

VISTRA ENERGY



Timothy A. Hope
Manager, Regulatory Affairs
Luminant
P.O. Box 1002
6322 North FM 56
Glen Rose, TX 76043
o 254.897.6370
m 817.360.6882

CP-201700904
TXX-17092

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Ref: 10 CFR 50.55a(z)(2)

11/01/2017

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT
DOCKET NOS. 50-445 AND 50-446
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING RELIEF REQUEST 1/2B3-2
FOR THE UNIT 1 AND UNIT 2 THIRD TEN YEAR INSERVICE INSPECTION INTERVAL
(2007 EDITION OF ASME CODE, SECTION XI, 2008 ADDENDA
UNIT 1 THIRD INTERVAL END DATE: AUGUST 12, 2020
UNIT 2 THIRD INTERVAL END DATE: AUGUST 2, 2024)

- REFERENCES:
1. Letter logged TXX-17090 dated October 30, 2017, from Steven K. Sewell to the NRC submitting Relief Request 1/2B3-2 for the Unit 1 and Unit 2 Third Ten Year Inservice Inspection Interval
 2. Email dated October 31, 2017, from Lisa Regner of the NRC to Jack Hicks of Vistra Operations Company LLC regarding additional information regarding Relief Request No. 1/2B3-2

Dear Sir or Madam:

Per Reference 1, Vistra Operations Company LLC ("VistraOpCo"), submitted Relief Request 1/2B3-2 for Comanche Peak Nuclear Power Plant Units 1 and 2 (herein referred to as CPNPP) for the third ten year inservice inspection interval. VistraOpCo is proposing an alternative to perform the examination of selected Class 1 piping and valves at plant conditions other than those required by IWB-5220 in accordance with 10 CFR 50.55a(z)(2) due to hardship without a compensating increase in quality and safety.

Per Reference 2, the NRC provide a request for additional information regarding the subject relief request.

Attached is the VistraOpCo response to the request for additional information.

A047
NRR

**COMANCHE PEAK NUCLEAR POWER PLANT UNITS 1 AND 2
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
REGARDING RELIEF REQUEST 1/2B3-2
SYSTEM LEAKAGE TEST CONDUCTED AT OR NEAR THE END OF INTERVAL
(UNIT 1 THIRD INTERVAL END DATE: AUGUST 12, 2020;
UNIT 2 THIRD INTERVAL END DATE: AUGUST 2, 2024)**

NRC Request 1:

The licensee did not address reasons for a request for an NRC verbal authorization (e.g., the licensee has failed to comply with IWB-5220(b) required system leakage test in the first and second 10-year ISI intervals).

VistraOpCo Response to Request 1:

VistraOpCo is requesting a NRC verbal authorization for failing to comply with IWB-5220(b) required system leakage test in the first and second 10-year ISI intervals for both Units without an approved Relief Request. This is documented in the CPNPP corrective action program under CR-2017-010530 and CR-2017-011968.

NRC Request 2:

Were there any system leakage test performed during past (i.e., during 1st and 2nd) intervals and with what pressure?

VistraOpCo Response to Request 2:

Yes, system leakage tests have been performed during the 1st and 2nd intervals. See the following Tables 1 and 2 for pressures associated with the most recent tests.

Table 1: Unit 1 Class 1 Pressure Testing		
<u>Description of Location</u>	<u>Test/Condition</u>	<u>Pressure</u>
Main RCS Loop Piping	Mode 3	> 2200 psi
Charging/Alt. Charging	Mode 3	> 2200 psi
Aux Spray Line	RCS System Fill	48 psi
Cold Leg Injection	OPT-614A	> 150 psi (990 psi in 1RF18)
Hot Leg Injection	OPT-611A	> 150 psi (985 psi in 1RF18)
LHSI and IHSI Cold Leg Injection	Mode 3	> 600 psi (630 psi in 1RF18)
RHR Pump Suction from RCS HL	RHR Shutdown	325 psi

<u>Description of Location</u>	<u>Test/Condition</u>	<u>Pressure</u>
Main RCS Loop Piping	Mode 3	> 2200 psi
Charging/Alt. Charging	Mode 3	> 2200 psi
Aux Spray Line	RCS System Fill	48 psi
Cold Leg Injection	OPT-614A	> 150 psi (1000 psi in 2RF16)
Hot Leg Injection	OPT-611A	> 150 psi (1000 psi in 2RF16)
LHSI and IHSI Cold Leg Injection	Mode 3	> 600 psi (630 psi in 2RF16)
RHR Pump Suction from RCS HL	RHR Shutdown	325 psi

NRC Request 3:

Were the previous system leakage tests performed with visual examination in accordance with IWA-5240 and IWA-5213 (pressure hold time)?

