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DUKE POWER

July 3, 1989

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

Subject: Catawba Nuclear Station, Unit 2
Docket No. 50-414
LER 414/89-14

Gentlemen:

Attached is Licensee Event Report 414/89-14 concerning Technical Specification violation due to lack of attention to detail when determining main steam isolation valve retest requirements.

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

Very truly yours,

A handwritten signature in cursive script, appearing to read 'Tony B. Owen'.

Tony B. Owen
Station Manager

KEB\LER-NRC.TBO

xc: Mr. S. D. Ebnetter
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Catawba Nuclear Station, Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 4 1 4	PAGE (3) 1 OF 0 4
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TITLE (4)
Technical Specification Violation Due to Lack of Attention To Detail When Determining Main Steam Isolation Valve Retest Requirements

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	6	0	3	8	9	8	9	0	1	4	0	0	0
									N/A			0 5 0 0 0	
												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) 0 1 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)						
	20.406(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)						
	20.406(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	20.406(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)							
	20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)							
	20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(ix)							

LICENSEE CONTACT FOR THIS LER (12)

NAME R.M. Glover, Compliance Manager	TELEPHONE NUMBER
	AREA CODE: 8 0 3 8 3 1 - 3 2 3 6

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	SIB	XIB	E 1 6 9	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

On June 3, 1989, a work request was written to improve the stroke time for Steam Generator 2A Main Steam Isolation Valve, 2SM7. The valve stem was greased and the valve retested satisfactorily. Also on June 3, another work request was written to further improve the stroke time. Internal metering valves were adjusted and the stroke time decreased. When the metering valves were opened all the way, the valve would not cycle. A few minutes later, the valve cycled with no operator action. The second work request was expanded to investigate and repair the problem. An optical isolator was found to be defective and replaced. The Shift Manager then contacted a Performance Engineer to determine if a retest was required. Due to lack of attention to detail, all of the work performed was not described to the Performance Engineer. A retest was not determined to be required when one was actually necessary. Technical Specification 3.6.3 was violated when the valve was returned to service with no retest performed. This incident has been discussed with appropriate personnel. It was discovered during review of the second work request, on June 6, 1989, at approximately 1200 hours, that a retest had not been performed. Unit 2 was in Mode 3, Hot Standby, from the time of the incident until the valve was retested.

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

BACKGROUND

The Main Steam [EIIS:SB] (SM) System conducts the generated steam from the outlet of the Steam Generators (S/Cs) to various system components throughout the Turbine Building [EIIS:NM]. The steam is used for various operational auxiliary services such as shaft steam seals, Turbine Driven Feedwater Pumps [EIIS:P], and steam jet air ejectors as well as the principal purpose of supplying the Main Turbine [EIIS:TRB].

The SM isolation valves [EIIS:V] are Y-body, open/shut, air to open/spring to close piston-operated globe valves. They define the boundary between the code and non-code portions of the main steam lines. They are designed to close with line break flow from either direction and are required to automatically fail closed by spring force within five seconds after a main steam isolation signal occurs, or upon loss of instrument air.

Technical Specification 3.6.3 requires that the SM isolation valves be capable of closing in less than or equal to five seconds to be considered operable. If they are not, they must be restored to OPERABLE status within four hours or the affected penetration [EIIS:PEN] must be isolated within four hours. If these conditions are not accomplished, the Unit must be in Mode 3, Hot Standby, within the next six hours and in Mode 5, Cold Shutdown, within the following thirty hours.

The Inservice Valve Testing (IWV) Program, Article IWV-3000, requires a retest when a valve or its control system has been replaced, repaired, or has undergone maintenance that could affect its performance. The retest shall demonstrate that the performance parameters, which could be affected by the replacement, repair, or maintenance, are within acceptable limits. Although the replacement of an optical isolator does not require a retest, the adjustment of metering valves does require a retest.

