

September 6, 1994

Docket No. 50-440

Mr. Robert A. Stratman  
Vice President Nuclear - Perry  
Centerior Service Company  
P. O. Box 97, A200  
Perry, Ohio 44081

DISTRIBUTION:

Docket File	MRushbrook
NRC & Local PDRs	JHopkins
PD3-3 Reading	OGC
JRoe	EJordan
JZwolinski	ACRS(10)
JHannon	OPA
EGreenman, RIII	LGundrum

Dear Mr. Stratman:

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR REQUESTED EXEMPTION FROM THE  
REQUIREMENTS OF 10 CFR 70.24 FOR CRITICALITY MONITORS FOR NEW FUEL  
AREAS - PERRY NUCLEAR POWER PLANT, UNIT NO. 1 (TAC NO. M82974)

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for exemption dated February 28, 1992 (PY-CEI/NRR-1387 L). The proposed exemption submitted pursuant to 10 CFR 70.14(a) and 10 CFR 70.24(d) would exempt the Perry Nuclear Power Plant from the requirements of 10 CFR 70.24, "Criticality accident requirements." Section 70.24(a) of 10 CFR requires a criticality monitoring system for the handling, use, and storage of special nuclear materials in the form of unirradiated fuel assemblies that are not handled or stored beneath water shielding, and requires maintaining emergency procedures for responding to the criticality monitoring system alarm, conduct of drills to familiarize personnel with the evacuation plan, and designating responsible individuals to determine the cause of the alarm.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

ORIGINAL SIGNED BY:

Jon B. Hopkins, Senior Project Manager  
Project Directorate III-3  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Enclosure:  
Environmental Assessment

cc w/enclosure:

See next page

\*SEE PREVIOUS CONCURRENCE

**NRC FILE CENTER COPY**

OFC:	LA:PDIII-3	APM:PDIII-3	PM:PDIII-3	OGC*	D:PDIII-3
NAME:	MRushbrook	LGundrum	JHopkins	SChidake1	JHannon
DATE:	9/12/94	9/16/94	9/16/94	8/29/94	9/16/94

OFFICIAL RECORD COPY

Document Name: G:\PERRY\PER82974.EA

9409140197 940906  
PDR ADOCK 05000440  
P PDR

100052

DF01



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

September 6, 1994

Docket No. 50-440

Mr. Robert A. Stratman  
Vice President Nuclear - Perry  
Centerior Service Company  
P. O. Box 97, A200  
Perry, Ohio 44081

Dear Mr. Stratman:

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR REQUESTED EXEMPTION FROM THE  
REQUIREMENTS OF 10 CFR 70.24 FOR CRITICALITY MONITORS FOR NEW FUEL  
AREAS - PERRY NUCLEAR POWER PLANT, UNIT NO. 1 (TAC NO. M82974)

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for exemption dated February 28, 1992 (PY-CEI/NRR-1387 L). The proposed exemption submitted pursuant to 10 CFR 70.14(a) and 10 CFR 70.24(d) would exempt the Perry Nuclear Power Plant from the requirements of 10 CFR 70.24, "Criticality accident requirements." Section 70.24(a) of 10 CFR requires a criticality monitoring system for the handling, use, and storage of special nuclear materials in the form of unirradiated fuel assemblies that are not handled or stored beneath water shielding, and requires maintaining emergency procedures for responding to the criticality monitoring system alarm, conduct of drills to familiarize personnel with the evacuation plan, and designating responsible individuals to determine the cause of the alarm.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

A handwritten signature in cursive script, reading "Jon B. Hopkins", is written over the typed name.

