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CP-201200879
TXX-12116

Ref. # 10CFR50.55a(a)(3)(i)

September 6, 2012

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

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT
DOCKET NOS. 50-445 AND 50-446
RELIEF REQUEST NO. V-1 FOR UNIT 1 AND UNIT 2 INSERVICE TESTING PLAN
FOR PUMPS AND VALVES (ASME OM CODE 2004 EDITION, THROUGH 2006
ADDENDA; THIRD INTERVAL START DATE: AUGUST 3, 2013)

- REFERENCES:**
1. Letter logged TXX-98153 dated June 24, 1998 from C. Lance Terry to the NRC submitting Relief Request No. V-8, Revision 2, for the Unit 1 and Unit 2 Inservice Testing Plan for Pumps and Valves (ASME OM Code 1989 Edition, No Addenda; Unit 1 Interval Start Date: August 13, 1990, First Interval; Unit 2 Interval Start Date: August 3, 1993, First Interval).
 2. NRC Letter dated August 14, 1998, from John N. Hannon to C. Lance Terry concerning Approval of Risk-Informed Inservice Testing (RI-IST) Program for Comanche Peak Steam Electric Station, Units 1 and 2 (TAC Nos. M94165, M94166, MA19722 and MA1973)

Dear Sir or Madam:

Luminant Generation Company LLC (Luminant Power) requests relief from ASME OM Code 2004 Edition, through 2006 Addenda, for the testing of the motor-operated valves at Comanche Peak Nuclear Power Plant (CPNPP) pursuant to 10CFR50.55a(a)(3)(i) for the third interval of the CPNPP Unit 1 and Unit 2 Inservice Testing Plan for Pumps and Valves.

Luminant Power had previously submitted this relief request via Reference 1 and it had been approved by the NRC via Reference 2.

This communication contains no new commitment regarding Comanche Peak Units 1 and 2.

Should you have any questions, please contact Mr. Jack Hicks at (254) 897-6725.

A member of the STARS Alliance

Callaway · Comanche Peak · Diablo Canyon · Palo Verde · San Onofre · South Texas Project · Wolf Creek

A047
NRR

Sincerely,

Luminant Generation Company LLC

Rafael Flores

By: 
Fred W. Madden
Director, Oversight & Regulatory Affairs

Attachment- Relief Request V-1 (Third Interval Start Date: August 3, 2013)

c - E. E. Collins, Region IV
B. K. Singal, NRR
Resident Inspectors, Comanche Peak
Jack Ballard, ANIL, Comanche Peak

Luis Ponce
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1. **ASME Code Component(s) Affected**

See attached table.

2. **Applicable Code Edition and Addenda**

The applicable code edition is the ASME OM Code, 2004 Edition through 2006 Addenda.

3. **Applicable Code Requirements**

ISTC-5120, Motor-Operated Valves, ISTC-5121(a) states: "Active valves shall have their stroke times measured when exercised in accordance with ISTC-3500."

ISTC-3700, Position Verification Testing, states in part: "Valves with remote position indicators shall be observed locally at least once every 2 years to verify that valve operation is accurately indicated."

ISTC-3510, Exercising Test Frequency, states: "Active Category A, Category B, and Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3520, ISTC-3540, ISTC-3550, ISTC-3560, ISTC-5221, and ISTC-5222. Power-operated relief valves shall be exercise tested once per fuel cycle."

4. **Reason for Request 10CFR50.55a(a)(3)(i)**

NUREG-1482, Rev. 1, Section 4.2.5 states in part: As an alternative to MOV stroke-time testing, ASME developed Code Case OMN-1 Revision 0, "Alternative Rules for Preservice and Inservice Testing of Certain Electric Motor-Operated Valve Assemblies in LWR Power Plants" which provides periodic exercising and diagnostic testing for use in assessing the operational readiness of MOVs.

NUREG-1482, Revision 1, Section 4.2.5 recommends that the licensees implement ASME Code Case OMN-1 Revision 0 as accepted by the NRC (with certain conditions) in the regulations or Regulatory Guide (RG) 1.192, as an alternative to the stroke-time testing provisions in the ASME Code for MOVs. RG 1.192 allows licensees to implement ASME Code Case OMN-1, Revision 0, (in accordance with the provisions in the RG) as an alternative to the Code provisions for MOV stroke time testing in the ASME OM Code 1995 Edition through 2000 Addenda.

