

10CFR50.73

January 26, 2007

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop P1-137
Washington, DC 20555-0001

ULNRC05361



Ladies and Gentlemen:

**DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
UNION ELECTRIC CO.
FACILITY OPERATING LICENSE NPF-30
LICENSEE EVENT REPORT 2006-009-00
Inadequate Application of Technical Specifications Related to Main Steam
Isolation Valves and Actuator Trains**

The enclosed voluntary licensee event report, 2006-009-00, is prepared and submitted in accordance with 10CFR50.73 to report the inadequate implementation of Technical Specification 3.7.2 requirements for Main Steam Isolation Valve actuator train inoperability prior to License Amendment 172.

This letter does not contain new commitments.

Sincerely,

A handwritten signature in black ink, appearing to read "D. T. Fitzgerald".

David T. Fitzgerald
Manager, Regulatory Affairs

DTF/JWH/tdp

Enclosure

Mr. Bruce S. Mallett
Regional Administrator
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-4005

Senior Resident Inspector
Callaway Resident Office
U.S. Nuclear Regulatory Commission
8201 NRC Road
Steedman, MO 65077

Mr. Jack N. Donohew (2 copies)
Licensing Project Manager, Callaway Plant
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Mail Stop O-7D1
Washington, DC 20555-2738

Missouri Public Service Commission
Governor Office Building
200 Madison Street
PO Box 360
Jefferson City, MO 65102-0360

Records Center
Institute of Nuclear Power Operations
700 Galleria Parkway
Atlanta, GA 30339

bcc: C. D. Naslund
A. C. Heflin
C. R. Younie
D. T. Fitzgerald
G. A. Hughes
D. E. Shafer
S. L. Gallagher (100)
L. M. Belsky (NSRB)
K. A. Mills
P. M. Bell
msh@nrc.gov
ded@nrc.gov
LEREvents@inpo.org
babrook@wcnoc.com
A160.0761

Certrec Corporation
4200 South Hulen, Suite 630
Fort Worth, TX 76109

***(Certrec receives ALL attachments
as long as they are non-safeguards
and public disclosed).***

Send the following without attachments:

Ms. Diane M. Hooper
Supervisor, Licensing
WCNOC
P.O. Box 411
Burlington, KS 66839

Mr. Scott Bauer
Regulatory Affairs
Palo Verde NGS
P.O. Box 52034,
Mail Station 7636
Phoenix, AZ 85072-2034

Mr. Dennis Buschbaum
TXU Power
Comanche Peak SES
P.O. Box 1002
Glen Rose, TX 76043

Mr. Stan Ketelsen
Manager, Regulatory Services
Pacific Gas & Electric
Mail Stop 104/5/536
P.O. Box 56
Avila Beach, CA 93424

LICENSEE EVENT REPORT (LER)

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

Estimated burden per response to comply with this mandatory collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose 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.

1. FACILITY NAME Callaway Plant Unit 1	2. DOCKET NUMBER 05000 483	3. PAGE 1 OF 8
--	--------------------------------------	--------------------------

4. TITLE
Inadequate Application of Tech Spec.s Related to Main Steam Isolation Valves and Actuator Trains

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
11	30	2006	2006	- 009 -	00	01	26	2007	None	
									FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: (Check all that apply)									
10. POWER LEVEL 100 %	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)						
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)						
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)						
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)						
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input checked="" type="checkbox"/> OTHER: Voluntary Report						
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A						

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME K. A. Mills, Supervisor Regional Regulatory Affairs/Safety Analysis	TELEPHONE NUMBER (Include Area Code) (573) 676-4317
--	--

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

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

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

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

Prior to June 2006 Callaway Plant Technical Specification 3.7.2 did not explicitly address Main Steam Isolation Valve actuator trains. Inoperability of actuator trains was addressed through a Technical Specification Interpretation, which specified that due to the redundant actuator design, inoperability of a single actuator train did not render the associated isolation valve inoperable. The interpretation was eventually incorporated into Chapter 16 of the Final Safety Analysis Report and applied to the failure of a single actuator train on December 29, 2004. The NRC questioned the use of this provision and took the position that Main Steam Isolation Valve Technical Specification 3.7.2 requirements should have been imposed. The issue was identified as an Unresolved Item for which NRC Office of Nuclear Reactor Regulation involvement was required. Prior to NRC resolution, Callaway Plant determined that Technical Specification 3.7.2 was inadequate. In May 2005, a license amendment request was submitted to explicitly include requirements for the actuator trains under Technical Specification 3.7.2. The NRC approved and issued the amendment request in June 2006. Following issuance of the license amendment, the ongoing NRC evaluation reached resolution in October 2006. The NRC concluded that the requirements of Technical Specification 3.7.2 were inadequately applied prior to the license amendment and should have been imposed for past instances of actuator train inoperability.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2) NUMBER (2)	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Callaway Plant Unit 1	05000483	2006	009	00	2	OF 8