Jon B. Hopkins, Senior Project Manager  
Project Directorate III-3  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Enclosure:  
Environmental Assessment

cc w/enclosure:  
See next page

Mr. Robert A. Stratman  
Centerior Service Company

cc:

Jay E. Silberg, Esq.  
Shaw, Pittman, Potts & Trowbridge  
2300 N Street, N. W.  
Washington, D. C. 20037

Mary E. O'Reilly  
Centerior Energy Corporation  
300 Madison Avenue  
Toledo, Ohio 43652

Resident Inspector's Office  
U. S. Nuclear Regulatory Commission  
Parmly at Center Road  
Perry, Ohio 44081

Regional Administrator, Region III  
U. S. Nuclear Regulatory Commission  
801 Warrenville Road  
Lisle, Illinois 60532-4531

Lake County Prosecutor  
Lake County Administration Bldg.  
105 Main Street  
Painesville, Ohio 44077

Ms. Sue Hiatt  
OCRE Interim Representative  
8275 Munson  
Mentor, Ohio 44060

Terry J. Lodge, Esq.  
618 N. Michigan Street, Suite 105  
Toledo, Ohio 43624

Ashtabula County Prosecutor  
25 West Jefferson Street  
Jefferson, Ohio 44047

Regulatory Affairs Manager  
Cleveland Electric Illuminating  
Company  
Perry Nuclear Power Plant  
P. O. Box 97, E-210  
Perry, Ohio 44081

James R. Williams, Chief of Staff  
Ohio Emergency Management Agency  
2825 West Granville Road  
Worthington, Ohio 43085

Perry Nuclear Power Plant  
Unit Nos. 1 and 2

Mr. James W. Harris, Director  
Division of Power Generation  
Ohio Department of Industrial  
Relations  
P. O. Box 825  
Columbus, Ohio 43216

The Honorable Lawrence Logan  
Mayor, Village of Perry  
4203 Harper Street  
Perry, Ohio 44081

The Honorable Robert V. Orosz  
Mayor, Village of North Perry  
North Perry Village Hall  
4778 Lockwood Road  
North Perry Village, Ohio 44081

Attorney General  
Department of Attorney General  
30 East Broad Street  
Columbus, Ohio 43216

Radiological Health Program  
Ohio Department of Health  
Post Office Box 118  
Columbus, Ohio 43266-0118

Ohio Environmental Protection  
Agency  
DERR--Compliance Unit  
ATTN: Zack A. Clayton  
P. O. Box 1049  
Columbus, Ohio 43266-0149

Mr. Thomas Haas, Chairman  
Perry Township Board of Trustees  
3750 Center Rd., Box 65  
Perry, Ohio 44081

State of Ohio  
Public Utilities Commission  
East Broad Street  
Columbus, Ohio 43266-0573

David P. Igyarto, Plant Manager  
Cleveland Electric Illuminating  
Company  
Perry Nuclear Power Plant  
P. O. Box 97, SB306  
Perry, Ohio 44081

UNITED STATES NUCLEAR REGULATORY COMMISSION  
CLEVELAND ELECTRIC ILLUMINATING COMPANY, ET AL.

DOCKET NO. 50-440

PERRY NUCLEAR POWER PLANT, UNIT NO. 1  
ENVIRONMENTAL ASSESSMENT AND FINDING OF  
NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from the requirements of 10 CFR 70.24 for Facility Operating License No. NPF-58 issued to the Cleveland Electric Illuminating Company, Centerior Service Company, Duquesne Light Company, Ohio Edison Company, Pennsylvania Power Company, and Toledo Edison Company (the licensees) for operation of the Perry Nuclear Power Plant (PNPP), Unit No. 1, located in Lake County, Ohio.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action

The proposed action would exempt PNPP from the requirements of 10 CFR 70.24(a)(1) to install a criticality monitoring system for the handling, use, and storage of special nuclear material in the form of unirradiated nuclear fuel assemblies and 10 CFR 70.24(a)(3) to maintain emergency procedures for each area in which this licensed special nuclear material is handled, used, or stored to ensure that all personnel withdraw to an area of safety upon the sounding of the alarm and to conduct drills and designate responsible individuals for such emergency procedures.

The proposed action is in accordance with the licensee's application for exemption dated February 28, 1992.

