



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-373

LASALLE COUNTY STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 118
License No. NPF-11

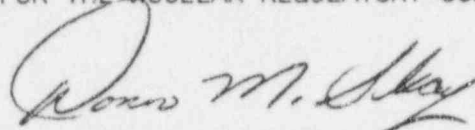
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by the Commonwealth Edison Company (the licensee), dated January 20, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 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 set forth in 10 CFR Chapter I;
 - 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 enclosure to this license amendment and paragraph 2.C.(2) of the Facility Operating License No. NPF-11 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 118, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Donna M. Skay, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: **July 16, 1997**

ATTACHMENT TO LICENSE AMENDMENT NO. 118

FACILITY OPERATING LICENSE NO. NPF-11

DOCKET NO. 50-373

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain a vertical line indicating the area of change.

REMOVE

3/4 1-10
3/4 4-7
3/4 4-8
3/4 5-3
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3/4 5-5
3/4 5-9
3/4 6-17
3/4 6-18
B 3/4 5-3
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INSERT

3/4 1-10
3/4 4-7
3/4 4-8
3/4 5-3
3/4 5-3a
3/4 5-5
3/4 5-9
3/4 6-17
3/4 6-18
B 3/4 5-3
B 3/4 5-4

REACTIVITY CONTROL SYSTEM

SURVEILLANCE REQUIREMENTS

4.1.3.5 Each control rod scram accumulator shall be determined OPERABLE:

- a. At least once per 7 days by verifying that the indicated pressure is greater than or equal to 940 psig unless the control rod is inserted and disarmed or scrambled.

REACTOR COOLANT SYSTEM

OPERATIONAL LEAKAGE

LIMITING CONDITION FOR OPERATION

3.4.3.2 Reactor coolant system leakage shall be limited to:

- a. No PRESSURE BOUNDARY LEAKAGE.
- b. 5 gmp UNIDENTIFIED LEAKAGE.
- c. 25 gpm total leakage averaged over any 24 hour period.
- d. 1 gpm leakage at a reactor coolant system pressure at 1000 ± 50 psig from any reactor coolant system pressure isolation valve specified in Table 3.4.3.2-1.
- e. 2 gpm increase in UNIDENTIFIED LEAKAGE within any 24 hour period.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

- a. With any PRESSURE BOUNDARY LEAKAGE, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. With any reactor coolant system leakage greater than the limits in b and/or c, above, reduce the leakage rate to within the limits within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With any reactor coolant system pressure isolation valve leakage greater than the above limit, isolate the high pressure portion of the affected system from the low pressure portion within 4 hours by use of at least two closed valves, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- d. With one or more high/low pressure interface valve leakage pressure monitors inoperable, restore the inoperable monitor(s) to OPERABLE status within 7 days or verify the pressure to be less than the alarm setpoint at least once per 12 hours by local indication; restore the inoperable monitor(s) to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 12 hours.
- e. With any reactor coolant system leakage greater than the limit in e above, identify the source of leakage within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS

4.4.3.2.1 The reactor coolant system leakage shall be demonstrated to be within each of the above limits on average once per 8 hours not to exceed 12 hours.*

4.4.3.2.2 Each reactor coolant system pressure isolation valve specified in Table 3.4.3.2-1 shall be demonstrated OPERABLE:

- a. Pursuant to Specification 4.0.5, except that in lieu of any leakage testing required by Specification 4.0.5, each valve shall be demonstrated OPERABLE by verifying leakage to be within its limit:
 1. At least once per 18 months, and
 2. Prior to returning the valve to service following maintenance, repair or replacement work on the valve which could affect its leakage rate.

The provisions of Specification 4.0.4 are not applicable for entry into OPERATIONAL CONDITION 3.

- b. By demonstrating OPERABILITY of the high/low pressure interface valve leakage pressure monitors by performance of a:
 1. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
 2. CHANNEL CALIBRATION at least once per 18 months,

With the alarm setpoint for the:

1. HPCS system \leq 100 psig.
2. LPCS system \leq 500 psig.
3. LPCI/shutdown cooling system \leq 400 psig.
4. RHR shutdown cooling \leq 190 psig.
5. RCIC \leq 90 psig.

