

- (4) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (6) PSEG Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I 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 or incorporated below:

(1) Maximum Power Level

PSEG Nuclear LLC is authorized to operate the facility at reactor core power levels not in excess of 3840 megawatts thermal (100 percent rated power) in accordance with the conditions specified herein.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 174, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into the license. PSEG Nuclear LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Inservice Testing of Pumps and Valves (Section 3.9.6, SSER No. 4)\*

This License Condition was satisfied as documented in the letter from W. R. Butler (NRC) to C. A. McNeill, Jr. (PSE&G) dated December 7, 1987. Accordingly, this condition has been deleted.

\*The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report and/or its supplements wherein the license condition is discussed.

- (8) Solid Waste Process Control Program (Section 11.4.2, SER; Section 11.4, SSER No. 4)

PSEG Nuclear shall obtain NRC approval of the Class B and C solid waste process control program prior to processing Class B and C solid wastes.

- (9) Emergency Planning (Section 13.3, SSER No. 5)

In the event that the NRC finds that the lack of progress in completion of the procedures in the Federal Emergency Management Agency's final rule, 44 CFR Part 350, is an indication that a major substantive problem exists in achieving or maintaining an adequate state of emergency preparedness, the provisions of 10 CFR Section 50.54(s)(2) will apply.

- (10) Initial Startup Test Program (Section 14, SSER No. 5)

Any changes to the Initial Startup Test Program described in Section 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 shall be reported in accordance with 50.59(b) within one month of such change.

- (11) Partial Feedwater Heating (Section 15.1, SER; Section 15.1, SSER No. 5; Section 15.1, SSER No. 6)

The facility shall not be operated with reduced feedwater temperature for the purpose of extending the normal fuel cycle unless analyses supporting such operation are submitted by the licensee and approved by the staff.

- (12) Detailed Control Room Design Review (Section 18.1, SSER No. 5)

- a. PSE&G shall submit for staff review Detailed Control Room Design Review Summary Reports II and III on a schedule consistent with, and with contents as specified in, its letter of January 9, 1986.
- b. Prior to exceeding five percent power, PSE&G shall provide temporary zone markings on safety-related instruments in the control room.

- (18) Upon implementation of Amendment No. 173 adopting TSTF-448, Revision 3, the determination of control room envelope (CRE) unfiltered air inleakage as required by Surveillance Requirement 4.7.2.2.a, in accordance with TS 6.16.c.(i), the assessment of CRE habitability as required by Specification 6.16.c.(ii), and the measurement of CRE pressure as required by Specification 6.16.d, shall be considered met. Following implementation:
- a. The first performance of Surveillance Requirement 4.7.2.2.a, in accordance with Specification 6.16.c.(i), shall be within the specified frequency of 6 years, plus the 18 month allowance of Surveillance Requirement 4.0.2, as measured from July 29, 2001, the date of the most recent successful tracer gas test, as stated in the December 9, 2003 letter response to Generic Letter 2003-01, or within the next 18 months if the time period since the most recent successful tracer gas test is greater than 6 years.
  - b. The first performance of the periodic assessment of CRE habitability, Specification 6.16.c(ii), shall be 3 years, plus the 9 month allowance of Surveillance Requirement 4.0.2, as measured from July 29, 2001, the date of the most recent successful tracer gas test, as stated in the December 9, 2003 letter response to Generic Letter 2003-01, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.
  - c. The first performance of the periodic measurement of CRE pressure, Specification 6.16.d, shall be within 18 months, plus the 138 days allowed by Surveillance Requirement 4.0.2, as measured from April 5, 2006, the date of the most recent successful pressure measurement test, or within 138 days if not performed previously.
- (19) Leak rate tests required by Surveillance Requirement 4.6.1.2.a and 4.6.1.2.h to be performed in accordance with the Primary Containment Leakage Rate Testing Program are not required to be performed until their next scheduled performance, which is due at the end of the first test interval that begins on the date the test was last performed prior to implementation of Amendment No. 174 . .

(20) Top Guide Beams

Until there is more detailed guidance regarding the inspections of the top guide beams or the issue is resolved by the BWRVIP generically, the following license condition applies to Hope Creek to preclude the loss of the component's intended function:

Enhanced visual testing (EVT-1) of the top guide grid beams will be performed in accordance with GE SIL 554 following the sample selection and inspection frequency of BWRVIP-47 for CRD guide tubes. That is, inspections will be performed on 5 percent of the population within six years, and 10 percent of the total population of cells within twelve years. The sample locations selected for examination will be in areas that are exposed to the highest fluence. This inspection plan will be implemented beginning with the first RFO following EPU operation.

(21) Vibration Acceptance Criteria for SRVs

PSEG Nuclear LLC shall provide the Level 1 main steam safety relief valve vibration acceptance criteria to the NRC staff prior to increasing power above 3339 MWt.

(22) Steam Dryer

This license condition provides for monitoring, evaluating, and taking prompt action in response to potential adverse flow effects as a result of power uprate operation on plant structures, systems, and components (including verifying the continued structural integrity of the steam dryer).

1. The following requirements are placed on initial operation of the facility at power levels above 3339 MWt to 3840 MWt for the power ascension:
  - a. PSEG Nuclear LLC shall monitor hourly the main steam line (MSL) strain gage data during power ascension above 3339 MWt for increasing pressure fluctuations in the steam lines.
  - b. PSEG Nuclear LLC shall hold the facility at 105 percent and 110 percent of 3339 MWt to collect data from the MSL strain gages required by Condition 1.a, conduct plant inspections and walkdowns, and evaluate steam dryer performance based on these data; shall submit the evaluation to the NRC staff upon completion of the evaluation; and shall not increase power above each hold point until 96 hours after submitted to the NRC.

