



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION I  
2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PA 19406-2713

August 16, 2018

Mr. Richard Bologna  
Site Vice President  
FirstEnergy Nuclear Operating Company  
Beaver Valley Power Station  
P.O. Box 4, Route 168  
Shippingport, PA 15077

SUBJECT: BEAVER VALLEY POWER STATION, UNIT NO. 2 [NOED No. 18-1-01]

Dear Mr. Bologna:

By letter dated August 15, 2018, you requested that the U.S. Nuclear Regulatory Commission (NRC) exercise discretion not to enforce compliance with the actions required in Technical Specification (TS) 3.8.4, "DC Sources - Operating" and TS 3.8.9 "Distribution Systems – Operating" for Beaver Valley Power Station (BV), Unit 2. Your letter documented information previously discussed with the NRC during a telephone conference held on August 13, 2018, at 11:30 EDT, with subsequent approval verbally granted by John Giessner, NRC Region I Acting Deputy Regional Administrator, at 12:03 EDT.

Your letter stated that a loss of the 2-9P 480V bus occurred due to a trip of its 4kV feeder bus at 01:58 on August 12, 2018. The loss of the 2-9P 480V bus resulted in the loss of the B train battery charger and B train AC vital bus electrical power distribution subsystem. At 03:58 on August 12, 2018, the required actions for TS 3.8.4 and 3.8.9 could not be accomplished and as a result, your staff appropriately performed a reactor shutdown. BV Unit 2 TS 3.8.4 states, "The Train A and Train B DC electrical power subsystems shall be OPERABLE." D.2 requires that if a DC electrical subsystem cannot be restored the unit will be placed in Mode 3 in six hours and in Mode 5 within 36 hours. BV Unit 2 TS 3.8.9 states, "Train A and Train B AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE." D.2 requires that if an electrical subsystem cannot be restored the unit will be placed Mode 3 in six hours and in Mode 5 within 36 hours. Therefore, the completion time expiration for restoration of the train, or to be in Mode 5 was at 15:58 EDT on August 13, 2018.

You were able to determine that the trip of the 4kV feeder breaker to the 2-9P bus was due to a failed relay (50-VF-211C). This relay was replaced and a successful post-maintenance test was performed at 13:59 EDT on August 12, 2018. The restoration of the electrical subsystem required restoring the B train batteries to full charge. Completion of charging the batteries to full charge was expected to take longer than the allowed technical specification completion time to be in Mode 5. You determined that a full charge on the B train batteries could be completed within 18 hours of the required completion time.

On August 13, 2018 at approximately 05:30, you notified the resident inspector of the potential request for this NOED. On August 13, 2018, at 11:30 am, you verbally requested that a Notice of Enforcement Discretion (NOED) be issued pursuant to the NRC's policy regarding the exercise of enforcement discretion for an operating facility as detailed in the NRC Enforcement Policy and

NRC Inspection Manual Chapter (IMC) 0410, "Notices of Enforcement Discretion," dated March 13, 2013. You requested that the NOED be in effect from 15:58 EDT, end of the TS allowed outage time, on August 13, 2018, until the restoration of the B train batteries to full charge, but not to exceed 09:58 EDT on August 14, 2018. You stated that the request satisfied Section 3.0.3(b) of IMC 0410 in that compliance with this TS would result in an unnecessary cooldown and shutdown transient of the reactor without a corresponding public health and safety benefit.

This letter documents our telephone conversations on August 13, 2018, at 11:30 EDT, as well as our verbal granting of this NOED at 12:03 on August 13, 2018. The principal staff members who participated in this telephone conferences, which met the minimum NRC staffing requirement for considering an NOED request, are noted in Enclosure 1. This letter also documents that the staff confirmed that your August 15, 2018, letter (ML18227A044) was consistent with the NOED request made verbally on August 13, 2018.

During the teleconference on August 13, 2018, and as further elaborated in your August 15, 2018, letter, your staff indicated that from a risk perspective, it was beneficial to remain in Mode 4 instead of transitioning to Mode 5, since the additional time until TS requirements were met did not result in a more than minimal increase in radiological risk, or involve adverse consequences to the environment. Your staff performed a quantitative risk assessment and determined that the risk was within normal work control levels (Incremental Conditional Core Damage Probability (ICCDP) less than or equal to  $5E-07$ ). Based on actual plant conditions, your staff estimated the ICCDP to be  $1.5E-07$  for the requested duration of the NOED, and the Incremental Conditional Large Release Probability (ICLERP) to be below  $5E-08$ . Both of these risk estimates were below the thresholds established by NRC IMC 0410. Additionally, your staff stated that the estimated ICCDP and ICLERP values did not take into account conservatism associated with compensatory actions discussed below that would be put in place during the period of enforcement discretion. The results of your staff's quantification were independently corroborated by NRC risk analysts and were confirmed to be within the guidance thresholds in NRC IMC 0410.

