



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-295

ZION STATION UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 54
License No. DPR-39

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated September 2, 1977, supplemented by letters dated February 26 and September 26, 1979, and applications dated September 28 and November 7, 1979, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-39 is hereby amended to read as follows:

(2) Technical Specifications

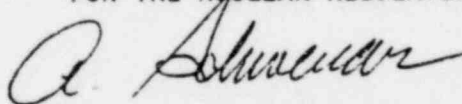
The Technical Specifications contained in Appendixes A and B, as revised through Amendment No. 54, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license is further amended by adding the following new paragraph 2.C.(8):

2.C.(8) - The licensee shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:

1. Identification of a sampling schedule for the critical parameters and control points for these parameters;
 2. Identification of the procedures used to quantify parameters that are critical to control points;
 3. Identification of process sampling points;
 4. Procedure for the recording and management of data;
 5. Procedures defining corrective actions for off control point chemistry conditions; and
 6. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events required to initiate corrective action.
4. The license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Attachments:

Changes to the Technical
Specifications

Changes to Facility Operating
License No. DPR-39 pgs. 5 & 6 & 6a

Date of Issuance: April 28, 1980



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-304

ZION STATION UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 51
License No. DPR-48

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated September 2, 1977, supplemented by letters dated February 26 and September 26, 1979, and applications dated September 28 and November 7, 1979, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(8) of Facility Operating License No. DPR-48 is hereby amended to read as follows:

(2) Technical Specifications

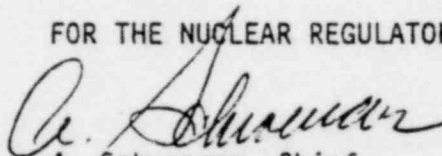
The Technical Specifications contained in Appendixes A and B, as revised through Amendment No. 51, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license is further amended by adding the following new paragraph 2.C.(8):

2.C.(8) - The licensee shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:

1. Identification of a sampling schedule for the critical parameters and control points for these parameters;
 2. Identification of the procedures used to quantify parameters that are critical to control points;
 3. Identification of process sampling points;
 4. Procedure for the recording and management of data;
 5. Procedures defining corrective actions for off control point chemistry conditions; and
 6. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events required to initiate corrective action.
4. The license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Attachments:

Changes to the Technical
Specifications

Changes to Facility Operating
License No. DPR-48 pgs. 4, 5 & 6 & 6a

Date of Issuance: April 28, 1980

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 54 TO FACILITY OPERATING LICENSE NO. DPR-39

AMENDMENT NO. 51 TO FACILITY OPERATING LICENSE NO. DPR-48

DOCKET NOS. 50-295 AND 50-304

1. Revise Appendix A of the Technical Specifications as follows:

Remove Pages

59 (Unit 2 only)
73
79
80
82
83
94
164
168
174
315
328a

Insert Pages

59 (Unit 2 only)
73
79
80
82
83
94
164
168
174
315
328a

2. Replace the following pages of the Facility Operating License No. DPR-39 and DPR-48 with the attached pages as indicated. The change area in the license is indicated by a marginal line:

Remove Pages

5 Unit 1
6 Unit 1
4 Unit 2
5 Unit 2
6 Unit 2
6a Unit 1
6a Unit 2

*Insert Pages

5 Unit 1
6 Unit 1
4 Unit 2
5 Unit 2
6 Unit 2
6a Unit 1
6a Unit 2

*These pages were retyped to include all previous amendments to the licenses.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 54, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) This amended license is subject to the following conditions for the protection of the environment:

(a) Radiological and non-radiological Technical Specifications have been established by the Regulatory staff. These Technical Specifications cover, but are not limited to, the following:

(1) An extended operational monitoring program to determine the environmental impacts of Station operation. The program should determine the size, shape, and location of the thermal plume during different wind and weather conditions. The program should define the effects of facility operation on the aquatic ecosystem, including data on impingement of aquatic organisms on the bar racks and traveling screens.