*Technical Specification 4.0.2 does not apply.

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

- d. For ECCS divisions 1 and 2, provided that ECCS division 3 is OPERABLE:
 - 1. With LPCI subsystem "A" and either LPCI subsystem "B" or "C" inoperable, restore at least the inoperable LPCI subsystem "A" or inoperable LPCI subsystem "B" or "C" to OPERABLE status within 72 hours.
 - 2. With the LPCS system inoperable and either LPCI subsystems "B" or "C" inoperable, restore at least the inoperable LPCS system or inoperable LPCI subsystem "B" or "C" to OPERABLE status within 72 hours.
 - 3. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- e. For ECCS divisions 1 and 2, provided that ECCS division 3 is OPERABLE and divisions 1 and 2 are otherwise OPERABLE:
 - 1. With one of the above required ADS valves inoperable, restore the inoperable ADS valve to OPERABLE status within 14 days or be in at least HOT SHUTDOWN within the next 12 hours and reduce reactor steam dome pressure to ≤ 122 psig within the next 24 hours.
 - 2. With two or more of the above required ADS valves inoperable, be in at least HOT SHUTDOWN within 12 hours and reduce reactor steam dome pressure to ≤ 122 psig within the next 24 hours.
- f. With an ECCS discharge line "keep filled" pressure alarm instrumentation channel inoperable, perform Surveillance Requirement 4.5.1.a.1 at least once per 24 hours.
- g. With an ECCS header delta P instrumentation channel inoperable, restore the inoperable channel to OPERABLE status within 72 hours or determine ECCS header delta P locally at least once per 12 hours; otherwise, declare the associated ECCS inoperable.
- h. With Surveillance Requirement 4.5.1.d.2 not performed at the required interval due to low reactor steam pressure, the provisions of Specification 4.0.4 are not applicable provided the surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.

*Whenever two or more RHR subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods.

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

- i. In the event an ECCS system is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.6.C within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected safety injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.
- j. With one or more ECCS corner room watertight doors inoperable, restore all the inoperable ECCS corner room watertight doors to OPERABLE status within 14 days, otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- k. With ADS accumulator backup compressed gas system bottle pressure less than 500 psig, restore ADS accumulator backup compressed gas system bottle pressure to greater than 500 psig within 72 hours or declare the associated ADS valves inoperable, and follow Action e of this specification.

SURVEILLANCE REQUIREMENTS (Continued)

- (a) LPCS system to be ≤ 500 psig and ≥ 45.5 psig, respectively.
 - (b) LPCI subsystem "A" to be ≤ 400 psig and ≥ 41.0 psig, respectively.
 - (c) LPCI subsystem "B" to be ≤ 400 psig and ≥ 38.5 psig, respectively.
 - (d) LPCI subsystem "C" to be ≤ 400 psig and ≥ 45.0 psig, respectively.
- 2) Low pressure setpoint allowable value of the HPCS system to be ≥ 42.5 psig.
- b) Header delta P instrumentation and verifying the setpoint allowable value of the:
- 1) LPCS system and LPCI subsystems to be ± 1 psid.
 - 2) HPCS system to be 5 ± 2.0 psid greater than the normal indicated ΔP .
3. Deleted.
4. Visually inspecting the ECCS corner room watertight door seals and room penetration seals and verifying no abnormal degradation, damage, or obstructions.
- d. For the ADS by:
- 1. At least once per 31 days:
 - a) Verify ADS accumulator supply header pressure is ≥ 150 psig.
 - b) Verify ADS accumulator backup compressed gas system bottle pressure is ≥ 500 psig.
 - 2. At least once per 18 months:
 - a) Performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence, but excluding actual valve actuation.
 - b) Manually opening each ADS valve and observing the expected change in the indicated valve position.

