

Mr. George A. Hunger, Jr.
 Director-Licensing, MC 62A-1
 PECO Energy Company
 Nuclear Group Headquarters
 Correspondence Control Desk
 P.O. Box No. 195
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January 23, 1998

**SUBJECT: ENVIRONMENTAL ASSESSMENT OF REQUEST FOR EXEMPTION FROM
 10 CFR 70.24 CRITICALITY ACCIDENT REQUIREMENTS - LIMERICK
 GENERATING STATION (LSG), UNIT 1 (TAC NO. MA0327)**

Dear Mr. Hunger:

Enclosed for your information is a copy of an "Environmental Assessment and Finding of No Significant Impact." This assessment relates to your application dated December 23, 1997, which requested an exemption from certain requirements of 10 CFR 70.24, "Criticality Accident Requirements," for the LGS, Unit 1.

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

Sincerely,

/s/

Bartholomew C. Buckley, Senior Project Manager
 Project Directorate I-2
 Division of Reactor Projects - I/II
 Office of Nuclear Reactor Regulation

Docket No. 50-352

Enclosure: Environmental Assessment

cc w/encl: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

January 23, 1998

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Mr. George A. Hunger, Jr.
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Limerick Generating Station,
Units 1 & 2

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UNITED STATES NUCLEAR REGULATORY COMMISSIONPHILADELPHIA ELECTRIC COMPANYDOCKET NO. 50-352LIMERICK GENERATING STATION, UNIT 1ENVIRONMENTAL ASSESSMENT AND FINDING OFNO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from certain requirements of its regulations for Facility Operating License No. NPF-39 issued to Philadelphia Electric Company (the licensee), for operation of the Limerick Generating Station (LGS), Unit 1, located in Montgomery and Chester Counties, Pennsylvania.

ENVIRONMENTAL ASSESSMENTIdentification of the Proposed Action:

The proposed action would exempt Philadelphia Electric Company from the requirements of 10 CFR 70.24(a), which requires in each area in which special nuclear material is handled, used, or stored, a monitoring system that will energize clear audible alarms if accidental criticality occurs. The proposed action would also exempt the licensee from the requirements 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, to familiarize personnel with the evacuation plan, and to designate responsible individuals for determining the cause of the alarm, and to place radiation survey instruments in accessible locations for use in such an emergency.

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The proposed action is in accordance with the licensee's application for exemption dated December 23, 1997.

The Need for the Proposed Action:

The purpose of 10 CFR 70.24 is to ensure that if a criticality were to occur during the handling of special nuclear material, personnel would be alerted to that fact and would take appropriate action. At a commercial nuclear power plant the inadvertent criticality with which 10 CFR 70.24 is concerned could occur during fuel handling operations. The special nuclear material that could be assembled into a critical mass at a commercial nuclear power plant is in the form of nuclear fuel; the quantity of other forms of special nuclear material that is stored on site in any given location is small enough to preclude achieving a critical mass. Because the fuel is not enriched beyond 5.0 weight percent Uranium-235 and because commercial nuclear plant licensees have procedures and design features that prevent inadvertent criticality, the staff has determined that it is unlikely that an inadvertent criticality could occur due to the handling of special nuclear material at a commercial power reactor. The requirements of 10 CFR 70.24(a), therefore, are not necessary to ensure the safety of personnel during the handling of special nuclear materials at commercial power reactors. However, an exemption to 10 CFR 70.24(a) is needed to permit deviation from these requirements.

Environmental Impacts of the Proposed Action:

The Commission has completed its evaluation of the proposed action and concludes that the proposed action involves features located entirely within the protected area as defined in 10 CFR Part 20.

The proposed action will not result in an increase in the probability or consequences of accidents or result in a change in occupational or offsite dose. Therefore, there are no radiological impacts associated with the proposed action.

The proposed action will not result in a change in nonradiological plant effluents and will have no other nonradiological environmental impact.

Accordingly, the Commission concludes that there are no environmental impacts associated with this action.

Alternatives to the Proposed Action:

Since the Commission has concluded there is no measurable environmental impact associated with the proposed action, any alternatives with equal or greater environmental impact need not be evaluated. As an alternative to the proposed exemption, the staff considered denial of the requested exemption. Denial of the request would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

This action does not involve the use of any resources not previously considered in the "Final Environmental Statement Related to the Operation of Limerick Generating Station, Units 1 and 2," dated November 1973.

Agencies and Persons Consulted:

In accordance with its stated policy, on January 23, 1998, the staff consulted with the Pennsylvania State official, Mr. David Ney of the Bureau of Radiation Protection, Department of Environmental Protection, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

Based upon the environmental assessment, the Commission 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 action.

For further details with respect to the proposed action, see the licensee's letter dated December 23, 1997, which is available for public inspection at the Commission's Public Document Room, The Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document room located at the Pottstown Public Library, 500 High Street, Pottstown, PA 19464.

Dated at Rockville, Maryland, this 23rd day of January 1998.

FOR THE NUCLEAR REGULATORY COMMISSION

**Bartholomew C. Buckley, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation**