

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. 35 License No. NPF-39

- 1. The Muclear Regulatory Commission (the Commission) has found that
 - A. The application for amendment by Philadelphia Electric Company (the licensee) dated July 11, 1989, as supplemented by letter of November 3, 1989, 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.
- 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. 35, are hereby incorporated into this license. Philadelphia Flectric 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 MUCLEAR REGULATORY COMMISSION

Walter R. Rutler, Director Project Directorate I-2

Division of Reactor Projects I/II

Attachment: Changes to the Technical Specifications

Date of Issuance: December 19, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 35

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.*

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6.1 RESPONSIBILITY

- 6.1.1 The Plant Manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.
- 6.1.2 The Shift Supervisor, or during his absence from the control room, a designated individual shall be responsible for the control room command function. A management directive to this effect, signed by the Vice President, Limerick Generating Station shall be reissued to all station personnel on an annual basis.

6.2 ORGANIZATION

6.2.1 OFFSITE AND ONSITE ORGANIZATIONS

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safety of the nuclear power plant.

- a. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organizational positions. These relationships shall be documented and updated, as appropriate, in the form of organizational charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the Limerick Quality Assurance Program.
- b. The Plant Manager shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.
- c. The Vice President, Limerick Generating Station shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety.
- d. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

6.2.2 UNIT STAFF

- Each on duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.2.2-1;
- b. At least one licensed Operator shall be in the control room when fuel is in the reactor. In addition, while the unit is in OPERATIONAL CONDITION 1, 2, or 3, at least one licensed Senior Operator shall be in the control room:
- c. A Health Physics Technician* shall be on site when fuel is in the reactor;
- d. ALL CORE ALTERATIONS shall be observed and directly supervised by either a licensed Senior Operator or licensed Senior Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation;
- e. A site fire brigade of at least five members shall be maintained on site at all times*. The fire brigade shall not include the Shift Superintendent, the Shift Technical Advisor, nor the two other members of the minimum shift crew necessary for safe shutdown of the unit and any personnel required for other essential functions during a fire emergency;
- f. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions (e.g., licensed Senior Operators, licensed Operators, health physicists, auxiliary operators, and key maintenance personnel).

Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work a normal 8-hour day, 40-hour week while the unit is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for refueling, major maintenance, or major unit modifications, on a temporary basis the following guidelines shall be followed:

- An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time.
- An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any 7-day period, all excluding shift turnover time.
- A break of at least 8 hours should be allowed between work periods, including shift turnover time.
- 4. Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.

^{*}The Health Physics Technician and fire brigade composition may be less than the minimum requirements for a period of time not to exceed 2 hours, in order to accommodate unexpected absence, provided immediate action is taken to fill the required positions.

UNIT STAFF (Continued)

Any deviation from the above guidelines shall be authorized by the Plant Manager or personnel designated in administrative procedures or higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation. Controls shall be included in the procedures such that individual overtime shall be reviewed monthly by the Plant Manager, or the appropriate designated personnel to assure that excessive hours have not been assigned. Routine deviation from the above guidelines is not authorized; and

g. The Plant Manager or the Superintendent Operations, and the Assistant Superintendent Operations shall hold a Senior Reactor Operator License. The Superintendent Technical or the Technical Engineer shall hold a Senior Reactor Operator License.

fg is intentionally left blank.

TABLE 6.2.2-1 MINIMUM SHIFT CREW COMPOSITION TWO UNITS WITH A COMMON CONTROL ROOM

	WITH UNIT 2 IN	CONDITION 4	OR 5 OR	DEFUELED
POSITION	NUMBER OF 1	INDIVIDUALS	REQUIRED	TO FILL POSITION
	CONDITION	, 2, or 3		CONDITION 4 or 5
SS SRO RO NLO STA	2 2 2	*		1* 1* 1 2** None
	WITH UNIT 2 I	N CONDITION	1, 2, 0	R 3
POSITION				TO FILL POSITION
	CONDITION 1	, 2, or 3		CONDITION 4 or 5
SS SRO RO NLO STA	1 2	* * ** **		1* 1* 1 1 None

TABLE NOTATIONS

*Individual may fill the same position on Unit 2.

