



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

November 7, 1988

Docket No.: 50-352

Mr. William M. Alden
Director-Licensing
Correspondence Control Desk
Philadelphia Electric Company
2301 Market Street
Philadelphia, Pennsylvania 19101

Dear Mr. Alden:

SUBJECT: TECHNICAL SPECIFICATION CHANGES REGARDING OPERATIONAL CONDITIONS IN
RESPONSE TO GENERIC LETTER 87-09 (TAC NO. 69358)

RE: LIMERICK GENERATING STATION, UNIT 1

The Commission has issued the enclosed Amendment No. 11 to Facility Operating License No. NPF-39 for the Limerick Generating Station, Unit 1. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated July 19, 1988. Your application responded to the guidance provided in our Generic Letter 87-09 dated June 4, 1987 to address three specific problems that have been encountered with respect to applicability of Sections 3.0 and 4.0 of the Standard Technical Specifications.

This amendment 1) modifies Section 3.0.4 of the general limiting conditions for operation (LCO) to allow entry into an operational condition under certain circumstances when compliance with the LCO's related action statements would allow continued operation for an unlimited period of time, 2) modifies the general surveillance requirements in Section 4.0.3 to clarify the time at which action statement time limits begin relative to failure to perform a surveillance requirement and to allow for a delay of the action statement requirements for up to 24 hours to complete the surveillance if the allowable time is less than 24 hours, 3) revises Section 4.0.4 to clarify that restrictions on entry into operational conditions based on failure to comply with surveillance requirements shall not prevent passage into or through operational conditions as required by action statements and 4) revises the bases for the above three sections to reflect the changes. In addition, the amendment deletes notated statements throughout the TSs which take exception to the provisions of Section 3.0.4 in accordance with the guidance on page 3 of generic letter 87-09.

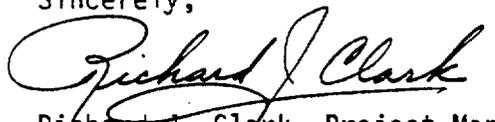
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Handwritten signatures: DFO, CP, and other initials

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

Sincerely,



Richard J. Clark, Project Manager
Project Directorate I-2
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 11 to
License No. NPF-39
2. Safety Evaluation

cc w/enclosures:
See next page

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

Sincerely,

Original signed by
Richard J. Clark

Richard J. Clark, Project Manager
Project Directorate I-2
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

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Mr. William M. Alden
Philadelphia Electric Company

Limerick Generating Station
Units 1 & 2

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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. 11
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 July 19, 1988, 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. 11, 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: November 7, 1988

PDI-2/EA
NO Brien
11/2/88

PDI-2/PM
RClark: *RC*
09/28/88

OGC
OGC
10/13/88

PDI-2/D
WButler *WB*
11/13/88

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

FOR THE NUCLEAR REGULATORY COMMISSION



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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 7, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 11

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 0-1	3/4 0-1
3/4 0-2	3/4 0-2
3/4 0-3	3/4 0-3
3/4 1-15*	3/4 1-15*
3/4 1-16	3/4 1-16
3/4 2-9	3/4 2-9
3/4 2-10*	3/4 2-10*
3/4 3-35*	3/4 3-35*
3/4 3-36	3/4 3-36
3/4 3-63	3/4 3-63
3/4 3-64*	3/4 3-64*
3/4 3-67*	3/4 3-67*
3/4 3-68	3/4 3-68
3/4 3-73	3/4 3-73
3/4 3-74*	3/4 3-74*
3/4 3-89	3/4 3-89
3/4 3-90	3/4 3-90
3/4 3-91	3/4 3-91
3/4 3-92	3/4 3-92
3/4 3-97	3/4 3-97
3/4 3-98	3/4 3-98
3/4 4-23*	3/4 4-23*
3/4 4-24	3/4 4-24
3/4 6-51*	3/4 6-51*
3/4 6-51a	3/4 6-51a

Remove

3/4 7-17
3/4 7-18*

3/4 7-19
3/4 7-20*

3/4 7-21*
3/4 7-22

3/4 7-23*
3/4 7-24

3/4 7-25
3/4 7-26

3/4 7-29
3/4 7-30*

3/4 7-31
3/4 7-32*

3/4 11-5
3/4 11-6

3/4 11-7
3/4 11-8

3/4 11-11*
3/4 11-12

3/4 11-13
3/4 11-14

3/4 11-15
3/4 11-16*

3/4 11-17
3/4 11-18

3/4 11-19*
3/4 11-20

3/4 12-1*
3/4 12-2

3/4 12-13
3/4 12-14

Insert

3/4 7-17
3/4 7-18*

3/4 7-19
3/4 7-20*

3/4 7-21*
3/4 7-22

3/4 7-23*
3/4 7-24

3/4 7-25
3/4 7-26

3/4 7-29
3/4 7-30*

3/4 7-31
3/4 7-32*

3/4 11-5
3/4 11-6

3/4 11-7
3/4 11-8

3/4 11-11*
3/4 11-12

3/4 11-13
3/4 11-14

3/4 11-15
3/4 11-16*

3/4 11-17
3/4 11-18

3/4 11-19*
3/4 11-20

3/4 12-1*
3/4 12-2

3/4 12-13
3/4 12-14

Remove

B 3/4 0-1
B 3/4 0-2

B 3/4 0-3
-

-
-

Insert

B 3/4 0-1
B 3/4 0-2

B 3/4 0-3
B 3/4 0-4

B 3/4 0-5
B 3/4 0-6

3/4.0 APPLICABILITY

LIMITING CONDITION FOR OPERATION

3.0.1 Compliance with the Limiting Conditions for Operation contained in the succeeding Specifications is required during the OPERATIONAL CONDITIONS or other conditions specified therein; except that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met.

3.0.2 Noncompliance with a Specification shall exist when the requirements of the Limiting Condition for Operation and associated ACTION requirements are not met within the specified time intervals. If the Limiting Condition for Operation is restored prior to expiration of the specified time intervals, completion of the ACTION requirements is not required.

3.0.3 When a Limiting Condition for Operation is not met, except as provided in the associated ACTION requirements, within one hour action shall be initiated to place the unit in an OPERATIONAL CONDITION in which the Specification does not apply by placing it, as applicable, in:

- a. At least STARTUP within the next 6 hours,
- b. At least HOT SHUTDOWN within the following 6 hours, and
- c. At least COLD SHUTDOWN within the subsequent 24 hours.

Where corrective measures are completed that permit operation under the ACTION requirements, the ACTION may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation. Exceptions to these requirements are stated in the individual Specifications.

This Specification is not applicable in OPERATIONAL CONDITION 4 or 5.

3.0.4 Entry into an OPERATIONAL CONDITION or other specified condition shall not be made when the conditions for the Limiting Condition for Operation are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval. Entry into an OPERATIONAL CONDITION or other specified condition may be made in accordance with the ACTION requirements when conformance to them permits continued operation of the facility for an unlimited period of time. This provision shall not prevent passage through or to OPERATIONAL CONDITIONS as required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual Specifications.

APPLICABILITY

SURVEILLANCE REQUIREMENTS

4.0.1 Surveillance Requirements shall be met during the OPERATIONAL CONDITIONS or other conditions specified for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement.

4.0.2 Each Surveillance Requirement shall be performed within the specified time interval with:

- a. A maximum allowable extension not to exceed 25% of the surveillance interval, but
- b. The combined time interval for any 3 consecutive surveillance intervals shall not exceed 3.25 times the specified surveillance interval.

4.0.3 Failure to perform a Surveillance Requirement within the allowed surveillance interval defined by Specification 4.0.2, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation. The time limits of the ACTION requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed. The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the ACTION requirements are less than 24 hours. Surveillance requirements do not have to be performed on inoperable equipment.

4.0.4 Entry into an OPERATIONAL CONDITION or other specified applicable condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the applicable surveillance interval or as otherwise specified. This provision shall not prevent passage through or to OPERATIONAL CONDITIONS as required to comply with ACTION requirements.

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2, & 3 components shall be applicable as follows:

- a. Inservice inspection of ASME Code Class 1, 2, and 3 components and inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR Part 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR Part 50, Section 50.55a(g) (6) (i).
- b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications:

APPLICABILITY

SURVEILLANCE REQUIREMENTS (Continued)

<u>ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice inspection and testing activities</u>	<u>Required frequencies for performing inservice inspection and testing activities</u>
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

REACTIVITY CONTROL SYSTEMS

CONTROL ROD DRIVE HOUSING SUPPORT

LIMITING CONDITION FOR OPERATION

3.1.3.8 The control rod drive housing support shall be in place.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

With the control rod drive housing support not in place, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.1.3.8 The control rod drive housing support shall be verified to be in place by a visual inspection prior to startup any time it has been disassembled or when maintenance has been performed in the control rod drive housing support area.

REACTIVITY CONTROL SYSTEMS

3/4.1.4 CONTROL ROD PROGRAM CONTROLS

ROD WORTH MINIMIZER

LIMITING CONDITION FOR OPERATION

3.1.4.1 The rod worth minimizer (RWM) shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2*, **, when THERMAL POWER is less than or equal to 20% of RATED THERMAL POWER, the minimum allowable preset power level.

ACTION:

- a. With the RWM inoperable, verify control rod movement and compliance with the prescribed control rod pattern by a second licensed operator or other technically qualified member of the unit technical staff who is present at the reactor control console. Otherwise, control rod movement may be only by actuating the manual scram or placing the reactor mode switch in the Shutdown position.

SURVEILLANCE REQUIREMENTS

4.1.4.1 The RWM shall be demonstrated OPERABLE:

- a. In OPERATIONAL CONDITION 2 within 8 hours prior to withdrawal of control rods for the purpose of making the reactor critical, and in OPERATIONAL CONDITION 1 within 1 hour after RWM automatic initiation when reducing THERMAL POWER, by verifying proper indication of the selection error of at least one out-of-sequence control rod.
- b. In OPERATIONAL CONDITION 2 within 8 hours prior to withdrawal of control rods for the purpose of making the reactor critical, by verifying the rod block function by demonstrating inability to withdraw an out-of-sequence control rod.
- c. In OPERATIONAL CONDITION 1 within 1 hour after RWM automatic initiation when reducing THERMAL POWER, by verifying the rod block function by demonstrating inability to withdraw an out-of-sequence control rod.
- d. By verifying that the control rod patterns and sequence input to the RWM computer are correctly loaded following any loading of the program into the computer.

*See Special Test Exception 3.10.2.

**Entry into OPERATIONAL CONDITION 2 and withdrawal of selected control rods is permitted for the purpose of determining the OPERABILITY of the RWM prior to withdrawal of control rods for the purpose of bringing the reactor to criticality.

POWER DISTRIBUTION LIMITS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION

- a. With the end-of-cycle recirculation pump trip system inoperable per Specification 3.3.4.2, operation may continue provided that, within 1 hour, MCPR is determined to be greater than or equal to the MCPR limit as a function of the average scram time shown in Figure 3.2.3-1a (BP/P8X8R fuel) and Figure 3.2.3-1b (GE8X8EB fuel), EOC-RPT inoperable curve, times the k_f shown in Figure 3.2.3-2.
- b. With MCPR less than the applicable MCPR limit shown in Figures 3.2.3-1a, 3.2.3-1b and 3.2.3-2, initiate corrective action within 15 minutes and restore MCPR to within the required limit within 2 hours or reduce THERMAL POWER to less than 25% of RATED THERMAL POWER within the next 4 hours.

