

April 20, 1993

Mr. George A. Hunger, Jr.
Director-Licensing, MC 52A-5
Philadelphia Electric Company
Nuclear Group Headquarters
Correspondence Control Desk
P.O. Box No. 195
Wayne, Pennsylvania 19087-0195

Dear Mr. Beck:

SUBJECT: FREQUENCY OF TESTING FIRE DETECTION INSTRUMENTATION, LIMERICK
GENERATING STATION, UNITS 1 AND 2 (TAC NOS. M85638 AND M85639)

The Commission has issued the enclosed Amendment No. 60 to Facility Operating License No. NPF-39 and Amendment No. 25 to Facility Operating License No. NPF-85 for the Limerick Generating Station, Units 1 and 2. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated January 8, 1993.

These amendments would reduce the frequency of testing certain fire detection instrumentation. The revisions substitute the pertinent fire detection requirements recommended by the 1990 Edition of the National Fire Protection Association (NFPA), Standard 72, in place of the requirements specified in an earlier edition of the NFPA Standard.

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

Sincerely,
/s/

Frank Rinaldi, Acting Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 60 to License No. NPF-39
- Amendment No. 25 to License No. NPF-85

- 2. Safety Evaluation

cc w/enclosures:

See next page

DISTRIBUTION:

Docket File	MO'Brien(2)	CGrimes, 11E21	CAnderson, RGN-I
NRC & Local PDRs	FRinaldi/JShea	CMcCracken	PMadden
PDI-2 Reading	OGC	ACRS(10)	
SVarga	DHagan, 3206	OPA	
JCalvo	GHill(4), P1-22	OC/LFMB	
CMiller	Wanda Jones, P-370	EWenzinger, RGN-I	

OFC	: PDI-2/EA	: PDI-2/PM	: SPLB	: OGC	: PDI-2/D	:
NAME	: MO'Brien	: FRinaldi	: rb	: CMcCracken	: CMiller	:
DATE	: 3/25/93	: 3/25/93	: 4/12/93	: 4/12/93	: 4/20/93	:

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April 20, 1993

Mr. George A. Hunger, Jr.
Director-Licensing, MC 52A-5
Philadelphia Electric Company
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Sincerely,
/s/

Frank Rinaldi, Acting Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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2. Safety Evaluation

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OFC	: PDI-2/PA	: PDI-2/PM	: SPLB)	: OGC	: PDI-2/D	:
NAME	: MO'Brien	: FRinaldi	: rb:CMcCracken:		: CMiller	:
DATE	: 3/25/93	: 3/25/93	: 4/12/93	: 4/12/93	: 4/20/93	:



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

April 20, 1993

Docket Nos. 50-352
and 50-353

Mr. George A. Hunger, Jr.
Director-Licensing, MC 52A-5
Philadelphia Electric Company
Nuclear Group Headquarters
Correspondence Control Desk
P.O. Box No. 195
Wayne, Pennsylvania 19087-0195

Dear Mr. Beck:

SUBJECT: FREQUENCY OF TESTING FIRE DETECTION INSTRUMENTATION, LIMERICK
GENERATING STATION, UNITS 1 AND 2 (TAC NOS. M85638 AND M85639)

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These amendments would reduce the frequency of testing certain fire detection instrumentation. The revisions substitute the pertinent fire detection requirements recommended by the 1990 Edition of the National Fire Protection Association (NFPA), Standard 72, in place of the requirements specified in an earlier edition of the NFPA Standard.

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

Sincerely,

A handwritten signature in cursive script, appearing to read "Frank Rinaldi".

Frank Rinaldi, Acting Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 60 to License No. NPF-39
Amendment No. 25 to License No. NPF-85
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. George A. Hunger, Jr.
Philadelphia Electric Company

Limerick Generating Station,
Units 1 & 2

cc:

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Sr. V.P. & General Counsel
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

PHILADELPHIA ELECTRIC COMPANY

DOCKET NO. 50-352

LIMERICK GENERATING STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 60
License No. NPF-39

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Philadelphia Electric Company (the licensee) dated January 8, 1993, 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 Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-39 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 60 , are hereby incorporated into this license. Philadelphia Electric 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, to be implemented within 2 weeks from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Charles L. Miller

Charles L. Miller, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the
Technical Specifications

Date of Issuance: April 20, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 60

FACILITY OPERATING LICENSE NO. NPF-39

DOCKET NO. 50-352

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. Overleaf pages are provided to maintain document completeness.*

<u>Remove</u>	<u>Insert</u>
3/4 3-91	3/4 3-91*
3/4 3-92	3/4 3-92
3/4 3-92a	3/4 3-92a
-	-
B 3/4 3-5	B 3/4 3-5*
B 3/4 3-6	B 3/4 3-6

INSTRUMENTATION

TOXIC GAS DETECTION SYSTEM

LIMITING CONDITION FOR OPERATION

3.3.7.8.2 Two independent toxic gas detection system subsystems shall be OPERABLE with their alarm setpoints adjusted to actuate at a toxic gas concentration of less than or equal to:

<u>CHEMICAL</u>	<u>MONITOR SET POINT (ppm)</u>
Ammonia	25
Ethylene Oxide	50
Formaldehyde	5
Vinyl Chloride	10
Phosgene	0.4

APPLICABILITY: ALL OPERATIONAL CONDITIONS.

ACTION:

- a. With one toxic gas detection subsystem inoperable, restore the inoperable detection system to OPERABLE status within 7 days or, within the next 6 hours, initiate and maintain operation of at least one control room emergency filtration system subsystem in the chlorine isolation mode of operation.
- b. With both toxic gas detection subsystems inoperable, within 1 hour initiate and maintain operation of at least one control room emergency filtration system subsystem in the chlorine isolation mode of operation.

SURVEILLANCE REQUIREMENTS

4.3.7.8.2 Each of the above required toxic gas detection system subsystems shall be demonstrated OPERABLE by performance of a:

- a. CHANNEL CHECK at least once per 12 hours,
- b. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
- c. CHANNEL CALIBRATION at least once per 18 months.

INSTRUMENTATION

FIRE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.7.9 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3.7.9-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment protected by the fire detection instrument is required to be OPERABLE.

ACTION:

- a. With the number of OPERABLE fire detection instruments in one or more zones:
 1. Less than, but more than one-half of, the Total Number of Instruments shown in Table 3.3.7.9-1 for Function A, restore the inoperable Function A instrument(s) to OPERABLE status within 14 days or within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside an inaccessible zone, then inspect the area surrounding the inaccessible zone at least once per hour.
 2. One less than the Total Number of Instruments shown in Table 3.3.7.9-1 for Function B, or one-half or less of the Total Number of Instruments shown in Table 3.3.7.9-1 for Function A, or with any two or more adjacent instruments inoperable, within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside an inaccessible zone, then inspect the area surrounding the inaccessible zone at least once per hour.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.9.1 The above required fire detection instruments which are accessible during unit operation shall be demonstrated OPERABLE:

- a. For smoke detectors, at least once per 12 months by performance of a CHANNEL FUNCTIONAL TEST.
- b. For heat detectors, at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST on one or more detectors in each signal-initiation circuit. Detectors shall be selected such that different detectors are tested in each test. All detectors shall be tested at least once per 5 years.

INSTRUMENTATION

SURVEILLANCE REQUIREMENTS (Continued)

- c. For all other types of fire detectors, at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST.

Fire detectors which are not accessible during unit operation shall be demonstrated OPERABLE by performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the past 12 months for smoke detectors, or 6 months for all other types of fire detectors.

4.3.7.9.2 The NFPA Standard 72D supervised circuits supervision associated with the detector alarms of each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 12 months.

3/4.3.7.2 SEISMIC MONITORING INSTRUMENTATION

The OPERABILITY of the seismic monitoring instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the unit.

