

July 20, 1988

Docket No. 50-440

Mr. Alvin Kaplan, Vice President  
Nuclear Group  
The Cleveland Electric Illuminating  
Company  
10 Center Road  
Perry, Ohio 44081

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Dear Mr. Kaplan:

The Commission has issued the enclosed Amendment No. 15 to Facility Operating License No. NPF-58 for the Perry Nuclear Power Plant, Unit No. 1. This amendment consists of changes to the Environmental Protection Plan (EPP), Appendix B to the operating license, in response to your application dated October 2, 1987.

This amendment revises Section 4.2.1(2) of the EPP to reflect changes in the sampling procedures for Corbicula. The principal change is a shift in the sampling area from the off-shore lake bottom adjacent to the Perry intake and discharge structures to sampling of sediments in the Perry raw water systems. The sampling procedures at the Eastlake Power Plant to determine the presence of Corbicula are also revised.

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,

Timothy G. Colburn, Project Manager  
Project Directorate III-3  
Division of Reactor Projects - III, IV, V  
& Special Projects

Enclosures:

1. Amendment No. 15 to License No. NPF-58
2. Safety Evaluation

cc w/enclosures:  
See next page

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Surname: PKreutzer  
Date: 6/30/88

*File for*  
SPE/PDIII-3  
MDLynch/tg  
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*File*  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

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License No. NPF-58
2. Safety Evaluation

cc w/enclosures:  
See next page

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Illuminating Company

Perry Nuclear Power Plant  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL.

DOCKET NO. 50-440

PERRY NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 15  
License No. NPF-58

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, Pennsylvania Power Company, and Toledo Edison Company (the licensees) dated October 2, 1988 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 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:

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P PDC

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 15, are hereby incorporated into this license. The Cleveland Electric Illuminating 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.

FOR THE NUCLEAR REGULATORY COMMISSION

*Timothy M. Colburn*  
Kenneth E. Perkins, Director *for*  
Project Directorate III-3  
Division of Reactor Projects - III,  
IV, V and Special Projects

Attachment:  
Changes to the Environmental  
Protection Plan

Date of Issuance: July 20, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 15

FACILITY OPERATING LICENSE NO. NPF-58

DOCKET NO. 50-440

Replace the following page of the Appendix "B" Environmental Protection Plan with the attached page. The revised page is identified by Amendment number and contains vertical lines indicating the areas of change.

Remove

4-1

Insert

4-1

#### 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.
- (2) 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-0707 L).



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 15 TO FACILITY OPERATING LICENSE NO. NPF-58

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL.

PERRY NUCLEAR POWER PLANT, UNIT NO. 1

DOCKET NO. 50-440

1.0 INTRODUCTION

By letter dated October 2, 1987, The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, Pennsylvania Power Company, and Toledo Edison Company (the licensees) requested an amendment to Facility Operating License No. NPF-58 for the Perry Nuclear Power Plant, Unit No. 1. The proposed amendment would revise the monitoring program for the determination of the presence of Corbicula (i.e., Asiatic Clams). This program was established in 1982 since there existed the possibility of flow blockage in the Emergency Service Water System due to the growth of water-borne organisms. (Refer to Section 9.2.1.4 of the Perry Updated Safety Analysis Report, (USAR)). The revision proposed by the licensees contains changes in the methods of monitoring for Corbicula at the Perry facility and at the Eastlake Power Plant located on Lake Erie to the west of the Perry facility. Additionally, the licensees propose to establish a communications network/information exchange with agencies involved with monitoring benthic macroinvertebrates on Lake Erie. The first two of these proposed changes involve a revision to Section 4.2.1, Aquatic Monitoring, of the Environmental Protection Plan (EPP), Appendix B to the license.

2.0 EVALUATION

Section 4.2.1(2) of the EPP requires the licensees to conduct semi-annual (e.g., late spring and early fall) sampling for Corbicula in areas adjacent to the Perry intake and discharge structures. The licensees propose in their letter of October 2, 1987, to change the sampling area from the offshore lake bottom to areas within the plant itself where sediments favorable to the growth of Corbicula are found. These areas within the plant proper are those where fine sand deposits accumulate in the Perry raw water systems. Specifically, the areas to be sampled and the sampling frequency are: the service water basin (semi-annually); the traveling screen forebay (quarterly); the traveling screen trash basket (quarterly); the cooling tower basin (plant outages); and the Lake Erie shore beach (weekly). The last area is presently being monitored on a weekly basis due to the potential for shoreline erosion. (It is anticipated that this shoreline sampling may be reduced if the potential for shoreline erosion reduces significantly.)

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The rationale for this proposed change is based on consideration of three factors. The first of these is that Corbicula is capable of producing a mucous "drogue" which enables this organism to be carried by water currents directly into a power plant prior to being detected in sediments close to that power plant. Secondly, the lake bottom immediately offshore from the Perry facility is pre-dominantly bedrock with only small pockets of sand. Research within the last few years has shown that the preferred substrate for Corbicula is fine sand. Additionally, the design of the Perry discharge structure minimizes conditions for over-wintering of Corbicula. Thus, the off-shore lake bottom is not considered a hospitable environment for colonization. The third factor is that additional research has demonstrated that such plant areas as the service water basins and sumps provide environments that are more suitable than the offshore lake bottom for development of Corbicula colonies due to consistent water flow and the accumulation of large quantities of fine sand. The net effect is that these plant areas can support clam populations several orders of magnitude larger than those which might exist on the offshore lake bottom.

Based on these considerations, the staff finds that the change proposed by the licensees in the Corbicula monitoring program at the Perry facility is acceptable in that it provides a more effective and direct method of detecting the presence of Corbicula. The proposed revision is also acceptable in that it properly incorporates required changes in the Corbicula monitoring program based on the results of additional research on the ecology and biology of the subject organism in the 5½ years since the original proposal made by the licensees in December 1982.

The licensees also propose to sample the lake bottom sediments at the nearby Eastlake Power Plant using a hand dredge instead of collecting samples by SCUBA divers using suction devices. Since Corbicula has already been determined to be present in the fine sand sediments off-shore from the Eastlake plant, the more sensitive sampling techniques presently used at this facility can be replaced by the dredging technique. We find that this proposed change is acceptable since the revised sampling will still provide the required qualitative determination confirming the continued presence of Corbicula.

Finally, the licensees propose establishing a communications network with agencies involved in benthic sampling in Lake Erie. The staff finds this proposal acceptable in that it will provide a greater amount of information to the licensees concerning the location and the migration patterns of Corbicula.

In summary, the proposed revisions to the Corbicula monitoring program for the Perry facility enhance the sensitivity of detecting the presence of the subject organism both in Lake Erie and within the plant itself. In that these changes will yield an improved monitoring program incorporating the results of a continuing research program on Corbicula, the staff finds this proposed revision will continue to assure the operability of the Emergency Service Water system in accordance with Section 9.2.1.4 of the USAR and is, therefore, acceptable.

### 3.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an Environmental Assessment and Finding of No Significant Impact has been prepared and published in the Federal Register on July 19, 1988 (53 FR27248). 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.

### 4.0 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, and (2) such activities will be conducted in compliance with the Commission's regulations and 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: M. D. Lynch

Dated: July 20, 1988