



Nebraska Public Power District

COOPER NUCLEAR STATION
P.O. BOX 96, BROWNVILLE, NEBRASKA 68321
TELEPHONE (402)825-3811
FAX (402)825-5205

NLS960041

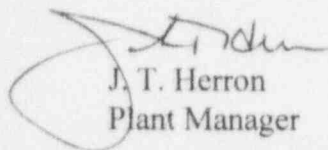
March 21, 1996

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Dear Sir:

Cooper Nuclear Station Licensee Event Report 95-023 is forwarded as an attachment to this letter.

Sincerely,



J. T. Herron
Plant Manager

/crm

Attachment

cc: Regional Administrator
USNRC - Region IV

Senior Project Manager
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector
USNRC

NPG Distribution

INPO Records Center

W. Turnbull
MidAmerica Energy

260031
9603260195 960321
PDR ADOCK 05000298
S PDR

IF22
11

LICENSEE EVENT REPORT (LER)

(See reverse for required number of
digits/characters for each block)ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS
MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS.
REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE
LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD
COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION
AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR
REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND
TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF

FACILITY NAME (1)

COOPER NUCLEAR STATION

DOCKET NUMBER (2)

05000298

PAGE (3)

1 OF 4

TITLE (4)

Loss Of Configuration Control By Valve Vendor

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONT H	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISI ON NUMBE R	MONT H	DAY	YEA R	FACILITY NAME	DOCKET NUMBER
10	30	95	95	-- 023	-- 00	03	21	96	FACILITY NAME	DOCKET NUMBER
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)(i)		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)		<input checked="" type="checkbox"/> 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

Chris R. Moeller, Senior Staff Licensing Engineer

TELEPHONE NUMBER (Include Area Code)

(402) 825-3811

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

CAUSE	SYSTEM	COMPONEN T	MANUFACTU RER	REPORTAB LE	CAUSE	SYSTEM	COMPONEN T	MANUFACTU RER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO	EXPECTED SUBMISSION DATE (15)	MONT	DAY	YEAR
---	---	----	-------------------------------------	------	-----	------

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

On October 30, 1995, it was determined that Anchor/Darling (A/D) design records for valves supplied for essential applications did not, in every case, match the actual configuration of the valves as installed. This condition was discovered as a result of errors found in limiting component analyses (LCAs) provided by A/D in support of the Cooper Nuclear Station (CNS) Generic Letter (GL) 89-10 motor-operated valve (MOV) program. Other discrepancies identified include differences in material types and component characteristics such as bolt patterns, bolt diameters, and actuator sizes. Upon investigation, it was determined that Anchor/Darling's internal administrative controls for record revision, record retention, and LCA development were less than adequate. Contributing to these problems were failures within the CNS MOV program to notify the vendor of field modifications, to correct identified errors when found, and to establish clear ownership of valve configuration. At the time of discovery, the plant was in cold shutdown for refueling.

The causes for this condition are Management/Quality Assurance Deficiency and Other - Vendor (NUREG-1022, Appendix B, Cause Codes E and X, respectively). Management/quality assurance deficiencies existed at CNS due to a lack of MOV program ownership and controls necessary to ensure that the vendor was provided accurate and timely feedback on configuration changes made in the field. As noted above, Anchor/Darling's administrative programs for configuration control were less than adequate. Corrective actions were taken to walkdown and document the as-built configuration of all GL 89-10 program MOVs and to assess the impact of identified discrepancies on LCAs and component level reviews. Additionally, these discrepancies were provided to A/D to correct their valve configuration records. Other vendors for MOVs included in the GL 89-10 program were audited with minor findings. No operability concerns have been identified to date. CNS programmatic controls for communicating changes to vendor documents and for validating design inputs are being strengthened to prevent recurrence. This LER is being submitted as a voluntary report.

LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL	REVISION	
COOPER NUCLEAR STATION	05000298	95	-- 023	-- 00	2 OF 4

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

PLANT STATUS

At the time of discovery, the plant was in cold shutdown for refueling.

EVENT DESCRIPTION

On October 30, 1995, it was determined that Anchor/Darling (A/D) design records for valves supplied for essential applications did not, in every case, match the actual configuration of the valves as installed. This condition was discovered during a review of limiting component analyses (LCAs) provided by A/D in support of the Cooper Nuclear Station (CNS) Generic Letter (GL) 89-10 motor-operated valve (MOV) program. Review of the LCAs was prompted by inconsistencies noted during the implementation of a design change to replace the yoke and operator on RHR-MOV-MO39A, Suppression Chamber Cooling Loop A Outboard Isolation. The following inconsistencies were identified:

1. LCA R91.100 for valves RHR-MOV-MO39A and 39B, Suppression Chamber Cooling Loop A/B Outboard Isolation, identified the yoke to bonnet cap screws as 1 inch in diameter. The actual yoke to bonnet cap screws are 7/8 inch in diameter.
2. LCA R91.085 for valve HPCI-MOV-MO19, HPCI injection, identified a Limitorque SMB-2 operator with 3/4 inch diameter yoke to operator mount cap screws. The installed configuration utilizes a Limitorque SMB-3 operator with 7/8 inch diameter cap screws.

