



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 8, 2021

Mr. Ken J. Peters
Senior Vice President and
Chief Nuclear Officer
Attention: Regulatory Affairs
Vistra Operations Company LLC
Comanche Peak Nuclear Power Plant
6322 N FM 56
P.O. Box 1002
Glen Rose, TX 76043

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT, UNIT NO. 1 – PROPOSED
ALTERNATIVE TO THE REQUIREMENTS OF THE ASME OM CODE TO
EXTEND THE INSERVICE TESTING PROGRAM INTERVAL FOR CERTAIN
CHECK AND RELIEF VALVES (EPID L-2020-LLR-0096 [COVID-19])

Dear Mr. Peters:

By electronic submittal dated July 14, 2020, Vistra Operations Company LLC (the licensee), submitted a request to the U.S. Nuclear Regulatory Commission (NRC) for the use of an alternative to certain American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code) requirements at Comanche Peak Nuclear Power Plant, Unit No. 1 (Comanche Peak Unit 1).

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(z)(2), the licensee requested to use the proposed Alternative V-3 on the basis that complying with the specified requirements would result in hardship or unusual difficulty. The licensee requested to extend the interval for performance of the inservice testing program for the examination activities for four specific check valves and for the testing of nine specific relief valves at Comanche Peak Unit 1 listed in the request, from refueling outage 1RF21 in the fall of 2020 to refueling outage 1RF22 scheduled to occur in the spring of 2022.

On August 11, 2020, the NRC provided verbal authorization for proposed Alternative V-3 for a one-time extension of the inservice testing program examination interval for the four specific check valves and nine specific relief valves at Comanche Peak Unit 1 listed in the licensee's submittal dated July 14, 2020, until restart from the next refueling outage in the spring of 2022.

As set forth in the enclosed safety evaluation, the NRC staff concludes that proposed Alternative V-3 will provide reasonable assurance that the specified check valves and relief valves at Comanche Peak Unit 1 are operationally ready to perform their safety functions unit the next refueling outage currently scheduled for the spring of 2022. The NRC staff finds that compliance with the specified requirements in the ASME OM Code would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Accordingly, the NRC staff concludes that the licensee has adequately addressed the regulatory requirements set forth in 10 CFR 50.55a(z)(2). If the licensee identifies a performance issue

with any of these check valves or relief valves, the licensee will be expected to take action to implement the requirements of its technical specifications. This authorization will remain in effect until restart from the next refueling outage for Comanche Peak Unit 1 in the spring of 2022. The licensee's disassembly and examination plans for the specified check valves and testing plans for the specified relief valves may be adjusted as appropriate by any subsequent NRC-authorized alternative requests.

All other requirements in the ASME OM Code for which relief was not specifically requested and approved in this request remains applicable.

If you have any questions, please contact the Project Manager, Dennis Galvin, at 301-415-6256 or Dennis.Galvin@nrc.gov.

Sincerely,

Jennifer L. Dixon-Herrity, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-445

Enclosure:
Safety Evaluation

cc: Listserv



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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
PROPOSED ALTERNATIVE V-3 REGARDING SPECIFIED CHECK VALVE EXAMINATION
EXTENSION AND RELIEF VALVE TEST INTERVAL EXTENSION
VISTRA OPERATIONS COMPANY LLC
COMANCHE PEAK NUCLEAR POWER PLANT, UNIT NO. 1
DOCKET NO. 50-445

1.0 INTRODUCTION

By electronic submittal dated July 14, 2020 (Agencywide Documents Access and Management System (ADAMS) Package Accession No. ML20196L876), Vistra Operations Company LLC (the licensee), submitted a request to the U.S. Nuclear Regulatory Commission (NRC) for the use of an alternative to specific inservice testing (IST) program requirements in the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code), 2004 Edition through 2006 Addenda, for Comanche Peak Nuclear Power Plant, Unit No. 1 (Comanche Peak Unit 1).

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a(z)(2), the licensee requested to use the proposed alternative on the basis that complying with the specified requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The licensee requested in the proposed Alternative V-3 authorization, to extend the performance of the IST program examination activities for four specific check valves and IST program testing of nine specific relief valves at Comanche Peak Unit 1 listed in the request, from refueling outage 1RF21 in the fall of 2020 to refueling outage 1RF22 scheduled to occur in the spring of 2022.

On August 11, 2020, the NRC provided a verbal authorization (ADAMS Accession No. ML20225A152) for the proposed one-time extension from refueling outage 1RF21 to begin on October 18, 2020, to the next refueling outage 1RF22 scheduled to occur in the spring of 2022 of the IST program examination interval for the four specific check valves and the IST program testing interval for the nine specific relief valves at Comanche Peak Unit 1 specified in the licensee's submittal July 14, 2020. The verbal authorization documentation provides a summary of the NRC staff evaluation for this proposed alternative. This safety evaluation (SE) provides the details of the NRC staff review of proposed Alternative V-3 for Comanche Peak Unit 1.

