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

RENEWED FACILITY OPERATING LICENSE

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 1

CALVERT CLIFFS NUCLEAR POWER PLANT, LLC

CONSTELLATION ENERGY GENERATION, LLC

DOCKET NO. 50-317

Renewed License No. DPR-53

1. The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. DPR-53 issued on July 31, 1974, has now found that:

   A. The application to Renewed License No. DPR-53 filed by Baltimore Gas and Electric Company* 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, and all required notifications to other agencies or bodies have been duly made;

   B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Calvert Cliffs Nuclear Power Plant, Unit 1 (facility), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;

   C. There is reasonable assurance: (i) that the activities authorized by this renewed license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the applicable regulations set forth in 10 CFR Chapter I, except as exempted from compliance;

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* By Order dated October 9, 2009, as superseded by Order dated October 30, 2009, the transfer of this license to Calvert Cliffs Nuclear Power Plant, LLC, was approved. By Order dated March 24, 2014, the transfer of the operating authority under this license to Exelon Generation Company, LLC was approved. By Order dated November 16, 2021, a transaction was approved that resulted in Exelon Generation Company, LLC being renamed Constellation Energy Generation, LLC. Unless otherwise noted, references to "the licensee" are to Constellation Energy Generation, LLC as the operating licensee.

D. The Calvert Cliffs Nuclear Power Plant, LLC and Constellation Energy Generation, LLC** have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements";

E. The renewal of this license will not be inimical to the common defense and security or the health and safety of the public; and

F. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the renewal of this license is in accordance with 10 CFR Part 51 and all applicable requirements have been satisfied.

2. On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-53, issued on July 31, 1974, is superseded by Renewed Facility Operating License No. DPR-53, which is hereby issued to Calvert Cliffs Nuclear Power Plant, LLC and Constellation Energy Generation, LLC to read as follows:

A. This license applies to the Calvert Cliffs Nuclear Power Plant, Unit 1, a pressurized water reactor and associated equipment (the facility), owned by Calvert Cliffs Nuclear Power Plant, LLC. The facility is located in Calvert County, Maryland, and is described in the Final Safety Analysis Report (FSAR), as supplemented and amended, and the Environmental Report, as supplemented and amended.

B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

(1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," (a) Calvert Cliffs Nuclear Power Plant, LLC to possess, and (b) Constellation Energy Generation, LLC to possess, use, and operate the facility at the designated location in Calvert County, Maryland, in accordance with the procedures and limitations set forth in this license;

(2) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time, special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, and described in the Final Safety Analysis Report, as supplemented and amended;

(3) Constellation Energy Generation, 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;

** Constellation Energy Generation, LLC is authorized to act for Calvert Cliffs Nuclear Power Plant, LLC and has exclusive responsibility and control over the physical possession, operation, and maintenance of the facility.

(4) Constellation Energy Generation, 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, and special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

(5) Constellation Energy Generation, LLC, pursuant to the Act and 10 CFR Parts 30 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 is deemed to contain and is subject to the conditions set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act, and the rules, regulations, and orders of the Commission, now or hereafter applicable; and is subject to the additional conditions specified and incorporated below:

(1) Maximum Power Level

Constellation Energy Generation, LLC is authorized to operate the facility at steady-state reactor core power levels not in excess of 2737 megawatts-thermal in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 349, are hereby incorporated into this license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Technical Specifications.

(a) For Surveillance Requirements (SRs) that are new, in Amendment 227 to Facility Operating License No. DPR-53, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 227. For SRs that existed prior to Amendment 227, including SRs with modified acceptance criteria and SRs whose frequency of performance is being extended, the first performance is due at the end of the first surveillance interval that begins on the date the Surveillance was last performed prior to implementation of Amendment 227.

(3) Additional Conditions

The Additional Conditions contained in Appendix C as revised through Amendment No. 345 are hereby incorporated into this license. Constellation Energy Generation, LLC shall operate the facility in accordance with the Additional Conditions.

(4) Secondary Water Chemistry Monitoring Program

Constellation Energy Generation, LLC 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 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.

(5) Mitigation Strategy

Constellation Energy Generation, LLC shall develop and maintain strategies for addressing large fires and explosions that include the following key areas:

(a) Fire fighting response strategy with the following elements:

1. Pre-defined coordinated fire response strategy and guidance
2. Assessment of mutual aid fire fighting assets
3. Designated staging areas for equipment and materials
4. Command and control
5. Training of response personnel

(b) Operations to mitigate fuel damage considering the following:

1. Protection and use of personnel assets
2. Communications
3. Minimizing fire spread
4. Procedures for implementing integrated fire response strategy
5. Identification of readily available pre-staged equipment
6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

(c) Actions to minimize release to include consideration of:

1. Water spray scrubbing
2. Dose to onsite responders

(6) Risk-Informed Categorization and Treatment of Structures, Systems, and Components

Constellation Energy Generation, LLC is approved to implement 10 CFR 50.69 using the processes for categorization of Risk-Informed Safety Class (RISC)-1, RISC-2, RISC-3, and RISC-4 Structures, Systems, and Components (SSCs) using: Probabilistic Risk Assessment (PRA) models to evaluate risk associated with internal events, including internal flooding, and internal fire; the shutdown safety assessment process to assess shutdown risk; the Arkansas Nuclear One, Unit 2 (ANO-2) passive categorization method to assess passive component risk for Class 2 and Class 3 and non-Class SSCs and their associated supports: the results of the non-PRA evaluations that are based on the IPEEE Screening Assessment for External Hazards updated using the external hazard screening significance process identified in ASME/ANS PRA Standard RA-Sa-2009 for other external hazards except seismic: and the alternative seismic approach as described in Exelon's original submittal letter dated November 28, 2018, and all its subsequent associated supplements as specified in License Amendment No. 332 dated February 28, 2020.

Prior NRC approval, under 10 CFR 50.90, is required for a change to the categorization process specified above (e.g., change from a seismic margins approach to a seismic probabilistic risk assessment approach).

(7) Constellation Energy Generation, LLC shall provide to the Director of the Office of Nuclear Reactor Regulation or the Director of the Office of Nuclear Material Safety and Safeguards, as applicable, a copy of any application, at the time it is filed, to transfer (excluding grants of security interests or liens) from Constellation Energy Generation, LLC to its direct or indirect parent, or to any other affiliated company, facilities for the production, transmission, or distribution of electric energy having a depreciated book value exceeding ten percent (10%) of Constellation Energy Generation, LLC's consolidated net utility plant, as recorded on Constellation Energy Generation, LLC's books of account.

D. Constellation Energy Generation, LLC 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 combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Calvert Cliffs Nuclear Power Plant Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 1" submitted May 19, 2006.

Constellation Energy Generation, LLC shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The licensee's CSP was approved by License Amendment No. 298 and modified by License Amendment No. 312.

E. Constellation Energy Generation, LLC shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the license amendment request dated September 24, 2013; as supplemented by letters dated February 9, 2015, March 11, 2015, April 13, 2015, July 6, 2015, August 13, 2015, February 24, 2016, and April 22, 2016, and as approved in the NRC safety evaluation dated August 30, 2016. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), and the criteria listed below are satisfied.

(1) <u>Risk-Informed Changes That May Be Made Without Prior NRC Approval</u>

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed fire PRA model, methods that have been approved by NRC through a plant-specific license amendment, NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact.

(a) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

(b) Prior NRC review and approval is not required for individual changes that result in a risk increase less than 1×10^{-7}/yr for CDF and less than 1×10^{-8}/yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

(2) Other Changes that May Be Made Without Prior NRC Approval

(a) Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program

Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental fire protection program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent. The licensee may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.

The licensee may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is "adequate for the hazard." Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:

- "Fire Alarm and Detection Systems" (Section 3.8);
- "Automatic and Manual Water-Based Fire Suppression Systems" (Section 3.9);
- "Gaseous Fire Suppression Systems" (Section 3.10); and,
- "Passive Fire Protection Features" (Section 3.11)

This license condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.

(b) Fire Protection Program Changes that Have No More than Minimal Risk Impact

Prior NRC review and approval are not required for changes to the licensee's fire protection program that have been demonstrated to have no more than a minimal risk impact. The licensee may use its screening process as approved in the NRC safety evaluation dated August 30, 2016, to determine that certain fire protection program changes meet the minimal criterion. The licensee shall ensure that fire protection defense-in-depth and safety margins are maintained when changes are made to the fire protection program.

F. At the time of the next scheduled update to the FSAR required pursuant to 10 CFR 50.71(e)(4) following the issuance of this renewed license, the licensee shall update the FSAR to include the FSAR supplement submitted pursuant to 10 CFR 54.21(d), as amended and supplemented by the program descriptions in Appendix E to the Safety Evaluation Report, NUREG-1705. Until that FSAR update is complete, the licensee may make changes to the programs described in Appendix E without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

G. Any future actions listed in Appendix E to the Safety Evaluation Report, NUREG-1705, shall be included in the FSAR. The licensee shall complete these actions by July 31, 2014, except for the volumetric inspections of the control element drive mechanisms, which must be completed no later than 2029 for Unit 1 (Appendix E, Item 65).

H. This renewed license is effective as of the date of issuance and shall expire at midnight on July 31, 2034.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Samuel J. Collins, Director
Office of Nuclear Reactor Regulation

Attachments:

Appendix A – Technical Specifications
Appendix B – Environmental Protection Plan (non-radiological) Technical Specifications
Appendix C – Additional Conditions

Date of Issuance: March 23, 2000

1.0 USE AND APPLICATION

1.1 Definitions

------------------------------------NOTE------------------------------------
The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases.

Term	Definition
ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
AXIAL SHAPE INDEX (ASI)	ASI shall be the power generated in the lower half of the core less the power generated in the upper half of the core, divided by the sum of the power generated in the lower and upper halves of the core. $ASI = \frac{\text{lower} - \text{upper}}{\text{lower} + \text{upper}}$
AZIMUTHAL POWER TILT (T_q)	AZIMUTHAL POWER TILT shall be the power asymmetry between azimuthally symmetric core locations.
CHANNEL CALIBRATION	A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY, and shall include the CHANNEL FUNCTIONAL TEST. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step.
CHANNEL CHECK	A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel

1.1 Definitions

indication and status to other indications or status derived from independent instrument channels measuring the same parameter.

CHANNEL FUNCTIONAL TEST

A CHANNEL FUNCTIONAL TEST shall be:

Analog Channels - the injection of a simulated signal into the channel as close to the primary sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY.

Bistable Channels - the injection of a simulated signal into the channel sensor to verify OPERABILITY of all devices in the channel required for channel OPERABILITY.

The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping or total channel steps, and each step must be performed within the Frequency in the Surveillance Frequency Control Program for the devices included in the step.

CORE OPERATING LIMITS REPORT (COLR)

The COLR is the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific parameter limits shall be determined for each reload cycle in accordance with Specification 5.6.5. Plant operation within these limits is addressed in individual Specifications.

DOSE EQUIVALENT I-131

DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries/gram) that alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The TEDE (Total Effective Dose Equivalent) inhalation dose conversion factors used for this calculation shall be those listed in Table 2.1 in the column headed "effective" of Federal Guidance Report 11, ORNL, 1988, "Limiting Values of Radionuclide Intake and

1.1 Definitions

	Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion."
$\bar{E}$-AVERAGE DISINTEGRATION ENERGY	$\bar{E}$ shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half lives > 15 minutes, making up at least 95% of the total non-iodine activity in the coolant.
ENGINEERED SAFETY FEATURE (ESF) RESPONSE TIME	The ESF RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ESF actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.
INSERVICE TESTING PROGRAM	The INSERVICE TESTING PROGRAM is the licensee program that fulfills the requirements of 10 CFR 50.55a(f).
L_a	The maximum allowable containment leakage rate, L_a, shall be 0.16% of containment air weight per day at the calculated peak containment pressure (P_a).

1.1 Definitions

LEAKAGE

LEAKAGE shall be:

a. Identified LEAKAGE

1. LEAKAGE, such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal leakoff), that is captured and conducted to collection systems or a sump or collecting tank;

2. LEAKAGE into the containment atmosphere from sources that are both specifically located and known to not interfere with the operation of leakage detection systems; or

3. Reactor Coolant System (RCS) LEAKAGE through a steam generator to the Secondary System (primary to secondary LEAKAGE),

b. Unidentified LEAKAGE

All LEAKAGE (except RCP seal leakoff) that is not identified LEAKAGE; and

c. Pressure Boundary LEAKAGE

LEAKAGE (except primary to secondary LEAKAGE) through a fault in an RCS component body, pipe wall, or vessel wall. LEAKAGE past seals, packing, and gaskets is not pressure boundary LEAKAGE.

MODE

A MODE shall correspond to any one inclusive combination of core reactivity condition, power level, average reactor coolant temperature, and reactor vessel head closure bolts specified in Table 1.1-1 with fuel in the reactor vessel.

1.1 Definitions

OPERABLE-OPERABILITY	A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
PHYSICS TESTS	PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation. These tests are: a. Described in Chapter 13, Initial Tests and Operation of the Updated Final Safety Analysis Report; b. Authorized under the provisions of 10 CFR 50.59; or c. Otherwise approved by the Nuclear Regulatory Commission.
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 2737 MWt.
REACTOR PROTECTIVE SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until electrical power to the CEAs drive mechanism is interrupted. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for

1.1 Definitions

	verification have been previously reviewed and approved by the NRC, or the components have been evaluated in accordance with an NRC approved methodology.
SHUTDOWN MARGIN (SDM)	SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming all full length control element assemblies (CEAs) (shutdown and regulating) are fully inserted except for the single CEA of highest reactivity worth, which is assumed to be fully withdrawn. However, with all CEAs verified fully inserted by two independent means, it is not necessary to account for a stuck CEA in the SDM calculation. With any CEAs not capable of being fully inserted, the reactivity worth of these CEAs must be accounted for in the determination of SDM.
THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

Table 1.1-1 (page 1 of 1)
MODES

MODE	TITLE	REACTIVITY CONDITION (k_{eff})	% RATED THERMAL POWER[a]	AVERAGE REACTOR COOLANT TEMPERATURE (°F)
1	Power Operation	≥ 0.99	> 5	NA
2	Startup	≥ 0.99	≤ 5	NA
3	Hot Standby	< 0.99	NA	≥ 300
4	Hot Shutdown[b]	< 0.99	NA	$300 > T_{avg} > 200$
5	Cold Shutdown[b]	< 0.99	NA	≤ 200
6	Refueling[c]	NA	NA	NA

(a) Excluding decay heat

(b) Reactor vessel head bolted

(c) Reactor vessel head unbolted

1.0 USE AND APPLICATION

1.2 Logical Connectors

PURPOSE

The purpose of this section is to explain the meaning of logical connectors.

Logical connectors are used in Technical Specifications (TS) to discriminate between, and yet connect, discrete Conditions, Required Actions, Completion Times, Surveillances, and Frequencies. The only logical connectors that appear in TS are AND and OR. The physical arrangement of these connectors constitutes logical conventions with specific meanings.

BACKGROUND

Several levels of logic may be used to state Required Actions. These levels are identified by the placement (or nesting) of the logical connectors and by the number assigned to each Required Action. The first level of logic is identified by the first digit of the number assigned to a Required Action and the placement of the logical connector in the first level of nesting (i.e., left justified with the number of the Required Action). The successive levels of logic are identified by additional digits of the Required Action number and by successive indentions of the logical connectors.

When logical connectors are used to state a Condition, Completion Time, Surveillance, or Frequency, only the first level of logic is used, and the logical connector is left justified with the statement of the Condition, Completion Time, Surveillance, or Frequency.

EXAMPLES

The following examples illustrate the use of logical connectors.

1.2 Logical Connectors

EXAMPLE 1.2-1

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. LCO not met.	A.1 Verify . . . AND A.2 Restore . . .	

In this example the logical connector AND is used to indicate that when in Condition A, both Required Actions A.1 and A.2 must be completed.

1.2 Logical Connectors

EXAMPLE 1.2-2

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. LCO not met.	A.1 Trip . . . OR A.2.1 Verify . . . AND A.2.2.1 Reduce . . . OR A.2.2.2 Perform . . . OR A.3 Align . . .	

This example represents a more complicated use of logical connectors. Required Actions A.1, A.2, and A.3 are alternative choices, only one of which must be performed as indicated by the use of the logical connector OR and the left justified placement. Any one of these three Actions may be chosen. If A.2 is chosen, then both A.2.1 and A.2.2 must be performed as indicated by the logical connector AND. Required Action A.2.2 is met by performing A.2.2.1 or A.2.2.2. The indented position of the logical connector OR indicates that A.2.2.1 and A.2.2.2 are alternative choices, only one of which must be performed.

1.0 USE AND APPLICATION

1.3 Completion Times

PURPOSE	The purpose of this section is to establish the Completion Time convention and to provide guidance for its use.
BACKGROUND	Limiting Conditions for Operation (LCOs) specify minimum requirements for ensuring safe operation of the unit. The ACTIONS associated with an LCO state Conditions that typically describe the ways in which the requirements of the LCO can fail to be met. Specified with each stated Condition are Required Action(s) and Completion Time(s).
DESCRIPTION	The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the discovery of a situation (e.g., inoperable equipment or variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO. Unless otherwise specified, the Completion Time begins when a senior licensed operator on the operating shift crew with responsibility for plant operations makes the determination that an LCO is not met and an ACTIONS Condition is entered. The "otherwise specified" exceptions are varied, such as a Required Action Note or Surveillance Requirement Note that provides an alternative time to perform specific tasks, such as testing, without starting the Completion Time. While utilizing the Note, should a Condition be applicable for any reason not addressed by the Note, the Completion Time begins. Should the time allowance in the Note be exceeded, the Completion Time begins at that point. The exceptions may also be incorporated into the Completion Time. For example, LCO 3.8.1, "AC Sources - Operating," Required Action B.3, requires declaring required feature(s) supported by an inoperable diesel generator, inoperable when the redundant required feature(s) are inoperable. The Completion Time states, "4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)." In

1.3 Completion Times

this case the Completion Time does not begin until the conditions in the Completion Time are satisfied. Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability.

If situations are discovered that require entry into more than one Condition at a time within a single LCO (multiple Conditions), the Required Actions for each Condition must be performed within the associated Completion Time. When in multiple Conditions, separate Completion Times are tracked for each Condition starting from the discovery of the situation that required entry into the Condition, unless otherwise specified.

Once a Condition has been entered, subsequent trains, subsystems, components, or variables expressed in the Condition, discovered to be inoperable or not within limits, will <u>not</u> result in separate entry into the Condition, unless specifically stated. The Required Actions of the Condition continue to apply to each additional failure, with Completion Times based on initial entry into the Condition, unless otherwise specified.

However, when a <u>subsequent</u> train, subsystem, component, or variable expressed in the Condition is discovered to be inoperable or not within limits, the Completion Time(s) may be extended. To apply this Completion Time extension, two criteria must first be met. The subsequent inoperability:

a. Must exist concurrent with the <u>first</u> inoperability; and

b. Must remain inoperable or not within limits after the first inoperability is resolved.

The total Completion Time allowed for completing a Required Action to address the subsequent inoperability shall be limited to the more restrictive of either:

1.3 Completion Times

a. The stated Completion Time, as measured from the initial entry into the Condition, plus an additional 24 hours; or

b. The stated Completion Time as measured from discovery of the subsequent inoperability.

The above Completion Time extensions do not apply to those Specifications that have exceptions that allow completely separate re-entry into the Condition (for each train, subsystem, component, or variable expressed in the Condition), and separate tracking of Completion Times based on this re-entry. These exceptions are stated in individual Specifications.

The above Completion Time extension does not apply to a Completion Time with a modified "time zero." This modified "time zero" may be expressed as a repetitive time (i.e., "once per 8 hours," where the Completion Time is referenced from a previous completion of the Required Action versus the time of Condition entry) or as a time modified by the phrase "from discovery . . ."

The following examples illustrate the use of Completion Times with different types of Conditions and changing Conditions.

1.3 Completion Times

EXAMPLE 1.3-1

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

Condition B has two Required Actions. Each Required Action has its own separate Completion Time. Each Completion Time is referenced to the time that Condition B is entered.

The Required Actions of Condition B are to be in MODE 3 within 6 hours AND in MODE 5 within 36 hours. A total of 6 hours is allowed for reaching MODE 3 and a total of 36 hours (not 42 hours) is allowed for reaching MODE 5 from the time that Condition B was entered. If MODE 3 is reached within 3 hours, the time allowed for reaching MODE 5 is the next 33 hours because the total time allowed for reaching MODE 5 is 36 hours.

If Condition B is entered while in MODE 3, the time allowed for reaching MODE 5 is the next 36 hours.

1.3 Completion Times

EXAMPLE 1.3-2

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One pump inoperable.	A.1 Restore pump to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

When a pump is declared inoperable, Condition A is entered. If the pump is not restored to OPERABLE status within 7 days, Condition B is also entered and the Completion Time clocks for Required Actions B.1 and B.2 start. If the inoperable pump is restored to OPERABLE status after Condition B is entered, Condition A and B are exited, and therefore, the Required Actions of Condition B may be terminated.

When a second pump is declared inoperable while the first pump is still inoperable, Condition A is not re-entered for the second pump. LCO 3.0.3 is entered, since the ACTIONS do not include a Condition for more than one inoperable pump. The Completion Time clock for Condition A does not stop after LCO 3.0.3 is entered, but continues to be tracked from the time Condition A was initially entered.

While in LCO 3.0.3, if one of the inoperable pumps is restored to OPERABLE status and the Completion Time for Condition A has not expired, LCO 3.0.3 may be exited and operation continued in accordance with Condition A.

1.3 Completion Times

While in LCO 3.0.3, if one of the inoperable pumps is restored to OPERABLE status and the Completion Time for Condition A has expired, LCO 3.0.3 may be exited and operation continued in accordance with Condition B. The Completion Time for Condition B is tracked from the time the Condition A Completion Time expired.

On restoring one of the pumps to OPERABLE status, the Condition A Completion Time is not reset, but continues from the time the first pump was declared inoperable. This Completion Time may be extended if the pump restored to OPERABLE status was the first inoperable pump. A 24 hour extension to the stated 7 days is allowed, provided this does not result in the second pump being inoperable for > 7 days.

1.3 Completion Times

EXAMPLE 1.3-3

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One Function X train inoperable.	A.1 Restore Function X train to OPERABLE status.	7 days
B. One Function Y train inoperable.	B.1 Restore Function Y train to OPERABLE status.	72 hours
C. One Function X train inoperable.	C.1 Restore Function X train to OPERABLE status.	72 hours
AND	OR	
One Function Y train inoperable.	C.2 Restore Function Y train to OPERABLE status.	72 hours

When one Function X train and one Function Y train are inoperable, Condition A and Condition B are concurrently applicable. The Completion Times for Condition A and Condition B are tracked separately for each train starting from the time each train was declared inoperable and the Condition was entered. A separate Completion Time is established for Condition C and tracked from the time the second train was declared inoperable (i.e., the time the situation described in Condition C was discovered).

1.3 Completion Times

If Required Action C.2 is completed within the specified Completion Time, Conditions B and C are exited. If the Completion Time for Required Action A.1 has not expired, operation may continue in accordance with Condition A. The remaining Completion Time in Condition A is measured from the time the affected train was declared inoperable (i.e., initial entry into Condition A).

It is possible to alternate between Conditions A, B, and C in such a manner that operation could continue indefinitely without ever restoring systems to meet the LCO. However, doing so would be inconsistent with the basis of the Completion Times. Therefore, there shall be administrative controls to limit the maximum time allowed for any combination of Conditions that result in a single contiguous occurrence of failing to meet the LCO. These administrative controls shall ensure that the Completion Times for those conditions are not inappropriately extended.

1.3 Completion Times

EXAMPLE 1.3-4

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more valves inoperable.	A.1 Restore valve(s) to OPERABLE status.	4 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	6 hours 12 hours

A single Completion Time is used for any number of valves inoperable at the same time. The Completion Time associated with Condition A is based on the initial entry into Condition A and is not tracked on a per valve basis. Declaring subsequent valves inoperable, while Condition A is still in effect, does not trigger the tracking of separate Completion Times.

Once one of the valves has been restored to OPERABLE status, the Condition A Completion Time is not reset, but continues from the time the first valve was declared inoperable. The Completion Time may be extended if the valve restored to OPERABLE status was the first inoperable valve. The Condition A Completion Time may be extended for up to 4 hours provided this does not result in any subsequent valve being inoperable for > 4 hours.

If the Completion Time of 4 hours (including the extension) expires while one or more valves are still inoperable, Condition B is entered.

1.3 Completion Times

EXAMPLE 1.3-5

ACTIONS

-----------------------------NOTE-----------------------------
Separate Condition entry is allowed for each inoperable valve.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more valves inoperable.	A.1 Restore valve to OPERABLE status.	4 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	6 hours 12 hours

The Note above the ACTIONS Table is a method of modifying how the Completion Time is tracked. If this method of modifying how the Completion Time is tracked was applicable only to a specific Condition, the Note would appear in that Condition rather than at the top of the ACTIONS Table.

The Note allows Condition A to be entered separately for each inoperable valve and Completion Times tracked on a per valve basis. When a valve is declared inoperable, Condition A is entered and its Completion Time starts. If subsequent valves are declared inoperable, Condition A is entered for each valve and separate Completion Times start and are tracked for each valve.

If the Completion Time associated with a valve in Condition A expires, Condition B is entered for that valve.

1.3 Completion Times

If the Completion Times associated with subsequent valves in Condition A expire, Condition B is entered separately for each valve and separate Completion Times start and are tracked for each valve. If a valve that caused entry into Condition B is restored to OPERABLE status, Condition B is exited for that valve.

Since the Note in this example allows multiple Condition entry and tracking of separate Completion Times, Completion Time extensions do not apply.

1.3 Completion Times

EXAMPLE 1.3-6

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One channel inoperable.	A.1 Perform SR 3.x.x.x. OR A.2 Reduce THERMAL POWER to ≤ 50% RTP.	Once per 8 hours 8 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours

Entry into Condition A offers a choice between Required Action A.1 or A.2. Required Action A.1 have a "once per" Completion Time, which qualifies for the 25% extension, per SR 3.0.2, to each performance after the initial performance. The initial 8 hour interval of Required Action A.1 begins when Condition A is entered and the initial performance of Required Action A.1 must be complete within the first 8 hour interval. If Required Action A.1 is followed and the Required Action is not met within the Completion Time (plus the extension allowed by SR 3.0.2), Condition B is entered. If Required Action A.2 is followed and the Completion Time of 8 hours is not met, Condition B is entered.

If after entry into Condition B, Required Action A.1 or A.2 is met, Condition B is exited and operation may then continue in Condition A.

1.3 Completion Times

EXAMPLE 1.3-7

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One subsystem inoperable.	A.1 Verify affected subsystem isolated.	1 hour AND Once per 8 hours thereafter
	AND	
	A.2 Restore subsystem to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	AND	
	B.2 Be in MODE 5.	36 hours

Required Action A.1 has two Completion Times. The 1 hour Completion Time begins at the time the Condition is entered and each "Once per 8 hours thereafter" interval begins upon performance of Required Action A.1.

If after Condition A is entered, Required Action A.1 is not met within either the initial 1 hour or any subsequent 8 hour interval from the previous performance (plus the extension allowed by SR 3.0.2), Condition B is entered.

1.3 Completion Times

The Completion Time clock for Condition A does not stop after Condition B is entered, but continues from the time Condition A was initially entered. If Required Action A.1 is met after Condition B is entered, Condition B is exited and operation may continue in accordance with Condition A, provided the Completion Time for Required Action A.2 has not expired.

EXAMPLE 1.3-8

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One subsystem inoperable.	A.1 Restore subsystem to OPERABLE status.	7 days OR In accordance with the Risk Informed Completion Time Program
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

When a subsystem is declared inoperable, Condition A is entered. The 7 day Completion Time may be applied as discussed in Example 1.3-2. However, the licensee may elect to apply the Risk Informed Completion Time Program which permits calculation of a Risk Informed Completion Time (RICT) that may be used to complete the required Action beyond the 7 day Completion Time. The RICT cannot exceed

1.3 Completion Times

30 days. After the 7 day Completion Time has expired, the subsystem must be restored to OPERABLE status within the RICT or Condition B must also be entered.

The Risk Informed Completion Time Program requires recalculation of the RICT to reflect changing plant conditions. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.

If the 7 day Completion Time clock of Condition A has expired and subsequent changes in plant condition result in exiting the applicability of the Risk Informed Completion Time Program without restoring the inoperable subsystem to OPERABLE status, Condition B is also entered and the Completion Time clocks for Required Actions B.1 and B.2 start.

If the RICT expires or is recalculated to be less than the elapsed time since the Condition was entered and the inoperable subsystem has not been restored to OPERABLE status, Condition B is also entered and the Completion Time clocks for Required Actions B.1 and B.2 start. If the inoperable subsystems are restored to OPERABLE status after Condition B is entered, Conditions A and B are exited, and therefore, the Required Actions of Condition B may be terminated.

IMMEDIATE COMPLETION TIME

When "Immediately" is used as a Completion Time, the Required Action should be pursued without delay and in a controlled manner.

1.0 USE AND APPLICATION

1.4 Frequency

PURPOSE

The purpose of this section is to define the proper use and application of Frequency requirements.

DESCRIPTION

Each Surveillance Requirement (SR) has a specified Frequency in which the Surveillance must be met in order to meet the associated LCO. An understanding of the correct application of the specified Frequency is necessary for compliance with the SR.

The "specified Frequency" is referred to throughout this section and each of the Specifications of Section 3.0, Surveillance Requirement (SR) Applicability. The "specified Frequency" consists of the requirements of the Frequency column of each SR, as well as certain Notes in the Surveillance column that modify performance requirements.

Situations where a Surveillance could be required (i.e., its Frequency could expire), but where it is not possible or not desired that it be performed until sometime after the associated LCO is within its Applicability, represent potential SR 3.0.4 conflicts. To avoid these conflicts, the SR (i.e., the Surveillance or the Frequency) is stated such that it is only "required" when it can be and should be performed. With an SR satisfied, SR 3.0.4 imposes no restriction.

EXAMPLES

The following examples illustrate the various ways that Frequencies are specified. In these examples, the Applicability of the LCO (LCO not shown) is MODES 1, 2, and 3.

1.4 Frequency

EXAMPLE 1.4-1

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
Perform CHANNEL CHECK.	12 hours

Example 1.4-1 contains the type of SR most often encountered in the Technical Specifications (TS). The Frequency specifies an interval (12 hours) during which the associated Surveillance must be performed at least one time. Performance of the Surveillance initiates the subsequent interval. Although the Frequency is stated as 12 hours, an extension of the time interval to 1.25 times the stated Frequency is allowed by SR 3.0.2 for operational flexibility. The measurement of this interval continues at all times, even when the SR is not required to be met per SR 3.0.1 (such as when the equipment is inoperable, a variable is outside specified limits, or the unit is outside the Applicability of the LCO). If the interval specified by SR 3.0.2 is exceeded while the unit is in a MODE or other specified condition in the Applicability of the LCO, and the performance of the Surveillance is not otherwise modified (refer to Example 1.4-3), then SR 3.0.3 becomes applicable.

If the interval as specified by SR 3.0.2 is exceeded while the unit is not in a MODE or other specified condition in the Applicability of the LCO for which performance of the SR is required, the Surveillance must be performed within the Frequency requirements of SR 3.0.2 prior to entry into the MODE or other specified condition except as provided in SR 3.0.4.

1.4 Frequency

EXAMPLE 1.4-2

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
Verify flow is within limits.	Once within 12 hours after ≥ 25% RTP AND 24 hours thereafter

Example 1.4-2 has two Frequencies. The first is a one time performance Frequency, and the second is of the type shown in Example 1.4-1. The logical connector "AND" indicates that both Frequency requirements must be met. Each time reactor power is increased from a power level < 25% RTP to ≥ 25% RTP, the Surveillance must be performed within 12 hours.

The use of "once" indicates a single performance will satisfy the specified Frequency (assuming no other Frequencies are connected by "AND"). This type of Frequency does not qualify for the extension allowed by SR 3.0.2. "Thereafter" indicates future performances must be established per SR 3.0.2, but only after a specified condition is first met (i.e., the "once" performance in this example). If reactor power decreases to < 25% RTP, the measurement of both intervals stops. New intervals start upon reactor power reaching 25% RTP.

1.4 Frequency

EXAMPLE 1.4-3

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
------------------ NOTE ------------------ Not required to be performed until 12 hours after ≥ 25% RTP. -- Perform channel adjustment.	7 days

The interval continues, whether or not the unit operation is < 25% RTP between performances.

As the Note modifies the required performance of the Surveillance, it is construed to be part of the "specified Frequency." Should the 7 day interval be exceeded while operation is < 25% RTP, this Note allows 12 hours after power reaches ≥ 25% RTP to perform the Surveillance. The Surveillance is still considered to be performed within the "specified Frequency." Therefore, if the Surveillance were not performed within the 7 day (plus the extension allowed by SR 3.0.2) interval, but operation was < 25% RTP, it would not constitute a failure of the SR or failure to meet the LCO. Also, no violation of SR 3.0.4 occurs when changing MODES, even with the 7 day Frequency not met, provided operation does not exceed 12 hours with power ≥ 25% RTP.

Once the unit reaches 25% RTP, 12 hours would be allowed for completing the Surveillance. If the Surveillance were not performed within this 12 hour interval, there would then be a failure to perform a Surveillance within the specified Frequency, and the provisions of SR 3.0.3 would apply.

2.0 SAFETY LIMITS (SLs)

2.1 SLs

2.1.1 Reactor Core SLs

2.1.1.1 In MODES 1 and 2, the combination of THERMAL POWER, pressurizer pressure, and the highest operating loop cold leg coolant temperature shall not exceed the limits shown in Figure 2.1.1-1.

2.1.1.2 In MODES 1 and 2, the peak fuel centerline temperature shall be maintained at:

a. For Framatome fuel, < 5081°F, decreasing by 58°F per 10,000 MWD/MTU and adjusted for burnable poison per XN-NF-79-56(P)(A), Revision 1, Supplement 1.

b. For Westinghouse fuel, < 5080°F, decreasing by 58°F per 10,000 MWD/MTU and adjusted for burnable poison per CENPD-382-P-A.

2.1.2 Reactor Coolant System (RCS) Pressure SL

In MODES 1, 2, 3, 4, and 5, the RCS pressure shall be maintained ≤ 2750 psia.

