

July 16, 1997

Ms. Irene Johnson, Acting Manager
Nuclear Regulatory Services
Commonwealth Edison Company
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. M97824 AND M97825)

Dear Ms. Johnson:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 118 to Facility Operating License No. NPF-11 and Amendment No. 103 to Facility Operating License No. NPF-18 for the LaSalle County Station, Units 1 and 2, respectively. The amendments are in response to your application dated January 20, 1997.

The amendments revise the Technical Specifications (TS) for various alarm or indication only instruments. The amendments relocate the surveillance requirements (SR) for selected instrumentation from TS to licensee controlled documents or replace selected SR with those more appropriate to the associated Limiting Conditions for Operation. In addition, the amendments add an action statement related to the automatic depressurization system accumulator backup compressed gas system and delete action statements related to suppression chamber water level instrumentation.

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

Sincerely,

ORIGINAL SIGNED BY:

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

Docket Nos. 50-373, 50-374

- Enclosures: 1. Amendment No. 118 to NPF-11
- 2. Amendment No. 103 to NPF-18
- 3. Safety Evaluation

DFD 1/1

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cc w/encl: see next page

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see SE.*

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I. Johnson
Commonwealth Edison Company

LaSalle County Station
Unit Nos. 1 and 2

cc:

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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:

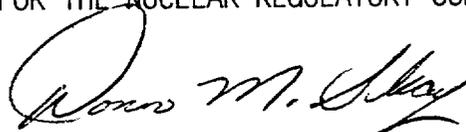
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(2) Technical Specifications and Environmental Protection Plan

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
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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

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3/4 4-7
3/4 4-8
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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.

EMERGENCY CORE COOLING SYSTEMS

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.

EMERGENCY CORE COOLING SYSTEMS

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 (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.

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. 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 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

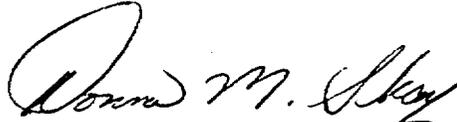
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by the Commonwealth Edison Company (the licensee), dated January 20, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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
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3/4 1-10
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B 3/4 5-3
B 3/4 5-4

REACTIVITY CONTROL SYSTEM

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 one notch 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 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 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. 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)

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.

EMERGENCY CORE COOLING SYSTEMS

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

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.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 118 TO FACILITY OPERATING LICENSE NO. NPF-11 AND
AMENDMENT NO. 103 TO FACILITY OPERATING LICENSE NO. NPF-18
COMMONWEALTH EDISON COMPANY
LASALLE COUNTY STATION, UNITS 1 AND 2
DOCKET NOS. 50-373 AND 50-374

1.0 INTRODUCTION

By letter dated January 20, 1997, the Commonwealth Edison Company (ComEd, the licensee), submitted a request for changes to the LaSalle County Station, Units 1 and 2, Technical Specifications (TS). The proposed amendments would relocate or revise the surveillance requirements (SR) or action statements for selected indication/alarm only instrumentation.

The LaSalle TS contain requirements for instruments that serve only an alarm or indication function. The TS, as currently written, require that the components associated with these instruments be declared inoperable if the instrument SR can not be met; although inoperability of the instruments does not indicate inoperability of the component or system required by the Limiting Condition for Operation. The licensee has determined that the affected instruments do not meet the criteria for inclusion in the TS because they have only alarm or indication functions and have no automatic or interlock functions. The affected TS are: 4.1.3.5 - Control Rod Scram Accumulators; 4.4.3.2.1 - Reactor Coolant System Operational Leakage; 4.5.1.d - ECCS - Operating; and 3.5.3 and 3.6.2.1 - Suppression Chamber.

2.0 EVALUATION

2.1 Surveillance Requirement 4.1.3.5, Control Rod Scram Accumulators

The control rod scram accumulators ensure that the control rods can be inserted under the most unfavorable depressurization of the reactors. Operability of the accumulators is determined by verifying that the pressure in each accumulator is greater than or equal to 940 psig. TS 4.1.3.5.a requires weekly verification of accumulator pressure. SR 4.1.3.5.b requires the performance of a channel functional test of the control rod drive (CRD) accumulator leak detectors and a channel calibration of the pressure detectors every 18 months. Because there is no TS action statement for inoperable CRD accumulator alarm instrumentation, the accumulators must be declared inoperable when an instrument becomes inoperable for any reason, placing the unit in a shutdown action statement.

