



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. 8
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 March 23, 1987, 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. 8, are hereby incorporated into this license. Philadelphia Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/s/

Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 10, 1988

PDI-2/LA
MO'Brien
3/10/88

PDI-2/PM
RClark
02/18/88

OGC
S H Lewis
2/24/88

PDI-2/D
WButler
3/10/88

WB

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Walter R. Butler

Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 10, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 8

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 page is provided to maintain document completeness.*

Remove

xxi
xxii*

3/4 6-45*
3/4 6-46

B 3/4 6-5*
B 3/4 6-5a

Insert

xxi
xxii*

3/4 6-45*
3/4 6-46

B 3/4 6-5*
B 3/4 6-6

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CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS

- 4.6.4.1 Each suppression chamber - drywell vacuum breaker shall be:
- a. Verified closed at least once per 7 days.
 - b. Demonstrated OPERABLE:
 1. At least once per 31 days and within 2 hours after any discharge of steam to the suppression chamber from the safety/relief valves, by cycling each vacuum breaker through at least one complete cycle of full travel.
 2. At least once per 31 days by verifying both position indicators OPERABLE by observing expected valve movement during the cycling test.
 3. At least once per 18 months by;
 - a) Verifying each valve's opening setpoint, from the closed position, to be 0.5 psid \pm 5%, and
 - b) Verifying both position indicators OPERABLE by performance of a CHANNEL CALIBRATION.
 - c) Verifying that each outboard valve's position indicator is capable of detecting disk displacement ≥ 0.050 ", and each inboard valve's position indicator* is capable of detecting disk displacement ≥ 0.120 ".

CONTAINMENT SYSTEMS

3/4.6.5 SECONDARY CONTAINMENT

REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.5.1.1 REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY shall be maintained.
APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

Without REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY, restore REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.1.1 REACTOR ENCLOSURE SECONDARY CONTAINMENT INTEGRITY shall be demonstrated by:

- a. Verifying at least once per 24 hours that the pressure within the reactor enclosure secondary containment is greater than or equal to 0.25 inch of vacuum water gauge.
- b. Verifying at least once per 31 days that:
 1. All reactor enclosure secondary containment equipment hatches and blowout panels are closed and sealed.
 2. At least one door in each access to the reactor enclosure secondary containment is closed.
 3. All reactor enclosure secondary containment penetrations not capable of being closed by OPERABLE secondary containment automatic isolation dampers/valves and required to be closed during accident conditions are closed by valves, blind flanges, slide gate dampers or deactivated automatic dampers/valves secured in position.
- c. At least once per 18 months:
 1. Verifying that one standby gas treatment subsystem will draw down the reactor enclosure secondary containment to greater than or equal to 0.25 inch of vacuum water gauge in less than or equal to 121 seconds with the reactor enclosure recirc system in operation, and
 2. Operating one standby gas treatment subsystem for one hour and maintaining greater than or equal to 0.25 inch of vacuum water gauge in the reactor enclosure secondary containment at a flow rate not exceeding 1250 cfm with wind speeds of < 7.0 mph as measured on the wind instrument on Tower 1 elevation 30' or, if that instrument is unavailable, Tower 2, elevation 159'.

CONTAINMENT SYSTEMS

BASES

3/4.6.5 SECONDARY CONTAINMENT

Secondary containment is designed to minimize any ground level release of radioactive material which may result from an accident. The Reactor Enclosure and associated structures provide secondary containment during normal operation when the drywell is sealed and in service. At other times the drywell may be open and, when required, secondary containment integrity is specified.

Establishing and maintaining a vacuum in the reactor enclosure secondary containment with the standby gas treatment system once per 18 months, along with the surveillance of the doors, hatches, dampers and valves, is adequate to ensure that there are no violations of the integrity of the secondary containment.

The OPERABILITY of the reactor enclosure recirculation system and the standby gas treatment systems ensures that sufficient iodine removal capability will be available in the event of a LOCA or refueling accident (SGTS only). The reduction in containment iodine inventory reduces the resulting SITE BOUNDARY radiation doses associated with containment leakage. The operation of this system and resultant iodine removal capacity are consistent with the assumptions used in the LOCA and refueling accident analyses. Provisions have been made to continuously purge the filter plenums with instrument air when the filters are not in use to prevent buildup of moisture on the adsorbers and the HEPA filters.