2.2 SL Violations

2.2.1 If SL 2.1.1 is violated, restore compliance and be in MODE 3 within 1 hour.

2.2.2 If SL 2.1.2 is violated:

2.2.2.1 In MODE 1 or 2, restore compliance and be in MODE 3 within 1 hour.

2.0 SAFETY LIMITS (SLs)

2.2.2.2 In MODE 3, 4, or 5, restore compliance within 5 minutes.

2.0 SAFETY LIMITS (SLs)

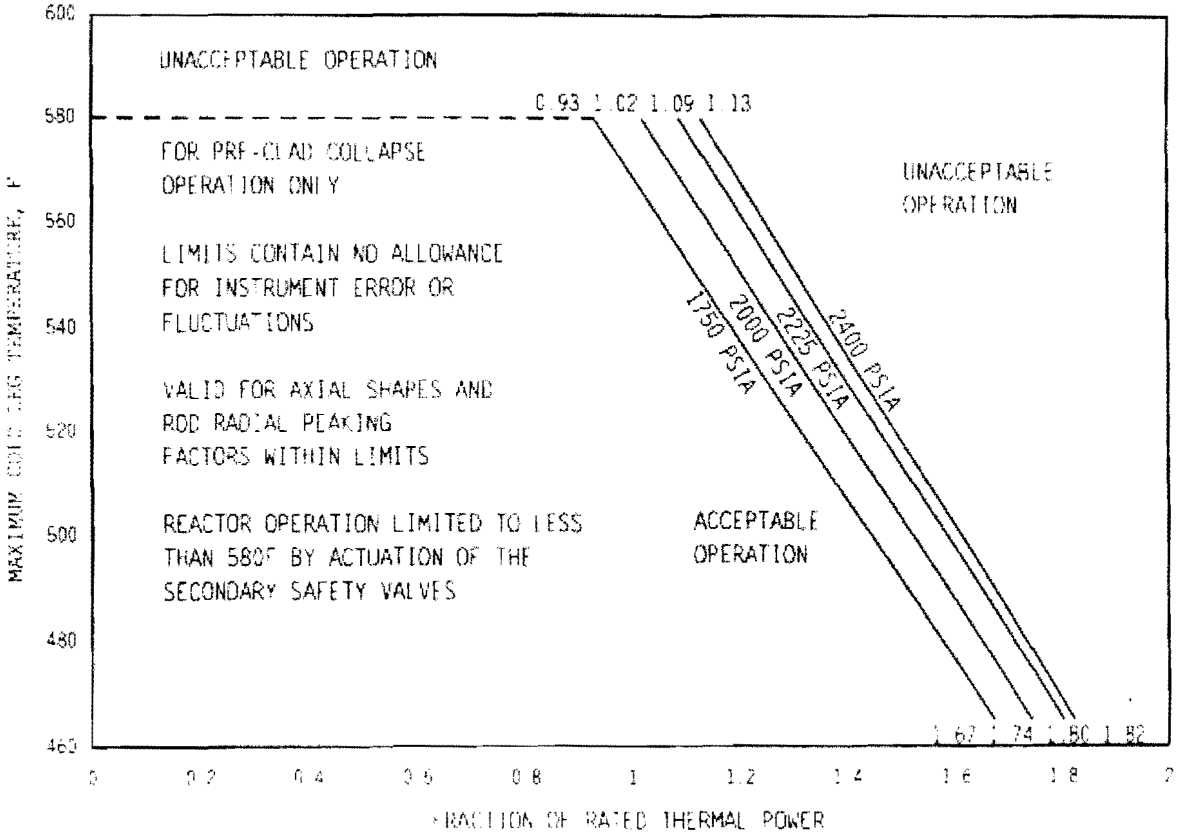

Figure 2.1.1-1
Unit 1 and Unit 2 Reactor Core Thermal Margin Safety Limit

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

LCO 3.0.1 LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2, LCO 3.0.7, LCO 3.0.8 and LCO 3.0.9.

LCO 3.0.2 Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.

If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required, unless otherwise stated.

LCO 3.0.3 When an LCO is not met and the associated ACTIONS are not met, an associated ACTION is not provided, or if directed by the associated ACTIONS, the unit shall be placed in a MODE or other specified condition in which the LCO is not applicable. Action shall be initiated within 1 hour to place the unit, as applicable, in:

a. MODE 3 within 7 hours;

b. MODE 4 within 13 hours; and

c. MODE 5 within 37 hours.

Exceptions to this Specification are stated in the individual Specifications.

Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required.

LCO 3.0.3 is only applicable in MODES 1, 2, 3, and 4.

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

LCO 3.0.4 When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:

a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time, or

b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate (exceptions to this Specification are stated in the individual Specifications); or

c. When a note is inserted in the individual value, parameter, or other Specification, that allows application of this part.

This Specification shall not prevent changes in MODEs or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

LCO 3.0.5 Equipment removed from service or declared inoperable to comply with ACTIONS may be returned to service under administrative control solely to perform testing required to demonstrate its OPERABILITY or the OPERABILITY of other equipment. This is an exception to LCO 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.

LCO 3.0.6 When a supported system LCO is not met solely due to a support system LCO not being met, the Conditions and Required Actions associated with this supported system are

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

not required to be entered. Only the support system LCO ACTIONS are required to be entered. This is an exception to LCO 3.0.2 for the supported system. In this event, additional evaluations and limitations may be required in accordance with Specification 5.5.15, "Safety Function Determination Program (SFDP)." If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

When a support system's Required Action directs a supported system to be declared inoperable or directs entry into Conditions and Required Actions for a supported system, the applicable Conditions and Required Actions shall be entered in accordance with LCO 3.0.2.

LCO 3.0.7 Special test exception (STE) LCOs in each applicable LCO section allow specified Technical Specification (TS) requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with STE LCOs is optional. When an STE LCO is desired to be met but is not met, the ACTIONS of the STE LCO shall be met. When an STE LCO is not desired to be met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with the other applicable Specifications.

LCO 3.0.8 When one or more required snubbers are unable to perform their associated support function(s), any affected supported LCO(s) are not required to be declared not met solely for this reason if risk is assessed and managed, and:

a. the snubbers not able to perform their associated support function(s) are associated with only one train or subsystem of a multiple train or subsystem supported system or are associated with a single train or subsystem supported system and are able to perform their associated support function within 72 hours; or

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

b. the snubbers not able to perform their associated support function(s) are associated with more than one train or subsystem of a multiple train or subsystem supported system and are able to perform their associated support function within 12 hours.

At the end of the specified period the required snubbers must be able to perform their associated support function(s), or the affected supported system LCO(s) shall be declared not met.

LCO 3.0.9

When one or more required barriers are unable to perform their related support function(s), any supported system LCO(s) are not required to be declared not met solely for this reason for up to 30 days provided that at least one train or subsystem of the supported system is OPERABLE and supported by barriers capable of providing their related support function(s), and risk is assessed and managed. This specification may be concurrently applied to more than one train or subsystem of a multiple train or subsystem supported system provided at least one train or subsystem of the supported system is OPERABLE and the barriers supporting each of these trains or subsystems provide their related support function(s) for different categories of initiating events.

If the required OPERABLE train or subsystem becomes inoperable while this specification is in use, it must be restored to OPERABLE status within 24 hours or the provisions of this specification cannot be applied to the trains or subsystems supported by the barriers that cannot perform their related support function(s).

At the end of the specified period, the required barriers must be able to perform their related support function(s) or the supported system LCO(s) shall be declared not met.

3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

SR 3.0.1

SRs shall be met during the MODES or other specified conditions in the Applicability for individual LCOs, unless otherwise stated in the SR. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO. Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO, except as provided in SR 3.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

SR 3.0.2

The specified Frequency for each SR is met if the Surveillance is performed within 1.25 times the interval specified in the Frequency, as measured from the previous performance, or as measured from the time a specified condition of the Frequency is met.

For Frequencies specified as "once," the above interval extension does not apply.

If a Completion Time requires periodic performance on a "once per . . ." basis, the above Frequency extension applies to each performance after the initial performance.

Exceptions to this Specification are stated in the individual Specifications.

SR 3.0.3

If it is discovered that a Surveillance was not performed within its specified Frequency, then compliance with the requirement to declare the LCO not met may be delayed, from the time of discovery up to 24 hours, or up to the limit of the specified Frequency, whichever is greater. This delay period is permitted to allow performance of the Surveillance. The delay period is only applicable when there is a reasonable expectation the surveillance will be met when performed. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

SR 3.0.4

Entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency, except as provided by SR 3.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with LCO 3.0.4.

This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of the shutdown of the unit.

3.1 REACTIVITY CONTROL SYSTEMS

3.1.1 SHUTDOWN MARGIN (SDM)

LCO 3.1.1 SDM shall be within limits as specified in the COLR, AND when in MODE 5 with pressurizer level < 90 inches, the Reactor Coolant System level shall be above the bottom of the hot leg nozzles and all sources of non-borated water shall be ≤ 88 gpm.

APPLICABILITY: MODES 3, 4, and 5.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. -------- NOTE -------- Only applicable in MODE 5 with pressurizer level < 90 inches. --------------------- Non-borated water sources > 88 gpm.	A.1 --------NOTE ------- Not required if SDM has been increased to compensate for the additional sources of non-borated water. -------------------- Suspend positive reactivity changes. <u>AND</u>	 Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)	A.2	Initiate action to increase SDM to compensate for the additional non-borated water sources.	Immediately
	<u>AND</u>		
	A.3	Verify SDM has been increased to compensate for the additional sources of non-borated water.	Once per 12 hours
B. --------- NOTE -------- Only applicable in MODE 5 with pressurizer level < 90 inches. --------------------- Reactor Coolant System level at or below the bottom of the hot leg nozzles.	B.1	Suspend operations involving positive reactivity additions that could result in loss of required SDM.	Immediately
	<u>AND</u>		
	B.2	Initiate action to increase Reactor Coolant System level to above the bottom of the hot leg nozzles.	Immediately
C. SDM not within limits for reasons other than Condition A or B.	C.1	Initiate boration to restore SDM to within limit.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.1.1	Verify SDM is within limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program
SR 3.1.1.2	-------------------NOTE------------------- Only required in MODE 5 with pressurizer level < 90 inches. -- Verify Reactor Coolant System level is above the bottom of the hot leg nozzles.	Once within 1 hour after achieving MODE 5 with pressurizer level < 90 inches <u>AND</u> 12 hours thereafter

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.1.1.3	------------------NOTE------------------ Only required in MODE 5 with pressurizer level < 90 inches. -- Verify non-borated water sources ≤ 88 gpm.	Once within 1 hour after achieving MODE 5 with pressurizer level < 90 inches __AND__ 12 hours thereafter

3.1 REACTIVITY CONTROL SYSTEMS

3.1.2 Reactivity Balance

LCO 3.1.2 The core reactivity balance shall be within ± 1% $\Delta k/k$ of predicted values.

APPLICABILITY: MODE 1.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Core reactivity balance not within limit.	A.1 Re-evaluate core design and safety analysis and determine that the reactor core is acceptable for continued operation.	7 days
	<u>AND</u>	
	A.2 Establish appropriate operating restrictions and Surveillance Requirements.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 2.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.2.1	-------------------NOTE------------------ The predicted reactivity values may be adjusted (normalized) to correspond to the measured core reactivity prior to exceeding a fuel burnup of 60 effective full power days after each fuel loading. -- Verify overall core reactivity balance is within ± 1% Δk/k of predicted values.	Prior to entering MODE 1 after fuel loading AND -----NOTE ---- Only required after 60 effective full power days -------------- 31 effective full power days

3.1 REACTIVITY CONTROL SYSTEMS

3.1.3 Moderator Temperature Coefficient (MTC)

LCO 3.1.3 The MTC shall be maintained within the limits specified in the COLR. The maximum positive limit shall be that specified in Figure 3.1.3-1.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. MTC not within limits.	A.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.1.3.1 Verify MTC is within the upper limit.	Prior to entering MODE 1 after each fuel loading

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.1.3.2	-------------------NOTE------------------- If the MTC is more negative than the COLR limit when extrapolated to the end of cycle, SR 3.1.3.2 may be repeated. Shutdown must occur prior to exceeding the minimum allowable boron concentration at which MTC is projected to exceed the lower limit. --	
	Verify MTC is within the lower limit specified in the COLR.	Each fuel cycle within 7 effective full power days (EFPD) of initially reaching an equilibrium condition with THERMAL POWER ≥ 90% RTP <u>AND</u> Each fuel cycle within 7 EFPD of reaching 2/3 of expected core burnup

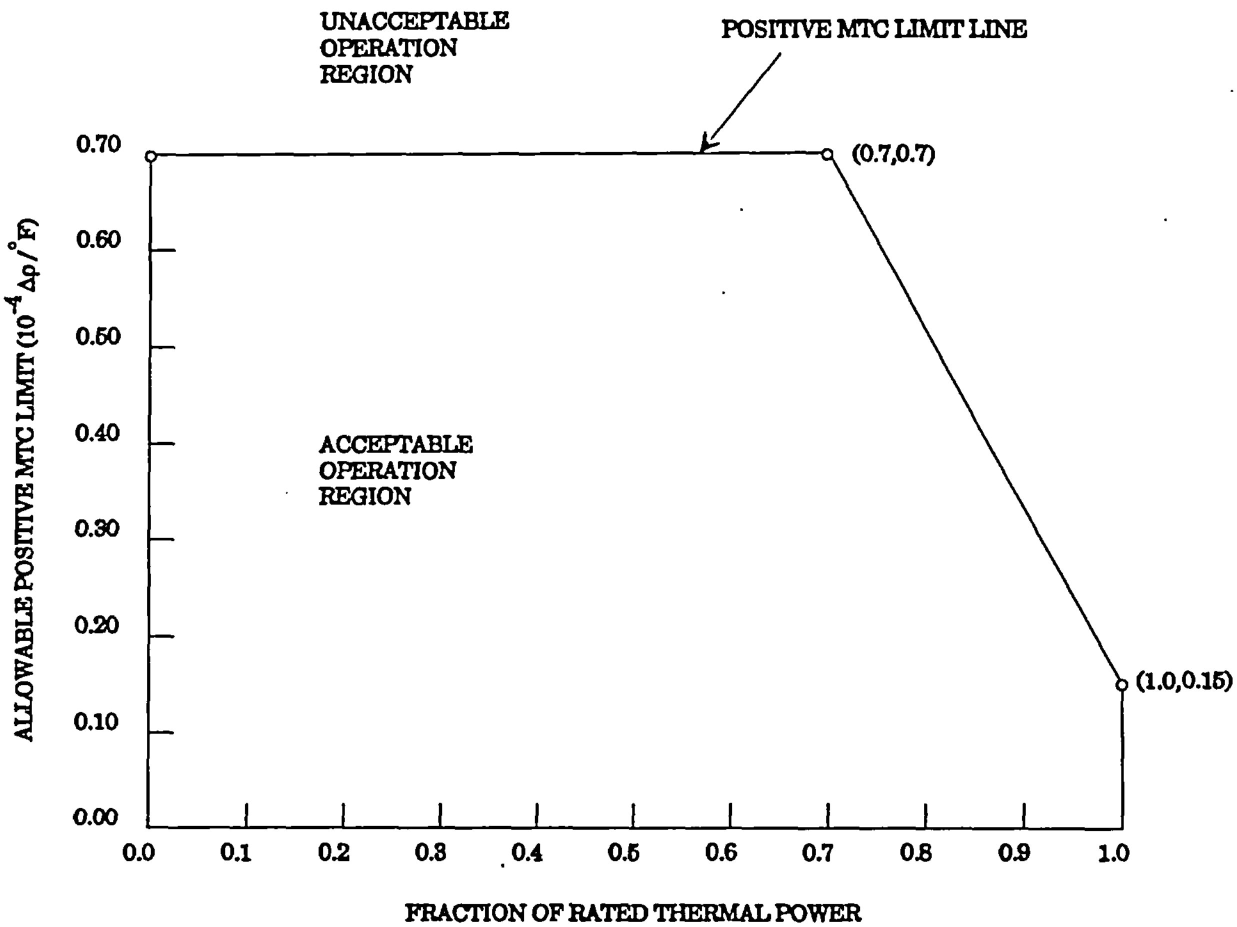

Figure 3.1.3-1 (page 1 of 1)
Allowable Positive MTC Limit

3.1 REACTIVITY CONTROL SYSTEMS

3.1.4 Control Element Assembly (CEA) Alignment

LCO 3.1.4 All CEAs shall be OPERABLE and aligned to within 7.5 inches (indicated position) of their respective group, and the CEA motion inhibit and the CEA deviation circuit shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more CEAs trippable and misaligned from its group by > 7.5 inches and ≤ 15 inches.	A.1 Restore CEA alignment.	1 hour
B. One CEA trippable and misaligned from its group by > 15 inches.	B.1 Restore CEA alignment.	In accordance with the COLR
C. Required Action and associated Completion Time of Condition A or B not met.	C.1 Reduce THERMAL POWER to ≤ 70% RTP. AND C.2 Restore CEA alignment.	1 hour 2 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. CEA motion inhibit inoperable.	D.1	Perform SR 3.1.4.1.	1 hour AND Every 4 hours thereafter
	AND		
	D.2.1	Restore CEA motion inhibit to OPERABLE status. OR	6 hours
	D.2.2	--------NOTE ------- Performance of Required Action D.2.2 is allowed only when not in conflict with Required Action A.1, B.1, C.2, or E.1. -------------------- Fully withdraw all CEAs in groups 3 and 4 and withdraw all CEAs in group 5 to < 5% insertion.	6 hours
E. CEA deviation circuit inoperable.	E.1	Perform SR 3.1.4.1.	1 hour AND Every 4 hours thereafter

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Required Action and associated Completion Time of Condition C, D, or E not met. <u>OR</u> One or more CEAs untrippable. <u>OR</u> Two or more CEAs misaligned by > 15 inches.	F.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.4.1	Verify the indicated position of each CEA to be within 7.5 inches of all other CEAs in its group.	Within 1 hour following any CEA movement of > 7.5 inches <u>AND</u> In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.1.4.2	Verify the CEA motion inhibit is OPERABLE.	In accordance with the Surveillance Frequency Control Program
SR 3.1.4.3	Verify the CEA deviation circuit is OPERABLE.	In accordance with the Surveillance Frequency Control Program
SR 3.1.4.4	Verify CEA freedom of movement (trippability) by moving each individual CEA that is not fully inserted into the reactor core 7.5 inches in either direction.	In accordance with the Surveillance Frequency Control Program
SR 3.1.4.5	Perform a CHANNEL FUNCTIONAL TEST of the reed switch position transmitter channel.	In accordance with the Surveillance Frequency Control Program
SR 3.1.4.6	Verify each CEA drop time is $\leq$ 3.1 seconds.	Prior to reactor criticality, after each removal of the reactor head

3.1 REACTIVITY CONTROL SYSTEMS

3.1.5 Shutdown Control Element Assembly (CEA) Insertion Limits

LCO 3.1.5 All shutdown CEAs shall be withdrawn to ≥ 129 inches.

APPLICABILITY: MODE 1,
MODE 2 with any regulating CEA not fully inserted.

---------------------------- NOTE ----------------------------
This Limiting Condition of Operation is not applicable while performing SR 3.1.4.4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One shutdown CEA withdrawn ≥ 121.5 inches and < 129 inches.	A.1 Verify the accumulated times the shutdown CEAs have been withdrawn ≥ 121.5 inches and < 129 inches.	Once within 4 hours <u>AND</u> 24 hours thereafter

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One shutdown CEA withdrawn $\geq$ 121.5 inches and < 129 inches for > 7 days per occurrence or > 14 days per 365 days. <u>OR</u> One shutdown CEA withdrawn < 121.5 inches. <u>OR</u> Two or more shutdown CEAs not within limit.	B.1 Restore shutdown CEA(s) to within limit.	2 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.5.1	Verify each shutdown CEA is withdrawn $\geq$ 129 inches.	In accordance with the Surveillance Frequency Control Program

3.1 REACTIVITY CONTROL SYSTEMS

3.1.6 Regulating Control Element Assembly (CEA) Insertion Limits

LCO 3.1.6 The power dependent insertion limit alarm circuit shall be OPERABLE, and the regulating CEA groups shall be limited to the withdrawal sequence and to the insertion limits specified in the COLR.

APPLICABILITY: MODES 1 and 2.

---------------------------- NOTE ----------------------------
This Limiting Condition of Operation is not applicable while performing SR 3.1.4.4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Regulating CEA groups inserted beyond the transient insertion limit.	A.1 Restore regulating CEA groups to within limits.	2 hours
	<u>OR</u>	
	A.2 Reduce THERMAL POWER to less than or equal to the fraction of RTP allowed by the CEA group position and insertion limits specified in the COLR.	2 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. Regulating CEA groups inserted between the long-term steady state insertion limit and the transient insertion limit for > 4 hours per 24 hour interval.	B.1	Verify short-term steady state insertion limits are not exceeded.	15 minutes
	<u>OR</u>		
	B.2	Restrict increases in THERMAL POWER to ≤ 5% RTP per hour.	15 minutes
C. Regulating CEA groups inserted between the long-term steady state insertion limit and the transient insertion limit for intervals > 5 effective full power days (EFPD) per 30 EFPD interval or > 14 EFPD per 365 EFPD.	C.1	Restore regulating CEA groups to within limits.	2 hours
D. Power dependent insertion limit alarm circuit inoperable.	D.1	Perform SR 3.1.6.1.	1 hour <u>AND</u> Once per 4 hours thereafter
E. Required Action and associated Completion Time not met.	E.1	Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.6.1	Verify each regulating CEA group position is within its insertion limits.	In accordance with the Surveillance Frequency Control Program
SR 3.1.6.2	Verify the accumulated times during which the regulating CEA groups are inserted beyond the steady state insertion limits, but within the transient insertion limits.	In accordance with the Surveillance Frequency Control Program
SR 3.1.6.3	Verify power dependent insertion limit alarm circuit is OPERABLE.	In accordance with the Surveillance Frequency Control Program

3.1 REACTIVITY CONTROL SYSTEMS

3.1.7 Special Test Exception (STE)-SHUTDOWN MARGIN (SDM)

LCO 3.1.7 The SDM requirements of LCO 3.1.1, "SHUTDOWN MARGIN (SDM)," the shutdown control element assembly (CEA) insertion limits of LCO 3.1.5, "Shutdown Control Element Assembly (CEA) Insertion Limits," and the regulating CEA insertion limits of LCO 3.1.6, "Regulating Control Element Assembly (CEA) Insertion Limits," may be suspended for measurement of CEA worth, provided shutdown reactivity equivalent to at least the highest estimated CEA worth (of those CEAs actually withdrawn) is available for trip insertion.

APPLICABILITY: MODES 2 and 3 during PHYSICS TESTS.

---------------------------- NOTE ----------------------------
Operation in MODE 3 shall be limited to 6 consecutive hours.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Any CEA not fully inserted and less than the above shutdown reactivity equivalent available for trip insertion. <u>OR</u>	A.1 Initiate boration to restore required shutdown reactivity.	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (Continued) All CEAs inserted and the reactor subcritical by less than the above shutdown reactivity equivalent.		

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.7.1	Verify that the position of each CEA not fully inserted is within the acceptance criteria for available negative reactivity addition.	In accordance with the Surveillance Frequency Control Program
SR 3.1.7.2	-------------------NOTE------------------- Not required to be performed during initial power escalation following a refueling outage if SR 3.1.4.6 has been met. --	
	Verify that each CEA not fully inserted is capable of full insertion when tripped from at least the 50% withdrawn position.	Once within 7 days prior to reducing SDM to less than the limits of LCO 3.1.1

3.1 REACTIVITY CONTROL SYSTEMS

3.1.8 Special Test Exception (STE)-MODES 1 and 2

LCO 3.1.8 During the performance of PHYSICS TESTS, the requirements of

LCO 3.1.3, "Moderator Temperature Coefficient (MTC);"
LCO 3.1.4, "Control Element Assembly (CEA) Alignment;"
LCO 3.1.5, "Shutdown Control Element Assembly (CEA) Insertion Limits;"
LCO 3.1.6, "Regulating Control Element Assembly (CEA) Insertion Limits;"

LCO 3.2.3, "Total Integrated Radial Peaking Factor (F_r^T);" and
LCO 3.2.4, "AZIMUTHAL POWER TILT (T_q)"

may be suspended, provided THERMAL POWER is restricted to the test power plateau, which shall not exceed 85% RTP.

APPLICABILITY: MODES 1 and 2 during PHYSICS TESTS.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Test power plateau exceeded.	A.1 Reduce THERMAL POWER to less than or equal to test power plateau.	15 minutes

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time not met.	B.1 Suspend PHYSICS TESTS. AND B.2 Be in MODE 3.	1 hour 6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.8.1	Verify THERMAL POWER is equal to or less than the test power plateau.	In accordance with the Surveillance Frequency Control Program

3.2 POWER DISTRIBUTION LIMITS

3.2.1 Linear Heat Rate (LHR)

LCO 3.2.1 LHR shall not exceed the limits specified in the COLR.

APPLICABILITY: MODE 1.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. LHR, as determined by the Incore Detector Monitoring System, exceeds the limits specified in the COLR, as indicated by four or more coincident incore channels. <u>OR</u> LHR, as determined by the Excore Detector Monitoring System, exceeds the limits as indicated by the ASI outside the power dependent control limits specified in the COLR.	A.1 Restore LHR to within limits.	1 hour

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 2.	6 hours

SURVEILLANCE REQUIREMENTS

-----------------------------------NOTE-----------------------------------
Either the Excore Detector Monitoring System or the Incore Detector Monitoring System shall be used to determine LHR.

SURVEILLANCE		FREQUENCY
SR 3.2.1.1	Deleted	
SR 3.2.1.2	------------------NOTE------------------ Only applicable when the Excore Detector Monitoring System is being used to determine LHR. --- Verify ASI alarm setpoints are within the limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.2.1.3	------------------ NOTES ------------------ 1. Only applicable when the Incore Detector Monitoring System is being used to determine LHR. 2. Not required to be performed below 20% RTP. -- Verify incore detector local power density alarms satisfy the requirements of the core power distribution map, which shall be updated at least once per 31 days of accumulated operation in MODE 1.	In accordance with the Surveillance Frequency Control Program
SR 3.2.1.4	------------------ NOTES ------------------ 1. Only applicable when the Incore Detector Monitoring System is being used to determine LHR. 2. Not required to be performed below 20% RTP. -- Verify incore detector local power density alarm setpoints are less than or equal to the limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program

3.2 POWER DISTRIBUTION LIMITS

3.2.3 Total Integrated Radial Peaking Factor (F_r^T)

LCO 3.2.3 The calculated value of F_r^T shall be within the limits specified in the COLR.

APPLICABILITY: MODE 1.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. F_r^T not within limit.	A.1 Restore F_r^T to within limits.	6 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 2.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.2.3.1	-------------------NOTE------------------- F_r^T shall be determined by using the incore detectors to obtain a power distribution map with all full length control element assemblies at or above the long-term steady state insertion limit as specified in the COLR. --- Verify the value of F_r^T.	Prior to operation > 70% RTP after each fuel loading <u>AND</u> In accordance with the Surveillance Frequency Control Program

3.2 POWER DISTRIBUTION LIMITS

3.2.4 AZIMUTHAL POWER TILT (T_q)

LCO 3.2.4 T_q shall be $\leq$ 0.03.

APPLICABILITY: MODE 1 with THERMAL POWER > 50% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Indicated T_q > 0.03 and $\leq$ 0.10.	A.1 Restore T_q to $\leq$ 0.03. OR A.2 Verify F_r^T is within the limit of LCO 3.2.3, "Total Integrated Radial Peaking Factor (F_r^T)".	4 hours 4 hours AND Once per 8 hours thereafter
B. Indicated T_q > 0.10.	B.1 Restore T_q to $\leq$ 0.10.	2 hours
C. Required Action and associated Completion Time not met.	C.1 Reduce THERMAL POWER to $\leq$ 50% RTP.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.2.4.1	Verify T_q is within limits.	In accordance with the Surveillance Frequency Control Program

3.2 POWER DISTRIBUTION LIMITS

3.2.5 AXIAL SHAPE INDEX (ASI)

LCO 3.2.5 The ASI shall be maintained within the limits specified in the COLR.

APPLICABILITY: MODE 1 with THERMAL POWER > 20% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ASI not within limits.	A.1 Restore ASI to within limits.	2 hours
B. Required Action and associated Completion Time not met.	B.1 Reduce THERMAL POWER to ≤ 20% RTP.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.2.5.1 Verify ASI is within limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program

3.3 INSTRUMENTATION

3.3.1 Reactor Protective System (RPS) Instrumentation-Operating

LCO 3.3.1 Four RPS bistable trip units, associated measurement channels, and applicable automatic bypass removal features for each Function in Table 3.3.1-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.1-1.

ACTIONS

------------------------------------NOTE------------------------------------
Separate Condition entry is allowed for each RPS Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one RPS bistable trip unit or associated measurement channel inoperable except for Condition C (excore channel not calibrated with incore detectors).	A.1 Place affected bistable trip unit in bypass or trip.	1 hour
	<u>AND</u>	
	A.2.1 Restore affected bistable trip unit and associated measurement channel to OPERABLE status. <u>OR</u>	48 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (Continued)	A.2.2	Place affected bistable trip unit in trip.	48 hours OR In accordance with the Risk Informed Completion Time Program
B. One or more Functions with two RPS bistable trip units or associated measurement channels inoperable except for Condition C (excore channel not calibrated with incore detectors).	B.1	Place one affected bistable trip unit in bypass and place the other affected bistable trip unit in trip.	1 hour
	AND		
	B.2	Restore one affected bistable trip unit and associated measurement channel to OPERABLE status.	48 hours OR In accordance with the Risk Informed Completion Time Program
C. One or more Functions with one or more power range excore channels not calibrated with the incore detectors.	C.1	Perform SR 3.3.1.3.	24 hours
	OR		
	C.2	Restrict THERMAL POWER to < 90% RTP.	24 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One or more Functions with one automatic bypass removal feature inoperable.	D.1 Disable bypass channel.	1 hour
	<u>OR</u>	
	D.2.1 Place affected bistable trip units in bypass or trip.	1 hour
	<u>AND</u>	
	D.2.2.1 Restore automatic bypass removal feature and affected bistable trip unit to OPERABLE status.	48 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
	<u>OR</u>	
	D.2.2.2 Place affected bistable trip unit in trip.	48 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. One or more Functions with two automatic bypass removal feature channels inoperable.	E.1 Disable bypass channels.	1 hour
	<u>OR</u>	
	E.2.1 Place one affected bistable trip unit in bypass and place the other in trip for each affected trip Function.	1 hour
	<u>AND</u>	
	E.2.2 Restore one automatic bypass removal feature and the affected bistable trip unit to OPERABLE status for each affected trip Function.	48 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Required Action and associated Completion Time not met for Axial Power Distribution-High and Loss of Load Trip Functions.	F.1 Reduce THERMAL POWER to < 15% RTP.	6 hours
G. Required Action and associated Completion Time not met except for Axial Power Distribution-High and Loss of Load Trip Functions.	G.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

-----------------------------------NOTE-----------------------------------
Refer to Table 3.3.1-1 to determine which Surveillance Requirement shall be performed for each RPS Function.

SURVEILLANCE		FREQUENCY
SR 3.3.1.1	Perform a CHANNEL CHECK of each RPS instrument channel except Loss of Load.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.2	------------------ NOTES ------------------ 1. Not required to be performed until 12 hours after THERMAL POWER is ≥ 15% RTP. 2. The daily calibration may be suspended during PHYSICS TESTS, provided the calibration is performed upon reaching each major test power plateau, and prior to proceeding to the next major test power plateau. -- Perform a calibration (heat balance only) and adjust the excore power range and ΔT power channels to agree with calorimetric calculation if the absolute difference is ≥ 1.5%.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.3	-------------------NOTE------------------- Not required to be performed until 12 hours after THERMAL POWER is ≥ 20% RTP and required to be performed prior to operation above 90% RTP. -- Calibrate the power range excore channels using the incore detectors.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.4	Perform a CHANNEL FUNCTIONAL TEST of each RPS instrument channel except Loss of Load and Rate of Change of Power-High.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.5	-------------------NOTE------------------- Neutron detectors are excluded from CHANNEL CALIBRATION. -- Perform a CHANNEL CALIBRATION on excore power range channels.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.6	Perform a CHANNEL FUNCTIONAL TEST of each Rate of Change of Power-High and Loss of Load instrument channel.	Once within 7 days prior to each reactor startup
SR 3.3.1.7	Perform a CHANNEL FUNCTIONAL TEST on each automatic bypass removal feature.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.8	-------------------NOTE------------------- Neutron detectors are excluded from CHANNEL CALIBRATION. -- Perform a CHANNEL CALIBRATION of each instrument channel, including applicable automatic bypass removal functions.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.9	-------------------NOTE------------------- Neutron detectors are excluded from RPS RESPONSE TIME testing. -- Verify RPS RESPONSE TIME is within limits.	In accordance with the Surveillance Frequency Control Program

Table 3.3.1-1 (page 1 of 3)
Reactor Protective System Instrumentation

FUNCTION	MODES	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Power Level-High	1, 2	SR 3.3.1.1 SR 3.3.1.2 SR 3.3.1.3 SR 3.3.1.4 SR 3.3.1.5 SR 3.3.1.8 SR 3.3.1.9	≤ 10% RTP above current THERMAL POWER but not < 30% RTP nor > 107% RTP
2. Rate of Change of Power-High[a]	1, 2	SR 3.3.1.1[f] SR 3.3.1.6 SR 3.3.1.7 SR 3.3.1.8	≤ 2.6 dpm
3. Reactor Coolant Flow-Low[b]	1, 2	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.7 SR 3.3.1.8 SR 3.3.1.9	≥ 92% of Design Flow
4. Pressurizer Pressure-High	1, 2	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.8 SR 3.3.1.9	≤ 2400 psia
5. Containment Pressure-High	1, 2	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.8 SR 3.3.1.9	≤ 4.0 psig

Table 3.3.1-1 (page 2 of 3)
Reactor Protective System Instrumentation

	FUNCTION	MODES	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
6.	Steam Generator Pressure-Low[c]	1, 2	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.7 SR 3.3.1.8 SR 3.3.1.9	≥ 685 psia
7.	Steam Generator Level-Low	1, 2	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.8 SR 3.3.1.9	≥ 50 inches below normal water level*
8.	Axial Power Distribution-High[d]	1[e]	SR 3.3.1.1 SR 3.3.1.2 SR 3.3.1.3 SR 3.3.1.4 SR 3.3.1.5 SR 3.3.1.7 SR 3.3.1.8 SR 3.3.1.9	In accordance with the COLR
9a.	Thermal Margin/Low Pressure (TM/LP)[b]	1, 2	SR 3.3.1.1 SR 3.3.1.2 SR 3.3.1.3 SR 3.3.1.4 SR 3.3.1.5 SR 3.3.1.7 SR 3.3.1.8 SR 3.3.1.9	In accordance with the COLR

* For Unit 2, the ALLOWABLE VALUE shall remain ≥ 10 inches below top of feed ring through Cycle 14.

Table 3.3.1-1 (page 3 of 3)
Reactor Protective System Instrumentation

FUNCTION	MODES	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
9b. Asymmetric Steam Generator Transient (ASGT)[b]	1, 2	SR 3.3.1.1 SR 3.3.1.4 SR 3.3.1.7 SR 3.3.1.8 SR 3.3.1.9	≤ 135 psid
10. Loss of Load[d]	1[e]	SR 3.3.1.6 SR 3.3.1.7	NA

[a] Bistable trip unit may be bypassed when NUCLEAR INSTRUMENT POWER is < 1E-4% RTP or > 12% RTP. Bypass shall be automatically removed when NUCLEAR INSTRUMENT POWER is ≥ 1E-4% RTP and < 12% RTP.

