



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

March 15, 2019

Mr. David B. Hamilton  
Site Vice President  
FirstEnergy Nuclear Operating Company  
Perry Nuclear Power Station  
Mail Stop A-PY-A290  
P.O. Box 97, 10 Center Road  
Perry, OH 44081-0097

**SUBJECT: PERRY NUCLEAR POWER PLANT, UNIT NO. 1 – CORRECTION TO  
REQUEST FOR ALTERNATIVES RELATED TO INSERVICE TESTING  
PROGRAM FOR THE FOURTH 10-YEAR INSERVICE TESTING INTERVAL  
(EPID L-2018-LLR-0092, L-2018-LLR-0093, L-2018-LLR-0094,  
L-2018-LLR-0095, AND L-2018-LLR-0096)**

Dear Mr. Hamilton:

On February 25, 2019, the U.S. Nuclear Regulatory Commission (NRC) authorized the use of five alternative to certain inservice testing requirements of the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code) at Perry Nuclear Power Plant, Unit 1 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19029A090). This authorization was issued in response to FirstEnergy Nuclear Operating Company's (FENOC) request dated June 21, 2018, as supplemented by letter dated October 16, 2018 (ADAMS Accession Nos. ML18172A068 and ML18290A461).

During FENOC's review of the NRC's safety evaluation, it identified an error on page 14, associated with Request Number VR-1. The third paragraph reads:

The subject pneumatically operated valves have a safety function in ensuring control rod insertion during a reactor scram. Valve 1C11-126, scram exhaust valve, opens to vent the control rod drive piston to the scram discharge volume allowing control rod movement. Valve 1C11-127, scram inlet valve, opens to supply pressurized water to the bottom of the control rod drive piston which rapidly inserts the control rod into the reactor core.

The NRC staff inadvertently transposed the valve numbers associated with the valve names. Request Number VR-1 correctly refers to the scram inlet and exhaust valves as 1C11-126 and 1C11-127, respectively.

The proposed correction does not change any of the conclusions in the safety evaluation associated with the authorization of the alternatives. Enclosed, please find corrected safety evaluation page 14.

D. Hamilton

- 2 -

If you have any questions regarding this matter, I can be reached at (301) 415-1627 or [Kimberly.Green@nrc.gov](mailto:Kimberly.Green@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kimberly J. Green". The signature is fluid and cursive, with the first name being the most prominent.

Kimberly J. Green, Senior Project Manager  
Plant Licensing Branch III  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosure:  
Corrected Page 14 to the Safety Evaluation

cc: Listserv

ENCLOSURE

PERRY NUCLEAR POWER PLANT, UNIT NO. 1

FACILITY OPERATING LICENSE NPF-58

DOCKET NO. 50-440

ALTERNATIVES RELATED TO INSERVICE TESTING PROGRAM FOR THE FOURTH

10-YEAR INSERVICE TESTING INTERVAL

CORRECTED PAGE TO SAFETY EVALUATION

Similarly for check valves, subparagraph ISTC-3522(a), requires that Category C check valves be exercised during operation at power in a manner that verifies obturator travel by using the methods in paragraph ISTC-5221. It also states that if exercising is not practicable during operation at power or cold shutdowns, it shall be performed during refueling outages. Subparagraph ISTC-5221(a) states the necessary valve obturator movement during exercise testing shall be demonstrated by performing both an open and a close test.

The licensee proposed an alternative in lieu of these requirements for pneumatically-operated valves 1C11-126 and 1C11-127 as well as for check valves 1C11-114 and 1C11-115. Specifically, the licensee proposed (1) to test the valves at the rod scram test frequency identified in the plant TSs, and (2) to identify valve degradation by verifying that control rods meet the scram insertion time limits defined in the plant TS in lieu of conducting valve stroke time tests.

The subject pneumatically operated valves have a safety function in ensuring control rod insertion during a reactor scram. Valve 1C11-127, scram exhaust valve, opens to vent the control rod drive piston to the scram discharge volume allowing control rod movement. Valve 1C11-126, scram inlet valve, opens to supply pressurized water to the bottom of the control rod drive piston which rapidly inserts the control rod into the reactor core. These valves are classified as Category B valves in accordance with the ASME OM Code. The subject check valves also have a safety function in ensuring control rod insertion during a reactor scram. Valve 1C11-114, scram discharge header check valve, opens to allow water to pass from the control rod drive pistons to the scram discharge header. Valve 1C11-115, charging water header check valve, closes to prevent loss of water pressure in the event supply pressure to the scram accumulator is lost. These valves are classified as Category C valves in accordance with the ASME OM Code.

NUREG-1482, Revision 2 (ADAMS Accession No. ML13295A020), Section 4.4.6, states that for CRD system valves (which includes the four subject valves) for which testing could result in rapid insertion of one or more control rods, the rod scram test frequency identified in the facility's TS may be used as the valve testing frequency to minimize rapid reactivity transients and wear of the CRD mechanisms. It also states that the scram inlet and outlet valves are power-operated valves that full-stroke in milliseconds and are not equipped with indication for both positions and therefore, it may be impractical to measure their full-stroke time as required by the Code. Furthermore, it states that verifying that the associated control rod meets the scram insertion time limits defined in the plant's TSs can be an acceptable alternative method of detecting degradation of these valves. The NRC staff finds that the proposed alternative is consistent with the staff position in NUREG-1482, Revision 2; therefore, the alternative provides reasonable assurance of the operational readiness of the CRD valves and provides an acceptable level of quality and safety.

SUBJECT: PERRY NUCLEAR POWER PLANT, UNIT NO. 1 – CORRECTION TO REQUEST FOR ALTERNATIVES RELATED TO INSERVICE TESTING PROGRAM FOR THE FOURTH 10-YEAR INSERVICE TESTING INTERVAL (EPID L-2018-LLR-0092, L-2018-LLR-0093, L-2018-LLR-0094, L-2018-LLR-0095, AND L-2018-LLR-0096) DATED MARCH 15, 2019

**DISTRIBUTION:**

PUBLIC

RidsACRS\_MailCTR Resource

RidsNrrDorlLpl3 Resource

RidsNrrDeEmib Resource

RidsNrrLAIbetts Resource

RidsNrrPMPerry Resource

RidsRgn3MailCenter Resource

**ADAMS Accession No.: ML19072A085**

|        |                  |                  |                  |                  |
|--------|------------------|------------------|------------------|------------------|
| OFFICE | NRR/DORL/LPL3/PM | NRR/DORL/LPL3/LA | NRR/DORL/LPL3/BC | NRR/DORL/LPL3/PM |
| NAME   | KGreen           | IBetts           | DWrona           | KGreen           |
| DATE   | 03/14/19         | 03/14/19         | 03/15/19         | 03/15/19         |

**OFFICIAL RECORD COPY**