VistraOpCo Response to Request 3:

Yes, the previous system leakage tests were performed with visual examination in accordance with IWA-5240 and IWA-5213. Per IWA-5213 no hold time is required for Class 1 components after attaining test pressure.

NRC Request 4:

Discuss any operating experience regarding thermal fatigue in the subject piping segments.

VistraOpCo Response to Request 4:

Thermal Fatigue is addressed at CPNPP through the Thermal Fatigue Program which follows MRP-146. The subject piping welds are outside the scope of MRP-146 as Thermal Fatigue is not credible upstream of the first isolation device. To date there have been no relevant indications found through the MRP-146 required exams on either unit.

NRC Request 5:

The NRC staff notes that NRC Information Notice (IN) 2011-04, "Contaminants and Stagnant Conditions Affecting Stress Corrosion Cracking in Stainless Steel Piping in Pressurized water Reactors," discusses potential stress corrosion cracking (SCC) in the stainless steel piping. Discuss any operating experience regarding IN 2011-04 in the subject piping segments.

VistraOpCo Response to Request 5:

CPNPP has previously evaluated IN-2011-04 "Contaminants and Stagnant Conditions Affecting Stress Corrosion Cracking in Stainless Steel Piping in Pressurized Water Reactors". Awareness of the issue was presented to Operations, Quality Control, System Engineering and Maintenance. There have been no instances of SCC reported in the subject piping segments or anywhere else at CPNPP.

NRC Request 6:

Provide the maximum test pressure for the proposed system leakage test for each pipe segment.

VistraOpCo Response to Request 6:

See Tables 3 and 4 for maximum test pressures for each pipe segment, for both Units.

Table 3: Unit 1 Class 1 Piping Segments Maximum Pressure					
Flow Diagram No.	Line Function	First Isolation Valve	Affected Line	Second Isolation Device	Max Pressure (psig)
M1-0253 Sh. A	Pressurizer Aux. Spray	1CS-8377	CS-1-112	1-8145	55
M1-0261 Sh. -	High Pressure Safety Injection - Loop 2	1SI-8900B	SI-1-200	1-8815	1800
		1SI-8900B	SI-1-026	1-8815	1800
		1SI-8900B	SI-1-033	1-8815	1800
		1SI-8900B	SI-1-303	1-8815	1800
	High Pressure Safety Injection - Loop 1	1SI-8900A	SI-1-199	1-8815	1800
		1SI-8900A	SI-1-025	1-8815	1800
		1SI-8900A	SI-1-339	1-8815	1800
	High Pressure Safety Injection - Loop 4	1SI-8900D	SI-1-202	1-8815	1800
		1SI-8900D	SI-1-028	1-8815	1800
	High Pressure Safety Injection - Loop 3	1SI-8900C	SI-1-201	1-8815	1800
1SI-8900C		SI-1-027	1-8815	1800	
M1-0263 Sh. -	Hot Leg Injection - Loop 2	1-8949B	SI-1-101	1-8841A	1800
		1-8949B	SI-1-301	1SI-8905B	1800
	Hot Leg Injection - Loop 3	1-8949C	SI-1-102	1-8841B	1800
		1-8949C	SI-1-302	1SI-8905C	1800
	Hot Leg Injection - Loop 1	1-8949A	SI-1-148	1SI-8905A	1800
		1-8949A	SI-1-059	1SI-8905A	1800
	Hot Leg Injection - Loop 4	1-8949D	SI-1-172	1SI-8905D	1800
		1-8949D	SI-1-086	1SI-8905D	1800
M1-0262 Sh. - M1-0263 Sh. -	Cold Leg Injection - Loop 1	1-8948A	SI-1-179	1-8956A	644
		1-8948A	SI-1-089	1-8818A	644
		1-8948A	SI-1-063	1SI-8819A	644
		1SI-0049	SI-1-910	1-8956A	644
	Cold Leg Injection - Loop 2	1-8948B	SI-1-180	1-8956B	644
		1-8948B	SI-1-090	1-8818B	644
		1-8948B	SI-1-328	1-8818B	644
		1-8948B	SI-1-065	1SI-8819B	644
	Cold Leg Injection - Loop 3	1SI-0050	SI-1-908	1-8956B	644
		1-8948C	SI-1-181	1-8956C	644
		1-8948C	SI-1-091	1-8818C	644
		1-8948C	SI-1-330	1-8818C	644
	Cold Leg Injection - Loop 4	1-8948C	SI-1-067	1SI-8819C	644
		1SI-0051	SI-1-911	1-8956C	644
		1-8948D	SI-1-182	1-8956D	644
		1-8948D	SI-1-092	1-8818D	644
Cold Leg Injection - Loop 4	1-8948D	SI-1-069	1SI-8819D	644	
	1SI-0052	SI-1-909	1-8956D	644	
M1-0260 Sh. -	RHR Suction - Train A	1-8702A	RH-1-001	1-8701A	440
	RHR Suction - Train B	1-8702B	RH-1-002	1-8701B	440