[b] Bistable trip unit may be bypassed when NUCLEAR INSTRUMENT POWER is < 1E-4%. Bypass shall be automatically removed when NUCLEAR INSTRUMENT POWER is ≥ 1E-4% RTP. During testing pursuant to LCO 3.4.16, trips may be bypassed below 5% RTP.

[c] Bistable trip unit may be bypassed when steam generator pressure is < 785 psia. Bypass shall be automatically removed when steam generator pressure is ≥ 785 psia.

[d] Bistable trip unit may be bypassed when NUCLEAR INSTRUMENT POWER is < 15% RTP. Bypass shall be automatically removed when NUCLEAR INSTRUMENT POWER is ≥ 15% RTP.

[e] Trip is only applicable in MODE 1, NUCLEAR INSTRUMENT POWER ≥ 15% RTP.

[f] CHANNEL CHECK only applies to Wide Range Logarithmic Neutron Flux Monitor.

3.3 INSTRUMENTATION

3.3.2 Reactor Protective System (RPS) Instrumentation-Shutdown

LCO 3.3.2 Four Rate of Change of Power-High RPS bistable trip units, associated measurement channels, and automatic bypass removal features shall be OPERABLE.

APPLICABILITY: MODES 3, 4, and 5, with any reactor trip circuit breakers closed and any control element assembly capable of being withdrawn.

---------------------------- NOTE ----------------------------

Bistable trip units may be bypassed when NUCLEAR INSTRUMENT POWER is < 1E-4% RTP. Bypass shall be automatically removed when NUCLEAR INSTRUMENT POWER is ≥ 1E-4% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One Rate of Change of Power-High bistable trip unit or associated measurement channel inoperable.	A.1 Place affected bistable trip unit in bypass or trip.	1 hour
	<u>AND</u>	
	A.2.1 Restore affected bistable trip unit and associated measurement channel to OPERABLE status.	48 hours
	<u>OR</u>	

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (Continued)	A.2.2 Place affected bistable trip unit in trip.	48 hours
B. Two Rate of Change of Power-High bistable trip units or associated measurement channels inoperable.	B.1 Place one bistable trip unit in bypass and place the other bistable trip unit in trip.	1 hour
	AND	
	B.2 Restore one bistable trip unit to OPERABLE status.	48 hours
C. One automatic bypass removal feature inoperable.	C.1 Disable bypass channel.	1 hour
	OR	
	C.2.1 Place affected bistable trip unit in bypass or trip.	1 hour
	AND	

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (Continued)	C.2.2.1 Restore automatic bypass removal feature and affected bistable trip unit to OPERABLE status. OR C.2.2.2 Place affected bistable trip unit in trip.	48 hours 48 hours
D. Two automatic bypass removal features inoperable.	D.1 Disable bypass channels. OR D.2.1 Place one affected bistable trip unit in bypass and place the other in trip. AND D.2.2 Restore one automatic bypass removal feature and the affected bistable trip unit to OPERABLE status.	1 hour 1 hour 48 hours
E. Required Action and associated Completion Time not met.	E.1 Open all reactor trip circuit breakers.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.2.1	Perform a CHANNEL CHECK of each Wide Range Logarithmic Neutron Flux Monitor.	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.2	Perform a CHANNEL FUNCTIONAL TEST on the Rate of Change of Power trip instrument channel. The allowable value shall be ≤ 2.6 dpm.	Once within 7 days prior to each reactor startup
SR 3.3.2.3	Perform a CHANNEL FUNCTIONAL TEST on each automatic bypass removal feature.	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.4	-------------------NOTE------------------- Neutron detectors are excluded from CHANNEL CALIBRATION. -- Perform a CHANNEL CALIBRATION, including automatic bypass removal features.	In accordance with the Surveillance Frequency Control Program

3.3 INSTRUMENTATION

3.3.3 Reactor Protective System (RPS) Logic and Trip Initiation

LCO 3.3.3 Six channels of RPS Matrix Logic, four channels of RPS Trip Path Logic, four channels of reactor trip circuit breakers (RTCBs), and four channels of Manual Trip shall be OPERABLE.

APPLICABILITY: MODES 1 and 2,
MODES 3, 4, and 5, with any RTCBs closed and any control element assemblies capable of being withdrawn.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One Matrix Logic channel inoperable.	A.1 Restore Matrix Logic channel to OPERABLE status.	48 hours OR In accordance with the Risk Informed Completion Time Program
B. One channel of Manual Trip, RTCBs, or Trip Path Logic inoperable in MODE 1 or 2.	B.1 Open the affected RTCBs.	1 hour
C. One channel of Manual Trip, RTCBs, or Trip Path Logic inoperable in MODE 3, 4, or 5.	C.1 Open all RTCBs.	48 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Two channels of RTCBs or Trip Path Logic affecting the same trip leg inoperable.	D.1 Open the affected RTCBs.	Immediately
E. Required Action and associated Completion Time of Condition A, B, or D not met. OR One or more Functions with two or more Manual Trip, Matrix Logic, Trip Path Logic, or RTCB channels inoperable for reasons other than Condition A or D.	E.1 Be in MODE 3. AND E.2 Open all RTCBs.	6 hours 6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.3.1	Perform a CHANNEL FUNCTIONAL TEST on each RTCB channel.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.3.2	Perform a CHANNEL FUNCTIONAL TEST on each RPS Logic channel.	In accordance with the Surveillance Frequency Control Program
SR 3.3.3.3	Perform a CHANNEL FUNCTIONAL TEST on each RPS Manual Trip channel.	Once within 7 days prior to each reactor startup

3.3 INSTRUMENTATION

3.3.4 Engineered Safety Features Actuation System (ESFAS) Instrumentation

LCO 3.3.4 Four ESFAS sensor modules, associated measurement channels, and applicable automatic block removal features for each Function in Table 3.3.4-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

-------------------------------------NOTE-------------------------------------
Separate Condition entry is allowed for each ESFAS Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one ESFAS sensor module or associated measurement channel inoperable.	A.1 Place affected sensor module in bypass or trip.	1 hour
	<u>AND</u>	
	A.2.1 Restore affected sensor module and associated measurement channel to OPERABLE status.	48 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
	<u>OR</u>	

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.2.2 Place affected sensor module in trip.	48 hours OR In accordance with the Risk Informed Completion Time Program
B. One or more Functions with two ESFAS sensor modules or associated measurement channels inoperable.	B.1 Place one sensor module in bypass and place the other sensor module in trip.	1 hour
	AND	
	B.2 Restore one sensor module and associated measurement channel to OPERABLE status.	48 hours OR In accordance with the Risk Informed Completion Time Program
C. One or more Functions with the automatic block removal feature of one sensor block module inoperable.	C.1 Disable affected sensor block module.	1 hour
	OR	
	C.2 Place affected sensor block module in bypass.	1 hour

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. One or more Functions with the automatic block removal feature of two sensor block modules inoperable.	D.1	Disable affected sensor block modules.	1 hour
	OR		
	D.2.1	Place one affected sensor block module in bypass and disable the other for each affected ESFAS Function.	1 hour
	AND		
	D.2.2	Restore one automatic block removal feature and the associated sensor block module to OPERABLE status for each affected ESFAS Function.	48 hours OR In accordance with the Risk Informed Completion Time Program
E. Required Action and associated Completion Time not met.	E.1	Be in MODE 3.	6 hours
	AND		
	E.2	Be in MODE 4.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.4.1	Perform a CHANNEL CHECK of each ESFAS sensor channel.	In accordance with the Surveillance Frequency Control Program
SR 3.3.4.2	Perform a CHANNEL FUNCTIONAL TEST of each ESFAS sensor channel.	In accordance with the Surveillance Frequency Control Program
SR 3.3.4.3	Perform a CHANNEL FUNCTIONAL TEST on each automatic block removal feature.	In accordance with the Surveillance Frequency Control Program
SR 3.3.4.4	Perform a CHANNEL CALIBRATION of each ESFAS sensor channel, including automatic block removal feature.	In accordance with the Surveillance Frequency Control Program
SR 3.3.4.5	Verify ESF RESPONSE TIME is within limits.	In accordance with the Surveillance Frequency Control Program

Table 3.3.4-1 (page 1 of 3)
Engineered Safety Features Actuation System Instrumentation

FUNCTION	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Safety Injection Actuation Signal		
a. Containment Pressure-High	SR 3.3.4.1 SR 3.3.4.2 SR 3.3.4.4 SR 3.3.4.5	≤ 4.75 psig
b. Pressurizer Pressure-Low[a]	SR 3.3.4.1 SR 3.3.4.2 SR 3.3.4.3 SR 3.3.4.4 SR 3.3.4.5	≥ 1725 psia
2. Containment Spray Actuation Signal[b]		
a. Containment Pressure-High	SR 3.3.4.1 SR 3.3.4.2 SR 3.3.4.4 SR 3.3.4.5	≤ 4.75 psig
3. Containment Isolation Signal		
a. Containment Pressure-High	SR 3.3.4.1 SR 3.3.4.2 SR 3.3.4.4 SR 3.3.4.5	≤ 4.75 psig

Table 3.3.4-1 (page 2 of 3)
Engineered Safety Features Actuation System Instrumentation

FUNCTION	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
4. Steam Generator Isolation Signal[c]		
a. Steam Generator Pressure-Low[d]	SR 3.3.4.1 SR 3.3.4.2 SR 3.3.4.3 SR 3.3.4.4 SR 3.3.4.5	≥ 685 psia
5. Containment Sump Recirculation		
a. Refueling Water Tank Level-Low	SR 3.3.4.2 SR 3.3.4.4 SR 3.3.4.5	≥ 42.5 inches above tank bottom
6. Auxiliary Feedwater Actuation System		
a. Steam Generator 1 Level-Low	SR 3.3.4.1 SR 3.3.4.2 SR 3.3.4.4 SR 3.3.4.5	≤ -149 inches and ≥ -194 inches
b. Steam Generator 2 Level-Low	SR 3.3.4.1 SR 3.3.4.2 SR 3.3.4.4 SR 3.3.4.5	≤ -149 inches and ≥ -194 inches
c. Steam Generator Pressure Difference-High (1 > 2) or (2 > 1)	SR 3.3.4.1 SR 3.3.4.2 SR 3.3.4.4 SR 3.3.4.5	≤ 135.0 psid for Unit 1 ≤ 130.0 psid for Unit 2

Table 3.3.4-1 (page 3 of 3)
Engineered Safety Features Actuation System Instrumentation

(a) Pressurizer Pressure-Low may be manually bypassed when pressurizer pressure is < 1800 psia. The bypass shall be automatically removed whenever pressurizer pressure is ≥ 1800 psia.

(b) Safety Injection Actuation Signal is required to start the containment spray pumps.

(c) Only the Steam Generator Isolation Signal function and the Steam Generator Pressure-Low signal are not required to be OPERABLE when all associated valves isolated by the Steam Generator Isolation Signal function are closed and de-activated.

(d) Steam Generator Pressure-Low may be manually bypassed when steam generator pressure is < 785 psia. The bypass shall be automatically removed whenever steam generator pressure is ≥ 785 psia.

3.3 INSTRUMENTATION

3.3.5 Engineered Safety Features Actuation System (ESFAS) Logic and Manual Actuation

LCO 3.3.5 Two ESFAS Manual Actuation or Start channels and two ESFAS Actuation Logic channels shall be OPERABLE for each ESFAS Function specified in Table 3.3.5-1.

APPLICABILITY: According to Table 3.3.5-1.

ACTIONS

-----------------------------------NOTE-----------------------------------
Separate Condition entry is allowed for each ESFAS Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One Auxiliary Feedwater Actuation System Manual Start channel or Actuation Logic channel inoperable.	A.1 Restore affected Auxiliary Feedwater Actuation System Manual Start channel and Actuation Logic channel to OPERABLE status.	48 hours OR In accordance with the Risk Informed Completion Time Program
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	6 hours 12 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One or more Functions with one Manual Actuation channel or Actuation Logic channel inoperable except Auxiliary Feedwater Actuation System.	C.1 Restore affected Manual Actuation channel and Actuation Logic channel to OPERABLE status.	48 hours OR In accordance with the Risk Informed Completion Time Program
D. Required Action and associated Completion Time of Condition C not met for one Manual Actuation channel.	D.1 Be in MODE 3. AND D.2 Be in MODE 5.	6 hours 36 hours
E. Required Action and associated Completion Time of Condition C not met for one Actuation Logic channel.	E.1 Be in MODE 3. AND E.2 Be in Mode 4.	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.5.1	------------------NOTES------------------ 1. Testing of Actuation Logic shall include verification of the proper relay driver output signal. 2. Relays associated with plant equipment that cannot be operated during plant operation are only required to be tested once per 24 months. --- Perform a CHANNEL FUNCTIONAL TEST on each ESFAS Actuation Logic channel.	In accordance with the Surveillance Frequency Control Program
SR 3.3.5.2	Perform a CHANNEL FUNCTIONAL TEST on each ESFAS Manual Actuation channel.	In accordance with the Surveillance Frequency Control Program

Table 3.3.5-1 (page 1 of 2)
Engineered Safety Features Actuation System
Actuation Logic and Manual Actuation Applicability

FUNCTION	APPLICABLE MODES
1. Safety Injection Actuation Signal[a]	
a. Manual Actuation	1,2,3,4
b. Actuation Logic	1,2,3
2. Containment Spray Actuation Signal	
a. Manual Actuation	1,2,3,4
b. Actuation Logic	1,2,3
3. Containment Isolation Signal	
a. Manual Actuation	1,2,3,4
b. Actuation Logic	1,2,3
4. Steam Generator Isolation Signal	
a. Manual Actuation (Main Steam Isolation Valve Handswitches and Feedwater Header Isolation Handswitches)	1,2,3,4
b. Actuation Logic	1,2,3
5. Containment Sump Recirculation Actuation Signal	
a. Manual Actuation	1,2,3,4
b. Actuation Logic	1,2,3
6. Auxiliary Feedwater Actuation System Signal	
a. Manual Start	1,2,3
b. Actuation Logic	1,2,3

Table 3.3.5-1 (page 2 of 2)
Engineered Safety Features Actuation System
Actuation Logic and Manual Actuation Applicability

(a) High Pressure Safety Injection pumps are only required to start automatically on a Safety Injection Actuation Signal when Reactor Coolant System temperature is ≥ 385°F for Unit 1, ≥ 325°F for Unit 2.

3.3 INSTRUMENTATION

3.3.6 Diesel Generator (DG)-Loss of Voltage Start (LOVS)

LCO 3.3.6 Four sensor modules and measurement channels per DG for the Loss of Voltage Function, four sensor modules and measurement channels per DG for the Transient Degraded Voltage Function, and four sensor modules and measurement channels per DG for the Steady State Degraded Voltage Function shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

-----------------------------------NOTE-----------------------------------
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one sensor module or associated measurement channel per DG inoperable.	A.1 Place sensor module in bypass or trip. AND A.2.1 Restore sensor module and associated measurement channel to OPERABLE status. OR	1 hour 48 hours OR In accordance with the Risk Informed Completion Time Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (Continued)	A.2.2 Place the sensor module in trip.	48 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
B. One or more Functions with two sensor modules or associated measurement channels per DG inoperable.	B.1 Enter applicable Conditions and Required Actions for the associated DG made inoperable by DG-LOVS instrumentation.	1 hour
	<u>OR</u>	
	B.2.1 Place one sensor module in bypass and the other sensor module in trip.	1 hour
	<u>AND</u>	
	B.2.2 Restore one sensor module and associated measurement channel to OPERABLE status.	48 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. One or more Functions with more than two sensor modules or associated measurement channels inoperable.	C.1	Restore at least two sensor modules and associated measurement channels to OPERABLE status.	1 hour
D. Required Action and associated Completion Time not met.	D.1	Enter applicable Conditions and Required Actions for the associated DG made inoperable by DG-LOVS instrumentation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.6.1	Perform CHANNEL FUNCTIONAL TEST.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.6.2	Perform CHANNEL CALIBRATION with setpoint Allowable Values as follows: 1. Transient Degraded Voltage Function $\geq$ 3630 V and $\leq$ 3790 V; Time Delay: $\geq$ 7.6 seconds and $\leq$ 8.4 seconds; 2. Steady State Degraded Voltage Function $\geq$ 3820 V and $\leq$ 3980 V Time Delay: $\geq$ 97.5 seconds and $\leq$ 104.5 seconds; and 3. Loss of voltage Function $\geq$ 2345 V and $\leq$ 2555 V Time Delay: $\geq$ 1.8 seconds and $\leq$ 2.2 seconds at 2450 V.	In accordance with the Surveillance Frequency Control Program

3.3 INSTRUMENTATION

3.3.7 Containment Radiation Signal (CRS)

LCO 3.3.7 Four CRS containment radiation monitor sensor modules, associated measurement channels, one CRS Actuation Logic channel, and one Manual Actuation channel shall be OPERABLE.

APPLICABILITY: During movement of irradiated fuel assemblies within containment with containment purge valves open.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One radiation monitor sensor module or associated measurement channel inoperable.	A.1 Place the affected sensor module in trip.	4 hours
	OR	
	A.2 Suspend movement of irradiated fuel assemblies within containment.	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One required Manual Actuation channel or Actuation Logic channel inoperable. OR More than one radiation monitor sensor module or associated measurement channel inoperable. OR Required Action and associated Completion Time of Condition A not met.	B.1 Place and maintain containment purge and exhaust valves in closed position. OR B.2 Enter applicable Conditions and Required Actions for affected valves of LCO 3.9.3, "Containment Penetrations," made inoperable by isolation instrumentation.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.7.1	Perform a CHANNEL CHECK on each containment radiation monitor sensor.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.7.2	-------------------NOTE------------------- Testing of Actuation Logic shall include verification of the proper relay driver output signal. -- Perform a CHANNEL FUNCTIONAL TEST on each CRS Actuation Logic channel.	In accordance with the Surveillance Frequency Control Program
SR 3.3.7.3	Perform a CHANNEL FUNCTIONAL TEST on each containment radiation monitor sensor. Verify CRS high radiation setpoint is less than or equal to the Allowable Value of 220 mR/hr.	In accordance with the Surveillance Frequency Control Program
SR 3.3.7.4	Perform a CHANNEL CALIBRATION on each containment radiation monitor instrument channel.	In accordance with the Surveillance Frequency Control Program
SR 3.3.7.5	Perform a CHANNEL FUNCTIONAL TEST on each CRS Manual Actuation channel.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.7.6	Verify CRS response time is within limits.	In accordance with the Surveillance Frequency Control Program

3.3 INSTRUMENTATION

3.3.8 Control Room Recirculation Signal (CRRS)

LCO 3.3.8 One CRRS trip circuit and measurement channel shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4,
During movement of irradiated fuel assemblies.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. CRRS trip circuit or measurement channel inoperable in MODE 1, 2, 3, or 4.	A.1 Place one post-loss-of-coolant incident filter fan in service.	1 hour
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours
C. CRRS trip circuit or measurement channel inoperable during movement of irradiated fuel assemblies.	C.1 Place one post-loss-of-coolant incident filter fan in service. OR C.2 Suspend movement of irradiated fuel assemblies.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.8.1	Perform a CHANNEL CHECK on the control room radiation monitor channel.	In accordance with the Surveillance Frequency Control Program
SR 3.3.8.2	Perform a CHANNEL FUNCTIONAL TEST on the CRRS radiation monitor trip circuit and measurement channel. Verify CRRS high radiation setpoint is less than or equal to the Allowable Value of 6E4 cpm above normal background.	In accordance with the Surveillance Frequency Control Program
SR 3.3.8.3	Perform a CHANNEL CALIBRATION on the CRRS radiation monitor trip circuit and measurement channel.	In accordance with the Surveillance Frequency Control Program

3.3 INSTRUMENTATION

3.3.9 Chemical and Volume Control System (CVCS) Isolation Signal

LCO 3.3.9 Four channels of West Penetration Room/Letdown Heat Exchanger Room pressure sensor modules, associated measurement channels, and two Actuation Logic channels shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One Actuation Logic channel inoperable.	A.1 Restore the Actuation Logic channel to OPERABLE status.	48 hours
B. One CVCS isolation sensor module or associated measurement channel inoperable.	B.1 Place the affected sensor module in bypass or trip.	1 hour
	<u>AND</u>	
	B.2.1 Restore the affected sensor module and measurement channel to OPERABLE status.	48 hours
	<u>OR</u>	
	B.2.2 Place the affected sensor module in trip.	48 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Two CVCS isolation sensor modules or associated measurement channels inoperable.	C.1 Place one sensor module in bypass and place the other sensor module in trip.	1 hour
	AND	
	C.2 Restore one sensor module and associated measurement channel to OPERABLE status.	48 hours
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3.	6 hours
	AND	
	D.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.9.1	Perform a CHANNEL CHECK of each sensor channel.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.9.2	------------------ NOTES ------------------ 1. Testing of Actuation Logic shall include the verification of the proper relay driver output signal. 2. Relays associated with plant equipment that cannot be operated during plant operation are only required to be tested once per 24 months. --- Perform a CHANNEL FUNCTIONAL TEST on each CVCS sensor channel with setpoints in accordance with the following Allowable Values: West Penetration Room Pressure-High $\leq$ 0.5 psig Letdown Heat Exchanger Room Pressure-High $\leq$ 0.5 psig	In accordance with the Surveillance Frequency Control Program
SR 3.3.9.3	Perform a CHANNEL CALIBRATION on each CVCS sensor channel.	In accordance with the Surveillance Frequency Control Program
SR 3.3.9.4	Verify CVCS Isolation Signal response time is within limits.	In accordance with the Surveillance Frequency Control Program

3.3 INSTRUMENTATION

3.3.10 Post-Accident Monitoring (PAM) Instrumentation

LCO 3.3.10 The PAM indication channels for each Function in Table 3.3.10-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

------------------------------------NOTE------------------------------------
Separate Condition entry is allowed for each Function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more Functions with one required indication channel inoperable.	A.1 Restore required indication channel to OPERABLE status.	30 days
B. Required Action and associated Completion Time of Condition A not met.	B.1 Initiate action in accordance with Specification 5.6.7.	Immediately

TIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. One or more Functions with two required indication channels inoperable.	C.1	Restore one indication channel to OPERABLE status.	7 days
D. Required Action and associated Completion Time of Condition C not met.	D.1	Enter the Condition referenced in Table 3.3.10-1 for the channel.	Immediately
E. As required by Required Action D.1 and referenced in Table 3.3.10-1.	E.1	Be in MODE 3.	6 hours
	<u>AND</u>		
	E.2	Be in MODE 4.	12 hours
F. As required by Required Action D.1 and referenced in Table 3.3.10-1.	F.1	Initiate action in accordance with Specification 5.6.7.	Immediately

SURVEILLANCE REQUIREMENTS

-----------------------------------NOTE-----------------------------------
These Surveillance Requirements apply to each PAM instrumentation Function in Table 3.3.10-1.

SURVEILLANCE		FREQUENCY
SR 3.3.10.1	Perform CHANNEL CHECK for each required indication channel that is normally energized.	In accordance with the Surveillance Frequency Control Program
SR 3.3.10.2	Deleted	
SR 3.3.10.3	------------------NOTE------------------ Neutron detectors, Core Exit Thermocouples, and Reactor Vessel Level Monitoring System are excluded from CHANNEL CALIBRATION. -- Perform CHANNEL CALIBRATION on each indication channel.	In accordance with the Surveillance Frequency Control Program

Table 3.3.10-1 (page 1 of 2)
Post-Accident Monitoring Instrumentation

FUNCTION	REQUIRED INDICATION CHANNELS	CONDITIONS REFERENCED FROM REQUIRED ACTION D.1
1. Wide Range Logarithmic Neutron Flux	2	E
2. Reactor Coolant Outlet Temperature	2	E
3. Reactor Coolant Inlet Temperature	2	E
4. RCS Subcooled Margin Monitor	1	N/A
5. Reactor Vessel Water Level	2	F
6. Containment Water Level (wide range)	2	E
7. Containment Pressure	2	E
8. Penetration Flow Path Containment Isolation Valve Position	2 per penetration flow path[(a)(b)]	E
9. Containment Area Radiation (high range)	2	F
10. Pressurizer Pressure (wide range)	2	E
11. Steam Generator Pressure	2 per steam generator	E
12. Pressurizer Level	2	E
13. Steam Generator Water Level (wide range)	2 per steam generator	E

Table 3.3.10-1 (page 2 of 2)
Post-Accident Monitoring Instrumentation

	FUNCTION	REQUIRED INDICATION CHANNELS	CONDITIONS REFERENCED FROM REQUIRED ACTION D.1
14.	Condensate Storage Tank Level	2	E
15.	Core Exit Temperature-Quadrant 1	2[c]	E
16.	Core Exit Temperature-Quadrant 2	2[c]	E
17.	Core Exit Temperature-Quadrant 3	2[c]	E
18.	Core Exit Temperature-Quadrant 4	2[c]	E
19.	Pressurizer Pressure (low range)	2	E

[a] Not required for isolation valves whose associated penetration is isolated by at least one closed and de-activated automatic valve, closed manual valve, check valve with flow through the valve secured, blind flange, or equivalent.

[b] Only one position indication channel is required for penetration flow paths with only one installed control room indication channel.

[c] A channel consists of two or more core exit thermocouples.

3.3 INSTRUMENTATION

3.3.11 Remote Shutdown Instrumentation

LCO 3.3.11 The Remote Shutdown Instrumentation Functions in Table 3.3.11-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

------------------------------------NOTE------------------------------------
Separate Condition entry is allowed for each function.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required Functions inoperable.	A.1 Restore required Functions to OPERABLE status.	30 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	AND	
	B.2 Be in MODE 4.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.11.1	Perform CHANNEL CHECK for each required indication channel that is normally energized.	In accordance with the Surveillance Frequency Control Program
SR 3.3.11.2	-------------------NOTE------------------- Neutron detectors and Reactor Trip Breaker Indication are excluded from the CHANNEL CALIBRATION. -- Perform CHANNEL CALIBRATION for each required indication channel.	In accordance with the Surveillance Frequency Control Program

Table 3.3.11-1 (page 1 of 1)
Remote Shutdown System Instrumentation

FUNCTION/INDICATION	REQUIRED NUMBER OF CHANNELS
1. Reactivity Monitoring	
a. Wide Range Neutron Flux	1
b. Reactor Trip Breaker Indication	1 per trip breaker
2. Reactor Coolant System Pressure Monitoring	
a. Pressurizer Pressure	1
3. Monitoring Decay Heat Removal via Steam Generators	
a. Reactor Coolant Cold Leg Temperature	1 per loop
b. Steam Generator Pressure	1 per steam generator
c. Steam Generator Level (Wide Range)	1 per steam generator
4. Reactor Coolant System Inventory Monitoring	
a. Pressurizer Level	1

3.3 INSTRUMENTATION

3.3.12 Wide Range Logarithmic Neutron Flux Monitor Channels

LCO 3.3.12 Two channels of wide range logarithmic neutron flux monitoring instrumentation shall be OPERABLE.

APPLICABILITY: MODES 3, 4, and 5, with the reactor trip circuit breakers open or Control Element Assembly Drive System not capable of Control Element Assembly withdrawal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required channels inoperable.	A.1 Suspend all operations that involve positive reactivity additions that are not accounted for in the calculated SDM. AND A.2 Perform SDM verification in accordance with SR 3.1.1.1.	Immediately 4 hours AND Once per 12 hours thereafter

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.12.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.3.12.2	Perform CHANNEL FUNCTIONAL TEST.	Once within 7 days prior to each reactor startup
SR 3.3.12.3	-------------------NOTE------------------- Neutron detectors are excluded from CHANNEL CALIBRATION. -- Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.1 RCS Pressure, Temperature, and Flow Departure from Nucleate Boiling (DNB) Limits

LCO 3.4.1 RCS DNB parameters for pressurizer pressure, cold leg temperature, and RCS total flow rate shall be within the limits specified in the COLR.

APPLICABILITY: MODE 1.

---------------------------NOTE---------------------------
Pressurizer pressure limit does not apply during:

a. THERMAL POWER ramp > 5% RTP per minute; or

b. THERMAL POWER step > 10% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. RCS DNB parameter(s) not within limits.	A.1 Restore parameter(s) to within limit.	2 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 2.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.1.1	Verify pressurizer pressure is within the limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program
SR 3.4.1.2	Verify RCS cold leg temperature is within the limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program
SR 3.4.1.3	Verify RCS total flow rate is greater than or equal to the limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program
SR 3.4.1.4	Verify measured RCS total flow rate is within the limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.2 RCS Minimum Temperature for Criticality

LCO 3.4.2 Each RCS loop average temperature (T_{avg}) shall be ≥ 515°F.

APPLICABILITY: MODE 1,
MODE 2 with K_{eff} ≥ 1.0.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. T_{avg} in one or more RCS loops not within limit.	A.1 Be in MODE 2 with K_{eff} < 1.0.	30 minutes

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.2.1	Verify RCS T_{avg} in each loop ≥ 515°F.	Once within 30 minutes prior to reaching criticality AND -----NOTE ---- Only required to be performed when RCS T_{avg} is < 525°F -------------- 30 minutes thereafter

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.3 RCS Pressure and Temperature (P/T) Limits

LCO 3.4.3 RCS pressure, RCS temperature, and RCS heatup and cooldown rates shall be maintained within limits.

---------------------------- NOTE ----------------------------
During hydrostatic testing above system design pressure, temperature changes shall be ≤ 5°F in any one hour period.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ---------NOTE------- Required Action A.2 shall be completed whenever this Condition is entered. -------------------- Requirements of Limiting Condition for Operation not met in MODE 1, 2, 3, or 4.	A.1 Restore parameter(s) to within limits. AND A.2 Determine RCS is acceptable for continued operation.	30 minutes 72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND	6 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (Continued)	B.2 Be in MODE 5 with RCS pressure < 300 psia.	36 hours
C. ---------NOTE------- Required Action C.2 shall be completed whenever this Condition is entered. --------------------- Requirements of Limiting Condition for Operation not met any time in other than MODE 1, 2, 3, or 4.	C.1 Initiate action to restore parameter(s) to within limits. AND C.2 Determine RCS is acceptable for continued operation.	Immediately Prior to entering MODE 4

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.3.1	-------------------NOTE------------------- Only required to be performed during RCS heatup and cooldown operations and RCS inservice leak and hydrostatic testing. -- Verify RCS pressure, RCS temperature, and RCS heatup and cooldown rates are within limits specified in Figures 3.4.3-1 and 3.4.3-2.	In accordance with the Surveillance Frequency Control Program

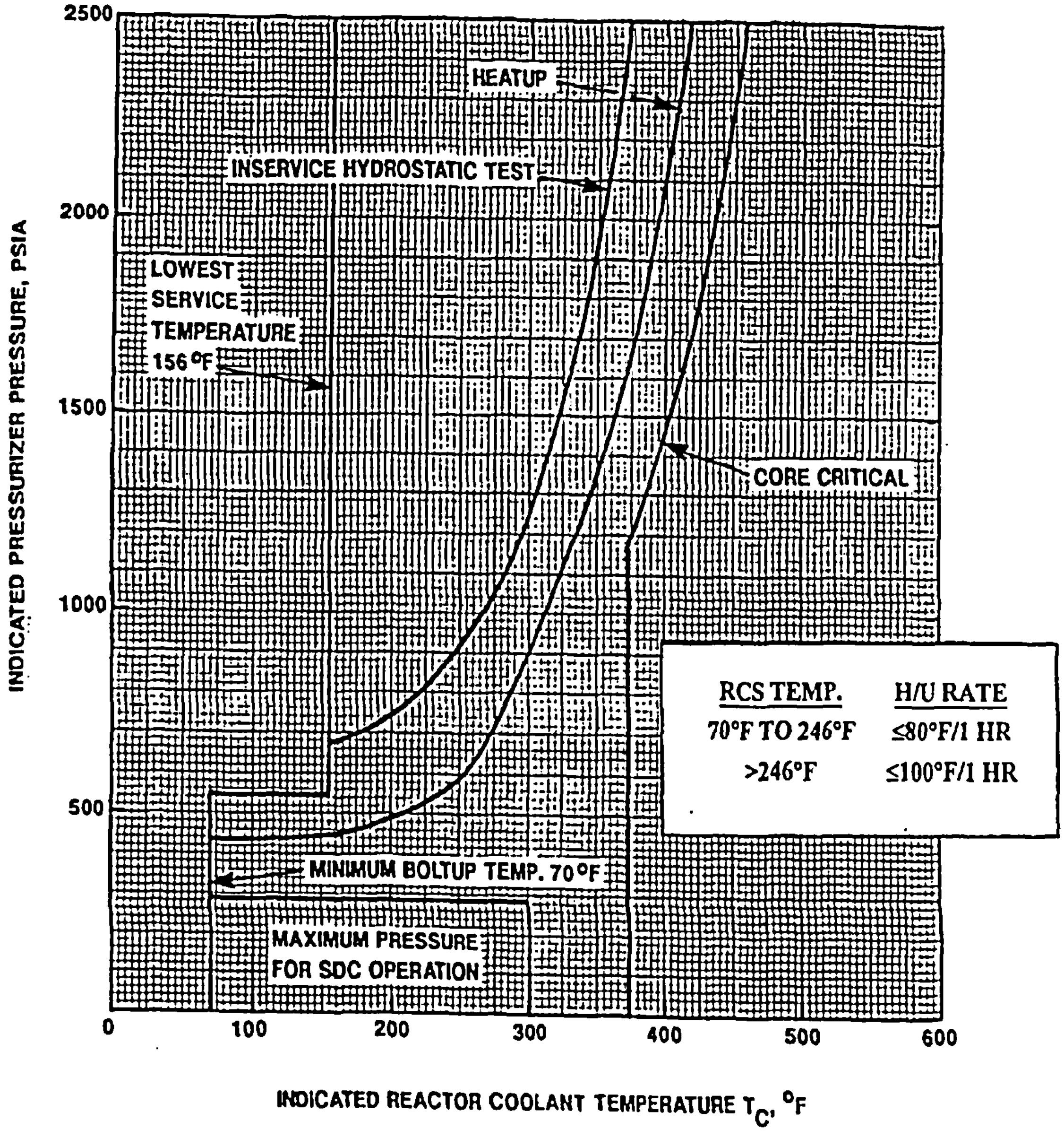

Figure 3.4.3-1
Calvert Cliffs Unit 1 Heatup Curve, for Fluence ≤ 4.49×10^{19} n/cm^2
Reactor Coolant System Pressure Temperature Limits