SURVEILLANCE REQUIREMENTS

4.5.3.1 The suppression chamber shall be determined OPERABLE by verifying:

- a. The water level to be greater than or equal to, as applicable:
 - 1. -4 1/2 inches** at least once per 24 hours.
 - 2. -12 feet 7 inches** at least once per 12 hours.

4.5.3.2 With the suppression chamber level less than the above limit in OPERATIONAL CONDITION 5*, at least once per 12 hours verify footnote conditions* to be satisfied.

*The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9.

**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1).

CONTAINMENT SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

- c. Deleted.
- d. Deleted.
- e. With the drywell-to-suppression chamber bypass leakage in excess of the limit, restore the bypass leakage to within the limit prior to increasing reactor coolant temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.2.1 The suppression chamber shall be demonstrated OPERABLE:

- a. By verifying the suppression chamber water volume to be within the limits at least once per 24 hours.
- b. At least once per 24 hours in OPERATIONAL CONDITION 1 or 2 by verifying the suppression chamber average water temperature to be less than or equal to 105°F, except:
 - 1. At least once per 5 minutes during testing which adds heat to the suppression chamber, by verifying the suppression chamber average water temperature less than or equal to 105°F.
 - 2. At least once per 60 minutes when suppression chamber average water temperature is greater than 105°F, by verifying suppression chamber average water temperature less than or equal to 110°F and THERMAL POWER less than or equal to 1% of RATED THERMAL POWER.
 - 3. At least once per 30 minutes following a scram with suppression chamber average water temperature greater than or equal to 105°F, by verifying suppression chamber average water temperature less than or equal to 120°F.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. Delted.
- d. By conducting drywell-to-suppression chamber bypass leak tests at least once per 18 months at an initial differential pressure of 1.5 psi and verifying that the A/\sqrt{k} calculated from the measured leakage is within the specified limit.

If any 1.5 psi leak test results in a calculated A/\sqrt{k} >20% of the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission.

If two consecutive 1.5 psi leak tests result in a calculated A/\sqrt{k} greater than the specified limit, then:

1. A 1.5 psi leak test shall be performed at least once per 9 months until two consecutive 1.5 psi leak tests result in the calculated A/\sqrt{k} within the specified limits, and
2. A 5 psi leak test, performed with the second consecutive successful 1.5 psi leak test, results in a calculated A/\sqrt{k} within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.

If any required 5 psi leak test results in a calculated A/\sqrt{k} greater than the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission.

If two consecutive 5 psi leak tests result in a calculated A/\sqrt{k} greater than the specified limit, then a 5 psi leak test shall be performed at least once per 9 months until two consecutive 5 psi leak tests result in a calculated A/\sqrt{k} within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.

EMERGENCY CORE COOLING SYSTEMS

BASES

3/4.5.1 and 3/4.5.2 ECCS - OPERATING and SHUTDOWN (Continued)

ADS automatically controls seven selected safety-relief valves. Six valves are required to be OPERABLE since the LOCA analysis assumes 6 ADS valves in addition to a single failure. It is therefore appropriate to permit one of the required valves to be out-of-service for up to 14 days without materially reducing system reliability.

The ADS accumulator supply header pressure is supplied by the normal instrument nitrogen system, which has two compressors. This system supplies both the low pressure pneumatic supply header for other pneumatic equipment/components in the drywell and the two high pressure ADS accumulator supply headers. Maintaining the ADS accumulators at greater than or equal to 150 psig assures that the accumulators are pressurized to greater than or equal to 150 psig prior to the loss of the normal pneumatic supply. With an initial pressure of 150 psig, the accumulator is designed to operate the safety/relief valve two times at 70% of drywell design pressure following failure of the pneumatic supply to the accumulator. TS SR 4.5.1.d.1.a assures that this initial condition is met. The monthly frequency for this SR is adequate, because of the reliability of the normal pneumatic supply and multiple alarms that indicate the loss of the normal pneumatic supply. In addition, each ADS accumulator has a low pressure alarm in the control room which will signal when an ADS accumulator is less than 150 psig. This monitoring surveillance and the monthly frequency is consistent with the corresponding SR 3.5.1.3 in NUREG-1434, Revision 1.