Enclosure

2.0 REGULATORY EVALUATION

The regulations in 10 CFR 50.55a(f)(4), "Inservice testing standards requirement for operating plants," state, in part, that,

Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, pumps and valves that are within the scope of the ASME OM Code must meet the inservice test requirements (except design and access provisions) set forth in the ASME OM Code and addenda that become effective subsequent to editions and addenda specified in [10 CFR 50.55a(f)(2) and (3)] and that are incorporated by reference in [10 CFR 50.55a(a)(1)(iv)], to the extent practical within the limitations of design, geometry, and materials of construction of the components.

The regulations in 10 CFR 50.55a(z), "Alternatives to codes and standards requirements," state, that alternatives to the requirements of 10 CFR 50.55a(f) may be used, when authorized by the NRC, if the licensee demonstrates (1) the proposed alternatives would provide an acceptable level of quality and safety, or (2) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

The applicable ASME OM Code of Record for the IST program at Comanche Peak Unit 1 is the 2004 Edition through 2006 Addenda (Omb-2006) of the ASME OM Code.

3.0 TECHNICAL EVALUATION

3.1 The Licensee's Proposed Alternative

Applicable ASME OM Code Requirements

The IST requirements of the ASME OM Code as incorporated by reference in 10 CFR 50.55a related to this alternative request are as follows:

ASME OM Code, Subsection ISTA, "General Requirements," paragraph ISTA-3120, "Inservice Test Interval," subparagraph (a), which states:

The frequency for inservice testing shall be in accordance with the requirements of Section IST.

ASME OM Code, Subsection ISTC, "Inservice Testing of Valves in Light-Water Reactor Nuclear Power Plants," paragraph ISTC-5221, "Valve Obturator Movement," subparagraph (c)(3), states, that for check valves

At least one valve from each group shall be disassembled and examined at each refueling outage; all valves in each group shall be disassembled and examined at least once every 8 yr.

ASME OM Code, Mandatory Appendix I, "Inservice Testing of Pressure Relief Devices in Light-Water Reactor Nuclear Power Plants," paragraph I-1320, "Test Frequencies, Class 1 Pressure Relief Valves," subparagraph (a), "5-Year Test Interval," states:

Class 1 pressure relief valves shall be tested at least once every 5 years, starting with initial electric power generation. No maximum limit is specified for the number of valves to be tested within each interval; however, a minimum of 20% of the valves from each valve group shall be tested within any 24-month interval. This 20% shall consist of valves that have not been tested during the current 5-year interval, if they exist. The test interval for any individual valve shall not exceed 5 years.

ASME OM Code, Mandatory Appendix I, paragraph I-1350, "Test Frequency, Classes 2 and 3 Pressure Relief Valves," subparagraph (a), "10-year Test Interval," states:

Classes 2 and 3 pressure relief valves, with the exception of PWR [pressurized water reactor] main steam safety valves, shall be tested every 10 years, starting with initial electric power generation. No maximum limit is specified for the number of valves to be tested during any single plant operating cycle; however, a minimum of 20% of the valves from each valve group shall be tested within any 48-month interval. This 20% shall consist of valves that have not been tested during the current 10-year test interval, if they exist.

The test interval for any individual valve shall not exceed 10 years. PWR main steam safety valves shall be tested in accordance with I-1320.

Reason for Request

Due to the COVID-19 virus pandemic and in an effort to comply with the Centers for Disease Control and Prevention guidance, the licensee requested this one-time alternative associated with performing certain check valve and relief valve testing. The licensee stated that this alternative request demonstrates that there is reasonable assurance that the operational readiness of each identified valve will be maintained through the next refueling outage currently scheduled for the spring of 2022 (1RF22). The licensee's technical justification utilizes available detailed data from the most recent valve test, and a review of the maintenance history for each valve. The licensee stated that this provides the technical justification necessary to show that the proposed alternative is acceptable, and that deferral of the testing in 2020 will not result in an adverse consequence to safety.

Proposed Alternative

The licensee requested a one-time extension to the next refueling outage of the IST program examination interval for the four specific check valves and the IST program testing interval for the nine specific relief valves at Comanche Peak Unit 1 specified in Table 1 of the submittal. Table 1 also describes the basis for the alternative for each valve.

With respect to the check valves listed in its submittal, the licensee proposed, in lieu of the ASME OM Code, Appendix I, paragraph ISTC-5221(c)(3) requirement, to alternatively defer the disassembly and examination of the check valves to the next refueling outage.