The Code of Record for Comanche Peak Nuclear Power Plant (CPNPP) Third 10-Year IST Interval is ASME OM Code 2004 Edition with Addenda through 2006 Addenda.

Note: OMN-1 Revision 0, was previously approved for use at CPNPP by the NRC, Refer to NRC Letter dated August 14, 1998 from Mr. John N. Hannon to Mr. C. Lance Terry, Technical Assignment Control (TAC) Nos. M94165, M94166, MA1972, and MA1973.

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5. Proposed Alternative and Basis for Use

Pursuant to the guidelines provided in NUREG-1482, Rev. 1, Section 4.2.5, and the conditions stated in RG 1.192, CPNPP proposes to implement Code Case OMN-1 Revision 1, in lieu of the stroke-time provisions specified in ISTC-5120 for MOVs as well as the position verification testing in ISTC-3700.

There are no significant differences between the versions of Code Case OMN-1 that is in the 1999 Addenda of the OM Code currently approved for use in RG 1.192, Revision 0 and the Revision 1 of the Code Case (OMN-1-1) in 2009 Edition of the OM Code.

The use of Code Case OMN-1 Revision 1 by a licensee permits licensees to replace stroke time and position verification testing of MOVs with a program of exercising MOVs every refueling cycle and diagnostically testing on longer intervals.

The proposed alternative is considered to be acceptable because Code Case OMN-1 Revision 1 provides a superior method than the stroke-timing method required by the OM code for assessing the operational readiness of MOVs.

Using the provisions of this relief request as an alternative to the MOV stroke time testing requirements of ISTC-5120 and position indication verification of ISTC-3700 provide an acceptable level of quality for determination of valve operational readiness. Code Case OMN-1 Revision 1 should be considered acceptable for use with ASME OM Code 2004 Edition through 2006 Addenda as the Code of Record.

There are recognized weaknesses in the stroke-time testing requirements for MOVs in the OM Code and the use of Code Case OMN-1 Revision 1 by a licensee resolves the weaknesses. Code Case OMN-1 Revision 1 permits licensees to replace stroke time and position verification testing of MOVs with a program of exercising MOVs every refueling cycle and diagnostically testing on longer intervals.

Luminant Power believes that the proposed alternative to be acceptable because Code Case OMN-1 Revision 1 provides a superior method than the stroke-timing method required by the OM Code for assessing the operational readiness of MOVs. The NRC staff has recommended that licensees implement Code Case OMN-1 as an alternative to the MOV stroke-time and position verification testing provisions in the ASME Code. The NRC has also found that there are no significant differences between the version of Code Case OMN-1 that is in the 1999 Addenda of the OM Code currently approved for use in RG 1.192 and the version of Code Case OMN-1 in the 2004 Edition of the OM Code. [Reference ADAMS Accession No. ML102150077.]

However, Luminant Power intends to maintain the following exceptions which were addressed in the original submission of the relief request for OMN-1 Revision 0 to the requirements in ASME Code Case OMN-1 as described below:

- 1) Paragraph 3.3.1, items (a) & (b) - The initial inservice test frequency for each MOV shall be determined based upon the MOV's risk significance category (i.e. High or Low) and magnitude of margin. See Figure 1 for initial inservice test frequency details. The inservice test frequency may change when sufficient test data has been collected and

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analyzed to determine a more appropriate test frequency. No test frequency shall exceed 10 years.

- 2) Paragraph 6.4.3 - In order to maintain consistency and compatibility with the Joint Owners Group (JOG) MOV Periodic Verification Program, "Functional Margin" will be redefined to agree with the definition of "Margin" as detailed in Topical Report MPR-1807 (Reference 2). The terms "Functional Margin" and "Margin" shall be synonymous within the CPNPP MOV Periodic verification program.

"Margin", as defined in Reference 2, is dependent upon "Required Thrust." At CPNPP "Required Thrust" for rising stem MOVs has been determined from stem thrust measurements taken during extensive baseline testing performed in response to GL 89-10 under both static and dynamic test conditions. Valve factors have been determined by statistical means for each group of rising stem MOVs; these factors will be reviewed/verified as new data is obtained from CPNPP testing and results are received from the JOG Periodic Verification Program."

6. Duration of Proposed Alternative

This proposed alternative will be utilized for the third ten-year interval of the CPNPP Unit 1 and Unit 2 Inservice Testing Plan for Pumps and Valves (August 3, 2013 through August 2, 2023).