The ADS accumulator backup compressed gas system is comprised of two separate bottle banks of nitrogen bottles, one bottle bank for each high pressure ADS accumulator supply header. One header supplies 3 ADS valve accumulators, the other header supplies the remaining 4 ADS valves. Each bank of the ADS accumulator backup compressed gas system has its own indication and alarm for low pressure. This is a backup system provided for long-term availability of ADS during and following an accident and, therefore, is required to be Operable. The monitoring surveillance assures the continued Operability of ADS. The monthly frequency for this SR is adequate, because each ADS bottle bank has a low pressure alarm. Also, unless the normal pneumatic supply is lost, the only losses from the bottles is through gas leakage, which is minimal.

Action statement k, for the ADS accumulator backup compressed gas system bottle pressure less than 500 psig, is adequate, because this is a backup system to the ADS valve accumulators. The allowed outage time of 72 hours is reasonable based on the ADS valve accumulators remaining greater than 150 psig, below which the associated ADS valves are inoperable. In addition, the 72 hours provides sufficient time to obtain full nitrogen bottle(s) and replace low pressure bottles with the full bottle(s).

EMERGENCY CORE COOLING SYSTEMS

BASES

3/4.5.3 SUPPRESSION CHAMBER

The suppression chamber is also required to be OPERABLE as part of the ECCS to ensure that a sufficient supply of water is available to the HPCS, LPCS and LPCI systems in the event of a LOCA. This limit on suppression chamber minimum water volume ensures that sufficient water is available to permit recirculation cooling flow to the core (See Figure B 3/4.6.2-1). The OPERABILITY of the suppression chamber in OPERATIONAL CONDITIONS 1, 2 or 3 is required by Specification 3.6.2.1.

Repair work might require making the suppression chamber inoperable. This specification will permit those repairs to be made and at the same time give assurance that the irradiated fuel has an adequate cooling water supply when the suppression chamber must be made inoperable in OPERATIONAL CONDITION 4 or 5.

In OPERATIONAL CONDITION 4 and 5 the suppression chamber minimum required water volume is reduced because the reactor coolant is maintained at or below 200°F. Since pressure suppression is not required below 212°F, the minimum water volume is based on NPSH, recirculation volume, vortex prevention plus a 2'-4" safety margin for conservatism.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-374

LASALLE COUNTY STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 103
License No. NPF-18

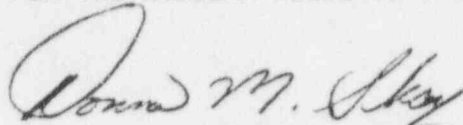
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by the Commonwealth Edison Company (the licensee), dated January 20, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 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 set forth in 10 CFR Chapter I;
 - 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 enclosure to this license amendment and paragraph 2.C.(2) of the Facility Operating License No. NPF-18 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 103 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Donna M. Skay, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: **July 16, 1997**

ATTACHMENT TO LICENSE AMENDMENT NO. 103

FACILITY OPERATING LICENSE NO. NPF-18

DOCKET NO. 50-374

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain a vertical line indicating the area of change. The page indicated by an asterisk (*) is an overleaf page and is provided for convenience only.

REMOVE

3/4 1-9
3/4 1-10
3/4 4-8
3/4 4-9
3/4 5-3
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*3/4 5-4
3/4 5-5
3/4 5-9
3/4 6-20
3/4 6-21
B 3/4 5-3
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INSERT

3/4 1-9
3/4 1-10
3/4 4-8
3/4 4-9
3/4 5-3
3/4 5-3a
*3/4 5-4
3/4 5-5
3/4 5-9
3/4 6-20
3/4 6-21
B 3/4 5-3
B 3/4 5-4

CONTROL ROD SCRAM ACCUMULATORS

LIMITING CONDITION FOR OPERATION

3.1.3.5 All control rod scram accumulators shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 5*.

ACTION:

- a. In OPERATIONAL CONDITION 1 or 2:
 - 1. With one control rod scram accumulator inoperable:
 - a) Within 8 hours, either:
 - 1) Restore the inoperable accumulator to OPERABLE status, or
 - 2) Declare the control rod associated with the inoperable accumulator inoperable.
 - b) Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.
 - 2. With more than one control rod scram accumulator inoperable, declare the associated control rod inoperable and:
 - a) If the control rod associated with any inoperable scram accumulator is withdrawn, immediately verify that at least one CRD pump is operating by inserting at least one withdrawn control rod at least on watch by drive water pressure within the normal operating range or place the reactor mode switch in the Shutdown position.
 - b) Insert the inoperable control rods and disarm the associated directional control valves either:
 - 1) Electrically, or
 - 2) Hydraulically by closing the drive water and exhaust water isolation valves.

Otherwise, be in at least HOT SHUTDOWN within 12 hours.
- b. In OPERATIONAL CONDITION 5 with:
 - 1. One withdrawn control rod with its associated scram accumulator inoperable, insert the affected control rod and disarm the associated directional control valves within 1 hour, either:
 - a) Electrically, or
 - b) Hydraulically by closing the drive water and exhaust water isolation valves.
 - 2. More than one withdrawn control rod with the associated scram accumulator inoperable or with no control rod drive pump operating, immediately place the reactor mode switch in the Shutdown position.

*At least the accumulator associated with each withdrawn control rod. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.

REACTIVITY CONTROL SYSTEM

SURVEILLANCE REQUIREMENTS

4.1.3.5 Each control rod scram accumulator shall be determined OPEKABLE:

- a. At least once per 7 days by verifying that the indicated pressure is greater than or equal to 940 psig unless the control rod is inserted and disarmed or scrambled.

OPERATIONAL LEAKAGE

LIMITING CONDITION FOR OPERATION

3.4.3.2 Reactor coolant system leakage shall be limited to:

- a. No PRESSURE BOUNDARY LEAKAGE.
- b. 5 gmp UNIDENTIFIED LEAKAGE.
- c. 25 gpm total leakage averaged over any 24 hour period.
- d. 1 gpm leakage at a reactor coolant system pressure at 1000 ± 50 psig from any reactor coolant system pressure isolation valve specified in Table 3.4.3.2-1.
- e. 2 gpm increase in UNIDENTIFIED LEAKAGE within any 24 hour period.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

- a. With any PRESSURE BOUNDARY LEAKAGE, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. With any reactor coolant system leakage greater than the limits in b and/or c, above, reduce the leakage rate to within the limits within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With any reactor coolant system pressure isolation valve leakage greater than the above limits, isolate the high pressure portion of the affected system from the low pressure portion within 4 hours by use of at least two closed valves, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- d. With one or more high/low pressure interface valve leakage pressure monitors inoperable, restore the inoperable monitor(s) to OPERABLE status within 7 days or verify the pressure to be less than the alarm setpoint at least once per 12 hours by local indication; restore the inoperable monitor(s) to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 12 hours.
- e. With any reactor coolant system leakage greater than the limit in e, above, identify the source of leakage within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.4.3.2.1 The reactor coolant system leakage shall be demonstrated to be within each of the above limits on average once per 8 hours not to exceed 12 hours.

4.4.3.2.2 Each reactor coolant system pressure isolation valve specified in Table 3.4.3.2-1 shall be demonstrated OPERABLE:

- a. Pursuant to Specification 4.0.5, except that in lieu of any leakage testing required by Specification 4.0.5, each valve shall be demonstrated OPERABLE by verifying leakage to be within its limit:
 - 1. At least once per 18 months, and
 - 2. Prior to returning the valve to service following maintenance, repair or replacement work on the valve which could affect its leakage rate.

The provisions of Specification 4.0.4 are not applicable for entry into OPERATIONAL CONDITION 3.

