Rafael Flores
Senior Vice President
& Chief Nuclear Officer
rafael.flores@Luminant.com

Luminant Power
P O Box 1002
6322 North FM 56
Glen Rose, TX 76043

T 254 897 5550
C 817 559 0403
F 254 897 6652

CP- 201500862
TXX -15126

Ref. # 10CFR50.73(a)(2)(i)(B)

September 18, 2015

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT (CPNPP)
DOCKET NO. 50-446
UNIT 2 TRAIN B SAFETY INJECTION SYSTEM INOPERABLE FOR LONGER THAN ALLOWED BY TS
LICENSEE EVENT REPORT 446 / 15-001-00

Dear Sir or Madam:

Enclosed is Licensee Event Report (LER) 446/15-001-00, "Unit 2 Train B Safety Injection System Inoperable for Longer Than Allowed By TS," for Comanche Peak Nuclear Power Plant (CPNPP) Unit 2. The Unit 2 Train B Safety Injection System was allowed to be inoperable for longer than the time allowed by the CPNPP Technical Specifications based on a request for enforcement discretion which was granted by NRC Region IV at 0920 on July 10, 2015.

This communication contains no new or revised commitments.

Should you have any questions, please contact R. A. Slough at (254) 897-5727.

Sincerely,

Luminant Generation Company LLC

Rafael Flores

By: _____
Kenneth J. Peters
Site Vice President

Enclosure

c - Marc L. Dapas, Region IV
B. K. Singal, NRR
Resident Inspectors, Comanche Peak

IE22
NRR

NRC FORM 366 (02-2014) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES:01/31/2017

Estimated burden per response to comply with this mandatory collection request: 80 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 F53), 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.

LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Comanche Peak Nuclear Power Plant (CPNPP) Unit 2	05000 446	1 OF 3

4. TITLE

Unit 2 Train B Safety Injection System Inoperable For Longer Than Allowed By TS

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
07	10	2015	2015	001	00	09	18	2015	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE

1

10. POWER LEVEL

100

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*

☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☐ OTHER
☐ 20.2203(a)(2)(vi)	☒ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)	VOLUNTARY LER

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER (*Include Area Code*)
Timothy A. Hope, Manager, Regulatory Affairs	254-897-6370

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

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES (*If yes, complete 15. EXPECTED SUBMISSION DATE*) ☒ NO

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

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

On July 10, 2015 at 1304 Comanche Peak Nuclear Power Plant, Unit 2 exceeded a 72 hour limiting condition for operation (LCO), after being granted a period of enforcement discretion, due to a through-wall leak found on the "B" train of the Safety Injection (SI) system piping at the 3/4" socket weld coupling to valve 2SI-0055. The flaw resulted in declaring the "B" train of SI inoperable. This event was reportable under 10 CFR 50.73(a)(2)(i)(B) as an operation or condition which was prohibited by the plant's Technical Specifications. A Notification of Enforcement Discretion (NOED) was granted by the NRC at 0920 on July 10, 2015. The repair process issues leading to the NOED request were the requirement to apply a freeze seal to allow installation of a new vent valve to allow adequate static refill of the system and complete dye penetrant testing of the weld, ultrasonic examination of the suction piping to verify the system full of water, and pump testing to establish operability of the system. The most probable cause of the through-wall leak was determined to be an original weld defect which resulted in a stress concentration that allowed otherwise acceptable tensile loads to cause propagation of a through-wall crack. The corrective action was to grind out the weld and repair (re-weld).

This event had no adverse effect upon the health and safety of the public.

All times in this report are approximate and Central Daylight Time unless noted otherwise.

I. DESCRIPTION OF THE REPORTABLE EVENT

A. REPORTABLE EVENT CLASSIFICATION:

Reportable per 10 CFR 50.73(a)(2)(i)(B), "Operation in a condition prohibited by Technical Specifications."

B. PLANT CONDITION PRIOR TO EVENT:

At the time of discovery, Unit 2 was in MODE 1 (Power Operation) at 100 percent power.

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

There were no structures, components or systems (SSC) that were inoperable at the start of the event and that contributed to the event.