- c. If any frequency peak from the MSL strain gage data exceeds any of the Level 1 limit curves, PSEG Nuclear LLC shall return the facility to a lower power level at which the limit curve is not exceeded. PSEG Nuclear shall resolve the uncertainties in the steam dryer analysis, evaluate the continued structural integrity of the steam dryer, and submit that evaluation to the NRC staff.
  - d. In addition to evaluating the MSL strain gage data, PSEG Nuclear LLC shall monitor reactor pressure vessel water level instrumentation and MSL piping accelerometers on an hourly basis during power ascension above 3339 MWt. If resonance frequencies are identified as increasing above nominal levels in proportion to strain gage instrumentation data (including consideration of the EPU bump-up factor), PSEG Nuclear LLC shall stop power ascension, evaluate the continued structural integrity of the steam dryer, and submit that evaluation to the NRC staff.
2. PSEG Nuclear LLC shall implement the following actions for the initial power ascension at power levels above 3339 MWt to 3840 MWt:
- a. In the event that acoustic signals are identified that challenge the limit curves during power ascension above 3339 MWt, PSEG Nuclear LLC shall evaluate dryer loads and re-establish the limit curves based on the new strain gage data, and shall perform a frequency-specific assessment of ACM uncertainty at the acoustic signal frequency including application of 65 percent bias error and 10 percent uncertainty to all the SRV acoustic resonances.
  - b. After reaching 111.5 percent of 3339 MWt, PSEG Nuclear LLC shall obtain measurements from the MSL strain gages and establish the steam dryer flow-induced vibration load fatigue margin for the facility, update the dryer stress report, and re-establish the limit curves with the updated ACM load definition, which will be submitted to the NRC staff.
  - c. After reaching 115 percent of 3339 MWt, PSEG Nuclear LLC shall obtain measurements from the MSL-strain gages and establish the steam dryer flow-induced vibration load fatigue margin for the facility, update the dryer stress report, and re-establish the limit curves with the updated ACM load definition, which will be submitted to the NRC staff.

- d. During power ascension above 3339 MWt, if an engineering evaluation is required because a Level 1 acceptance criterion is exceeded, PSEG Nuclear LLC shall perform the structural analysis to address frequency uncertainties up to  $\pm 10$  percent and assure that peak responses that fall within this uncertainty band are addressed.
  - e. PSEG Nuclear LLC shall revise plant procedures to reflect long-term monitoring of plant parameters potentially indicative of steam dryer failure; to reflect consistency of the facility's steam dryer inspection program with BWRVIP-139; and to identify the NRC Project Manager for the facility as the point of contact for providing power ascension testing information during power ascension.
  - f. PSEG Nuclear LLC shall submit the final EPU steam dryer load definition for the facility to the NRC staff upon completion of the power ascension test program.
  - g. PSEG Nuclear LLC shall submit the flow-induced vibration related portions of the EPU startup test procedure to the NRC staff, including methodology for updating the limit curves, prior to initial power ascension above 3339 MWt.
3. PSEG Nuclear LLC shall prepare the EPU startup test procedure to include:
- a. the stress limit curves to be applied for evaluating steam dryer performance;
  - b. specific hold points and their duration during EPU power ascension;
  - c. activities to be accomplished during hold points;
  - d. plant parameters to be monitored;
  - e. inspections and walk downs to be conducted for steam, FW, and condensate systems and components during the hold points;
  - f. methods to be used to trend plant parameters;
  - g. acceptance criteria for monitoring and trending plant parameters, and conducting the walkdowns and inspections;

- h. actions to be taken if acceptance criteria are not satisfied; and
- i. verification of the completion of commitments and planned actions specified in its application and all supplements to the application in support of the EPU license amendment request pertaining to the steam dryer prior to power increase above 3339 MWt.

PSEG Nuclear LLC shall provide the related EPU startup test procedure sections to the NRC staff prior to increasing power above 3339 MWt.

- 4. The following key attributes of the program for verifying the continued structural integrity of the steam dryer shall not be made less restrictive without prior NRC approval:
  - a. During initial power ascension testing above CLTP, each test plateau increment shall be approximately 5 percent of 3339 MWt;
  - b. Level 1 performance criteria; and
  - c. The methodology for establishing the stress spectra used for the Level 1 and Level 2 performance criteria.

Changes to other aspects of the program for verifying the continued structural integrity of the steam dryer may be made in accordance with the guidance of NEI 99-04.

- 5. During the first scheduled refueling outage after Cycle 15 and during the first two scheduled refueling outages after reaching full EPU conditions, a visual inspection shall be conducted of all accessible, susceptible locations of the steam dryer in accordance with BWRVIP-139 inspection guidelines.
- 6. The results of the visual inspections of the steam dryer shall be reported to the NRC staff within 90 days following startup from the respective refueling outage. The results of the power ascension testing to verify the continued structural integrity of the steam dryer shall be submitted to the NRC staff in a report within 60 days following the completion of all Cycle 15 power ascension testing. A supplement shall be submitted within 60 days following the completion of all EPU power ascension testing.

- D. The facility requires exemptions from certain requirements of 10 CFR Part 50 and 10 CFR Part 70. An exemption from the criticality alarm requirements of 10 CFR 70.24 was granted in Special Nuclear Material License No. 1953, dated August 21, 1985. This exemption is described in Section 9.1 of Supplement No. 5 to the SER. This previously granted exemption is continued in this operating license. An exemption from certain requirements of Appendix A to 10 CFR Part 50, is described in Supplement No. 5 to the SER. This exemption is a schedular exemption to the requirements of General Design Criterion 64, permitting delaying functionality of the Turbine Building Circulating Water System-Radiation Monitoring System until 5 percent power for local indication, and until 120 days after fuel load for control room indication (Appendix R of SSER 5). Exemptions from certain requirements of Appendix J to 10 CFR Part 50, are described in Supplement No. 5 to the SER. These include an exemption from the requirement of Appendix J, exempting main steam isolation valve leak-rate testing at 1.10 Pa (Section 6.2.6 of SSER 5); an exemption from Appendix J, exempting Type C testing on traversing incore probe system shear valves (Section 6.2.6 of SSER 5); an exemption from Appendix J, exempting Type C testing for instrument lines and lines containing excess flow check valves (Section 6.2.6 of SSER 5); and an exemption from Appendix J, exempting Type C testing of thermal relief valves (Section 6.2.6 of SSER 5). These exemptions are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security. These exemptions are hereby granted. The special circumstances regarding each exemption are identified in the referenced section of the safety evaluation report and the supplements thereto. These exemptions are granted pursuant to 10 CFR 50.12. With these exemptions, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.
- E. The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54 (p). The plans, submitted by letter dated May 19, 2006 are entitled: "Salem-Hope Creek Nuclear Generating Station Security Training and Qualification Plan," and "Salem-Hope Creek Nuclear Generating Station Security Contingency Plan." The plans contain Safeguards Information protected under 10 CFR 73.21.