The licensee proposes to relocate SR 4.1.3.5.b to plant procedures. SR 4.1.3.5.b does not verify operability of the accumulators and this instrumentation has no automatic or interlock functions. Operability of the CRD accumulators is verified by SR 4.1.3.5.a which requires weekly verification that the pressure indicated is greater than or equal to 940 psig. If the pressure detector is not functioning, SR 4.1.3.5.a can not be met and the accumulator will be declared inoperable. This change will allow the licensee to consider the accumulator operable if the alarm function becomes inoperable. Operability of the accumulator alarm function is not critical to the ability to insert control rods because: (1) the rods can be inserted with normal drive water pressure if the accumulator is inoperable; and (2) the automatic CRD charging water header low pressure scram initiates before any accumulator loses its full capability to insert the control rod. Therefore, the staff has determined that the SR for the CRD accumulator instrumentation may be relocated to plant procedures.

2.2 Surveillance Requirement 4.4.3.2.1 - Reactor Coolant System Operational Leakage

TS 3.4.3.2 provides limits on the amount of unidentified and total reactor coolant system leakage. The methods available to measure leakage are monitoring of primary containment atmospheric particulate and gaseous radioactivity, primary containment sump flow rate, and primary containment air coolers condensate flow. TS 4.4.3.2.1 requires monitoring by each of these methods at least once per 12 hours. However, there are no action statements associated with these surveillances that address the actions to take if a leakage detection system is inoperable. Per the current TS, if a leakage detection system is inoperable, the TS surveillance could not be met and the unit would be placed in a very restrictive time clock. The appropriate action statements for this situation are in TS 3.4.3.1, "Reactor Coolant System Leakage Detection System." TS 3.4.3.1 allows continued operation for up to 30 days when one leakage detection system is inoperable provided grab samples are analyzed once per 24 hours.

The licensee proposes to revise the TS to require that reactor coolant system leakage be demonstrated to be within the specified limits on the average of once per 8 hours, not to exceed 12 hours. The proposed TS meets the intent of the TS - to ensure that reactor coolant system leakage remains within limits - but does not reference specific detection systems to be used. As long as there is enough operable leakage detection instrumentation to meet the requirements of TS 3.4.3.1, there is sufficient instrumentation to determine operational leakage to satisfy the requirements of 3.4.3.2. Because an existing TS 3.4.3.1 provides the LCO, Action Statements, and SR for the leakage detection systems, the revision to TS 4.4.3.2.1 is acceptable.

2.3 Surveillance Requirement 4.5.1.d - ECCS - Operating; Automatic Depressurization System

The Automatic Depressurization System (ADS) controls seven selected safety-relief valves (SRV) for depressurization of the reactor. Each SRV utilized

for automatic depressurization is equipped with an air accumulator and check valve arrangement. The ADS accumulator supply header pressure is supplied by the normal instrument nitrogen system which maintains the ADS valve accumulators at greater than or equal to 150 psig. These accumulators ensure that the ADS valves can be held open following failure of the air supply to the accumulators. The accumulators are backed up by two banks of nitrogen bottles, one for each accumulator supply header, with similar check valve arrangements to assure ADS operability through the cooldown decay heat removal period. These ADS bottle banks provide the safety-related pneumatic supply for long-term cooling. Therefore, ADS is a backup for shutdown cooling. The nitrogen bottle banks are equipped with indication and alarms for low pressure.

Current TS 4.5.1.d.1 requires a monthly channel functional test of the accumulator backup compressed gas system (bottle banks) low pressure alarm system. Because there are no action statements for inoperable monitoring instruments, inoperability of the compressed gas system low pressure alarm would result in the ADS valves associated with that nitrogen bottle bank being declared inoperable. Each bottle bank serves one supply header which supplies either three or four ADS valve accumulators. Therefore, inoperability of a nitrogen bank low pressure alarm or indicator would render three or four ADS valves inoperable and TS 3.0.3 must be entered.

The licensee proposes to revise TS SR 4.5.1.d.1 to delete a functional test of the compressed gas low pressure alarm system and instead require monthly verification that ADS accumulator supply header pressure is greater than or equal to 150 psig and accumulator backup compressed gas system bottle pressure is greater than or equal to 500 psig.

The proposed surveillances more accurately verify operability of the ADS because low pressure in the supply header directly affects the ability of the accumulator to open and hold open the SRVs. Maintaining the supply header pressure at greater than or equal to 150 psig will ensure that the accumulators are pressurized and will be able to operate the SRV two times following failure of the pneumatic supply to the accumulator. If pressure decreases below 150 psig in any accumulator, an alarm will signal in the control room. In addition, multiple alarms will indicate a loss of the normal pneumatic supply. The proposed surveillance of nitrogen bottle bank pressure will ensure long-term availability of ADS during and following an accident. Unless normal supply is lost, the only losses are through gas leakage and, therefore, pressure decrease between the monthly surveillances will be minimal. In addition, the alarms on low nitrogen bottle pressure, although no longer a TS requirement, will be maintained and will signal low pressure in the control room. Therefore, the proposed surveillances are acceptable.