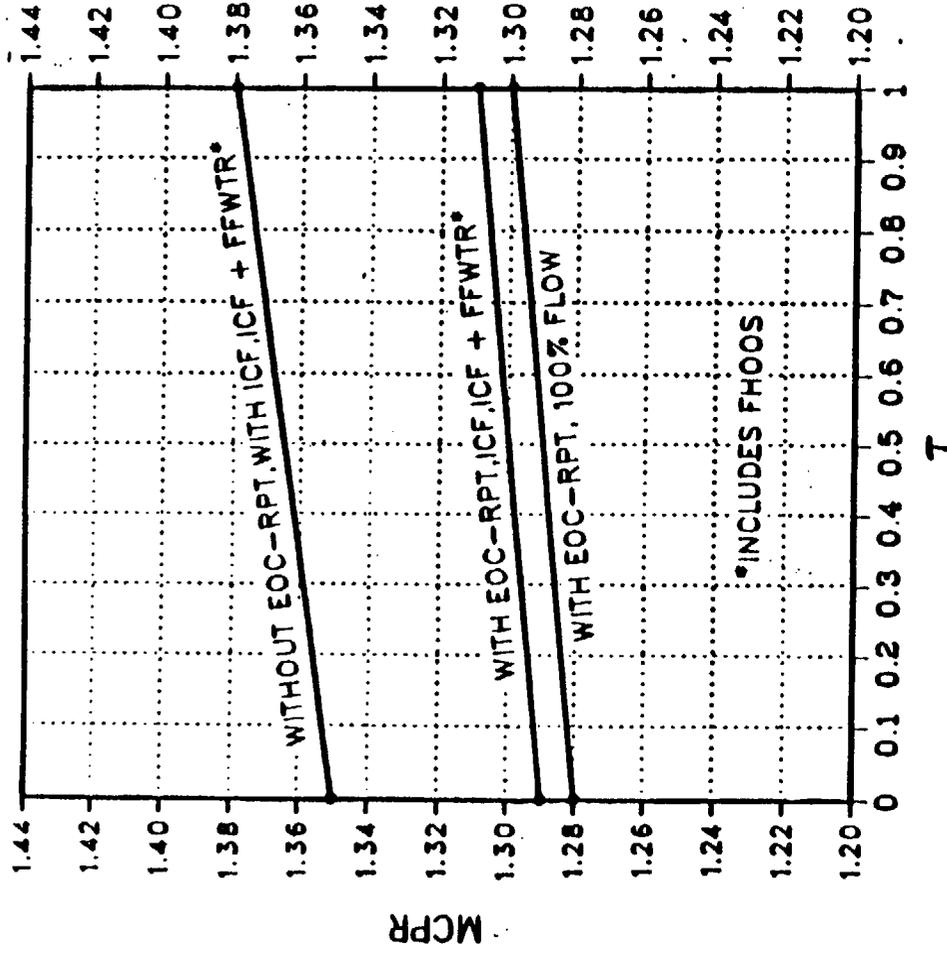
SURVEILLANCE REQUIREMENTS

4.2.3 MCPR, with:

- a. $\tau = 1.0$ prior to performance of the initial scram time measurements for the cycle in accordance with Specification 4.1.3.2, or
- b. τ as defined in Specification 3.2.3 used to determine the limit within 72 hours of the conclusion of each scram time surveillance test required by Specification 4.1.3.2,

shall be determined to be equal to or greater than the applicable MCPR limit determined from Figures 3.2.3-1a, 3.2.3-1b and 3.2.3-2.

- a. At least once per 24 hours,
- b. Within 12 hours after completion of a THERMAL POWER increase of at least 15% of RATED THERMAL POWER, and
- c. Initially and at least once per 12 hours when the reactor is operating with a LIMITING CONTROL ROD PATTERN for MCPR.
- d. The provisions of Specification 4.0.4 are not applicable.



DEFINITIONS:

LCE - INCREASED CORE FLOW (UP TO 105% RATED)

FHOOS - FEEDWATER HEATING OUT OF SERVICE THROUGHOUT CYCLE (UP TO 60 DEG. F TEMP. REDUCTION; ACHIEVED BY REMOVAL OF FEEDWATER HEATER(S))

FFWTR - FINAL FEEDWATER TEMPERATURE REDUCTION AT END-OF-CYCLE (UP TO 60 DEG. F TEMP REDUCTION; ACHIEVED BY REMOVAL OF ALL 6TH STAGE HEATERS)

MINIMUM CRITICAL POWER RATIO (MCPR) VERSUS τ (P8X8R/BP8X8R FUEL)

FIGURE 3.2.3-1a

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

TABLE NOTATIONS

- (a) A channel may be placed in an inoperable status for up to 2 hours for required surveillance without placing the trip system in the tripped condition provided at least one OPERABLE channel in the same trip system is monitoring that parameter.
 - (b) Also provides input to actuation logic for the associated emergency diesel generators.
 - (c) One trip system. Provides signal to HPCI pump suction valves only.
 - (d) On 1 out of 2 taken twice logic, provides a signal to trip the HPCI pump turbine only.
 - (e) The manual initiation push buttons start the respective core spray pump and diesel generator. The "A" and "B" logic manual push buttons also actuate an initiation permissive in the injection valve opening logic.
 - (f) A channel as used here is defined as the 127 bus relay for Item 1 and the 127, 127Y, and 127Z feeder relays with their associated time delay relays taken together for Item 2.
- * When the system is required to be OPERABLE per Specification 3.5.2.
- # Not required to be OPERABLE when reactor steam dome pressure is less than or equal to 100 psig.
- ** Required when ESF equipment is required to be OPERABLE.
- ## Not required to be OPERABLE when reactor steam dome pressure is less than or equal to 200 psig.

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

ACTION STATEMENTS

- ACTION 30 With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement:
- a. With one channel inoperable, place the inoperable channel in the tripped condition within 1 hour or declare the associated system inoperable.
 - b. With more than one channel inoperable, declare the associated system inoperable.
- ACTION 31 With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, declare the associated ECCS inoperable.
- ACTION 32 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, place the inoperable channel in the tripped condition within 1 hour.
- ACTION 33 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, restore the inoperable channel to OPERABLE status within 8 hours or declare the associated ECCS inoperable.
- ACTION 34 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement:
- a. For one channel inoperable, place the inoperable channel in the tripped condition within 1 hour or declare the HPCI system inoperable.
 - b. With more than one channel inoperable, declare the HPCI system inoperable.
- ACTION 35 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, place at least one inoperable channel in the tripped condition within 1 hour or declare the HPCI system inoperable.
- ACTION 36 With the number of OPERABLE channels less than the Total Number of Channels, declare the associated emergency diesel generator inoperable and take the ACTION required by Specification 3.8.1.1 or 3.8.1.2, as appropriate.
- ACTION 37 - With the number of OPERABLE channels one less than the Total Number of Channels, place the inoperable channel in the tripped condition within 1 hour; operation may then continue until performance of the next required CHANNEL FUNCTIONAL TEST.

INSTRUMENTATION

3/4.3.7 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.7.1 The radiation monitoring instrumentation channels shown in Table 3.3.7.1-1 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3.7.1-1.

ACTION:

- a. With a radiation monitoring instrumentation channel alarm/trip setpoint exceeding the value shown in Table 3.3.7.1-1, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.
- b. With one or more radiation monitoring channels inoperable, take the ACTION required by Table 3.3.7.1-1.
- c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.1 Each of the above required radiation monitoring instrumentation channels shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST, and CHANNEL CALIBRATION operations for the conditions and at the frequencies shown in Table 4.3.7.1-1.

LIMERICK - UNIT 1

3/4 3-64

TABLE 3.3.7.1-1

RADIATION MONITORING INSTRUMENTATION

<u>INSTRUMENTATION</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE CONDITIONS</u>	<u>ALARM/TRIP SETPOINT</u>	<u>ACTION</u>
1. Main Control Room Normal Fresh Air Supply Radiation Monitor	4	1,2,3,5 and *	$1 \times 10^{-5} \mu\text{Ci/cc}$	70
2. Area Monitors				
a. Criticality Monitors				
1) Spent Fuel Storage Pool	2	(a)	$\geq 5 \text{ mR/h}$ and $\leq 20 \text{ mR/h}^{(b)}$	71
b. Control Room Direct Radiation Monitor	1	At All Times	N.A. ^(b)	73
3. Reactor Enclosure Cooling Water Radiation Monitor	1	At All Times	$\leq 3 \times \text{Background}^{(b)}$	72

TABLE 4.3.7.1-1 (Continued)

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TABLE NOTATIONS

*When irradiated fuel is being handled in the secondary containment.

(a) With fuel in the spent fuel storage pool.

(b) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards (NBS) or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration shall be used.

INSTRUMENTATION

SEISMIC MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.7.2 The seismic monitoring instrumentation shown in Table 3.3.7.2-1* shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

- a. With one or more of the above required seismic monitoring instruments inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.2.1 Each of the above required seismic monitoring instruments shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST, and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3.7.2-1.

4.3.7.2.2 Each of the above required seismic monitoring instruments actuated during a seismic event greater than or equal to 0.01g shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 5 days following the seismic event. Data shall be retrieved from actuated instruments and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 10 days describing the magnitude, frequency spectrum and resultant effect upon unit features important to safety.

*Shared with Unit 2.

INSTRUMENTATION

METEOROLOGICAL MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.7.3 The meteorological monitoring instrumentation channels shown in Table 3.3.7.3-1 shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

- a. With one or more meteorological monitoring instrumentation channels inoperable for more than 7 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrumentation to OPERABLE status.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.3 Each of the above required meteorological monitoring instrumentation channels shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3.7.3-1.

TABLE 3.3.7.3-1

METEOROLOGICAL MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>Tower 1 (Primary)</u>		<u>Tower 2 (Backup)</u>	<u>MINIMUM INSTRUMENTS OPERABLE</u>
1. Wind Speed				
a. Elevation 1	30 feet	or	159 feet	1
b. Elevation 2	175 feet	or	304 feet	1
2. Wind Direction				
a. Elevation 1	30 feet	or	159 feet	1
b. Elevation 2	175 feet	or	304 feet	1
3. Air Temperature Difference				
a. Elevations	266 feet- 26 feet	or	300 feet- 26 feet	1

INSTRUMENTATION

TRAVERSING IN-CORE PROBE SYSTEM

LIMITING CONDITION FOR OPERATION

3.3.7.7 The traversing in-core probe system shall be OPERABLE with:

- a. Five movable detectors, drives and readout equipment to map the core, and
- b. Indexing equipment to allow all five detectors to be calibrated in a common location.

APPLICABILITY: When the traversing in-core probe is used for:

- a. Recalibration of the LPRM detectors, and
- b.* Monitoring the APLHGR, LHGR, MCPR, or MFLPD.

ACTION:

With the traversing in-core probe system inoperable, suspend use of the system for the above applicable monitoring or calibration functions. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.7 The traversing in-core probe system shall be demonstrated OPERABLE by normalizing each of the above required detector outputs within 72 hours prior to use for the LPRM calibration function.

