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January 5, 2000

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Mr. John K. Wood
 Vice President - Nuclear, Perry
 FirstEnergy Nuclear Operating Company
 P.O. Box 97, A200
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SUBJECT: PERRY NUCLEAR POWER PLANT, UNIT 1 - ISSUANCE OF AMENDMENT
 RE: CHANGES TO OPERATING LICENSE APPENDIX B FOR *CORBICULA*
 SAMPLING REQUIREMENTS (TAC NO. MA6461)

Dear Mr. Wood:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 110 to Facility Operating License No. NPF-58 for the Perry Nuclear Power Plant, Unit 1 (PNPP). This amendment revises the PNPP Operating License, Appendix B, Environmental Protection Plan, in response to your application dated September 9, 1999 (PY-CEI/NRR-2406L).

This amendment eliminates the requirement to sample Lake Erie sediment for *Corbicula* in the Perry and Eastlake Plant areas. *Corbicula* and Zebra Mussels have already been identified and effective control and treatment plans have been implemented for both species.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,
 /RA/
 Douglas V. Pickett, Sr. Project Manager, Section 2
 Project Directorate III
 Division of Licensing Project Management
 Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosures: 1. Amendment No. 110 to License No. NPF-58
 2. Safety Evaluation
 cc w/encls: See next page

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J. Wood
FirstEnergy Nuclear Operating Company

Perry Nuclear Power Plant, Units 1 and 2

cc:

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

FIRSTENERGY NUCLEAR OPERATING COMPANY

DOCKET NO. 50-440

PERRY NUCLEAR POWER PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 110
License No. NPF-58

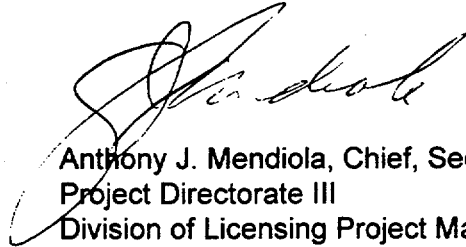
1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the FirstEnergy Nuclear Operating Company (the licensee) dated September 9, 1999, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to Appendix B, the Environmental Protection Plan as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-58 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. are hereby incorporated into this license. The FirstEnergy Nuclear Operating Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented not later than 30 days after issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Anthony J. Mendiola, Chief, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Environmental
Protection Plan

Date of Issuance: January 5, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 110

FACILITY OPERATING LICENSE NO. NPF-58

DOCKET NO. 50-440

Replace the following pages of the Appendix B Environmental Protection Plan with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

2-1
4-1

Insert

2-1
4-1

2.0 Environmental Protection Issues

In the FES-OL dated August 1982, the staff considered the environmental impacts associated with the operation of the two-unit Perry Nuclear Power Plant. Certain environmental issues were identified which required study or license conditions to resolve environmental concerns and to assure adequate protection of the environment.

2.1 Aquatic Issues

- (1) No specific nonradiological aquatic impact issues were identified by NRC staff in the FES-OL.
- (2) The presence of Asiatic clams (Corbicula, sp) in western Lake Erie renders their eventual presence near Perry as likely. Should the presence of Corbicula in the vicinity of Perry threaten the operation of a safety system, due to biofouling, measures to control Corbicula will be undertaken (FES Section 4.3.6.2).

2.2 Terrestrial Issues

- (1) Cooling tower drift was not expected to cause adverse effects but the need for operational data to confirm this conclusion was identified by the staff. (FES Section 5.5.1.5)
- (2) Herbicide use should conform with current Federal and State regulation. (FES Section 5.5.1.4)

4.0 Environmental Conditions

4.1 Unusual or Important Environmental Events

Any occurrence of an unusual or important event that indicates or could result in significant environmental impact causally related to plant operation shall be recorded and reported to the NRC within 24 hours followed by a written report per Subsection 5.4.2. The following are examples: excessive bird impaction events, onsite plant or animal disease outbreaks, mortality or unusual occurrence of any species protected by the Endangered Species Act of 1973, fish kills, increase in nuisance organisms or conditions, and unanticipated or emergency discharge of waste water or chemical substances.

No routine monitoring programs are required to implement this condition.