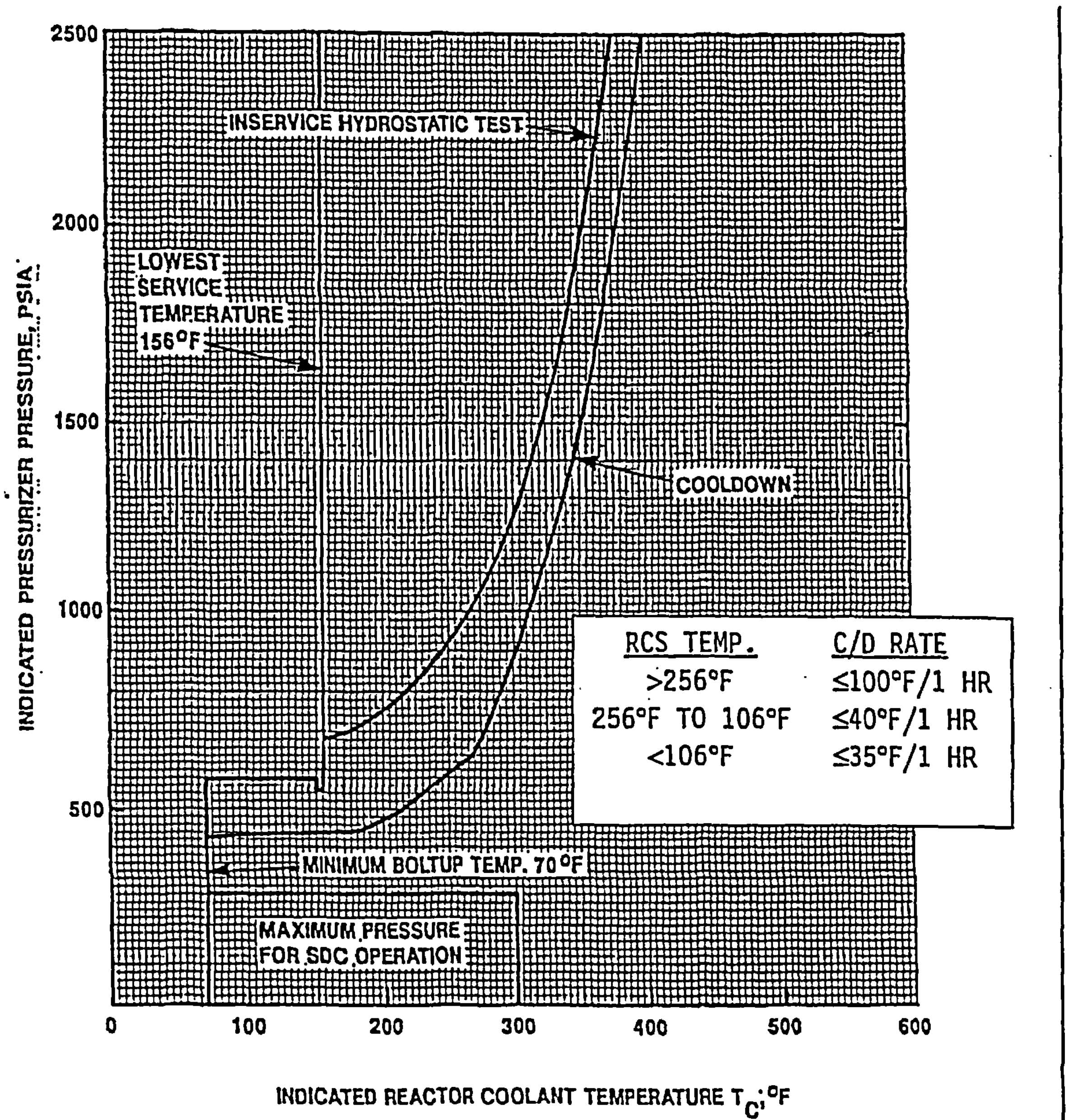

Figure 3.4.3-2
Calvert Cliffs Unit 1 Cooldown Curve, for Fluence ≤ 4.49×10^{19} n/cm^2
Reactor Coolant System Pressure Temperature Limits

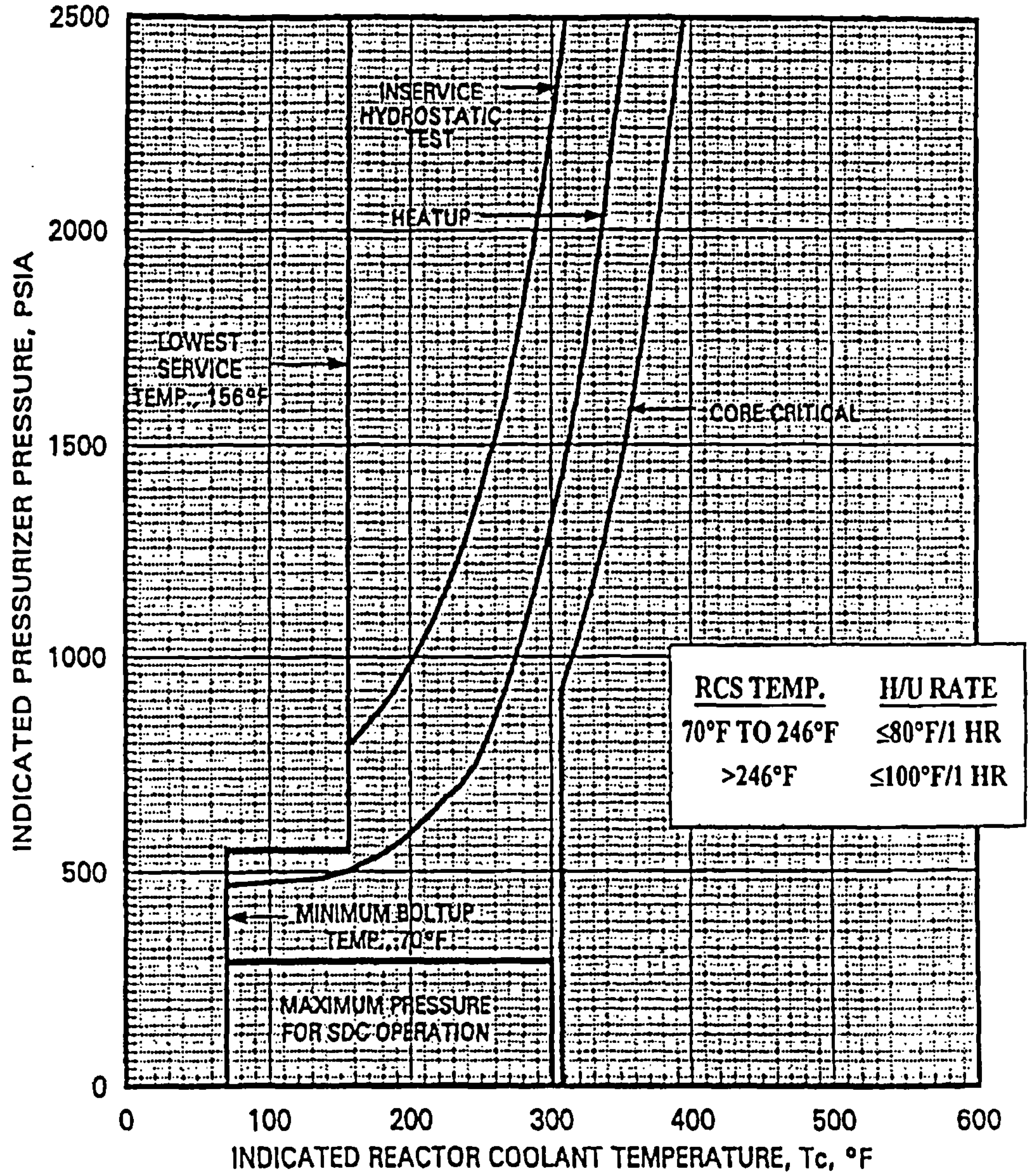

Figure 3.4.3-1
Calvert Cliffs Unit 2 Heatup Curve, for Fluence ≤ $4.0x10^{19}$ n/cm^2
Reactor Coolant System Pressure Temperature Limits

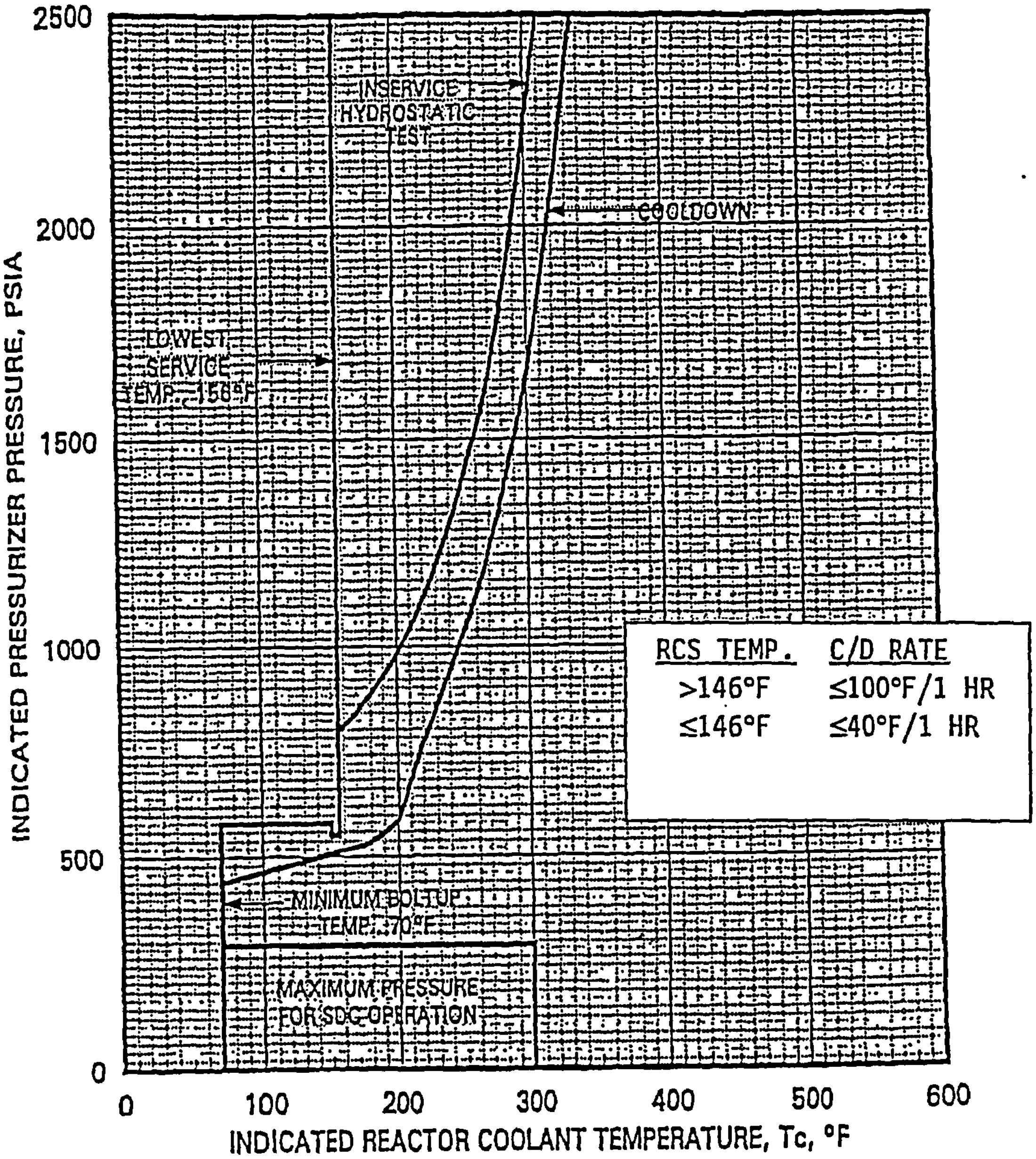

Figure 3.4.3-2
Calvert Cliffs Unit 2 Cooldown Curve, for Fluence ≤ 4.0×10^{19} n/cm^2
Reactor Coolant System Pressure Temperature Limits

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.4 RCS Loops - MODES 1 and 2

LCO 3.4.4 Two RCS loops shall be OPERABLE and in operation.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of Limiting Condition of Operation not met.	A.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.4.1 Verify each RCS loop is in operation.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.5 RCS Loops - MODE 3

LCO 3.4.5 Two RCS loops shall be OPERABLE and one RCS loop shall be in operation.

-------------------------- NOTES ---------------------------

1. All reactor coolant pumps may be not in operation for ≤ 1 hour per 8 hour period and ≤ 2 hours per 8 hour period for low flow testing, provided:

    a. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1; and

    b. Core outlet temperature is maintained at least 10°F below saturation temperature.

2. No reactor coolant pump shall be started with any RCS cold leg temperature ≤ 365°F (Unit 1), ≤ 301°F (Unit 2) unless:

    a. The pressurizer water level is ≤ 170 inches;

    b. The pressurizer pressure is ≤ 300 psia (Unit 1), ≤ 320 psia (Unit 2); and

    c. The secondary water temperature of each steam generator is ≤ 30°F above the RCS temperature.

APPLICABILITY: MODE 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required RCS loop inoperable.	A.1 Restore required RCS loop to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 4.	12 hours
C. No RCS loop OPERABLE. <u>OR</u> No RCS loop in operation.	C.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1. <u>AND</u> C.2 Initiate action to restore one RCS loop to OPERABLE status and operation.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.5.1	Verify required RCS loop is in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.5.2	Verify secondary side water level in each steam generator > -50 inches.	In accordance with the Surveillance Frequency Control Program
SR 3.4.5.3	Verify correct breaker alignment and indicated power available to the required pump that is not in operation.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.6 RCS Loops - MODE 4

LCO 3.4.6 Two loops consisting of any combination of RCS loops and shutdown cooling (SDC) loops shall be OPERABLE and at least one loop shall be in operation.

--------------------------- NOTES ---------------------------

1. All reactor coolant pumps and SDC pumps may be not in operation for ≤ 1 hour per 8 hour period, provided:

   a. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1; and

   b. Core outlet temperature is maintained at least 10°F below saturation temperature.

2. No reactor coolant pump shall be started with any RCS cold leg temperature ≤ 365°F (Unit 1), ≤ 301°F (Unit 2) unless:

   a. Pressurizer water level is ≤ 170 inches;

   b. Pressurizer pressure is ≤ 300 psia (Unit 1), ≤ 320 psia (Unit 2); and

   c. Secondary side water temperature in each steam generator is ≤ 30°F above the RCS temperature.

APPLICABILITY: MODE 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required RCS loop inoperable. AND Two SDC loops inoperable.	A.1 Initiate action to restore a second loop to OPERABLE status.	Immediately
B. One required SDC loop inoperable. AND Two required RCS loops inoperable.	B.1 Be in MODE 5.	24 hours
C. Required RCS or SDC loops inoperable. OR No RCS or SDC loops in operation.	C.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1. AND C.2 Initiate action to restore one loop to OPERABLE status and operation.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.6.1	Verify one RCS or SDC loop is in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.6.2	Verify secondary side water level in required steam generator(s) is > -50 inches.	In accordance with the Surveillance Frequency Control Program
SR 3.4.6.3	Verify correct breaker alignment and indicated power available to the required loop components that are not in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.6.4	-------------------NOTE------------------- Not required to be performed until 12 hours after entering MODE 4. -- Verify required SDC train locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 RCS Loops - MODE 5, Loops Filled

LCO 3.4.7 One shutdown cooling (SDC) loop shall be OPERABLE and in operation, and either:

a. One additional SDC loop shall be OPERABLE; or

b. The secondary side water level of each steam generator (SG) shall be ≥ -50 inches.

---------------------------- NOTES ----------------------------

1. The SDC pump of the loop in operation may be not in operation for ≤ 1 hour per 8 hour period provided:

    a. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1; and

    b. Core outlet temperature is maintained at least 10°F below saturation temperature.

2. One required SDC loop may be inoperable for up to 2 hours for surveillance testing provided that the other SDC loop is OPERABLE and in operation.

3. No reactor coolant pump shall be started with any RCS cold leg temperature ≤ 365°F (Unit 1), ≤ 301°F (Unit 2) unless:

    a. The pressurizer water level is ≤ 170 inches;

    b. Pressurizer pressure is ≤ 300 psia (Unit 1), ≤ 320 psia (Unit 2); and

    c. The secondary side water temperature in each SG is ≤ 30°F above the RCS temperature.

4. All SDC loops may be not in operation during planned heatup to MODE 4 when at least one RCS loop is in operation.

APPLICABILITY: MODE 5 with RCS loops filled.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One SDC loop inoperable. AND Any SG with secondary side water level not within limit.	A.1 Initiate action to restore a second SDC loop to OPERABLE status. OR A.2 Initiate action to restore SG secondary side water levels to within limits.	Immediately Immediately
B. Required SDC loops inoperable. OR No SDC loop in operation.	B.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1. AND B.2 Initiate action to restore one SDC loop to OPERABLE status and operation.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.7.1	Verify one SDC loop is in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.7.2	Verify required SG secondary side water level is > -50 inches.	In accordance with the Surveillance Frequency Control Program
SR 3.4.7.3	Verify correct breaker alignment and indicated power available to the required SDC loop components that are not in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.7.4	Verify required SDC train locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 RCS Loops - MODE 5, Loops Not Filled

LCO 3.4.8 Two shutdown cooling (SDC) loops shall be OPERABLE and one SDC loop shall be in operation.

------------------------- NOTES -------------------------

1. All SDC pumps may be not in operation for ≤ 15 minutes when switching from one loop to another provided:

   a. The core outlet temperature is maintained at least 10°F below saturation temperature;

   b. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1; and

   c. No draining operations to further reduce the RCS water volume are permitted.

2. One SDC loop may be inoperable for ≤ 2 hours for surveillance testing provided the other SDC loop is OPERABLE and in operation.

APPLICABILITY: MODE 5 with RCS loops not filled.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One SDC loop inoperable.	A.1 Initiate action to restore SDC loop to OPERABLE status.	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required SDC loops inoperable. OR No SDC loop in operation.	B.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1.	Immediately
	AND	
	B.2 Initiate action to restore one SDC loop to OPERABLE status and operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.8.1	Verify one SDC loop is in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.8.2	Verify correct breaker alignment and indicated power available to the required SDC loop components that are not in operation.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.8.3	Verify SDC train locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.9 Pressurizer

LCO 3.4.9 The pressurizer shall be OPERABLE with:

a. Pressurizer water level ≥ 133 inches and ≤ 225 inches; and

b. Two banks of pressurizer heaters OPERABLE with the capacity of each bank ≥ 150 kW and capable of being powered from an emergency power supply.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Pressurizer water level not within limit.	A.1	Be in MODE 3 with reactor trip breakers open.	6 hours
	AND		
	A.2	Be in Mode 4.	12 hours
B. One required bank of pressurizer heaters inoperable.	B.1	Restore required bank of pressurizer heaters to OPERABLE status.	72 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. --------NOTE-------- Not applicable when second bank of pressurizer heaters intentionally made inoperable. -------------------- Two required banks of pressurizer heaters inoperable.	C.1	Restore at least one bank of required pressurizer heaters to OPERABLE status.	24 hours
D. Required Action and associated Completion Time of Condition B or C not met.	D.1 <u>AND</u> D.2	Be in MODE 3. Be in Mode 4.	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.9.1	Verify pressurizer water level is $\geq$ 133 inches and $\leq$ 225 inches.	In accordance with the Surveillance Frequency Control Program
SR 3.4.9.2	Verify capacity of each required bank of pressurizer heaters $\geq$ 150 kW.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.10 Pressurizer Safety Valves

LCO 3.4.10 Two pressurizer safety valves shall be OPERABLE.

APPLICABILITY: MODES 1 and 2,
MODE 3 with all RCS cold leg temperatures > 365°F (Unit 1), > 301°F (Unit 2).

------------------------------ NOTE ------------------------------
The lift settings are not required to be within Limiting Condition for Operation limits during MODE 3 > 365°F (Unit 1), > 301°F (Unit 2) for the purpose of setting the pressurizer safety valves under ambient (hot) conditions. This exception is allowed for 36 hours following entry into MODE 3 > 365°F (Unit 1), > 301°F (Unit 2) provided a preliminary cold setting was made prior to heatup.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One pressurizer safety valve inoperable.	A.1 Restore valve to OPERABLE status.	15 minutes

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time not met. OR Two pressurizer safety valves inoperable.	B.1 Be in MODE 3. AND B.2 Reduce all RCS cold leg temperatures to $\leq$ 365°F (Unit 1), $\leq$ 301°F (Unit 2).	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.10.1	Verify each pressurizer safety valve is OPERABLE in accordance with the INSERVICE TESTING PROGRAM. The lift settings shall be within limits as specified below: Valve — As Found Lift Setting (psia) — As Left Lift Setting (psia) RC-200 — $\geq$ 2475 and $\leq$ 2575 — $\geq$ 2475 and $\leq$ 2525 RC-201 — $\geq$ 2475 and $\leq$ 2600 — $\geq$ 2500 and $\leq$ 2550	In accordance with the INSERVICE TESTING PROGRAM

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.11 Pressurizer Power-Operated Relief Valves (PORVs)

LCO 3.4.11 Two PORVs and associated block valves shall be OPERABLE.

APPLICABILITY: MODES 1 and 2,
MODE 3 with all RCS cold leg temperatures > 365°F (Unit 1), > 301°F (Unit 2).

ACTIONS

-----------------------------------NOTE-----------------------------------

Separate Condition entry is allowed for each PORV.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or two PORVs inoperable and capable of being manually cycled.	A.1 Close and maintain power to associated block valve.	1 hour

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. One PORV inoperable and not capable of being manually cycled.	B.1	Close associated block valve.	1 hour
	<u>AND</u>		
	B.2	Remove power from associated block valve.	1 hour
	<u>AND</u>		
	B.3	Restore PORV to OPERABLE status.	5 days
C. One block valve inoperable.	C.1	Place associated PORV in override closed.	1 hour
	<u>AND</u>		
	C.2	Restore block valve to OPERABLE status.	5 days
D. Two PORVs inoperable and not capable of being manually cycled.	D.1	Close associated block valves.	1 hour
	<u>AND</u>		
	D.2	Remove power from associated block valves.	1 hour
	<u>AND</u>		
	D.3	Restore one PORV to OPERABLE status.	72 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
E. Two block valves inoperable.	E.1	Place associated PORVs in override closed.	1 hour
	AND		
	E.2	Restore one block valve to OPERABLE status.	72 hours
F. Required Action and associated Completion Time not met.	F.1	Be in MODE 3.	6 hours
	AND		
	F.2	Reduce any RCS cold leg temperature $\leq$ 365°F (Unit 1), $\leq$ 301°F (Unit 2).	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.11.1	Perform a CHANNEL FUNCTIONAL TEST of each PORV.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.11.2	-------------------NOTE------------------- Not required to be performed with block valve closed in accordance with the Required Actions of this Limiting Condition for Operation. --- Perform a complete cycle of each block valve.	In accordance with the Surveillance Frequency Control Program
SR 3.4.11.3	Perform a complete cycle of each PORV.	In accordance with the Surveillance Frequency Control Program
SR 3.4.11.4	Perform a CHANNEL CALIBRATION of each PORV.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.12 Low Temperature Overpressure Protection (LTOP) System

LCO 3.4.12 An LTOP System shall be OPERABLE with:

a. 1. A maximum of one high pressure safety injection (HPSI) pump only capable of manually injecting into the RCS, and

2. When HPSI suction is aligned to the refueling water tank, the HPSI pump shall be in manual control and either:

a) HPSI flow limited to $\leq$ 210 gpm, or

b) An RCS vent of $\geq$ 2.6 square inches established;

<u>AND</u>

b. HPSI loop motor-operated valves (MOVs) only capable of manually aligning HPSI pump flow to the RCS;

------------------------ NOTE ------------------------
HPSI loop MOVs may be capable of automatically aligning HPSI pump flow to the RCS for the purposes of testing.

<u>AND</u>

c. 1. Two OPERABLE power-operated relief valves (PORVs), and associated block valves open, with PORV lift settings on or below the curve in Figure 3.4.12-1 when the Shutdown Cooling (SDC) System is not in operation and PORV lift settings $\leq$ 429 psia (Unit 1), $\leq$ 443 psia (Unit 2), when the SDC is in operation, or

2. One OPERABLE PORV, and associated block valve open, with PORV lift setting on or below the curve in

Figure 3.4.12-1 when the SDC System is not in operation and PORV lift setting ≤ 429 psia (Unit 1), ≤ 443 psia (Unit 2), when the SDC is in operation; and an RCS vent of ≥ 1.3 square inches established; or

3. An RCS vent of ≥ 2.6 square inches established.

APPLICABILITY: MODE 3 with any RCS cold leg temperature ≤ 365°F (Unit 1), ≤ 301°F (Unit 2),
MODES 4, 5, and 6.

---------------------------- NOTE ----------------------------
This Specification is not applicable when the RCS is vented to ≥ 8 square inches.

ACTIONS

------------------------------------NOTE------------------------------------
LCO 3.0.4.b is not applicable to PORVs when entering MODE 3.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more HPSI pumps capable of automatically injecting into the RCS. OR Two or more HPSI pumps capable of manually injecting into the RCS.	A.1 Initiate action to verify a maximum of one HPSI pump only capable of manually injecting into the RCS and no HPSI pumps capable of automatically injecting into the RCS.	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. HPSI flow > 210 gpm and suction aligned to refueling water tank. AND RCS vent < 2.6 square inches established.	B.1 Initiate action to reduce flow to ≤ 210 gpm.	Immediately
C. One or more HPSI loop MOVs capable of automatically aligning HPSI pump flow to the RCS.	C.1 Initiate action to verify HPSI loop MOVs are only capable of manually aligning HPSI pump flow to the RCS.	Immediately
D. One of two required PORVs inoperable in MODE 3 with any RCS cold leg temperature ≤ 365°F (Unit 1), ≤ 301°F (Unit 2), or MODE 4. AND RCS vent < 1.3 square inches established.	D.1 Restore required PORV to OPERABLE status.	5 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
E. One of two required PORVs inoperable in MODE 5 or 6. <u>AND</u> RCS vent < 1.3 square inches established.	E.1	Restore required PORV to OPERABLE status.	24 hours
F. Required Action and associated Completion Time of Condition D or E not met.	F.1	Depressurize RCS and establish RCS vent ≥ 1.3 square inches.	48 hours
G. All required PORVs inoperable.	G.1	Depressurize RCS and establish RCS vent of ≥ 2.6 square inches.	48 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.12.1	Verify a maximum of one HPSI pump is only capable of manually injecting into the RCS.	In accordance with the Surveillance Frequency Control Program
SR 3.4.12.2	Verify HPSI loop MOVs are only capable of manually aligning HPSI pump flow to the RCS.	In accordance with the Surveillance Frequency Control Program
SR 3.4.12.3	Verify required RCS vent is open.	In accordance with the Surveillance Frequency Control Program
SR 3.4.12.4	Verify PORV block valve is open for each required PORV.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.12.5	-------------------NOTE------------------- Not required to be performed until 12 hours after decreasing any RCS cold leg temperature to ≤ 365°F (Unit 1), ≤ 301°F (Unit 2). -- Perform CHANNEL FUNCTIONAL TEST on each required PORV, excluding actuation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.12.6	Perform CHANNEL CALIBRATION on each required PORV actuation channel.	In accordance with the Surveillance Frequency Control Program

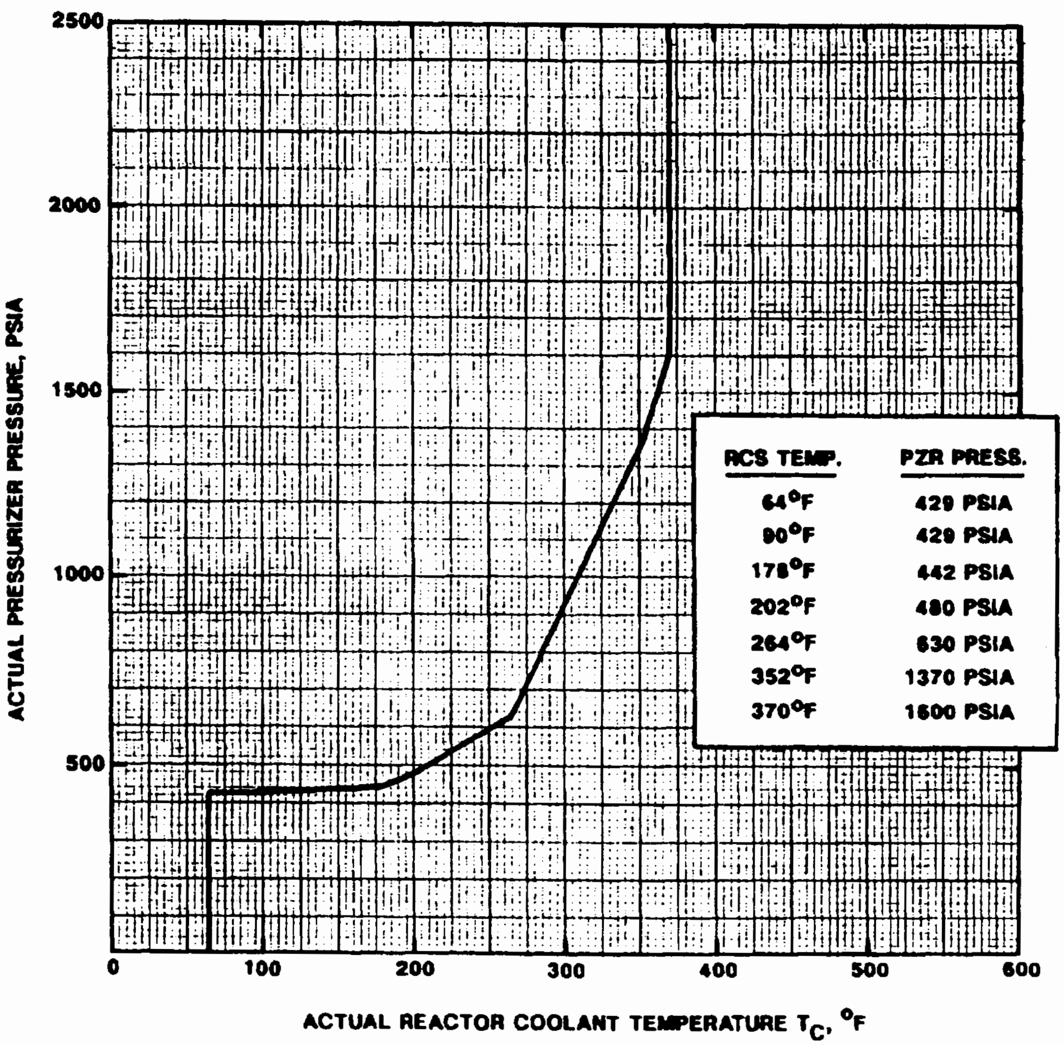

Figure 3.4-12-1
Calvert Cliffs Unit 1, for Fluence ≤ 4.49×10^{19} n/cm^2
Maximum PORV Opening Pressure vs Temperature

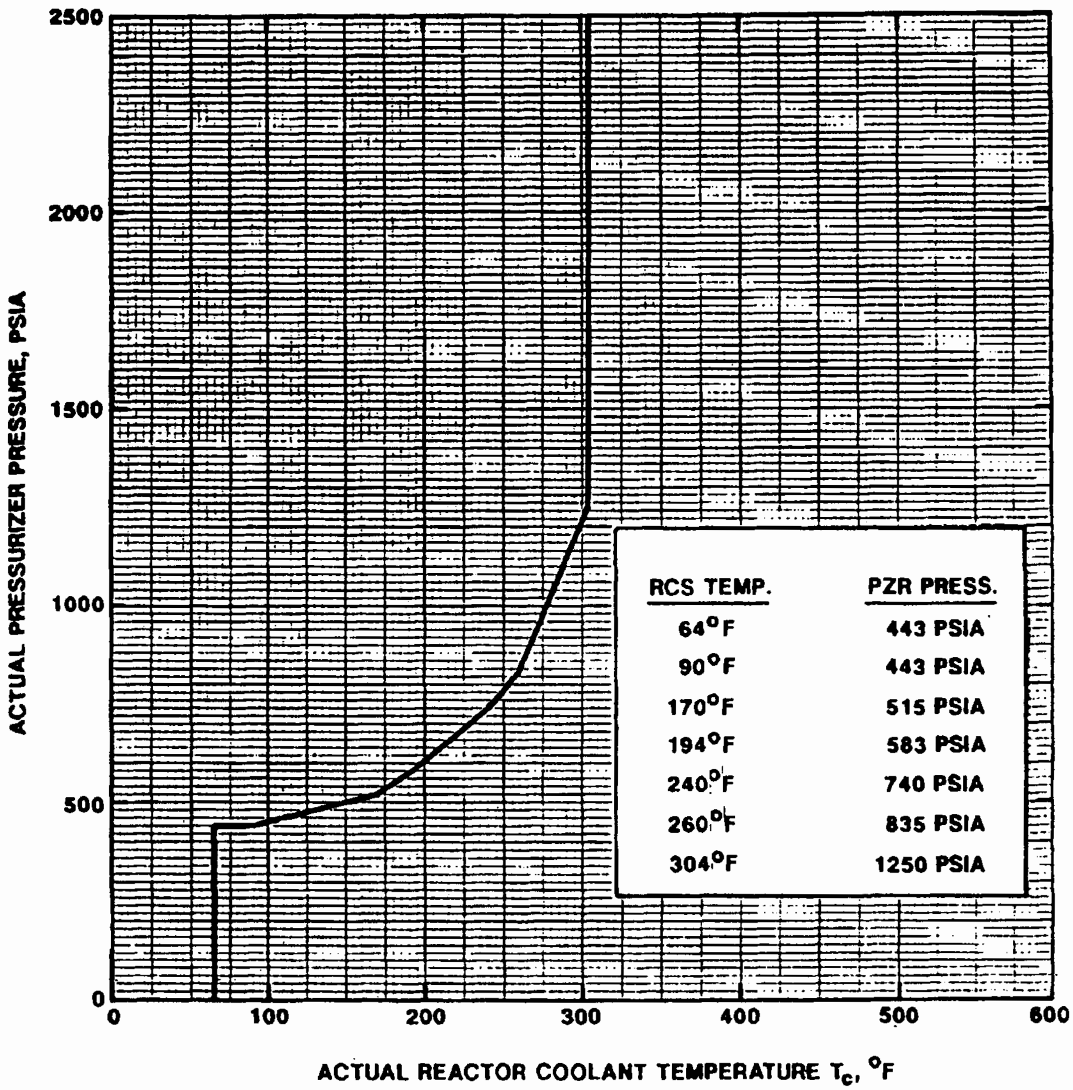

Figure 3.4-12-1
Calvert Cliffs Unit 2, for Fluence $\leq 4.0\text{x}10^{19}$ n/cm^2
Maximum PORV Opening Pressure vs Temperature

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.13 RCS Operational LEAKAGE

LCO 3.4.13 RCS operational LEAKAGE shall be limited to:

a. No pressure boundary LEAKAGE;

b. 1 gpm unidentified LEAKAGE;

c. 10 gpm identified LEAKAGE; and

d. 100 gallons per day primary to secondary LEAKAGE through any one steam generator (SG).