- F. Except as otherwise provided in the Technical Specifications or Environmental Protection Plan, PSEG Nuclear LLC shall report any violations of the requirements contained in Section 2.C of this license in the following manner: initial notification shall be made within 24 hours to the NRC Operations Center via the Emergency Notification System with written followup within thirty days in accordance with the procedures described in 10 CFR 50.73(b), (c), and (e).
- G. The licensees shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- H. This license is effective as of the date of issuance and shall expire at midnight on April 11, 2026.

FOR THE NUCLEAR REGULATORY COMMISSION  
- original signed by H.R. Denton -  
Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

Enclosures:

1. Appendix A - Technical Specifications (NUREG-1202)
2. Appendix B - Environmental Protection Plan

Date of Issuance: July 25, 1986

## DEFINITIONS

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### PROCESS CONTROL PROGRAM

1.33 The PROCESS CONTROL PROGRAM (PCP) shall contain the current formulas, sampling, analyses, test, and determinations to be made to ensure that processing and packing of solid radioactive wastes based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way as to assure compliance with 10 CFR Parts 20, 61, and 71, State regulations, burial ground requirements, and other requirements governing the disposal of solid radioactive waste.

### PURGE - PURGING

1.34 PURGE or PURGING shall be the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating condition, in such manner that replacement air or gas is required to purify the confinement.

### RATED THERMAL POWER

1.35 RATED THERMAL POWER shall be a total reactor core heat transfer rate to the reactor coolant of 3840 MWt.

### REACTOR PROTECTION SYSTEM RESPONSE TIME

1.36 REACTOR PROTECTION SYSTEM RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by any series of sequential, overlapping or total steps such that the entire response time is measured.

### REPORTABLE EVENT

1.37 A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.

### ROD DENSITY

1.38 ROD DENSITY shall be the number of control rod notches inserted as a fraction of the total number of control rod notches. All rods fully inserted is equivalent to 100% ROD DENSITY.

## 2.0 SAFETY LIMITS AND LIMITING SAFETY SYSTEM SETTINGS

### 2.1 SAFETY LIMITS

#### THERMAL POWER, Low Pressure or Low Flow

2.1.1 THERMAL POWER shall not exceed 24% of RATED THERMAL POWER with the reactor vessel steam dome pressure less than 785 psig or core flow less than 10% of rated flow.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

#### ACTION:

With THERMAL POWER exceeding 24% of RATED THERMAL POWER and the reactor vessel steam dome pressure less than 785 psig or core flow less than 10% of rated flow, be in at least HOT SHUTDOWN within 2 hours and comply with the requirements of Specification 6.7.1.

#### THERMAL POWER, High Pressure and High Flow

2.1.2 With reactor steam dome pressure greater than 785 psig and core flow greater than 10% of rated flow:

The MINIMUM CRITICAL POWER RATIO (MCPR) shall be  $\geq 1.08$  for two recirculation loop operation and shall be  $\geq 1.10$  for single recirculation loop operation.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

#### ACTION:

With reactor steam dome pressure greater than 785 psig and core flow greater than 10% of rated flow and the MCPR below the values for the fuel stated in LCO 2.1.2, be in at least HOT SHUTDOWN within 2 hours and comply with the requirements of Specification 6.7.1.

#### REACTOR COOLANT SYSTEM PRESSURE

2.1.3 The reactor coolant system pressure, as measured in the reactor vessel steam dome, shall not exceed 1325 psig.

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

#### ACTION:

With the reactor coolant system pressure, as measured in the reactor vessel steam dome, above 1325 psig, be in at least HOT SHUTDOWN with reactor coolant system pressure less than or equal to 1325 psig within 2 hours and comply with the requirements of Specification 6.7.1.

TABLE 2.2.1-1

REACTOR PROTECTION SYSTEM INSTRUMENTATION SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
1. Intermediate Range Monitor, Neutron Flux-High	$\leq 120/125$ divisions of full scale	$\leq 122/125$ divisions of full scale
2. Average Power Range Monitor:		
a. Neutron Flux-Upscale, Setdown	$\leq 14\%$ of RATED THERMAL POWER	$\leq 19\%$ of RATED THERMAL POWER
b. Flow Biased Simulated Thermal Power-Upscale		
1) Flow Biased	$\leq 0.57(w-\Delta w) + 58\%^{**}$ with a maximum of	$\leq 0.57(w-\Delta w) + 61\%^{**}$ with a maximum of
2) High Flow Clamped	$\leq 113.5\%$ of RATED THERMAL POWER	$\leq 115.5\%$ of RATED THERMAL POWER
c. Fixed Neutron Flux-Upscale	$\leq 118\%$ of RATED THERMAL POWER	$\leq 120\%$ of RATED THERMAL POWER
d. Inoperative	NA	NA
3. Reactor Vessel Steam Dome Pressure - High	$\leq 1037$ psig	$\leq 1057$ psig
4. Reactor Vessel Water Level - Low, Level 3	$\geq 12.5$ inches above instrument zero*	$\geq 11.0$ inches above instrument zero
5. Main Steam Line Isolation Valve - Closure	$\leq 8\%$ closed	$\leq 12\%$ closed

\*See Bases Figure B 3/4 3-1.

\*\*The Average Power Range Monitor Scram function varies as a function of recirculation loop drive flow (w).  $\Delta w$  is defined as the difference in indicated drive flow (in percent of drive flow which produces rated core flow) between two loop and single loop operation at the same core flow.  $\Delta w = 0$  for two recirculation loop operation.  $\Delta w = 9\%$  for single recirculation loop operation.

## REACTIVITY CONTROL SYSTEMS

### 3/4.1.4 CONTROL ROD PROGRAM CONTROLS

#### ROD WORTH MINIMIZER

##### LIMITING CONDITION FOR OPERATION

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

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2\*#, when THERMAL POWER is less than or equal to 8.6% of RATED THERMAL POWER, minimum allowable low power setpoint.

