



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

September 14, 2018

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 – REQUEST FOR  
ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT  
REQUEST TO REVISE TECHNICAL SPECIFICATION 3.8.4, "DC SOURCES -  
OPERATING," CONDITION B (**EXIGENT CIRCUMSTANCES**)  
(EPID L-2018-LLA-0238)

Dear Mr. Peters:

By letter dated September 5, 2018 (Agencywide Documents Access and Management System Accession No. ML18250A186), Vistra Operations Company LLC (Vistra OpCo, the licensee), requested an amendment to Facility Operating License No. NPF-87 for Comanche Peak Nuclear Power Plant, Unit No. 1 (CPNPP Unit 1). The proposed license amendment would revise Technical Specification (TS) 3.8.4, "DC [Direct Current] Sources – Operating," by adding a new REQUIRED ACTION to Condition B and an extended COMPLETION TIME (CT), on a one-time basis to repair two affected battery cells on the CPNPP Unit 1, Train B safety-related batteries.

Specifically, the licensee requested a one-time change to the TS CT for each of the CPNPP Unit 1 Train B safety-related batteries (BT1ED2 and BT1ED4) during CPNPP Unit 1 Cycle 20, from 2 hours to 18 hours. The proposed new REQUIRED ACTION B.2 provides up to an 18-hour CT to replace cell 27 in battery BT1ED2 and up to an 18-hour CT to replace cell 41 in battery BT1ED4 (not at the same time).

In Attachment 2 of the license amendment request, the licensee provided a list of commitments. The U.S. Nuclear Regulatory Commission (NRC) staff has determined that implementation of the commitments is necessary to ensure that the battery cell replacement activities will not be planned or performed during times of potential electrical grid instability and to ensure that risk is appropriately managed. Therefore, if the amendment is approved, the NRC staff intends to elevate all the commitments into conditions of the license by incorporation into the proposed NOTE in TS 3.8.4, REQUIRED ACTION B.2. Please provide a revised TS page accordingly.

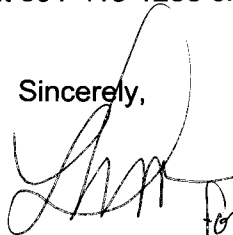
These proposed license conditions were discussed with Mr. Corbin of your staff on September 13, 2018. In order to support the issuance of the safety evaluation in a timely fashion, Vistra OpCo should review the list of commitments in Attachment 2 of the license

amendment request to prevent any unintended consequences of their use as license conditions and confirm Vistra OpCo's understanding and acceptance of these conditions. It should be noted, however, that the acceptance does not constitute completion of the NRC staff's review or approval of the proposed license amendment.

Additionally, as a result of our review, the NRC staff finds that additional information is needed as set forth in the enclosure to this letter. Your staff has indicated that a response to these questions can be provided by September 18, 2018.

If you have any questions, please call me at 301-415-1233 or via e-mail at [Margaret.O'Banion@nrc.gov](mailto:Margaret.O'Banion@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read 'Margaret W. O'Banion', with a stylized flourish at the end.

Margaret W. O'Banion, Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-445

Enclosure:  
Request for Additional Information

cc: Listserv

REQUEST FOR ADDITIONAL INFORMATION  
REGARDING EXIGENT LICENSE AMENDMENT REQUEST TO REVISE TECHNICAL  
SPECIFICATION 3.8.4, "DC SOURCES – OPERATING," CONDITION B  
VISTRA OPERATIONS COMPANY LLC  
COMANCHE PEAK NUCLEAR POWER PLANT, UNIT NO. 1  
DOCKET NO. 50-445

By letter dated September 5, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18250A186), Vistra Operations Company LLC (the licensee), requested an amendment to Facility Operating License No. NPF-87 for Comanche Peak Nuclear Power Plant, Unit No. 1 (CPNPP Unit 1). The proposed license amendment would revise Technical Specification (TS) 3.8.4, "DC [Direct Current] Sources – Operating," by adding a new REQUIRED ACTION to Condition B, to extend the COMPLETION TIME (CT) on a one-time basis to repair two affected battery cells on the CPNPP Unit 1, Train B safety-related batteries.

Specifically, the licensee requested a one-time change to the TS CT for each of the CPNPP Unit 1 Train B safety-related batteries (BT1ED2 and BT1ED4) during CPNPP Unit 1 Cycle 20, from 2 hours to 18 hours. The proposed new REQUIRED ACTION B.2 provides up to an 18-hour CT to replace cell 27 in battery BT1ED2 and up to an 18-hour CT to replace cell 41 in battery BT1ED4 (not at the same time).