3/4.3.7.3 (Deleted) - INFORMATION FROM THIS SECTION RELOCATED TO THE ODCM.

3/4.3.7.4 REMOTE SHUTDOWN SYSTEM INSTRUMENTATION AND CONTROLS

The OPERABILITY of the remote shutdown system instrumentation and controls ensures that sufficient capability is available to permit shutdown and maintenance of HOT SHUTDOWN of the unit from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with General Design Criterion 19 of 10 CFR Part 50, Appendix A.

3/4.3.7.5 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess important variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, "Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1975 and NUREG-0737, "Clarification of TMI Action Plan Requirements," November 1980.

3/4.3.7.6 SOURCE RANGE MONITORS

The source range monitors provide the operator with information of the status of the neutron level in the core at very low power levels during startup and shutdown. At these power levels, reactivity additions shall not be made without this flux level information available to the operator. When the intermediate range monitors are on scale, adequate information is available without the SRMs and they can be retracted.

3/4.3.7.7 TRAVERSING IN-CORE PROBE SYSTEM

The OPERABILITY of the traversing in-core probe system with the specified minimum complement of equipment ensures that the measurements obtained from use of this equipment accurately represent the spatial neutron flux distribution of the reactor core.

The TIP system OPERABILITY is demonstrated by normalizing all probes (i.e., detectors) prior to performing an LPRM calibration function. Monitoring core thermal limits may involve utilizing individual detectors to monitor selected areas of the reactor core, thus all detectors may not be required to be OPERABLE. The OPERABILITY of individual detectors to be used for monitoring is demonstrated by comparing the detector(s) output in the resultant heat balance calculation (P-1) with data obtained during a previous heat balance calculation (P-1).

INSTRUMENTATION

BASES

3/4.3.7.8 CHLORINE AND TOXIC GAS DETECTION SYSTEMS

The OPERABILITY of the chlorine and toxic gas detection systems ensures that an accidental chlorine and/or toxic gas release will be detected promptly and the necessary protective actions will be automatically initiated for chlorine and manually initiated for toxic gas to provide protection for control room personnel. Upon detection of a high concentration of chlorine, the control room emergency ventilation system will automatically be placed in the chlorine isolation mode of operation to provide the required protection. Upon detection of a high concentration of toxic gas, the control room emergency ventilation system will manually be placed in the chlorine isolation mode of operation to provide the required protection. The detection systems required by this specification are consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators against an Accidental Chlorine Release," February 1975.

3/4.3.7.9 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the detection instrumentation ensures that both adequate warning capability is available for prompt detection of fires and that fire suppression systems, that are actuated by fire detectors, will discharge extinguishing agent in a timely manner. Prompt detection and suppression of fires will reduce the potential for damage to safety-related equipment and is an integral element in the overall facility fire protection program.

Fire detectors that are used to actuate fire suppression systems represent a more critically important component of a plant's fire protection program than detectors that are installed solely for early fire warning and notification. Consequently, the minimum number of OPERABLE fire detectors must be greater.

The loss of detection capability for fire suppression systems, actuated by fire detectors, represents a significant degradation of fire protection for any area. As a result, the establishment of a fire watch patrol must be initiated at an earlier stage than would be warranted for the loss of detectors that provide only early fire warning. The establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY.

The surveillance requirements for demonstrating the OPERABILITY of the fire detectors are based on the recommendations of NFPA 72E - 1990 Edition.

3/4.3.7.10 LOOSE-PART DETECTION SYSTEM

The OPERABILITY of the loose-part detection system ensures that sufficient capability is available to detect loose metallic parts in the primary system and avoid or mitigate damage to primary system components. The allowable out-of-service times and surveillance requirements are consistent with the recommendations of Regulatory Guide 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors," May 1981.

3/4.3.7.11 (Deleted) - INFORMATION FROM THIS SECTION RELOCATED TO THE ODCM.