##### ACTION:

- a. With the RWM inoperable after the first 12 control rods are fully withdrawn, operation may continue provided that control rod movement and compliance with the prescribed control rod pattern is verified by a second licensed operator or other technically qualified member of the unit technical staff who is present at the reactor control console.
- b. With the RWM inoperable before the first twelve (12) control rods are fully withdrawn, one startup per calendar year may be performed provided that the control rod movement and compliance with the prescribed control rod pattern are verified by a second licensed operator or other technically qualified member of the unit technical staff who is present at the reactor control console.
- c. Otherwise, control rod movement may be only by actuating the manual scram or placing the reactor mode switch in the Shutdown position.

##### SURVEILLANCE REQUIREMENTS

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4.1.4.1 The RWM shall be demonstrated OPERABLE:

- a. In OPERATIONAL CONDITION 2 within 8 hours prior to withdrawal of control rods for the purpose of making the reactor critical, and in OPERATIONAL CONDITION 1 within 8 hours prior to RWM automatic initiation when reducing THERMAL POWER, by verifying proper indication of the selection error of at least one out-of-sequence control rod.

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

# See Special Test Exception 3.10.2.

### 3/4.2 POWER DISTRIBUTION LIMITS

#### 3/4.2.1 AVERAGE PLANAR LINEAR HEAT GENERATION RATE

##### LIMITING CONDITION FOR OPERATION

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3.2.1 All AVERAGE PLANAR LINEAR HEAT GENERATION RATES (APLHGRs) shall be less than or equal to the limits specified in the CORE OPERATING LIMITS REPORT.

APPLICABILITY: OPERATIONAL CONDITION 1, when THERMAL POWER is greater than or equal to 24% of RATED THERMAL POWER.

##### ACTION:

With an APLHGR exceeding the limits specified in the CORE OPERATING LIMITS REPORT, initiate corrective action within 15 minutes and restore APLHGR to within the required limits within 2 hours or reduce THERMAL POWER to less than 24% of RATED THERMAL POWER within the next 4 hours.

##### SURVEILLANCE REQUIREMENTS

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4.2.1 All APLHGRs shall be verified to be equal to or less than the limits specified in the CORE OPERATING LIMITS REPORT:

- a. Once within 12 hours after THERMAL POWER is greater than or equal to 24% of RATED THERMAL POWER and at least once per 24 hours thereafter.
- b. Initially and at least once per 12 hours when the reactor is operating with a LIMITING CONTROL ROD PATTERN for APLHGR.

POWER DISTRIBUTION LIMITS

3/4.2.3 MINIMUM CRITICAL POWER RATIO

LIMITING CONDITION FOR OPERATION

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3.2.3 The MINIMUM CRITICAL POWER RATIO (MCPR) shall be equal to or greater than the MCPR limit specified in the CORE OPERATING LIMITS REPORT.

APPLICABILITY: OPERATIONAL CONDITION 1, when THERMAL POWER is greater than or equal to 24% of RATED THERMAL POWER.

ACTION:

- a. With the end-of-cycle recirculation pump trip system inoperable per Specification 3.3.4.2, operation may continue and the provisions of Specification 3.0.4 are not applicable provided that, within 1 hour, MCPR is determined to be greater than or equal to the EOC-RPT inoperable limit specified in the CORE OPERATING LIMITS REPORT.
- b. With MCPR less than the applicable MCPR limit specified in the CORE OPERATING LIMITS REPORT, initiate corrective action within 15 minutes and restore MCPR to within the required limit within 2 hours or reduce THERMAL POWER to less than 24% of RATED THERMAL POWER within the next 4 hours.

SURVEILLANCE REQUIREMENTS

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4.2.3 MCPR, shall be determined to be equal to or greater than the applicable MCPR limit specified in the CORE OPERATING LIMITS REPORT:

- a. Once within 12 hours after THERMAL POWER is greater than or equal to 24% of RATED THERMAL POWER and at least once per 24 hours thereafter.
- b. Initially and at least once per 12 hours when the reactor is operating with a LIMITING CONTROL ROD PATTERN for MCPR.

POWER DISTRIBUTION LIMITS

3/4.2.4 LINEAR HEAT GENERATION RATE

LIMITING CONDITION FOR OPERATION

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3.2.4 The LINEAR HEAT GENERATION RATE (LHGR) shall not exceed the limit specified in the CORE OPERATING LIMITS REPORT.

APPLICABILITY: OPERATIONAL CONDITION 1, when THERMAL POWER is greater than or equal to 24% of RATED THERMAL POWER.

ACTION:

With the LHGR of any fuel rod exceeding the limit specified in the CORE OPERATING LIMITS REPORT, initiate corrective action within 15 minutes and restore the LHGR to within the limit within 2 hours or reduce THERMAL POWER to less than 24% of RATED THERMAL POWER within the next 4 hours.

SURVEILLANCE REQUIREMENTS

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4.2.4 LHGR's shall be determined to be equal to or less than the limit specified in the CORE OPERATING LIMITS REPORT:

- a. Once within 12 hours after THERMAL POWER is greater than or equal to 24% of RATED THERMAL POWER and at least once per 24 hours thereafter.
- b. Initially and at least once per 12 hours when the reactor is operating on a LIMITING CONTROL ROD PATTERN for LHGR.

TABLE 3.3.1-1 (Continued)

REACTOR PROTECTION SYSTEM INSTRUMENTATION

TABLE NOTATIONS

- (a) A channel may be placed in an inoperable status for up to 6 hours for required surveillance without placing the trip system in the tripped condition provided at least one OPERABLE channel in the same trip system is monitoring that parameter.
- (b) This function shall be automatically bypassed when the reactor mode switch is in the Run position.
- (c) Unless adequate shutdown margin has been demonstrated per Specification 3.1.1, the "shorting links" shall be removed from the RPS circuitry prior to and during the time any control rod is withdrawn\*.
- (d) The non-coincident NMS reactor trip function logic is such that all channels go to both trip systems. Therefore, when the "shorting links" are removed, the Minimum OPERABLE Channels Per the Trip System are 4 APRMS, 6 IRMS and 2 SRMS.
- (e) An APRM channel is inoperable if there are less than 2 LPRM inputs per level or less than 14 LPRM inputs to an APRM channel.
- (f) This function is not required to be OPERABLE when the reactor pressure vessel head is removed per Specification 3.10.1.
- (g) This function shall be automatically bypassed when the reactor mode switch is not in the Run position.
- (h) This function is not required to be OPERABLE when PRIMARY CONTAINMENT INTEGRITY is not required.
- (i) With any control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.
- (j) This function shall be automatically bypassed when turbine first stage pressure is equivalent to THERMAL POWER less than 24% of RATED THERMAL POWER.
- (k) Also actuates the EOC-RPT system.

