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

March 15, 2018

LICENSEE: FirstEnergy Nuclear Operating Company

FACILITY: Perry Nuclear Power Plant, Unit 1

SUBJECT: SUMMARY OF FEBRUARY 21, 2018, PUBLIC MEETING WITH FIRSTENERGY NUCLEAR OPERATING COMPANY REGARDING A PROPOSED REVISION TO THE PERRY NUCLEAR POWER PLANT, UNIT 1, FIRE PROTECTION PROGRAM (EPID L-2018-LRM-0011)

The U.S. Nuclear Regulatory Commission (NRC) conducted a Category 1 public meeting with representatives of FirstEnergy Nuclear Operating Company (FENOC or the licensee) on February 21, 2018. The purpose of the meeting was to discuss a proposed license amendment request (LAR) to revise the Perry Nuclear Power Plant, Unit 1 (PNPP), Fire Protection Program (FPP).

The meeting notice can be found in the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML18038B281. The meeting notice is also posted on the NRC public website. The attendance list for the meeting is enclosed. FENOC's presentation handout is available at ADAMS Accession No. ML18054B600.

The licensee presented an overview of the proposed LAR and the regulatory bases for the request. During the meeting, FENOC described the general area heat detection system that exists in the drywell. The licensee indicated that the heat detection system is degraded due to high temperatures in the drywell area which is causing spurious signals to the main control room. To preclude the spurious signals, FENOC informed that it has installed temporary modifications (e.g., jumpering of cables) and employed supplemental actions (e.g., hourly readings of temperatures from the drywell cooling and containment atmosphere monitoring systems) to compensate for the heat detection system degraded condition.

FENOC reviewed the regulatory bases for the PNPP FPP. FENOC stated that the FPP was reviewed under NUREG-0800, Section 9.5-1, "Fire Protection Program"; Branch Technical Position (BTP) Chemical Engineering Branch (CMEB) 9.5-1, "Guidelines for Fire Protection for Nuclear Power Plants"; and Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix R, "Fire Protection Program for Nuclear Power Facility Operating Prior to January 1, 1979." However, PNPP is not a 10 CFR 50, Appendix R, plant because its operating license was issued in March 1986. FENOC stated that PNPP's operating license contains the standard fire protection license condition 2.C.(6):

> FENOC may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

FENOC has conducted an engineering evaluation and has concluded that the function of the drywell general area fire detection is no longer required, and plans to submit a request to the

NRC to have the detection removed from the approved FPP. FENOC has determined that the proposed change (i.e., abandon the drywell general area heat detectors) is not in compliance with BTP CMEB 9.5-1; therefore, FENOC concluded that NRC approval of the change to the FPP is needed. The NRC staff clarified that the BTP is guidance, and that Perry must meet its license condition; therefore, if FENOC determines that the change adversely affects FENOC's ability to achieve and maintain safe shutdown, then submittal of the LAR to the NRC for approval would be appropriate.

FENOC made reference to Regulatory Guide 1.189, "Fire Protection for Nuclear Power Plants," which reiterates the standard license condition wording regarding "adverse effect." FENOC also referenced Nuclear Energy Institute (NEI) 02-03, "Guidance for Performing a Regulatory Review of Proposed Changes to the Approved Fire Protection Program," which provides guidance for determining whether prior NRC approval is required for changes to the approved FPP. According to NEI 02-03, an example that could require NRC approval is removing heat detection systems from areas having low combustible loading because the evaluation demonstrates that fire damage would be limited to a single post-fire safe shutdown train. The NRC staff indicated that a statement in the LAR about whether there are any exemptions associated with the PNPP FPP will be helpful to the staff for its review.

FENOC described the design of the drywell fire protection system and features including the amount of combustibles contained within the drywell and the fire rating of structures and components in the area. The drywell contains two heat detection systems—one system has fire warning and local suppression in the area of the reactor recirculation pumps, and the second system is a heat detection system for the general area and consists of 39 fixed temperature heat detectors. The detection and suppression system for the reactor recirculation pumps will remain in place. FENOC is proposing abandonment of only the general area heat detectors.

FENOC evaluated the proposed change and provided the following technical justifications. The installation of the fire detection system and automatic suppression system was not credited to protect the safe shutdown components and circuits. If a fire was detected in the drywell during normal operation, the time it would take to safely shutdown the plant and enter the drywell (approximately 6 hours) would exceed the burn time associated with the drywell combustible loading. Therefore, the plant response time to respond to an alarm or equipment failure would be about the same with or without the drywell general area heat detection. FENOC provided additional justification including most of the combustible material is located in the area of the reactor recirculation pumps, and the cable insulation, which is a large part of the combustible material in the drywell fire zone, is contained in conduit; therefore, extensive damage from a fire is not reasonably expected. FENOC concludes that the change is technically acceptable. The NRC staff indicated that inclusion in the LAR of the amount of combustible material and ignition sources within the drywell in the will be helpful to the staff for its review.

FENOC currently plans to submit the LAR in April 2018. No regulatory decisions or commitments were made during the meeting. The public was invited to observe the meeting and was given an opportunity to communicate with the NRC during the public meeting before adjourning. Two members of the public provided comments during the meeting. Specifically, both commenters expressed concern about the degraded cables. One member of the public also expressed concern about the compensatory measures being employed and the bounding approach FENOC is using to justify the proposed abandonment of the drywell general area heat detectors. The NRC staff responded to the questions at the meeting and provided contact information if the members of the public wanted to follow-up or ask additional questions on the topic of this meeting and proposed LAR.

Please direct any inquiries to me at 301-415-1627, or Kimberly.Green@nrc.gov.

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Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosure:
List of Attendees

cc: Listserv

LIST OF ATTENDEES

FEBRUARY 21, 2018, PUBLIC MEETING WITH

FIRSTENERGY NUCLEAR OPERATING COMPANY

REGARDING A PROPOSED REVISION TO THE FIRE PROTECTION PROGRAM

PERRY NUCLEAR POWER PLANT, UNIT 1

Name	Affiliation
Kimberly Green	U.S Nuclear Regulatory Commission (NRC)
Daniel Frumkin	NRC
Naeem Iqbal	NRC
Phil Lashley	FirstEnergy Nuclear Operating Company (FENOC)
Jim Emley	FENOC
Marc Kuntz	FENOC
Aaron Cyphert	FENOC
Michael Koberling	FENOC
Tom Lentz	FENOC
Jeff Haddick	FENOC
Matthew Murtha	FENOC (Davis-Besse)
Gregory Richardson	Engineering Planning and Management, Inc. (EPM)
Michael Szkutak	EPM
Pat Marida	Sierra Club, Ohio Chapter
Michael Keegan	Don't Waste Michigan

Enclosure

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ADAMS Accession No. Meeting Summary ML18065A139 PKG ML18065A246
Meeting Notice ML18038B281 Slides ML ML18054B600

OFFICE	DORL/LPL3/PM	DORL/LPL3/LA	DRA/APLB/BC	DORL/LPL3/BC	DORL/LPL3/PM
NAME	KGreen	SRohrer	GCasto	DWrona	KGreen
DATE	03/07/18	03/06/18	03/07/18	03/13/18	03/15/18

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