**One of the two required individuals may fill the same position on Unit 2.

SS - Shift Superintendent or Shift Supervisor with a Senior Operator license on Unit 1.

SRO - Individual with a Senior Operator license on Unit 1.

RO - Individual with an Operator license on Unit 1.

NLO - Non-licensed operator properly qualified to support the unit to which assigned.

STA - Shift Technical Advisor

Except for Shift Supervision (SS), the shift crew composition may be one less than the minimum requirements of Table 6.2.2-1 for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements of Table 6.2.2-1. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewman being late or absent.

During any absence of Shift Supervision (SS) from the control room while the unit is in OPERATIONAL CONDITION 1, 2, or 3, an individual (other than the Shift Technical Advisor) with a valid Senior Operator license shall be designated to assume the control room command function. During any absence of Shift Supervision from the control room while the unit is in OPERATIONAL CONDITION 4 or 5, an individual with a valid Senior Operator license or Operator license shall be designated to assume the control room command function.

6.2.3 INDEPENDENT SAFETY ENGINEERING GROUP (ISEG)

FUNCTION

6.2.3.1 The ISEG shall function to examine unit operating characteristics, NRC issuances, industry advisories, Licensee Event Reports, and other sources of unit design and operating experience information, including units of similar design, which may indicate areas for improving unit safety. The ISEG shall make detailed recommendations for revised procedures, equipment modifications, maintenance activities, operations activities, or other means of improving unit safety. Such recommendations shall be submitted through the General Manager-Nuclear Quality Assurance to the Executive Vice President-Nuclear.

COMPOSITION

6.2.3.2 The Limerick ISEG shall be composed of at least five dedicated, full-time engineers, including the ISEG Superintendent, located onsite. Each shall have a bachelor's degree in engineering or related science and at least two years professional level experience in his or her field. The Limerick ISEG Superintendent shall have at least six years of experience in the nuclear field. The LGS ISEG reports to the General Manager-Nuclear Quality Assurance.

RESPONSIBILITIES

6.2.3.3 The ISEG shall be responsible for maintaining surveillance of unit activities to provide independent verification* that these activities are performed correctly and that human errors are reduced as much as practical.

RECORDS

6.2.3.4 Records of activities performed by the ISEG shall be prepared, maintained, and forwarded each calendar month to the General Manager-Nuclear Quality Assurance.

6.2.4 SHIFT TECHNICAL ADVISOR

6.2.4.1 The Shift Technical Advisor shall provide advisory technical support to Shift Supervision in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to safe operation of the unit. The Shift Technical Advisor shall have a bachelor's degree or equivalent in a scientific or engineering discipline and shall have received specific training in the response and analysis of the unit for transients and accidents, and in unit design and layout, including the capabilities of instrumentation and controls in the control room.

6.3 UNIT STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions, except for the Senior Health Physicist who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975. The licensed Operators and Senior Operators shall also meet or exceed the minimum qualifications of the supplemental requirements specified in Sections A and C of Enclosure 1 of the March 28, 1980 NRC letter to all licensees.

^{*}Not responsible for sign-off function.

RESPONSIBILITIES (Continued)

C. Provide written notification within 24 hours to the Vice President, Limerick Generating Station and the Nuclear Review Board of disagreement between the PORC and the Plant Manager; however, the Plant Manager shall have responsibility for resolution of such disagreements pursuant to Specification 6.1.1.

RECORDS

6.5.1.8 The PORC shall maintain written minutes of each PORC meeting that, at a minimum, document the results of all PORC activities performed under the responsibility provisions of these Technical Specifications. Copies shall be provided to the Vice President, Limerick Generating Station, Plant Manager, and the Nuclear Review Board.

6.5.2 NUCLEAR REVIEW BOARD (NRB)

FUNCTION

- 6.5.2.1 The NRB shall function to provide independent review and audit of designated activities in the areas of:
 - a. Nuclear power plant operations,
 - b. Nuclear engineering,
 - c. Chemistry and radiochemistry,
 - d. Metallurgy,
 - e. Instrumentation and control,
 - f. Radiological safety,
 - g. Mechanical and electrical engineering, and
 - h. Quality assurance practices.