\* Not required for control rods removed per Specification 3.9.10.1 or 3.9.10.2.

TABLE 4.3.1.1-1 (Continued)  
REACTOR PROTECTION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>CHANNEL CALIBRATION</u>	<u>OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED</u>
8. Scram Discharge Volume Water Level - High				
a. Float Switch	NA	Q	R	1, 2, 5(j)
b. Level Transmitter/Trip Unit	S	Q(k)	R	1, 2, 5(j)
9. Turbine Stop Valve - Closure	NA	Q	R	1
10. Turbine Control Valve Fast Closure Valve Trip System Oil Pressure - Low	NA	Q	R	1
11. Reactor Mode Switch Shutdown Position	NA	R	NA	1, 2, 3, 4, 5
12. Manual Scram	NA	W	NA	1, 2, 3, 4, 5

- (a) Neutron detectors may be excluded from CHANNEL CALIBRATION.
- (b) The IRM and SRM channels shall be determined to overlap for at least 1/2 decades during each startup after entering OPERATIONAL CONDITION 2 and the IRM and APRM channels shall be determined to overlap for at least 1/2 decades during each controlled shutdown, if not performed within the previous 7 days.
- (c) DELETED
- (d) This calibration shall consist of the adjustment of the APRM channel to conform to the power values calculated by a heat balance during OPERATIONAL CONDITION 1 when THERMAL POWER  $\geq$  24% of RATED THERMAL POWER. Adjust the APRM channel if the absolute difference is greater than 2% of RATED THERMAL POWER.
- (e) This calibration shall consist of the adjustment of the APRM flow biased channel to conform to a calibrated flow signal.
- (f) The LPRMs shall be calibrated at least once per 1000 effective full power hours (EFPH).
- (g) Verify measured core flow (total core flow) to be greater than or equal to established core flow at the existing recirculation loop flow (APRM % flow).
- (h) This calibration shall consist of verifying the  $6 \pm 0.6$  second simulated thermal power time constant.
- (i) This item intentionally blank
- (j) With any control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.
- (k) Verify the tripset point of the trip unit at least once per 92 days.
- (l) Not required to be performed when entering OPERATIONAL CONDITION 2 from OPERATIONAL CONDITION 1 until 12 hours after entering OPERATIONAL CONDITION 2.

TABLE 3.3.2-2

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
1. <u>PRIMARY CONTAINMENT ISOLATION</u>		
a. Reactor Vessel Water Level		
1) Low Low, Level 2	≥ -38.0 inches*	≥ -45.0 inches
2) Low Low Low, Level 1	≥ -129.0 inches*	≥ -136.0 inches
b. Drywell Pressure - High	≤ 1.68 psig	≤ 1.88 psig
c. Reactor Building Exhaust Radiation - High	≤ 1x10 <sup>-3</sup> μCi/cc	≤ 1.2x10 <sup>-3</sup> μCi/cc
d. Manual Initiation	NA	NA
2. <u>SECONDARY CONTAINMENT ISOLATION</u>		
a. Reactor Vessel Water Level - Low Low, Level 2	≥ -38.0 inches*	≥ -45.0 inches
b. Drywell Pressure - High	≤ 1.68 psig	≤ 1.88 psig
c. Refueling Floor Exhaust Radiation - High	≤ 2x10 <sup>-3</sup> μCi/cc	≤ 2.4x10 <sup>-3</sup> μCi/cc
d. Reactor Building Exhaust Radiation - High	≤ 1x10 <sup>-3</sup> μCi/cc	≤ 1.2x10 <sup>-3</sup> μCi/cc
e. Manual Initiation	NA	NA
3. <u>MAIN STEAM LINE ISOLATION</u>		
a. Reactor Vessel Water Level - Low Low Low, Level 1	≥ -129.0 inches*	≥ -136.0 inches
b. Main Steam Line Radiation - High, High###	≤ 3.0 X full power background	≤ 3.6 X full power background
c. Main Steam Line Pressure - Low	≥ 756.0 psig	≥ 736.0 psig
d. Main Steam Line Flow - High	≤ 162.8 psid	≤ 169.3 psid

## INSTRUMENTATION

### END-OF-CYCLE RECIRCULATION PUMP TRIP SYSTEM INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

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3.3.4.2 The end-of-cycle recirculation pump trip (EOC-RPT) system instrumentation channels shown in Table 3.3.4.2-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3.4.2-2 and with the END-OF-CYCLE RECIRCULATION PUMP TRIP SYSTEM RESPONSE TIME as shown in Table 3.3.4.2-3.

APPLICABILITY: OPERATIONAL CONDITION 1, when THERMAL POWER is greater than or equal to 24% of RATED THERMAL POWER.

#### ACTION:

- a. With an end-of-cycle recirculation pump trip system instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3.4.2-2, declare the channel inoperable until the channel is restored to OPERABLE status with the channel setpoint adjusted consistent with the Trip Setpoint value.
- b. With the number of OPERABLE channels one less than required by the Minimum OPERABLE Channels per Trip System requirement for one or both trip systems, place the inoperable channel(s) in the tripped condition within 12 hours.
- c. With the number of OPERABLE channels two or more less than required by the Minimum OPERABLE Channels per Trip System requirement for one trip system and:
  1. If the inoperable channels consist of one turbine control valve channel and one turbine stop valve channel, place both inoperable channels in the tripped condition within 12 hours.
  2. If the inoperable channels include two turbine control valve channels or two turbine stop valve channels, declare the trip system inoperable.
- d. With one trip system inoperable, restore the inoperable trip system to OPERABLE status within 72 hours or take the ACTION required by Specification 3.2.3.
- e. With both trip systems inoperable, restore at least one trip system to OPERABLE status within one hour or take the ACTION required by Specification 3.2.3.