*Only the detector(s) in the required measurement location(s) are required to be OPERABLE.

INSTRUMENTATION

CHLORINE DETECTION SYSTEM

LIMITING CONDITION FOR OPERATION

3.3.7.8.1 Two independent chlorine detection system subsystems shall be OPERABLE with their alarm and trip setpoints adjusted to actuate at a chlorine concentration of less than or equal to 0.5 ppm.

APPLICABILITY: ALL OPERATIONAL CONDITIONS.

ACTION:

- a. With one chlorine 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 chlorine 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

4.3.7.8.1 Each of the above required chlorine 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

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 Each of the above required fire detection instruments which are accessible during unit operation shall be demonstrated OPERABLE 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 the performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months.

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 6 months.

INSTRUMENTATION

LOOSE-PART DETECTION SYSTEM

LIMITING CONDITION FOR OPERATION

3.3.7.10 The loose-part detection system shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

- a. With one or more loose-part detection system channels inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.10 Each channel of the loose-part detection system shall be demonstrated OPERABLE by performance of a:

- a. CHANNEL CHECK at least once per 24 hours,
- b. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
- c. CHANNEL CALIBRATION at least once per 18 months.

INSTRUMENTATION

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.7.11 The radioactive liquid effluent monitoring instrumentation channels shown in Table 3.3.7.11-1 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.1.1 are not exceeded. The alarm/trip setpoints* of these channels shall be determined and adjusted in accordance with the methodology and parameters in the OFFSITE DOSE CALCULATION MANUAL (ODCM).

APPLICABILITY: At all times.

ACTION:

- a. With a radioactive liquid effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above specification, immediately suspend the release of radioactive liquid effluents monitored by the affected channel, or declare the channel inoperable.
- b. With less than the minimum number of radioactive liquid effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3.7.11-1. Restore the inoperable instrumentation to OPERABLE status within the time specified in the ACTION or explain in the next Semiannual Radioactive Effluent Release Report why this inoperability was not corrected within the time specified.
- c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.11 Each radioactive liquid effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3.7.11-1.

*Excluding the flow rate measuring devices which are not determined and adjusted in accordance with the ODCM.

REACTOR COOLANT SYSTEM

3/4.4.7 MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.4.7 Two main steam line isolation valves (MSIVs) per main steam line shall be OPERABLE with closing times greater than or equal to 3 and less than or equal to 5 seconds.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With one or more MSIVs inoperable:
 1. Maintain at least one MSIV OPERABLE in each affected main steam line that is open and within 8 hours, either:
 - a) Restore the inoperable valve(s) to OPERABLE status, or
 - b) Isolate the affected main steam line by use of a deactivated MSIV in the closed position.
 2. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.4.7 Each of the above required MSIVs shall be demonstrated OPERABLE by verifying full closure between 3 and 5 seconds when tested pursuant to Specification 4.0.5.

REACTOR COOLANT SYSTEM

3/4.4.8 STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.4.8 The structural integrity of ASME Code Class 1, 2, and 3 components shall be maintained in accordance with Specification 4.4.8.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, and 5.

ACTION:

- a. With the structural integrity of any ASME Code Class 1 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the reactor coolant system temperature more than 50°F above the minimum temperature required by NDT considerations.
- b. With the structural integrity of any ASME Code Class 2 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the reactor coolant system temperature above 200°F.
- c. With the structural integrity of any ASME Code Class 3 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) from service.

SURVEILLANCE REQUIREMENTS

4.4.8 No requirements other than Specification 4.0.5..

TABLE 3.6.5.2.2-1
REFUELING AREA SECONDARY CONTAINMENT VENTILATION SYSTEM
AUTOMATIC ISOLATION VALVES

<u>REFUELING AREA (ZONE III)</u>	<u>MAXIMUM</u> <u>ISOLATION TIME</u> <u>(Seconds)</u>	<u>ISOLATION</u> <u>SIGNALS^(a)</u>
<u>VALVE FUNCTION</u>		
1. Refueling Area Ventilation Supply Valve HV-76-117 (Unit 1)	5	R,T
2. Refueling Area Ventilation Supply Valve HV-76-118 (Unit 1)	5	R,T
3. Refueling Area Ventilation Exhaust Valve HV-76-167 (Unit 1)	5	R,T
4. Refueling Area Ventilation Exhaust Valve HV-76-168 (Unit 1)	5	R,T
5. Refueling Area Ventilation Supply Valve HV-76-217 (Unit 2)**	5	R,T
6. Refueling Area Ventilation Supply Valve HV-76-218 (Unit 2)**	5	R,T
7. Refueling Area Ventilation Exhaust Valve HV-76-267 (Unit 2)**	5	R,T
8. Refueling Area Ventilation Exhaust Valve HV-76-268 (Unit 2)**	5	R,T
9. Drywell Purge Exhaust Valve HV-76-030	5	B,H,S,U,R,T
10. Drywell Purge Exhaust Valve HV-76-031	5	B,H,S,U,R,T
11. Drywell Purge Exhaust Inboard Valve HV-57-114 (Unit 1)	5	B,H,S,U,W,R,T
12. Drywell Purge Exhaust Outboard Valve HV-57-115 (Unit 1)	6	B,H,S,U,W,R,T
13. Suppression Pool Purge Exhaust Inboard Valve HV-57-104 (Unit 1)	5	B,H,S,U,W,R,T
14. Suppression Pool Purge Exhaust Outboard Valve HV-57-112 (Unit 1)	6	B,H,S,U,W,R,T

TABLE 3.6.5.2.2-1 (Continued)
REFUELING AREA SECONDARY CONTAINMENT VENTILATION SYSTEM
AUTOMATIC ISOLATION VALVES

<u>REFUELING AREA (ZONE III)</u>	<u>MAXIMUM ISOLATION TIME (Seconds)</u>	<u>ISOLATION SIGNALS^(a)</u>
<u>VALVE FUNCTION</u>		
15. Drywell Purge Exhaust Inboard Valve HV-57-214 (Unit 2)**	5	B,H,S,U,W,R,T
16. Drywell Purge Exhaust Outboard Valve HV-57-215 (Unit 2)**	6	B,H,S,U,W,R,T
17. Suppression Pool Purge Exhaust Inboard Valve HV-57-204 (Unit 2)**	5	B,H,S,U,W,R,T
18. Suppression Pool Purge Exhaust Outboard Valve HV-57-212 (Unit 2)**	6	B,H,S,U,W,R,T

**These lines are blanked off during Unit 1 operation/Unit 2 construction.

(a) See Specification 3.3.2, Table 3.3.2-1, for isolation signals that operate each automatic isolation valve.

PLANT SYSTEMS

3/4.7.5 SEALED SOURCE CONTAMINATION

LIMITING CONDITION FOR OPERATION

3.7.5 Each sealed source containing radioactive material either in excess of 100 microcuries of beta and/or gamma emitting material or 5 microcuries of alpha emitting material shall be free of greater than or equal to 0.005 microcurie of removable contamination.

APPLICABILITY: At all times.

ACTION:

- a. With a sealed source having removable contamination in excess of the above limit, withdraw the sealed source from use and either:
 1. Decontaminate and repair the sealed source, or
 2. Dispose of the sealed source in accordance with Commission Regulations.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.5.1 Test Requirements - Each sealed source shall be tested for leakage and/or contamination by:

- a. The licensee, or
- b. Other persons specifically authorized by the Commission or an Agreement State.

The test method shall have a detection sensitivity of at least 0.005 microcurie per test sample.

4.7.5.2 Test Frequencies - Each category of sealed sources, excluding startup sources and fission detectors previously subjected to core flux, shall be tested at the frequency described below.

- a. Sources in use - At least once per 6 months for all sealed sources containing radioactive material:
 1. With a half-life greater than 30 days, excluding Hydrogen 3, and
 2. In any form other than gas.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. Stored sources not in use - Each sealed source and fission detector shall be tested prior to use or transfer to another licensee unless tested within the previous 6 months. Sealed sources and fission detectors transferred without a certificate indicating the last test date shall be tested prior to being placed into use.
 - c. Startup sources and fission detectors - Each sealed startup source and fission detector shall be tested within 31 days prior to being subjected to core flux or installed in the core and following repair or maintenance to the source.
- 4.7.5.3 Reports - A report shall be prepared and submitted to the Commission on an annual basis if sealed source or fission detector leakage tests reveal the presence of greater than or equal to 0.005 microcurie of removable contamination.

PLANT SYSTEMS

3/4.7.6 FIRE SUPPRESSION SYSTEMS

FIRE SUPPRESSION WATER SYSTEM

LIMITING CONDITION FOR OPERATION

- 3.7.6.1 The fire suppression water system shall be OPERABLE with:
- a. Two OPERABLE fire suppression pumps, one electric motor driven and one diesel engine driven, each with a capacity of 2500 gpm, with their discharge aligned to the fire suppression header,
 - b. Separate fire water supplies, each with a minimum contained volume of 311,000 gallons, and
 - c. An OPERABLE flow path capable of taking suction from the Unit 1 Cooling Tower Basin and the Unit 2 Cooling Tower Basin and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves, the last valve ahead of the water flow alarm device on each wet pipe sprinkler system and the last valve ahead of the deluge valve on each deluge, spray, or pre-action sprinkler system and the last valve ahead of the fire hose stations required to be OPERABLE per Specifications 3.7.6.2, 3.7.6.5, and 3.7.6.6.

APPLICABILITY: At all times.

ACTION:

- a. With one pump and/or one water supply inoperable, restore the inoperable equipment to OPERABLE status within 7 days or provide an alternate backup pump or supply. The provisions of Specification 3.0.3 are not applicable.
- b. With the fire suppression water system otherwise inoperable, establish a backup fire suppression water system within 24 hours.

SURVEILLANCE REQUIREMENTS

- 4.7.6.1.1 The fire suppression water system shall be demonstrated OPERABLE:
- a. At least once per 7 days by verifying the minimum contained water supply volume.
 - b. At least once per 31 days by starting the electric motor-driven fire suppression pump and operating it for at least 15 minutes on recirculation flow.
 - c. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path is in its correct position.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- d. At least once per 12 months by performance of a system flush.
 - e. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
 - f. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:
 - 1. Verifying that each fire suppression pump develops at least 2500 gpm at a system head of 125 psig,
 - 2. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel, and
 - 3. Verifying that each fire suppression pump starts to maintain the fire suppression water system pressure greater than or equal to 95 psig.
 - g. At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14th Edition, published by the National Fire Protection Association.
- 4.7.6.1.2 The diesel-driven fire suppression pump shall be demonstrated OPERABLE:
- a. At least once per 31 days by:
 - 1. Verifying the fuel day tank contains at least 330 gallons of fuel.
 - 2. Starting the diesel-driven pump from ambient conditions and operating for greater than or equal to 30 minutes on recirculation flow.
 - b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-D270-75, is within the acceptable limits specified in Table 1 of ASTM D975-77 when checked for viscosity, water, and sediment.
 - c. At least once per 18 months by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4.7.6.1.3 The diesel-driven fire pump starting 24-volt battery bank and charger shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that:
 1. The electrolyte level of each cell is above the plates,
 2. The pilot cell specific gravity, corrected to 77°F and full electrolyte level, is greater than or equal to 1.260, and
 3. The overall battery voltage is greater than or equal to 24 volts.
- b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.
- c. At least once per 18 months by verifying that:
 1. The batteries, cell plates, and battery racks show no visual indication of physical damage or abnormal deterioration, and
 2. Battery-to-battery and terminal connections are clean, tight, free of corrosion, and coated with anticorrosion material.