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

I. DESCRIPTION OF THE REPORTABLE EVENT

A. REPORTABLE EVENT CLASSIFICATION

OTHER: Voluntary Report - any event or condition that does not meet the criteria for required reporting, if the licensee believes that the event or condition might be of safety significance or of generic interest or concern.

Prior to October 2006, the NRC's regulatory position on the application of technical specification requirements to redundant actuation equipment was not clearly established for Callaway Plant or the industry. As such, this voluntary report is submitted to address potential generic interest or concern.

B. PLANT OPERATING CONDITIONS PRIOR TO THE EVENT

Mode 1, 100 Percent Reactor Power

C. STATUS OF STRUCTURES, SYSTEMS OR COMPONENTS THAT WERE INOPERABLE AT THE START OF THE EVENT AND THAT CONTRIBUTED TO THE EVENT

No structures, systems or components were inoperable at the start of the event which contributed to the event.

D. NARRATIVE SUMMARY OF THE EVENT, INCLUDING DATES AND APPROXIMATE TIMES

Background

The Callaway Plant design includes one Main Steam Isolation Valve (MSIV) on each of four main steam lines. Each MSIV has two actuator trains energized from separate safety-related sources, each of which is capable of independently closing the MSIV. In the event of a failure of both trains of actuation for an MSIV (e.g., a loss of power to both trains) the valve will fail "as is". Final Safety Analysis Report (FSAR) Section 10.3.1.1, "Safety Design Bases", states that component redundancy is provided, consistent with General Design Criteria 34, so that MSIV safety functions can be completed assuming a single active component failure coincident with the loss of off-site power. FSAR Section 10.3.3, "Safety Evaluation", states that no single failure will compromise the MSIV system safety functions.

Requirements for the MSIVs are specified in Callaway Technical Specification (T/S) 3.7.2, "Main Steam Isolation Valves". Until recently, however, the MSIV actuator trains themselves were not explicitly addressed by MSIV T/S 3.7.2. MSIV actuator train inoperability was addressed by application of a Technical Specification Interpretation (TSI) based on the following premises:

- (1) Due to redundancy in actuator design (i.e., recognizing that only one MSIV actuator train is needed for the associated MSIV to close on demand), an MSIV was considered to be operable with only one actuator train operable.

(continued)

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2) NUMBER (2)	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Callaway Plant Unit 1	05000483	2006	- 009	- 00	3	OF 8

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

(2) As a prudent measure, both actuators were routinely tested for each MSIV during the performance of applicable surveillances on the MSIVs. Wording in the T/S 3.7.2.1 Surveillance Requirement Bases suggested that this testing should be done; however, it was not interpreted that the surveillance had to be satisfied via both actuator trains for each performance. The surveillance could be satisfied with either actuator train.

Following conversion to Improved T/S in April 2000 (for conformance to the new Standard Technical Specifications in NUREG-1431), the TSI was incorporated into a plant procedure that addressed operability issues. The content of the procedure remained unchanged from that of the TSI.

In December 2004 the content of the original TSI was relocated from the plant procedure to Chapter 16 of the FSAR with implementation of FSAR Change Notice 03-048. This resulted in the imposition of an FSAR controlled allowed outage time (AOT) for an inoperable MSIV actuator train. The AOT was imposed as a restriction that was considered to be above and beyond the T/S requirements for the MSIVs. The AOT specified for a single inoperable train of actuation was 64 hours, which was based on an allowed outage time that had evolved from operating experience under the TSI. The AOT was also supported by both engineering evaluation and probabilistic risk assessment.

Description

On 12/29/2004, Callaway Plant experienced a failure of the active four-way valve component of a single actuator train on the 'C' MSIV, ABHV0020. This event resulted in the first usage of the FSAR Chapter 16 requirements specifying a 64-hour AOT for a single MSIV actuator train. During this time the MSIV itself was still considered Operable. The actuator train was restored within approximately 46 hours.