7. References

- 1) NRC Letter dated August 14, 1998 from Mr. John N. Hannon to Mr. C. Lance Terry, Technical Assignment Control (TAC) NOS. M94165, M94166, MA1972, and MA1973.
- 2) Joint BWR, Westinghouse and Combustion Engineering Owners' Group Program on Periodic Verification on Motor-Operated Valves (MOV) Periodic Verification, Topical Report MPR-1807, Revision 2, July 1997

8. Precedents

- 1) NRC Letter to Mr. Edward D. Halpin from Mr. Michael T. Markley dated September 2, 2010. Subject : "South Texas Project, Units 1 and 2 -Relief Request Nos., VRR-01, PRR-01, PRR-02, AND PRR-03 for the Third 10-year Inservice Testing Program Interval (TAC NOS. ME3515, ME3516, ME3517, ME3518, ME3519, ME3520, ME3521, AND ME3522)." [ADAMS Accession No. ML102150077]

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System	Valve Number	Category	Code Class	Description
Auxiliary Feedwater	HV-2480	B	3	Aux feedwater Pump Emergency Supply Flowpath
	HV-2481	B	3	Aux feedwater Pump Emergency Supply Flowpath
	HV-2482	B	3	Aux feedwater Pump Emergency Supply Flowpath
	HV-2484	B	3	Condensate System to Condensate Storage Tank Isolation to Preclude Tank Overpressurization
	HV-2485	B	3	Condensate System to Condensate Storage Tank Isolation to Preclude Tank Overpressurization
	HV-2491A	B	2	Containment Isolation & AFW to Faulted SG Flow Isolation
	HV-2491B	B	2	Containment Isolation & AFW to Faulted SG Flow Isolation
	HV-2492A	B	2	Containment Isolation & AFW to Faulted SG Flow Isolation
	HV-2492B	B	2	Containment Isolation & AFW to Faulted SG Flow Isolation
	HV-2493A	B	2	Containment Isolation & AFW to Faulted SG Flow Isolation
	HV-2493B	B	2	Containment Isolation & AFW to Faulted SG Flow Isolation
	HV-2494A	B	2	Containment Isolation & AFW to Faulted SG Flow Isolation
	HV-2494B	B	2	Containment Isolation & AFW to Faulted SG Flow Isolation
Component Cooling Water	HV-4512	B	3	Train A to Train B Crosstie Isolation
	HV-4513	B	3	Train A to Train B Crosstie Isolation

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System	Valve Number	Category	Code Class	Description
	HV-4514	B	3	Train A to Train B Crosstie Isolation
	HV-4515	B	3	Train A to Train B Crosstie Isolation
	HV-4524	B	3	Non-Safety Loop Flowpath Isolation
	HV-4525	B	3	Non-Safety Loop Flowpath Isolation
	HV-4526	B	3	Non-Safety Loop Flowpath Isolation
	HV-4527	B	3	Non-Safety Loop Flowpath Isolation
	HV-4572	B	3	RHR Heat Exchanger Cooling Flowpath
	HV-4573	B	3	RHR Heat Exchanger Cooling Flowpath
	HV-4574	B	3	Containment Spray Heat Exchanger Cooling Flowpath
	HV-4575	B	3	Containment Spray Heat Exchanger Cooling Flowpath
	HV-4696	A	2	Containment Isolation & RCP Thermal Barrier Rupture Isolation
	HV-4699	B	2	Passive Pipe Break Isolation (Inside Containment)
	HV-4700	A	2	Containment Isolation & Passive Pipe Break Isolation (Inside Containment)
	HV-4701	A	2	Containment Isolation
	HV-4708	A	2	Containment Isolation
	HV-4709	A	2	Containment Isolation & RCP Thermal Barrier Rupture Isolation