The licensee also proposes to add an action statement for low pressure in the compressed gas bottles. The action statement would require that with bottle pressure less than 500 psig, pressure must be restored within 72 hours or the associated ADS valves must be declared inoperable. The allowed outage time of 72 hours provides sufficient time to replace low pressure bottles with full

bottles. Because the nitrogen bank provides long-term cooling, it would not be required immediately following an accident. Operation of the ADS SRVs immediately following an accident is accomplished by the pressurized accumulators which are required to be maintained at 150 psig. Therefore, the proposed action statement is acceptable.

The current TS 4.5.1.d.2.c requires performance of a channel calibration of the accumulator backup compressed gas system low pressure alarm system and verification of alarm setpoints every 18 months. The licensee proposes to delete this requirement because it has determined that operability of ADS is not dependent on operability of the backup compressed gas system instrumentation. In addition, there are no automatic functions associated with the low pressure alarm. This instrumentation and the SR are being relocated to plant procedures. Verification of alarm operability has been replaced with the proposed monthly verification of compressed gas bottle pressure as discussed above. This change is acceptable.

2.4 TS 3.5.3 and 3.6.2.1 - Suppression Chamber

The TS limit on suppression chamber level ensures that a sufficient volume of water is available to the high-pressure core spray, low-pressure core spray and low-pressure core injection systems in the event of a loss-of-coolant accident and for depressurization. In operational conditions 1, 2, and 3, the TS minimum level is -4.5" and the maximum level is +3". In operational conditions 4 and 5 the minimum required water volume is reduced because the reactor coolant is maintained at or below 200 degrees Fahrenheit. The minimum water volume in these conditions (-12' 7") is based on net positive suction head, recirculation volume, and vortex prevention, plus a 28" safety margin. Normal operational monitoring of suppression chamber water level between -4.5" and +3" is satisfied with two narrow range instruments. One narrow range instrument indicates and alarms in the control room and the other indicates at the remote shutdown panel. There are two channels of wide range level instrumentation for accident monitoring. Suppression chamber water temperature indication instrumentation consists of 14 channels in two divisions and is used for both normal and accident conditions. The TS requires daily verification of suppression chamber level and temperature with increased temperature monitoring during periods of significant heat addition.

TS 3.5.3 Actions c and d, and TS 3.6.2.1 Actions c and d, provide actions for inoperable water level instrumentation. They require that with one channel inoperable, the channel must be restored within 7 days or water level must be verified to be greater than the minimum required for the operational mode once per 12 hours by local indication. With both channels inoperable, one channel must be restored within 8 hours or the unit must in cold shutdown within 36 hours and the level must be verified by local indication every 12 hours. TS 3.6.2.1 actions c and d also require that with one division of suppression chamber temperature indication inoperable, it must be restored within 7 days or the temperature must be verified at least once per 12 hours and with both divisions of temperature indication inoperable, one must be restored within

8 hours or the unit must be in cold shutdown in 36 hours. The licensee proposes to delete these action statements.

The licensee has determined that these instruments are not required to be included in TS because they have only indication or alarm functions and do not impact the operability of the suppression chamber. There are no automatic or interlock functions associated with these instruments. The LCOs for TS 3.5.3 and 3.6.2.1 require operability of the suppression chamber based on the volumes and temperature of water in the pool. Requirements for operability of the instruments to measure level and temperature do not relate directly to operability of the suppression chamber and are inappropriate for inclusion in these TS. The TS contain other requirements specific to operability of these instruments that will continue to be met. TS 3.3.7.4, "Remote Shutdown Monitoring Instrumentation" requires operability of one channel of narrow range level instrumentation that indicates at the remote shutdown panel. This TS requires the plant to be in hot shutdown within 12 hours if the channel is not restored within 7 days and requires channel checks and channel calibrations. Wide range level instrumentation will continue to be required by TS 3.3.7.5, "Accident Monitoring Instrumentation." TS 3.3.7.5 requires operability of two channels of suppression chamber level instrumentation and seven channels of suppression pool temperature instrumentation. The TS requires that with one channel of suppression chamber level instrumentation or one division of suppression chamber temperature instrumentation inoperable, restore within 7 days or be in hot shutdown within 12 hours. TS 3.3.7.5 requires that with both channels/divisions of suppression chamber level or temperature instrumentation inoperable, restore one channel/division within 48 hours or be in hot shutdown within 12 hours.