PLANT SYSTEMS

SPRAY AND/OR SPRINKLER SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.6.2 The following spray and sprinkler systems shall be OPERABLE:

<u>Fire Zone</u>	<u>Description</u>
	Reactor Enclosure Hatchway Water Curtains:
	1. EL 253'
	2. EL 283'
	3. EL 313'
	Fire Area Separation Water Curtains:
48A	1. Area 602, EL 313'
45A	2. Area 402, EL 253'
44	3. Area 304, EL 217' (2 curtains)
22	Cable Spreading Room, Room 450, EL 254',
27	Control Structure Fan Room, EL 304'
27	CREFAS System Filters, EL 304'
28B	SGTS Filters, Compartment 624 and SGTS Access Area 625, EL 332'
33	RCIC Pump Room, Room 108, EL 177'
34	HPCI Pump Room, Room 109, EL 177'
41*	RECW Area, EL 201'
42A*	Safeguard System Access Area 200, EL 201'
44	Safeguard System Access Area 304, EL 217' (Partial) (2 systems)
45A	CRD Hydraulic Equipment Area 402, Reactor Enclosure, EL 253' (Partial)
45B	Neutron Monitoring System Area 406, EL 253' (Partial)
47A	General Equipment Area 500 and Corridor 506, Reactor Enclosure, EL 283' (Partial)
51A & B	Reactor Enclosure Recirculation System Filters, EL 331'
79,80,81,82	Diesel Generator cells (4 Cells)

APPLICABILITY: Whenever equipment protected by the spray and/or sprinkler systems is required to be OPERABLE.

ACTION:

- a. With one or more of the above required spray and/or sprinkler systems inoperable, within 1 hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol.
- b. The provisions of Specification 3.0.3 are not applicable.

*Not required to be OPERABLE until prior to exceeding 5% of RATED THERMAL POWER.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

4.7.6.2 Each of the above required spray and sprinkler systems shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path is in its correct position.
- b. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
- c. At least once per 18 months:
 1. By performing a system functional test which includes simulated automatic actuation of the system, and:
 - a) Verifying that the automatic valves in the flow path actuate to their correct positions on a test signal, and
 - b) Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.
 2. By a visual inspection of the dry pipe spray and sprinkler headers to verify their integrity, and
 3. By a visual inspection of each sprinkler nozzle's spray area to verify that the spray pattern is not obstructed.
- d. At least once per 3 years by performing an air or water flow test through each open head spray and sprinkler header system and verifying each open head spray nozzle and sprinkler header system is unobstructed, except the charcoal filter system spray nozzles which only need to be visually inspected and verified to be unobstructed each time the charcoal is changed.

PLANT SYSTEMS

CO₂ SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.6.3 The following low pressure CO₂ system shall be OPERABLE:

- a. Control Room Entrance, Hose Rack OHR601 and OHR 602.

APPLICABILITY: Whenever equipment protected by the CO₂ systems is required to be OPERABLE.

ACTION:

- a. With the above required CO₂ system inoperable, within 1 hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.6.3.1 The above required low pressure CO₂ system shall be demonstrated OPERABLE at least once per 7 days by verifying the CO₂ storage tank level to be greater than 25% and pressure to be greater than 265 psig.

4.7.6.3.2 The above required CO₂ system shall be demonstrated OPERABLE at least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path is in its correct position.

PLANT SYSTEMS

HALON SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.6.4 The following Halon systems shall be OPERABLE with the storage tanks having at least 95% of full charge weight and 90% of full charge pressure:

- a. Remote Shutdown Panel Area 540, EL 289' (Raised Floor), and
- b. Auxiliary Equipment Room 542, EL 289' (Raised Floor).

APPLICABILITY: Whenever equipment protected by the Halon systems is required to be OPERABLE.

ACTION:

- a. With one or more of the above required Halon systems inoperable, within 1 hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.6.4 Each of the above required Halon systems shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path is in its correct position.
- b. At least once per 6 months by verifying Halon storage tank weight and pressure.
- c. At least once per 18 months by:
 1. Performance of a functional test of the general alarm circuit and associated alarm and interlock devices, and
 2. Performance of a system flow test to assure no blockage.

PLANT SYSTEMS

FIRE HOSE STATIONS

LIMITING CONDITION FOR OPERATION

3.7.6.5 The fire hose stations shown in Table 3.7.6.5-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment in the areas protected by the fire hose stations is required to be OPERABLE.

ACTION:

- a. With one or more of the fire hose stations shown in Table 3.7.6.5-1 inoperable, provide gated wye(s) on the nearest OPERABLE hose station(s). One outlet of the wye shall be connected to the standard length of hose provided at the hose station. The second outlet of the wye shall be connected to a length of hose sufficient to provide coverage for the area left unprotected by the inoperable hose station. Where it can be demonstrated that the physical routing of the fire hose would result in a recognizable hazard to operating technicians, plant equipment, or the hose itself, the fire hose shall be stored in a roll at the outlet of the OPERABLE hose station. Signs shall be mounted above the gated wye(s) to identify the proper hose to use. The above ACTION shall be accomplished within 1 hour if the inoperable fire hose is the primary means of fire suppression; otherwise route the additional hose within 24 hours.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.6.5 Each of the fire hose stations shown in Table 3.7.6.5-1 shall be demonstrated OPERABLE:

- a. At least once per 31 days by a visual inspection of the fire hose stations accessible during plant operation to assure all required equipment is at the station.
- b. At least once per 18 months by:
 1. Visual inspection of the fire hose stations not accessible during plant operation to assure all required equipment is at the station.
 2. Removing the hose for inspection and reracking, and
 3. Inspecting all gaskets and replacing any degraded gaskets in the couplings.
- c. At least once per 3 years by:
 1. Partially opening each hose station valve to verify valve OPERABILITY and no flow blockage.
 2. Conducting a hose hydrostatic test at a pressure of 150 psig or at least 50 psig above the maximum fire main operating pressure, whichever is greater.

PLANT SYSTEMS

YARD FIRE HYDRANTS AND HOSE CART HOUSES

LIMITING CONDITION FOR OPERATION

3.7.6.6 The yard fire hydrants and hose cart houses shown in Table 3.7.6.6-1 shall be OPERABLE.

APPLICABILITY: Whenever equipment in the areas protected by the yard fire hydrants is required to be OPERABLE.

ACTION:

- a. With one or more of the yard fire hydrants or hose cart houses shown in Table 3.7.6.6-1 inoperable, within 1 hour have sufficient additional lengths of 2 1/2 inch diameter hose located in an adjacent OPERABLE hose cart house to provide service to the unprotected area(s) if the inoperable fire hydrant or hose cart house is the primary means of fire suppression; otherwise provide the additional hose within 24 hours.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.6.6 Each of the yard fire hydrants and hose cart houses shown in Table 3.7.6.6-1 shall be demonstrated OPERABLE:

- a. At least once per 31 days by visual inspection of the hose cart house to assure all required equipment is at the hose house.
- b. At least once per 6 months, during March, April, or May and during September, October, or November, by visually inspecting each yard fire hydrant and verifying that the hydrant barrel is dry and that the hydrant is not damaged.
- c. At least once per 12 months by:
 1. Conducting a hose hydrostatic test at a pressure of 150 psig or at least 50 psig above the maximum fire main operating pressure, whichever is greater.
 2. Replacement of all degraded gaskets in couplings.
 3. Performing a flow check of each hydrant.

TABLE 3.7.6.6-1

YARD FIRE HYDRANTS AND HOSE CART HOUSES

LOCATION

HYDRANT NUMBER

West of Diesel Generator Enclosure

FH #7

South of Diesel Generator Enclosure

FH #8

LOCATION

HOSE CART HOUSE NUMBER

West of Diesel Generator Enclosure

HCH #1

PLANT SYSTEMS

3/4.7.7 FIRE RATED ASSEMBLIES

LIMITING CONDITION FOR OPERATION

3.7.7 All fire rated assemblies, including walls, floor/ceilings, cable tray enclosures and other fire barriers, separating safe shutdown fire areas or separating portions of redundant systems important to safe shutdown within a fire area, and all sealing devices in fire rated assembly penetrations, including fire doors, fire windows, fire dampers, cable, piping and ventilation duct penetration seals and ventilation seals, shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

- a. With one or more of the above required fire rated assemblies and/or sealing devices inoperable, within 1 hour establish a continuous fire watch on at least one side of the affected assembly(s) and/or sealing device(s) or verify the OPERABILITY of fire detectors on at least one side of the inoperable assembly(s) and sealing device(s) and establish an hourly fire watch patrol.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.7.1 Each of the above required fire rated assemblies and penetration sealing devices shall be verified OPERABLE at least once per 18 months by performing a visual inspection of:

- a. The exposed surfaces of each fire rated assembly.
- b. Each fire window, fire damper, and associated hardware.
- c. At least 10% of each type of sealed penetration, except internal conduit seals. If apparent changes in appearance or abnormal degradations are found, a visual inspection of an additional 10% of each type of sealed penetration shall be made. This inspection process shall continue until a 10% sample with no apparent changes in appearance or abnormal degradation is found. Samples shall be selected such that each penetration seal will be inspected at least once per 15 years.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4.7.7.2 Each of the above required fire doors which are not electrically supervised shall be verified OPERABLE by inspecting the closing mechanism and latches at least once per 6 months, and by verifying:

- a. That each locked-closed fire door is closed at least once per 7 days.
- b. That each unlocked fire door without electrical supervision is closed at least once per 24 hours.

4.7.7.3 Each of the above required fire doors which are electrically supervised shall be verified OPERABLE:

- a. By verifying that each locked-closed fire door is closed at least once per 7 days.
- b. By verifying the OPERABILITY of the fire door supervision system for each electrically supervised fire door by performing a CHANNEL FUNCTIONAL TEST at least once per 31 days.
- c. By inspecting the closing mechanism and latches at least once per 6 months.

RADIOACTIVE EFFLUENTS

DOSE

LIMITING CONDITION FOR OPERATION

3.11.1.2 The dose or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released from each reactor unit to UNRESTRICTED AREAS (See Figure 5.1.3-1) shall be limited:

- a. During any calendar quarter to less than or equal to 1.5 mrems to the total body and to less than or equal to 5 mrems to any organ, and
- b. During any calendar year to less than or equal to 3 mrems to the total body and to less than or equal to 10 mrems to any organ.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated dose from the release of radioactive materials in liquid effluents exceeding any of the above limits, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which identifies the cause(s) for exceeding the limit(s) and defines the corrective actions that have been taken to reduce the releases and the proposed corrective actions to be taken to assure that subsequent releases will be in compliance with the above limits. This Special Report shall also include the radiological impact on finished drinking water supplies at the nearest downstream drinking water source.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.1.2 Cumulative dose contributions from liquid effluents for the current calendar quarter and the current calendar year shall be determined in accordance with the methodology and parameters in the ODCM at least once per 31 days.