A corrective action document was initiated on 1/4/2005 in response to a review of FSAR Change Notice 03-048. The review focused on FSAR Chapter 16 provisions associated with inoperable MSIV actuator trains and the FSAR Chapter 15 accident analyses. A discrepancy was identified between the T/S 3.7.2 Bases (Applicable Safety Analyses); FSAR Chapter 16 provisions for MSIV actuator trains; and the FSAR Chapter 6.2, "Containment Systems", discussions on MSIV modeling in the containment analysis. A review of the accident analysis Calculation of Record M-YY-43, "Containment Pressure/Temperature Response to a Main Steam Line Break (MSLB)", identified a scenario that requires both MSIV actuation trains for accident mitigation. This case assumes the loss of off-site power and the failure of one instrument logic train as the single failure. These assumptions result in the unavailability of an emergency diesel generator, one containment heat removal train, and one MSIV actuator train. Bounded containment pressure and temperature results for the scenario were dependent upon revised assumptions regarding the minimum heat removal capability of the remaining operable containment coolers.

In review of these issues, the Nuclear Regulatory Commission (NRC) raised questions regarding the basis of the Callaway FSAR Chapter 16 provisions for inoperable MSIV actuator trains. The NRC subsequently took the position that MSIV actuator trains are "attendant" equipment for the MSIVs (based on the T/S definition of Operability) and; therefore, both MSIV actuator trains are required for MSIV Operability. As such, Regional NRC staff took the position that the T/S requirements for MSIV inoperability should have been imposed for events involving MSIV actuator inoperability. This issue was identified as an Unresolved Item (URI), and resolution was sought through NRC Office of Nuclear Reactor Regulation (NRR) involvement. Both branches of the NRC and the Licensee agreed that the issue was not a significant safety concern.

(continued)

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2) NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Callaway Plant Unit 1	05000483	2006	- 009	- 00	4 OF 8

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

While awaiting NRC resolution, Callaway Plant continued to address the concern under the corrective action program. Callaway Plant staff subsequently determined from the issues raised by this concern that the T/S was inadequate with respect to requirements for MSIV actuator trains. A license amendment request (LAR) was therefore initiated to clarify the effect of actuator train inoperability on the MSIVs and the required treatment of actuator train inoperability.

In May 2005, AmerenUE submitted the LAR to revise the T/S to include actuator trains in the scope of the MSIV Limiting Condition for Operation (LCO) under T/S 3.7.2. The amendment request sought to explicitly address the actuator trains and to establish specific conditions and Completion Times for the actuator trains in addition to the MSIVs themselves. This was consistent with the position that the actuator trains should have a reasonable allowed outage time prior to declaring the affected MSIV inoperable.

During the NRC review process for the license amendment, administrative controls were established at Callaway Plant to provide conditions and actions for plant Operators to follow in the event an MSIV actuator train became inoperable. Based on interactions with the NRC, these controls were ultimately made to match the controls specified in the proposed LAR.

On June 16, 2006, the NRC approved and issued License Amendment 172. The T/S revisions incorporated by the amendment were unchanged from those requested under the LAR. Under the amended T/S, declaring an MSIV actuator train inoperable does not require concurrently declaring the associated MSIV inoperable while the Required Actions for the inoperable actuator train are in effect.

In parallel with the processing of Amendment 172, NRC resolution of the URI continued. The internal NRC evaluation was ongoing between January 2005 and October 2006 and culminated in the issuance of an internal letter on October 19, 2006. NRC resolution of the historical treatment of MSIV actuator train inoperability included several meetings during the evaluation period. The meetings included an internal NRC meeting in January 2006 and several subsequent meetings between the NRC, Licensees, and the Industry with participation from the Nuclear Energy Institute and the Technical Specifications Task Force. The final meeting was conducted in October 2006 and was concluded without reaching consensus on the final resolution. Subsequently, final NRC resolution was provided internally via the October 19, 2006, letter entitled, "Operability Determination for Callaway Plant Technical Specifications Requirements When One main Steam Isolation Valve Actuator Train is Removed from Service (ML061730396)". Callaway Plant was officially informed of the resolution in an NRC inspection exit meeting on November 30, 2006, when Callaway Plant was notified of a potential noncited violation based on the position documented in the resolution letter.