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Pressure boundary LEAKAGE exists.	A.1 Isolate affected component, pipe, or vessel from the RCS by use of a closed manual valve, closed and de-activated automatic valve, blind flange, or check valve.	4 hours
B. RCS operational LEAKAGE not within limits for reasons other than pressure boundary LEAKAGE or primary to secondary LEAKAGE.	B.1 Reduce LEAKAGE to within limits.	4 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time not met. OR Primary to secondary LEAKAGE not within limit.	C.1 Be in MODE 3. AND C.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.13.1	-----------------NOTES---------------- 1. Not required to be performed until 12 hours after establishment of steady state operation. 2. Not applicable to primary to secondary LEAKAGE. --------------------------------------- Verify RCS Operational LEAKAGE is within limits by performance of RCS water inventory balance.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.13.2	-------------------NOTE------------------- Not required to be performed until 12 hours after establishment of steady state operation. --	
	Verify primary to secondary LEAKAGE is ≤ 100 gallons per day through any one SG.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.14 RCS Leakage Detection Instrumentation

LCO 3.4.14 The following RCS leakage detection instrumentation shall be OPERABLE:

a. One containment sump level alarm; and

b. One containment atmosphere radioactivity monitor (gaseous or particulate).

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment sump level alarm inoperable.	A.1 --------NOTE-------- Not required until 12 hours after establishment of steady state operation. -------------------- Perform SR 3.4.13.1.	Once per 24 hours
	AND	
	A.2 Restore containment sump level alarm to OPERABLE status.	30 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required containment atmosphere radioactivity monitor inoperable.	B.1.1 Analyze grab samples of the containment atmosphere.	Once per 24 hours
	OR	
	B.1.2 --------NOTE-------- Not required until 12 hours after establishment of steady state operation. -------------------- Perform SR 3.4.13.1.	Once per 24 hours
	AND	
	B.2 Restore required containment atmosphere radioactivity monitor to OPERABLE status.	30 days
C. --------NOTE-------- Only applicable when the containment atmosphere gaseous radiation monitor is the only OPERABLE monitor. --------------------- Containment sump level alarm inoperable.	C.1 Analyze grab samples of the containment atmosphere.	Once per 12 hours
	AND	
	C.2 Restore containment sump level alarm to OPERABLE status.	7 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3. AND D.2 Be in MODE 5.	6 hours 36 hours
E. All required alarms and monitors inoperable.	E.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.14.1	Perform CHANNEL CHECK of the required containment atmosphere radioactivity monitor.	In accordance with the Surveillance Frequency Control Program
SR 3.4.14.2	Perform CHANNEL FUNCTIONAL TEST of the required containment atmosphere radioactivity monitor.	In accordance with the Surveillance Frequency Control Program
SR 3.4.14.3	Perform CHANNEL CALIBRATION of the required containment sump level alarm.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.14.4	Perform CHANNEL CALIBRATION of the required containment atmosphere radioactivity monitor.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.15 RCS Specific Activity

LCO 3.4.15 RCS DOSE EQUIVALENT I-131 and DOSE EQUIVALENT XE-133 specific activity shall be within limits.

APPLICABILITY: MODES 1, 2, 3, and 4

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. DOSE EQUIVALENT I-131 > 0.5 μCi/gm.	----------- NOTE ----------- LCO 3.0.4.c is applicable. ---------------------------	
	A.1 Verify DOSE EQUIVALENT I-131 ≤ 30 μCi/gm.	Once per 4 hours
	<u>AND</u>	
	A.2 Restore DOSE EQUIVALENT I-131 to within limit.	48 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. DOSE EQUIVALENT XE-133 > 630 μCi/gm.	-----------NOTE----------- LCO 3.0.4.c is applicable. -------------------------- B.1 Restore DOSE EQUIVALENT XE-133 to within limit.	 48 hours
C. Required Action and associated Completion Time of Condition A or B not met. OR DOSE EQUIVALENT I-131 > 30 μCi/gm.	C.1 Be in MODE 3 AND C.2 Be in MODE 5	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.15.1	Verify reactor coolant DOSE EQUIVALENT XE-133 specific activity ≤ 630 μCi/gm.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.15.2	Verify reactor coolant DOSE EQUIVALENT I-131 specific activity ≤ 0.5 μCi/gm.	In accordance with the Surveillance Frequency Control Program <u>AND</u> Between 2 and 6 hours after THERMAL POWER change of ≥ 15% RTP within a 1 hour period
SR 3.4.15.3	Deleted	

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.16 Special Test Exception (STE) RCS Loops - MODE 2

LCO 3.4.16 The requirements of LCO 3.4.4, "RCS Loops-MODES 1 and 2," and the listed requirements of LCO 3.3.1, "Reactor Protective System (RPS) Instrumentation-Operating," for the Reactor Coolant Flow-Low, Thermal Margin/Low Pressure, and Asymmetric Steam Generator Transient Functions may be suspended provided:

a. THERMAL POWER $\leq$ 5% RTP; and

b. The reactor trip setpoints of the OPERABLE Power Level-High channels are set $\leq$ 15% RTP.

APPLICABILITY: MODE 2, during startup and PHYSICS TESTS.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. THERMAL POWER not within limit.	A.1 Open reactor trip breakers.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.16.1 Verify THERMAL POWER $\leq$ 5% RTP.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.16.2	Perform a CHANNEL FUNCTIONAL TEST on each logarithmic and power level neutron flux monitoring channel.	12 hours prior to initiating startup or PHYSICS TESTS

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.17 Special Test Exception (STE) RCS Loops - MODES 4 and 5

LCO 3.4.17 The reactor coolant circulation requirements of LCO 3.4.6, "RCS Loops-MODE 4," LCO 3.4.7, "RCS Loops-MODE 5, Loops Filled," and LCO 3.4.8, "RCS Loops-MODE 5, Loops Not Filled" may be suspended during the time intervals required: 1) for local leak rate testing of containment penetration number 41 pursuant to the requirements of the Containment Leakage Rate Testing Program; and 2) to permit maintenance on valves located in the common shutdown cooling suction line or on the shutdown cooling flow control valve (CV-306) provided:

a. Xenon reactivity is ≤ 0.1% Δk/k and is approaching stability;

b. No operations are permitted which could cause introduction of coolant into the RCS with boron concentration less than that required to meet the SDM of LCO 3.1.1;

c. The charging pumps are deenergized and the charging flow paths are closed; and

d. The SDM requirement of LCO 3.1.1 is verified every 8 hours.

APPLICABILITY: MODES 4 and 5.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more requirements of the Limiting Condition for Operation not met.	A.1 Suspend activities being performed under this Special Test Exception.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.4.17.1 Verify xenon reactivity is within limits.	Once within 1 hour prior to suspending the reactor coolant circulation requirements of LCO 3.4.6, LCO 3.4.7, and LCO 3.4.8
SR 3.4.17.2 Verify charging pumps de-energized.	In accordance with the Surveillance Frequency Control Program
SR 3.4.17.3 Verify charging flow paths isolated.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.17.4	Perform SR 3.1.1.1.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.18 Steam Generator (SG) Tube Integrity

LCO 3.4.18 SG tube integrity shall be maintained.

<u>AND</u>

All SG tubes satisfying the tube plugging criteria shall be plugged in accordance with the Steam Generator Program.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

------------------------------------ NOTES ------------------------------------
Separate Condition entry is allowed for each SG tube.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more SG tubes satisfying the tube plugging criteria and not plugged in accordance with the Steam Generator Program.	A.1 Verify tube integrity of the affected tube(s) is maintained until the next refueling outage or SG tube inspection.	7 days
	<u>AND</u>	
	A.2 Plug the affected tube(s) in accordance with the Steam Generator Program.	Prior to entering MODE 4 following the next refueling outage or SG tube inspection

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met. OR SG tube integrity not maintained.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.18.1	Verify SG tube integrity in accordance with the Steam Generator Program.	In accordance with the Steam Generator Program
SR 3.4.18.2	Verify that each inspected SG tube that satisfies the tube plugging criteria is plugged in accordance with the Steam Generator Program.	Prior to entering MODE 4 following a SG tube inspection

3.5 EMERGENCY CORE COOLING SYSTEM (ECCS)

3.5.1 Safety Injection Tanks (SITs)

LCO 3.5.1 Four SITs shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One SIT inoperable due to boron concentration not within limits.	A.1 Restore boron concentration to within limits.	72 hours
B. One SIT inoperable for reasons other than Condition A.	B.1 Restore SIT to OPERABLE status.	1 hour
C. Required Action and associated Completion Time of Condition A or B not met.	C.1 Be in MODE 3. <u>AND</u> C.2 Be in MODE 4.	6 hours 12 hours
D. Two or more SITs inoperable.	D.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.1.1	Verify each SIT isolation valve is fully open.	In accordance with the Surveillance Frequency Control Program
SR 3.5.1.2	Verify borated water volume in each SIT is $\geq$ 1113 cubic feet (187 inches) and $\leq$ 1179 cubic feet (199 inches).	In accordance with the Surveillance Frequency Control Program
SR 3.5.1.3	Verify nitrogen cover pressure in each SIT is $\geq$ 200 psig and $\leq$ 250 psig.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.1.4	Verify boron concentration in each SIT is ≥ 2300 ppm and ≤ 2700 ppm.	In accordance with the Surveillance Frequency Control Program <u>AND</u> -----NOTE ---- Only required to be performed for affected SIT -------------- Once within 1 hour prior to each solution volume increase of ≥ 1% of tank volume
SR 3.5.1.5	Verify power is removed from each SIT isolation valve operator when pressurizer pressure is ≥ 2000 psig.	In accordance with the Surveillance Frequency Control Program

3.5 EMERGENCY CORE COOLING SYSTEM (ECCS)

3.5.2 ECCS - Operating

LCO 3.5.2 Two ECCS trains shall be OPERABLE.

APPLICABILITY: MODES 1 and 2,
MODE 3 with pressurizer pressure $\geq$ 1750 psia.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more trains inoperable. AND At least 100% of the ECCS flow equivalent to a single OPERABLE ECCS train available.	A.1 Restore train(s) to OPERABLE status.	72 hours OR In accordance with the Risk Informed Completion Time Program
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Reduce pressurizer pressure to < 1750 psia.	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.2.1	Verify the following valves are in the listed position with power to the valve operator removed. <u>Valve Number</u> <u>Position</u> <u>Function</u> MOV-659 Open Mini-flow Isolation MOV-660 Open Mini-flow Isolation CV-306 Open Low Pressure Safety Injection Flow Control	In accordance with the Surveillance Frequency Control Program
SR 3.5.2.2	-------------------NOTE------------------- Not required to be met for system vent flow paths opened under administrative control. -- Verify each ECCS manual, power-operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.5.2.3	Verify each high pressure safety injection - and low pressure safety injection pump's developed head at the test flow point is greater than or equal to the required developed head.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.5.2.4	Deleted	

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.2.5	Verify each ECCS automatic valve that is not locked, sealed, or otherwise secured in position, in the flow path actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.5.2.6	Verify each ECCS pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.5.2.7	Verify each low pressure safety injection pump stops on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.5.2.8	Deleted.	
SR 3.5.2.9	Verify the Shutdown Cooling System open-permissive interlock prevents the Shutdown Cooling System suction isolation valves from being opened with a simulated or actual Reactor Coolant System pressure signal of $\geq$ 309 psia.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.2.10	Verify ECCS locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

3.5 EMERGENCY CORE COOLING SYSTEM (ECCS)

3.5.3 ECCS - Shutdown

LCO 3.5.3 One high pressure safety injection (HPSI) train shall be OPERABLE.

---------------------------- NOTE ----------------------------
When Reactor Coolant System cold leg temperatures are < 385°F (Unit 1), < 325°F (Unit 2) during heatup or cooldown and when ≤ 365°F (Unit 1), ≤ 301°F (Unit 2), during other conditions, the HPSI train is not required to be capable of automatically starting on an actuation signal.

APPLICABILITY: MODE 3 with pressurizer pressure < 1750 psia,
MODE 4.

ACTIONS

------------------------------------NOTE------------------------------------
LCO 3.0.4.b is not applicable to ECCS High Pressure Safety Injection subsystem when entering MODE 4.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required HPSI train inoperable.	A.1 Restore required HPSI train to OPERABLE status.	1 hour
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 5.	24 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.5.3.1 The HPSI train related portions of the train following Surveillance Requirements are applicable: SR 3.5.2.1 SR 3.5.2.5 SR 3.5.2.2 SR 3.5.2.6 SR 3.5.2.3 SR 3.5.2.10	In accordance with applicable Surveillance Requirements

3.5 EMERGENCY CORE COOLING SYSTEM (ECCS)

3.5.4 Refueling Water Tank (RWT)

LCO 3.5.4 The RWT shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. RWT boron concentration not within limits. OR RWT borated water temperature not within limits.	A.1 Restore RWT to OPERABLE status.	8 hours
B. RWT inoperable for reasons other than Condition A.	B.1 Restore RWT to OPERABLE status.	1 hour
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. AND C.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.4.1	------------------NOTE------------------ Only required to be performed when ambient air temperature is < 40°F. -- Verify RWT borated water temperature is ≥ 40°F.	In accordance with the Surveillance Frequency Control Program
SR 3.5.4.2	------------------NOTES------------------ 1. Only required to be met in MODE 1. 2. Only required to be performed when ambient air temperature is > 100°F. -- Verify RWT borated water temperature is ≤ 100°F.	In accordance with the Surveillance Frequency Control Program
SR 3.5.4.3	Verify RWT borated water volume is ≥ 412,350 gallons.	In accordance with the Surveillance Frequency Control Program
SR 3.5.4.4	Verify RWT boron concentration is ≥ 2300 ppm and ≤ 2700 ppm.	In accordance with the Surveillance Frequency Control Program

3.5 EMERGENCY CORE COOLING SYSTEM (ECCS)

3.5.5 Sodium Tetraborate (STB)

LCO 3.5.5 The STB baskets shall contain ≥ 13,750 lbm of STB.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. STB not within limits.	A.1 Restore STB to within limits.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.5.1	Verify the STB baskets contain ≥ 13,750 lbm of equivalent weight sodium tetraborate decahydrate.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.5.2	Verify that a sample from the STB baskets provides adequate pH adjustment of water borated to be representative of a post-loss-of-coolant accident sump condition.	In accordance with the Surveillance Frequency Control Program

3.6 CONTAINMENT SYSTEMS

3.6.1 Containment

LCO 3.6.1 Containment shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment inoperable.	A.1 Restore containment to OPERABLE status.	1 hour
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.1.1	Perform required visual examinations and leakage rate testing except for containment air lock testing, in accordance with the Containment Leakage Rate Testing Program.	In accordance with the Containment Leakage Rate Testing Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.1.2	Verify containment structural integrity in accordance with the Containment Tendon Surveillance Program.	In accordance with the Containment Tendon Surveillance Program

3.6 CONTAINMENT SYSTEMS

3.6.2 Containment Air Locks

LCO 3.6.2 Two containment air locks shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

------------------------------------ NOTES ------------------------------------

1. Entry and exit is permissible to perform repairs on the affected air lock components.

2. Separate Condition entry is allowed for each air lock.

3. Enter applicable Conditions and Required Actions of LCO 3.6.1, "Containment," when leakage results in exceeding the overall containment leakage rate acceptance criteria.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more containment air locks with one containment air lock door inoperable.	------------NOTES------------ 1. Required Actions A.1, A.2, and A.3 are not applicable if both doors in the same air lock are inoperable and Condition C is entered. 2. Entry and exit is permissible for 7 days under administrative controls if both air locks are inoperable. ----------------------------	
	A.1 Verify the OPERABLE door is closed in the affected air lock.	1 hour
	<u>AND</u>	
	A.2 Lock the OPERABLE door closed in the affected air lock.	24 hours
	<u>AND</u>	

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.3 --------NOTE------- Air lock doors in high radiation areas may be verified locked closed by administrative means. --------------------- Verify the OPERABLE door is locked closed in the affected air lock.	 Once per 31 days
B. One or more containment air locks with containment air lock interlock mechanism inoperable.	-----------NOTES----------- 1. Required Actions B.1, B.2, and B.3 are not applicable if both doors in the same air lock are inoperable and Condition C is entered. 2. Entry and exit of containment is permissible under the control of a dedicated individual. --------------------------- B.1 Verify an OPERABLE door is closed in the affected air lock. AND	 1 hour

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. (continued)	B.2	Lock an OPERABLE door closed in the affected air lock.	24 hours
	AND		
	B.3	--------NOTE ------- Air lock doors in high radiation areas may be verified locked closed by administrative means. --------------------	
		Verify an OPERABLE door is locked closed in the affected air lock.	Once per 31 days
C. One or more containment air locks inoperable for reasons other than Condition A or B.	C.1	Initiate action to evaluate overall containment leakage rate per LCO 3.6.1.	Immediately
	AND		
	C.2	Verify a door is closed in the affected air lock.	1 hour
	AND		

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.3 Restore air lock to OPERABLE status.	24 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3. <u>AND</u> D.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.2.1	------------------ NOTES ------------------ 1. An inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test. 2. Results shall be evaluated against acceptance criteria applicable to SR 3.6.1.1. --- Perform required air lock leakage rate testing in accordance with the Containment Leakage Rate Testing Program.	In accordance with the Containment Leakage Rate Testing Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.2.2	Verify only one door in the air lock can be opened at a time.	In accordance with the Surveillance Frequency Control Program

3.6 CONTAINMENT SYSTEMS

3.6.3 Containment Isolation Valves

LCO 3.6.3 Each containment isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

------------------------------------ NOTES ------------------------------------

1. Penetration flow paths may be unisolated intermittently under administrative controls.

2. Separate Condition entry is allowed for each penetration flow path.

3. Enter applicable Conditions and Required Actions for system(s) made inoperable by containment isolation valves.

4. Enter applicable Conditions and Required Actions of LCO 3.6.1, "Containment," when leakage results in exceeding the overall containment leakage rate acceptance criteria.

5. Shutdown cooling isolation valves may be opened when RCS temperature is < 300°F to establish shutdown cooling flow.

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. -------- NOTE -------- Only applicable to penetration flow paths with two containment isolation valves and not a closed system. --------------------- One or more penetration flow paths with one containment isolation valve inoperable.	A.1	Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.	4 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
	<u>AND</u>		
	A.2	--------NOTE ------- Isolation devices in high radiation areas may be verified by use of administrative means. -------------------- Verify the affected penetration flow path is isolated.	Once per 31 days following isolation for isolation devices outside containment <u>AND</u> Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. -------- NOTE -------- Only applicable to penetration flow paths with two containment isolation valves and not a closed system. --------------------- One or more penetration flow paths with two containment isolation valves inoperable.	B.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.	1 hour

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. --------NOTE-------- Only applicable to penetration flow paths with one or more containment isolation valves and a closed system. --------------------- One or more penetration flow paths with one or more containment isolation valves inoperable.	C.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange. AND C.2 --------NOTE ------- Isolation devices in high radiation areas may be verified by use of administrative means. -------------------- Verify the affected penetration flow path is isolated.	72 hours OR In accordance with the Risk Informed Completion Time Program Once per 31 days following isolation
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3. AND D.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.3.1	Verify each 4 inch containment vent valve is closed except when the 4 inch containment vent valves are open for pressure control, ALARA or air quality considerations for personnel entry, or for Surveillances that require the valves to be open.	In accordance with the Surveillance Frequency Control Program
SR 3.6.3.2	-------------------NOTE------------------- Valves and blind flanges in high radiation areas may be verified by use of administrative means. -- Verify each containment isolation manual valve and blind flange that is located outside containment and not locked, sealed, or otherwise secured and is required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.3.3	-------------------NOTE------------------- Valves and blind flanges in high radiation areas may be verified by use of administrative means. -- Verify each containment isolation manual valve and blind flange that is located inside containment and not locked, sealed, or otherwise secured and required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls.	Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days
SR 3.6.3.4	Verify the isolation time of each automatic power-operated containment isolation valve is within limits.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.6.3.5	Verify each automatic containment isolation valve that is not locked, sealed, or otherwise secured in position, actuates to the isolation position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

3.6 CONTAINMENT SYSTEMS

3.6.4 Containment Pressure

LCO 3.6.4 Containment pressure shall be ≥ -1.0 psig and ≤ 1.0 psig.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment pressure not within limits.	A.1 Restore containment pressure to within limits.	1 hour
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. <u>AND</u> B.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1	Verify containment pressure is within limits.	In accordance with the Surveillance Frequency Control Program

3.6 CONTAINMENT SYSTEMS

3.6.5 Containment Air Temperature

LCO 3.6.5 Containment average air temperature shall be ≤ 120°F.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment average air temperature not within limit.	A.1 Restore containment average air temperature to within limit.	8 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.5.1	Verify containment average air temperature is within limit.	In accordance with the Surveillance Frequency Control Program

3.6 CONTAINMENT SYSTEMS

3.6.6 Containment Spray and Cooling Systems

LCO 3.6.6 Two containment spray trains and two containment cooling trains shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.
MODE 3, except containment spray is not required to be OPERABLE when pressurizer pressure is < 1750 psia.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One containment spray train inoperable.	A.1 Restore containment spray train to OPERABLE status.	72 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
B. One containment cooling train inoperable.	B.1 Restore containment cooling train to OPERABLE status.	7 days <u>OR</u> In accordance with the Risk Informed Completion Time Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. --------NOTE-------- Not applicable when second containment spray train intentionally made inoperable. --------------------- Two containment spray trains inoperable.	C.1 Verify LCO 3.7.8, "CREVS," is met. <u>AND</u> C.2 Restore at least one containment spray train to OPERABLE status.	1 hour 24 hours
D. Two containment cooling trains inoperable.	D.1 Restore one containment cooling train to OPERABLE status.	72 hours
E. Required Action and associated Completion Time not met.	E.1 Be in MODE 3. <u>AND</u> E.2 Be in MODE 4.	6 hours 12 hours
F. Any combination of three or more trains inoperable.	F.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.6.6.1	------------------NOTE------------------ Not required to be met for system vent flow paths opened under administrative control. -- Verify each containment spray manual, power-operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.2	Operate each containment cooling train fan unit for ≥ 15 minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.3	Verify each containment cooling train cooling water flow rate is ≥ 2000 gpm to each fan cooler.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.4	Verify each containment spray pump's developed head at the flow test point is greater than or equal to the required developed head.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.6.6.5	Verify each automatic containment spray valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.6.6	Verify each containment spray pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.7	Verify each containment cooling train starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.8	Verify each spray nozzle is unobstructed.	Following maintenance that could result in nozzle blockage
SR 3.6.6.9	Verify containment spray locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

3.6 CONTAINMENT SYSTEMS

3.6.8 Iodine Removal System (IRS)

LCO 3.6.8 Three IRS trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One IRS train inoperable.	A.1 Restore IRS train to OPERABLE status.	7 days
B. -------- NOTE -------- Not applicable when the second IRS train intentionally made inoperable. --------------------- Two IRS trains inoperable.	B.1 Verify at least one train of containment spray is OPERABLE. <u>AND</u> B.2 Restore one IRS train to OPERABLE status.	1 hour 24 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. <u>AND</u> C.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.8.1	Operate each IRS train for ≥ 15 minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.6.8.2	Perform required IRS filter testing in accordance with the Ventilation Filter Testing Program.	In accordance with the Ventilation Filter Testing Program
SR 3.6.8.3	Verify each IRS train actuates on an actual or simulated actuation signal, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.	In accordance with the Surveillance Frequency Control Program

3.6 CONTAINMENT SYSTEMS

3.6.9 Containment Emergency Sump

LCO 3.6.9 The Containment emergency sump shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment emergency sump inoperable due to containment accident generated and transported debris exceeding the analyzed limits.	A.1 Initiate action to mitigate containment accident generated and transported debris.	Immediately
	<u>AND</u>	
	A.2 Perform SR 3.4.13.1.	Once per 24 hours
	<u>AND</u>	
	A.3 Restore the containment emergency sump to OPERABLE status.	90 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Containment emergency sump inoperable for reasons other than Condition A.	B.1 -----NOTES------- 1. Enter applicable Conditions and Required Actions of LCO 3.5.2, "ECCS - Operating," and LCO 3.5.3, "ECCS - Shutdown," for emergency core cooling trains made inoperable by the containment emergency sump. 2. Enter applicable Conditions and Required Actions of LCO 3.6.6, "Containment Spray and Cooling Systems," for containment spray trains made inoperable by the containment emergency sump. --------------------- Restore the containment emergency sump to OPERABLE status.	72 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. <u>AND</u> C.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.9.1	Verify, by visual inspection, the containment emergency sump does not show structural damage, abnormal corrosion, or debris blockage.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.1 Main Steam Safety Valves (MSSVs)

LCO 3.7.1 The MSSVs shall be OPERABLE as specified in Table 3.7.1-1 and Table 3.7.1-2.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

-----------------------------------NOTE-----------------------------------
Separate Condition entry is allowed for each MSSV.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required MSSVs inoperable.	A.1 Reduce power to less than or equal to the applicable % RTP listed in Table 3.7.1-1.	4 hours
	<u>AND</u>	
	A.2 Reduce the Power Level-High Trip setpoint in accordance with Table 3.7.1-1.	36 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time not met. OR One or more steam generators with less than five MSSVs OPERABLE.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.1.1	-------------------NOTE------------------- Only required to be performed in MODES 1 and 2. -- Verify each required MSSV lift setpoint per Table 3.7.1-2 in accordance with the INSERVICE TESTING PROGRAM. Following testing, lift settings shall be within ± 1%.	In accordance with the INSERVICE TESTING PROGRAM

Table 3.7.1-1
Power Level-High Trip Setpoint versus
OPERABLE Main Steam Safety Valves

MINIMUM NUMBER OF MSSVs PER STEAM GENERATOR REQUIRED OPERABLE	MAXIMUM POWER (% RTP)	MAXIMUM ALLOWABLE POWER LEVEL-HIGH TRIP SETPOINT (% RTP)
8	100	107
7	93	93
6	79	79
5	66	66

Table 3.7.1-2
Main Steam Safety Valve Lift Settings

VALVE NUMBER		LIFT SETTING[1] (psig)
Steam Generator #1	Steam Generator #2	
RV-3992	RV-4000	935-1005
RV-3993	RV-4001	935-1005
RV-3994	RV-4002	935-1035
RV-3995	RV-4003	935-1035
RV-3996	RV-4004	935-1050
RV-3997	RV-4005	935-1050
RV-3998	RV-4006	935-1050
RV-3999	RV-4007	935-1050

(1) Lift settings for a given steam line are also acceptable if any two valves lift between 935 and 1005 psig, any two other valves lift between 935 and 1035 psig, and the four remaining valves lift between 935 and 1050 psig.

3.7 PLANT SYSTEMS

3.7.2 Main Steam Isolation Valves (MSIVs)

LCO 3.7.2 Two MSIVs shall be OPERABLE.

APPLICABILITY: MODE 1,
MODES 2 and 3 except when all MSIVs are closed.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One MSIV inoperable in MODE 1.	A.1 Restore MSIV to OPERABLE status.	8 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 2.	6 hours
C. -------- NOTE -------- Separate Condition entry is allowed for each MSIV. --------------------- One or more MSIVs inoperable in MODE 2 or 3.	C.1 Close MSIV. <u>AND</u> C.2 Verify MSIV is closed.	8 hours Once per 7 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition C not met.	D.1 Be in MODE 3. AND D.2 Be in MODE 4.	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.2.1	Verify closure time of each MSIV is within limits.	In accordance with the INSERVICE TESTING PROGRAM

3.7 PLANT SYSTEMS

3.7.3 Auxiliary Feedwater (AFW) System

LCO 3.7.3 Two AFW trains shall be OPERABLE.

------------------------------ NOTE ------------------------------
AFW trains required for OPERABILITY may be taken out of service under administrative control for the performance of periodic testing.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

------------------------------ NOTE ------------------------------
LCO 3.0.4.b is not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One steam-driven AFW pump inoperable.	A.1 Align remaining OPERABLE steam-driven pump to automatic initiating status.	72 hours
	<u>AND</u>	
	A.2 Restore steam-driven pump to OPERABLE status.	7 days <u>OR</u> In accordance with the Risk Informed Completion Time Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. One motor-driven AFW pump inoperable.	B.1	Align standby steam-driven pump to automatic initiating status.	72 hours
	<u>AND</u>		
	B.2	Restore motor-driven pump to OPERABLE status.	7 days <u>OR</u> In accordance with the Risk Informed Completion Time Program
C. Two AFW pumps inoperable.	C.1	Align remaining OPERABLE pump to automatic initiating status.	1 hour
	<u>AND</u>		
	C.2	Verify the other unit's motor-driven AFW pump is OPERABLE.	1 hour
	<u>AND</u>		
	C.3	Verify, by administrative means, the cross-tie valve to the opposite unit is OPERABLE.	1 hour
	<u>AND</u>		

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.4 Restore one AFW pump to OPERABLE status.	72 hours OR In accordance with the Risk Informed Completion Time Program
D. One AFW train inoperable for reasons other than Condition A, B, or C.	D.1 Restore AFW train to OPERABLE status.	72 hours OR In accordance with the Risk Informed Completion Time Program
E. Required Action and associated Completion Time of Condition A, B, C, or D not met.	E.1 Be in MODE 3. AND E.2 Be in MODE 4.	6 hours 12 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Two AFW trains inoperable.	F.1 --------NOTE ------- LCO 3.0.3 and all other LCO Required Actions requiring MODE changes are suspended until one AFW train is restored to OPERABLE status. --------------------	
	Initiate action to restore one AFW train to OPERABLE status.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.3.1	Verify each AFW manual, power-operated, and automatic valve in each water flow path and in both steam supply flow paths to the steam turbine-driven pumps, that is not locked, sealed, or otherwise secured in position, is in the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.7.3.2	Cycle each testable, remote-operated valve that is not in its operating position.	In accordance with the INSERVICE TESTING PROGRAM

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.3.3	-------------------NOTE------------------- Not required to be performed for the turbine-driven AFW pump until 24 hours after reaching 800 psig in the steam generators. -- Verify the developed head of each AFW pump at the flow test point is greater than or equal to the required developed head.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.7.3.4	-------------------NOTE------------------- Not required to be performed for the turbine-driven AFW pump until 24 hours after reaching 800 psig in the steam generators. -- Verify each AFW automatic valve that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.3.5	-------------------NOTE------------------- Not required to be performed for the turbine-driven AFW pump until 24 hours after reaching 800 psig in the steam generators. -- Verify each AFW pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.3.6	-------------------NOTE------------------- Not required to be performed for the AFW train with the turbine-driven AFW pump until 24 hours after reaching 800 psig in the steam generators. -- Verify the AFW system is capable of providing a minimum of 300 gpm nominal flow to each flow leg.	In accordance with the Surveillance Frequency Control Program
SR 3.7.3.7	Verify the proper alignment of the required AFW flow paths by verifying flow from the condensate storage tank to each steam generator.	Prior to entering MODE 2 whenever unit has been in MODE 5 or 6 for > 30 days

3.7 PLANT SYSTEMS

3.7.4 Condensate Storage Tank (CST)

LCO 3.7.4 The CST shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. CST inoperable.	A.1 Verify OPERABILITY of backup water supply. <u>AND</u> A.2 Restore CST to OPERABLE status.	4 hours <u>AND</u> Once per 12 hours thereafter 7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. <u>AND</u> B.2 Be in MODE 4.	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.4.1	Verify CST usable volume is $\geq$ 150,000 gallons per Unit.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.5 Component Cooling (CC) System

LCO 3.7.5 Two CC loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CC loop inoperable.	A.1 --------NOTE ------- Enter applicable Conditions and Required Actions of LCO 3.4.6, "RCS Loops--MODE 4," for shutdown cooling made inoperable by CC. -------------------- Restore CC loop to OPERABLE status.	 72 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. <u>AND</u> B.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.5.1	-------------------NOTE------------------- Isolation of CC flow to individual components does not render the CC System inoperable. -- Verify each CC manual, power-operated, and automatic valve in the flow path servicing safety-related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.7.5.2	Verify each CC automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.5.3	Verify each CC pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.6 Service Water (SRW) System

LCO 3.7.6 Two SRW subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One SRW heat exchanger inoperable.	A.1 Isolate flow to one of the associated containment cooling units. --------NOTE ------- Enter applicable Conditions and Required Actions of LCO 3.6.6, "Containment Spray and Cooling Systems," for one containment cooling train made inoperable by the heat exchanger. -------------------- AND	1 hour

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)	A.2	Restore heat exchanger to operable status.	7 days OR In accordance with the Risk Informed Completion Time Program
B. One SRW subsystem inoperable.	B.1	--------NOTE------- Enter applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources--Operating," for diesel generator made inoperable by SRW. -------------------- Restore SRW subsystem to OPERABLE status.	72 hours OR In accordance with the Risk Informed Completion Time Program
C. Required Action and associated Completion Time of Condition A or B not met.	C.1	Be in MODE 3.	6 hours
	AND		
	C.2	Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.6.1	-------------------NOTE------------------- Isolation of SRW flow to individual components does not render SRW inoperable. -- Verify each SRW manual, power-operated, and automatic valve in the flow path servicing safety-related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.7.6.2	Verify each SRW automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.6.3	Verify each SRW pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.7 Saltwater (SW) System

LCO 3.7.7 Two SW subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One SW subsystem inoperable.	A.1 ------- NOTES ------- 1. Enter applicable Conditions and Required Actions of LCO 3.8.1, "AC Sources-Operating," for emergency diesel generator made inoperable by SW System. 2. Enter application Conditions and Required Actions of LCO 3.4.6, "RCS Loops-MODE 4," for shutdown cooling made inoperable by SW System. --------------------	

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	Restore SW subsystem to OPERABLE status.	72 hours OR In accordance with the Risk Informed Completion Time Program
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.7.1	------------------NOTE------------------ Isolation of SW System flow to individual components does not render SW inoperable. -- Verify each SW System manual, power-operated, and automatic valve in the flow path servicing safety-related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.7.2	Verify each SW System automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.7.3	Verify each SW System pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.8 Control Room Emergency Ventilation System (CREVS)

LCO 3.7.8 Two CREVS trains shall be OPERABLE.

------------------------------------ NOTES ------------------------------------

1. Only one CREVS redundant component is required to be OPERABLE during movement of irradiated fuel assemblies when both Units are in MODE 5 or 6, or defueled.