- b. By demonstrating OPERABILITY of the high/low pressure interface valve leakage pressure monitors by performance of a:
 - 1. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
 - 2. CHANNEL CALIBRATION at least once per 18 months,

With the alarm setpoint for the:

- 1. HPCS system \leq 100 psig.
- 2. LFCS system \leq 500 psig.
- 3. LPCI/shutdown cooling system \leq 400 psig.
- 4. RHR shutdown cooling \leq 190 psig.
- 5. RCIC \leq 90 psig.

*Technical Specification 4.0.2 does not apply.

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

2. With the LPCS system inoperable and either LPCI subsystems "B" or "C" inoperable, restore at least the inoperable LPCS system or inoperable LPCI subsystem "B" or "C" to OPERABLE status within 72 hours.
 3. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- e. For ECCS divisions 1 and 2, provided that ECCS division 3 is OPERABLE and divisions 1 and 2 are otherwise OPERABLE:
1. With one of the above required ADS valves inoperable, restore the inoperable ADS valve to OPERABLE status within 14 days or be in at least HOT SHUTDOWN within the next 12 hours and reduce reactor steam dome pressure to ≤ 122 psig within the next 24 hours.
 2. With two or more of the above required ADS valves inoperable, be in at least HOT SHUTDOWN within 12 hours and reduce reactor steam dome pressure to ≤ 122 psig within the next 24 hours.
- f. With an ECCS discharge line "keep filled" pressure alarm instrumentation channel inoperable, perform Surveillance Requirement 4.5.1.a.1 at least once per 24 hours.
- g. With an ECCS header delta P instrumentation channel inoperable, restore the inoperable channel to OPERABLE status within 72 hours or determine ECCS header delta P locally at least once per 12 hours; otherwise, declare the associated ECCS inoperable.
- h. With Surveillance Requirement 4.5.1.d.2 not performed at the required interval due to low reactor steam pressure, the provisions of Specification 4.0.4 are not applicable provided the surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.

*Whenever two or more RHR subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods.

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

- i. In the event an ECCS system is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.6.C within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected safety injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.
- j. With one or more ECCS corner room watertight doors inoperable, restore all the inoperable ECCS corner room watertight doors to OPERABLE status within 14 days, otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- k. With ADS accumulator backup compressed gas system bottle pressure less than 500 psig, restore ADS accumulator backup compressed gas system bottle pressure to greater than 500 psig within 72 hours or declare the associated ADS valves inoperable, and follow Action e of this specification.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS

4.5.1 ECCS divisions 1, 2, and 3 shall be demonstrated OPERABLE by:

- a. At least once per 31 days for the LPCS, LPCI, and HPCS systems:
 1. Verifying by venting at the high point vents that the system piping from the pump discharge valve to the system isolation valve is filled with water.
 2. Performance of a CHANNEL FUNCTIONAL TEST of the:
 - a) Discharge line "keep filled" pressure alarm instrumentation, and
 - b) Header delta P instrumentation.
 3. Verifying that each valve (manual, power-operated, or automatic,) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.
 4. Verifying that each ECCS corner room watertight door is closed, except during entry to and exit from the room.
- b. Verifying that, when tested pursuant to Specification 4.0.5, each:
 1. LPCS pump develops a flow of at least 6350 gpm against a test line pressure greater than or equal to 290 psig.
 2. LPCI pump develops a flow of at least 7200 gpm against a test line pressure greater than or equal to 130 psig.
 3. HPCS pump develops a flow of at least 6200 gpm against a test line pressure greater than or equal to 330 psig.
- c. For the LPCS, LPCI and HPCS systems, at least once per 18 months:
 1. Performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence and verifying that each automatic valve in the flow path actuates to its correct position. Actual injection of coolant into the reactor vessel may be excluded from this test.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