The U.S. Nuclear Regulatory Commission (NRC) staff requires additional information to complete its review of this request, as detailed below:

**Request for Additional Information (RAI) 1**

Criterion 17 (GDC 17), "Electric power systems," of Appendix A, "General Design Criteria [GDC] for Nuclear Power Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, requires, in part, that:

The onsite electric power supplies, including the batteries, and the onsite electric distribution system, shall have sufficient independence, redundancy, and testability to perform their safety functions assuming a single failure.

Section 50.63, "Loss of all alternating current power," of 10 CFR, paragraph (a)(1), states, in part, that each light-water-cooled nuclear power plant licensed to operate "must be able to withstand for a specified duration and recover from a station blackout [SBO]..."

Section 8B, "Station Blackout," of the CPNPP Final Safety Analysis Report (FSAR), as updated, states in part, that the licensee complies with SBO requirements by having the batteries as an independent alternating current power source for up to 4 hours by using Class 1E batteries (i.e., both Train A and B batteries) based on the loading requirements specified in FSAR Table 8.3-4, "125-Vdc Class 1E Battery Load Requirements."

Enclosure

In Section 3.1.2, "Battery Cell Replacement Discussion," of the license amendment request (LAR), the licensee states in part, that "[e]ven though the affected battery is inoperable due to the disassembly of seismic bracing, the battery will remain connected and available for approximately 16 hours of the requested 18 hour COMPLETION TIME. For the planned activity, unavailability is limited to approximately 2 hours and is equivalent to the existing 2 hour COMPLETION TIME for TS 3.8.4 REQUIRED ACTION B.1."

The LAR does not appear to address how the SBO 4-hour coping time requirements will be met, as specified in the FSAR, during the proposed extended CT for each battery.

Address how the SBO 4-hour coping requirements will be met, as specified in CPNPP FSAR Table 8.3-4, during the duration of the requested CT if an SBO event occurs at CPNPP Unit 1. In addition, identify how the structures, systems, and components (SSCs) will meet the associated FSAR battery loading requirements and describe any additional compensatory measures that will be used to ensure the SSCs will meet the associated FSAR battery loading requirements.

## **RAI 2**

Attachment 2 to the LAR contains Regulatory Commitment 5, which addresses the proposed actions to be taken should severe weather conditions be anticipated prior to the scheduled battery cell replacement or if a severe thunderstorm warning or tornado warning is issued after entering TS 3.8.4, REQUIRED ACTION B.2. The commitment states in part:

Battery cell replacement will not be scheduled if severe weather conditions are anticipated.

If a Severe Thunderstorm Warning or Tornado Warning is issued per ABN 907... after entry into TS 3.8.4 proposed REQUIRED ACTION B.2, then exit TS 3.8.4 proposed REQUIRED ACTION B.2 and enter TS 3.8.4 REQUIRED ACTION D.1 (Be in MODE 3 within 6 hours) and TS 3.8.4 REQUIRED ACTION D.2 (Be in MODE 5 within 36 hours).

While Regulatory Commitment 5 addresses that the battery cell replacement will not be scheduled if severe weather conditions are anticipated, the commitment does not address if the licensee will enter TS 3.8.4, proposed REQUIRED ACTION B.2, if severe weather conditions are anticipated.

Justify why the actions described in Regulatory Commitment 5 do not address why the licensee would not enter TS 3.8.4, proposed REQUIRED ACTION B.2, if severe weather conditions are anticipated.

Also, clarify why the actions described in Regulatory Commitment 5 do not address actions necessary if severe thunderstorm and tornado watches are issued.

## **RAI 3**

Attachment 2 of the LAR contains Regulatory Commitment 5, which addresses the proposed actions to be taken should a severe thunderstorm or tornado warning be issued after entering TS 3.8.4, proposed REQUIRED ACTION B.2. The commitment states, in part:

- TS 3.8.4 proposed REQUIRED ACTION B.2 is entered and battery cell replacement begins.
- One hour after entering TS 3.8.4 proposed REQUIRED ACTION B.2 a Tornado Warning is issued for Somervell County, the county where Comanche Peak is located.
- At that one-hour point TS 3.8.4 proposed REQUIRED ACTION B.2 is exited and TS 3.8.4 REQUIRED ACTIONS D.1 and D.2 are entered.
- One hour after exit from TS 3.8.4 proposed REQUIRED ACTION B.2 and entry into TS 3.8.4 REQUIRED ACTIONS D.1 and D.2, the Tornado Warning for Somervell County is cancelled and forecasts predict no further severe weather.
- TS 3.8.4 REQUIRED ACTIONS D.1 and D.2 are exited and TS 3.8.4 proposed REQUIRED ACTION B.2 is re-entered with 16 hours remaining to complete battery cell replacement.

