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

July 9, 2010

Mr. Mark B. Bezilla
Site Vice President
FirstEnergy Nuclear Operating Company
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 SAFETY EVALUATION RE: TECHNICAL SPECIFICATION CHANGE TO DIVISION 3 EMERGENCY DIESEL GENERATOR START TIME SURVEILLANCE REQUIREMENTS (TAC NO. ME1691)

Dear Mr. Bezilla:

By letter dated June 30, 2010, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML101690203), the U.S. Nuclear Regulatory Commission (NRC) issued Amendment No. 154 to Facility Operating License No. NPF-58 for the Perry Nuclear Power Plant (PNPP), Unit No. 1. The amendment modified the frequency portion of the start time acceptance criteria for the Division 3 Emergency Diesel Generator in response to your application dated June 30, 2009 (ADAMS) Accession No. ML091900387), as supplemented by letter dated May 24, 2010 (ADAMS Accession No. ML101590647).

Subsequently, your staff noted an error in the second paragraph of page 4 of the safety evaluation (SE) regarding the reference table that provides the parameters for containment isolation valves. The SE incorrectly referenced Table 6.2-22 of the PNPP Updated Final Safety Analysis Report (UFSAR) titled "Drywell Head Flow Path." Table 6.2-32, "Containment Isolation Valve Summary," of the UFSAR provides the parameters for containment isolations valves.

Enclosed is the revised version of page 4 of the SE. The incorrect information was editorial in nature. The line in the right margin indicates the area of correction. The correction does not affect the NRC staff's conclusions associated with the SE. Please substitute the revised page SE for the one originally provided. We regret any inconvenience this may have caused you.

Sincerely,

Araceli T. Billoch Colón

Araceli T. Billoch Colón, Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosure:
Revised SE

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Table 6.3-2 of the UFSAR titled "Operational Sequence of Emergency Core Cooling Systems for Design Basis Accident" summarizes the expected response of plant equipment required to mitigate the consequences of a design-basis accident. This table indicates that a motor-operated gate valve located outside the primary containment will reach the position required to deliver rated flow within 29 seconds following the initiation of an accident or safety injection signal. The HPCS system is capable of delivering rated flow into the reactor vessel within 27 seconds following receipt of an automatic initiation signal. However, the HPCS injection valve reaches full open position 29 seconds after receiving an accident signal.

Table 6.2-32, "Containment Isolation Valve Summary," provides a summary of parameters for containment isolation valves. According to this table, HPCS injection valve E22F004 has a stroke time of 16 seconds. Per this LAR, the licensee is requesting that HPCS EDG voltage and frequency (after 13 seconds) be 'at or above' 3900 V and 58.8 Hz. At this voltage and frequency, the stroke time may be longer than 16 seconds resulting in less time available for the EDG to start.

In a letter dated March 23, 2010 (ADAMS Accession No. ML100740652), the staff requested additional information (RAI) regarding the response time of the containment isolation valves at less than the nominal voltage and frequency. In response to the RAI, the licensee evaluated the stroke time of the HPCS valves, and concluded that the stroke time at 3900 V and 58.8 Hz would increase to 16.5 seconds due to the combined effects of the lower voltage and frequency (reference letter dated May 24, 2010, ADAMS Accession No. ML101590647). If the HPCS EDG takes 13 seconds to reach acceptable frequency and voltage, the total time for safety injection will be 29.5 seconds or 0.5 seconds longer than the accident analyses.

In the letter dated May 24, 2010, the licensee stated that there is margin in the actual stroke time of the existing valves. The slowest in-service test program open stroke time since 2001 was measured at 13.5 seconds, taken from control signal initiation to receipt of full open position indication. The surveillance procedure acceptance criterion for valve open stroke time is less than 15.4 seconds. The licensee also stated that the flow rates credited in the emergency core cooling system response time for LOCA can be achieved when gate valves used in the HPCS system are 80-percent open. Assuming a 13-second start time for the HPCS EDG to reach 3900 V and 58.8 Hz and allowing for the slower opening of the HPCS valves, the licensee has concluded that the accident credited flow rates can be achieved in 26.2 seconds from the initiation of an accident signal. Since this is less than the 29 second time delay assumed in the accident analyses, allowing a 13 second time delay to energize the HPCS pump, will not adversely impact the allowable time for the HPCS system to support the accident analysis allotted time of 29 seconds. The proposed change to SR 3.6.1.7 and related SRs identified in this LAR is, therefore, considered acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Ohio State official was notified of the proposed issuance of the amendment. The State official had no comments.

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Sincerely,

/RA/
Araceli T. Billoch Colón, Project Manager
Plant Licensing Branch III-2
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