2. Performing a CHANNEL CALIBRATION of the:
 - a) Discharge line "keep filled" pressure alarm instrumentation and verifying the:
 - 1) High pressure setpoint allowable value and the low pressure setpoint allowable value of the:
 - (a) LPCS system to be ≤ 500 psig and ≥ 45.5 psig, respectively.
 - (b) LPCI subsystem "A" to be ≤ 400 psig and ≥ 41.0 psig, respectively.
 - (c) LPCI subsystem "B" to be ≤ 400 psig and ≥ 38.5 psig, respectively.
 - (d) LPCI subsystem "C" to be ≤ 400 psig and ≥ 45.0 psig, respectively.
 - 2) Low pressure setpoint allowable value of the HPCS system to be ≥ 42.5 psig.
 - b) Header delta P instrumentation and verifying the setpoint allowable value of the:
 - 1) LPCS system and LPCI subsystems to be ± 1 psid.
 - 2) HPCS system to be 5 ± 2.0 psid greater than the normal indicated ΔP .
 3. Deleted
 4. Visually inspecting the ECCS corner room watertight door seals and room penetration seals and verifying no abnormal degradation, damage, or obstructions.
- d. For the ADS by:
1. At least once per 31 days:
 - a) Verify ADS accumulator supply header pressure is ≥ 150 psig.
 - b) Verify ADS accumulator backup compressed gas system bottle pressure is ≥ 500 psig.
 2. At least once per 18 months:
 - a) Performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence, but excluding actual valve actuation.
 - b) Manually opening each ADS valve and observing the expected change in the indicated valve position.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS

4.5.3.1 The suppression chamber shall be determined OPERABLE by verifying:

- a. The water level to be greater than or equal to, as applicable:
 1. -4 1/2 inches** at least once per 24 hours.
 2. -12 feet 7 inches** at least once per 12 hours.

4.5.3.2 With the suppression chamber level less than the above limit in OPERATIONAL CONDITION 5*, at least once per 12 hours verify footnote conditions* to be satisfied.

*The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9.

**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1).

CONTAINMENT SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

- c. Deleted.
- d. Deleted.
- e. With the drywell-to-suppression chamber bypass leakage in excess of the limit, restore the bypass leakage to within the limit prior to increasing reactor coolant temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.2.1 The suppression chamber shall be demonstrated OPERABLE:

- a. By verifying the suppression chamber water volume to be within the limits at least once per 24 hours.
- b. At least once per 24 hours in OPERATIONAL CONDITION 1 or 2 by verifying the suppression chamber average water temperature to be less than or equal to 105°F, except:
 - 1. At least once per 5 minutes during testing which adds heat to the suppression chamber, by verifying the suppression chamber average water temperature less than or equal to 105°F.
 - 2. At least once per 60 minutes when suppression chamber average water temperature is greater than 105°F, by verifying suppression chamber average water temperature less than or equal to 110°F and THERMAL POWER less than or equal to 1% of RATED THERMAL POWER.
 - 3. At least once per 30 minutes following a scram with suppression chamber average water temperature greater than or equal to 105°F, by verifying suppression chamber average water temperature less than or equal to 120°F.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

c. Deleted.

d. By conducting drywell-to-suppression chamber bypass leak tests at least once per 18 months at an initial differential pressure of 1.5 psi and verifying that the A/\sqrt{k} calculated from the measured leakage is within the specified limit.

If any 1.5 psi leak test results in a calculated A/\sqrt{k} >20% of the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission.

If two consecutive 1.5 psi leak tests result in a calculated A/\sqrt{k} greater than the specified limit, then:

1. A 1.5 psi leak test shall be performed at least once per 9 months until two consecutive 1.5 psi leak tests result in the calculated A/\sqrt{k} within the specified limits, and
2. A 5 psi leak test, performed with the second consecutive successful 1.5 psi leak test, results in a calculated A/\sqrt{k} within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.

If any required 5 psi leak test results in a calculated A/\sqrt{k} greater than the specified limit, then the test schedule for subsequent tests shall be reviewed by the Commission.