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System	Valve Number	Category	Code Class	Description
Chemical & Volume Control	LCV-0112B	B	2	ECCS Flowpath Boundary & Isolation of VCT Cover Gas from Charging Pumps' Suction Header (upon low VCT level) & Boron Dilution Flowpath Isolation
	LCV-0112C	B	2	ECCS Flowpath Boundary & Isolation of VCT Cover Gas from Charging Pumps' Suction Header (upon low VCT level) & Boron Dilution Flowpath Isolation
	LCV-0112D	B	2	ECCS Injection Flowpath & Boration Flowpath/ECCS Recirculation Flowpath Boundary
	LCV-0112E	B	2	ECCS Injection Flowpath & Boration Flowpath/ECCS Recirculation Flowpath Boundary
	8100	A	2	Containment Isolation
	8104	B	2	Boration Flowpath
	8105	A	2	Boration Flowpath/ECCS Flowpath Boundary & Containment Isolation
	8106	B	2	Boration Flowpath/ECCS Flowpath Boundary
	8109	B	2	ECCS Flowpath Boundary
	8110	B	2	ECCS Flowpath Boundary
	8111	B	2	ECCS Flowpath Boundary
	8112	A	2	Containment Isolation
	8351A	B	2	Containment Isolation
8351B	B	2	Containment Isolation	

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System	Valve Number	Category	Code Class	Description
	8351C	B	2	Containment Isolation
	8351D	B	2	Containment Isolation
	8511A	B	2	High Head Safety Injection Pump Miniflow Path/ECCS Recirculation Flowpath Boundary
	8511B	B	2	High Head Safety Injection Pump Miniflow Path/ECCS Recirculation Flowpath Boundary
	8512A	B	2	ECCS Recirculation Flowpath Boundary
	8512B	B	2	ECCS Recirculation Flowpath Boundary
Containment Spray	LV-4754	B	3	Chemical Additive Flowpath/Chemical Additive Tank Isolation
	LV-4755	B	3	Chemical Additive Flowpath/Chemical Additive Tank Isolation
	HV-4758	B	2	Sump Recirculation Flowpath Boundary
	HV-4759	B	2	Sump Recirculation Flowpath Boundary
	FV-4772-1	B	2	Pump Miniflow Flowpath/Containment Spray Flowpath Boundary
	FV-4772-2	B	2	Pump Miniflow Flowpath/Containment Spray Flowpath Boundary
	FV-4773-1	B	2	Pump Miniflow Flowpath/Containment Spray Flowpath Boundary
	FV-4773-2	B	2	Pump Miniflow Flowpath/Containment Spray Flowpath Boundary
	HV-4776	A	2	Containment Spray Flowpath/Containment Isolation
HV-4777	A	2	Containment Spray Flowpath/Containment Isolation	

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System	Valve Number	Category	Code Class	Description
	HV-4782	B	2	Sump Recirculation Flowpath/Containment Isolation
	HV-4783	B	2	Sump Recirculation Flowpath/Containment Isolation
Reactor Coolant	8000A	B	1	Post Accident Vent Path/Vent Path Isolation & Reactor Coolant Pressure Boundary
	8000B	B	1	Post Accident Vent Path/Vent Path Isolation & Reactor Coolant Pressure Boundary
Residual Heat Removal	FCV-0610	B	2	Pump Miniflow Path/ECCS & RHR Flowpath Boundary
	FCV-0611	B	2	Pump Miniflow Path/ECCS & RHR Flowpath Boundary
	8701A	A	1	RHR Flowpath/Containment Isolation & Reactor Coolant Pressure Boundary
	8701B	A	1	RHR Flowpath/Containment Isolation & Reactor Coolant Pressure Boundary
	8702A	A	1	RHR Flowpath/Reactor Coolant Pressure Boundary
	8702B	A	1	RHR Flowpath/Reactor Coolant Pressure Boundary
	8716A	B	2	ECCS Injection Flowpath/ECCS Recirculation Flowpath Boundary
	8716B	B	2	ECCS Injection Flowpath/ECCS Recirculation Flowpath Boundary
Safety Injection	8801A	B	2	ECCS to Cold Legs Flowpath & Boration Flowpath/ Containment Isolation & Passive Pipe Break Isolation
	8801B	B	2	ECCS to Cold Legs Flowpath & Boration Flowpath/ Containment Isolation & Passive Pipe Break Isolation