The NRB shall report to and advise the Executive Vice President - Nuclear on those areas of responsibility in Specifications 6.5.2.7 and 6.5.2.8.

COMPOSITION

6.5.2.2 The Chairman, members, and alternates of the NRB shall be appointed in writing by the Executive Vice President - Nuclear, and shall have an academic degree in an engineering or physical science field; and in addition, shall have a minimum of 5 years technical experience, of which a minimum of 3 years shall be in one or more areas given in Specification 6.5.2.1. The NRB shall be composed of no less than eight and no more than 12 members.

The members and alternates of the NRB will be competent in the area of Quality Assurance practice and cognizant of the Quality Assurance requirements of 10 CFR Part 50, Appendix B. Additionally, they will be cognizant of the corporate Quality Assurance Program and will have the corporate Quality Assurance organization available to them.

ALTERNATES

5.5.2.3 All alternates shall be appointed in writing by the NRB Chairman to serve on a continuing basis. They shall receive correspondence sent to NRB members with regard to NRB activities and shall be invited to attend all NRB meetings. Alternates shall vote only in the absence of those members for whom they are the alternate.

CONSULTANTS

5.5.2.4 Consultants shall be utilized as determined by the NRB Chairman to provide expert advice to the NRB.

MEETING FREQUENCY

6.5.2.5 The NRB shall meet at least once per calendar quarter during the initial year of unit operation following fuel loading and at least once per 6 months

QUORUM

6.5.2.6 The quorum of the NRB necessary for the performance of the NRB review and audit functions of these Technical Specifications shall consist of the Chairman or a designated alternate and at least four but not less than one half of the voting NRB members. No more than a minority of the quorum shall have line responsibility for operation of the facility.

REVIEW

6.5.2.7 The NRB shall review:

- a. The safety evaluations for (1) changes to procedures, equipment, facilities or systems; and (2) tests or experiments completed under the provision of 10 CFR 50.59 to verify that such actions did not constitute an unreviewed safety question:
- Proposed changes to procedures, equipment, or systems which involve an unreviewed safety question as defined in 10 CFR 50.59:
- Proposed tests or experiments which involve an unreviewed safety question as defined in 10 CFR 50.59;
- Proposed changes to Technical Specifications or this Operating License;
- e. Violations of codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance;
- 5 Significant operating abnormalities or deviations from normal and expected performance of unit equipment that affect nuclear safety;
- g. All REPORTABLE EVENTS:

REVIEW (Continued)

- All recognized indications of an unanticipated deficiency in some aspect of design or operation of structures, systems, or components that could affect nuclear safety; and
- i. Reports and meeting minutes of the PORC.

AUDITS

- 6.5.2.8 Audits of unit activities shall be performed under the cognizance of the NRB. These audits shall encompas:
 - a. The conformance of unit operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months;
 - The performance, training and qualifications of the entire unit staff at least once per 12 months;
 - c. The results of actions taken to correct deficiencies occurring in unit equipment, structures, systems, or method of operation that affect nuclear safety, at least once per 6 months;
 - d. The performance of activities required by the Operational Quality Assurance Program to meet the criteria of Appendix B, 10 CFR Part 50, at least once per 24 months;
 - e. The Emergency Plan and implementing procedures at least once per 12 months.
 - f. The Security Plan and implementing procedures at least once per 12 months.
 - g. Any other area of unit operation considered appropriate by the NRB or the Executive Vice President Nuclear.
 - h. The Fire Protection Program and implementing procedures at least once per 24 months.
 - i. An independent fire protection and loss prevention inspection and audit shall be performed at least once per 12 months unilizing either qualified offsite licensee personnel or an outside fire protection firm.
 - j. An inspection and audit of the fire protection and lass program shall be performed by an outside qualified fire consultant at intervals no greater than 36 months.

AUDITS (Continued)

- K. The radiological environmental monitoring program and the results thereof at least once per 12 months.
- The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months.
- m. The PROCESS CONTROL PROGRAM and implementing procedures at least once per 24 months.
- n. The performance of activities required by the Quality Assurance Program to meet the criteria of Regulatory Guide 4.15, December, 1977, at least once per 12 months.