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

PHILADELPHIA ELECTRIC COMPANY

DOCKET NO. 50-353

LIMERICK GENERATING STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 25
License No. NPF-85

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Philadelphia Electric Company (the licensee) dated January 8, 1993, 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.

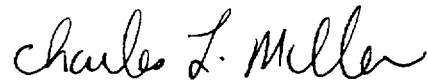
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-85 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 25 , are hereby incorporated into this license. Philadelphia Electric 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, to be implemented within 2 weeks from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Charles L. Miller, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the
Technical Specifications

Date of Issuance: April 20, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 25

FACILITY OPERATING LICENSE NO. NPF-85

DOCKET NO. 50-353

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. Overleaf pages are provided to maintain document completeness.*

<u>Remove</u>	<u>Insert</u>
3/4 3-91	3/4 3-91*
3/4 3-92	3/4 3-92
3/4 3-92a	3/4 3-92a
-	-
B 3/4 3-5	B 3/4 3-5*
B 3/4 3-6	B 3/4 3-6

INSTRUMENTATION

TOXIC GAS DETECTION SYSTEM

LIMITING CONDITION FOR OPERATION

3.3.7.8.2 Two independent toxic gas detection system subsystems shall be OPERABLE with their alarm setpoints adjusted to actuate at a toxic gas concentration of less than or equal to:

<u>CHEMICAL</u>	<u>MONITOR SET POINT (ppm)</u>
Ammonia	25
Ethylene Oxide	50
Formaldehyde	5
Vinyl Chloride	10
Phosgene	0.4

APPLICABILITY: ALL OPERATIONAL CONDITIONS.

ACTION:

- a. With one toxic gas detection subsystem inoperable, restore the inoperable detection system to OPERABLE status within 7 days or, within the next 6 hours, initiate and maintain operation of at least one control room emergency filtration system subsystem in the chlorine isolation mode of operation.
- b. With both toxic gas detection subsystems inoperable, within 1 hour initiate and maintain operation of at least one control room emergency filtration system subsystem in the chlorine isolation mode of operation.

SURVEILLANCE REQUIREMENTS

4.3.7.8.2 Each of the above required toxic gas detection system subsystems shall be demonstrated OPERABLE by performance of a:

- a. CHANNEL CHECK at least once per 12 hours,
- b. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
- c. CHANNEL CALIBRATION at least once per 18 months.

INSTRUMENTATION

FIRE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.7.9 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3.7.9-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment protected by the fire detection instrument is required to be OPERABLE.

ACTION:

- a. With the number of OPERABLE fire detection instruments in one or more zones:
 1. Less than, but more than one-half of, the Total Number of Instruments shown in Table 3.3.7.9-1 for Function A, restore the inoperable Function A instrument(s) to OPERABLE status within 14 days or within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside an inaccessible zone, then inspect the area surrounding the inaccessible zone at least once per hour.
 2. One less than the Total Number of Instruments shown in Table 3.3.7.9-1 for Function B, or one-half or less of the Total Number of Instruments shown in Table 3.3.7.9-1 for Function A, or with any two or more adjacent instruments inoperable, within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside an inaccessible zone, then inspect the area surrounding the inaccessible zone at least once per hour.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.9.1 The above required fire detection instruments which are accessible during unit operation shall be demonstrated OPERABLE:

- a. For smoke detectors, at least once per 12 months by performance of a CHANNEL FUNCTIONAL TEST.
- b. For heat detectors, at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST on one or more detectors in each signal-initiation circuit. Detectors shall be selected such that different detectors are tested in each test. All detectors shall be tested at least once per 5 years.

INSTRUMENTATION

SURVEILLANCE REQUIREMENTS (Continued)

- c. For all other types of fire detectors, at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST.

Fire detectors which are not accessible during unit operation shall be demonstrated OPERABLE by performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the past 12 months for smoke detectors, or 6 months for all other types of fire detectors.

4.3.7.9.2 The NFPA Standard 72D supervised circuits supervision associated with the detector alarms of each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 12 months.