The final NRC position stated that for the Callaway Plant MSIVs, with one of the redundant actuator trains out of service, the MSIV should have been declared inoperable under T/S 3.7.2 (prior to implementation of License Amendment 172). Because T/S Surveillance Requirement 3.7.2.2 applies to both actuator trains of the MSIV, the surveillance requirement could not be met with an actuator train out of service. Therefore, T/S LCO 3.7.2 would not be met with an inoperable actuator train because Surveillance Requirement 3.7.2.2 could not be met. Both actuator trains must in fact be tested to demonstrate that the MSIV is operable as designed and described in the FSAR. The Callaway licensing basis requires the MSIV actuators to function to effect closure of the associated MSIV on an Engineered Safety Feature Actuation Signal for steam line isolation. Therefore, the MSIV actuators perform a required support function for the safety-related MSIVs. Since the actuators were not included in the MSIV T/S LCO (prior to Amendment 172), the MSIV actuators are non-T/S support functions required by the T/S definition of Operability.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2) NUMBER (2)	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Callaway Plant Unit 1	05000483	2006	- 009	- 00	5	OF 8

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

E. METHOD OF DISCOVERY OF EACH COMPONENT, SYSTEM FAILURE, OR PROCEDURAL ERROR

On 12/29/2004, Callaway Plant experienced a failure of the active four-way valve component of a single actuator train on the 'C' MSIV, ABHV0020. This event resulted in the first usage of the FSAR Chapter 16 requirements specifying a 64-hour AOT for a single inoperable MSIV actuator train. During the actuator train AOT, the MSIV itself was still considered Operable. Following this event a discrepancy was identified during a review of FSAR Change Notice 03-048, which added MSIV actuator train inoperability guidance to FSAR Chapter 16.7.12. The discrepancy was between T/S Bases descriptions of MSIV modeling in the containment analysis and descriptions in FSAR Chapter 6.2 of the same modeling. A review of the Callaway calculation of record for the containment pressure/temperature response to a Main Steam Line Break showed that the FSAR discussion was correct and that the T/S Bases discussion was inadequate.

Following significant and lengthy Licensee and NRC evaluation, the NRC issued a final interpretation in the form of an internal letter. The letter provided the basis for the proper application of T/S requirements to the MSIVs for a single train of actuation being out of service. This NRC position resulted in the issuance of a potential violation for inadequate T/S compliance, which was discussed with the Licensee during an inspection exit meeting on 11/30/2006.

II. EVENT DRIVEN INFORMATION

A. SAFETY SYSTEMS THAT RESPONDED

No automatic actuations occurred and no safety systems were required to respond to this event.

B. DURATION OF SAFETY SYSTEM INOPERABILITY

With regard to the determinations set forth in the final NRC position, there have been instances in the three years prior to implementation of License Amendment 172 on June 16, 2006, when the applicable T/S Action statements were not entered and associated Completion Times were not met. The applicable T/S Actions and Completion Times were as follows:

- 3.7.2.A With one MSIV inoperable in MODE 1, restore MSIV to OPERABLE status within 8 hours.
- 3.7.2.B With Required Action and associated Completion Time of condition A not met, be in MODE 2 within 6 hours.
- 3.7.2.C With one or more MSIVs inoperable in MODE 2 or 3, close MSIV within 8 hours and verify MSIV is closed once per 7 days.
- 3.7.2.D With Required Action and associated Completion Time of condition C not met, be in MODE 3 within 6 hours, AND be in MODE 4 within 12 hours.

(continued)

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2) NUMBER (2)	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Callaway Plant Unit 1	05000483	2006	- 009	- 00	6	OF 8

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

Research of MSIV inoperability and MSIV actuator train unavailability for the three years prior to License Amendment 172 was performed to determine actual out of service times and to establish if Callaway Plant failed to declare the associated MSIV inoperable in accordance with T/S requirements in effect at the time. The review determined that there were eighteen instances where an MSIV actuator train was out of service and the associated MSIV was not declared inoperable. Six instances exceeded the MSIV AOT and resulted in a failure to enter MODE 2 within the required 6-hour Completion Time. In three of those instances the MSIV was not closed within 8 hours of being inoperable in MODE 2 or 3 and the 6-hour time allowed to be in MODE 3 was exceeded. In one case the requirement to be in MODE 4 within 12 hours was not met. The six cases are as follows:

Begin Date/Time	End Date/Time	Total Duration Hr:Min:Sec	MSIV 8-Hr Completion Time Exceeded Hr:Min:Sec
Sep 7, 2003 / 5:02	Sep 8, 2003 / 11:06	30:04:02	22:04:02
Nov 16, 2003 / 4:41	Nov 17, 2003 / 10:42	30:01:02	22:01:02
Dec 29, 2004 / 7:55	Dec 31, 2004 / 6:12	46:17:00	38:17:00
Jan 10, 2005 / 10:28	Jan 11, 2005 / 8:17	21:48:08	13:48:08
Mar 31, 2005 / 22:05	Apr 1, 2005 / 16:02	17:57:30	9:57:30
Nov 16, 2005 / 8:05	Nov 16, 2005 / 20:41	12:36:01	4:36:01

None of the six instances exceeded the 72-hour allowed outage time for an actuation train under the current Technical Specifications.