The licensee proposes to relocate the requirements for calibration and testing of the suppression chamber level and temperature instruments to plant procedures. TS 4.5.3.1.b and 4.6.2.1.c require a channel check every 24 hours, a channel functional test every 31 days, and a channel calibration every 18 months of suppression chamber level and temperature instrumentation. Although these requirements will be deleted from the TS, the instruments are still required to be operable to fulfill the requirements to meet TS 4.5.3.1.a and 4.6.2.1.a and b. The deletion of these surveillances is consistent with the deletion of the associated action statements as discussed above.

TS 4.5.3.1.b and 4.6.2.1.c also require that the low water level alarm be set at greater than or equal to -3 inches. The licensee proposes to relocate this requirement because there are no associated action statements for an inoperable alarm. Inoperability of the alarm would put the plant in an action statement that would require the instrument to be restored within 8 hours or begin unit shutdown. This action is inappropriate for this instrument. In addition, operability of the alarms is not critical to operability of the suppression chamber because, due to the large volume of water in the suppression pool, it takes a long time for level or temperature to change significantly and the daily surveillances of level and temperature would detect any change.

2.5 Criteria for Relocation of Requirements from TS

Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to include TS as part of the license. The Commission's regulatory requirements related to the content of the TS are set forth in 10 CFR 50.36. The regulation does not specify the particular requirements to be included in a plant's TS.

The Commission has provided guidance for the content of TS in its "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors," 58 FR 39132 (July 22, 1993), in which the Commission indicated that compliance with the Final Policy Statement satisfies Section 182a of the Act. In particular, the Commission indicated that certain items could be relocated from the TS to licensee-controlled documents.

The Final Policy Statement identified four criteria to be used in determining whether a particular matter is required to be included in the TS. These criteria were subsequently incorporated into the regulations by an amendment to 10 CFR 50.36 (60 FR 36953; July 19, 1995). The criteria incorporated into the rule are as follows:

- (1) Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary;
- (2) a process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident or Transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier;
- (3) a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a Design Basis Accident or Transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier;
- (4) a structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety.

Existing TS requirements which fall within or satisfy any of the criteria must be retained in the TS, while those TS requirements which do not fall within or satisfy these criteria may be relocated to other, licensee-controlled documents.

The licensee has evaluated the instrumentation discussed above against the four criteria of 10 CFR 50.36(c)(2)(ii) and determined that none of the criteria applies to the TS that are being relocated for the reasons below:

Criterion 1: The instrumentation being relocated does not detect and indicate in the control room a significant degradation of the reactor

coolant pressure boundary. The relocated instruments are used to detect and indicate control rod scram accumulator pressure, ADS accumulator backup compressed gas system pressure, and suppression chamber water level and temperature.

Criterion 2: The process variables monitored by the relocated instrumentation are assumed in initial conditions of accidents or transients. However, the instruments themselves are not and may be relocated from the TS. If a process variable can not be determined to be within its limit due to inoperability of the associated instruments, then the TS action requirements must be entered. The instruments serve no active function in an accident or transient.

Criterion 3: These instruments do not function to mitigate an accident or transient, with the exception of the instruments that measure suppression chamber water level and temperature. These instruments meet Criterion 3 because they are Regulatory Guide 1.97, Category 1, Type A, instruments that are required to be retained as accident monitoring instrumentation. However, these instruments will continue to be required per TS 3/4.3.7.5, Accident Monitoring Instrumentation, which is not affected by this amendment.

Criterion 4: The licensee has verified that operating experience and the LaSalle probabilistic safety assessment have not determined these instruments to be significant to public health or safety.

Therefore, the instrumentation that is proposed to be relocated from the TS does not meet the criteria of 10 CFR 50.36.(c)(2)(ii) as being required to be included in TS. The instrumentation, along with the supporting actions and surveillances, may be moved to plant procedures.

2.6 Editorial Change to TS 3.1.3.5

The licensee proposes to make an editorial change to action statement a.2 of TS 3.1.3.5 because the current page format is incorrect. The last line of the action statement, "Otherwise be in at least HOT SHUTDOWN within 12 hours," is indented incorrectly in the Unit 2 TS. As currently indented, the statement appears to apply to action statements a.1 and a.2 of TS 3.1.3.5 rather than only a.2 as intended. The Unit 1 TS are indented correctly.

The staff has reviewed the proposed change and agrees that the format of the Unit 1 TS 3.1.3.5 is correct and the Unit 2 TS should be changed to be consistent.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (62 FR 8795). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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