Northern States Power Company

Monticello Nuclear Generating Plant
2807 West County Road 75
Monticello, MN 55362

NSP

March 8, 2000

10 CFR Part 50
Section 50.73

US Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

LER 2000-003
Procedural Inadequacy Results in Two Automatic Closures of Recirculation Sample Containment Isolation Valve

The Licensee Event Report for this occurrence is attached.

Three new NRC commitments, which will be completed before the next refueling outage, are included in this report:

1. Procedures 0086 and 0255-07-IA-2 will be revised to specifically identify steps which could result in closure of the recirculation sample values. Other test procedures will be reviewed, and corrected where necessary, to eliminate other possible unplanned emergency safeguards features (ESF) actuations.

2. The Monticello procedure writers guide will be reviewed, and revisions made, to ensure that appropriate prerequisites and precautions are incorporated into new and revised test procedures to eliminate unplanned ESF actuations.

3. Training will be provided to engineering and operations personnel to emphasize the need for self-checking to detect conflicts between test procedures, work in progress, and the existing plant configuration. Reducing the possibility of unplanned ESF actuations will be emphasized.

IE22

March 8, 2000

Contact David Musolf, Consulting Production Engineer, at (763) 295-1201 if you require further information.

Byron Day
Plant Manager
Monticello Nuclear Generating Plant

c: Regional Administrator - III NRC
NRR Project Manager, NRC
Sr Resident Inspector, NRC
State of Minnesota, Attn:Acting Public Service Commissioner

Attachment

NRC FORM 366 (6-1998) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to the industry. Forward comments regarding burden estimate to the Records Management Branch(T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 205555-0001, 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)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
MONTICELLO NUCLEAR GENERATING PLANT	05000 – 263	1 OF 4

TITLE (4) Procedural Inadequacy Results in Two Automatic Closures of Recirculation Sample Containment Isolation Valve

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 05000
02	07	00	00	-- 003 --	00	03	08	00	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
POWER LEVEL (10)	000	20.2201(b)	20.2203(a)(2)(v)	50.73(a)(2)(i)	50.73(a)(2)(viii)
		20.2203(a)(1)	20.2203(a)(3)(l)	50.73(a)(2)(ii)	50.73(a)(2)(x)
		20.2203(a)(2)(i)	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(c)(1)	50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)	50.36(c)(2)	50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
David Musolf	763-295-1201

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
	YES (If yes, complete EXPECTED SUBMISSION DATE).	NO				

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

During the 2000 refueling outage, a work order was initiated to repair a small valve, HWC-16, in a branch connection on the reactor recirculation loop "B" sampling line. The outboard containment isolation valve in the sampling line, CV-2791, was opened to drain the affected line. On 2/7/2000, Standby Liquid Control (SBLC) refueling tests were initiated while work on HWC-16 was in progress. When a SBLC pump was started in accordance with the test procedure, CV-2791 closed automatically as designed. One day later, during performance of the main steam isolation valve (MSIV) functional test, CV-2791 once again closed automatically as designed when a Group 1 containment isolation signal was generated during performance of the MSIV test. Each instance of automatic closure of CV-2791 is considered an automatic engineered safety feature actuation reportable to the NRC. Steps in both test procedures did not adequately recognize or pre-plan the automatic closure of CV-2791. Procedure enhancements will be made to the SBLC and MSIV test procedures. In addition, other procedures will be reviewed to find and correct similar deficiencies. The procedure writers guide will be revised as necessary to address this concern. Training will be provided to engineering and operations personnel to emphasize the need for self checking to detect conflicts between test procedures and work in progress.

Description

On 2/6/2000, during the 2000 refueling outage, work was initiated to repair a body-to-bonnet leak in valve[1] HWC-16. HWC-16 is located in a ¾-inch branch line connected to the "B" loop recirculation sample line[2]. To facilitate draining of piping for this repair air operated valve[3] CV-2791, the outboard containment isolation valve in the recirculation sample line, was opened and a "secure" card was placed on its handswitch[4].

At 0055 on 2/7/2000, Procedure 0086, "Standby Liquid Control (SBLC)[5] Refueling Tests," was initiated. When an SBLC pump[6] was started in accordance with this procedure, CV-2791 received an automatic isolation signal and closed as designed. An automatic Group 3 signal is generated whenever either of the two SBLC pumps are actuated from the key locked actuation switch in the Control Room. The Group 3 signal closes containment isolation valves for the Reactor Water Cleanup System[7](RWCU) to prevent the RWCU from removing boron injected into the reactor by the SBLC. A Group 3 isolation signal is also sent to the recirculation sample line containment isolation valves[8].

Following this event, CV-2791 was reopened. On the following day, at 0333, Procedure 0255-07-IA-2, "Main Steam Isolation Valve (MSIV) Functional Checks Test," was initiated. As part of this procedure, DC power[9] is removed from the MSIV solenoids[10] to verify that the redundant AC solenoids[10] are operable. Removal of DC power also generates a Group 1 containment isolation signal. A Group 1 signal closes the MSIVs, the main steam line drain containment isolation valves[8], and the recirculation sample line containment isolation valves. As a result, CV-2791 once again received an automatic isolation signal and closed as designed.

Event Analysis

Analysis of Reportability

This event is reportable under 10 CFR 50.73(a)(2)(iv). The two closure events of CV-2791 are

[1] EIIS Component Code: SHV
[2] EIIS System Code: KN
[3] EIIS Component Code: SMV
[4] EIIS Component Code: HS
[5] EIIS System Code: BR
[6] EIIS Component Code: P
[7] EIIS System Code: CE
[8] EIIS Component Code: ISV
[9] EIIS System Code: EJ
[10] EIIS Component Code: SOL

considered unplanned actuations of an engineered safety feature. The events have been combined into one Licensee Event Report, as permitted by NUREG-1022, Revision 1, because the events are related, both occurred during refueling outage related testing, and both occurred within a short time period.

Safety Significance

At the time the automatic closures of CV-2791 occurred, the plant was in a refueling shutdown condition. CV-2791, and its related automatic isolation logic, were not required to be operable.

The safety significance of this event was limited to two unnecessary distractions to plant operators.

Cause

Procedure 0086 specifically addresses the automatic Group 3 closure of the RWCU isolation valves. However, automatic closure of the recirculation sample containment isolation valves which also receive the Group 3 closure signal, is not adequately addressed in the body of the procedure.

Positive actions were not initiated after the first unplanned automatic closure of CV-2791 to prevent a second event.

Procedure 0255-07-IA-2 also did not adequately address the automatic closure of the recirculation sample isolation valves. It was assumed, but not so stated in the procedure, that these valves would be closed under the plant conditions in which this test would be performed.

Corrective Actions

Procedures 0086 and 0255-07-IA-2 will be revised to specifically identify steps which could result in closure of the recirculation sample values. Other test procedures will be reviewed, and corrected where necessary, to eliminate other unplanned emergency safeguards features (ESF) actuations.

The Monticello procedure writers guide will be reviewed, and revisions made, to ensure that appropriate prerequisites and precautions are incorporated into new and revised test procedures to eliminate unplanned ESF actuations.

Training will be provided to engineering and operations personnel to emphasize the need for self-checking to detect conflicts between test procedures, work in progress, and the existing plant configuration. Reducing the possibility of unplanned ESF actuations will be emphasized.

All of these corrective actions will be completed prior to the next refueling outage.

Failed Component Identification

Not applicable.

Similar Events

None