(2) A basis for starting the deicing operation (pumping heated discharge water to the intake structure) only after there are positive indications that icing of the offshore intake structure is in fact taking place.

(b) Commonwealth Edison shall develop design modifications to the condenser cooling water intake structure to reduce the effective water intake velocity to less than 1 foot per second (under winter deicing operations the present velocity is calculated to be over 3.7 fps; during non-winter operation it is calculated to be over 2.4 fps); or to otherwise minimize fish entrainment. Commonwealth Edison will be prepared to install the modifications within a specified time period if excessive numbers of juvenile or adult fish mortalities result from operation of the condenser cooling water system.

(c) If important adverse effects or evidence of irreversible damage are detected by the monitoring programs, Commonwealth Edison will provide to the Commission an analysis of the problem and a plan of action to be taken to eliminate or acceptably reduce the detrimental effects or damage.

(d) Commonwealth Edison shall perform fish population studies in the offshore control areas to provide base line population statistics for all seasons of the year. Commonwealth Edison shall monitor the quantity and quality of fish population in these areas and shall assure that these control areas are outside the influence of the thermal plume. Commonwealth Edison shall submit this fish population study program to the Commission for review by January 15, 1974.

- (4) The licensee shall not operate the reactor at power levels above P-7 (as defined in Section 7.2 of the Zion Final Safety Analysis Report) with less than four (4) reactor coolant loops in operation until safety analyses for less than four loop operation have been submitted and approval for less than four loop operation at power levels above P-7 has been granted by the Commission by amendment to this license.
- (5) The licensee may proceed with and is required to complete the modifications indicated in Paragraphs 3.1.1 through 3.1.20 of the NRC's Fire Protection Safety Evaluation (SE) on the Zion Nuclear Power Station dated March 10, 1978 and supplements thereto. These modifications shall be completed as specified in Table 3.1 of Supplement No. 1 or in subsequent supplements to that SE. In addition, the licensee shall submit the additional information identified in Table 3.2 of the above cited SE in accordance with the schedule contained therein. In the event these dates for submittal cannot be met, the licensee shall submit a report explaining the circumstances, together with a revised schedule.
- (6) The licensee shall maintain in effect and fully implement all provisions of the Commission-approved physical security plan, including amendments and changes made pursuant to the authority of 10 CFR 50.54(p). The approved security plan documents, withheld from public disclosure pursuant to 10 CFR 2.790(d), collectively titled "Zion Station Unit Nos. 1 and 2 Physical Security Plan," dated November 18, 1977 as revised May 26 and July 25, 1978."
- (7) Spent Fuel Pool Modification

The licensee is authorized to modify the spent fuel pool as described in the application dated April 13, 1978, as supplemented October 24, November 8 and 29, 1978, January 24 and 26, February 23, March 7 and 19, 1979.

- (a) Fuel stored in the spent fuel pool shall have a U-235 loading less than or equal to 40.6 grams per axial centimeter.
- (b) No loads heavier than the weight of a single spent fuel assembly plus the tool for moving that assembly shall be carried over fuel stored in the spent fuel pool. The spent fuel handling tool, the burnable poison tool, the rod cluster control changing fixture and the thimble plug shall not be carried at heights greater than two feet over fuel stored in the spent fuel pool.
- (c) The NRC shall be notified in advance should it become necessary to handle heavy loads in the vicinity of the spent fuel storage pool.
- (d) Upon completion of the modification a corrosion surveillance program for the racks shall be implemented and kept in force to insure that any loss of neutron absorber material and/or swelling of the storage tubes is detected.

- (e) In situ neutron attenuation tests shall be performed to verify that tubes and racks contain a sufficient number of Boral plates such that K-effective will not be greater than 0.95 when the spent fuel is in place. Results of these tests shall be reported to the NRC within 30 days after completion of the modification.
- (8) The licensee shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:
- (a) Identification of a sampling schedule for the critical parameters and control points for these parameters;
 - (b) Identification of the procedures used to quantify parameters that are critical to control points;
 - (c) Identification of process sampling points;
 - (d) Procedure for the recording and management of data;
 - (e) Procedures defining corrective actions for off control point chemistry conditions; and
 - (f) A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events required to initiate corrective action.

C. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:

(1) Maximum Power Level

Commonwealth Edison Company is authorized to operate the Zion Nuclear Power Station Unit No. 2 at steady state reactor core power levels not to exceed 3250 megawatts thermal.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 51, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(3) This license is subject to the following conditions for the protection of the environment:

(a) Radiological and non-radiological Technical Specifications have been established by the Regulatory staff. These Technical Specifications cover, but are not limited to, the following:

(1) An extended operational monitoring program to determine the environmental impacts of Station operation. The program should determine the size, shape, and location of the thermal plume during different wind and weather conditions. The program should define the effects of facility operation on the aquatic ecosystem, including data on impingement of aquatic organisms on the bar racks and traveling screens.

(2) A basis for starting the deicing operation (pumping heated discharge water to the intake structure) only after there are positive indications that icing of the offshore intake structure is in fact taking place.

(b) Commonwealth Edison shall develop design modifications to the condenser cooling water intake structure to reduce the effective water intake velocity to less than 1 foot per second (under winter deicing operations the present velocity is calculated to be over 3.7 fps; during non-winter operation it is calculated to be over 2.4 fps); or

to otherwise minimize fish entrainment. Commonwealth Edison will be prepared to install the modifications within a specified time period of excessive numbers of juvenile or adult fish mortalities result from operation of the condenser cooling water system.

- (c) If important adverse effects or evidence of irreversible damage are detected by the monitoring programs, Commonwealth Edison will provide to the Commission an analysis of the problem and a plan of action to be taken to eliminate or acceptably reduce the detrimental effects of damage.
 - (d) Commonwealth Edison shall perform fish population studies in the offshore control areas to provide base line population statistics for all seasons of the year. Commonwealth Edison shall monitor the quantity and quality of fish population in these areas and shall assure that these control areas are outside the influence of the thermal plume. Commonwealth Edison shall submit this fish population study program to the Commission for review by January 15, 1974.
- (4) The licensee shall not operate the reactor at power levels above P-7 (as defined in Section 7.2 of the Zion Final Safety Analysis Report) with less than four (4) reactor coolant loops in operation until safety analyses for less than four loop operation have been submitted and approval for less than four loop operation at power levels above P-7 has been granted by the Commission by amendment to this license.
 - (5) The licensee may proceed with and is required to complete the modifications indicated in Paragraphs 3.1.1 through 3.1.20 of the NRC's Fire Protection Safety Evaluation (SE) on the Zion Nuclear Power Station dated March 10, 1978 and supplements thereto. These modifications shall be completed as specified in Table 3.1 of Supplement No. 1 or in subsequent supplements to that SE. In addition, the licensee shall submit the additional information identified in Table 3.2 of the above cited SE in accordance with the schedule contained therein. In the event these dates for submittal cannot be met, the licensee shall submit a report explaining the circumstances, together with a revised schedule.
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 - (c) The NRC shall be notified in advance should it become necessary to handle heavy loads in the vicinity of the spent fuel storage pool.
 - (d) Upon completion of the modification a corrosion surveillance program for the racks shall be implemented and kept in force to insure that any loss of neutron absorber material and/or swelling of the storage tubes is detected.
 - (e) In situ neutron attenuation tests shall be performed to verify that tubes and racks contain a sufficient number of Boral plates such that K-effective will not be greater than 0.95 when the spent fuel is in place. Results of these tests shall be reported to the NRC within 30 days after completion of the modification.
- (8) The licensee shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:
- (a) Identification of a sampling schedule for the critical parameters and control points for these parameters;
 - (b) Identification of the procedures used to quantify parameters that are critical to control points;
 - (c) Identification of process sampling points;
 - (d) Procedure for the recording and management of data;