RECORDS

- 6.5.2.9 Records of NRB activities shall be prepared, approved, and distributed as indicated below:
 - a. Minutes of each NRB meeting shall be prepared, approved, and forwarded to the Executive Vice President - Nuclear within 14 days following each meeting.
 - b. Reports of reviews encompassed by Specification 6.5.2.7 shall be prepared, approved, and forwarded to the Executive Vice President - Nuclear within 14 days following completion of the review.
 - c. Audit reports encompassed by Specification 6.5.2.8 shall be forwarded to the Corporate Officer(s) and management positions responsible for the areas audited within 30 days after completion of the audit by the auditing organization.

5.6 REPORTABLE EVENT ACTION

- 6.6.1 The following actions shall be taken for REPORTABLE EVENTS:
 - a. The Commission shall be notified and a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and
 - b. Each REPORTABLE EVENT shall be reviewed by the PORC and submitted to the NRB, Plant Manager and the Vice President, Limerick Generating Station.

6.7 SAFETY LIMIT VIOLATION

- 6.7.1 The following actions shall be taken in the event a Safety Limit is violated:
 - a. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within 1 hour. The Vice President, Limerick Generating Station, Plant Manager, and the NRB shall be notified within 24 hours.

HIGH RADIATION AREA (Continued)

- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate levels in the area have been established and personnel have been made knowledgeable of them.
- c. A health physics qualified individual (i.e., qualified in radiation protection procedures) with a radiation dose rate monitoring device who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the Health Physicist in the RWP.
- 6.12.2 In addition to the requirements of Specification 6.12.1, areas accessible to personnel with radiation levels such that a major portion of the body could receive in 1 hour a dose greater than 1000 mrems shall be provided with locked doors to prevent unauthorized entry, and the keys shall be maintained under the administrative control of Shift Supervision on duty and/or the health physics supervision. Doors shall remain locked except during periods of access by personnel under an approved RWP which shall specify the dose rate levels in the immediate work area and the maximum allowable stay time for individuals in that area. For individual areas accessible to personnel with radiation levels such that a major portion of the body could receive in 1 hour a dose in excess of 1000 mrems* that are located within large areas, such as the containment, where no enclosure exists for purposes of locking, and no enclosure can be reasonably constructed around the individual areas, then that area shall be roped off, conspicuously posted, and a flashing light shall be activated as a warning device. In lieu of the stay time specification of the RWP, continuous surveillance direct or remote (such as use of closed circuit TV cameras), may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities within the area.

5.13 PROCESS CONTROL PROGRAM (PCP)

- 6.13.1 The PCP shall be approved by the Commission prior to implementation.
- 6.13.2 Licensee-initiated changes to the PCP:
 - a. Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made effective. This submittal shall contain:
 - Sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information.

^{*}Measurement made at 18 inches from source of radioactivity.

PROCESS CONTROL PROGRAM (Continued)

- A determination that the change did not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes; and
- Documentation of the fact that the change has been reviewed and found acceptable by the PORC.
- b. Shall become effective upon review and acceptance by the PORC.

6.14 OFFSITE DOSE CALCULATION MANUAL (GDCM)

- 6.14.1 The ODCM shall be approved by the Commission prior to implementation.
- 6.14.2 Licensee-initiated changes to the ODCM:
 - a. Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made effective. This submittal shall contain:
 - Sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information. Information submitted should consist of a package of those pages of the ODCM to be changed with each page numbered and provided with an approval and date box, together with appropriate analyses or evaluations justifying the change(s);
 - A determination that the change will not reduce the accuracy or reliability of dose calculations or setpoint determinations; and
 - Documentation of the fact that the change has been reviewed and found acceptable by the PORC.
 - b. Shall become effective upon review and acceptance by the PORC.

6.15 MAJOR CHANGES TO RADIOACTIVE WASTE TREATMENT SYSTEMS

- 6.15.1 Licensee-initiated major changes to the radioactive weste systems (liquid, gaseous, and solid):
 - a. Shall be reported to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change was made effective. The discussion of each change shall contain:
 - A summary of the evaluation that led to the determination that the change could be made in accordance with 10 CFR 50.59;