RADIOACTIVE EFFLUENTS

LIQUID RADWASTE TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

3.11.1.3 The liquid radwaste treatment system shall be OPERABLE and appropriate portions of the system shall be used to reduce the radioactive materials in liquid waste prior to their discharge when the projected doses due to the liquid effluent, from each reactor unit, to UNRESTRICTED AREAS (see Figure 5.1.3-1) would exceed 0.06 mrem to the total body or 0.2 mrem to any organ in a 31-day period.

APPLICABILITY: At all times.

ACTION:

- a. With radioactive liquid waste being discharged without treatment and in excess of the above limits, prepare and submit to the Commission within 30 days pursuant to Specification 6.9.2 a Special Report which includes the following information:
 1. Explanation of what liquid radwaste was being discharged without treatment, identification of any inoperable equipment or sub-systems, and the reason for the inoperability,
 2. Action(s) taken to restore the inoperable equipment to OPERABLE status, and
 3. Summary description of action(s) taken to prevent a recurrence.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.1.3.1 Doses due to liquid releases from each reactor unit to UNRESTRICTED AREAS shall be projected at least once per 31 days in accordance with the methodology and parameters in the ODCM.

4.11.1.3.2 The liquid radwaste treatment system shall be demonstrated OPERABLE by meeting Specifications 3.11.1.1 and 3.11.1.2.

RADIOACTIVE EFFLUENTS

LIQUID HOLDUP TANKS

LIMITING CONDITION FOR OPERATION

3.11.1.4 The quantity of radioactive material contained in any outside temporary tanks shall be limited to less than or equal to 10 curies, excluding tritium and dissolved or entrained noble gases.

APPLICABILITY: At all times.

ACTION:

- a. With the quantity of radioactive material in any of the above tanks exceeding the above limit, immediately suspend all additions of radioactive material to the tank and within 48 hours reduce the tank contents to within the limit and describe the events leading to this condition in the next Semiannual Radioactive Effluent Release Report.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.1.4 The quantity of radioactive material contained in each of the above tanks shall be determined to be within the above limit by analyzing a representative sample of the tank's contents at least once per 7 days when radioactive materials are being added to the tank.

RADIOACTIVE EFFLUENTS

3/4.11.2 GASEOUS EFFLUENTS

DOSE RATE

LIMITING CONDITION FOR OPERATION

3.11.2.1 The dose rate due to radioactive materials released in gaseous effluents from the site to areas at or beyond the SITE BOUNDARY (see Figure 5.1.3-1) shall be limited to the following:

- a. For noble gases: Less than or equal to 500 mrem/yr to the total body and less than or equal to 3000 mrem/yr to the skin, and
- b. For iodine-131, for iodine-133, for tritium, and for all radionuclides in particulate form with half-lives greater than 8 days; Less than or equal to 1500 mrem/yr to any organ. (Inhalation pathways only.)

APPLICABILITY: At all times.

ACTION:

- a. With the dose rate(s) exceeding the above limits, immediately restore the release rate to within the above limits.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.1.1 The dose rate due to noble gases in gaseous effluents shall be determined to be within the above limits in accordance with the methodology and parameters of the ODCM.

4.11.2.1.2 The dose rate due to iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents shall be determined to be within the above limits in accordance with the methodology and parameters of the ODCM by obtaining representative samples and performing analyses in accordance with the sampling and analysis program specified in Table 4.11.2.1.2-1.

TABLE 4.11.2.1.2-1 (Continued)

TABLE NOTATIONS

- b Sampling and analyses shall also be performed following shutdown, startup, or a THERMAL POWER change exceeding 15% of the RATED THERMAL POWER within a 1-hour period. This requirement does not apply if (1) analysis shows that the DOSE EQUIVALENT I-131 concentration in the primary coolant has not increased more than a factor of 3; and (2) the main condenser offgas pre-treatment radioactivity monitor shows that effluent activity has not increased more than a factor of 3.
- c Samples shall be changed at least once per 7 days and analyses shall be completed within 48 hours after changing, or after removal from sampler. Sampling shall also be performed at least once per 24 hours for at least 7 days following each shutdown, startup, or THERMAL POWER change exceeding 15% of RATED THERMAL POWER in 1 hour and analyses completed within 48 hours of changing. When samples collected for 24 hours are analyzed, the corresponding LLDs may be increased by a factor of 10. This requirement does not apply if (1) analysis shows that the DOSE EQUIVALENT I-131 concentration in the primary coolant has not increased more than a factor of 3; and (2) the noble gas monitor shows that effluent activity has not increased more than a factor of 3.
- d The ratio of the sample flow rate to the sampled stream flow rate shall be known for the time period covered by each dose or dose rate calculation made in accordance with Specifications 3.11.2.1, 3.11.2.2, and 3.11.2.3.
- e The principal gamma emitters for which the LLD specification applies include the following radionuclides: Kr-87, Kr-88, Xe-133, Xe-133m, Xe-135, Xe-135m and Xe-138 for gaseous emissions and Mn-54, Fe-59, Co-58, Co-60, Zn-65, Mo-99, I-131, Cs-134, Cs-137, Ce-141 and Ce-144 for particulate emissions. This list does not mean that only these nuclides are to be considered. Other gamma peaks which are identifiable, together with those of the above nuclides, shall also be analyzed and reported in the Semiannual Radioactive Effluent Release Report, pursuant to Specification 6.9.1.8.
- f Under the provisions of footnote e. above, only noble gases need to be considered.
- g Required only when handling or storing irradiated fuel in the secondary containment.
- h. Required for the hot maintenance shop ventilation exhaust only during operation of the hot maintenance shop ventilation exhaust system.

RADIOACTIVE EFFLUENTS

DOSE - NOBLE GASES

LIMITING CONDITION FOR OPERATION

3.11.2.2 The air dose due to noble gases released in gaseous effluents, from each reactor unit, to areas at and beyond the SITE BOUNDARY (see Figure 5.1.3-1) shall be limited to the following:

- a. During any calendar quarter: Less than or equal to 5 mrad for gamma radiation and less than or equal to 10 mrad for beta radiation, and
- b. During any calendar year: Less than or equal to 10 mrad for gamma radiation and less than or equal to 20 mrad for beta radiation.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated air dose from radioactive noble gases in gaseous effluents exceeding any of the above limits, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which identifies the cause(s) for exceeding the limit(s) and defines the corrective actions that have been taken to reduce the releases and the proposed corrective actions to be taken to assure that subsequent releases will be in compliance with the above limits.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.2 Cumulative dose contributions for the current calendar quarter and current calendar year for noble gases shall be determined in accordance with the methodology and parameters in the ODCM at least once per 31 days.

RADIOACTIVE EFFLUENTS

DOSE - IODINE-133, TRITIUM, AND RADIONUCLIDES IN PARTICULATE FORM

LIMITING CONDITION FOR OPERATION

3.11.2.3 The dose to a MEMBER OF THE PUBLIC from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released, from each reactor unit, to areas at and beyond the SITE BOUNDARY (see Figure 5.1.3-1) shall be limited to the following:

- a. During any calendar quarter: Less than or equal to 7.5 mrem to any organ and,
- b. During any calendar year: Less than or equal to 15 mrem to any organ.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated dose from the release of iodine-131, iodine-133, tritium, and radionuclides in particulate form with half-lives greater than 8 days, in gaseous effluents exceeding any of the above limits, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which identifies the cause(s) for exceeding the limit and defines the corrective actions that have been taken to reduce the releases and the proposed corrective actions to be taken to assure that subsequent releases will be in compliance with the above limits.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.3 Cumulative dose contributions for the current calendar quarter and current calendar year for iodine-131, iodine-133, tritium, and radionuclides in particulate form with half-lives greater than 8 days shall be determined in accordance with the methodology and parameters in the ODCM at least once per 31 days.

RADIOACTIVE EFFLUENTS

VENTILATION EXHAUST TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

3.11.2.4 The VENTILATION EXHAUST TREATMENT SYSTEM shall be OPERABLE and appropriate portions of the system shall be used to reduce radioactive materials in gaseous waste prior to their discharge when the projected doses due to gaseous effluent releases from each reactor unit to areas at and beyond the SITE BOUNDARY (see Figure 5.1.3-1) when averaged over 31 days would exceed 0.3 mrem to any organ in a 31-day period.

APPLICABILITY: At all times.

ACTION:

- a. With gaseous waste being discharged without treatment, and in excess of the above limits, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report which includes the following information:
 1. Explanation of why gaseous radwaste was being discharged without treatment, identification of any inoperable equipment or subsystems, and the reason for the inoperability,
 2. Action(s) taken to restore the inoperable equipment to OPERABLE status, and
 3. Summary description of action(s) taken to prevent a recurrence.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.4.1 Doses due to gaseous releases from each reactor unit to areas at and beyond the SITE boundary shall be projected at least once per 31 days in accordance with the methodology and parameters in the ODCM.

4.11.2.4.2 The VENTILATION EXHAUST TREATMENT SYSTEM shall be demonstrated OPERABLE by meeting Specifications 3.11.2.1, 3.11.2.2, and 3.11.2.3.

RADIOACTIVE EFFLUENTS

EXPLOSIVE GAS MIXTURE

LIMITING CONDITION FOR OPERATION

3.11.2.5 The concentration of hydrogen in the main condenser offgas treatment system shall be limited to less than or equal to 4% by volume.

APPLICABILITY: Whenever the main condenser air ejector system is in operation.

ACTION:

- a. With the concentration of hydrogen in the main condenser offgas treatment system exceeding the limit, restore the concentration to within the limit within 48 hours.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.5 The concentration of hydrogen in the main condenser offgas treatment system shall be determined to be within the above limits by continuously monitoring the waste gases in the main condenser offgas treatment system with the hydrogen monitors required OPERABLE by Table 3.3.7.12-1 of Specification 3.3.7.12.

RADIOACTIVE EFFLUENTS

MAIN CONDENSER

LIMITING CONDITION FOR OPERATION

3.11.2.6 The rate of the sum of the activities of the noble gases Kr-85m, Kr-87, Kr-88, Xe-133, Xe-135, and Xe-138 measured at the recombiner after-condenser discharge shall be limited to less than or equal to 330 millicuries/second.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2*, and 3*.

ACTION:

With the rate of the sum of the activities of the specified noble gases at the recombiner after-condenser discharge exceeding 330 millicuries/second, restore the gross radioactivity rate to within its limit within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.11.2.6.1 The rate of the sum of the activities of noble gases at the recombiner after-condenser discharge shall be continuously monitored in accordance with Specification 3.3.7.12.

4.11.2.6.2 The rate of the sum of the activities of the specified noble gases from the recombiner after-condenser discharge shall be determined to be within the limits of Specification 3.11.2.6 at the following frequencies by performing an isotopic analysis of a representative sample of gases taken at the recombiner after condenser discharge:

- a. At least once per 31 days.
- b. Within 4 hours following an increase, as indicated by the Main Condenser Off-Gas Pretreatment Radioactivity Monitor, of greater than 50%, after factoring out increases due to changes in THERMAL POWER level or air in-leakage, in the nominal steady-state fission gas release from the primary coolant.
- c. The provisions of Specification 4.0.4 are not applicable.