TABLE 3.3.4.2-1

END-OF-CYCLE RECIRCULATION PUMP TRIP SYSTEM INSTRUMENTATION

<u>TRIP FUNCTION</u>	<u>MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM<sup>(a)</sup></u>
1. Turbine Stop Valve - Closure	2 <sup>(b)</sup>
2. Turbine Control Valve-Fast Closure	2 <sup>(b)</sup>

(a) A trip system may be placed in an inoperable status for up to 6 hours for required surveillance provided that the other trip system is OPERABLE.

(b) This function shall be automatically bypassed when turbine first stage pressure is equivalent to THERMAL POWER less than 24% of RATED THERMAL POWER.

TABLE 3.3.6-2  
CONTROL ROD BLOCK INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
1. <u>ROD BLOCK MONITOR</u>		
a. Upscale		
i. Flow Biased	$\leq 0.66 (w-\Delta w) + 65\%*$	$\leq 0.66 (w-\Delta w) + 68%*$
ii. High Flow Clamped	$\leq 116\%$	$\leq 119\%$
b. Inoperative	NA	NA
c. Downscale	$\geq 5\%$ of RATED THERMAL POWER	$\geq 3\%$ of RATED THERMAL POWER
2. <u>APRM</u>		
a. Flow Biased Neutron Flux - Upscale	$\leq 0.57(w-\Delta w) + 53%*$	$\leq 0.57(w-\Delta w) + 56%*$
b. Inoperative	NA	NA
c. Downscale	$\geq 4\%$ of RATED THERMAL POWER	$\geq 3\%$ of RATED THERMAL POWER
d. Neutron Flux - Upscale, Startup	$\leq 11\%$ of RATED THERMAL POWER	$\leq 13\%$ of RATED THERMAL POWER
3. <u>SOURCE RANGE MONITORS</u>		
a. Detector not full in	NA	NA
b. Upscale	$\leq 1.0 \times 10^5$ cps	$\leq 1.6 \times 10^5$ cps
c. Inoperative	NA	NA
d. Downscale	$\geq 3$ cps	$\geq 1.8$ cps
4. <u>INTERMEDIATE RANGE MONITORS</u>		
a. Detector not full in	NA	NA
b. Upscale	$\leq 108/125$ divisions of full scale	$\leq 110/125$ divisions of full scale
c. Inoperative	NA	NA
d. Downscale	$\geq 5/125$ divisions of full scale	$\geq 3/125$ divisions of full scale
5. <u>SCRAM DISCHARGE VOLUME</u>		
a. Water Level-High (Float Switch)	109'1" (North Volume) 108'11.5" (South Volume)	109'3" (North Volume) 109'1.5" (South Volume)
6. <u>REACTOR COOLANT SYSTEM RECIRCULATION FLOW</u>		
a. Upscale	$\leq 111\%$ of rated flow	$\leq 114\%$ of rated flow
b. Inoperative	NA	NA
c. Comparator	$\leq 10\%$ flow deviation	$\leq 11\%$ flow deviation
7. <u>REACTOR MODE SWITCH SHUTDOWN POSITION</u>	NA	NA

\* The rod block function is varied as a function of recirculation loop flow (w) and  $\Delta w$  which is defined as the difference in indicated drive flow (in percent of drive flow which produces rated core flow) between two loop and single loop operation at the same core flow.

### 3/4.3 INSTRUMENTATION

#### 3/4.3.11 OSCILLATION POWER RANGE MONITOR

##### LIMITING CONDITION FOR OPERATION

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3.3.11 Four channels of the OPRM instrumentation shall be OPERABLE\*. Each OPRM channel period based algorithm amplitude trip setpoint (Sp) shall be less than or equal to the Allowable Value as specified in the CORE OPERATING LIMITS REPORT.

APPLICABILITY: OPERATIONAL CONDITION 1, when THERMAL POWER is greater than or equal to 24% of RATED THERMAL POWER.

##### ACTIONS

- a. With one or more required channels inoperable:
  1. Place the inoperable channels in trip within 30 days, or
  2. Place associated RPS trip system in trip within 30 days, or
  3. Initiate an alternate method to detect and suppress thermal hydraulic instability oscillations within 30 days.
- b. With OPRM trip capability not maintained:
  1. Initiate alternate method to detect and suppress thermal hydraulic instability oscillations within 12 hours, and
  2. Restore OPRM trip capability within 120 days.
- c. Otherwise, reduce THERMAL POWER to less than 24% RTP within 4 hours.

##### SURVEILLANCE REQUIREMENTS

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- 4.3.11.1 Perform CHANNEL FUNCTIONAL TEST at least once per 184 days.
- 4.3.11.2 Calibrate the local power range monitor once per 1000 Effective Full Power Hours (EFPH) in accordance with Note f, Table 4.3.1.1-1 of TS 3/4.3.1.
- 4.3.11.3 Perform CHANNEL CALIBRATION once per 18 months. Neutron detectors are excluded.
- 4.3.11.4 Perform LOGIC SYSTEM FUNCTIONAL TEST once per 18 months.
- 4.3.11.5 Verify OPRM is enabled when THERMAL POWER is  $\geq 26.1\%$  RTP and recirculation drive flow  $\leq$  the value corresponding to 60% of rated core flow once per 18 months.
- 4.3.11.6 Verify the RPS RESPONSE TIME is within limits. Each test shall include at least one channel per trip system such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip system. Neutron detectors are excluded.

\* When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated ACTIONS may be delayed for up to 6 hours, provided the OPRM maintains trip capability.

### 3/4.4 REACTOR COOLANT SYSTEM

#### 3/4.4.1 RECIRCULATION SYSTEM

##### RECIRCULATION LOOPS

##### LIMITING CONDITION FOR OPERATION

---

3.4.1.1 Two reactor coolant system recirculation loops shall be in operation.

APPLICABILITY: OPERATIONAL CONDITIONS 1\* and 2\*.