EVENT DESCRIPTION

On June 3, 1989, with Unit 2 in Mode 3, Work Request 7092 PRF was written due to valve 2SM7, S/G 2A Main Steam Isolation Valve, having a 5.1 second stroke time while performing PT/2/A/4200/30A, SM Valve Inservice Test. The valve stem was greased and the valve retested. The stroke time on the retest was acceptable at 4.8 seconds.

Work Request 7093 PRF was originated on June 3, 1989, to investigate and repair the marginal stroke time on valve 2SM7. On June 4, 1989, the two metering valves on the sub base manifold were adjusted. Instrumentation and Electrical (IAE) personnel had Operations stroke the valve a couple of times and timed it.

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

The stroke time was reduced to 4.5 seconds. Performance was contacted and indicated the expected stroke time should be between 2.5 and 3.5 seconds. The metering valves were then opened all the way and Operations was called to cycle valve 2SM7. However, the valve would not close. Within a few minutes, the valve unexpectedly started cycling with no operator action.

The scope of Work Request 7093 PRF was expanded to investigate and repair the problem of valve 2SM7 unexpectedly cycling. It was discovered that optical isolator [EIIS:XB] IM in cabinet 2SMTC1 was dropping out and picking up relays [EIIS:RLY]. IAE personnel replaced the optical isolator and had the valve cycled from the Control Room.

The Shift Manager contacted a Performance Engineer to determine if a retest for valve 2SM7 was required. Due to lack of attention to detail, by not reading all the work performed, the only work described was the replacement of the optical isolator. Based on that information, the Performance Engineer stated no retest was required.

Technical Specification 3.6.3 was violated when valve 2SM7 was returned to service without a retest being performed, on June 5, 1989. On June 6, at approximately 1200 hours, the Performance Test Engineer was reviewing Work Request 7093 PRF when it was noted a retest had not been performed. A retest of valve 2SM7 was immediately performed in accordance with PT/2/A/4200/30A. The results of the test were satisfactory.

Unit 2 was in Mode 3 from the time the incident occurred until the valve was retested.

CONCLUSION

This incident has been attributed to lack of attention to detail, which resulted in the required retest of valve 2SM7 not being performed.

A review of incidents in the past twelve months indicates there have been Technical Specification violations due to lack of attention to detail. None of the previous incidents involved retests not being performed or involvement by a Shift Manager. Therefore, this is not considered to be a recurring event. Missed retests in the past three years are a recurring problem at Catawba (see LERs 414/86-025, 413/88-022, 414/88-015). These missed retests were results of inappropriate actions. None of the incidents involved Shift Managers.

The Optical Isolator was manufactured by Electromax Instruments Incorporated. Isolator model number DOI-175C115 was upgraded with model number DOI-175C156 in accordance with the Equipment Qualification Reference Index.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104
EXPIRES 6/31/88

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TEXT (If more space is required, use additional NRC Form 386A's) (17)

CORRECTIVE ACTION

SUBSEQUENT

- (1) Valve 2SM7 was repaired and retested in accordance with PT/2/A/4200/30A.
- (2) A memo has been sent to all Shift Managers, discussing this incident.

PLANNED

- (1) A review of who presently makes retest determinations, and the appropriateness of that group of individuals will be performed. Criteria will be established for retest decision making, including the use of telecons for review of work performed. Training on these criteria will be provided to those individuals identified.

SAFETY ANALYSIS

In the event that 2SM7 failed to close following a design basis accident, the analysis of the Final Safety Analysis Report, Section 15.1.5, Steam System Piping Failure, bounds the event.

Assuming a main steam line rupture occurs, a Safety Injection and a Reactor trip would be initiated. For any break, in any location, no more than one Steam Generator would experience an uncontrolled blowdown even if the isolation valve failed to close. Auxiliary Feedwater [EII:SH] would be delivered to the intact Steam Generators.

In addition, valve 2SM7 was satisfactorily tested when the incident was discovered. Therefore, the health and safety of the public were unaffected by this incident.