- (e) Procedures defining corrective actions for off control point chemistry conditions; and
 - (f) A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events required to initiate corrective action.
3. The conditions imposed by the Atomic Safety and Licensing Board relative to the fuel densification phenomenon are being satisfied by the inclusion of the power level restrictions of Figure 3.2-9b of the Technical Specifications, as amended.
 4. The conditions imposed by the Atomic Safety and Licensing Board and the Atomic Safety and Licensing Appeal Board relative to the Industrial Security Plan are set forth in Appendix C, as revised by issued changes through Change No. 1, of this amended license, and are incorporated herein by reference. Appendix C is being given restricted distribution.
 5. This license is issued without prejudice to subsequent licensing action which may be taken by the Commission.
 6. This license is effective as of the date of issuance and shall expire at midnight on December 26, 2008.

FOR THE ATOMIC ENERGY COMMISSION

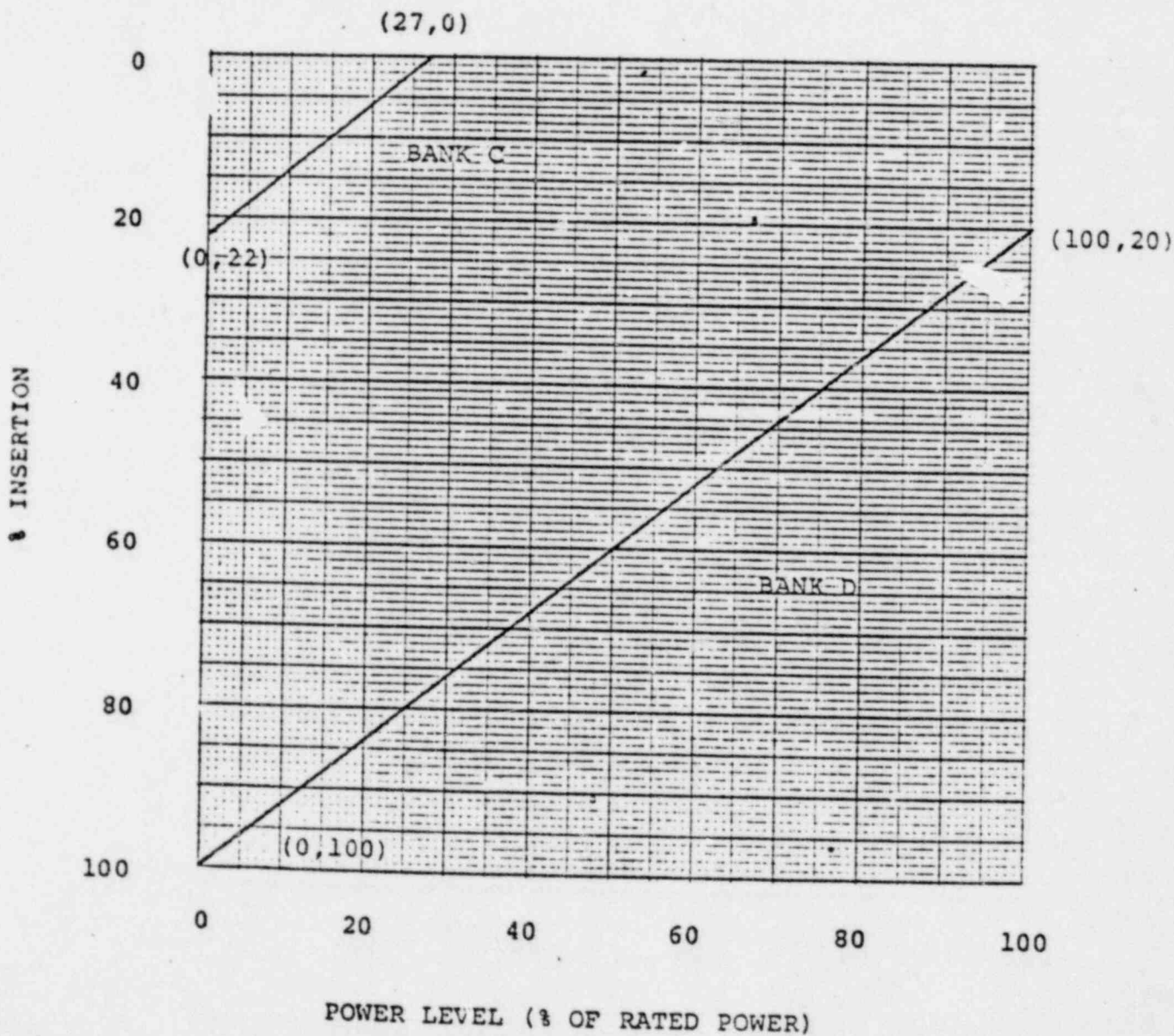
Original signed by Roger S. Boyd

A. Giambusso, Deputy Director
for Reactor Projects
Directorate of Licensing

Date of Issuance: Nov. 14, 1973

Figure 3.2-4
 CONTROL ROD INSERTION LIMITS FOUR-LOOP OPERATION
 Zion Unit 2

Banks A and B Fully Withdrawn



LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
<p>3.3 Reactor Coolant System (per unit)</p> <p><u>Applicability</u></p> <p>Applies to a Reactor Coolant System operational status, heatup and cooldown, leakage, structural integrity, chemistry and radio-chemistry.</p> <p><u>Objective</u></p> <p>To assure the integrity and safe operation of a Reactor Coolant System.</p> <p><u>Specification (per unit)</u></p> <p>1. Operational Components</p> <p> A. Reactor Coolant Pumps</p> <p> 1. The reactor coolant pumps shall be operational as specified in sections 3.2.1.D.5, 3.2.1.D.6, 2.1.2.B and Table 3.1-1. Three loop operation is specified in sections 3.2.1.D.6, 2.1.2.B and Table 3.1-1. (See 3.3.2.G for low RCS temperature operation.)