While the B train batteries were inoperable, your staff stated that the following actions would be implemented to reduce the risk associated with the plant configuration during the period of the enforcement discretion: 1) protecting the A train batteries and battery chargers, and all discretionary yellow risk or greater work was placed on hold; 2) flex equipment and spare battery chargers were staged and procedures were available; 3) the steam driven auxiliary feedwater pump was protected and the operators briefed on local manual operation of the auxiliary feedwater throttle valves; and 4) operators were briefed on the procedures for the station blackout cross-tie between units. In addition you stated that no discretionary switchyard activities would occur during the enforcement discretion. These additional compensatory risk management measures remained in place during the period of the NOED and were independently verified to be in place by the NRC resident inspectors.

The BV Plant Operations Review Committee (PORC) reviewed and concurred with the NOED request. During the telephone call on August 13, 2018, you stated, and the NRC acknowledged, that this was a one-time request for enforcement discretion of the required completion time for the B train batteries to become fully charged. Your staff stated that a follow-up license amendment request would not be pursued.

Based on the NRC's staff's evaluation of your request, the NRC concluded that you have adequately addressed all of the criteria in IMC 0410 which demonstrates that granting this NOED was consistent with the NRC's Enforcement Policy. Specifically, based on the risk evaluations

performed by FirstEnergy Nuclear Operating Company and the NRC, as well as the compensatory measures put in place during the NOED, the staff concludes that granting the NOED would not adversely affect public health and safety, or the common defense and security, or involve adverse consequences to the environment. Therefore, as communicated to your staff at 12:03 EDT on August 13, 2018, the NRC exercised discretion not to enforce compliance with TS 3.8.4 and TS 3.8.9, for an additional period of 18 hours, which would have expired at 09:58 EDT on August 14, 2018. Due to the successful completion of a full charge of the B batteries ahead of schedule and compliance with Technical Specifications 3.8.3 and 3.8.9, this NOED was terminated at 22:53 EDT on August 13, 2018, after an elapsed time of just under 7 hours, and in advance of the staff's issuance of this letter.

In addition, as discussed on August 13, 2018, the NRC staff agreed with your determination that a follow-up TS amendment is not necessary. The staff finds that a TS amendment (either temporary or permanent) needed for circumstances similar to those addressed by the NOED is not necessary because it involves a non-recurring non-compliance and only involves a single request for enforcement discretion beyond the required TS completion time to allow for restoration of inoperable batteries.

As stated in the NRC Enforcement Policy, action will be taken, to the extent that any violation was involved, for the root cause that led to the noncompliance for which this NOED was necessary.

Sincerely,

*/RA/*

John B. Giessner  
Acting Deputy Regional Administrator

Docket No.: 50-412  
License No.: NPF-73

Enclosure 1:  
Key NRC staff participants in the NOED evaluation

cc w/encl: Distribution via ListServ

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### **Key NRC staff participants in the NOED evaluation**

- John Giessner, Acting Deputy Regional Administrator, Region I
- Raymond Lorson, Director, Division of Reactor Projects (DRP), Region I
- David Pelton, Deputy Director, Division of Reactor Projects (DRP), Region I
- Matthew Young, Branch Chief, DRP, Region I
- Frank Arner, Senior Reactor Analyst, DRS, Region I
- Stacey Horvitz, Resident Inspector, Beaver Valley Power Station, Region I
- Joseph Giitter, Division Director, Division of Operating Reactor Licensing (DORL), Office of Nuclear Reactor Regulation (NRR)
- James Danna, Branch Chief, DORL
- Jennifer Tobin, Beaver Valley Project Manager, DORL
- Booma Venkataraman, NOED Process Expert, Division of Policy and Rulemaking
- Brandon Hartle, NOED Probability Risk Assessment Engineer, Division of Risk Assessment
- Jesse Quichocho, Branch Chief, Division of Engineering
- Victor Cusumano, Branch Chief, Division of Safety Systems (DSS)
- Roy Matthew, Senior Electrical Engineer, NRR