##### ACTION:

- a. With one reactor coolant system recirculation loop not in operation:
  1. Within 4 hours:
    - a) Place the recirculation flow control system in the Local Manual mode, and
    - b) Reduce THERMAL POWER to  $\leq 60.86\%$  of RATED THERMAL POWER, and
    - c) Increase the MINIMUM CRITICAL POWER RATIO (MCPR) Safety Limit per Specification 2.1.2, and
    - d) Reduce the AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR) limit to a value specified in the CORE OPERATING LIMITS REPORT for single loop operation, and
    - e) Reduce the LINEAR HEAT GENERATION RATE (LHGR) limit to a value specified in the CORE OPERATING LIMITS REPORT for single loop operation, and
    - f) Limit the speed of the operating recirculation pump to less than or equal to 90% of rated pump speed, and
    - g) Perform surveillance requirement 4.4.1.1.2 if THERMAL POWER is  $\leq 38\%$  of RATED THERMAL POWER or the recirculation loop flow in the operating loop is  $\leq 50\%$  of rated loop flow.
  2. Within 4 hours, reduce the Average Power Range Monitor (APRM) Scram Trip Setpoints and Allowable Values to those applicable for single recirculation loop operation per Specification 2.2.1; otherwise, with the Trip Setpoints and Allowable Values associated with one trip system not reduced to those applicable for single recirculation loop operation, place the affected trip system in the tripped condition and within the following 6 hours, reduce the Trip Setpoints and Allowable Values of the affected channels to those applicable for single recirculation loop operation per Specification 2.2.1.
  3. Within 4 hours, reduce the APRM Control Rod Block Trip Setpoints and Allowable Values to those applicable for single recirculation loop operation per Specification 3.3.6; otherwise, with the Trip Setpoint and Allowable Values associated with one trip function not

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\*See Special Test Exception 3.10.4.

## REACTOR COOLANT SYSTEM

### SURVEILLANCE REQUIREMENTS

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4.4.1.1.1 With one reactor coolant system recirculation loop not in operation at least once per 12 hours verify that:

- a. Reactor THERMAL POWER is  $\leq 60.86\%$  of RATED THERMAL POWER, and
- b. The recirculation flow control system is in the Local Manual mode, and
- c. The speed of the operating recirculation pump is less than or equal to 90% of rated pump speed.

4.4.1.1.2 With one reactor coolant system recirculation loop not in operation, within no more than 15 minutes prior to either THERMAL POWER increase or recirculation loop flow increase, verify that the following differential temperature requirements are met if THERMAL POWER is  $\leq 38\%$  of RATED THERMAL POWER or the recirculation loop flow in the operating recirculation loop is  $\leq 50\%$  of rated loop flow:

- a.  $\leq 145^{\circ}\text{F}$  between reactor vessel steam space coolant and bottom head drain line coolant, and
- b.  $\leq 50^{\circ}\text{F}$  between the reactor coolant within the loop not in operation and the coolant in the reactor pressure vessel, and
- c.  $\leq 50^{\circ}\text{F}$  between the reactor coolant within the loop not in operation and the operating loop.

The differential temperature requirements of Specifications 4.4.1.1.2b and 4.4.1.1.2c do not apply when the loop not in operation is isolated from the reactor pressure vessel.

4.4.1.1.3 Each pump MG set scoop tube mechanical and electrical stop shall be demonstrated OPERABLE with overspeed setpoints less than or equal to 109% and 107%, respectively, of rated core flow, at least once per 18 months.

REACTOR COOLANT SYSTEM

JET PUMPS

LIMITING CONDITION FOR OPERATION

---

3.4.1.2 All jet pumps shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

With one or more jet pumps inoperable, be in at least HOT SHUTDOWN within 12 hours.

SURVEILLANCE REQUIREMENTS\*

---

4.4.1.2 All jet pumps shall be demonstrated OPERABLE as follows:

- a. Each of the above required jet pumps shall be demonstrated OPERABLE prior to THERMAL POWER exceeding 24% of RATED THERMAL POWER and at least once per 24 hours by determining recirculation loop flow, total core flow and diffuser-to-lower plenum differential pressure for each jet pump and verifying that no two of the following conditions occur when the recirculation pumps are operating in accordance with Specification 3.4.1.3.
  1. The indicated recirculation loop flow differs by more than 10% from the established pump speed-loop flow characteristics.
  2. The indicated total core flow differs by more than 10% from the established total core flow value derived from recirculation loop flow measurements.
  3. The indicated diffuser-to-lower plenum differential pressure of any individual jet pump differs from the established patterns by more than 20%.
- b. During single recirculation loop operation, each of the above required jet pumps in the operating loop shall be demonstrated OPERABLE at least once per 24 hours by verifying that no two of the following conditions occur:
  1. The indicated recirculation loop flow in the operating loop differs by more than 10% from the established\* pump speed-loop flow characteristics.
  2. The indicated total core flow differs by more than 10% from the established\* total core flow value derived from single recirculation loop flow measurements.
  3. The indicated diffuser-to-lower plenum differential pressure of any individual jet pump differs from established\* single recirculation loop pattern by more than 20%.
- c. The provisions of Specification 4.0.4 are not applicable provided that this surveillance is performed within 24 hours after exceeding 24% of RATED THERMAL POWER.

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\*During startup following any refueling outage, baseline data shall be recorded for the parameters listed to provide a basis for establishing the specified relationships. Comparisons of the actual data in accordance with the criteria listed shall commence upon conclusion of the baseline data analysis. Single loop baseline data shall be recorded the first time the unit enters single loop operation during an operating cycle.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Primary containment leakage rates shall be limited to:

- a. An overall integrated leakage rate (Type A test) in accordance with the Primary Containment Leakage Rate Testing Program.
- b. A combined leakage rate in accordance with the Primary Containment Leakage Rate Testing Program for all primary containment penetrations and all primary containment isolation valves that are subject to Type B and C tests, except for: main steam line isolation valves\*, valves which form the boundary for the long-term seal of the feedwater lines, other valves which are hydrostatically tested, and those valves where an exemption to Appendix J of 10 CFR 50 has been granted.
- c. \*Less than or equal to 150 scfh per main steam line and less than or equal to 250 scfh combined through all four main steam lines when tested at 5 psig (leakage rate corrected to 1 Pa, 50.6 psig).
- d. A combined leakage rate of less than or equal to 10 gpm for all containment isolation valves which form the boundary for the long-term seal of the feedwater lines, when tested at 1.10 Pa, 55.7 psig.
- e. A combined leakage rate of less than or equal to 10 gpm for all other penetrations and containment isolation valves in hydrostatically tested lines which penetrate the primary containment, when tested at 1.10 Pa, 55.7 psig  $\Delta p$ .