Table 4: Unit 2 Class 1 Piping Segments Maximum Pressure						
Flow Diagram No.	Line Function	First Isolation Valve	Affected Line	Second Isolation Device	Max Pressure (psig)	
M2-0255 Sh. -	Pressurizer Aux. Spray	2CS-8377	CS-2-112	2-8145	55	
M2-0261 Sh. -	High Pressure Safety Injection - Loop 2	2SI-8900B	SI-2-200	2-8815	1800	
		2SI-8900B	SI-2-026	2-8815	1800	
		2SI-8900B	SI-2-033	2-8815	1800	
		2SI-8900B	SI-2-303	2-8815	1800	
	High Pressure Safety Injection - Loop 1	2SI-8900A	SI-2-199	2-8815	1800	
		2SI-8900A	SI-2-025	2-8815	1800	
		2SI-8900A	SI-2-339	2-8815	1800	
	High Pressure Safety Injection - Loop 4	2SI-8900D	SI-2-202	2-8815	1800	
		2SI-8900D	SI-2-028	2-8815	1800	
	High Pressure Safety Injection - Loop 3	2SI-8900C	SI-2-201	2-8815	1800	
2SI-8900C		SI-2-027	2-8815	1800		
M2-0263 Sh. -	Hot Leg Injection - Loop 2	2-8949B	SI-2-101	2-8841A	1800	
		2-8949B	SI-2-301	2SI-8905B	1800	
	Hot Leg Injection - Loop 3	2-8949C	SI-2-102	2-8841B	1800	
		2-8949C	SI-2-302	2SI-8905C	1800	
	Hot Leg Injection - Loop 1	2-8949A	SI-2-148	2SI-8905A	1800	
		2-8949A	SI-2-059	2SI-8905A	1800	
	Hot Leg Injection - Loop 4	2-8949D	SI-2-172	2SI-8905D	1800	
		2-8949D	SI-2-086	2SI-8905D	1800	
M2-0263 Sh. B M2-0263 Sh. -	Cold Leg Injection - Loop 1	2-8948A	SI-2-179	2-8956A	644	
		2-8948A	SI-2-089	2-8818A	644	
		2-8948A	SI-2-063	2SI-8819A	644	
		2-8948A	3/4-2501R-1	2SI-0049	644	
	Cold Leg Injection - Loop 2	2-8948B	SI-2-180	2-8956B	644	
		2-8948B	SI-2-090	2-8818B	644	
		2-8948B	SI-2-328	2-8818B	644	
		2-8948B	SI-2-065	2SI-8819B	644	
		2-8948B	3/4-2501R-1	2SI-0050	644	
	Cold Leg Injection - Loop 3	2-8948C	SI-2-181	2-8956C	644	
		2-8948C	SI-2-091	2-8818C	644	
		2-8948C	SI-2-330	2-8818C	644	
		2-8948C	SI-2-067	2SI-8819C	644	
		2-8948C	3/4-2501R-1	2SI-0051	644	
	Cold Leg Injection - Loop 4	2-8948D	SI-2-182	2-8956D	644	
		2-8948D	SI-2-092	2-8818D	644	
		2-8948D	SI-2-069	2SI-8819D	644	
		2-8948D	3/4-2501R-1	2SI-0052	644	
	M2-0260 Sh. -	RHR Suction - Train A	2-8702A	RH-2-001	2-8701A	440
		RHR Suction - Train B	2-8702B	RH-2-002	2-8701B	440

NRC Request 7:

Will the proposed system leakage tests be performed with visual examination in accordance with IWA-5240 and IWA-5213 (pressure hold time)?

VistraOpCo Response to Request 7:

Yes, system leakage tests performed with visual examination will be performed in accordance with IWA-5240 and IWA-5213. Per IWA-5213 no hold time is required for Class 1 components after attaining test pressure.

NRC Request 8:

Provide an estimate for person- roentgen equivalent man (rem) exposure with consideration of an as low as reasonably achievable (ALARA).

VistraOpCo Response to Request 8:

It is estimated (with consideration of ALARA) that extending the boundary to the second isolation valve for all Class 1 components would result in a total dose of 1.926 REM and would require an estimated 147 man hours for Unit 1. The estimate for Unit 2 is 1.767 REM and would require an estimated 136 man hours. The estimate is based on discussions with Operations, Radiation Protection, Maintenance, and Scaffolding about the associated activity durations and local dose rates for the following activities; scaffold erection, insulation removal, valve manipulations, blind flange work, freeze seals, exams, re-installation of insulation and scaffold removal.