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

While performing a quarterly system walkdown on 7/7/2015, the SI System Engineer discovered a boric acid accumulation coming out of the insulation on pipe segment SI-2-070 beneath 2SI-0055 and accumulating on the floor. The insulation was removed within an hour of identifying the accumulation. Upon removal, a through wall leak was discovered in the socket weld beneath test vent 2SI-0055. T.S. LCO 3.5.2 Condition B was entered immediately upon discovery of the through wall leak on 7/7/2015 at 1304. The socket weld was reworked as an emergent activity under WO-5087339. An enhanced weld design was implemented to improve the fatigue life of the socket weld by using a 2:1 weld leg ratio. Repairs took a total of 82 hours and 56 minutes. A Notification of Enforcement Discretion (NOED) was approved which allowed Unit 2 to remain at power despite exceeding the allowed LCO time of 72 hours for Condition B.1 plus 6 hours for Condition C.1.

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

While performing a quarterly system walkdown on 7/7/2015, the SI system Engineer discovered a boric acid accumulation coming out of the insulation on pipe segment SI-2-070 beneath 2SI-0055 and accumulating on the floor. Upon removal of the piping insulation, a through wall leak was discovered in the socket weld beneath test vent 2SI-0055.

II. COMPONENT OR SYSTEM FAILURES

A. CAUSE OF EACH COMPONENT OR SYSTEM FAILURE

An original weld defect resulted in a stress concentration that allowed otherwise acceptable tensile loads to cause propagation of a through-wall crack.

B. FAILURE MODE, MECHANISM, AND EFFECTS OF EACH FAILED COMPONENT

Cracking of the socket weld beneath 2SI-0055 allowed system fluid to leak through the resulting weld fracture. Cracking was evident by visual inspection which indicated that the failure was brittle in nature since there was a lack of deformation in the failed socket weld.

C. SYSTEMS OR SECONDARY FUNCTIONS THAT WERE AFFECTED BY FAILURE OF COMPONENTS WITH MULTIPLE FUNCTIONS

The sole safety function of the socket weld was pressure boundary integrity in support of the train B ECCS. No other safety functions or components with multiple safety functions were affected.

D. FAILED COMPONENT INFORMATION

Through-wall crack of the socket weld beneath 2SI-0055, a cantilever connected, ¾" vent valve near the Unit 2, Train B Safety Injection pump suction.

III. ANALYSIS OF THE EVENT

A. SAFETY SYSTEM RESPONSES THAT OCCURRED

Not applicable - No safety system responses occurred as a result of this event.

B. DURATION OF SAFETY SYSTEM TRAIN INOPERABILITY

Unit 2, Train B Safety Injection System was declared inoperable at 1304 Central Time on July 7, 2015 and was restored to operable at 0000 Central Time on July 11, 2015. The total time Unit 2, Train B Safety Injection System was inoperable was 82 hours and 56 minutes.

C. SAFETY CONSEQUENCES AND IMPLICATIONS OF THE EVENT

During the time the Unit 2, Train B Safety Injection system was inoperable, the Unit 2 Train A Safety Injection system was operable and fully capable of performing the intended safety functions of the Safety Injection system. Prior to discovery, Train A SI had been operable since completion of the pre-summer cleaning of the 2-01 CCW/SSW heat exchanger on June 20, 2015 at 0233. Since the Train A Safety Injection system was capable of performing the intended function during the period of inoperability, there was no impact to public health and safety.

IV. CAUSE OF THE EVENT

An original weld defect added a stress concentration which allowed otherwise acceptable tensile loads to cause propagation of a through-wall crack.

V. CORRECTIVE ACTIONS

The failed socket weld was replaced with an improved 2:1 weld leg ratio. As a part of the CPNPP Corrective Action Program, Engineering has reviewed the extent of condition for this event and plans to perform dye penetrant testing and volumetric inspections, capable of detecting subsurface indications, of the process pipe to vent and drain pipe socket welds for other potential locations where the condition may exist.

VI. PREVIOUS SIMILAR EVENTS

There have been no previous similar reportable events at Comanche Peak Nuclear Power Plant (CPNPP) in the last three years.