*When the main condenser air ejector is in operation.

RADIOACTIVE EFFLUENTS

VENTING OR PURGING

LIMITING CONDITION FOR OPERATION

3.11.2.7 VENTING or PURGING of the Mark II containment shall be through the standby gas treatment system.

APPLICABILITY: Whenever the containment is vented or purged.*

ACTION:

- a. With the requirements of the above specification not satisfied, suspend all VENTING and PURGING of the containment.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.7.1 The containment shall be determined to be aligned for VENTING or PURGING through the standby gas treatment system within 4 hours prior to start of and at least once per 12 hours during VENTING or PURGING of the containment.

4.11.2.7.2 Prior to use of the purge system through the standby gas treatment system assure that:

- a. Both standby gas treatment system trains are OPERABLE whenever the purge system is in use, and
- b. Whenever the purge system is in use during OPERATIONAL CONDITION 1 or 2 or 3, only one of the standby gas treatment system trains may be used.

*Except for the one inch/two inch vent valves to the Reactor Enclosure Equipment Compartment Exhaust Filters when used for containment pressure control and nitrogen make-up operations.

RADIOACTIVE EFFLUENTS

3/4.11.3 SOLID RADWASTE TREATMENT

LIMITING CONDITION FOR OPERATION

3.11.3 Radioactive wastes shall be SOLIDIFIED or dewatered in accordance with the PROCESS CONTROL PROGRAM to meet shipping and transportation requirements during transit, and disposal site requirements when received at the disposal site.

APPLICABILITY: At all times.

ACTION:

- a. With SOLIDIFICATION or dewatering not meeting disposal site and shipping and transportation requirements, suspend shipment of the inadequately processed wastes and correct the PROCESS CONTROL PROGRAM, the procedures and/or the solid waste system as necessary to prevent recurrence.
- b. With the SOLIDIFICATION or dewatering not performed in accordance with the PROCESS CONTROL PROGRAM, (1) test the improperly processed waste in each container to ensure that it meets burial ground and shipping requirements and (2) take appropriate administrative action to prevent recurrence.
- c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.3.1 The PROCESS CONTROL PROGRAM shall be used to verify that the properties of the packaged waste meet the minimum stability requirements of 10 CFR Part 61 and other requirements for transportation to the disposal site and receipt at the disposal site.

RADIOACTIVE EFFLUENTS

SURVEILLANCE REQUIREMENTS (Continued)

4.11.3.2 If the SOLIDIFICATION method is used, the PROCESS CONTROL PROGRAM shall be used to verify the SOLIDIFICATION of at least one representative test specimen from at least every tenth batch of each type of wet radioactive waste (e.g., filter sludges, spent resins, evaporator bottoms, and sodium sulfate solutions).

- a. If any test specimen fails to verify SOLIDIFICATION, the SOLIDIFICATION of the batch under test shall be suspended until such time as additional test specimens can be obtained, alternative SOLIDIFICATION parameters can be determined in accordance with the PROCESS CONTROL PROGRAM, and a subsequent test verifies SOLIDIFICATION. SOLIDIFICATION of the batch may then be resumed using the alternative SOLIDIFICATION parameters determined by the PROCESS CONTROL PROGRAM.
- b. If the initial test specimen from a batch of waste fails to verify SOLIDIFICATION, the PROCESS CONTROL PROGRAM shall provide for the collection and testing of representative test specimens from each consecutive batch of the same type of wet waste until at least three consecutive initial test specimens demonstrate SOLIDIFICATION. The PROCESS CONTROL PROGRAM shall be modified as required, as provided in Specification 6.13, to assure SOLIDIFICATION of subsequent batches of waste.

RADIOACTIVE EFFLUENTS

3/4.11.4 TOTAL DOSE

LIMITING CONDITION FOR OPERATION

3.11.4 The annual (calendar year) dose or dose commitment to any MEMBER OF THE PUBLIC, due to releases of radioactivity and radiation, from uranium fuel cycle sources shall be limited to less than or equal to 25 mrems to the total body or any organ, except the thyroid, which shall be limited to less than or equal to 75 mrems.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated doses from the release of radioactive materials in liquid or gaseous effluents exceeding twice the limits of Specification 3.11.1.2a., 3.11.1.2b., 3.11.2.2a., 3.11.2.2b., 3.11.2.3a., or 3.11.2.3b., calculations shall be made including direct radiation contributions from the reactor units and from outside storage tanks to determine whether the above limits of Specification 3.11.4 have been exceeded. If such is the case, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report that defines the corrective action to be taken to reduce subsequent releases to prevent recurrence of exceeding the above limits and includes the schedule for achieving conformance with the above limits. This Special Report, as defined in 10 CFR 20.405c, shall include an analysis that estimates the radiation exposure (dose) to a MEMBER OF THE PUBLIC from uranium fuel cycle sources, including all effluent pathways and direct radiation, for the calendar year that includes the release(s) covered by this report. It shall also describe levels of radiation and concentrations of radioactive material involved, and the cause of the exposure levels or concentrations. If the estimated dose(s) exceeds the above limits, and if the release condition resulting in violation of 40 CFR Part 190 has not already been corrected, the Special Report shall include a request for a variance in accordance with the provisions of 40 CFR Part 190. Submittal of the report is considered a timely request, and a variance is granted until staff action on the request is complete.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.11.4.1 Cumulative dose contributions from liquid and gaseous effluents shall be determined in accordance with Specifications 4.11.1.2, 4.11.2.2, and 4.11.2.3, and in accordance with the methodology and parameters in the ODCM.
- 4.11.4.2 If the cumulative dose contributions exceed the limits defined in 3.11.4, ACTION a, Cumulative dose contributions from direct radiation from unit operation shall be determined in accordance with the methodology and parameters in the ODCM.

3/4.12 RADIOLOGICAL ENVIRONMENTAL MONITORING

3/4.12.1 MONITORING PROGRAM

LIMITING CONDITION FOR OPERATION

3.12.1 The radiological environmental monitoring program shall be conducted as specified in Table 3.12.1-1.

APPLICABILITY: At all times.

ACTION:

- a. With the radiological environmental monitoring program not being conducted as specified in Table 3.12.1-1, prepare and submit to the Commission, in the Annual Radiological Environmental Operating Report per Specification 6.9.1.7, a description of the reasons for not conducting the program as required and the plans for preventing a recurrence.
- b. With the level of radioactivity as the result of plant effluents in an environmental sampling medium at a specified location exceeding the reporting levels of Table 3.12.1-2 when averaged over any calendar quarter, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report that identifies the cause(s) for exceeding the limit(s) and defines the corrective actions to be taken to reduce radioactive effluents so that the potential annual dose to a MEMBER OF THE PUBLIC is less than the calendar year limits of Specifications 3.11.1.2, 3.11.2.2 and 3.11.2.3. When more than one of the radionuclides in Table 3.12.1-2 are detected in the sampling medium, this report shall be submitted if:

$$\frac{\text{concentration (1)}}{\text{reporting level (1)}} + \frac{\text{concentration (2)}}{\text{reporting level (2)}} + \dots \geq 1.0$$

When radionuclides other than those in Table 3.12.1-2 are detected and are the result of plant effluents, this report shall be submitted if the potential annual dose to a MEMBER OF THE PUBLIC is equal to or greater than the calendar year limits of Specifications 3.11.1.2, 3.11.2.2, and 3.11.2.3. This report is not required if the measured level of radioactivity was not the result of plant effluents; however, in such an event, the condition shall be reported and described in the Annual Radiological Environmental Operating Report.

RADIOLOGICAL ENVIRONMENTAL MONITORING

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

- c. With milk or fresh leafy vegetable samples unavailable from one or more of the sample locations required by Table 3.12.1-1, identify locations for obtaining replacement samples and add them to the radiological environmental monitoring program within 30 days. The specific locations from which samples were unavailable may then be deleted from the monitoring program. Pursuant to Specification 6.9.1.8, identify the cause of the unavailability of samples and identify the new location(s) for obtaining replacement samples in the next Semiannual Radioactive Effluent Release Report and also include in the report a revised figure(s) and table for the ODCM reflecting the new location(s).
- d. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.12.1.1 The radiological environmental monitoring samples shall be collected pursuant to Table 3.12.1-1 from the specific locations given in the table and figure in the ODCM and shall be analyzed pursuant to the requirements of Tables 3.12.1-1, the detection capabilities required by Table 4.12.1-1.

RADIOLOGICAL ENVIRONMENTAL MONITORING

3/4.12.2 LAND USE CENSUS

LIMITING CONDITION FOR OPERATION

3.12.2 A land use census shall be conducted and shall identify within a distance of 8 km (5 miles) the location in each of the 16 meteorological sectors of the nearest milk animal, the nearest residence and the nearest garden* of greater than 50 m² (500 ft²) producing broad leaf vegetation.

APPLICABILITY: At all times.

ACTION:

- a. With a land use census identifying a location(s) which yields a calculated dose or dose commitment greater than the values currently being calculated in Specification 4.11.2.3, identify the new location(s) in the next Semiannual Radioactive Effluent Release Report, pursuant to Specification 6.9.1.8.
- b. With a land use census identifying a location(s) that yields a calculated dose or dose commitment (via the same exposure pathway) 20% greater than at a location from which samples are currently being obtained in accordance with Specification 3.12.1, add the new location(s) to the radiological environmental monitoring program within 30 days. The sampling location(s), excluding the control station location, having the lowest calculated dose or dose commitment(s) (via the same exposure pathway) may be deleted from this monitoring program after October 31 of the year in which this land use census was conducted. Pursuant to Specification 6.9.1.8, identify the new location(s) in the next Semiannual Radioactive Effluent Release Report and also include in the report a revised figure(s) and table for the ODCM reflecting the new location(s).
- c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.12.2 The land use census shall be conducted during the growing season at least once per 12 months using that information that will provide the best results, such as by a door-to-door survey, aerial survey, or by consulting local agriculture authorities. The results of the land use census shall be included in the Annual Radiological Environmental Operating Report pursuant to Specification 6.9.1.7.

*Broad leaf vegetation sampling of at least three different kinds of vegetation may be performed at the SITE BOUNDARY in each of two different direction sectors with the highest predicted D/Qs in lieu of the garden census. Specifications for broad leaf vegetation sampling in Table 3.12.1-1 item 4.c. shall be followed, including analysis of control samples.

RADIOLOGICAL ENVIRONMENTAL MONITORING

3/4.12.3 INTERLABORATORY COMPARISON PROGRAM

LIMITING CONDITION FOR OPERATION

3.12.3 Analyses shall be performed on radioactive materials supplied as part of an Interlaboratory Comparison Program which has been approved by the Commission.

APPLICABILITY: At all times.

ACTION:

- a. With analyses not being performed as required above, report the corrective actions taken to prevent a recurrence to the Commission in the Annual Radiological Environmental Operating Report pursuant to Specification 6.9.1.7.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.12.3 The Interlaboratory Comparison Program shall be described in the ODCM. A summary of the results obtained as part of the above required Interlaboratory Comparison Program shall be included in the Annual Radiological Environmental Operating Report pursuant to Specification 6.9.1.7.