In addition, Attachment 2 of the LAR, contains Regulatory Commitment 6, which addresses the proposed actions to be taken to ensure the local grid is stable and no anticipated challenges have been identified. Regulatory Commitment 6 states, in part:

Similar to the example described in severe weather above, if TS 3.8.4 REQUIRED ACTIONS D.1 and D.2 are entered due to an item (6.a, b, c, or d) above not being met and the items are subsequently met, then TS 3.8.4 REQUIRED ACTIONS D.1 and D.2 will be exited and TS 3.8.4 proposed REQUIRED ACTION B.2 will be re-entered and battery cell replacement will continue until completed or 18 hours from initial entry into TS 3.8.4 proposed REQUIRED ACTION B.2.

The proposed language in the commitments above appear to conflict with the wording in the NOTE in TS 3.8.4, proposed REQUIRED ACTION B.2, as stated below:

Required Action B.2 is applicable for a one-time basis to replace cell 27 in battery BT1ED2 and cell 41 in battery BT1ED4 during Unit 1 Cycle 20 (not at the same time). If the second battery on the same train becomes inoperable, immediately initiate Required Actions D.1 and D.2.

The proposed language in the NOTE specifies a one-time usage of TS 3.8.4, proposed REQUIRED ACTION B.2 to replace each cell in batteries BT1ED2 and BT1ED4. Commitments 5 and 6 indicate that TS 3.8.4, proposed REQUIRED ACTION B.2 can be entered, exited, and re-entered based on severe weather and grid instability.

Clarify the apparent discrepancy between Regulatory Commitments 5 and 6 and the NOTE in proposed TS 3.8.4 REQUIRED ACTION B.2. In addition, explain why the proposed NOTE allows re-entry into TS 3.8.4, REQUIRED ACTION B.2 or revise the NOTE, if necessary.

#### **RAI 4**

Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to include TSs as part of the license. The regulations in 10 CFR Part 50.36, "Technical specifications," require, in part, that the operating license of a nuclear production facility include TSs. The regulations in 10 CFR 50.36(c)(2) require that the TSs include limiting conditions for operation (LCOs), which are the lowest functional capability or performance levels of equipment

required for safe operation of the facility. When an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TSs until the condition can be met.

In Section 3.1.2, "Battery Cell Replacement Discussion," of the LAR, the licensee states in part:

Even though the affected battery is inoperable due to the disassembly of seismic bracing, the battery will remain connected and available for approximately 16 hours of the requested 18 hour COMPLETION TIME. For the planned activity, unavailability is limited to approximately 2 hours and is equivalent to the existing 2 hour COMPLETION TIME for TS 3.8.4 REQUIRED ACTION B.1.

The proposed language in TS 3.8.4, REQUIRED ACTION B.2 NOTE does not discuss the need to enter TS 3.8.4, REQUIRED ACTIONS D.1 and D.2 if batteries BT1ED2 and BT1ED4 are unavailable for greater than 2 hours each. Explain why the proposed NOTE does not have this provision and revise the NOTE, if necessary.

#### **RAI 5**

GDC 17, "Electric power systems," of Appendix A to 10 CFR Part 50, requires, in part, that:

An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

The onsite electric power supplies, including the batteries, and the onsite electric distribution system, shall have sufficient independence, redundancy, and testability to perform their safety functions assuming a single failure.

As quoted above in RAI 4, the licensee describes in Section 3.1.2 of the LAR that the affected battery will be inoperable due to the disassembly of seismic bracing during the extended CT, but the battery will be available for 16 hours of the requested 18-hour CT. The licensee further states that unavailability of the batteries will be limited to 2 hours, which is equivalent to the existing 2-hour CT for TS 3.8.4, REQUIRED ACTION B.1.

In addition, in Section 3.1.4, "Defense in Depth Considerations," of the LAR, the licensee states that "[t]he extension of the CT has no impact on the current safety analysis because the remaining OPERABLE batteries are still available to perform their safety functions while in this TS action."

Please provide a discussion explaining: (1) what scenarios and failures the licensee has evaluated, and (2) whether the licensee has established plant procedures, or will develop temporary plant procedures to address potential consequences to the plant in the event of a design-basis event or an anticipated operational occurrence.

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 (EPID L-2018-LLA-0238) DATED SEPTEMBER 14, 2018

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**ADAMS Accession No. ML18256A257****\*by e-mail**

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NAME	MO'Banion	PBlechman	JQuichocho
DATE	9/14/18	9/14/18	9/14/18
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