C. SAFETY CONSEQUENCES AND IMPLICATIONS OF THE EVENT.

The MSIVs are credited in the Containment analysis for mitigating a Main Steam Line Break (MSLB). The Containment analysis is based on the blowdown of one steam generator. All four of Callaway's steam generators are connected to a common steam header. Closure of the MSIVs prevents the three intact steam generators from feeding the break flow. Additionally, closure of all four MSIVs isolates the common steam header from the break. Failure of a single MSIV to close would still prevent the three intact steam generators from blowing down. However, failure of one MSIV would increase the amount of mass available from the common steam header that feeds the break.

The impact of an inoperable MSIV actuator train on the deterministic safety analysis was reviewed using the CONTEMPT computer code. The inoperable MSIV actuator train taken in addition to a postulated single failure would result in additional mass release from the common main steam header. This mass would result in an incremental increase in peak post-accident containment pressure of approximately 1.5 psig. At the time of this event, the Callaway Plant FSAR reported a peak post-accident Containment pressure of 48.1 psig. The design pressure of the Containment building is 60 psig. Therefore, the increased pressure would not have caused the Containment Design Bases Limit (continued)

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2) NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Callaway Plant Unit 1	05000483	2006	- 009	- 00	7 OF 8

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

for Fission Product Barrier (DBLFPB) to be exceeded or altered. This event did not result in jeopardizing the ability of the Callaway Containment to accommodate peak post-accident pressure as described in General Design Criterion 50.

In addition, the issue described in this LER was evaluated with the Callaway PRA model. The evaluation determined that the incremental conditional core damage probability (ICCDP) attributable to this issue is significantly below 1E-6; therefore, this event was of very low risk significance. Use of the PRA model to evaluate the event provides for a comprehensive, quantitative assessment of the potential safety consequences and implications of the event, including the consideration of alternative conditions beyond those analyzed in the FSAR.

III. CAUSE(S) OF THE EVENT AND CORRECTIVE ACTION(S)

Prior to documenting a formal resolution in the October 2006 letter, the NRC's regulatory position on this issue was not clearly established for Callaway Plant or the industry. Historically, Callaway consistently implemented the position that unavailability of a single, redundant MSIV actuator train does not render the associated MSIV inoperable; and that a reasonable allowed outage time is permitted to restore the unavailable actuator train prior to declaring the MSIV inoperable. In addition, the industry position appeared to be consistent with this interpretation.

The most probable causes for the difference in interpretation of the original Callaway Plant MSIV T/S and the associated corrective action to prevent recurrence are as follows:

- (1) The original T/S did not explicitly address the MSIV actuator trains (the authors and reviewers of the original T/S and T/S Bases did not explicitly address MSIV actuator and MSIV operability);
- (2) The redundancy in the MSIV actuator design permits an MSIV to close on demand, with one actuator train unavailable;
- (3) Plant operational experience demonstrated the fact that the 8-hour allowed outage time for an inoperable MSIV was too restrictive for restoring an unavailable actuator train; and finally
- (4) Allowing a reasonable time to restore the unavailable actuator train, without declaring the MSIV itself inoperable, was not a safety concern.

Subsequent to identification of concerns with the adequacy of T/S guidance related to MSIVs and their associated actuator trains, AmerenUE submitted a license amendment request to revise the T/S to explicitly include the MSIV actuator trains within the scope of the T/S 3.7.2 LCO. The amendment request sought to add the actuator trains to the T/S and to establish specific conditions and completion times apart from the MSIVs themselves. This LAR was approved and changes issued under License Amendment 172 on June 16, 2006.

IV. PREVIOUS SIMILAR EVENTS

Internal and external operating experience (OE) was reviewed. However, no relevant operating experience was identified that would have affected Callaway's historical interpretation and practice associated with unavailable MSIV actuator trains and inoperability of the associated MSIV.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2) NUMBER (2)	LER NUMBER (6)			PAGE (3)	
Callaway Plant Unit 1	05000483	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	8	OF 8
		2006	- 009	- 00		

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

V. ADDITIONAL INFORMATION

The system and component codes listed below are from the IEEE Standard 805-1984 and IEEE Standard 803A-1983, respectively.

Main Steam Isolation Valves System: SB
 Component: ISV

Main Steam Iso Valve Actuator System: SB
 Component: FSV