3/4.0 APPLICABILITY

BASES

Specifications 3.0.1 through 3.0.4 establish the general requirements applicable to Limiting Conditions for Operation. These requirements are based on the requirements for Limiting Conditions for Operation stated in the Code of Federal Regulations, 10 CFR 50.36(c)(2):

"Limiting Conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specification until the condition can be met."

Specification 3.0.1 establishes the Applicability statement within each individual specification as the requirement for when (i.e., in which OPERATIONAL CONDITIONS or other specified conditions) conformance to the Limiting Conditions for Operation is required for safe operation of the facility. The ACTION requirements establish those remedial measures that must be taken within specified time limits when the requirements of a Limiting Condition for Operation are not met. It is not intended that the shutdown ACTION requirement be used as an operational convenience which permits (routine) voluntary removal of a system(s) or component(s) from service in lieu of other alternatives that would not result in redundant systems or components being inoperable.

There are two basic types of ACTION requirements. The first specifies the remedial measures that permit continued operation of the facility which is not further restricted by the time limits of the ACTION requirements. In this case, conformance to the ACTION requirements provides an acceptable level of safety for unlimited continued operation as long as the ACTION requirements continue to be met. The second type of ACTION requirement specifies a time limit in which conformance to the conditions of the Limiting Condition for Operation must be met. This time limit is the allowable outage time to restore an inoperable system or component to OPERABLE status or for restoring parameters within specified limits. If these actions are not completed within the allowable outage time limits, a shutdown is required to place the facility in an OPERATIONAL CONDITION or other specified condition in which the specification no longer applies.

The specified time limits of the ACTION requirements are applicable from the point of time it is identified that a Limiting Condition for Operation is not met. The time limits of the ACTION requirements are also applicable when a system or component is removed from service for surveillance testing or investigation of operational problems. Individual specifications may include a specified time limit for the completion of a Surveillance Requirement when equipment is removed from service. In this case, the allowable outage time limits of the ACTION requirements are applicable when this limit expires if the surveillance has not been completed. When a shutdown is required to comply with ACTION requirements, the plant may have entered an OPERATIONAL CONDITION in which a new specification becomes applicable. In this case, the time limits of the ACTION requirements would apply from the point in time that the new specification becomes applicable if the requirements of the Limiting Condition for Operation are not met.

3/4.0 APPLICABILITY

BASES

Specification 3.0.2 establishes that noncompliance with a specification exists when the requirements of the Limiting Condition for Operation are not met and the associated ACTION requirements have not been implemented within the specified time interval. The purpose of this specification is to clarify that (1) implementation of the ACTION requirements within the specified time interval constitutes compliance with a specification and (2) completion of the remedial measures of the ACTION requirements is not required when compliance with a Limiting Condition of Operation is restored within the time interval specified in the associated ACTION requirements.

Specification 3.0.3 establishes the shutdown ACTION requirements that must be implemented when a Limiting Condition for Operation is not met and the condition is not specifically addressed by the associated ACTION requirements. The purpose of this specification is to delineate the time limits for placing the unit in a safe shutdown CONDITION when plant operation cannot be maintained within the limits for safe operation defined by the Limiting Conditions for Operation and its ACTION requirements. It is not intended to be used as an operational convenience which permits (routine) voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable. One hour is allowed to prepare for an orderly shutdown before initiating a change in plant operation. This time permits the operator to coordinate the reduction in electrical generation with the load dispatcher to ensure the stability and availability of the electrical grid. The time limits specified to reach lower CONDITIONS of operation permit the shutdown to proceed in a controlled and orderly manner that is well within the specified maximum cooldown rate and within the cooldown capabilities of the facility assuming only the minimum required equipment is OPERABLE. This reduces thermal stresses on components of the primary coolant system and the potential for a plant upset that could challenge safety systems under conditions for which this specification applies.

If remedial measures permitting limited continued operation of the facility under the provisions of the ACTION requirements are completed, the shutdown may be terminated. The time limits of the ACTION requirements are applicable from the point in time there was a failure to meet a Limiting Condition for Operation. Therefore, the shutdown may be terminated if the ACTION requirements have been met or time limits of the ACTION requirements have not expired, thus providing an allowance for the completion of the required actions.

The time limits of Specification 3.0.3 allow 37 hours for the plant to be in COLD SHUTDOWN when a shutdown is required during POWER operation. If the plant is in a lower CONDITION of operation when a shutdown is required, the time limit for reaching the next lower CONDITION of operation applies. However, if a lower CONDITION of operation is reached in less time than allowed, the total allowable time to reach COLD SHUTDOWN, or other OPERATIONAL CONDITION, is not reduced. For example, if STARTUP is reached in 2 hours, the time allowed to reach HOT SHUTDOWN is the next 11 hours because the total time to reach HOT SHUTDOWN is not reduced from the allowable limit of 13 hours. Therefore, if remedial measures are completed that would permit a return to POWER operation, a penalty is not incurred by having to reach a lower CONDITION of operation in less than the total time allowed.

3/4.0 APPLICABILITY

BASES

The same principle applies with regard to the allowable outage time limits of the ACTION requirements, if compliance with the ACTION requirements for one specification results in entry into an OPERATIONAL CONDITION or condition of operation for another specification in which the requirements of the Limiting Condition for Operation are not met. If the new specification becomes applicable in less time than specified, the difference may be added to the allowable outage time limits of the second specification. However, the allowable outage time limits of ACTION requirements for a higher CONDITION of operation may not be used to extend the allowable outage time that is applicable when a Limiting Condition for Operation is not met in a lower CONDITION of operation.

The shutdown requirements of Specification 3.0.3 do not apply in CONDITIONS 4 and 5, because the ACTION requirements of individual specifications define the remedial measures to be taken.

Specification 3.0.4 establishes limitations on a change in OPERATIONAL CONDITIONS when a Limiting Condition for Operation is not met. It precludes placing the facility in a higher CONDITION of operation when the requirements for a Limiting Condition for Operation are not met and continued noncompliance to these conditions would result in a shutdown to comply with the ACTION requirements if a change in CONDITIONS were permitted. The purpose of this specification is to ensure that facility operation is not initiated or that higher CONDITIONS of operation are not entered when corrective action is being taken to obtain compliance with a specification by restoring equipment to OPERABLE status or parameters to specified limits. Compliance with ACTION requirements that permit continued operation of the facility for an unlimited period of time provides an acceptable level of safety for continued operation without regard to the status of the plant before or after a change in OPERATIONAL CONDITIONS. Therefore, in this case, entry into an OPERATIONAL CONDITION or other specified condition may be made in accordance with the provisions of the ACTION requirements. The provisions of this specification should not, however, be interpreted as endorsing the failure to exercise good practice in restoring systems or components to OPERABLE status before plant startup.

When a shutdown is required to comply with ACTION requirements, the provisions of Specification 3.0.4 do not apply because they would delay placing the facility in a lower CONDITION of operation.

Specification 4.0.1 through 4.0.5 establish the general requirements applicable to Surveillance Requirements. These requirements are based on the Surveillance Requirements stated in the Code of Federal Regulations 10 CFR 50.36(c)(3):

"Surveillance requirements are requirements relating to test, calibration, or inspection to ensure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions of operation will be met."

Specification 4.0.1 establishes the requirement that surveillances must be performed during the OPERATIONAL CONDITIONS or other conditions for which the requirements of the Limiting Conditions for Operation apply unless otherwise stated in an individual Surveillance Requirement. The purpose of this specification is to ensure that surveillances are performed to verify the

3/4.0 APPLICABILITY

BASES

operational status of systems and components and that parameters are within specified limits to ensure safe operation of the facility when the plant is in an OPERATIONAL CONDITION or other specified condition for which the individual Limiting Conditions for Operation are applicable. Surveillance Requirements do not have to be performed when the facility is in an OPERATIONAL CONDITION for which the requirements of the associated Limiting Condition for Operation do not apply unless otherwise specified. The Surveillance Requirements associated with a Special Test Exception are only applicable when the Special Test Exception is used as an allowable exception to the requirements of a specification.

Specification 4.0.2 establishes the conditions under which the specified time interval for Surveillance Requirements may be extended. Item a. permits an allowable extension of the normal surveillance interval to facilitate surveillance scheduling and consideration of plant operating conditions that may not be suitable for conducting the surveillance; e.g., transient conditions or other ongoing surveillance or maintenance activities. Item b. limits the use of the provisions of item a. to ensure that it is not used repeatedly to extend the surveillance interval beyond that specified. The limits of Specification 4.0.2 are based on engineering judgment and the recognition that the most probable result of any particular surveillance being performed is the verification of conformance with the Surveillance Requirements. These provisions are sufficient to ensure that the reliability ensured through surveillance activities is not significantly degraded beyond that obtained from the specified surveillance interval.

Specification 4.0.3 establishes the failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by the provisions of specification 4.0.2, as a condition that constitutes a failure to meet the OPERABILITY requirements for a Limiting Condition for Operation. Under the provisions of this specification, systems and components are assumed to be OPERABLE when Surveillance Requirements have been satisfactorily performed within the specified time interval. However, nothing in this provision is to be construed as implying that systems or components are OPERABLE when they are found or known to be inoperable although still meeting the Surveillance Requirements. This specification also clarifies that the ACTION requirements are applicable when Surveillance Requirements have not been completed within the allowed surveillance interval and that the time limits of the ACTION requirements apply from the point in time it is identified that a surveillance has not been performed and not at the time that the allowed surveillance interval was exceeded. Completion of the Surveillance Requirement within the allowable outage time limits of the ACTION requirements restores compliance with the requirements of Specification 4.0.3. However, this does not negate the fact that the failure to have performed the surveillance within the allowed surveillance interval, defined by the provisions of Specification 4.0.2, was violation of the OPERABILITY requirements of a Limiting Condition for Operation that is subject to enforcement action. Further, the failure to perform a surveillance within the provisions of Specification 4.0.2 constitutes a failure to meet the OPERABILITY requirements for a Limiting Condition for Operation and any reports required by 10 CFR 50.73 shall be determined based on the length of time the surveillance interval has been exceeded, and the corresponding Limiting Conditions for Operation ACTION time requirements.

3/4.0 APPLICABILITY

BASES

If the allowable outage time limits of the ACTION requirements are less than 24 hours or a shutdown is required to comply with ACTION requirements, e.g., Specification 3.0.3, a 24-hour allowance is provided to permit a delay in implementing the ACTION requirements. This provides an adequate time limit to complete Surveillance Requirements that have not been performed. The purpose of this allowance is to permit the completion of a surveillance before a shutdown would be required to comply with ACTION requirements or before other remedial measures would be required that may preclude the completion of a surveillance. The basis for this allowance includes consideration for plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance, and the safety significance of the delay in completing the required surveillance. This provision also provides a time limit for the completion of Surveillance Requirements that become applicable as a consequence of CONDITION changes imposed by ACTION requirements and for completing Surveillance Requirements that are applicable when an exception to the requirements of Specification 4.0.4 is allowed. If a surveillance is not completed within 24-hour allowance, the time limits of the ACTION requirements are applicable at that time. When a surveillance is performed within the 24-hour allowance and the Surveillance Requirements are not met, the time limits of the ACTION requirements are applicable at the time that the surveillance is terminated.

Surveillance Requirements do not have to be performed on inoperable equipment because the ACTION requirements define the remedial measures that apply. However, the Surveillance Requirements have to be met to demonstrate that inoperable equipment has been restored to OPERABLE status.