3/4.3.7.2 SEISMIC MONITORING INSTRUMENTATION

The OPERABILITY of the seismic monitoring instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the unit.

3/4.3.7.3 (Deleted) - INFORMATION FROM THIS SECTION RELOCATED TO THE ODCM.3/4.3.7.4 REMOTE SHUTDOWN SYSTEM INSTRUMENTATION AND CONTROLS

The OPERABILITY of the remote shutdown system instrumentation and controls ensures that sufficient capability is available to permit shutdown and maintenance of HOT SHUTDOWN of the unit from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with General Design Criterion 19 of 10 CFR Part 50, Appendix A. The Unit 1 RHR transfer switches are included only due to their potential impact on the RHRSW system, which is common to both units.

3/4.3.7.5 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess important variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, "Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1975 and NUREG-0737, "Clarification of TMI Action Plan Requirements," November 1980.

3/4.3.7.6 SOURCE RANGE MONITORS

The source range monitors provide the operator with information of the status of the neutron level in the core at very low power levels during startup and shutdown. At these power levels, reactivity additions shall not be made without this flux level information available to the operator. When the intermediate range monitors are on scale, adequate information is available without the SRMs and they can be retracted.

3/4.3.7.7 TRAVERSING IN-CORE PROBE SYSTEM

The OPERABILITY of the traversing in-core probe system with the specified minimum complement of equipment ensures that the measurements obtained from use of this equipment accurately represent the spatial neutron flux distribution of the reactor core.

The TIP system OPERABILITY is demonstrated by normalizing all probes (i.e., detectors) prior to performing an LPRM calibration function. Monitoring core thermal limits may involve utilizing individual detectors to monitor selected areas of the reactor core, thus all detectors may not be required to be OPERABLE. The OPERABILITY of individual detectors to be used for monitoring is demonstrated by comparing the detector(s) output in the resultant heat balance calculation (P-1) with data obtained during a previous heat balance calculation (P-1).

3/4.3.7.8 CHLORINE AND TOXIC GAS DETECTION SYSTEMS

The OPERABILITY of the chlorine and toxic gas detection systems ensures that an accidental chlorine and/or toxic gas release will be detected promptly and the necessary protective actions will be automatically initiated for chlorine and manually initiated for toxic gas to provide protection for control room personnel. Upon detection of a high concentration of chlorine, the control room emergency ventilation system will automatically be placed in the chlorine isolation mode of operation to provide the required protection. Upon detection of a high concentration of toxic gas, the control room emergency ventilation system will manually be placed in the chlorine isolation mode of operation to provide the required protection. The detection systems required by this specification are consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators against an Accidental Chlorine Release," February 1975.

3/4.3.7.9 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the detection instrumentation ensures that both adequate warning capability is available for prompt detection of fires and that fire suppression systems, that are actuated by fire detectors, will discharge extinguishing agent in a timely manner. Prompt detection and suppression of fires will reduce the potential for damage to safety-related equipment and is an integral element in the overall facility fire protection program.

Fire detectors that are used to actuate fire suppression systems represent a more critically important component of a plant's fire protection program than detectors that are installed solely for early fire warning and notification. Consequently, the minimum number of OPERABLE fire detectors must be greater.

The loss of detection capability for fire suppression systems, actuated by fire detectors, represents a significant degradation of fire protection for any area. As a result, the establishment of a fire watch patrol must be initiated at an earlier stage than would be warranted for the loss of detectors that provide only early fire warning. The establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY.

The surveillance requirements for demonstrating the OPERABILITY of the fire detectors are based on the recommendations of NFPA 72E - 1990 Edition.

3/4.3.7.10 LOOSE-PART DETECTION SYSTEM

The OPERABILITY of the loose-part detection system ensures that sufficient capability is available to detect loose metallic parts in the primary system and avoid or mitigate damage to primary system components. The allowable out-of-service times and surveillance requirements are consistent with the recommendations of Regulatory Guide 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors," May 1981.