2. Only one CREVS train is required to be OPERABLE for the movement of irradiated fuel assemblies.

3. The control room envelope (CRE) boundary may be opened intermittently under administrative control.

APPLICABILITY: MODES 1, 2, 3, 4,
During movement of irradiated fuel assemblies.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Toilet area exhaust isolation valve inoperable.	A.1 Restore valve to OPERABLE status.	24 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One or more CREVS trains inoperable due to inoperable CRE boundary in MODE 1, 2, 3, or 4.	B.1 Initiate action to implement mitigating actions.	Immediately
	AND	
	B.2 Verify mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits.	24 hours
	AND	
	B.3 Restore CRE boundary to OPERABLE status.	90 days
C. One CREVS train inoperable for reasons other than Condition A or B in MODE 1, 2, 3, or 4.	C.1 Restore CREVS train to OPERABLE status.	7 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. -------- NOTE -------- Not applicable when second CREVS train intentionally made inoperable. --------------------- Two CREVS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.	D.1 Initiate action to implement mitigating actions. <u>AND</u> D.2 Verify LCO 3.4.15, "RCS Specific Activity," is met. <u>AND</u> D.3 Restore at least one CREVS train to OPERABLE status.	Immediately 1 hour 24 hours
E. Required Action and associated Completion Time of Condition A not met during movement of irradiated fuel assemblies. <u>OR</u> One or more CREVS trains inoperable due to an inoperable CRE boundary during movement of irradiated fuel assemblies.	E.1 Suspend movement of irradiated fuel assemblies.	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Two CREVS trains inoperable for reasons other than Condition A or B during movement of irradiated fuel assemblies.	F.1 Suspend movement of irradiated fuel assemblies.	Immediately
G. Required Action and associated Completion Time of Condition A, B, C, or D not met in MODE 1, 2, 3, or 4.	G.1 Be in MODE 3. AND G.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.8.1	Operate each required CREVS filter train for ≥ 15 minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.7.8.2	Perform required CREVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.8.3	Verify each CREVS train actuates on an actual or simulated actuation signal, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.	In accordance with the Surveillance Frequency Control Program
SR 3.7.8.4	Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Envelope Habitability Program

3.7 PLANT SYSTEMS

3.7.9 Control Room Emergency Temperature System (CRETS)

LCO 3.7.9 Two CRETS trains shall be OPERABLE.

-------------------------------------NOTE-------------------------------------
Only one CRETS train is required to be OPERABLE for the movement of irradiated fuel assemblies.

APPLICABILITY: MODES 1, 2, 3, 4,
During movement of irradiated fuel assemblies.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CRETS train inoperable in MODE 1, 2, 3, or 4.	A.1 Restore CRETS train to OPERABLE status.	30 days
B. Required Action and associated Completion Time of Condition A not met in MODE 1, 2, 3, or 4.	B.1 Be in MODE 3. <u>AND</u> B.2 Be in MODE 5.	6 hours 36 hours
C. Two CRETS trains inoperable in MODE 1, 2, 3, 4 or during movement of irradiated fuel assemblies.	C.1 Enter LCO 3.0.3. <u>AND</u> C.2 Suspend movement of irradiated fuel assemblies.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.9.1	Verify each required CRETS train has the capability to maintain control room temperature within limits.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.11 Spent Fuel Pool Exhaust Ventilation System (SFPEVS)

LCO 3.7.11 The SFPEVS shall be OPERABLE and in operation.

APPLICABILITY: During movement of recently irradiated fuel assemblies in the Auxiliary Building.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One SFPEVS exhaust fan inoperable.	A.1 Verify OPERABLE SFPEVS train is in operation. <u>OR</u> A.2 Suspend movement of recently irradiated fuel assemblies in the Auxiliary Building.	Immediately Immediately
B. No OPERABLE SFPEVS train. <u>OR</u> No OPERABLE SFPEVS train in operation.	B.1 Suspend movement of recently irradiated fuel assemblies in the Auxiliary Building.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.11.1	Verify an OPERABLE SFPEVS train is in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.7.11.2	Deleted.	
SR 3.7.11.3	Verify each SFPEVS fan can maintain a measurable negative pressure with respect to adjacent areas.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.12 Penetration Room Exhaust Ventilation System (PREVS)

LCO 3.7.12 Two PREVS trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One PREVS train inoperable.	A.1 Restore PREVS train to OPERABLE status.	7 days
B. --------NOTE-------- Not applicable when second PREVS train intentionally made inoperable. --------------------- Two PREVS trains inoperable.	B.1 Verify at least one train of containment spray is OPERABLE. AND B.2 Restore at least one PREVS train to OPERABLE status.	1 hour 24 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. AND C.2 Be in MODE 4.	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.12.1	Operate each PREVS train for ≥ 15 minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.7.12.2	Verify required PREVS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.12.3	Verify each PREVS train actuates on an actual or simulated actuation signal, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.13 Spent Fuel Pool (SFP) Water Level

LCO 3.7.13 The SFP water level shall be ≥ 21.5 ft over the top of irradiated fuel assemblies seated in the storage racks, and ≥ 19.8 ft over the top of fuel assemblies seated on rack spacers in the storage racks for reconstitution activities.

APPLICABILITY: During movement of irradiated fuel assemblies in the SFP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. SFP water level not within limits.	A.1 --------NOTE ------- LCO 3.0.3 is not applicable. -------------------- Suspend movement of irradiated fuel assemblies in SFP and suspend reconstitution activities.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.13.1	Verify the SFP water level is ≥ 21.5 ft above the top of irradiated fuel assemblies seated in the storage racks.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.14 Secondary Specific Activity

LCO 3.7.14 The specific activity of the secondary coolant shall be $\leq$ 0.10 μCi/gm DOSE EQUIVALENT I-131.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Specific activity not within limit.	A.1 Be in MODE 3. AND A.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.7.14.1 Verify the specific activity of the secondary coolant is within limit.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.15 Main Feedwater Isolation Valves (MFIVs)

LCO 3.7.15 Two MFIVs shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

---NOTE---
Separate Condition entry is allowed for each valve.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more MFIVs inoperable.	A.1 Restore MFIV to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.15.1	Verify the closure time of each MFIV is in accordance with the INSERVICE TESTING PROGRAM.	In accordance with the INSERVICE TESTING PROGRAM

3.7 PLANT SYSTEMS

3.7.16 Spent Fuel Pool (SFP) Boron Concentration

LCO 3.7.16 Boron concentration of the SFP shall be ≥ 2000 ppm.

APPLICABILITY: When fuel assemblies are stored in the SFPs.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Spent Fuel Pool boron concentration not within limit.	----------- NOTE ------------ LCO 3.0.3 is not applicable. ----------------------------	
	A.1 Suspend movement of fuel assemblies in the SFPs.	Immediately
	<u>AND</u>	
	A.2 Initiate action to restore boron concentration to within limit.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.16.1	Verify boron concentration is greater than 2000 ppm.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.17 Spent Fuel Pool (SFP) Storage

LCO 3.7.17 The combination of initial nominal enrichment and burnup of each fuel assembly stored in the Unit 2 Spent Fuel Pool shall be in accordance with the following:

(a) Irradiated fuel assemblies may be stored in any rack location in the Unit 2 Spent Fuel Pool provided the combination of burnup and initial nominal enrichment is in the acceptable range of Figure 3.7.17-1, and

(b) Irradiated or unirradiated fuel assemblies with a combination of burnup and initial nominal enrichment that are not in the acceptable range of Figure 3.7.17-1 may be stored in the Unit 2 Spent Fuel Pool if surrounded on all four adjacent faces by empty rack cells or other non-reactive materials.

APPLICABILITY: Whenever any fuel assembly is stored in the Unit 2 Spent Fuel Pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of the LCO not met.	----------- NOTE ------------ LCO 3.0.3 is not applicable. -----------------------------	
	A.1 Initiate action to move the non-complying fuel assembly to an acceptable storage location.	Immediately

Correction letter of 2-3-2005

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.17.1	Verify by administrative means that the initial enrichment, burnup and storage location of the fuel assembly is in accordance with Figure 3.7.17-1.	Prior to storing the fuel assembly in the Unit 2 Spent Fuel Pool

Correction letter of 2-3-2005

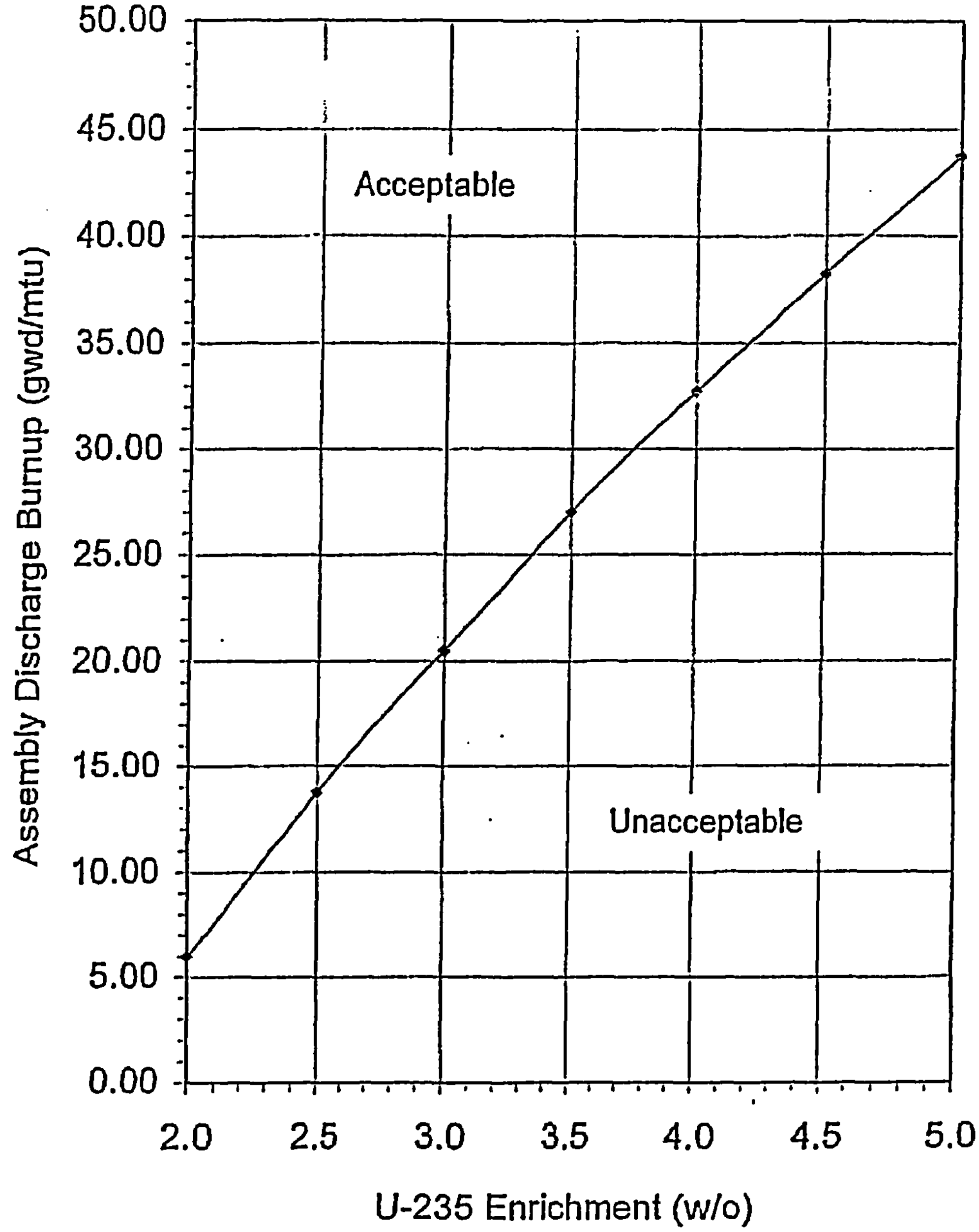

Figure 3.7.17-1
Discharge Burnup vs. Initial Enrichment for Unit 2 SFP

Correction letter of 2-3-2005

3.7 PLANT SYSTEMS

3.7.18 Atmospheric Dump Valves (ADVs)

LCO 3.7.18 Two ADV lines shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is being relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required ADV line inoperable.	A.1 Restore ADV line to OPERABLE status.	48 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
B. Two ADV lines inoperable.	B.1 Restore one ADV line to OPERABLE status.	1 hour
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3.	6 hours
	<u>AND</u>	
	C.2 Be in MODE 4 without reliance upon steam generator for heat removal.	24 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.18.1	Verify one complete cycle of each ADV.	In accordance with the Surveillance Frequency Control Program

3.8 ELECTRICAL POWER SYSTEMS

3.8.1 AC Sources-Operating

LCO 3.8.1 The following AC electrical sources shall be OPERABLE:

a. Two qualified circuits between the offsite transmission network and the onsite Class 1E AC Electrical Power Distribution System;

b. Two diesel generators (DGs) each capable of supplying one train of the onsite Class 1E AC Electrical Power Distribution System; and

c. One qualified circuit between the offsite transmission network and the other unit's onsite Class 1E AC electrical power distribution subsystems needed to supply power to the Control Room Emergency Ventilation System (CREVS) and Control Room Emergency Temperature System (CRETS) and one DG from the other unit capable of supplying power to the CREVS and CRETS.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

------------------------------------NOTE------------------------------------

LCO 3.0.4.b is not applicable to DGs.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One required LCO 3.8.1.a offsite circuit inoperable.	A.1	Perform SR 3.8.1.1 or SR 3.8.1.2 for required OPERABLE offsite circuits.	1 hour AND Once per 8 hours thereafter
	AND		
	A.2	Declare required feature(s) with no offsite power available inoperable when its redundant required feature(s) is inoperable.	24 hours from discovery of no offsite power to one train concurrent with inoperability of redundant required feature(s)
	AND		
	A.3	Restore required offsite circuit to OPERABLE status.	72 hours OR In accordance with the Risk Informed Completion Time Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. One LCO 3.8.1.b DG inoperable.	B.1	Verify both DGs on the other unit OPERABLE and OC DG available.	1 hour AND Once per 24 hours thereafter
	AND		
	B.2	Perform SR 3.8.1.1 or SR 3.8.1.2 for the OPERABLE required offsite circuit(s).	1 hour AND Once per 8 hours thereafter
	AND		
	B.3	Declare required feature(s) supported by the inoperable DG inoperable when its redundant required feature(s) is inoperable.	4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)
	AND		
	B.4.1	Determine OPERABLE DG(s) is not inoperable due to common cause failure. OR	24 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	B.4.2 Perform SR 3.8.1.3 for OPERABLE DG(s). <u>AND</u> B.5 Restore DG to OPERABLE status.	24 hours 14 days <u>OR</u> In accordance with the Risk Informed Completion Time Program
C. Required Action and associated Completion Time of Required Action B.1 not met.	C.1.1 Restore both DGs on the other unit to OPERABLE status and OC DG to available status. <u>OR</u> C.1.2 Restore DG to OPERABLE status.	72 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. LCO 3.8.1.c offsite circuit inoperable.	---------- NOTE ----------- Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems-Operating," when Condition D is entered with no AC power source to a train. -------------------------	
	D.1 Perform SR 3.8.1.1 or SR 3.8.1.2 for required OPERABLE offsite circuit(s).	1 hour <u>AND</u> Once per 8 hours thereafter
	<u>AND</u>	
	D.2 Declare, CREVS or CRETS with no offsite power available inoperable when the redundant CREVS or CRETS is inoperable.	24 hours from discovery of no offsite power to one train concurrent with inoperability of redundant required feature(s)
	<u>AND</u>	
	D.3 Declare CREVS and CRETS supported by the inoperable offsite circuit inoperable.	72 hours*

*Or 14 days, once during each applicable 2019 and 2020 Refuel Outage, for the connection of the new P-13000 Service Transformer.

Prior to entry into the 14-day Completion Time, the OC DG and the SMECO 69 kV Line shall be verified available. During the 14-day Completion Time, the OC DG and SMECO 69 kV Line shall be verified available once per shift.

If both the OC DG and SMECO 69 kV Line become un-available during the 14-day Completion Time, either the OC DG or the SMECO 69 kV Line shall be restored to available status within 24 hours, or the Unit shall be brought to MODE 3 within 6 hours and MODE 5 within 36 hours.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. LCO 3.8.1.c DG inoperable.	----------- NOTE ------------ Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems-Operating," when Condition E is entered with no AC power source to a train. ---------------------------	
	E.1 Verify both LCO 3.8.1.b DGs OPERABLE, the other unit's DG OPERABLE and the OC DG available.	1 hour AND Once per 24 hours thereafter
	AND	
	E.2 Perform SR 3.8.1.1 or SR 3.8.1.2 for the OPERABLE required offsite circuit(s).	1 hour AND Once per 8 hours thereafter
	AND	
	E.3 Declare CREVS or CRETS supported by the inoperable DG inoperable when the redundant CREVS or CRETS is inoperable.	4 hours from discovery of Condition E concurrent with inoperability of redundant required feature(s)
	AND	

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
E. (continued)	E.4.1	Determine OPERABLE DG(s) is not inoperable due to common cause failures.	24 hours
		<u>OR</u>	
	E.4.2	Perform SR 3.8.1.3 for OPERABLE DG(s).	24 hours
	<u>AND</u>		
	E.5	Declare CREVS and CRETS supported by the inoperable DG inoperable.	14 days
F. Required Action and associated Completion Time of Required Action E.1 not met.	F.1.1	Restore both LCO 3.8.1.b DGs and other unit's DG to OPERABLE status and OC DG to available status.	72 hours
		<u>OR</u>	
	F.1.2	Restore DG to OPERABLE status.	
		<u>OR</u>	
	F.1.3	Declare CREVS and CRETS supported by the inoperable DG inoperable.	

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
G. Two required LCO 3.8.1.a offsite circuits inoperable. OR One required LCO 3.8.1.a offsite circuit that provides power to the CREVS and CRETS inoperable and the required LCO 3.8.1.c offsite circuit inoperable.	G.1 Declare required feature(s) inoperable when its redundant required feature(s) is inoperable. AND G.2 Restore one required offsite circuit to OPERABLE status.	12 hours from discovery of Condition G concurrent with inoperability of redundant required feature(s) 24 hours OR In accordance with the Risk Informed Completion Time Program
H. One required LCO 3.8.1.a offsite circuit inoperable. AND One LCO 3.8.1.b DG inoperable.	----------- NOTE ------------ Enter applicable Conditions and Required Actions of LCO 3.8.9, when Condition H is entered with no AC power source to any train. --------------------------- H.1 Restore required offsite circuit to OPERABLE status. OR	12 hours OR In accordance with the Risk Informed Completion Time Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
H. (continued)	H.2 Restore DG to OPERABLE status.	12 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
I. Two LCO 3.8.1.b DGs inoperable. <u>OR</u> LCO 3.8.1.b DG that provides power to the CREVS and CRETS inoperable and LCO 3.8.1.c DG inoperable.	I.1 Restore one DG to OPERABLE status.	2 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
J. Required Action and associated Completion Time of Condition A, C, F, G, H, or I not met. OR Required Action and associated Completion Time of Required Action B.2, B.3, B.4.1, B.4.2, or B.5 not met. OR Required Action and associated Completion Time of Required Action E.2, E.3, E.4.1, E.4.2, or E.5 not met.	J.1 Be in MODE 3. AND J.2 Be in MODE 5.	6 hours 36 hours
K. Three or more required LCO 3.8.1.a and LCO 3.8.1.b AC sources inoperable.	K.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

-----------------------------------NOTE-----------------------------------

SR 3.8.1.1 through SR 3.8.1.15 are only applicable to LCO 3.8.1.a and LCO 3.8.1.b AC sources. SR 3.8.1.16 is only applicable to LCO 3.8.1.c AC sources.

SURVEILLANCE		FREQUENCY
SR 3.8.1.1	------------------NOTE------------------ Only required to be performed when SMECO is being credited for an offsite source. -- Verify correct breaker alignment and indicated power availability for the 69 kV SMECO offsite circuit.	Once within 1 hour after substitution for a 500 kV offsite circuit AND In accordance with the Surveillance Frequency Control Program
SR 3.8.1.2	Verify correct breaker alignment and indicated power availability for each required 500 kV offsite circuit.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.3	-----------------NOTES---------------- 1. Performance of SR 3.8.1.9 satisfies this Surveillance Requirement. 2. All DG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading. 3. A modified DG start involving idling and gradual acceleration to synchronous speed may be used for this Surveillance Requirement as recommended by the manufacturer. When modified start procedures are not used, the voltage and frequency tolerances of SR 3.8.1.9 must be met. --------------------------------------- Verify each DG starts and achieves steady state voltage ≥ 4060 V and ≤ 4310 V, and frequency ≥ 59.25 Hz and ≤ 60.75 Hz.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.8.1.4	------------------ NOTES ------------------ 1. DG loadings may include gradual loading as recommended by the manufacturer. 2. Momentary transients below the load limit do not invalidate this test. 3. This Surveillance shall be conducted on only one DG at a time. 4. This Surveillance Requirement shall be preceded by and immediately follow without shutdown a successful performance of SR 3.8.1.3 or SR 3.8.1.9. -- Verify each DG is synchronized and loaded, and operates for ≥ 60 minutes at a load ≥ 4000 kW for DG 1A and ≥ 2700 kW for DGs 1B, 2A, and 2B.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.5	Verify each day tank contains ≥ a one hour supply.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.6	Check for and remove accumulated water from each day tank.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.7	Verify the fuel oil transfer system operates to automatically transfer fuel oil from storage tank[s] to the day tank.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.8	Verify interval between each sequenced load block is within ± 10% of design interval for each emergency and shutdown load sequencer.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.9	----------------- NOTE -------------------- All DG starts may be preceded by an engine prelube period. -- Verify each DG starts from standby condition and achieves, in ≤ 10 seconds, voltage > 4060 V and frequency > 58.8 Hz, and after steady state conditions are reached, maintains voltage ≥ 4060 V and ≤ 4310 V and frequency of ≥ 59.25 Hz and ≤ 60.75 Hz.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.10	Verify manual transfer of AC power sources from the normal offsite circuit to the alternate offsite circuit.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.11	------------------NOTE------------------ 1. Momentary transients outside the load and power factor limits do not invalidate this test. 2. If performed with the DG synchronized with offsite power, the surveillance test shall be performed at the required power factor. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition, the power factor shall be maintained as close to the limit as practicable. --------------------------------------- Verify each DG, operating at a frequency ≥ 59.25 Hz and ≤ 60.75 Hz, and an appropriate accident load power factor operates for ≥ 4 hours while loaded to ≥ 4000 kW for DG 1A and ≥ 3000 kW for DGs 1B, 2A, and 2B.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.12	Verify each DG rejects a load ≥ 500 hp without tripping.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.13	Verify that automatically bypassed DG trips are automatically bypassed on an actual or simulated required actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.14	Verify each DG: a. Synchronizes with offsite power source while loaded upon a simulated restoration of offsite power; b. Manually transfers loads to offsite power source; and c. Returns to ready-to-load operation.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.15	------------------ NOTE ------------------ All DG starts may be preceded by an engine prelube period. -- Verify on an actual or simulated loss of offsite power signal in conjunction with an actual or simulated Engineered Safety Feature actuation signal: a. De-energization of emergency buses; b. Load shedding from emergency buses; c. DG auto-starts from standby condition and: 1. energizes permanently connected loads in ≤ 10 seconds, 2. energizes auto-connected emergency loads through load sequencer, 3. maintains steady state voltage ≥ 4060 V and ≤ 4310 V, 4. maintains steady state frequency of ≥ 59.25 Hz and ≤ 60.75 Hz, and 5. supplies permanently connected and auto-connected emergency loads for ≥ 5 minutes.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.16	For the LCO 3.8.1.c AC electrical sources, SR 3.8.1.1, SR 3.8.1.2, SR 3.8.1.3, SR 3.8.1.5, SR 3.8.1.6, and SR 3.8.1.7 are required to be performed.	In accordance with applicable Surveillance Requirements
SR 3.8.1.17	-------------------NOTE------------------- Momentary transients outside the load and power factor limits do not invalidate this test. -- Verify each DG operates for ≥ 24 hours: a. For ≥ 2 hours of the test loaded to ≥ 4200 kW for DG 1A, and ≥ 3150 kW and ≤ 3300 kW for DGs 1B, 2A, and 2B, and b. For the remaining hours of the test loaded to ≥ 3600 kW for DG 1A, and ≥ 2700 kW and ≤ 3000 kW for DGs 1B, 2A, and 2B.	In accordance with the Surveillance Frequency Control Program

3.8 ELECTRICAL POWER SYSTEMS

3.8.2 AC Sources-Shutdown

LCO 3.8.2 The following AC electrical power sources shall be OPERABLE:

a. One qualified circuit between the offsite transmission network and the onsite Class 1E AC electrical power distribution subsystem(s) required by LCO 3.8.10, "Distribution Systems-Shutdown;"

b. One diesel generator (DG) capable of supplying one train of the onsite Class 1E AC electrical power distribution subsystem(s) required by LCO 3.8.10;

c. One qualified circuit between the offsite transmission network and the other unit's onsite Class 1E AC electrical power distribution subsystems that supply power to the required Control Room Emergency Ventilation System and the Control Room Emergency Temperature System; and

d. One DG from the other unit capable of supplying the other unit's onsite Class 1E AC electrical power distribution subsystems that supply power to the required Control Room Emergency Ventilation System and Control Room Emergency Temperature System, if the DG required by LCO 3.8.2.b is not capable of supplying power to the onsite Class 1E AC electrical power distribution subsystems that supply power to the required Control Room Emergency Ventilation System and Control Room Emergency Temperature System.

APPLICABILITY: MODES 5 and 6,
During movement of irradiated fuel assemblies.

ACTIONS

------------------------------------ NOTES ------------------------------------

1. LCO 3.0.3 is not applicable.

2. Performance of Required Actions shall not preclude completion of actions to establish a safe conservative position.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required offsite circuit inoperable.	----------- NOTE ------------ Enter applicable Conditions and Required Actions of LCO 3.8.10, with one required train de-energized as a result of Condition A. ---------------------------	
	A.1 Declare affected required feature(s) with no offsite power available inoperable.	Immediately
	<u>OR</u>	
	A.2.1 Suspend movement of irradiated fuel assemblies.	Immediately
	<u>AND</u>	
	A.2.2 Suspend operations involving positive reactivity additions that could result in loss of required SDM or boron concentration.	Immediately
	<u>AND</u>	

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (Continued)	A.2.3	Initiate action to restore required offsite power circuit to OPERABLE status.	Immediately
B. One required DG inoperable.	B.1	Suspend movement of irradiated fuel assemblies.	Immediately
	<u>AND</u>		
	B.2	Suspend operations involving positive reactivity additions that could result in loss of required SDM or boron concentration.	Immediately
	<u>AND</u>		
	B.3	Initiate action to restore required DG to OPERABLE status.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.2.1	-------------------NOTE------------------- The following Surveillance Requirements (SRs) are not required to be performed: SR 3.8.1.11, SR 3.8.1.12, SR 3.8.1.14, and SR 3.8.1.17. -- For the LCO 3.8.2.a and LCO 3.8.2.b AC sources required to be OPERABLE, the SRs of Specification 3.8.1, "AC Sources-Operating," except SR 3.8.1.4, SR 3.8.1.8, SR 3.8.1.10, SR 3.8.1.13, 3.8.1.15, and SR 3.8.1.16, are applicable.	In accordance with applicable SRs
SR 3.8.2.2	For the LCO 3.8.2.c and LCO 3.8.2.d AC sources required to be OPERABLE, the SRs required by SR 3.8.1.16, are applicable.	In accordance with applicable SRs

3.8 ELECTRICAL POWER SYSTEMS

3.8.3 Diesel Fuel Oil

LCO 3.8.3 The stored diesel fuel oil shall be within limits for each required diesel generator (DG).

APPLICABILITY: When associated DG is required to be OPERABLE.

ACTIONS

------------------------------------NOTE------------------------------------
Separate Condition entry is allowed for each DG.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Fuel oil storage tank (FOST) 1A with fuel oil volume less than a 7 day supply and greater than or equal to a 6 day supply.	A.1 Restore fuel oil volume to within limits.	48 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. -------- NOTE -------- Only applicable to Unit 1. --------------------- FOST 21 with fuel oil volume less than a 7 day supply.	B.1	Verify combined available fuel oil volume of FOST 21 and OPERABLE FOST 11 greater than or equal to a 6 day supply.	1 hour
	<u>AND</u>		
	B.2	Verify combined available fuel oil volume of FOST 21 and OPERABLE FOST 11 greater than or equal to a 7 day supply.	48 hours <u>AND</u> Once per 31 days thereafter

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. -------- NOTE -------- Only applicable to Unit 2. --------------------- FOST 21 with fuel oil volume less than a 7 day supply.	C.1 Verify combined available fuel oil volume of FOST 21 and OPERABLE FOST 11 greater than or equal to a 6 day supply.	1 hour
	AND	
	C.2 ------- NOTES ------- 1. Only applicable during MODE 1, 2, 3, or 4. 2. Only applicable between April 1 and September 30. -------------------- Restore FOST 21 fuel oil volume to within limits.	2 hours
	AND	
	C.3 Restore FOST 21 fuel oil volume to within limits.	48 hours
D. One or more DGs with stored fuel oil total particulates not within limits.	D.1 Restore fuel oil total particulates to within limits.	7 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. One or more DGs with new fuel oil properties not within limits.	E.1 Restore stored fuel oil properties to within limits.	30 days
F. Required Action and associated Completion Time not met. <u>OR</u> One or more DGs with diesel fuel oil not within limits for reasons other than Condition A, B, C, D, or E.	F.1 Declare associated DG(s) inoperable.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.3.1	Verify fuel oil volume of: a. FOST 1A $\geq$ a 7 day supply, and b. FOST 21 $\geq$ a 7 day supply.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.2	Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.3.3	Check for and remove accumulated water from each FOST.	In accordance with the Surveillance Frequency Control Program

3.8 ELECTRICAL POWER SYSTEMS

3.8.4 DC Sources-Operating

LCO 3.8.4 Four channels of DC electrical sources shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One DC channel inoperable due to an inoperable battery and the reserve battery available.	A.1 Replace inoperable battery with reserve battery.	4 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
B. One DC channel inoperable for reasons other than Condition A.	B.1 Restore DC channel to OPERABLE status.	2 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. <u>AND</u> C.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.4.1	Verify battery terminal voltage is ≥ 125 V on float charge.	In accordance with the Surveillance Frequency Control Program
SR 3.8.4.2	Verify no visible corrosion at battery terminals and connectors. <u>OR</u> Verify battery connection resistance is within limits.	In accordance with the Surveillance Frequency Control Program
SR 3.8.4.3	Verify battery cells, cell plates, and racks show no visual indication of physical damage or abnormal deterioration that degrades performance.	In accordance with the Surveillance Frequency Control Program
SR 3.8.4.4	Remove visible terminal corrosion and verify battery cell to cell and terminal connections are coated with anti-corrosion material.	In accordance with the Surveillance Frequency Control Program
SR 3.8.4.5	Verify battery connection resistance is within limits.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.4.6	Verify each battery charger supplies $\geq$ 400 amps at $\geq$ 125 V for $\geq$ 30 minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.8.4.7	-------------------NOTE------------------- The modified performance discharge test in SR 3.8.4.8 may be performed in lieu of the service test in SR 3.8.4.7. -- Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.4.8	Verify battery capacity is ≥ 80% of the manufacturer's rating when subjected to a performance discharge test or a modified performance discharge test.	In accordance with the Surveillance Frequency Control Program <u>AND</u> 12 months when battery shows degradation or has reached 85% of the expected life with capacity < 100% of manufacturer's rating <u>AND</u> 24 months when battery has reached 85% of the expected life with capacity ≥ 100% of manufacturer's rating

3.8 ELECTRICAL POWER SYSTEMS

3.8.5 DC Sources-Shutdown

LCO 3.8.5 The required channels of DC electrical sources shall be OPERABLE to support the DC electrical power distribution subsystem(s) required by LCO 3.8.10, "Distribution Systems-Shutdown."

APPLICABILITY: MODES 5 and 6,
During movement of irradiated fuel assemblies.

ACTIONS

------------------------------------ NOTES ------------------------------------

1. LCO 3.0.3 is not applicable.

2. Performance of Required Actions shall not preclude completion of actions to establish a safe conservative position.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required DC channels inoperable.	A.1 Declare affected required feature(s) inoperable. OR A.2.1 Suspend movement of irradiated fuel assemblies. AND	Immediately Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.2.2 Suspend operations involving positive reactivity additions that could result in loss of required SDM or boron concentration. <u>AND</u>	Immediately
	A.2.3 Initiate action to restore required DC electrical power subsystems to OPERABLE status.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.5.1	-------------------NOTE------------------- The following Surveillance Requirements are not required to be performed: SR 3.8.4.6, SR 3.8.4.7, and SR 3.8.4.8. --	
	For DC sources required to be OPERABLE, the following Surveillance Requirements are applicable: SR 3.8.4.1 SR 3.8.4.4 SR 3.8.4.7 SR 3.8.4.2 SR 3.8.4.5 SR 3.8.4.8 SR 3.8.4.3 SR 3.8.4.6	In accordance with applicable Surveillance Requirements

3.8 ELECTRICAL POWER SYSTEMS

3.8.6 Battery Cell Parameters

LCO 3.8.6 Battery cell parameters for the batteries shall be within the limits of Table 3.8.6-1.

AND

Battery cell average electrolyte temperature for the batteries shall be within the required limit.

APPLICABILITY: When associated DC electrical source channels are required to be OPERABLE.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each battery.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more batteries with one or more battery cell parameters not within Category A or B limits.	A.1 Verify pilot cell(s) electrolyte level and individual cell float voltage meet Table 3.8.6-1 Category C limits.	1 hour
	AND	
	A.2 Verify battery cell parameters meet Table 3.8.6-1 Category C limits.	24 hours AND Once per 7 days thereafter
	AND	
	A.3 Restore battery cell parameters to Category A and B limits of Table 3.8.6-1.	31 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met. OR One or more batteries with average electrolyte temperature of the representative cells < 69°F. OR One or more batteries with one or more battery cell parameters not within Category C limits.	B.1 Declare associated battery inoperable.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.6.1	Verify battery cell parameters meet Table 3.8.6-1 Category A limits.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.6.2	Verify battery cell parameters meet Table 3.8.6-1 Category B limits.	In accordance with the Surveillance Frequency Control Program
SR 3.8.6.3	Verify average electrolyte temperature of representative cells is ≥ 69°F.	In accordance with the Surveillance Frequency Control Program

Table 3.8.6-1 (page 1 of 2)
Battery Surveillance Requirements

PARAMETER	CATEGORY A: LIMITS FOR EACH DESIGNATED PILOT CELL	CATEGORY B: LIMITS FOR EACH CONNECTED CELL	CATEGORY C: LIMITS FOR EACH CONNECTED CELL
Electrolyte Level	> Minimum level indication mark, and ≤ 1/4 inch above maximum level indication mark[a]	> Minimum level indication mark, and ≤ 1/4 inch above maximum level indication mark[a]	Above top of plates, and not overflowing
Individual Cell Float Voltage	≥ 2.13 V	≥ 2.13 V	≥ 2.08 V
Specific Gravity[b] [c]	≥ 1.200	≥ 1.195 AND Average of all connected cells ≥ 1.205	Not more than 0.020 below average connected cells AND Average of all connected cells ≥ 1.195

(a) It is acceptable for the electrolyte level to temporarily increase above the specified maximum during and following equalizing charges provided it is not overflowing.