Although the safety analyses assumes that the reactor enclosure secondary containment draw down time will take 135 seconds, these surveillance requirements specify a draw down time of 121 seconds. This 14 second difference is due to the diesel generator starting and sequence loading delays which is not part of this surveillance requirement.

The reactor enclosure secondary containment draw down time analyses assumes a starting point of 0.25 inch of vacuum water gauge and worst case SGTS dirty filter flow rate of 2800 cfm. The surveillance requirements satisfy this assumption by starting the drawdown from ambient conditions and connecting the adjacent reactor enclosure and refueling area to the SGTS to split the exhaust flow between the three zones and verifying a minimum flow rate of 2800 cfm from the test zone. This simulates the worst case flow alignment and verifies adequate flow is available to drawdown the test zone within the required time. The Technical Specification Surveillance Requirement 4.6.5.3.b.3 is intended to be a multi-zone air balance verification without isolating any test zone.

The SGTS fans are sized for three zones and therefore, when aligned to a single zone or two zones, will have excess capacity to more quickly drawdown the affected zones. There is no maximum flow limit to individual zones or pairs of zones and the air balance and drawdown time are verified when all three zones are connected to the SGTS.

The three zone air balance verification and drawdown test will be done prior to initial criticality of Unit 2 or after any major system alteration, which is any modification which will have an effect on the SGTS flowrate such that the ability of the SGTS to drawdown the reactor enclosure to greater than or equal to 0.25 inch of vacuum water gage in less than or equal to 121 seconds could be affected.

CONTAINMENT SYSTEMS

BASES

3/4.6.5 SECONDARY CONTAINMENT (Continued)

The field tests for bypass leakage across the SGTS charcoal adsorber and HEPA filter banks are performed at a flow rate of $3000 \pm 10\%$ cfm. This flow rate corresponds to the maximum overall three zone inleakage rate of 3264 cfm.

The SGTS filter train pressure drop is a function of air flow rate and filter conditions. Surveillance testing is performed using either the SCTS or drywell purge fans to provide operating convenience.

Each reactor enclosure secondary containment zone and refueling area secondary containment zone is tested independently to verify the design leak tightness. A design leak tightness of 1250 cfm or less for each reactor enclosure and 764 cfm or less for the refueling area at a 0.25 inch of vacuum water gage will ensure that containment integrity is maintained at an acceptable level if all zones are connected to the SGTS at the same time.

The post-LOCA offsite dose analysis assumes a reactor enclosure secondary containment post-draw down leakage rate of 1250 cfm and certain post-accident X/Q values. While the post-accident X/Q values represent a statistical interpretation of historical meteorological data, the highest ground level wind speed which can be associated with these values is 7 mph (Pasquill-Gifford stability Class G for a ground level release). Therefore, the surveillance requirement assures that the reactor enclosure secondary containment is verified under meteorological conditions consistent with the assumptions utilized in the design basis analysis. Reactor Enclosure Secondary Containment leakage tests that are successfully performed at wind speeds in excess of 7 mph would also satisfy the leak rate surveillance requirements, since it shows compliance with more conservative test conditions.

3/4.6.6 PRIMARY CONTAINMENT ATMOSPHERE CONTROL

The OPERABILITY of the systems required for the detection and control of hydrogen combustible mixtures of hydrogen and oxygen ensures that these systems will be available to maintain the hydrogen concentration within the primary containment below the lower flammability limit during post-LOCA conditions. The primary containment hydrogen recombiner is provided to maintain the oxygen concentration below the lower flammability limit. The combustible gas analyzer is provided to continuously monitor, both during normal operations and post-LOCA, the hydrogen and oxygen concentrations in the primary containment. The primary containment atmospheric mixing system is provided to ensure adequate mixing of the containment atmosphere to prevent localized accumulations of hydrogen and oxygen from exceeding the lower flammability limit. The hydrogen control system is consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA," March 1971.