If two consecutive 5 psi leak tests result in a calculated A/\sqrt{k} greater than the specified limit, then a 5 psi leak test shall be performed at least once per 9 months until two consecutive 5 psi leak tests result in a calculated A/\sqrt{k} within the specified limit, after which the above schedule of once per 18 months for only 1.5 psi leak tests may be resumed.

EMERGENCY CORE COOLING SYSTEMS

BASES

3/4.5.1 and 3/4.5.2 ECCS - OPERATING and SHUTDOWN (Continued)

ADS automatically controls seven selected safety-relief valves. Six valves are required to be OPERABLE since the LOCA analysis assumes 6 ADS valves in addition to a single failure. It is therefore appropriate to permit one of the required valves to be out-of-service for up to 14 days without materially reducing system reliability.

The ADS accumulator supply header pressure is supplied by the normal instrument nitrogen system, which has two compressors. This system supplies both the low pressure pneumatic supply header for other pneumatic equipment/components in the drywell and the two high pressure ADS accumulator supply headers. Maintaining the ADS accumulators at greater than or equal to 150 psig assures that the accumulators are pressurized to greater than or equal to 150 psig prior to the loss of the normal pneumatic supply. With an initial pressure of 150 psig, the accumulator is designed to operate the safety/relief valve two times at 70% of drywell design pressure following failure of the pneumatic supply to the accumulator. TS SR 4.5.1.d.1.a assures that this initial condition is met. The monthly frequency for this SR is adequate, because of the reliability of the normal pneumatic supply and multiple alarms that indicate the loss of the normal pneumatic supply. In addition, each ADS accumulator has a low pressure alarm in the control room which will signal when an ADS accumulator is less than 150 psig. This monitoring surveillance and the monthly frequency is consistent with the corresponding SR 3.5.1.3 in NUREG-1434, Revision 1.

The ADS accumulator backup compressed gas system is comprised of two separate bottle banks of nitrogen bottles, one bottle bank for each high pressure ADS accumulator supply header. One header supplies 3 ADS valve accumulators, the other header supplies the remaining 4 ADS valves. Each bank of the ADS accumulator backup compressed gas system has its own indication and alarm for low pressure. This is a backup system provided for long-term availability of ADS during and following an accident and, therefore, is required to be Operable. The monitoring surveillance assures the continued Operability of ADS. The monthly frequency for this SR is adequate, because each ADS bottle bank has a low pressure alarm. Also, unless the normal pneumatic supply is lost, the only losses from the bottles is through gas leakage, which is minimal.

Action statement k, for the ADS accumulator backup compressed gas system bottle pressure less than 500 psig, is adequate, because this is a backup system to the ADS valve accumulators. The allowed outage time of 72 hours is reasonable based on the ADS valve accumulators remaining greater than 150 psig, below which the associated ADS valves are inoperable. In addition, the 72 hours provides sufficient time to obtain full nitrogen bottle(s) and replace low pressure bottles with the full bottle(s).

EMERGENCY CORE COOLING SYSTEMS

BASES

3/4.5.3 SUPPRESSION CHAMBER

The suppression chamber is also required to be OPERABLE as part of the ECCS to ensure that a sufficient supply of water is available to the HPCS, LPCS and LPCI systems in the event of a LOCA. This limit on suppression chamber minimum water volume ensures that sufficient water is available to permit recirculation cooling flow to the core (See Figure B 3/4.6.2-1). The OPERABILITY of the suppression chamber in OPERATIONAL CONDITIONS 1, 2 or 3 is required by Specification 3.6.2.1.

Repair work might require making the suppression chamber inoperable. This specification will permit those repairs to be made and at the same time give assurance that the irradiated fuel has an adequate cooling water supply when the suppression chamber must be made inoperable in OPERATIONAL CONDITION 4 or 5.

In OPERATIONAL CONDITION 4 and 5 the suppression chamber minimum required water volume is reduced because the reactor coolant is maintained at or below 200°F. Since pressure suppression is not required below 212°F, the minimum water volume is based on NPSH, recirculation volume, vortex prevention plus a 2'-4" safety margin for conservatism.