(b) Corrected for electrolyte temperature and level. Level correction is not required, however, when battery charging current is < 1 amp when on float charge.

Table 3.8.6-1 (page 2 of 2)
Battery Surveillance Requirements

(c) A battery charging current of < 1 amp when on float charge is acceptable for meeting specific gravity limits following a battery recharge, for a maximum of 7 days. When charging current is used to satisfy specific gravity requirements, specific gravity of each connected cell shall be measured prior to expiration of the 7 day allowance.

3.8 ELECTRICAL POWER SYSTEMS

3.8.7 Inverters-Operating

LCO 3.8.7 Four inverters shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required inverter inoperable.	A.1 --------NOTE ------- Enter applicable Conditions and Required Actions of LCO 3.8.9, "Distribution Systems-Operating" with any vital bus de-energized. -------------------- Restore inverter to OPERABLE status.	 24 hours OR In accordance with the Risk Informed Completion Time Program
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.7.1	Verify correct inverter voltage and alignment to required AC vital buses.	In accordance with the Surveillance Frequency Control Program

3.8 ELECTRICAL POWER SYSTEMS

3.8.8 Inverters-Shutdown

LCO 3.8.8 Inverter(s) shall be OPERABLE to support the onsite Class 1E AC vital bus electrical power distribution subsystem(s) required by LCO 3.8.10, "Distribution Systems-Shutdown."

APPLICABILITY: MODES 5 and 6,
During movement of irradiated fuel assemblies.

ACTIONS

------------------------------------NOTE------------------------------------

LCO 3.0.3 is not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required inverters inoperable.	A.1 Declare affected required feature(s) inoperable. <u>OR</u> A.2.1 Suspend movement of irradiated fuel assemblies. <u>AND</u>	Immediately Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)	A.2.2	Suspend operations involving positive reactivity additions that could result in loss of required SDM or boron concentration.	Immediately
		<u>AND</u>	
	A.2.3	Initiate action to restore required inverters to OPERABLE status.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.8.1	Verify correct inverter voltage and alignment to required AC vital buses.	In accordance with the Surveillance Frequency Control Program

3.8 ELECTRICAL POWER SYSTEMS

3.8.9 Distribution Systems-Operating

LCO 3.8.9 The AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more AC electrical power distribution subsystems inoperable.	A.1 Restore AC electrical power distribution subsystems to OPERABLE status.	8 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program
B. One or more AC vital bus subsystem(s) inoperable.	B.1 Restore AC vital bus subsystems to OPERABLE status.	2 hours <u>OR</u> In accordance with the Risk Informed Completion Time Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. One DC electrical power distribution subsystem inoperable.	C.1 Restore DC electrical power distribution subsystem to OPERABLE status.	2 hours OR In accordance with the Risk Informed Completion Time Program
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3. AND D.2 Be in MODE 5.	6 hours 36 hours
E. Two or more electrical power distribution subsystems inoperable that result in a loss of function.	E.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.9.1	Verify correct breaker alignments and voltage to AC, DC, and AC vital bus electrical power distribution subsystems.	In accordance with the Surveillance Frequency Control Program

3.8 ELECTRICAL POWER SYSTEMS

3.8.10 Distribution Systems-Shutdown

LCO 3.8.10 The necessary portion of AC, DC, and AC vital bus electrical power distribution subsystems shall be OPERABLE to support equipment required to be OPERABLE.

APPLICABILITY: MODES 5 and 6,
During movement of irradiated fuel assemblies.

ACTIONS

------------------------------------ NOTES ------------------------------------

1. LCO 3.0.3 is not applicable.

2. Performance of Required Actions shall not preclude completion of actions to establish a safe conservative position.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required AC, DC, or AC vital bus electrical power distribution subsystems inoperable.	A.1 Declare associated supported required feature(s) inoperable.	Immediately
	<u>OR</u>	
	A.2.1 Suspend movement of irradiated fuel assemblies. <u>AND</u>	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)	A.2.2	Suspend operations involving positive reactivity additions that could result in loss of required SDM or boron concentration. <u>AND</u>	Immediately
	A.2.3	Initiate actions to restore required AC, DC, and AC vital bus electrical power distribution subsystems to OPERABLE status. <u>AND</u>	Immediately
	A.2.4	Declare associated required shutdown cooling subsystem(s) inoperable and not in operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.10.1	Verify correct breaker alignments and voltage to required AC, DC, and AC vital bus electrical power distribution subsystems.	In accordance with the Surveillance Frequency Control Program

3.9 REFUELING OPERATIONS

3.9.1 Boron Concentration

LCO 3.9.1 Boron concentrations of the Reactor Coolant System and the refueling pool shall be maintained within the limit specified in the COLR.

APPLICABILITY: MODE 6.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Boron concentration not within limit.	A.1 Suspend positive reactivity additions.	Immediately
	<u>AND</u>	
	A.2 Initiate action to restore boron concentration to within limit.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.1.1	Verify boron concentration is within the limit specified in the COLR.	In accordance with the Surveillance Frequency Control Program

3.9 REFUELING OPERATIONS

3.9.2 Nuclear Instrumentation

LCO 3.9.2 Two source range monitors (SRMs) shall be OPERABLE.

APPLICABILITY: MODE 6.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One required SRM inoperable.	A.1	Suspend positive reactivity additions.	Immediately
	<u>AND</u>		
	A.2	Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the boron concentration of LCO 3.9.1.	Immediately
B. Two required SRMs inoperable.	B.1	Initiate action to restore one SRM to OPERABLE status.	Immediately
	<u>AND</u>		
	B.2	Perform SR 3.9.1.1.	Once per 12 hours

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.9.2.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.9.2.2	-------------------NOTE------------------- Neutron detectors are excluded from CHANNEL CALIBRATION. -- Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program

3.9 REFUELING OPERATIONS

3.9.3 Containment Penetrations

LCO 3.9.3 The containment penetrations shall be in the following status:

a. 1. The equipment hatch closed and held in place by a minimum of four bolts, or

2. The containment outage door is capable of being closed under administrative control;

b. One door in the emergency air lock is closed;

------------------------------ NOTE ------------------------------
The emergency air lock temporary closure device can be used in place of an emergency air lock door.
----

c. The personnel air lock shall be either:

1. closed by one personnel air lock door, or

2. capable of being closed by an OPERABLE personnel air lock door under administrative control.

d. Each penetration providing direct access from the containment atmosphere to the outside atmosphere either:

1. closed by a manual or automatic isolation valve, blind flange, or equivalent, or

2. capable of being closed by an OPERABLE Containment Purge Valve Isolation System.

------------------------------ NOTE ------------------------------
Penetration flow path(s) providing direct access from the containment atmosphere to the outside atmosphere may be unisolated under administrative controls.

APPLICABILITY: During movement of irradiated fuel assemblies within containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more containment penetrations not in required status.	A.1 Suspend movement of irradiated fuel assemblies within containment.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.3.1	Verify each required containment penetration is in the required status.	In accordance with the Surveillance Frequency Control Program
SR 3.9.3.2	Verify each required containment purge and exhaust valve actuates to the isolation position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

3.9 REFUELING OPERATIONS

3.9.4 Shutdown Cooling (SDC) and Coolant Circulation-High Water Level

LCO 3.9.4 One SDC loop shall be OPERABLE and in operation.

-------------------------- NOTES --------------------------

1. The required SDC loop may be not in operation for $\leq$ 1 hour per 8 hour period, provided no operations are permitted that would cause introduction of coolant into the Reactor Coolant System with boron concentration less than that required to meet the minimum boron concentration of LCO 3.9.1.

2. The shutdown cooling pumps may be removed from operation during the time required for local leak rate testing of containment penetration number 41 pursuant to the requirements of SR 3.6.1.1 or to permit maintenance on valves located in the common SDC suction line, provided:

   a. no operations are permitted that would cause introduction of coolant into Reactor Coolant System with boron concentration less than that required to meet the minimum boron concentration of LCO 3.9.1,

   b. Movement of fuel assemblies within Containment is suspended, and

   c. all containment penetrations are in the status described in LCO 3.9.3.

APPLICABILITY: MODE 6 with the water level $\geq$ 23 ft above the top of the irradiated fuel assemblies seated in the reactor vessel.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One required SDC loop inoperable or not in operation.	A.1	Initiate action to restore SDC loop to OPERABLE status and operation.	Immediately
	AND		
	A.2	Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the boron concentration of LCO 3.9.1.	Immediately
	AND		
	A.3	Suspend loading of irradiated fuel assemblies in the core.	Immediately
	AND		
	A.4.1	Close equipment hatch and secure with a minimum of four bolts,	4 hours
		OR	
	A.4.2	Close the containment outage door.	4 hours
	AND		

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (Continued)	A.5	Close one door in each air lock.	4 hours
	AND		
	A.6.1	Close each penetration providing direct access from the containment atmosphere to the outside atmosphere with a manual or automatic isolation valve, blind flange, or equivalent.	4 hours
		OR	
	A.6.2	Verify each penetration is capable of being closed by an OPERABLE Containment Purge Valve Isolation System.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.4.1	Verify one SDC loop is in operation and circulating reactor coolant at a flow rate of ≥ 1500 gpm.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.9.4.2	Verify required SDC loop locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

3.9 REFUELING OPERATIONS

3.9.5 Shutdown Cooling (SDC) and Coolant Circulation-Low Water Level

LCO 3.9.5 Two SDC loops shall be OPERABLE, and one SDC loop shall be in operation.

------------------------- NOTES -------------------------

1. One SDC loop may be replaced by one spent fuel pool cooling loop provided it is lined up to provide cooling flow to irradiated fuel in the reactor core and the core heat generation rate is less than the heat removal capacity of the spent fuel cooling loop.

2. One required SDC loop may be inoperable for up to 2 hours for surveillance testing, provided that the other SDC loop is OPERABLE and in operation.

3. All SDC pumps may be de-energized for ≤ 15 minutes when switching from one train to another provided:

    a. The core outlet temperature is maintained > 10°F below saturation temperature;

    b. No operations are permitted that would cause introduction of coolant into the Reactor Coolant System with boron concentration less than that required to meet the minimum boron concentration of LCO 3.9.1; and

    c. No draining operations to further reduce Reactor Coolant System water volume are permitted.

APPLICABILITY: MODE 6 with the water level < 23 ft above the top of the irradiated fuel assemblies seated in the reactor vessel.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One SDC loop inoperable.	A.1 Initiate action to restore SDC loop to OPERABLE status.	Immediately
	<u>OR</u>	
	A.2 Initiate action to establish ≥ 23 ft of water above the top of irradiated fuel assemblies seated in the reactor vessel.	Immediately
B. No SDC loop OPERABLE or in operation.	B.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the boron concentration of LCO 3.9.1.	Immediately
	<u>AND</u>	
	B.2 Initiate action to restore one SDC loop to OPERABLE status and to operation.	Immediately
	<u>AND</u>	

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. (Continued)	B.3.1	Close equipment hatch and secure with a minimum of four bolts,	4 hours
		<u>OR</u>	
	B.3.2	Close the containment outage door.	4 hours
	<u>AND</u>		
	B.4	Close one door in each air lock.	4 hours
	<u>AND</u>		
	B.5.1	Close each penetration providing direct access from the containment atmosphere to the outside atmosphere with a manual or automatic isolation valve, blind flange, or equivalent.	4 hours
		<u>OR</u>	

Correction letter of 10-21-2004

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (Continued)	B.5.2 Verify each penetration is capable of being closed by an OPERABLE Containment Purge Valve Isolation System.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.5.1	Verify required SDC loops are OPERABLE and one SDC loop is in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.9.5.2	Verify SDC loop in operation is circulating reactor coolant at a flow rate of $\geq$ 1500 gpm.	In accordance with the Surveillance Frequency Control Program
SR 3.9.5.3	Verify correct breaker alignment and indicated power available to the required SDC loop components that are not in operation.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.9.5.4	Verify SDC loop locations susceptible to gas accumulation are sufficiently filled with water.	In accordance with the Surveillance Frequency Control Program

3.9 REFUELING OPERATIONS

3.9.6 Refueling Pool Water Level

LCO 3.9.6 Refueling pool water level shall be maintained ≥ 23 ft above the top of the irradiated fuel assemblies seated in the reactor vessel.

APPLICABILITY: During movement of irradiated fuel assemblies within containment.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Refueling pool water level not within limit.	A.1	Suspend movement of irradiated fuel assemblies within containment.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.6.1	Verify refueling pool water level is ≥ 23 ft above the top of the irradiated fuel assemblies seated in the reactor vessel.	In accordance with the Surveillance Frequency Control Program

4.0 DESIGN FEATURES

4.1 Site Location

The site for the Calvert Cliffs Nuclear Power Plant is located on the western shore of the Chesapeake Bay in Calvert County, Maryland, about 10-1/2 miles Southeast of Prince Frederick, Maryland. The site is approximately 45 miles southeast of Washington, DC, and 60 miles south of Baltimore, Maryland. The exclusion area boundary has a minimum radius of 1,150 meters from the center of the plant.

4.2 Reactor Core

4.2.1 Fuel Assemblies

The reactor shall contain 217 fuel assemblies. Each assembly shall consist of a matrix of M5, Zircalloy or ZIRLO fuel rods with an initial composition of natural or slightly enriched uranium dioxide (UO_2) as fuel material. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions.

4.2.2 Control Element Assemblies

The reactor core shall contain 77 control element assemblies.

4.3 Fuel Storage

4.3.1 Criticality

4.3.1.1 The spent fuel storage racks are designed and shall be maintained with:

4.0 DESIGN FEATURES

a. Fuel assemblies having a maximum U-235 enrichment of 5.00 weight percent;

b. k_{eff} < 1.00 if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.7.2 of the Updated Final Safety Analysis Report (UFSAR) and $k_{eff} \leq 0.95$ if fully flooded with water borated to 350 ppm, which includes an allowance for uncertainties as described in Section 9.7.2 of the UFSAR;

c. A nominal 10-3/32-inch center-to-center distance between fuel assemblies placed in the high density fuel storage racks;

4.3.1.2 The new fuel storage racks are designed and shall be maintained with:

a. Fuel assemblies having a maximum U-235 enrichment of 5.0 weight percent;

b. $k_{eff} \leq 0.95$ if fully flooded with unborated water, which includes an allowance for uncertainties as described in Section 9.7.1 of the UFSAR;

c. $k_{eff} \leq 0.95$ if moderated by aqueous foam, which includes an allowance for uncertainties as described in Section 9.7.1. of the UFSAR; and

d. A nominal 18-inch center-to-center distance between fuel assemblies placed in the storage racks.

4.0 DESIGN FEATURES

4.3.2 Drainage

The spent fuel storage pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 63 ft.

4.3.3 Capacity

The spent fuel storage pool is designed and shall be maintained with a storage capacity, for both Units 1 and 2, limited to no more than 1830 fuel assemblies.

5.0 ADMINISTRATIVE CONTROLS

5.1 Responsibility

5.1.1 The plant manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.

The plant manager or his designee shall approve, prior to implementation, each proposed test, experiment, or modification to systems or equipment that affects nuclear safety.

5.1.2 The Control Room Supervisor (CRS) shall be responsible for the control room command function. During any absence of the CRS from the control room while the unit is in MODE 1, 2, 3, or 4, an individual with an active Senior Reactor Operator (SRO) license shall be designated to assume the control room command function. During any absence of the CRS from the control room while the unit is in MODE 5 or 6, an individual with an active SRO license or Reactor Operator license shall be designated to assume the control room command function.

5.0 ADMINISTRATIVE CONTROLS

5.2 Organization

5.2.1 Onsite and Offsite Organizations

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting safety of the nuclear power plant.

a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all operating organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements including the plant-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications, shall be documented in the Updated Final Safety Analysis Report (UFSAR) or Quality Assurance Topical Report;

b. The plant manager shall be responsible for overall safe operation of the plant and shall have control over those onsite activities necessary for safe operation and maintenance of the plant;

c. A specified corporate officer shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety; and

d. The individuals who train the operating staff, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their independence from operating pressures.

5.2 Organization

5.2.2 Unit Staff

The unit staff organization shall include the following:

a. A total of three non-licensed operators shall be assigned to the Units 1 and 2 shift crews.

b. Those licensed operators counted toward minimum shift crew composition required by 10 CFR 50.54(m)(2)(i) shall be licensed for both units.

c. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i), 5.2.2.a, and 5.2.2.g for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.

d. A radiation protection technician shall be onsite when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.

e. Deleted.

f. The operations manager or assistant operations manager shall hold an SRO license.

g. One Shift Technical Advisor (STA) shall be assigned to the shift crew when either unit is in MODE 1, 2, 3, or 4, and shall be filled as follows:

    1. By the Shift Supervisor (SS) or an on-shift SRO license holder, provided the individual meets the Commission Policy Statement on Engineering Expertise on Shift; or

5.2 Organization

2. By an individual with a Bachelors Degree or equivalent in a scientific or engineering discipline with specific training in plant design, and response and analysis of the plant transient and accidents.

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications referenced for comparable positions as specified in the Constellation Energy Generation, LLC Quality Assurance Topical Report.

5.0 ADMINISTRATIVE CONTROLS

5.4 Procedures

5.4.1 Written procedures shall be established, implemented, and maintained covering the following activities:

a. The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978;

b. The emergency operating procedures required to implement the requirements of NUREG-0737 and to NUREG-0737, Supplement 1, as stated in Generic Letter 82-33;

c. Quality assurance for effluent and environmental monitoring; and

d. Deleted

e. All programs specified in Specification 5.5.

5.5 Programs and Manuals

The following programs shall be established, implemented, and maintained.

5.5.1 Offsite Dose Calculation Manual

a. The Offsite Dose Calculation Manual (ODCM) shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring alarm and trip setpoints, and in the conduct of the radiological environmental monitoring program; and

b. The ODCM shall also contain the radioactive effluent controls and radiological environmental monitoring activities and descriptions of the information that should be included in the Annual Radiological Environmental Operating and Radioactive Effluent Release Reports required by Specification 5.6.2 and Specification 5.6.3.

c. Licensee initiated changes to the ODCM:

1. Shall be documented and records of reviews performed shall be retained. This documentation shall contain:

   i. Sufficient information to support the change(s) together with the appropriate analyses or evaluations justifying the change(s), and

   ii. A determination that the change(s) maintain the levels of radioactive effluent control required by 10 CFR 20.1302, 40 CFR Part 190, 10 CFR 50.36a, and 10 CFR Part 50, Appendix I, and does not adversely impact the accuracy or reliability of effluent, dose, or setpoint calculations;

2. Shall become effective after the approval of the plant manager; and

3. Shall be submitted to the Nuclear Regulatory Commission in the form of a complete, legible copy of the entire ODCM as a part of or concurrent with the Radioactive

5.5 Programs and Manuals

Effluent Release Report for the period of the report in which any change in the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

5.5.2 Primary Coolant Sources Outside Containment

This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include Containment Spray, Safety Injection, and Chemical and Volume Control. The program shall include the following:

a. Preventive maintenance and periodic visual inspection requirements; and

b. Integrated leak test requirements for each system at least once per 24 months. The provisions of SR 3.0.2 are applicable.

5.5.3 Not Used

5.5.4 Radioactive Effluent Controls Program

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by procedures, and shall include remedial actions to

5.5 Programs and Manuals

be taken whenever the program limits are exceeded. The program shall include the following elements:

a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation, including surveillance tests and setpoint determination, in accordance with the methodology in the ODCM;

b. Limitations on the concentrations of radioactive material released in liquid effluents to unrestricted areas, conforming to 10 CFR Part 20, Appendix B, Table II, Column 2;

c. Monitoring, sampling, and analysis of radioactive liquid and gaseous effluents in accordance with 10 CFR 20.1302 and with the methodology and parameters in the ODCM;

d. Limitations on the annual and quarterly doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from the site to unrestricted areas to be limited:

    1. During any calendar quarter: Less than or equal to 3 mrems to the total body, and to less than or equal to 10 mrems to any organ; and

    2. During any calendar year: Less than or equal to 6 mrems to the total body, and to less than or equal to 20 mrems to any organ;

e. Determination of cumulative dose contributions from radioactive effluents for the current calendar quarter and current calendar year, in accordance with the methodology and parameters in the ODCM, at least every 31 days. Determination of projected dose contributions from radioactive effluents in accordance with the methodology in the ODCM at least every 31 days;

f. Limitations on the functional capability and use of the Liquid Radwaste Treatment System to ensure that appropriate portions of this system are used to reduce releases of

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radioactivity when the projected doses to unrestricted areas exceeds 0.36 mrem to the total body, or 1.20 mrem to any organ in a 92-day period;

g. Limitations on the functional capability and use of the Gaseous Radwaste Treatment System and the Ventilation Exhaust Treatment System to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the calculated doses to unrestricted areas exceeds 1.20 mrad for gamma radiation, and 2.40 mrad for beta radiation in a 92-day period;

h. Limitations on the functional capability and use of the Ventilation Exhaust Treatment System to ensure that appropriate portions of this system are used to reduce releases of radioactivity when the calculated doses due to gaseous releases to unrestricted areas exceeds 1.8 mrem to any organ in a 92-day period;

i. Limitations on the dose rate resulting from radioactive material released in gaseous effluents from the site to areas at or beyond the site boundary, to be limited:

   1. For noble gases: Less than or equal to 500 mrems/yr to the total body, and less than or equal to 3000 mrems/yr to the skin; and

   2. For Iodine-131 and for all radionuclides in particulate form with half lives greater than 8 days: Less than or equal to 1500 mrems/yr to any organ;

j. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents to areas beyond the site boundary, to be limited to:

   1. During any calendar quarter: Less than or equal to 10 mrads for gamma radiation, and less than or equal to 20 mrads for beta radiation; and

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2. During any calendar year: Less than or equal to 20 mrads for gamma radiation, and less than or equal to 40 mrads for beta radiation;

k. Limitations on the annual and quarterly doses to a member of the public from Iodine-131, Iodine-133, Tritium, and all radionuclides in particulate form with half-lives greater than 8 days, in gaseous effluents released from the site to areas beyond the site boundary, to be limited:

1. During any calendar quarter: Less than or equal to 15 mrems to any organ:

2. During any calendar year: Less than or equal to 30 mrems to any organ; and

3. Less than 0.1% of the limits of 5.5.4.k(1) and (2) as a result of burning-contaminated oil; and

l. Limitations on the annual dose or dose commitment to any member of the public, beyond the site boundary, due to releases of radioactivity, and to radiation from uranium fuel cycle sources to be limited to less than or equal to 25 mrems to the total body or any organ, except the thyroid, which shall be limited to less than or equal to 75 mrems.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Radioactive Effluent Controls Program surveillance frequency.

5.5.5 Component Cyclic or Transient Limit

This program provides controls to track the UFSAR, Section 4.1 cyclic and transient occurrences to ensure that components are maintained within the design limits.

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5.5.6 Concrete Containment Tendon Surveillance Program

This program provides controls for monitoring any tendon degradation in pre-stressed concrete containments, including effectiveness of its corrosion protection medium, to ensure containment structural integrity. The program shall include baseline measurements prior to initial operation. The Tendon Surveillance Program, inspection frequencies, and acceptance criteria shall be in accordance with Section XI, Subsection IWL of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10 CFR 50.55a, as amended by relief granted in accordance with 10 CFR 50.55a(a)(3).

The provisions of SR 3.0.3 are applicable to the Tendon Surveillance Program inspection frequencies.

5.5.7 Reactor Coolant Pump Flywheel Inspection Program

This program shall provide for the inspection of each reactor coolant pump flywheel per the recommendations of regulatory position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975.

In lieu of Regulatory Position C.4.b(1) and C.4.b(2), a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle one-half of the outer radius or a surface examination (MT and/or PT) of exposed surfaces of the removed flywheels may be conducted at an interval not to exceed 20 years.

5.5.8 DELETED

5.5.9 Steam Generator (SG) Program

An SG Program shall be established and implemented to ensure that SG tube integrity is maintained. In addition, the SG Program shall include the following:

a. Provisions for condition monitoring assessments. Condition monitoring assessment means an evaluation of the “as found” condition of the tubing with respect to the performance

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criteria for structural integrity and accident induced leakage. The “as found” condition refers to the condition of the tubing during an SG inspection outage, as determined from the inservice inspection results or by other means, prior to the plugging of tubes. Condition monitoring assessments shall be conducted during each outage during which the SG tubes are inspected or plugged to confirm that the performance criteria are being met.

b. Performance criteria for SG tube integrity. SG tube integrity shall be maintained by meeting the performance criteria for tube structural integrity, accident induced leakage, and operational LEAKAGE.

   1. Structural integrity performance criterion: All in-service SG tubes shall retain structural integrity over the full range of normal operating conditions (including startup, operation in the power range, hot standby, and cool down), all anticipated transients included in the design specification, and design basis accidents. This includes retaining a safety factor of 3.0 against burst under normal steady-state full power operation primary to secondary pressure differential and a safety factor of 1.4 against burst applied to the design basis accident primary-to-secondary pressure differentials. Apart from the above requirements, additional loading conditions associated with the design basis accidents, or combination of accidents in accordance with the design and licensing basis, shall also be evaluated to determine if the associated loads contribute significantly to burst or collapse. In the assessment of tube integrity, those loads that do significantly affect burst or collapse shall be determined and assessed in combination with the loads due to pressure with a safety factor of 1.2 on the combined primary loads and 1.0 on axial secondary loads.

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2. Accident induced leakage performance criterion: The primary to secondary accident induced leakage rate for any design basis accident, other than a SG tube rupture, shall not exceed the leakage rate assumed in the accident analysis in terms of total leakage rate for all SGs and leakage rate for an individual SG. Leakage is not to exceed 100 gpd per SG.

3. The operational LEAKAGE performance criterion is specified in LCO 3.4.13, "RCS Operational LEAKAGE."

c. Provisions for SG tube plugging criteria. Tubes found by inservice inspection to contain flaws with a depth equal to or exceeding 40% of the nominal tube wall thickness shall be plugged.

d. Provisions for SG tube inspections. Periodic SG tube inspections shall be performed. The number and portions of the tubes inspected and methods of inspection shall be performed with the objective of detecting flaws of any type (e.g., volumetric flaws, axial, and circumferential cracks) that may be present along the length of the tube, from the tube-to-tubesheet weld at the tube inlet to the tube-to-tubesheet weld at the tube outlet, and that may satisfy the applicable tube plugging criteria. The tube-to-tubesheet weld is not part of the tube. In addition to meeting the requirements of d.1, d.2, and d.3 below, the inspection scope, inspection methods, and inspection intervals shall be such as to ensure that SG tube integrity is maintained until the next SG inspection. A degradation assessment shall be performed to determine the type and location of flaws to which the tubes may be susceptible and, based on this assessment, to determine which inspection methods need to be employed and at what locations.

1. Inspect 100% of the tubes in each SG during the first refueling outage following SG installation.

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2. After the first refueling outage following SG installation, inspect 100% of the tubes in each SG at least every 96 effective full power months, which defines the inspection period.

3. If crack indications are found in any SG tube, then the next inspection for each affected and potentially affected SG for the degradation mechanism that caused the crack indication shall be at the next refueling outage. If definitive information, such as from examination of a pulled tube, diagnostic non-destructive testing, or engineering evaluation indicates that a crack-like indication is not associated with a crack(s), then the indication need not be treated as a crack.

e. Provisions for monitoring operational primary to secondary LEAKAGE.

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5.5.10 Secondary Water Chemistry Program

This program provides controls for monitoring secondary water chemistry to inhibit steam generator tube degradation and low pressure turbine disc stress corrosion cracking. The program shall include:

a. Identification of a sampling schedule for the critical variables and control points for these variables;

b. Identification of the procedures used to measure the values of the critical variables;

c. Identification of process sampling points which shall include monitoring the discharge of the condensate pumps for evidence of condenser in leakage;

d. Procedures for the recording and management of data;

e. Procedures defining corrective actions for all off control point chemistry conditions; and

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f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events, which are required to initiate corrective action.

5.5.11 Ventilation Filter Testing Program

A program shall be established to implement the following required testing of engineered safety feature (ESF) filter ventilation systems. Tests described in Specifications 5.5.11.a and 5.5.11.b shall be performed once per 18 months for ventilation systems other than the Iodine Removal System (IRS) and 24 months for the IRS; after each complete or partial replacement of the high efficiency particulate air (HEPA) filter bank or charcoal adsorber bank; after any structural maintenance on the HEPA filter or charcoal adsorber housing; and following painting, fire, or chemical release in any ventilation zone communicating with the system.

Tests described in Specification 5.5.11.c shall be performed once per 18 months for ventilation systems other than the IRS and 24 months for the IRS; after 720 hours of system operation; after any structural maintenance on the HEPA filter or charcoal adsorber housing; and following painting, fire, or chemical release in any ventilation zone communicating with the system.

Tests described in Specification 5.5.11.d shall be performed once per 18 months for ventilation systems other than the IRS and 24 months for the IRS.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Ventilation Filter Testing Program test frequencies.

a. Demonstrate for each of the ESF systems that an inplace test of the HEPA filters shows a penetration and system bypass $\leq$ 1.0% ($\leq$0.05% for the CREVS only) when tested in accordance with Regulatory Positions C.5.a and C.5.c of Regulatory

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Guide 1.52, Revision 2, and ANSI N510-1975, at the system flowrate specified as follows ± 10%:

ESF Ventilation System	Flowrate
Control Room Emergency Ventilation System (CREVS)	10,000 cfm
Penetration Room Exhaust Ventilation System (PREVS)	2,000 cfm
IRS	20,000 cfm

b. Demonstrate for each of the ESF systems that an inplace test of the charcoal adsorber shows a penetration and system bypass ≤ 1.0% when tested in accordance with Regulatory Positions C.5.a and C.5.d of Regulatory Guide 1.52, Revision 2, and ANSI N510-1975, at the system flowrate specified as follows ± 10%:

ESF Ventilation System	Flowrate
CREVS	10,000 cfm
PREVS	2,000 cfm
IRS	20,000 cfm

c. Demonstrate for each of the ESF systems within 31 days after removal that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, shows the methyl iodide penetration less than the value specified below when tested in accordance with ASTM D3803-1989 at a temperature of 30°C and greater than or equal to the relative humidity specified as follows:

ESF Ventilation System	Penetrations	RH
CREVS	4.5%	70%
PREVS	34.5%	95%
IRS	34.5%	95%

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d. For each of the ESF systems, demonstrate the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified below when tested in accordance with Regulatory Guide 1.52, Revision 2, and ANSI N510-1975 at the system flowrate specified as follows ± 10%:

ESF Ventilation System	Delta P	Flowrate
CREVS	6 inwg	10,000 cfm
PREVS	6 inwg	2,000 cfm
IRS	6 inwg	20,000 cfm

5.5.12 Explosive Gas and Storage Tank Radioactivity Monitoring Program

This program provides control for potentially explosive gas mixtures contained in the Waste Gas Holdup System and the quantity of radioactivity contained in gas storage tanks. The gaseous radioactivity quantities shall be determined following the methodology in the ODCM.

The program shall include:

a. The limits for concentrations of oxygen in the Waste Gas Holdup System and a surveillance program to ensure the limits are maintained. Such limits shall be appropriate to the system's design criteria (i.e., whether or not the system is designed to withstand a hydrogen explosion); and

b. A surveillance program to ensure that the quantity of radioactivity contained in each gas storage tank is less than or equal to 58,500 curies noble gases (considered as Xe-133).

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Explosive Gas and Storage Tank Radioactivity Monitoring Program surveillance Frequencies.

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5.5.13 Diesel Fuel Oil Testing Program

A Diesel Fuel Oil Testing Program to implement required testing of both new fuel oil and stored fuel oil shall be established. The program shall include sampling and testing requirements, and acceptance criteria, all in accordance with ASTM Standards. The purpose of the program is to establish the following:

a. Acceptability of new fuel oil for use prior to addition to storage tanks by determining that the fuel oil has:

   1. An American Petroleum Institute gravity or an absolute specific gravity within limits,

   2. A flash point and kinematic viscosity within limits for ASTM 2D fuel oil, and

   3. Water and sediment $\leq$ 0.05%.

b. Within 31 days following addition of new fuel oil to the storage tanks, verify that the properties of the new fuel oil, other than those addressed in a., above, are within limits for ASTM 2D fuel oil; and

c. Total particulate concentration of the fuel oil, when determined by gravimetric analysis based on ASTM D2276-1989, is $\leq$ 10 mg/l when tested every 92 days.

d. The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Diesel Fuel Oil Testing Frequencies.

5.5.14 Technical Specifications Bases Control Program

This program provides a means for processing changes to the Bases of these Technical Specifications.

a. Changes to the Bases of the Technical Specifications shall be made under appropriate administrative controls and reviews.

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b. Licensees may make changes to Bases without prior NRC approval provided the changes do not require either of the following:

1. A change in the Technical Specifications incorporated in the license; or

2. A change to the UFSAR or Bases that requires NRC approval pursuant to 10 CFR 50.59.

c. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the UFSAR.

d. Proposed changes that meet the criteria of Specification 5.5.14b above shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10 CFR 50.71(e).

5.5.15 Safety Function Determination Program (SFDP)

This program ensures loss of safety function is detected and appropriate actions taken. Upon entry into Limiting Condition for Operation (LCO) 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other appropriate limitations and remedial or compensatory actions may be identified to be taken as a result of the support system inoperability and corresponding exception to entering supported system Condition and Required Actions. This program implements the requirements of LCO 3.0.6. The SFDP shall contain the following:

a. Provisions for cross-train checks to ensure a loss of the capability to perform the safety function assumed in the accident analysis does not go undetected;

b. Provisions for ensuring the plant is maintained in a safe condition if a loss of function condition exists;

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c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and

d. Other appropriate limitations and remedial or compensatory actions.

A loss of safety function exists when, assuming no concurrent single failure, no concurrent loss of offsite power or no concurrent loss of onsite diesel generator(s), a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

a. A required system redundant to system(s) supported by the inoperable support system is also inoperable; or

b. A required system redundant to system(s) in turn supported by the inoperable supported system is also inoperable; or

c. A required system redundant to support system(s) for the supported systems (a) and (b) above is also inoperable.

The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered. When a loss of safety function is caused by the inoperability of a single Technical Specification support system, the appropriate Conditions and Required Actions to enter are those of the support system.

5.5.16 Containment Leakage Rate Testing Program

A program shall be established to implement the leakage testing of the containment as required by 10 CFR 50.54(o) and 10 CFR Part 50, Appendix J, Option B. This program shall be in accordance with the guidelines contained in Nuclear Energy Institute (NEI) 94-01, “Industry Guideline for Implementing Performance Based Option of 10 CFR Part 50, Appendix J,” Revision 3-A, dated July 2012, and the conditions and limitations specified in NEI 94-01, Revision 2-A dated October 2008.

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The peak calculated containment internal pressure for the design basis loss-of-coolant accident, P_a, is 49.7 psig. The containment design pressure is 50 psig.

The maximum allowable containment leakage rate, L_a, shall be 0.16 percent of containment air weight per day at P_a.