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System	Valve Number	Category	Code Class	Description
	8802A	B	2	ECCS to Hot Legs Flowpath/ECCS to Cold Legs Flowpath Boundary & Containment Isolation & Passive Pipe Break Isolation
	8802B	B	2	ECCS to Hot Legs Flowpath/ECCS to Cold Legs Flowpath Boundary & Containment Isolation & Passive Pipe Break Isolation
	8804A	B	2	ECCS Recirculation Flowpath/Passive Pipe Break Isolation
	8804B	B	2	ECCS Recirculation Flowpath/Passive Pipe Break Isolation
	8806	B	2	ECCS Flowpath Boundary (during Recirculation)
	8807A	B	2	ECCS Recirculation Flowpath/Passive Pipe Break Isolation
	8807B	B	2	ECCS Recirculation Flowpath/Passive Pipe Break Isolation
	8808A	B	2	ECCS from Accumulators to Cold Legs Flowpath
	8808B	B	2	ECCS from Accumulators to Cold Legs Flowpath
	8808C	B	2	ECCS from Accumulators to Cold Legs Flowpath
	8808D	B	2	ECCS from Accumulators to Cold Legs Flowpath
	8809A	A	2	ECCS to Cold Legs Flowpath/ECCS to Hot Legs Flowpath Boundary & Passive Pipe Break Isolation & Containment Isolation
	8809B	A	2	ECCS to Cold Legs Flowpath/ECCS to Hot Legs Flowpath Boundary & Passive Pipe Break Isolation & Containment Isolation
	8811A	B	2	ECCS Recirculation Flowpath/Containment Isolation & Passive Pipe Break Isolation

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System	Valve Number	Category	Code Class	Description
	8811B	B	2	ECCS Recirculation Flowpath/Containment Isolation & Passive Pipe Break Isolation
	8812A	B	2	ECCS Recirculation Flowpath Boundary & Shutdown Cooling Flowpath Boundary (during Safety Grade Cold Shutdown)
	8812B	B	2	ECCS Recirculation Flowpath Boundary & Shutdown Cooling Flowpath Boundary (during Safety Grade Cold Shutdown)
	8813	B	2	ECCS Recirculation Flowpath Boundary
	8814A	B	2	ECCS Recirculation Flowpath Boundary
	8814B	B	2	ECCS Recirculation Flowpath Boundary
	8821A	B	2	ECCS to Cold Legs Flowpath/ECCS to Hot Legs Flowpath Boundary & Passive Pipe Break Isolation
	8821B	B	2	ECCS to Cold Legs Flowpath/ECCS to Hot Legs Flowpath Boundary & Passive Pipe Break Isolation
Safety Injection	8835	B	2	ECCS to Cold Legs Flowpath/ECCS to Hot Legs Flowpath Boundary & Containment Isolation & Passive Pipe Break Isolation
	8840	A	2	ECCS to Hot Legs Flowpath/ECCS to Cold Legs Flowpath Boundary & Containment Isolation & Passive Pipe Break Isolation
	8923A	B	2	Passive Pipe Break Isolation
	8923B	B	2	Passive Pipe Break Isolation
	8924	B	2	Passive Pipe Break Isolation

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System	Valve Number	Category	Code Class	Description
Service Water	HV-4286	B	3	Service Water Flowpath/Throttling during Pump Start
	HV-4287	B	3	Service Water Flowpath/Throttling during Pump Start
	HV-4393	B	3	Service Water Flowpath
	HV-4394	B	3	Service Water Flowpath
	HV-4395	B	3	AFW Pump Emergency Supply Flowpath
	HV-4396	B	3	AFW Pump Emergency Supply Flowpath
Containment Isolation	HV-6082	A	2	Containment Isolation
	HV-6083	A	2	Containment Isolation
	HV-6084	A	2	Containment Isolation
	HV-4075B	A	2	Containment Isolation
	HV-4075C	A	2	Containment Isolation
	HV-5540	A	2	Containment Isolation
	HV-5541	A	2	Containment Isolation
	HV-5542	A	2	Containment Isolation
Containment Isolation	HV-5543	A	2	Containment Isolation
	HV-5562	A	2	Containment Isolation
	HV-5563	A	2	Containment Isolation

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LEGEND: Category A = Valves for which seat leakage is limited to a specific maximum amount in the closed position for fulfillment of their required safety function(s).

Category B = Valves for which seat leakage in the closed position is inconsequential for fulfillment of their required safety function(s).

Class = Code Class

Figure 1
Inservice Test Frequency

R I S K		MARGIN		
		Low	Medium	High
	High	1 cycle	2 cycles	3 cycles
	Low	2 cycles	4 cycles	6 cycles*

*Not to exceed 10 years

Notes:

- Criteria for MOV Margin Categories
Low Margin: <10%
Medium Margin: ≥10% and <15%
High Margin: ≥15%
- Criteria for Risk Categories
High Risk: Risk-Informed IST Program
Low Risk: Risk-Informed IST Program