</p>	<p>4.3 Reactor Coolant System (per unit)</p> <p><u>Applicability</u></p> <p>Applies to the monitoring of Reactor Coolant System surveillance.</p> <p><u>Objective</u></p> <p>To establish surveillance requirements for a Reactor Coolant System.</p> <p><u>Specification (per unit)</u></p> <p>1. Operational Components</p> <p> A. Reactor Coolant Pumps</p> <p> 1. Not Applicable</p>

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
<p data-bbox="125 315 965 348">3.3 2. Pressurization and System Integrity</p> <p data-bbox="308 376 743 409">A. Heatup and Cooldown</p> <p data-bbox="383 439 998 712">The Reactor Coolant System temperature and pressure (with the exception of the pressurizer) shall be limited in accordance with the limit lines shown in Figures 3.3.2-1 and 3.3.2-2 during heatup, cooldown and inservice leak and hydrostatic testing.</p> <ol data-bbox="390 745 1030 1567" style="list-style-type: none"> <li data-bbox="390 745 1030 1017">1. Allowable combinations of pressure and temperature for specified temperature change rates are below and of the right of the limit lines shown. Limit lines for cooldown rates between those presented may be obtained by interpolation. <li data-bbox="390 1050 1030 1414">2. Figures 3.3.2-1 and 3.3.2-2 define limits to assure prevention of non-ductile failure only. For normal operation other inherent plant characteristics, e.g., pump heat addition and pressurizer heater capacity may limit the heatup and cooldown rates that can be achieved over certain pressure-temperature ranges. <li data-bbox="390 1447 1030 1567">3. The Reactor Coolant System shall be limited to a maximum temperature change of 10°F/hr during inservice 	<p data-bbox="1073 315 1946 348">4.3 2. Pressurization and System Integrity</p> <p data-bbox="1295 376 1629 409">A. Not Applicable</p>