Specification 4.0.4 establishes the requirement that all applicable surveillances must be met before entry into an OPERATIONAL CONDITION or other condition of operation specified in the Applicability statement. The purpose of this specification is to ensure that system and component OPERABILITY requirements or parameter limits are met before entry into an OPERATIONAL CONDITION or other specified condition for which these systems and components ensure safe operation of the facility. This provision applies to changes in OPERATIONAL CONDITIONS or other specified conditions associated with plant shutdown as well as startup.

Under the provisions of this specification, the applicable Surveillance Requirements must be performed within the specified surveillance interval to ensure that the Limiting Conditions for Operation are met during initial plant startup or following a plant outage.

When a shutdown is required to comply with ACTION requirements, the provisions of Specification 4.0.4 do not apply because this would delay placing the facility in a lower CONDITION of operation.

Specification 4.0.5 establishes the requirement that inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. These requirements apply except when relief has been provided in writing by the Commission.

3/4.0 APPLICABILITY

BASES

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout the Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and applicable Addenda. The requirements of Specification 4.0.4 to perform surveillance activities before entry into an OPERATIONAL CONDITION or other specified condition takes precedence over the ASME Boiler and Pressure Vessel Code provision that allows pumps and valves to be tested up to one week after return to normal operation. The Technical Specification definition of OPERABLE does not allow a grace period before a component, which is not capable of performing its specified function, is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel Code provision that allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 11 TO FACILITY OPERATING LICENSE NO. NPF-39
PHILADELPHIA ELECTRIC COMPANY
LIMERICK GENERATING STATION, UNIT 1
DOCKET NO. 50-352

1.0 INTRODUCTION

By letter dated July 19, 1988, Philadelphia Electric Company (the licensee) requested an amendment to Facility Operating License No. NPF-39 for the Limerick Generating Station, Unit 1. The proposed amendment would change the Technical Specifications (TSs) as recommended by the staff in Generic Letter 87-09 issued June 4, 1987 to address three specific problems that have been encountered with respect to applicability of Sections 3.0 and 4.0 of the Standard Technical Specifications.

Specifically, the proposed amendment would revise Sections 3.0.4, 4.0.3 and 4.0.4 and the Bases for these Sections consistent with the changes suggested in Generic Letter 87-09 as follows:

Section 3.0.4 of the general limiting conditions for operation (LCO) would be revised to allow entry into an operational condition under certain circumstances when compliance with the LCO's related action statements would allow continued operation for an unlimited period of time. The wording proposed by the licensee for Section 3.0.4 is identical to that suggested by the staff in Enclosure 4 to Generic Letter 87-09. The thrust of the change is to define when the provisions of 3.0.4 apply instead of defining when the provisions do not apply.

Section 4.0.3 of the general surveillance requirements would be modified to clarify the time at which action statement time limits begin relative to failure to perform a surveillance requirement. The section would be revised to incorporate up to a 24 hour extension in the time permitted to implement action requirements due to a missed surveillance when the action requirements would otherwise specify a restoration time that is less than 24 hours. The wording proposed by the licensee for Section 4.0.3 is identical to that in the model TSs in Enclosure 4 to Generic Letter 87-09.

Section 4.0.4 would be revised to clarify that restrictions on entry into operational conditions based on failure to comply with surveillance requirements shall not prevent passage into or through

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operational conditions as required to comply with action requirements. The wording proposed by the licensee for Section 4.0.4 is identical to that in the model TSs in Enclosure 4 to Generic Letter 87-09.

As discussed in Enclosure 5 to Generic Letter 87-09, the Bases for the above three sections need to be revised to reflect the changes. Accordingly, the licensee has proposed changes to the Bases to justify the revision to Sections 3.0.4, 4.0.3 and 4.0.4.

On page 3 of Generic Letter 87-09, the staff stated that "as a consequence of the modification described above to Specification 3.0.4, individual specifications with Action Requirements permitting continued operation no longer need to indicate that Specification 3.0.4 does not apply". The staff further stated that the Action Requirements" should be revised to delete the noted exception to avoid confusion about the applicability of Specification 3.0.4". There are numerous pages in the Limerick 1 TSs that now have a note or statement that "The provisions of Specification 3.0.4 are not applicable". The licensee has reviewed the present TSs and determined that there are 75 pages where this note or statement is no longer necessary. The only change on these 75 pages is to delete reference to Specifications 3.0.4 as requested in Generic Letter 87-09.

2.0 EVALUATION

The proposed changes to the Limerick 1 Technical Specifications 3.0.4, 4.0.3, and 4.0.4 are consistent with the related staff positions outlined in the Generic Letter 87-09 dated June 4, 1987. The changes proposed by the licensee are compared with staff positions as follows:

Technical Specification 3.0.4

In the Generic Letter 87-09 the staff took the following position related to specification 3.0.4 changes which will prevent inconsistent application of sections 3.0.4.

Specification 3.0.4 unduly restricts facility operation when conformance to the Action Requirements provides an acceptable level of safety for continued operation. For an LCO that has Action Requirements permitting continued operation for an unlimited period of time, entry into an operational mode or other specified condition of operation should be permitted in accordance with those Action Requirements. This is consistent with NRC's regulatory requirements for an LCO. The restriction on a change in operational modes or other specified conditions should apply only where the Action Requirements establish a specified time interval in which the LCO must be met or a shutdown of the facility would be required. However, nothing in this staff position should be interpreted as endorsing or encouraging a plant startup with

inoperable equipment. The staff believes that good practice should dictate that the plant startup should normally be initiated only when all required equipment is operable and that startup with inoperable equipment must be the exception rather than the rule.

As a result of the above staff position, the licensee should change section 3.0.4 to define the conditions under which its requirements apply. The staff proposed the following replacement for section 3.0.4.

"Entry into an OPERATIONAL MODE or other specified condition shall not be made when the conditions for the Limiting Conditions for Operation are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval. Entry into an OPERATIONAL MODE or specified condition may be made in accordance with ACTION requirements when conformance to them permits continued operation of the facility for an unlimited period of time."

The proposed change to section 3.0.4 conforms to the above staff proposal and is therefore acceptable.

Technical Specification 4.0.3

In the Generic Letter 87-09, the staff took the following position related to specification 4.0.3.

It is overly conservative to assume that systems or components are inoperable when a surveillance requirement has not been performed. The opposite is in fact the case; the vast majority of surveillances demonstrate that systems or components in fact are operable. When a surveillance is missed, it is primarily a question of operability that has not been verified by the performance of the required surveillance. Because the allowable outage time limits of some Action Requirements do not provide an appropriate time limit for performing a missed surveillance before shutdown requirements may apply, the Technical Specifications should include a time limit that would allow a delay of the required actions to permit the performance of the missed surveillance.

This time limit should be based on considerations of plant conditions, adequate planning, availability of personnel, the time required to perform the surveillance, as well as the safety significance of the delay in completion of the surveillance. After reviewing possible limits, the staff has concluded that, based on these considerations, 24-hours would be an acceptable time limit for completing a missed surveillance when the allowable outage times of the Action Requirements are less than this time limit or when shutdown Action Requirements apply. The 24-hour time limit would balance the risks associated with an allowance for completing the surveillance within this period against the risks associated with the potential for a plant upset and challenge to safety systems when the alternative is a shutdown to comply with Action Requirements before the surveillance can be completed.

Although a missed surveillance would generally be completed in less time than this 24-hour limit allows, special circumstances may require additional time to ensure that the surveillance can be conducted in a safe manner. The time limits of Action Requirements for surveillances should start when it is identified that Surveillance Requirements have not been performed, except when the 24-hour delay is allowed in the implementation of the Action Requirements. Where the 24-hour time limit is allowed, the time limits of the Action Requirements are applicable either at the end of the 24-hour limit if the surveillance has not been completed or at the time the surveillance is performed if the system or component is found to be inoperable.

Several issues need to be clarified regarding the additional 24-hour time limit. First, this limit does not waive compliance with Specification 4.0.3. Under Specification 4.0.3, the failure to perform a Surveillance Requirement will continue to constitute noncompliance with the Operability Requirements of an LCO and to bring into play the applicable Action Requirements.

Second, Specifications 3.0.2 and 4.0.3 should not be misinterpreted. Specification 3.0.2 notes that a TS is being complied with when the Action Requirements are met within the specified time intervals. Although Specification 4.0.2 provides an allowance for extending the surveillance interval and allows for the completion of the surveillance within this time interval without violation of this Specification, under Specification 4.0.3 nonperformance of a Surveillance Requirement, within the allowed surveillance interval defined by Specification 4.0.2, constitutes a violation of the Operability Requirements of an LCO, as defined by Specification 4.0.3, and is subject to enforcement action.

Third, even though an additional 24-hour time limit may apply for missed surveillances, another consideration is the possibility that plant conditions may preclude the performance of the specified requirements. The provision of a 24-hour delay in the application of the Action Requirements for the completion of a missed surveillance would provide time to obtain a temporary waiver for a Surveillance Requirement that could not otherwise be completed because of current plant conditions. If a surveillance can be performed only when the plant is shut down, there are only two options available to licensees when a missed surveillance is discovered during power operation and continued operation is not allowed under the Action Requirements. The first is to shut down the plant and perform the required surveillance. The other option is to seek relief from the Surveillance Requirement.

As a result of the above staff position, the Specification 4.0.3 could be revised as follows to clarify when a missed surveillance constitutes a violation of the Operability Requirements of an LCO and to clarify the applicability of the Action Requirements and the time during which the limits apply:

"Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition

for Operation. The time limits of the ACTION requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed. The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the ACTION requirements are less than 24 hours."

Specification 4.0.3 previously included the statement that exceptions to it are stated in individual specifications. This statement is deleted because Specification 4.0.3 is always applicable, i.e., the implied exceptions for individual specifications do not exist.

The licensee has proposed a revised section 4.0.3 which is identical to the above staff proposal. The proposed revision to specification 4.0.3 is therefore acceptable.

Technical Specification 4.0.4

In the Generic Letter 87-09, the staff took the following position relative to specification 4.0.4.

The potential for a plant upset and challenge to safety systems is heightened if surveillances are performed during a shutdown to comply with Action Requirements. It is not the intent of Specification 4.0.4 to prevent passage through or to operational modes to comply with Action Requirements and it should not apply when mode changes are imposed by Action Requirements. Accordingly, Specification 4.0.4 should be modified to note that its provisions shall not prevent passage through or to operational modes as required to comply with Action Requirements. A similar provision is included in Specification 3.0.4.

The following will clarify Specification 4.0.4 for mode changes as a consequence of Action Requirements:

"This provision shall not prevent passage through or to OPERATIONAL MODES as required to comply with ACTION Requirements."

The licensee has proposed a Specification 4.0.4 change which is identical to the above staff proposal. The proposed change is therefore acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes to the surveillance requirements. The staff has determined that the amendment involves 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 this amendment

involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets 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 nor environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register October 5, 1988 (53 FR 39176) and consulted with the State of Pennsylvania. No public comments were received and the State of Pennsylvania did not have any comments.

The staff 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and the security nor to the health and safety of the public.

Principal Contributor: Richard Clark

Dated: November 7, 1988