3/4.3.7.11 (Deleted) - INFORMATION FROM THIS SECTION RELOCATED TO THE ODCM.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NOS. 60 AND 25 TO FACILITY OPERATING
LICENSE NOS. NPF-39 AND NPF-85
PHILADELPHIA ELECTRIC COMPANY
LIMERICK GENERATING STATION, UNITS 1 AND 2
DOCKET NOS. 50-352 AND 50-353

1.0 INTRODUCTION

By letter dated January 8, 1993, the Philadelphia Electric Company (the licensee) submitted a request for changes to the Limerick Generating Station (LGS), Units 1 and 2, Technical Specifications (TS). The requested changes would change TS Sections 4.3.7.9.1 and 4.3.7.9.2, "Fire Detection Instrumentation - Surveillance Requirements," and Bases Section 3/4.3.7.9, "Fire Detection Instrumentation," for both units, to reduce the frequency of testing certain fire detection instrumentation. The revisions will substitute smoke and heat detectors requirements recommended by the 1990 Edition of the National Fire Protection Association (NFPA), Standard 72, in place of the pertinent requirements stated in earlier editions of the NFPA Standard.

2.0 EVALUATION

The current TS surveillance requirements for fire detection instrumentation which are accessible during unit operation, require that they be demonstrated operable at least once every 6 months. Also, the supervised circuits associated with the applicable detector alarms are required to be demonstrated operable at least once every 6 months.

The licensee has proposed a change to these requirements based on the recommendations stated in the NFPA, Standard 72, 1990 Edition. The proposed changes define the fire detection instruments as smoke detectors, heat detectors, and all other fire detectors.

TS Section 4.3.7.9.1 addresses the requirements for smoke detectors. PECO has proposed to change the functional testing from at least once per 6 months to at least once per 12 months. This change is consistent with the NFPA, Standard 72E, 1990 Edition. Also, TS Section 4.3.7.9.1 addresses the requirements for heat detectors. The licensee has proposed to change the current functional testing requirements from once every 6 months to once every 12 months. However, PECO has proposed an additional requirement that guaranties that all heat detectors will be tested within a 5-year period. These requirements are consistent with the NFPA, Standard 72E, 1990 Edition. The surveillance testing interval for all other types of fire detectors remains unchanged by the proposed TS changes.

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TS Section 4.3.7.9.2 requires that the supervisory circuits associated with detector alarms be demonstrated operable at least once every 6 months. PECO has proposed to change this testing frequency from at least every 6 months to at least every 12 months. This change is also consistent with the requirements of NFPA, Standard 72, 1990 Edition.

The fire detection system is not a safety-related system. It provides early detection of a fire, and protects safety-related equipment. Its failure does not affect any transient or accident evaluation, including the LGS fire safe shutdown analyses. Also, the proposed changes do not impact on the design and performance requirements. Further, the LGS fire protection program utilizes: separation of redundant safety systems, an integrated network of components and equipment providing detection and suppression of fires, administrative controls and procedures, and personnel training.

The staff finds the requirements of NFPA Standards, 1990 Edition, acceptable, as applicable to the proposed revisions in surveillance requirement for smoke detectors, heat sensors, and supervisory circuits.

Generic Letter (GL) 86-10, "Implementation of Fire Protection Requirement" and GL-88-12, "Removal of Fire Protection Requirements from the Technical Specifications" provided guidance on the adoption of the NRC-approved Fire Protection Program in the plant Updated Final Safety Analysis Report (UFSAR), and the approach for deleting the fire protection requirements from the TS. PECO has indicated that they are aware of the above identified GLs and that they will provide an amendment request later this year.

Based on the above discussion, the staff finds the proposed revisions to TS Sections 4.3.7.9.1 and 4.3.7.9.2 acceptable.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents 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 the amendments involve no significant hazards consideration, and there has been no public comment on such finding (58 FR 8777). Accordingly, the amendments meet 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 the amendments.

5.0 CONCLUSION

The Commission 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 the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: F. Rinaldi

Date: April 20, 1993