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
<p>3.3.2. A3. (Continued)</p> <p>leak and hydrostatic testing operations above the heatup and cooldown limit curves.</p> <p>B. The limit lines shown in Figures 3.3.2-1 and 3.3.2-2 shall be recalculated periodically as required, based on results from the material surveillance program.</p> <p>C. The secondary side of the steam generator must be pressurized above 200 psig if the temperature of the vessel is below 70°F.</p> <p>D. The pressurizer heatup rate shall not exceed 100°F/hr and the pressurizer cooldown rate not exceed 200°F/hr. The spray shall not be used if the temperature difference between the pressurizer and the spray fluid is greater than 320°F.</p> <p>E. Hydrostatic Testing</p> <p>1. System inservice leak and hydrotests shall be performed in accordance with the requirements of ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition, up to and including Summer 1975 Addendum.</p>	

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
<p>3.3.2.G Low Temperature Overpressure Protection</p> <ol style="list-style-type: none"> 1. When the temperature of the reactor coolant system (RCS) is below 250°F and the reactor head is installed: <ol style="list-style-type: none"> a. Two power operated relief valves (PORVs) with a lift setting of 435 psig shall be operable except as specified in 3.3.2.G.1.a.1 and 3.3.2.G.1.a.2 or <ol style="list-style-type: none"> 1. One PORV may be inoperable for no more than 7 days. 2. If one PORV is inoperable for more than 7 days or if two PORVs are inoperable, the pressurizer level shall be lower than 25% and the pressurizer pressure shall be lower than 100 psig within 24 hours; the pressurizer shall remain in these conditions until both PORVs are restored to the operable status. b. One power operated relief valve shall be open or c. The pressurizer level shall be below 25% and the pressurizer pressure shall be below 100 psig. 	<p>4.3.2.G Low Temperature Overpressure Protection</p> <ol style="list-style-type: none"> 1. Surveillance and testing of the low temperature overpressure protection shall be performed as follows: <ol style="list-style-type: none"> a. Within 31 days prior to entering a condition in which the PORVs are required operable and at least once per 31 days while the PORVs are required operable, a channel functional test (including valve operation) shall be performed on each PORV. A channel calibration shall be performed at least once per 18 months. <ol style="list-style-type: none"> 1. Not applicable 2. Same as 4.3.2.G.1.c b. Not applicable. c. The pressurizer level shall be verified to be below 25% shiftly and the pressurizer pressure shall be verified to be below 100 psig shiftly.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
<p>3.3.2.G (Continued)</p> <ol style="list-style-type: none"> 2. Only one of the three charging pumps, no safety injection pumps, and no accumulators shall be operable when the RCS temperature is below 250°F and the reactor head is installed. 3. In order to start a reactor coolant pump when the RCS temperature is below 250°F and no other reactor coolant pumps are running, the steam generator temperature of the loop in which the pump is to be started shall be less than 50°F above the RCS temperature. 	<p>4.3.2.G (Continued)</p> <ol style="list-style-type: none"> 2. Two charging pumps, both safety injection pumps, and all accumulators shall be verified inoperable before bringing the RCS temperature below 250°F and shortly while the RCS temperature is below 250°F and the reactor head is installed. 3. Not applicable.

Bases: Low Temperature Overpressure Protection

- 3.3.2.G There are 3 means of protecting the
& RCS from overpressurization by a
4.3.2.G pressure transient at low temperatures
(below 250°F). The first type of
protection is ensured by the operation
and surveillance of the power operated
relief valves with a lift setting of
435 psig. A single power operated re-
lief valve (PORV) will relieve a pres-
sure transient caused by 1) a mass
addition into a solid RCS from a charg-
ing pump or 2) a heat input based on
a reactor coolant pump being started in
an idle RCS and circulating water into
a steam generator whose temperature is
50°F greater than the RCS temperature. (1)

The second means of protection is
ensured by a PORV being open. It will
have the same relieving capabilities
as mentioned above.