With respect to the relief valves listed in its submittal, the licensee proposed the following:

- In lieu of the ASME OM Code, Appendix I, paragraph I-1350(a) requirements to alternatively extend the interval of specific relief valve tests to 11 years and the minimum group test interval to 54 months.

- In lieu of the ASME OM Code, Appendix I, paragraph I-1320(a) requirements, to alternatively extend the interval of specific safety valve tests to 6 years and the minimum group test interval to 36 months.

3.2 NRC Staff Evaluation

The NRC staff has reviewed the historical performance data of the valves listed in the Table 1 provided with the licensee's proposed alternative.

In the proposed alternative, the licensee reported that its review of the maintenance and test history for the four specific check valves at Comanche Peak Unit 1 showed that the valves had no deficiencies, adverse trends, or open maintenance work orders identified that would impact or degrade each valve's performance capability and exclude it from this interval extension request. The licensee reported that the most recent two disassembly examinations for each of the specific check valves at Comanche Peak Unit 1 verified that the valve internals were structurally sound, and the visual inspection of the valve body, disc, and seat were completed with satisfactory results. The licensee proposed that these results support an extension of the disassembly examination test interval for these check valves.

The licensee reported that the seven MSSVs specified in its request are part of a 20-member valve group that is tested in accordance with ASME OM Code, Mandatory Appendix I, subparagraph I-1320(a), which requires a 5-year test interval with a 20 percent sample of the valves in the group to be tested every 24 months. The licensee indicated that over the last two 5-year testing cycles for the 20-member valve group, no additional valves were required to be tested by the acceptance criteria in ASME OM Code, Mandatory Appendix I, subparagraph I-1320(c). Of the valves in this 20-member valve group that needed adjustment based on the as-found values, the licensee reported that extrapolation of the setpoint drift would not have reached the as-left acceptance criteria for any of these valves. For these valves listed in the proposed alternative, the licensee had not identified any deficiencies, adverse trends, or maintenance work orders that would impact or degrade the valve's performance capability.

The licensee indicated that two of the relief valves listed in the proposed alternative are tested in accordance with ASME OM Code, Mandatory Appendix I, paragraph I-1350(a), which requires a 10-year test interval with 20 percent sample of the valves in the group to be tested every 48 months. With respect to relief valve 1DO-0111, the licensee reported that this valve has performed consistently during the last two successive tests without the need for adjustment with a set pressure drift of only 1 pound per square inch over a 9-year interval. With respect to relief Valve 1-8855A, the licensee reported that this relief valve has performed consistently over the previous test interval with virtually no set point drift. For these valves listed in the proposed alternative, the licensee had not identified any deficiencies, adverse trends, or maintenance work orders that would impact or degrade the valve's performance capability.

The NRC staff has determined that the valves listed in Table 1 of the proposed alternative have had satisfactory performance history and no deficiencies were identified, nor any adverse trends or maintenance work orders that could impact or degrade the valves performance. Requiring the valves listed in Table 1 of the proposed alternative to be tested within their specified intervals with limited personnel resources due to the circumstances of the pandemic situation represents a hardship or unusual difficulty without a compensating increase in the level of quality and safety.

4.0 CONCLUSION

As set forth above, the NRC staff concludes that proposed Alternative V-3 will provide reasonable assurance that the specified check valves and relief valves at Comanche Peak Unit 1 are operationally ready to perform their safety functions until the next refueling outage currently scheduled for the spring of 2022. The NRC staff finds that compliance with the specified requirements in the ASME OM Code would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Accordingly, the NRC staff concludes that the licensee has adequately addressed the regulatory requirements set forth in 10 CFR 50.55a(z)(2). If the licensee identifies a performance issue with any of these check valves or relief valves, the licensee will be expected to take action to implement the requirements of its technical specifications. This authorization will remain in effect until restart from the next refueling outage for Comanche Peak Unit 1 in the spring of 2022. The licensee's disassembly and examination plans for the specified check valves and testing plans for the specified relief valves may be adjusted as appropriate by any subsequent NRC-authorized alternative requests.

All other requirements in the ASME OM Code for which relief was not specifically requested and approved in this request remains applicable.

Principal Contributors: Jason Huang, NRR

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DATED FEBRUARY 8, 2021

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| OFFICE | NRR/DORL/LPL4/PM* | NRR/DORL/LPL4/LA* | NRR/DEX/EMIB/BC* |
| NAME | DGalvin | PBlechman | ABuford |
| DATE | 02/05/2021 | 02/03/2021 | 12/11/2020 |
| OFFICE | NRR/DORL/LPL4/BC* | | |
| NAME | JDixon-Herrity | | |
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