### The Need for the Proposed Action

Power reactor license applicants are evaluated for the safe handling, use, and storage of special nuclear materials. The proposed exemption from criticality accident requirements is based on the original design for radiation monitoring at PNPP as discussed in a Safety Evaluation Report, NUREG-0887. The exemption was granted with the original Part 70 license but it expired with the issuance of the Part 50 license when the exemption was inadvertently not included in that license. Therefore, the exemption is needed to clearly define the design of the plant as evaluated and approved for licensing.

### Environmental Impact of the Proposed Action

The NRC staff has completed its evaluation of the proposed action and concludes that there is no significant environmental impact if the exemption is granted. Inadvertent or accidental criticality will be precluded through compliance with the Perry Technical Specifications, facility procedures, and compliance with the restrictions placed on the exemption. The restrictions are: personnel involved in fuel handling activities are trained in the radiological consequences of fuel handling prior to participating in fuel handling activities; equipment used in fuel handling activities is preoperationally tested; criticality analyses are performed and maintained to ensure criticality cannot result when stored fuel assemblies are optimally moderated; fuel enrichments are less than 5 weight-percent U-235; a documented fuel assembly storage plan is in effect allowing storage of fuel only in authorized locations; fuel storage containers are stacked no more than three high; reactor engineer or licensed reactor operator will verify proper spacing of fuel assemblies

during receipt, inspection, and storage; and the minimum edge-to-edge distance between a group of three fuel assemblies and all other fuel assemblies shall be 12 inches. Since these measures provide assurance that criticality will not occur during receipt, inspection, use, and handling and storage of fuel, this is an acceptable alternative to a monitoring system. The exemption from 10 CFR 70.24(a)(3) does not preclude maintaining emergency procedures for fuel handling accidents as discussed in Chapter 15 of the Safety Analysis Report. Since the proposed exemption does not otherwise affect radiological plant effluents nor cause any significant occupational exposures, the NRC staff concludes that there are no radiological environmental impacts associated with the proposed exemption.

With regard to potential nonradiological impacts, the proposed exemption involves systems located within the restricted area as defined in 10 CFR Part 20. It does not affect nonradiological plant effluents and has no other environmental impact. Therefore, the NRC staff concludes that there are no significant nonradiological environmental impacts associated with the proposed amendment.

#### Alternative to the Proposed Action

Because the Commission's staff has concluded that there are no significant environmental impacts associated with the proposed action, any alternatives would have either no significantly different environmental impact or greater environmental impact.

The principal alternative would be to deny the requested exemption. This would not reduce environmental impacts as a result of plant operations.

### Alternative Use of Resources

This action does not involve the use of resources not previously considered in the Final Environmental Statement related to operation of the Perry Nuclear Power Plant, Units 1 and 2, dated August 1982.

### Agencies and Persons Consulted

The NRC staff consulted with the Ohio State official regarding the environmental impact of the proposed action. The state official had no comments.

### FINDING OF NO SIGNIFICANT IMPACT

Based upon the foregoing environmental assessment, the NRC staff concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed exemption.

For further details with respect to the proposed action, see the licensee's exemption request dated February 28, 1992, which is available for public inspection at the Commission's Public Document Room, Gelman Building, 2120 L Street, NW., Washington, D.C. 20555 and at the local public document room at the Perry Public Library, 3753 Main Street, Perry, Ohio 44081.

Dated at Rockville, Maryland, this 6th day of September 1994.

FOR THE NUCLEAR REGULATORY COMMISSION

ORIGINAL SIGNED BY:

John N. Hannon, Director  
Project Directorate III-3  
Division of Reactor Project - III/IV  
Office of Nuclear Reactor Regulation

\*SEE PREVIOUS CONCURRENCE

OFFICE	LA:PDIII-3	APM:PDIII-3	PM:PDIII-3	OGC*	D:PDIII-3
NAME	MRushbrook	LGundrum:lm	JHopkins JBH	SChidake1	JHannon
DATE	9/2/94	9/6/94	9/6/94	8/29/94	9/6/94

OFFICIAL RECORD COPY

FILENAME: G:\PERRY\PER82974.EA