The third means of protection limits
the pressurizer level to 25% and the
pressurizer pressure to 100 psig. A
pressure transient caused by the inad-
vertent mass addition from a charging
pump running for 10 minutes will be
relieved by the large gas volume and
low pressure present in the pressurizer
as mentioned above. Maintaining the
pressurizer level below 25% will also
make the hi pressurizer level deviation
alarm available to the operator during
a mass addition accident.

The repair period of 7 days is based on
allowing sufficient time to effect repairs
using safe and proper procedures and upon
the operability of the redundant PORV.
The 24 hour time period to reach the
restrictive conditions in the pressurizer
provides sufficient time to meet these
conditions.

The OMS must be treated on a periodic basis consistent with
the need for its use. A channel functional test shall be
performed prior to enabling the overpressure protection
system during cooldown and startup. This test shall be
repeated monthly when the PORVs are required to be operable.
The channel functional test shall include verification of the
backup air supply.

Operability of each low temperature over pressure protection
channel requires the control switch to be in the proper
position, the pressure point set, the PORV isolation valves
open, instrument and solenoid power on, and the PORV backup
air supply changed.

The limitations and surveillance requirements on the
ECCS equipment provides assurance that a mass addition
pressure transient can be relieved by the operation of
a single PORV or the limiting conditions placed on
the pressurizer.

The restrictions for startup of a RCP limits the heat
input accident to within the relieving capabilities of
a single PORV.

- (1) Pressure Mitigating Systems Transient Analysis
Results July 1977 Westinghouse Owners Group on
RCS Overpressurization.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
<p data-bbox="97 280 862 338"><u>3.8 EMERGENCY CORE COOLING & CORE COOLING SUPPORT</u></p> <p data-bbox="161 371 431 404"><u>Applicability:</u></p> <p data-bbox="161 429 970 553">Applies to the centrifugal charging, safety injection, residual heat removal, component cooling, service water and hydrogen control systems per unit.</p> <p data-bbox="161 586 355 619"><u>Objective:</u></p> <p data-bbox="161 644 970 735">To establish limiting conditions for the applicable systems so as to assure adequate emergency core cooling capability.</p> <p data-bbox="161 768 431 801"><u>Specification:</u></p> <ol data-bbox="161 826 1024 1040" style="list-style-type: none"> 1. Centrifugal charging pump system <ol style="list-style-type: none"> A. The two centrifugal charging pump systems shall be operable whenever the reactor is going from hot shutdown to hot standby. (See 3.3.2.G for low RCS temperature operation.) 	<p data-bbox="1078 272 1843 330"><u>4.8 EMERGENCY CORE COOLING & CORE COOLING SUPPORT</u></p> <p data-bbox="1142 363 1412 396"><u>Applicability:</u></p> <p data-bbox="1142 421 1951 545">Applies to the centrifugal charging, safety injection, residual heat removal, component cooling, service water and hydrogen control systems per unit.</p> <p data-bbox="1142 578 1336 611"><u>Objective:</u></p> <p data-bbox="1142 636 1940 693">To establish the surveillance requirements for the above systems.</p> <p data-bbox="1142 726 1412 759"><u>Specification:</u></p> <ol data-bbox="1142 784 2026 1214" style="list-style-type: none"> 1. Centrifugal charging pump system (Table 4.8-1) <ol style="list-style-type: none"> A. Surveillance and testing of the centrifugal charging pump systems shall be performed as follows: <ol style="list-style-type: none"> 1. The centrifugal charging pumps shall be started manually from the control room each month. Performance will be acceptable if the pump starts upon actuation, operates for at least 10 minutes on recirculation flow,