Leakage rate acceptance criteria are:

a. Containment leakage rate acceptance criterion is $\leq 1.0\ L_a$. During the first unit startup following testing, in accordance with this program, the leakage rate acceptance criterion are $\leq 0.60\ L_a$ for Types B and C tests and $\leq 0.75\ L_a$ for Type A tests.

b. Air lock testing acceptance criteria are:

   1. Overall air lock leakage rate is $\leq 0.05\ L_a$ when tested at $\geq P_a$.

   2. For each door, leakage rate is $\leq 0.0002\ L_a$ when pressurized to $\geq$ 15 psig.

The provisions of SR 3.0.2 do not apply to the test frequencies specified in the Containment Leakage Rate Testing Program.

The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.

5.5.17 Control Room Envelope Habitability Program

A Control Room Envelope (CRE) Habitability Program shall be established and implemented to ensure that CRE habitability is maintained such that, with an OPERABLE Control Room Emergency Ventilation System (CREVS), CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE

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under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of 5 rem whole body or its equivalent to any part of the body for the duration of the accident. The program shall include the following elements:

a. The definition of CRE and the CRE boundary.

b. Requirements for maintaining CRE boundary in its design condition including configuration control and preventive maintenance.

c. Requirements for (i) determining the unfiltered air inleakage past the CRE boundary into the CRE in accordance with the testing methods and at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CRE habitability at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0.

d. License controlled programs will be used to verify the integrity of the CRE boundary. Conditions that generate relevant information from those programs will be entered into the corrective action process and shall be trended and used as part of the 36 month assessments of the CRE boundary.

e. The quantitative limits on unfiltered air inleakage into the CRE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air inleakage measured by the testing described in paragraph c. The unfiltered air inleakage limit for radiological challenges is the inleakage flow rate assumed in the licensing basis analyses of DBA consequences. Unfiltered air inleakage limits for hazardous chemicals must ensure that exposure of CRE occupants to these hazards will be within the assumptions in the licensing basis.

f. The provisions of SR 3.0.2 are applicable to the Frequencies for assessing CRE habitability, determining CRE unfiltered

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inleakage, and assessing the CRE boundary as required by paragraphs c and d respectively.

5.5.18 Risk Informed Completion Time Program

This program provides controls to calculate a Risk Informed Completion Time (RICT) and must be implemented in accordance with NEI 06-09, Revision 0-A, "Risk-Managed Technical Specifications (RMTS) Guidelines." The program shall include the following:

a. The RICT may not exceed 30 days;

b. A RICT may only be utilized in MODE 1, and 2;

c. When a RICT is being used, any change to the plant configuration, as defined in NEI 06-09, Revision 0-A, Appendix A, must be considered for the effect on the RICT.

   1. For planned changes, the revised RICT must be determined prior to implementation of the change in configuration.

   2. For emergent conditions, the revised RICT must be determined within the time limits of the Required Action Completion Time (i.e., not the RICT) or 12 hours after the plant configuration change, whichever is less.

   3. Revising the RICT is not required if the plant configuration change would lower plant risk and would result in a longer RICT.

d. If the extent of condition evaluation for inoperable structures, systems, or components (SSCs) is not complete prior to exceeding the Completion Time, the RICT shall account for the increased possibility of common cause failure (CCF) by either:

   1. Numerically accounting for the increased possibility of CCF in the RICT calculation; or

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2. Risk Management Actions (RMAs) not already credited in the RICT calculation shall be implemented that support redundant or diverse SSCs that perform the function(s) of the inoperable SSCs, and, if practicable, reduce the frequency of initiating events that challenge the function(s) performed by the inoperable SSCs.

e. The risk assessment approaches and methods shall be acceptable to the NRC. The plant PRA shall be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant, as specified in Regulatory Guide 1.200, Revision 2. Methods to assess the risk from extending the completion times must be PRA methods used to support Amendment Nos. 326/304, or other methods approved by the NRC for generic use. Any change in the PRA methods to assess risk that are outside these approval boundaries require prior NRC approval.

5.5.19 Surveillance Frequency Control Program

This program provides controls for Surveillance Frequencies. The program shall ensure that Surveillance Requirements specified in the Technical Specifications are performed at intervals sufficient to assure the associated Limiting Conditions for Operation are met.

a. The Surveillance Frequency Control Program shall contain a list of Frequencies of those Surveillance Requirements for which the Frequency is controlled by the program.

b. Changes to the Frequencies listed in the Surveillance Frequency Control Program shall be made in accordance with NEI 04-10, "Risk-Informed Technical Specifications Initiative 5b, Risk Informed Method for Control of Surveillance Frequencies," Revision 1.

c. The provisions of Surveillance Requirements 3.0.2 and 3.0.3 are applicable to the Frequencies established in the Surveillance Frequency Control Program.

5.0 ADMINISTRATIVE CONTROLS

5.6 Reporting Requirements

The following reports shall be submitted in accordance with 10 CFR 50.4.

5.6.1 Deleted

5.6.2 Annual Radiological Environmental Operating Report

------------------------------NOTE------------------------------
A single submittal may be made for both units. The submittal should combine sections common to both units at the station.

The Annual Radiological Environmental Operating Report covering the operation of the unit during the previous calendar year shall be submitted by May 15 of each year. The report shall include summaries, interpretations, and analyses of trends of the results of the Radiological Environmental Monitoring Program for the reporting period. The material provided shall be consistent with the objectives outlined in the ODCM, and in 10 CFR Part 50, Appendix I, Sections IV.B.2, IV.B.3, and IV.C.

The Annual Radiological Environmental Operating Report shall include the results of analyses of all radiological environmental samples and of all environmental radiation measurements taken during the period pursuant to the locations specified in the table and figures in the ODCM, as well as summarized and tabulated results of these analyses and measurements in the format of the table in the Radiological Assessment Branch Technical Position, Revision 1, November 1979. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted in a supplementary report as soon as possible.

5.6 Reporting Requirements

5.6.3 Radioactive Effluent Release Report

--------------------------------NOTE--------------------------------
A single submittal may be made for both units. The submittal should combine sections common to both units at the station.

The Radioactive Effluent Release Report covering the operation of the unit shall be submitted in accordance with 10 CFR 50.36a, as modified by approved exemptions. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the units. The material provided shall be consistent with the objectives outlined in the ODCM, Process Control Program, and in conformance with 10 CFR 50.36a and 10 CFR 50, Appendix I, Section IV.B.1.

5.6.4 Deleted

5.6.5 CORE OPERATING LIMITS REPORT (COLR)

a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:

3.1.1	SHUTDOWN MARGIN
3.1.3	Moderator Temperature Coefficient
3.1.4	CEA Alignment
3.1.6	Regulating Control Element Assembly Insertion Limit
3.2.1	Linear Heat Rate
3.2.3	Total Integrated Radial Peaking Factor
3.2.5	AXIAL SHAPE INDEX
3.3.1	RPS Instrumentation - Operating
3.9.1	Boron Concentration

5.6 Reporting Requirements

b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

1. ANF-88-133(P)(A), "Qualification of Advanced Nuclear Fuels' PWR Design Methodology for Rod Burnup of 62 GWd/MTU"

2. BAW-10240(P)(A), "Incorporation of M5 Properties in Framatome ANP Approved Methods"

3. EMF-92-116(P)(A), "Generic Mechanical Design Criteria for PWR Fuel Designs"

4. EMF-92-153(P)(A), "HTP: Departure from Nucleate Boiling Correlation for High Thermal Performance Fuel"

5. EMF-96-029(P)(A), "Reactor Analysis System for PWRs"

6. EMF-1961(P)(A), "Statistical Setpoint/Transient Methodology for Combustion Engineering Type Reactors"

7. EMF-2103(P)(A), "Realistic Large Break LOCA Methodology for Pressurized Water Reactors"

8. EMF-2310(P)(A), "SRP Chapter 15 Non-LOCA Methodology for Pressurized Water Reactors"

9. EMF-2328(P)(A), "PWR Small Break LOCA Evaluation Model, S-RELAP5 Based"

10. XN-NF-75-32(P)(A), "Computational Procedure for Evaluating Fuel Rod Bowing"

11. XN-NF-78-44A, "Generic Analysis of the Control Rod Ejection Transient for PWRs"

12. XN-NF-79-56(P)(A), "Gadolinia Fuel Properties for LWR Fuel Safety Evaluation"

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13. XN-NF-82-06(P)(A), "Qualification of Exxon Nuclear Fuel for Extended Burnup"

14. XN-NF-82-21(P)(A), "Application of Exxon Nuclear Company PWR Thermal Margin Methodology to Mixed Core Configurations"

15. XN-NF-85-92(P)(A), "Exxon Nuclear Uranium Dioxide/ Gadolinia Irradiation Examination and Thermal Conductivity Results"

16. CEN-124(B)-P, "Statistical Combination of Uncertainties Methodology Part 2: Combination of System Parameter Uncertainties in Thermal Margin Analyses for Calvert Cliffs Units 1 and 2"

17. CEN-191(B)-P, "CETOP-D Code Structure and Modeling Methods for Calvert Cliffs Units 1 and 2"

18. Letter from Mr. D. H. Jaffe (NRC) to Mr. A. E. Lundvall, Jr. (BG&E), dated June 24, 1982, Unit 1 Cycle 6 License Approval (Amendment No. 71 to DPR-53 and SER)

19. CENPD-161-P-A, "TORC Code, A Computer Code for Determining the Thermal Margin of a Reactor Core"

20. CENPD-206-P-A, "TORC Code, Verification and Simplified Modeling Methods"

21. CENPD-225-P-A, "Fuel and Poison Rod Bowing"

22. CENPD-382-P-A, "Methodology for Core Designs Containing Erbium Burnable Absorbers"

23. CENPD-139-P-A, "C-E Fuel Evaluation Model Topical Report"

24. CEN-161-(B)-P-A, "Improvements to Fuel Evaluation Model"

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25. CEN-161-(B)-P, Supplement 1-P, "Improvements to Fuel Evaluation Model"

26. Letter from Mr. S. A. McNeil, Jr. (NRC) to Mr. J. A. Tiernan (BG&E), dated February 4, 1987, Docket Nos. 50-317 and 50-318, "Safety Evaluation of Topical Report CEN-161-(B)-P, Supplement 1-P, Improvements to Fuel Evaluation Model"

27. CEN-372-P-A, "Fuel Rod Maximum Allowable Gas Pressure"

28. CENPD-135, Supplement 5-P, "STRIKIN-II, A Cylindrical Geometry Fuel Rod Heat Transfer Program"

29. CENPD-387-P-A, "ABB Critical Heat Flux Correlations for PWR Fuel"

30. CENPD-404-P-A, "Implementation of ZIRLO™ Cladding Material in CE Nuclear Power Fuel Assembly Designs"

31. WCAP-11596-P-A, "Qualification of the PHOENIX-P, ANC Nuclear Design System for Pressurized Water Reactor Cores"

32. WCAP-10965-P-A, "ANC: A Westinghouse Advanced Nodal Computer Code"

33. WCAP-10965-P-A Addendum 1, "ANC: A Westinghouse Advanced Nodal Computer Code; Enhancements to ANC Rod Power Recovery"

34. WCAP-16072-P-A, "Implementation of Zirconium Diboride Burnable Absorber Coatings in CE Nuclear Power Fuel Assembly Designs"

35. WCAP-16045-P-A, "Qualification of the Two-Dimensional Transport Code PARAGON"

c. The core operating limits shall be determined assuming operation at RTP such that all applicable limits (e.g., fuel

5.6 Reporting Requirements

thermal mechanical limits, core thermal hydraulic limits, ECCS limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.

d. The COLR, including any mid cycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

5.6.6 Not Used

5.6.7 Post-Accident Monitoring Report

When a report is required by Condition B or F of LCO 3.3.10, "Post Accident Monitoring Instrumentation," a report shall be submitted within the following 14 days. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.

5.6.8 Tendon Surveillance Report

Any abnormal degradation of the containment structure detected during the tests required by the Pre-Stressed Concrete Containment Tendon Surveillance Program shall be reported to the NRC within 30 days. The report shall include a description of the tendon condition, the condition of the concrete (especially at tendon anchorages), the inspection procedures, the tolerances on cracking, and the corrective action taken.

5.6.9 Steam Generator Tube Inspection Report

A report shall be submitted within 180 days after the initial entry into MODE 4 following completion of an inspection performed in accordance with the Specification 5.5.9, "Steam Generator (SG) Program." The report shall include:

5.6 Reporting Requirements

a. The scope of inspections performed on each SG;

b. The nondestructive examination techniques utilized for tubes with increased degradation susceptibility;

c. For each degradation mechanism found:

   1. The nondestructive examination techniques utilized;

   2. The location, orientation (if linear), measured size (if available), and voltage response for each indication. For tube wear at support structures less than 20 percent through-wall, only the total number of indications needs to be reported;

   3. A description of the condition monitoring assessment and results, including the margin to the tube integrity performance criteria and comparison with the margin predicted to exist at the inspection by the previous forward-looking tube integrity assessment; and

   4. The number of tubes plugged during the inspection outage.

d. An analysis summary of the tube integrity conditions predicted to exist at the next scheduled inspection (the forward-looking tube integrity assessment) relative to the applicable performance criteria, including the analysis methodology, inputs, and results;

e. The number and percentage of tubes plugged to date, and the effective plugging percentage in each SG; and

f. The results of any SG secondary side inspections.

5.0 ADMINISTRATIVE CONTROLS

5.7 High Radiation Area

Pursuant to 10 CFR Part 20, paragraph 20.1601(c), in lieu of the requirements of paragraph 20.1601(a) and 20.1601(b) of 10 CFR Part 20:

5.7.1 Access to each high radiation area, as defined in 10 CFR 20, in which an individual could receive a deep dose equivalent > 0.1 rem in one hour (at 30 centimeters from the radiation source or from any surface penetrated by the radiation) shall be controlled as described below to prevent unauthorized entry.

a. Each area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be opened as necessary to permit entry or exit of personnel or equipment.

b. Entrance shall be controlled by requiring issuance of a Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rate in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures or personnel continuously escorted by such individuals may, for the performance of their assigned duties in high radiation areas, be exempt from the preceding requirements for issuance of an RWP or equivalent provided they are otherwise following plant radiation protection procedures for entry into, exit from, and work in such high radiation areas.

d. Each individual or group of individuals permitted to enter such areas shall possess, or be accompanied by, one or more of the following:

5.7 High Radiation Area

1. A radiation monitoring device that continuously indicates the radiation dose rate in the area.

2. A radiation monitoring device that continuously integrates the radiation dose rate in the area and alarms when a preset setpoint is reached. Entry into high radiation areas with this monitoring device may be made after the dose rate in the area has been determined and personnel have been made knowledgeable of it.

3. A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area.

4. An individual qualified in radiation protection procedures equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive radiation protection control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by radiation protection supervision.

5.7.2 In addition to the requirements of Specification 5.7.1, high radiation areas in which an individual could receive a deep dose equivalent > 1.0 rem in one hour (at 30 centimeters from the radiation source or from any surface penetrated by the radiation), but less than 500 rads/hour (at 1 meter from the radiation source or from any surface penetrated by the radiation) shall be provided with a locked or continuously guarded door, or gate, or equivalent to prevent unauthorized entry.

5.7 High Radiation Area

a. The keys to such locked doors or gates, or equivalent, shall be administratively controlled in accordance with a program approved by the radiation protection manager.

b. Doors and gates, or equivalent, shall remain locked except during periods of access by personnel under an approved RWP, or equivalent, to ensure individuals are informed of the dose rate in the immediate work areas prior to entry.

c. Individual high radiation areas in which an individual could receive a deep dose equivalent > 1.0 rem in one hour (at 30 centimeters from the radiation source or from any surface penetrated by the radiation), accessible to personnel, that are located within larger areas where no enclosure exists to enable locking, or that are not continuously guarded, and where no lockable enclosure can be reasonably constructed around the individual area require both of the following access controls:

   1. Each area shall be barricaded and conspicuously posted.

   2. A flashing light shall be activated as a warning device.

CALVERT CLIFFS

NUCLEAR POWER PLANT

UNIT 1

TECHNICAL SPECIFICATIONS

APPENDIX "B"
TO
LICENSE NO. DPR-53

ENVIRONMENTAL PROTECTION PLAN

(NON-RADIOLOGICAL)

TECHNICAL SPECIFICATIONS

ISSUED BY THE UNITED STATES NUCLEAR REGULATORY COMMISSION

1.0 Objectives of the Environmental Protection Plan

The Environmental Protection Plan (EPP) is to provide for protection of environmental values during construction and operation of the nuclear facility. The principal objectives of the EPP are as follows:

1. Verify that the plant is operated in an environmentally acceptable manner, as established by the FES and other NRC environmental impact assessments.

2. Coordinate NRC requirements and maintain consistency with other Federal, State and local requirements for environmental protection.

3. Keep NRC informed of the environmental effects of facility construction and operation and of actions taken to control those effects.

Environmental concerns identified in the FES which relate to water quality matters are regulated by way of the licensee's NPDES permit.

2.0 Environmental Protection Issues

In the FES-OL, the staff considered the environmental impacts associated with the operation of the Calvert Cliffs Plant. Certain environmental issues were identified which required study or license conditions to resolve environmental concerns and to assure adequate protection of the environment. The Appendix B Environmental Technical Specifications issued with the licenses included discharge restrictions and monitoring programs to resolve the issues. Prior to issuance of this EPP, the requirements remaining in the ETS were:

1. Protection of the aquatic environment by limiting the discharge of dissolved solids and acids and bases and an annual inventory of treatment chemicals added or used in the plant. (ETS 2.2.1, 2.2.2)

2. Surveillance programs for fish, crabs and oysters, and water quality to establish impact of plant operation on the aquatic environment. (ETS 3.1)

3. Special studies to document levels of intake entrainment and impingement in relation to the densities of important species in the plant vicinity. (ETS 3.1.2.b)

Aquatic issues are now addressed by the effluent limitations and monitoring requirements continued in the effective NPDES Permit issued by the Maryland Department of the Environment. The NRC will rely on this agency for regulation of matters involving water quality and aquatic biota.

3.0 Consistency Requirements

3.1 Plant Design and Operation

The licensee may make changes in station design or operation or perform tests or experiments affecting the environment provided such changes, tests or experiments do not involve an unreviewed environmental question. Changes in plant design or operation or performance of tests or experiments which do not affect the environment are not subject to this requirement.

Before engaging in unauthorized construction or operational activities which may affect the environment, the licensee shall perform an environmental evaluation of such activity.* When the evaluation indicates that such activity involves an unreviewed environmental question, the licensee shall provide a written evaluation of such activities and obtain prior approval from the NRC.

A proposed change, test or experiment shall be deemed to involve an unreviewed environmental question if it concerns (1) a matter which may result in a significant increase in any adverse environmental impact previously evaluated in the final environmental statement (FES) as modified by staff's testimony to the Atomic Safety and Licensing Board, supplements to the FES, environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing Board; or (2) a significant change in effluents or power level (in accordance with 10 CFR 51.2(b)(2)); or (3) a matter not previously reviewed and evaluated in the documents specified in (1) of this Subsection, which may have a significant adverse environmental impact.

The licensee shall maintain records of changes in facility design or operation and of tests and experiments carried out pursuant to this Subsection. These records shall include a written evaluation which provides bases for the determination that the change, test, or experiment does not involve an unreviewed environmental question.

Activities governed by Section 3.3 of this EPP are not subject to the requirements of this section.

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* Activities are excluded from this requirement if all measurable nonradiological effects are confined to the onsite areas previously disturbed during site preparation, plant construction and previous plant operation.

3.2 Reporting Related to the NPDES Permit and State Certification (pursuant to Section 401 of the Clean Water Act)

1. Violations of the NPDES Permit or the State 401 Certification Conditions shall be reported to the NRC by submittal of copies of the reports required by the NPDES Permit or State 401 Certification.

2. The licensee shall provide the NRC with a copy of any 316(a) or (b) studies and/or related documentation at the same time it is submitted to the permitting agency.

3. Changes and additions to the NPDES Permit or the State 401 Certification shall be reported to the NRC within 30 days following the date the change is approved. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.

4. The NRC shall be notified of changes to the effective NPDES Permit proposed by the licensee by providing NRC with a copy of the proposed change at the same time it is submitted to the permitting agency. The licensee shall provide the NRC a copy of the application for renewal of the NPDES Permit at the same time the application is submitted to the permitting agency.

3.3 Changes Required for Compliance with Other Environmental Regulations

Changes in plant design or operation and performance of tests or experiments which are required to achieve compliance with other Federal, State, or local environmental regulations are not subject to the requirements of Section 3.1.

4.0 Environmental Conditions

4.1 Significant Environmental Events

Any occurrence of a significant event that indicates or could result in significant environmental impact causally related to station operation shall be recorded and promptly reported to the NRC within 24 hours followed by a written report within 30 days. No routine monitoring programs are required to implement this condition.

The written report shall (a) describe, analyze, and evaluate the event, including extent and magnitude of the impact and plant operating characteristics, (b) describe the probable cause of the event, (c) indicate the action taken to correct the reported event, (d) indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving similar components or systems, and (e) indicate the agencies notified and their preliminary responses.

Events reportable under this subsection which also require reports to other Federal, State or local agencies shall be reported in accordance with those reporting requirements in lieu of the requirements of this subsection. The NRC shall be provided a copy of such report at the same time it is submitted to the other agency.

The following are examples of significant environmental events: excessive bird impaction events; onsite plant or animal disease outbreaks; mortality or unusual occurrence of any species protected by the Endangered Species Act of 1973; unusual fish kills; and increase in nuisance organisms or conditions.

Appendix C

Additional Conditions

Facility Operating License No. DPR-53

Constellation Energy Generation, LLC (the licensee) and Calvert Cliffs Nuclear Power Plant, LLC (CCNPP, LLC or Company) shall comply with the following conditions on the schedule noted below:

Amendment Number	Additional Condition	Implementation Date
227	Baltimore Gas and Electric Company (BGE) is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this Amendment shall include the relocation of these requirements to the appropriate documents as described in the licensee's application dated December 4, 1996, as supplemented by letters dated March 27, June 9, June 18, July 21, August 14, August 19, September 10, October 6, October 20, October 23, November 5, 1997, and January 12, January 28, and March 16, 1998, evaluated in the NRC staff's Safety Evaluation enclosed with this amendment.	This amendment is effective immediately and shall be implemented by August 31, 1998.
228	BGE is authorized to incorporate in the UFSAR certain changes regarding Main Steam Line Break, Steam Generator Tube Rupture, Seized Rotor, and Boron Dilution Analyses.	The updated UFSAR shall be implemented within 6 months after restart from the spring 1998 refueling outage.
237	Deleted.	

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

Amendment No.	Additional Conditions	Implementation Date
246	This amendment requires the licensee to incorporate in the Updated Final Safety Analysis Report (UFSAR) changes associated with the aircraft hazards analysis which was evaluated by the staff in the Safety Evaluation dated August 29, 2001.	Next update of the UFSAR
248	This amendment requires the licensee to incorporate in the Updated Final Safety Analysis Report (UFSAR) changes associated with the loss of feedwater flow analysis which was evaluated by the staff in the safety evaluation dated February 26, 2002.	Next update of the UFSAR
267	This amendment requires the licensee develop a long-term coupon surveillance program for the Carborundum samples. This program must verify that the Carborundum degradation rates assumed in the licensee's analyses to prove subcriticality, as required by 10 CFR 50.68, remain valid over the seventy-year life span of the Unit 1 spent fuel pool. The licensee must submit this modified coupon surveillance program to the NRC under the 10 CFR 50.90 requirements for its review and approval.	3 years after approval of this amendment

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

Amendment No.	Additional Conditions	Implementation Date
287	Upon implementation of Amendment No. 287 adopting TSTF-448, Revision 3, the determination of Control Room envelope unfiltered air inleakage as required by Surveillance Requirement (SR) 3.7.8.4 in accordance with Technical Specification 5.5.17c(i), and the assessment of Control Room envelope habitability as required by Technical Specification 5.5.17.c(ii) shall be considered met. Following implementation: (a) The first performance of SR 3.7.8.4 in accordance with Technical Specification 5.5.17c(i), shall be within the specified Frequency of 6 years (plus the 18 month allowance of SR 3.0.2) as measured from December 13, 2004, the date of the most Successful tracer gas test, 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 Control Room envelope habitability per Technical Specification 5.5.17c(ii) shall be within the next 9 months, because the time period since the most recent successful tracer gas test (December 13, 2004) is greater than 3 years.	Within 60 days following completion of the installation and testing of the plant modifications described in Amendment No. 281 issued on August 29, 2007.
295	CCNPP, LLC may no longer rely exclusively on an external sinking fund as its decommissioning funding assurance mechanism and will be required to implement an alternate decommissioning funding assurance mechanism, acceptable per NRC requirements outlined in 10 CFR 50.75(e)(1), which will be used to provide decommissioning funding assurance.	To be implemented at time the license transfer to the licensee from CCNPP, Inc. is effected.
297	For the Asymmetric Steam Generator Transient analysis performed in accordance with the methodology of Technical Specification 5.6.5.b.8, the methodology shall be revised to capture the asymmetric core inlet temperature distribution and application of local peaking augmentation factors. The revised methodology shall be applied to Calvert Cliffs Unit 1 core reload designs starting with Cycle 21.	This amendment is effective immediately and shall be implemented within 60 days of completion of the Unit 1 2012 refueling outage.

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

Amendment No.	Additional Conditions	Implementation Date
	For the Seized Rotor Event analysis performed in accordance with the methodology of Technical Specification 5.6.5.b.8, the methodology shall be revised to capture the asymmetric core inlet flow distribution. The revised methodology shall be applied to Calvert Cliffs Unit 1 core reload designs starting with Cycle 21.	
	For the Control Element Assembly Ejection analysis performed in accordance with the methodology of Technical Specification 5.6.5.b.11, the cycle-specific hot zero power peak average radial fuel enthalpy is calculated based on a modified power dependent insertion limit with Control Element Assembly Bank 3 assumed to be fully inserted (only in the analysis, not in actual plant operations). This revised methodology shall be applied to Calvert Cliffs Unit 1 core reload designs starting with Cycle 21.	
	The Small Break Loss of Coolant Accident performed in accordance with the methodology of Technical Specification 5.6.5.b.9 shall be analyzed using a break spectrum with augmented detail related to break size. This revised methodology shall be applied to Calvert Cliffs Unit 1 core reload designs starting with Cycle 21.	
	Core Operating Limits Report Figures 3.1.6, 3.2.3, and 3.2.5 shall not be changed without prior NRC review and approval until an NRC-accepted generic, or Calvert Cliffs-specific, basis is developed for analyzing the Control Element Assembly Rod Bank Withdrawal Event, the Control Element Assembly Drop, and the Control Element Assembly Ejection (power level-sensitive transients) at full power conditions only.	
	Approval of the use of S-RELAP5 (Technical Specification 5.6.5.b.8) is restricted to only those safety analyses that confirm acceptable transient performance relative to the specified acceptable fuel design limits. Prior transient specific NRC approval is required to analyze transient performance relative to reactor coolant pressure boundary integrity until NRC approval is obtained for a generic or Calvert Cliffs-specific basis for the use of the methodology in Technical Specification 5.6.5.b.8 to demonstrate reactor coolant pressure boundary integrity.	

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

Amendment No.	Additional Conditions	Implementation Date
	For the RODEX2-based fuel thermal-mechanical design analysis performed in accordance with the methodology of Technical Specification 5.6.5.b.3, Calvert Cliffs Unit 1 core reload designs (starting with Cycle 21) shall satisfy the following criteria: a. Predicted rod internal pressure shall remain below the steady state system pressure. b. The linear heat generation rate fuel centerline melting safety limit shall remain below 21.0 KW/ft.	
	For the Control Element Assembly Ejection analysis, Calvert Cliffs Unit 1 core reloads (starting with Cycle 21) shall satisfy the following criteria: a. Predicted peak radial average fuel enthalpy when calculated in accordance with the methodology of Technical Specification 5.6.5.b.11 shall remain below 200 cal/g. b. For the purpose of evaluating radiological consequences, should the SRELAP-5 hot spot model predict fuel temperature above incipient centerline melt conditions when calculated in accordance with the methodology of Technical Specification 5.6.5.b.8, a conservative radiological source term (in accordance with RG 1.183, Revision 0) shall be applied to the portion of fuel beyond incipient melt conditions (and combined with existing gap source term), and cladding failure shall be presumed.	
	The approval of the emergency core cooling system evaluation performed in accordance with the methodology of Technical Specification 5.6.5.b.7 shall be valid only for Calvert Cliffs Unit 1, Cycle 21. To remove this condition, Calvert Cliffs shall obtain NRC approval of the analysis of once- and twice-burned fuel for core designs following Unit 1 Cycle 21.	

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

Amendment No.	Additional Condition	Implementation Date
343	1) Deleted	No later than the closing date of the transaction approved on November 16, 2021.

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

Amendment No.	Additional Condition	Implementation Date
	2) Constellation Energy Generation, LLC shall, no later than the date the closing of the transaction approved on November 16, 2021, occurs, enter into a Support Agreement of approximately $126 million with CCNPP, LLC. Calvert Cliffs Nuclear Power Plant, LLC shall not take any action to cause Constellation Energy Generation, LLC, or its successors and assigns, to void, cancel, or materially modify the Constellation Energy Generation, LLC Support Agreement or cause it to fail to perform, or impair its performance under the Constellation Energy Generation, LLC Support Agreement, without the prior written consent of the NRC. The Constellation Energy Generation, LLC Support Agreement may not be amended or modified without 30 days prior written notice to the Director of the Office of Nuclear Reactor Regulation or their designee. An executed copy of the Constellation Energy Generation, LLC Support Agreement shall be submitted to the NRC no later than 30 days after the completion of the proposed transaction. Constellation Energy Generation, LLC shall inform the NRC in writing no later than 14 days after any funds are provided to or for CCNPP, LLC under the Constellation Energy Generation, LLC Support Agreement.	

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

Amendment No.	Additional Condition	Implementation Date
	3) Deleted.	
	4) Within 14 days of the closing of the transaction approved on November 16, 2021, Constellation Energy Generation, LLC shall submit to the NRC the Nuclear Operating Services Agreement reflecting the terms set forth in the application dated February 25, 2021. Section 7.1 of the Nuclear Operating Services Agreement may not be modified in any material respect related to financial arrangements that would adversely impact the ability of the licensee to fund safety-related activities authorized by the license without the prior written consent of the Director of the Office of Nuclear Reactor Regulation.	
	5) Deleted	
	6) Deleted	

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

Amendment No.	Additional Condition	Implementation Date
	7) Deleted	
	8) Deleted	
	9) Deleted	

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

Amendment No.	Additional Conditions	Implementation Date
318	(1) Before achieving full compliance with 10 CFR 50.48(c), risk informed changes to the licensee's fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in License Condition 2.E.(2)(b). (2) The licensee shall complete the modifications to its facility as described in Table S-2, "Plant Modifications Committed," of licensee letter dated April 22, 2016, to complete the transition to full compliance with 10 CFR 50.48(c) by April 30, 2018. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications. (3) The licensee shall implement the items listed in Enclosure 1, Attachment S, Table S-3, "Implementation Items," from licensee letter dated April 22, 2016 within 12 months after NRC approval unless that implementation date falls within a scheduled refueling outage. Then, implementation will occur 60 days after startup from that scheduled refueling outage. It should be noted that implementation item IMP-12 is associated with incorporation of the NFPA 805 modification and the completion of this implementation item is an on-going action initiated within the 180 day timeframe for completion of implementation items but only complete after completion of modification implementation per Table S-2.	April 30, 2018

Appendix C (Cont'd)

Additional Conditions

Facility Operating License No. DPR-53

Amendment No.	Additional Condition	Implementation Date
339	Up to two Framatome PROtect™ Lead Test Assemblies utilizing Chromium-coated M5® cladding and chromia doped pellets may be placed in limiting regions of the core for up to 3 cycles commencing with the implementation of Amendment 339.	With implementation of this Amendment
339	The safety limits specified in TS 2.1.1.2 regarding fuel centerline melt temperature for Framatome fuel, < 5081°F, decreasing by 58°F per 10,000 MWD/MTU and adjusted for burnable poison per XN-NF-79-56(P)(A), Revision 1, Supplement 1 is not applicable for the Framatome PROtect™ Lead Test Assemblies utilizing Chromium-coated M5® cladding and chromia doped pellets for up to 3 cycles commencing with the implementation of Amendment 339. .	With implementation of this Amendment
339	The requirement that the RODEX2 predicted rod internal pressure shall remain below the steady state system pressure is not applicable for the Framatome PROtect™ Lead Test Assemblies utilizing Chromium coated M5® cladding and chromia doped pellets for up to 3 cycles commencing with the implementation of Amendment 339.	With implementation of this Amendment

Appendix C (Cont'd.)

Additional Conditions

Facility Operating License No. DPR-53

Amendment No.	Additional Conditions	Implementation Date
318	(1) Before achieving full compliance with 10 CFR 50.48(c), risk informed changes to the licensee's fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in License Condition 2.E.(2)(b). (2) The licensee shall complete the modifications to its facility as described in Table S-2, "Plant Modifications Committed," of licensee letter dated April 22, 2016, to complete the transition to full compliance with 10 CFR 50.48(c) by April 30, 2018. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications. (3) The licensee shall implement the items listed in Enclosure 1, Attachment S, Table S-3, "Implementation Items," from licensee letter dated April 22, 2016 within 12 months after NRC approval unless that implementation date falls within a scheduled refueling outage. Then, implementation will occur 60 days after startup from that scheduled refueling outage. It should be noted that implementation item IMP-12 is associated with incorporation of the NFPA 805 modification and the completion of this implementation item is an on-going action initiated within the 180 day timeframe for completion of implementation items but only complete after completion of modification implementation per Table S-2.	April 30, 2018

Appendix C (Cont'd.)

Additional Conditions

Facility Operating License No. DPR-53

Amendment No.	Additional Condition	Implementation Date
339	Up to two Framatome PROtect™ Lead Test Assemblies utilizing Chromium-coated M5® cladding and chromia doped pellets may be placed in limiting regions of the core for up to 3 cycles commencing with the implementation of Amendment 339.	With implementation of this Amendment
339	The safety limits specified in TS 2.1.1.2 regarding fuel centerline melt temperature for Framatome fuel, < 5081°F, decreasing by 58°F per 10,000 MWD/MTU and adjusted for burnable poison per XN-NF-79-56(P)(A), Revision 1, Supplement 1 is not applicable for the Framatome PROtect™ Lead Test Assemblies utilizing Chromium-coated M5® cladding and chromia doped pellets for up to 3 cycles commencing with the implementation of Amendment 339. .	With implementation of this Amendment
339	The requirement that the RODEX2 predicted rod internal pressure shall remain below the steady state system pressure is not applicable for the Framatome PROtect™ Lead Test Assemblies utilizing Chromium coated M5® cladding and chromia doped pellets for up to 3 cycles commencing with the implementation of Amendment 339.	With implementation of this Amendment