4.2 Environmental Monitoring

4.2.1 Aquatic Monitoring

- (1) The certifications and permits required under the Clean Water Act provide mechanisms for protecting water quality and, indirectly, aquatic biota. The NRC will rely on the decisions made by the U.S. Environmental Protection Agency and the State of Ohio under the authority of the Clean Water Act for any requirements for aquatic monitoring.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 110 TO FACILITY OPERATING LICENSE NO. NPF-58

FIRSTENERGY NUCLEAR OPERATING COMPANY

PERRY NUCLEAR POWER PLANT, UNIT 1

DOCKET NO. 50-440

1.0 INTRODUCTION

By letter dated September 9, 1999, FirstEnergy Nuclear Operating Company (the licensee) submitted proposed changes to the Perry Nuclear Power Plant, Unit 1, Appendix B, Environmental Protection Plan (EPP). The changes would revise the EPP by eliminating the requirement to sample Lake Erie sediment for *Corbicula*. *Corbicula* and Zebra mussels have been identified in the Perry and Eastlake Plant areas and effective control plans have been implemented for both species.

2.0 BACKGROUND

The Nuclear Regulatory Commission staff has been concerned about the potential for biofouling of service water system piping and components for a number of years. In April 1981, the staff issued Bulletin 81-03, "Flow Blockage of Cooling Water to Safety System Components by *CORBICULA* sp (Asiatic Clam) and *MYTILUS* sp (Mussel)," in response to significant flow blockage of containment cooling units at the Arkansas Nuclear One facility by *Corbicula*. Required actions from the bulletin included 1) a determination of whether *Corbicula* or *Mytilus* exists in the vicinity of the plant, 2) flow testing of service water components to determine whether biofouling has degraded flow, and 3) a description from the licensee of the methods for preventing and detecting future flow blockage or degradation due to clams or mussels or shell debris.

In July 1989, the staff issued Generic Letter (GL) 89-13, "Service Water System Problems Affecting Safety-Related Equipment," due to continuing problems of biofouling of service water systems. This GL recommended implementation of an ongoing program of surveillance and control techniques to significantly reduce the incidence of flow blockage problems as a result of biofouling. In addition, recommendations were made to conduct a test program to verify the heat transfer capability of all safety-related heat exchangers cooled by service water.

3.0 EVALUATION

Appendix B of the Operating License, the Environmental Protection Plan, has a requirement to conduct semi-annual sampling in the vicinity of the plant to detect *Corbicula*. The licensee has proposed to eliminate item (2) of Section 4.2.1, "Aquatic Monitoring," of the Environmental Protection Plan. Item (2) currently reads as follows:

Semi-annual (late spring and early fall) sampling of areas at Perry and the licensee's Eastlake plant shall be conducted to detect the presence of Corbicula.

The sampling methodology shall be that committed to and described by the licensee in its letter dated October 2, 1987 (PY-CEI/NRR-0707L).

The licensee has also proposed to eliminate the following paragraph of item (2) of Section 2.1, "Aquatic Issues":

Section 9.2.1 of the SER (May 1982) recognizes the potential safety-related problem of biofouling by Corbicula, and cites the licensee's monitoring program that consists of: (a) sampling of the lake for the presence of Corbicula, both at Perry and at one of the licensee's nearby fossil-fueled power plants; (b) maintenance inspections; and (c) surveillance testing. This EPP addresses the lake sampling in (a) above.

In response to GL 89-13, the licensee adopted NRC recommendations for surveillance techniques and control techniques. The Perry licensee currently conducts a visual inspection for biofouling of the intake structure once per refueling cycle. Control techniques include system chlorinating, annual mollusk treatment and periodic flushing of plant systems. The licensee considers these surveillance and control techniques to be effective for *Corbicula*.

The intent of the semi-annual monitoring program is to provide an advance warning of the presence of *Corbicula* or zebra mussels in the lake water so that sufficient time will be available to implement effective control and treatment plans. As stated in the licensee's letter, *Corbicula* were identified at the Eastlake Plant in June of 1987, but have not, to date, been identified at the Perry site. Zebra mussels have been detected at the Perry plant since 1987.

Considering that the licensee has determined the presence of *Corbicula* in the plant vicinity and zebra mussels at the plant site, the staff agrees that minimal benefit will be gained by continued semi-annual sampling of the lake sediment. In addition, the licensee's surveillance and control techniques to monitor and control biofouling of service water system components have previously been reviewed against the recommendations of GL 89-13 and found acceptable. The surveillance and control recommendations of the GL will continue to be met by programs currently in place and will not be changed by the proposed changes to the EPP. Therefore, the staff concludes that the licensee's proposal to eliminate lake sampling for *Corbicula* will not present any safety concerns at the Perry facility and is 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.

5.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact was published in the Federal Register (64 FR 69297) for this amendment. Accordingly, based upon the environmental assessment, the Commission has determined that the issuance of this amendment will not have a significant effect on the quality of the human environment. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluent that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding (64 FR 59802). Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

6.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Douglas Pickett

Date: January 5, 2000