As a result of investigation, the following additional conditions were identified:

1. A recent over thrust evaluation performed by CNS was based on an informal and unapproved calculation.
2. Changes made by CNS to A/D generated LCAs had not been communicated back to A/D.
3. Numerous errors in the LCAs, although previously identified by CNS, had not been corrected or dispositioned in the CNS corrective action program.
4. SW-MOV-2128MV, Service Water (SW) Gland Seal Water Backup From SW Pumps A and C, and SW-MOV-2129MV, SW Gland Seal Water Backup From SW Pumps B and D, have six bolt and four bolt actuator-to-yoke configurations, respectively. The LCAs provided by A/D assumed both valves had six bolt actuator-to-yoke configurations. The LCAs were subsequently updated by CNS to reflect four bolt actuator-to-yoke configurations in both applications.
5. The A/D drawing for RCIC-MOV-MO21, RCIC Injection, shows a 1/5, 2/5 stem pitch and lead, respectively. The A/D supplied LCA for this valve also assumed a 1/5, 2/5 stem pitch and lead. The actual configuration is 1/4, 1/4 stem pitch and lead.
6. Incorrect design input data was provided by CNS to valve vendors for developing LCAs for some GL 89-10 program valves. This condition affected all torus attached piping MOVs in the GL 89-10 program.

LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
COOPER NUCLEAR STATION	05000298	YEAR	SEQUENTIAL	REVISION	3 OF 4
		95	-- 023 --	00	

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

As a result of these findings, a CNS Quality Assurance auditor and a CNS engineer performed an inspection of the A/D Williamsport, Pennsylvania, facility. The inspection focused on design change control, LCA performance, design basis control, record retention, and process control. The following weaknesses and discrepancies were identified:

1. A/D did not have a formal procedure or instruction for the use of design input information when creating LCAs. While basically three sources of design inputs are available, the preparer was provided no direction as to which source to use. Additionally, there was no requirement to document within the LCA which source of design inputs was used.
2. Some interfacing drawings used by A/D for LCA development were not consistent. In one instance, the inspection team found that dimensional requirements for mating yoke-to-bonnet and bonnet-to-body connections were not consistent between design drawings. These inconsistencies lead to the incorrect selection of design inputs used for an LCA provided to CNS. (The inconsistencies came from documentation originated by the Anchor Equipment Company (AEC), Hayward, California. This facility was subsequently closed in 1982 following merger activities that resulted in the creation of the present Anchor/Darling Valve Company.)
3. Stock requisitions (one of the design input sources used for LCAs) for valves provided by AEC had no revision control and, therefore, changes made by AEC lack adequate documentation. (A/D Williamsport utilizes material/drawing lists for new valves and has always maintained revision control of these documents.)
4. LCAs provided to CNS were performed assuming ASTM A574 material for non-pressure retaining cap screws instead of alloy steel cap screws heat treated to Grade B7 as specified on the applicable stock requisition. (The A574 material standard was not in existence at the time the subject valves were fabricated.)

CAUSE

This condition was caused by a lack of MOV program ownership and by weaknesses in the programmatic controls at CNS necessary to ensure vendors are provided accurate and timely feedback on configuration changes made in the field. Weaknesses in Anchor/Darling's administrative programs for configuration control are considered to be a contributing factor.

SAFETY SIGNIFICANCE

The safety significance for this condition is minimal since the errors introduced were either conservative in nature or did not reduce margins below minimum operability limits. However, the potential safety significance for this condition could have been high had actual component inoperabilities resulted. Hence, this LER is being submitted as a voluntary report.

LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL	REVISION	
COOPER NUCLEAR STATION	05000298	95	-- 023	-- 00	4 OF 4

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

CORRECTIVE ACTIONS

Corrective actions were taken to walkdown and document the as-built configuration of all GL 89-10 program MOVs and to assess the impact of identified discrepancies on LCAs and component level reviews (CLRs). Additionally, these discrepancies were provided to A/D to correct valve configuration records. Other vendors for valves included in the GL 89-10 program were audited with minor findings.

No operability concerns have been identified to date. Actions are continuing to obtain corrected LCAs and CLRs where required. To prevent recurrence, a policy/procedure is being developed to clearly delineate the responsibility of CNS (and consultants) regarding changes to vendor supplied documents and calculations. Further, the design input verification/validation process is being evaluated and the controlling procedures revised as necessary to ensure that design inputs are appropriately validated.

PREVIOUS EVENTS

None.

Correspondence No: NLS960041

The following table identifies those actions committed to by the District in this document. Any other actions discussed in the submittal represent intended or planned actions by the District. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Licensing Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

[illegible]