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
<p>3.8 2. Safety Injection pump system</p> <p>A. The two safety injection systems shall be operable whenever the reactor is going from hot shutdown to hot standby. (See 3.3.2.G for low RCS temperature operation.)</p>	<p>4.8 2. Safety injection pump System (Table 4.8-2)</p> <p>A. Surveillance and pump testing of the safety injection system shall be performed as follows:</p> <ol style="list-style-type: none"> 1. The safety injection pumps shall be started manually from the control room each month. Performance will be acceptable if the pump starts upon actuation, operates for at least 10 minutes on recirculation flow, and the discharge pressure and recirculation flow are within +10% of a point on the pump head curve. 2. Valves MOV-SI8813 & MOV-SI8814 closing control switch contacts shall be tested for shorts quarterly.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
<p>3.8.5 Accumulator System</p> <p>A. The four accumulator systems shall satisfy the following conditions whenever the reactor coolant system pressure exceeds 1000 psig except as specified in 3.8.5.A.5. (See 3.3.2.G for low RCS temperature operation.)</p> <ol style="list-style-type: none"> 1. Each accumulator shall be pressurized to at least 600 psig and shall contain minimum of 770 ft³ and a maximum of 818 ft³ of water. 2. Each accumulator shall contain water borated to at least 2000 ppm. 3. Each accumulator's isolation valve shall be open. 	<p>4.8.5 Accumulator System (Table 4.8-4)</p> <p>A. Surveillance and testing of the accumulator system shall be performed as follows:</p> <ol style="list-style-type: none"> 1. The pressure and level of the accumulator tanks shall be checked once a shift. At each 5% increase in level, the boron concentration will be checked. 2. The accumulator boron concentration shall be checked monthly. 3. The accumulator check valve operability (SI-8948A, B, C, and D and (SI-8956A, B, C, and D) will be verified at each refueling outage by opening the accumulator outlet isolation valve (MOV-SI8808A, B, C, and D) and verifying a decrease in accumulator level and a leakage test to determine that no gross valve leakage is experienced. 4. Isolation Valves Not applicable.

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Amendment No. 51, Unit 2

- B. Records and/or logs relative to the following items shall be recorded in a manner convenient for review and shall be retained for the life of the plant.
1. Substitution or replacement of principal items of equipment pertaining to nuclear safety.
 2. Changes made to the plant as it is described in the Safety Analysis Report.
 3. Records of new and spent fuel inventory and assembly histories.
 4. (Deleted)
 5. Updated, corrected, and as-built drawings of the plant.
 6. Records of plant radiation and contamination surveys.
 7. Records of off-site environmental monitoring surveys.
 8. Records of radiation exposure for all plant personnel, including all contractors and visitors to the plant in accordance with 10 CFR 20.
 9. Records of radioactivity in liquid and gaseous wastes released to the environment.
 10. Records of transient or operational cycling for those components that have been designed to operate safely for a limited number of transient or operational cycles.
 11. Records of individual staff members indicating qualifications, experience, training and retraining.
 12. Inservice inspections of the reactor coolant system.
 13. Minutes of meetings and results of reviews performed by the off-site and on-site review functions.
 14. Records of secondary water sampling and water quality.

6.6.3.c Special Reports

Reports on the following areas shall be as indicated:

<u>AREA</u>	<u>SUBMITTAL DATE</u>
a. Primary Coolant Leakage	Initial report within one year of initial criticality; 5 years after commercial service.
b. In-Service Inspection Development	First in-service inspection period after initial full power operation.
c. In-Service Inspection Evaluation	The requirements of Section 11 ASME Boiler Code (IS-620).
d. Loose parts monitoring program	On same date as in-service inspection report.
e. Containment Building Structural Testing Report	Within 90 days following completion of each test.
Q	
f. Lake Michigan Continuing Lake Study Projects No. 1, 6, 9, 10, 11, 12 ***	Within 60 days following the end of each 6 month routine operating report period. Each report shall contain tabular and graphical information, analysis and interpretation, of information obtained pursuant to each project.
g. Waukegan Memorial Airport Expansion Plans	The expansion plans and status of such plans for the Waukegan Memorial Airport will be reported yearly in the Annual Report including FAA #5010 report within 30 days of operation.
h. Overpressure Protection System Operation	

*** Zion Nuclear Power Station Environmental Report , Section 2.3.6, Table 9.

SPECIAL REPORTS

Table 6.6.2