APPLICABILITY: When PRIMARY CONTAINMENT INTEGRITY is required per Specification 3.6.1.1.

ACTION:  
With:

- a. The measured overall integrated primary containment leakage rate (Type A test) not in accordance with the Primary Containment Leakage Rate Testing Program, or
- b. The measured combined leakage rate exceeding the leakage rate specified in the Primary Containment Leakage Rate Testing Program for all primary containment penetrations and all primary containment isolation valves that are subject to Type B and C tests, except for: main steam line isolation valves\*, valves which form the boundary for the long-term seal of the feedwater lines, valves which are hydrostatically tested, and those valves where an exemption to Appendix J of 10 CFR 50 has been granted, or
- c. The measured leakage rate exceeding 150 scfh per main steam line or exceeding 250 scfh combined through all four main steam lines, or

\*Exemption to Appendix "J" of 10 CFR 50.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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- d. DELETED.
- e. DELETED.
- f. Main steam line isolation valves shall be leak tested at least once per 18 months.
- g. Containment isolation valves which form the boundry for the long-term seal of the feedwater lines shall be hydrostatically tested at 1.10 Pa, 55.7 psig, at least once per 18 months.
- h. All containment isolation valves in hydrostatically tested lines which penetrate the primary containment shall be leak tested at least once per 18 months.
- i. DELETED.
- j. DELETED.

PLANT SYSTEMS

3/4.7.7 MAIN TURBINE BYPASS SYSTEM

LIMITING CONDITION FOR OPERATION

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3.7.7 The main turbine bypass system shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITION 1 when THERMAL POWER is greater than or equal to 24% of RATED THERMAL POWER.

ACTION: With the main turbine bypass system inoperable, restore the system to OPERABLE status within 2 hours or reduce THERMAL POWER to less than or equal to 24% of RATED THERMAL POWER within the next 4 hours.

SURVEILLANCE REQUIREMENTS

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4.7.7 The main turbine bypass system shall be demonstrated OPERABLE at least once per:

- a. 31 days by cycling each turbine bypass valve through at least one complete cycle of full travel, and
- b. 18 months by:
  1. Performing a system functional test which includes simulated automatic actuation and verifying that each automatic valve actuates to its correct position.
  2. Demonstrating TURBINE BYPASS SYSTEM RESPONSE TIME meets the following requirements when measured from the initial movement of the main turbine stop or control valve:
    - a) 80% of turbine bypass system capacity shall be established in less than or equal to 0.3 second.
    - b) Bypass valve opening shall start in less than or equal to 0.1 second.

## SPECIAL TEST EXCEPTIONS

### 3/4.10.2 ROD WORTH MINIMIZER

#### LIMITING CONDITION FOR OPERATION

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3.10.2 The sequence constraints imposed on control rod groups by the rod worth minimizer (RWM) per Specification 3.1.4.1 may be suspended for the following tests provided that control rod movement prescribed for this testing is verified by a second licensed operator or other technically qualified member of the unit technical staff present at the reactor console:

- a. Shutdown margin demonstrations, Specification 4.1.1.
- b. Control rod scram, Specification 4.1.3.2.
- c. Control rod friction measurements.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2 when THERMAL POWER is less than or equal to 8.6% of RATED THERMAL POWER.

#### ACTION:

With the requirements of the above specification not satisfied, verify that the RWM is OPERABLE per Specifications 3.1.4.1.

#### SURVEILLANCE REQUIREMENTS

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4.10.2 When the sequence constraints imposed by the RWM are bypassed, verify:

- a. That movement of the control rods from 75% ROD DENSITY to the RWM low power setpoint is limited to the approved control rod withdrawal sequence during scram and friction tests.
- b. That movement of control rods during shutdown margin demonstrations is limited to the prescribed sequence per Specification 3.10.3.
- c. Conformance with this specification and test procedures by a second licensed operator or other technically qualified member of the unit technical staff.

## ADMINISTRATIVE CONTROLS

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### 6.8.4.f Primary Containment Leakage Rate Testing Program

A program shall be established, implemented, and maintained to comply with the leakage rate testing of the containment as required by 10CFR50.54(o) and 10CFR50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program", dated September 1995, as modified by the following exception:

- a. NEI 94-01-1995, Section 9.2.3: The first Type A test performed after April 12, 1994 shall be performed no later than April 12, 2009.

The peak calculated containment internal pressure for the design basis loss of coolant accident, Pa, is 50.6 psig.

The maximum allowable primary containment leakage rate, La, at Pa, shall be 0.5% of primary containment air weight per day.

Leakage Rate Acceptance Criteria are:

- a. Primary containment leakage rate acceptance criterion is less than or equal to 1.0 La. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are less than or equal to 0.6 La for Type B and Type C tests and less than or equal to 0.75 La for Type A tests;
- b. Air lock testing acceptance criteria are:
  - 1) Overall air lock leakage rate is less than or equal to 0.05 La when tested at greater than or equal to Pa,
  - 2) Door seal leakage rate less than or equal to 5 scf per hour when the gap between the door seals is pressurized to greater than or equal to 10.0 psig.

The provisions of Specification 4.0.2 do not apply to the test frequencies specified in the Primary Containment Leakage Rate Testing Program.

The provisions of Specification 4.0.3 are applicable to the Primary Containment Leakage Rate Testing Program.

### 6.8.4.g. Radioactive Effluent Controls Program

A program shall be provided conforming with 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to MEMBER(S) OF THE PUBLIC from radioactive effluents as low as reasonably achievable. The program (1) shall be contained in the ODCM, (2) shall be implemented by operating procedures, and (3) shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements: