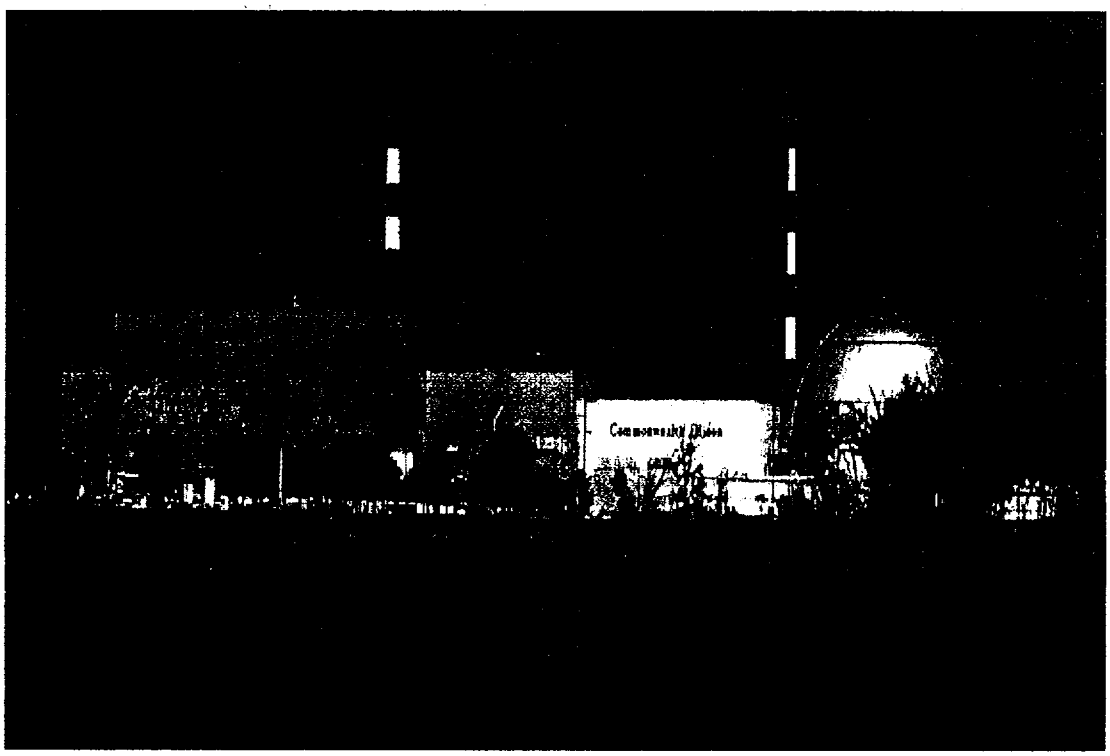
Improved Technical Specifications



Dresden Station

Volume 1:
Split Report, Chapters 1.0, 2.0, and Section 3.0

ComEd

APPLICATION OF SELECTION CRITERIA

TO THE

DRESDEN 2 AND 3

TECHNICAL SPECIFICATIONS

CONTENTS

1. INTRODUCTION 1

2. SELECTION CRITERIA 2

3. PROBABILISTIC RISK ASSESSMENT INSIGHTS 5

4. RESULTS OF APPLICATION OF SELECTION CRITERIA 8

5. REFERENCES 9

ATTACHMENT

SUMMARY DISPOSITION MATRIX FOR DRESDEN 2 AND 3

APPENDICES

A. JUSTIFICATION FOR SPECIFICATION RELOCATION

B. DRESDEN 2 AND 3 SPECIFIC RISK SIGNIFICANT EVALUATION

1. INTRODUCTION

The purpose of this document is to confirm the results of the BWR Owners Group application of the Technical Specification selection criteria on a plant specific basis for Dresden Nuclear Power Station, Units 2 and 3 (Dresden 2 and 3). Commonwealth Edison (ComEd) Company has reviewed the application of the selection criteria to each of the Technical Specifications utilized in BWROG report NEDO-31466, "Technical Specification Screening Criteria Application and Risk Assessment," including Supplement 1 (Reference 1), NUREG-1433, Standard Technical Specifications, General Electric Plant BWR/4," (Reference 2) and applied the criteria to each of the current Dresden 2 and 3 Technical Specifications. Additionally, in accordance with the NRC guidance, this confirmation of the application of selection criteria to Dresden 2 and 3 includes confirming the risk insights from Probabilistic Risk Assessment (PRA) evaluations, provided in Reference 1, as applicable to Dresden 2 and 3.

2. SELECTION CRITERIA

ComEd used the selection criteria provided in the NRC Final Policy Statement on Technical Specification Improvements of July 22, 1993 (Reference 3) to develop the results contained in the attached matrix. Probabilistic Risk Assessment (PRA) insights as used in the BWROG submittal were used, confirmed by ComEd, and are discussed in the next section of this report. The selection criteria and discussion provided in the NRC Final Policy statement are as follows:

> <u>Criterion 1</u>: Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary:
>
> <u>Discussion of Criterion 1</u>: A basic concept in the adequate protection of the public health and safety is the prevention of accidents. Instrumentation is installed to detect significant abnormal degradation of the reactor coolant pressure boundary so as to allow operator actions to either correct the condition or to shut down the plant safely, thus reducing the likelihood of a loss-of-coolant accident.
>
> This criterion is intended to ensure that Technical Specifications control those instruments specifically installed to detect excessive reactor coolant system leakage. This criterion should not, however, be interpreted to include instrumentation to detect precursors to reactor coolant pressure boundary leakage or instrumentation to identify the source of actual leakage (e.g., loose parts monitor, seismic instrumentation, valve position indicators).
>
> <u>Criterion 2</u>: A process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident or Transient analyses that either assumes the failure of or presents a challenge to the integrity of a fission product barrier:
>
> <u>Discussion of Criterion 2</u>: Another basic concept in the adequate protection of the public health and safety is that the plant shall be operated within the bounds of the initial conditions assumed in the existing Design Basis Accident and Transient analyses and that the plant will be operated to preclude unanalyzed transients and accidents. These analyses consist of postulated events, analyzed in the FSAR, for which a structure, system, or component must meet specified functional goals. These analyses are contained in Chapters 6 and 15 of the FSAR (or equivalent chapters) and are identified as Condition II, III, or IV events (ANSI N18.2) (or equivalent) that either assume the failure of or present a challenge to the integrity of a fission product barrier.
>
> As used in Criterion 2, process variables are only those parameters for which specific values or ranges of values have been chosen as reference bounds in the Design Basis Accident or Transient Analyses and which are monitored and controlled during power

2. (continued)

operation such that process values remain within the analysis bounds. Process variables captured by Criterion 2 are not, however, limited to only those directly monitored and controlled from the control room. These could also include other features or characteristics that are specifically assumed in Design Basis Accident or Transient analyses if they cannot be directly observed in the control room (e.g., moderator temperature coefficient and hot channel factors).

The purpose of this criterion is to capture those process variables that have initial values assumed in the Design Basis Accident and Transient analyses, and which are monitored and controlled during power operation. As long as these variables are maintained within the established values, risk to the public safety is presumed to be acceptably low. This criterion also includes active design features (e.g., high pressure/low pressure system valves and interlocks) and operating restrictions (pressure/temperature limits) needed to preclude unanalyzed accidents and transients.

Criterion 3: A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a Design Basis Accident or Transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier:

Discussion of Criterion 3: A third concept in the adequate protection of the public health and safety is that in the event that a postulated Design Basis Accident or Transient should occur, structures, systems, and components are available to function or to actuate in order to mitigate the consequences of the Design Basis Accident or Transient. Safety sequence analyses or their equivalent have been performed in recent years and provide a method of presenting the plant response to an accident. These can be used to define the primary success paths.

A safety sequence analysis is a systematic examination of the actions required to mitigate the consequences of events considered in the plant's Design Basis Accident and Transient analyses, as presented in Chapters 6 and 15 of the plant's FSAR (or equivalent chapters). Such a safety sequence analysis considers all applicable events, whether explicitly or implicitly presented. The primary success path of a safety sequence analysis consists of the combination and sequences of equipment needed to operate (including consideration of the single failure criteria), so that the plant response to Design Basis Accidents and Transients limits the consequences of these events to within the appropriate acceptance criteria.

It is the intent of this criterion to capture into Technical Specifications only those structures, systems, and components that are part of the primary success path of a safety sequence analysis. Also captured by this criterion are those support and actuation systems that are necessary for items in the primary success path to

2. (continued)

successfully function. The primary success path for a particular mode of operation does not include backup and diverse equipment (e.g., rod withdrawal block which is a backup to the average power range monitor high flux trip in the startup mode, safety valves which are backup to low temperature overpressure relief valves during cold shutdown).

Criterion 4: A structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety:

Discussion of Criterion 4: It is the Commission's policy that licensees retain in their Technical Specifications LCOs, action statements, and Surveillance Requirements for the following systems (as applicable), which operating experience and PSA have generally shown to be significant to public health and safety and any other structures, systems, or components that meet this criterion:

- Reactor Core Isolation Cooling/Isolation Condenser,
- Residual Heat Removal,
- Standby Liquid Control, and
- Recirculation Pump Trip.

The Commission recognizes that other structures, systems, or components may meet this criterion. Plant- and design-specific PSAs have yielded valuable insight to unique plant vulnerabilities not fully recognized in the safety analysis report Design Basis Accident or Transient analyses. It is the intent of this criterion that those requirements that PSA or operating experience exposes as significant to public health and safety, consistent with the Commission's Safety Goal and Severe Accident Policies, be retained or included in the Technical Specifications.

The Commission expects that licensees, in preparing their Technical Specification related submittals, will utilize any plant-specific PSA or risk survey and any available literature on risk insights and PSAs. This material should be employed to strengthen the technical bases for those requirements that remain in Technical Specifications, when applicable, and to verify that none of the requirements to be relocated contain constraints of prime importance in limiting the likelihood or severity of the accident sequences that are commonly found to dominate risk. Similarly, the NRC staff will also employ risk insights and PSAs in evaluating Technical Specifications related submittals. Further, as a part of the Commissions ongoing program of improving Technical Specifications, it will continue to consider methods to make better use of risk and reliability information for defining future generic Technical Specification requirements.

3. PROBABILISTIC RISK ASSESSMENT INSIGHTS

Introduction and Objectives

The Final Policy Statement includes a statement that NRC expects licensees to utilize the available literature on risk insights to verify that none of the requirements to be relocated contain constraints of prime importance in limiting the likelihood or severity of the accident sequences that are commonly found to dominate risk.

Those Technical Specifications proposed for relocation to other plant controlled documents will be maintained under the 10 CFR 50.59, safety evaluation review program. These specifications have been compared to a variety of Probabilistic Risk Assessment (PRA) material with two purposes: 1) to identify if a component or variable is addressed by PRA, and 2) to judge if the component or variable is risk-important. In addition, in some cases risk was judged independent of any specific PRA material. The intent of the review was to provide a supplemental screen to the deterministic criteria. Those Technical Specifications proposed to remain part of the Improved Technical Specifications were not reviewed. This review was accomplished in Reference 1 except where discussed in Appendix A, "Justification For Specification Relocation," and has been confirmed by ComEd for those Specifications to be relocated. The Dresden 2 and 3 plant-specific Probabilistic Risk Assessment (PRA) was reviewed during this process. Where Reference 1 did not review a Technical Specification against the criteria of Reference 3, ComEd performed a review similar (but not identical) to that described below for Reference 1. The results of these reviews are presented in Appendix B.

Assumptions and Approach

Briefly, the approach used in Reference 1 was the following:

> The risk assessment analysis evaluated the loss of function of the system or component whose LCO was being considered for relocation and qualitatively assessed the associated effect on core damage frequency and offsite releases. The assessment was based on available literature on plant risk insights and PRAs. Table 3-1 lists the PRAs used for making the assessments and is provided at the end of this section. A detailed quantitative calculation of the core damage and offsite release effects was not performed. However, the analysis did provide an indication of the relative significance of those LCOs proposed for relocation on the likelihood or severity of the accident sequences that are commonly found to dominate plant safety risks. The following analysis steps were performed for each LCO proposed for relocation:
>
> a. List the function(s) affected by removal of the LCO item.
>
> b. Determine the effect of loss of the LCO item on the function(s).
>
> c. Identify compensating provisions, redundancy, and backups related to the loss of the LCO item.

3. (continued)

d. Determine the relative frequency (high, medium, and low) of the loss of the function(s) assuming the LCO item is removed from Technical Specifications and controlled by other procedures or programs. Use information from current PRAs and related analyses to establish the relative frequency.

e. Determine the relative significance (high, medium, and low) of the loss of the function(s). Use information from current PRAs and related analyses to establish the relative significance.

f. Apply risk category criteria to establish the potential risk significance or non-significance of the LCO item. Risk categories were defined as follows:

RISK CRITERIA

	Consequence		
Frequency	High	Medium	Low
High	S	S	NS
Medium	S	S	NS
Low	NS	NS	NS

S = Potential Significant Risk Contributor

NS = Risk Non-Significant

g. List any comments or caveats that apply to the above assessment. The output from the above evaluation was a list of LCOs proposed for relocation that could have potential plant safety risk significance if not properly controlled by other procedures or programs. As a result these Specifications will be relocated to other plant controlled documents outside the Technical Specifications.

TABLE 3-1

BWR PRAs USED IN NEDO-31466 (and Supplement 1)
RISK ASSESSMENT

- BWR/6 Standard Plant, GESSAR II, 238 Nuclear Island, BWR/6 Standard Plant Probabilistic Risk Assessment, Docket No. STN 50-447, March 1982.

- La Salle County Station, NEDO-31085, Probabilistic Safety Analysis, February 1988.

- Grand Gulf Nuclear Station, IDCOR, Technical Report 86-2GG, Verification of IPE for Grand Gulf, March 1987.

- Limerick, Docket Nos. 50-352, 50-353, 1981, "Probabilistic Risk Assessment, Limerick Generating Station," Philadelphia Electric Company.

- Shoreham, Probabilistic Risk Assessment Shoreham Nuclear Power Station, Long Island Lighting Company, SAI-372-83-PA-01, June 24, 1983.

- Peach Bottom 2, NUREG-75/0104, "Reactor Safety Study," WASH-1400, October 1975.

- Millstone Point 1, NUREG/CR-3085, "Interim Reliability Evaluation Program: Analysis of the Millstone Point Unit 1 Nuclear Power Plant," January 1983.

- Grand Gulf, NUREG/CR-1659, "Reactor Safety Study Methodology Applications Program: Grand Gulf #1 BWR Power Plant," October 1981.

- NEDC-30936P, "BWR Owners' Group Technical Specification Improvement Methodology (with Demonstration for BWR ECCS Actuation Instrumentation) Part 2," June 1987.

4. RESULTS OF APPLICATION OF SELECTION CRITERIA

The selection criteria from Section 2 were applied to the Dresden 2 and 3 Technical Specifications. The attachment is a summary of that application indicating which Specifications are being retained or relocated. Discussions that document the rationale for the relocation of each Specification which failed to meet the selection criteria are provided in Appendix A. No Significant Hazards Considerations (10 CFR 50.92) evaluations for those Specifications relocated are provided with the Discussion of Changes for the specific Technical Specifications. ComEd will relocate those Specifications identified as not satisfying the criteria to licensee controlled documents whose changes are governed by 10 CFR 50.59.

5. REFERENCES

1. NEDO-31466 (and Supplement 1), "Technical Specification Screening Criteria Application and Risk Assessment," November 1987.

2. NUREG-1433, "Standard Technical Specifications, General Electric Plant BWR/4," Revision 1, April 1995.

3. Final Policy Statement on Technical Specifications Improvements, July 22, 1993 (58 FR 39132).

ATTACHMENT

SUMMARY DISPOSITION MATRIX

FOR

DRESDEN 2 AND 3

SUMMARY DISPOSITION MATRIX FOR DRESDEN 2 AND 3

CTS NUMBER	TITLE	ITS NUMBER	RETAINED/ CRITERION FOR INCLUSION	BASIS FOR INCLUSION/EXCLUSION[a]
1.0	DEFINITIONS	1.1 3.10.1 3.10.2 3.10.3 5.5.1	Yes	See Notes 1, 4, and 6, Page 13.
2.1	SAFETY LIMITS	2.0		
2.1.A	Thermal Power, Low Pressure or Low Flow	2.1.1.1	Yes	See Note 2, Page 13.
2.1.B	Thermal Power, High Pressure and High Flow	2.1.1.2	Yes	See Note 2, Page 13.
2.1.C	Reactor Coolant System Pressure	2.1.2	Yes	See Note 2, Page 13.
2.1.D	Reactor Vessel Water Level	2.1.1.3	Yes	See Note 2, Page 13.
2.2	LIMITING SAFETY SYSTEM SETTINGS			
2.2.A	Reactor Protection System (RPS) Instrumentation Setpoints	3.3.1.1	Yes	The application of Technical Specification selection criteria is not appropriate. However, the RPS LSSS have been included as part of the RPS Instrumentation Specification, which has been retained since the RPS Instrumentation Functions either actuate to mitigate consequences of design basis accidents and transients or are retained as directed by the NRC as the Functions are part of the RPS.
3.0	LIMITING CONDITIONS FOR OPERATION - APPLICABILITY			
3.0.A	Operational Conditions	LCO 3.0.1	Yes	See Note 3, Page 13.
3.0.B	Noncompliance	LCO 3.0.2	Yes	See Note 3, Page 13.
3.0.C	Generic Actions	LCO 3.0.3	Yes	See Note 3, Page 13.
3.0.D	Entry into Operational Conditions	LCO 3.0.4	Yes	See Note 3, Page 13.
3.0.E	Equipment Return to Service	LCO 3.0.5	Yes	See Note 3, Page 13.

(a) The applicable safety analyses are discussed in the Bases for the individual Technical Specifications.

CTS NUMBER	TITLE	ITS NUMBER	RETAINED/ CRITERION FOR INCLUSION	BASIS FOR INCLUSION/EXCLUSION[a]
4.0	SURVEILLANCE REQUIREMENTS - APPLICABILITY			
4.0.A	Operational Conditions	SR 3.0.1	Yes	See Note 3, Page 13.
4.0.B	Time of Performance	SR 3.0.2	Yes	See Note 3, Page 13.
4.0.C	Noncompliance	SR 3.0.3	Yes	See Note 3, Page 13.
4.0.D	Entry into Operational Conditions	SR 3.0.4	Yes	See Note 3, Page 13.
4.0.E	ASME Code Class 1, 2, 3 Components	5.5.6	Yes	See Note 3, Page 13.
3/4.1	REACTOR PROTECTION SYSTEM			
3/4.1.A[b]	Reactor Protection System (RPS)	3.3.1.1 3.10.7	Yes-3	Actuates to mitigate consequences of a DBA and/or transient, or it provides an anticipatory scram to ensure the scram discharge volume and thus RPS remains operable, or it is retained as directed by the NRC as it is part of the RPS.
3/4.1.A.10	Turbine EHC Control Oil Pressure - Low	Deleted	No	Deleted. See RPS Instrumentation technical change discussion in the Discussion of Changes for ITS 3.3.1.1.
3/4.1.A.12	Turbine Condenser Vacuum Low	Deleted	No	Deleted. See RPS Instrumentation technical change discussion in the Discussion of Changes for ITS 3.3.1.1.
3/4.2	INSTRUMENTATION	3.3		
3/4.2.A	Isolation Actuation	3.3.6.1 3.3.6.2	Yes-3, 4	Actuates to mitigate the consequences of a DBA LOCA, or actuates to mitigate the consequences of a DBA LOCA release to the environment and a fuel handling accident, or actuates to isolate potential leakage paths to secondary containment consistent with safety analysis assumptions, or is retained due to risk significance.

(a) The applicable safety analyses are discussed in the Bases for the individual Technical Specifications.

(b) For CTS 3/4.1.A and 3/4.2.E, when an individual instrument is listed, the CTS number consists of the Specification number and the instrument's number from the associated 3.2.X-1 Table. For example, the Rod Block Monitor instrument for the Control Rod Block Actuation Instrumentation is numbered 3/4.2.E.1, where 3/4.2.E is the Specification number and "1" is the location of the Rod Block Monitor instrument in Table 3.2.E-1.

CTS NUMBER	TITLE	ITS NUMBER	RETAINED/ CRITERION FOR INCLUSION	BASIS FOR INCLUSION/EXCLUSION[a]
	INSTRUMENTATION (continued)			
3/4.2.B	Emergency Core Cooling Systems (ECCS) Actuation	3.3.5.1 3.3.8.1	Yes-3, 4	ECCS Instrumentation actuates to mitigate the consequences of a DBA LOCA or a small break LOCA, or is retained due to risk significance, or is retained as required by the NRC as it is part of the ECCS actuation system. Loss of power instrumentation actuates to assure power availability to the ECCS and other safety-related systems in the event of a loss of offsite power. Mitigation of DBAs relies on the availability of the ECCS and other safety-related systems.
3/4.2.C	ATWS-RPT	3.3.4.1	Yes-4	Retained in accordance with the NRC Final Policy Statement on Technical Specification Improvements due to risk significance.
3/4.2.D	Isolation Condenser	3.3.5.2	Yes-4	Retained in accordance with the NRC Final Policy Statement on Technical Specification Improvements due to risk significance.
3/4.2.E[b]	Control Rod Block Actuation	3.3.2.1		
3/4.2.E.1	Rod Block Monitor	3.3.2.1.1	Yes-3	Prevents continuous withdrawal of a high worth control rod that would challenge the MCPR Safety Limit and 1 percent cladding plastic strain fuel design limit.
3/4.2.E.2	Average Power Range Monitors	Relocated	No	See Appendix A, Page 1.
3/4.2.E.3	Source Range Monitors	Relocated	No	See Appendix A, Page 2.
3/4.2.E.4	Intermediate Range Monitors	Relocated	No	See Appendix A, Page 3.
3/4.2.E.5	Scram Discharge Volume (SDV)	Relocated	No	See Appendix A, Page 4.
3/4.2.F	Accident Monitoring	3.3.3.1/ Relocated	Yes-3/ No	Regulatory Guide 1.97 Type A and Category 1 variables retained. See Appendix A, Page 5 for full discussion of all variables.

(a) The applicable safety analyses are discussed in the Bases for the individual Technical Specifications.

(b) For CTS 3/4.1.A and 3/4.2.E, when an individual instrument is listed, the CTS number consists of the Specification number and the instrument's number from the associated 3.2.X-1 Table. For example, the Rod Block Monitor instrument for the Control Rod Block Actuation Instrumentation is numbered 3/4.2.E.1, where 3/4.2.E is the Specification number and "1" is the location of the Rod Block Monitor instrument in Table 3.2.E-1.

SUMMARY DISPOSITION MATRIX FOR DRESDEN 2 AND 3

CTS NUMBER	TITLE	ITS NUMBER	RETAINED/ CRITERION FOR INCLUSION	BASIS FOR INCLUSION/EXCLUSION[a]
	INSTRUMENTATION (continued)			
3/4.2.G	Source Range Monitoring	3.3.1.2	Yes	Does not satisfy the selection criteria, however is being retained because the NRC considers it necessary for flux monitoring during shutdown, startup, and refueling operations.
3/4.2.H	Explosive Gas Monitoring	Relocated	No	See Appendix A, Page 7.
3/4.2.I	Suppression Chamber and Drywell Spray Actuation	Relocated	No	See Appendix A, Page 8.
3/4.2.J	Feedwater Pump Trip	3.3.2.2	Yes-3	Actuates to limit feedwater addition to the reactor vessel on feedwater controller failure consistent with safety analysis assumptions. Limits neutron flux peak and thermal transient to avoid fuel damage.
3/4.3	REACTIVITY CONTROL	3.1		
3/4.3.A	Shutdown Margin (SDM)	3.1.1	Yes-2	Not a measured process variable, but is important parameter used to confirm the acceptability of the accident analysis. In addition, the LCO is retained as directed by the NRC.
3/4.3.B	Reactivity Anomalies	3.1.2	Yes-2	Confirms assumptions made in the reload safety analysis.
3/4.3.C	Control Rod Operability	3.1.3	Yes-3	Control rods are part of the primary success path in mitigating the consequences of design basis accidents (DBAs) and transients.
3/4.3.D	Maximum Scram Insertion Times	3.1.3 3.1.4	Yes-3	Same as above.
3/4.3.E	Average Scram Insertion Times	3.1.4	Yes-3	Same as above.
3/4.3.F	Group Scram Insertion Times	3.1.4	Yes-3	Same as above.
3/4.3.G	Control Rod Scram Accumulators	3.1.5 3.9.5	Yes-3	Same as above
3/4.3.H	Control Rod Drive Coupling	3.1.3	Yes-3	Same as above.

(a) The applicable safety analyses are discussed in the Bases for the individual Technical Specifications.

CTS NUMBER	TITLE	ITS NUMBER	RETAINED/ CRITERION FOR INCLUSION	BASIS FOR INCLUSION/EXCLUSION[a]
	REACTIVITY CONTROL (continued)			
3/4.3.I	Control Rod Position Indication System	3.1.3 3.9.4	Yes-3	Control rods are part of the primary success path in mitigating the consequences of design basis accidents (DBAs) and transients.
3/4.3.J	Control Rod Drive Housing Support	Deleted	No	Deleted, see CRD Housing Support technical change discussion in the Discussion of Changes for CTS: 3/4.3.J.
3/4.3.K	SDV Vent and Drain Valves	3.1.8	Yes-3	The scram discharge volume vent and drain valves contribute to the operability of the control rod scram function.
3/4.3.L	Rod Worth Minimizer (RWM)	3.3.2.1.2	Yes-3	Prevents withdrawal of out-of-sequence control rods that might set-up high rod worth conditions beyond CRDA assumptions.
3/4.3.M	Rod Block Monitor (RBM)	3.3.2.1.1	Yes-3	Prevents continuous withdrawal of a high worth control rod that would challenge the MCPR Safety Limit and 1 percent cladding plastic strain fuel design limit.
3/4.3.N	Economic Generation Control (EGC) System	Relocated	No	See Appendix A, Page 10.
3/4.4.A	Standby Liquid Control System (SLCS)	3.1.7	Yes-4	Retained in accordance with the NRC Final Policy Statement on Technical Specification Improvements due to risk significance.
3/4.5	EMERGENCY CORE COOLING SYSTEMS	3.5		
3/4.5.A	Emergency Core Cooling System — Operating	3.5.1	Yes-3	Functions to mitigate the consequences of a DBA.
3/4.5.B	Emergency Core Cooling System — Shutdown	3.5.2	Yes-3	Functions to mitigate the consequences of a vessel draindown event.
3/4.5.C	Suppression Chamber	3.5.2 3.6.2.2	Yes-3 Yes-2, 3	Functions to mitigate the consequences of a DBA and a vessel draindown event. Functions to mitigate the consequences of a DBA and process variable assumed as an initial condition for a DBA or transient.
3/4.5.D	Isolation Condenser	3.5.3	Yes-4	Retained in accordance with the NRC Final Policy Statement on Technical Specification Improvements due to risk significance (The isolation condenser is analogous to the Reactor Core Isolation Cooling System).

(a) The applicable safety analyses are discussed in the Bases for the individual Technical Specifications.

CTS NUMBER	TITLE	ITS NUMBER	RETAINED/ CRITERION FOR INCLUSION	BASIS FOR INCLUSION/EXCLUSION[a]
3/4.6	PRIMARY SYSTEM BOUNDARY			
3/4.6.A	Recirculation Loops	3.4.1	Yes-2	Recirculation loop flow is an initial condition in the safety analysis.
3/4.6.B	Jet Pumps	3.4.2	Yes-3	Jet pump operability is assumed in the LOCA analysis to assure adequate core reflood capability.
3/4.6.C	Recirculation Pumps	3.4.1	Yes-2	Recirculation loop flow (pump speed) mismatch, within limits, is an initial condition in the safety analysis.
3/4.6.D	Idle Recirculation Loop Startup	3.4.9	Yes-2	Establishes initial conditions to operation such that operation is prohibited in areas or at temperature rate changes that might cause undetected flaws to propagate, in turn challenging the reactor coolant pressure boundary integrity.
3/4.6.E	Safety Valves	3.4.3	Yes-3	A minimum number of safety valves is assumed in the safety analyses to mitigate overpressure events.
3/4.6.F	Relief Valves	3.3.6.3 3.4.3 3.6.1.6	Yes-3	A minimum number of relief valves is assumed in the transient and containment loading safety analysis.
3/4.6.G	Leakage Detection Systems	3.4.5 Relocated	Yes-1/No	The drywell floor drain sump leak detection instrumentation is used to indicate a significant abnormal condition of the reactor coolant system pressure boundary. The primary containment atmospheric particulate radioactivity sampling system is being relocated. See Appendix A, Page 11.
3/4.6.H	Operational Leakage	3.4.4	Yes-2	Leakage beyond limits would indicate an abnormal condition of the reactor coolant system pressure boundary. Operation in this condition is unanalyzed and may result in reactor coolant system pressure boundary failure.
3/4.6.I	Relocated by Amendment Nos. 173 (Unit 2) and 169 (Unit 3)			
3/4.6.J	Specific Activity	3.4.6	Yes-2	Specific activity provides an indication of the onset of significant fuel cladding failure and is an initial condition for evaluation of the consequences of an accident due to a main steam line break (MSLB) outside containment.

(a) The applicable safety analyses are discussed in the Bases for the individual Technical Specifications.

CTS NUMBER	TITLE	ITS NUMBER	RETAINED/ CRITERION FOR INCLUSION	BASIS FOR INCLUSION/EXCLUSION[a]
	PRIMARY SYSTEM BOUNDARY (continued)			
3/4.6.K	Pressure/Temperature Limits	3.4.9	Yes-2	Establishes initial conditions to operation such that operation is prohibited in areas or at temperature rate changes that might cause undetected flaws to propagate in turn challenging the reactor coolant system pressure boundary integrity.
3/4.6.L	Reactor Steam Dome Pressure	3.4.10	Yes-2	Reactor Steam Dome pressure is an initial condition of the vessel overpressure protection analysis.
3/4.6.M	Main Steam Line Isolation Valves	3.6.1.3	Yes-3	Main steam line isolation within specified time limits ensures the release to the environment is consistent with the assumptions in the MSLB analysis.
3/4.6.N	Structural Integrity	Relocated	No	See Appendix A, Page 12.
3/4.6.O	Shutdown Cooling - Hot Shutdown	3.4.7	Yes-4	Retained in accordance with the NRC Final Policy Statement on Technical Specification Improvements due to risk significance.
3/4.6.P	Shutdown Cooling - Cold Shutdown	3.4.8	Yes-4	Same as above.
3/4.7	CONTAINMENT SYSTEMS	3.6		
3/4.7.A	Primary Containment Integrity	3.6.1.1	Yes-3	Primary containment functions to mitigate the consequences of a DBA.
3/4.7.B	Deleted by Amendment Nos. 150 (Unit 2) and 145 (Unit 3)			
3/4.7.C	Primary Containment Air Locks	3.6.1.2	Yes-3	Credit for air tightness is considered in safety analysis to limit offsite dose rates during a DBA.
3/4.7.D	Primary Containment Isolation Valves	3.6.1.3	Yes-3	Isolation valves function to limit DBA consequences.
3/4.7.E	Suppression Chamber - Drywell Vacuum Breakers	3.6.1.8	Yes-3	Suppression chamber - drywell vacuum breaker operation is assumed in the LOCA analysis to limit drywell pressure thereby ensuring primary containment integrity.
3/4.7.F	Reactor Building - Suppression Chamber Vacuum Breakers	3.6.1.7	Yes-3	Reactor building - suppression chamber vacuum breaker operation is relied on to limit negative pressure differential secondary to primary containment, that could challenge primary containment integrity.

(a) The applicable safety analyses are discussed in the Bases for the individual Technical Specifications.

CTS NUMBER	TITLE	ITS NUMBER	RETAINED/ CRITERION FOR INCLUSION	BASIS FOR INCLUSION/EXCLUSION[a]
	CONTAINMENT SYSTEMS (continued)			
3/4.7.G	Drywell Internal Pressure	3.6.1.4	Yes-2	Drywell pressure is an initial condition in the LOCA safety analysis.
3/4.7.H	Drywell - Suppression Chamber Differential Pressure	3.6.2.5	Yes-2	Drywell - suppression chamber differential pressure is an initial condition in the LOCA safety analysis.
3/4.7.I	Deleted by Amendment Nos. 150 (Unit 2) and 145 (Unit 3)			
3/4.7.J	Primary Containment Oxygen Concentration	3.6.3.1	Yes-2	Oxygen concentration is limited such that when combined with hydrogen that is postulated to evolve following a LOCA, the total concentrations remain below explosive levels. Therefore, primary containment integrity is maintained.
3/4.7.K	Suppression Chamber	3.6.1.1 3.6.2.1 3.6.2.2	Yes-2, 3	Drywell-to-suppression chamber bypass leakage within limits helps ensure the pressure suppression function is maintained. Suppression pool water level and temperature are initial conditions in the DBA LOCA analysis and mitigate the consequences of a DBA.
3/4.7.L	Suppression Chamber and Drywell Spray	3.6.2.4/ Relocated	Yes-3/ No	Suppression pool spray is assumed to mitigate the consequences of a DBA LOCA. Drywell spray is being relocated. See Appendix A, Page 13.
3/4.7.M	Suppression Pool Cooling	3.6.2.3	Yes-3	Suppression pool cooling functions to limit the consequences of a DBA LOCA.
3/4.7.N	Secondary Containment Integrity	3.6.4.1	Yes-3	Secondary containment limits the offsite dose in an accident analysis by ensuring a release to containment is delayed and treated prior to release to the environment.
3/4.7.O	Secondary Containment Automatic Isolation Dampers	3.6.4.2	Yes-3	Damper operation within time limits establishes secondary containment and limits offsite dose releases to acceptable values.
3/4.7.P	Standby Gas Treatment System	3.6.4.3	Yes-3	SGT operation following a DBA acts to mitigate the consequences of offsite dose releases.

(a) The applicable safety analyses are discussed in the Bases for the individual Technical Specifications.

CTS NUMBER	TITLE	ITS NUMBER	RETAINED/ CRITERION FOR INCLUSION	BASIS FOR INCLUSION/EXCLUSION[(a)]
3/4.8	PLANT SYSTEMS	3.7		
3/4.8.A	Component Cooling Service Water System	3.7.1	Yes-3	Designed for heat removal for safety-related systems following a DBA. As such, acts to mitigate the consequences of an accident.
3/4.8.B	Diesel Generator Cooling Water System	3.7.2	Yes-3	Designed for heat removal for the diesel generators so that the diesels can perform their function in mitigating the consequences of an accident.
3/4.8.C	Ultimate Heat Sink	3.7.3	Yes-3	Functions to remove heat from safety related equipment following a DBA.
3/4.8.D	Control Room Emergency Ventilation System	3.7.4 3.7.5	Yes-3	Maintains habitability of the control room so that operators can remain in the control room following an accident. As such, it mitigates the consequences of an accident by allowing operators to continue accident mitigation activities from the control room. Also ensures Operability of components in the control room.
3/4.8.E	Flood Protection	Relocated	No	See Appendix A, Page 14.
3/4.8.F	Snubbers	Deleted	No	Deleted, see Snubbers technical change discussion in the Discussion of Changes for CTS: 3/4.8.F.
3/4.8.G	Sealed Source Contamination	Relocated	No	See Appendix A, Page 15.
3/4.8.H	Offgas Explosive Mixture	5.5.8	Yes	Although this Specification does not meet any criteria of the NRC Final Policy Statement, it has been retained in accordance with the NRC letter from W.T. Russel to the industry ITS Chairpersons, dated October 25, 1993.
3/4.8.I	Main Condenser Offgas Activity	3.7.6	Yes-2	Main condenser offgas activity is an initial condition in the offgas system failure event.
3/4.8.J	Liquid Holdup Tanks	5.5.8	Yes	Although this Specification does not meet any criteria of the NRC Final Policy Statement, it has been retained in accordance with the NRC letter from W.T. Russel to the industry ITS Chairpersons, dated October 25, 1993.
3/4.9	ELECTRICAL POWER SYSTEMS	3.8		
3/4.9.A	A.C. Sources — Operating	3.8.1 3.8.3	Yes-3	Functions to mitigate the consequences of a DBA.

(a) The applicable safety analyses are discussed in the Bases for the individual Technical Specifications.

CTS NUMBER	TITLE	ITS NUMBER	RETAINED/ CRITERION FOR INCLUSION	BASIS FOR INCLUSION/EXCLUSION[a]
	ELECTRICAL POWER SYSTEMS (continued)			
3/4.9.B	A.C. Sources — Shutdown	3.8.2 3.8.3	Yes-3	Functions to mitigate the consequences of a vessel draindown event and is needed to support NRC Final Policy Statement requirement for decay heat removal.
3/4.9.C	D.C. Sources — Operating	3.8.4 3.8.6	Yes-3	Functions to mitigate the consequences of a DBA.
3/4.9.D	D.C. Sources — Shutdown	3.8.5 3.8.6	Yes-3	Functions to mitigate the consequences of a vessel draindown event and is being retained to support the NRC Final Policy Statement requirement for decay heat removal.
3/4.9.E	Distribution — Operating	3.8.7	Yes-3	Functions to mitigate the consequences of a DBA.
3/4.9.F	Distribution — Shutdown	3.8.8	Yes-3	Functions to mitigate the consequences of a vessel draindown event and is being retained to support the NRC Final Policy Statement requirement for decay heat removal.
3/4.9.G	RPS Power Monitoring	3.3.8.2	Yes-3	Provides protection for the RPS bus powered components against unacceptable voltage and frequency conditions that could degrade the instrumentation so that it would not perform the intended safety function.
3/4.10	REFUELING OPERATIONS	3.9		
3/4.10.A	Reactor Mode Switch	3.9.1 3.9.2 3.10.2 3.10.3	Yes-3	Provides an interlock to preclude fuel loading with control rods withdrawn. Operability is assumed in the control rod removal error during refueling and fuel assembly insertion error during refueling accident analysis.
3/4.10.B	Instrumentation	3.3.1.2	Yes	Does not satisfy the selection criteria, however is being retained because the NRC considers it necessary for flux monitoring during shutdown, startup, and refueling operations.
3/4.10.C	Control Rod Position	3.9.3	Yes-3	All control rods are required to be fully inserted when loading fuel. This requirement is assumed as an initial condition in the control rod withdrawal error during refueling accident analysis.

(a) The applicable safety analyses are discussed in the Bases for the individual Technical Specifications.

CTS NUMBER	TITLE	ITS NUMBER	RETAINED/ CRITERION FOR INCLUSION	BASIS FOR INCLUSION/EXCLUSION[a]
	REFUELING OPERATIONS (continued)			
3/4.10.D	Deleted by Amendment Nos. 150 (Unit 2) and 145 (Unit 3)			
3/4.10.E	Communications	Relocated	No	See Appendix A, Page 16.
3/4.10.F	Deleted by Amendment Nos. 150 (Unit 2) and 145 (Unit 3)			
3/4.10.G	Water Level — Reactor Vessel	3.9.6 3.9.7	Yes-2	A minimum amount of water is required to assure adequate scrubbing of fission products following a fuel handling accident.
3/4.10.H	Water Level — Spent Fuel Storage Pool	3.7.8	Yes-2	Same as above.
3/4.10.I	Single Control Rod Removal	3.10.3 3.10.4	Yes	See Note 4, Page 13.
3/4.10.J	Multiple Control Rod Removal	3.10.5	Yes	See Note 4, Page 13.
3/4.10.K	Shutdown Cooling and Coolant Circulation - High Water Level	3.9.8	Yes-4	Retained in accordance with the NRC Final Policy Statement on Technical Specification Improvements due to risk significance.
3/4.10.L	Shutdown Cooling and Coolant Circulation - Low Water Level	3.9.9	Yes-4	Same as above.
3/4.11	POWER DISTRIBUTION LIMITS	3.2		
3/4.11.A	Average Planar Linear Heat Generation Rate	3.2.1	Yes-2	Peak cladding temperature following a LOCA is primarily dependent on initial APLHGR. As such, it is an initial condition of a DBA analysis.
3/4.11.B	Transient Linear Heat Generation Rate	3.2.4	Yes-2, 3	APRM system provides input to the RPS to develop scram signals to protect the integrity of the fission product barrier. Also ensures acceptable margins to APLHGR, MCPR, and LHGR are maintained.

(a) The applicable safety analyses are discussed in the Bases for the individual Technical Specifications.

CTS NUMBER	TITLE	ITS NUMBER	RETAINED/ CRITERION FOR INCLUSION	BASIS FOR INCLUSION/EXCLUSION[(a)]
	POWER DISTRIBUTION LIMITS (continued)			
3/4.11.C	Minimum Critical Power Ratio	3.2.2	Yes-2	Utilized as an initial condition of the design basis transients. Transient analysis are performed to establish the largest reduction in Critical Power Ratio. This value is added to the fuel cladding integrity safety limit to determine the MCPR value.
3/4.11.D	Steady State Linear Heat Generation Rate	3.2.3	Yes-2	LHGR is calculated to avoid exceeding plastic strain limits on fuel rods. As such, it is an initial condition to Design Basis Transient Analyses.
3/4.12	SPECIAL TEST EXCEPTIONS	3.10		
3/4.12.A	Primary Containment Integrity	Deleted	No	The latitude of this Special Test Exception is no longer required at Dresden 2 and 3. See Discussion of Changes for CTS: 3/4.12.A.
3/4.12.B	Shutdown Margin Demonstrations	3.10.7	Yes	See Note 4, Page 13.
3/4.12.C	Deleted by Amendment Nos. [ ] (Unit 2) and [ ] (Unit 3)			
5.0	DESIGN FEATURES	4.0	Yes	See Note 5, Page 13.
6.0	ADMINISTRATIVE CONTROLS	5.0	Yes	See Note 6, Page 13.

(a) The applicable safety analyses are discussed in the Bases for the individual Technical Specifications.

SUMMARY DISPOSITION MATRIX FOR DRESDEN 2 AND 3

NOTE 1: DEFINITIONS

This section provides definitions for several defined terms used throughout the remainder of Technical Specifications. They are provided to improve the meaning of certain terms. As such, direct application of the Technical Specification selection criteria is not appropriate. However, only those definitions for defined terms that remain as a result of application of the selection criteria, will remain as definitions in this section of Technical Specifications.

NOTE 2: SAFETY LIMITS/LSSS

Application of Technical Specification selection criteria is not appropriate. However, Safety Limits and Limiting Safety System Settings (as part of Reactor Protection System Instrumentation) will be included in Technical Specifications as required by 10 CFR 50.36.

NOTE 3: 3.0/4.0

These Specifications provide generic guidance applicable to one or more Specifications. The information is provided to facilitate understanding of Limiting Conditions for Operation and Surveillance Requirements. As such, direct application of the Technical Specification selection criteria is not appropriate. However, the general requirements of 3.0/4.0 will be retained in Technical Specifications, as modified consistent with NUREG-1433.

NOTE 4: SPECIAL TEST EXCEPTIONS

These Specifications are provided to allow relaxation of certain Limiting Conditions for Operation under certain specific conditions to allow testing and maintenance. They are directly related to one or more Limiting Conditions for Operation. Direct application of the Technical Specification selection criteria is not appropriate. However, those special test exceptions, directly tied to Limiting Conditions for Operation that remain in Technical Specifications, will also remain as Technical Specifications. Those special test exceptions not applicable at Dresden 2 and 3 have been deleted.

NOTE 5: DESIGN FEATURES

Application of Technical Specification selection criteria is not appropriate. However, Design Features will be included in Technical Specifications as required by 10 CFR 50.36.

NOTE 6: ADMINISTRATIVE CONTROLS

Application of Technical Specification selection criteria is not appropriate. However, Administrative Controls will be included in Technical Specifications as required by 10 CFR 50.36.

APPENDIX A

JUSTIFICATION FOR

SPECIFICATION RELOCATION

3/4.2.E CONTROL ROD BLOCK ACTUATION

LCO Statement:

The control rod block actuation instrumentation CHANNEL(s) shown in Table 3.2.E-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column.

3/4.2.E.2 Average Power Range Monitors

Discussion:

The APRM control rod block functions to prevent conditions that would require RPS action if allowed to proceed, such as during a "control rod withdrawal error at power." The APRMs utilize LPRM signals to create the APRM rod block signal and provide information about the average core power. However, the rod block function is not used to mitigate a design basis accident (DBA) or transient.

Comparison to Screening Criteria:

1. The APRM control rod block instrumentation is not used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a DBA.

2. The APRM control rod block instrumentation is not used to monitor a process variable that is an initial condition of a DBA or transient analysis.

3. The APRM control rod block instrumentation is not a part of a primary success path in the mitigation of a DBA or transient.

4. As discussed in Sections 3.5 and 6, and summarized in Table 4-1 (item 135) of NEDO-31466, the loss of the APRM control rod block function was found to be a non-significant risk contributor to core damage frequency and offsite releases. ComEd has reviewed this evaluation, considers it applicable to Dresden 2 and 3, and concurs with the assessment.

Conclusion:

Since the screening criteria have not been satisfied, the Control Rod Block Actuation LCO and Surveillances applicable to APRM instrumentation may be relocated to other plant controlled documents outside the Technical Specifications.

3/4.2.E CONTROL ROD BLOCK ACTUATION

LCO Statement:

The control rod block actuation instrumentation CHANNEL(s) shown in Table 3.2.E-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column.

3/4.2.E.3 Source Range Monitors

Discussion:

SRM signals are used to monitor neutron flux during refueling, shutdown, and startup conditions. When IRMs are not above Range 2, the SRM control rod block functions to prevent a control rod withdrawal if the count rate exceeds a preset value or falls below a preset limit. No design basis accident (DBA) or transient analysis takes credit for rod block signals initiated by the SRMs.

Comparison to Screening Criteria:

1. The SRM control rod block instrumentation is not used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a DBA.

2. The SRM control rod block instrumentation is not used to monitor a process variable that is an initial condition of a DBA or transient analysis.

3. The SRM control rod block instrumentation is not a part of a primary success path in the mitigation of a DBA or transient.

4. As discussed in Sections 3.5 and 6, and summarized in Table 4-1 (item 137) of NEDO-31466, the loss of the SRM control rod block function was found to be a nonsignificant risk contributor to core damage frequency and offsite releases. ComEd has reviewed this evaluation, considers it applicable to Dresden 2 and 3, and concurs with the assessment.

Conclusion:

Since the screening criteria have not been satisfied, the Control Rod Block Actuation LCO and Surveillances applicable to SRM instrumentation may be relocated to other plant controlled documents outside the Technical Specifications.

3/4.2.E CONTROL ROD BLOCK ACTUATION

LCO Statement:

The control rod block actuation instrumentation CHANNEL(s) shown in Table 3.2.E-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column.

3/4.2.E.4 Intermediate Range Monitors

Discussion:

IRMs are provided to monitor the neutron flux levels during refueling, shutdown, and startup conditions. The IRM control rod block functions to prevent a control rod withdrawal if the IRM reading exceeds a preset value, or if the IRM is inoperable. No design basis accident (DBA) or transient analysis takes credit for rod block signals initiated by IRMs.

Comparison to Screening Criteria:

1. The IRM control rod block instrumentation is not used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a DBA.

2. The IRM control rod block instrumentation is not used to monitor a process variable that is an initial condition of a DBA or transient analysis.

3. The IRM control rod block instrumentation is not a part of a primary success path in the mitigation of a DBA or transient.

4. As discussed in Sections 3.5 and 6, and summarized in Table 4-1 (item 138) of NEDO-31466, the loss of the IRM control rod block function was found to be a non-significant risk contributor to core damage frequency and offsite releases. ComEd has reviewed this evaluation, considers it applicable to Dresden 2 and 3, and concurs with the assessment.

Conclusion:

Since the screening criteria have not been satisfied, the Control Rod Block Actuation LCO and Surveillances applicable to IRM instrumentation may be relocated to other plant controlled documents outside the Technical Specifications.

3/4.2.E CONTROL ROD BLOCK ACTUATION

LCO Statement:

The control rod block actuation instrumentation CHANNEL(s) shown in Table 3.2.E-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column.

3/4.2.E.5 Scram Discharge Volume (SDV)

Discussion:

The Scram Discharge Volume (SDV) control rod block functions to prevent control rod withdrawals, utilizing SDV signals to create the rod block signal if water is accumulating in the SDV. The purpose of measuring the SDV water level is to ensure that there is sufficient volume remaining to contain the water discharged by the control rod drives during a scram, thus ensuring that the control rods will be able to insert fully. This rod block signal provides an indication to the operator that water is accumulating in the SDV and prevents further rod withdrawals. With continued water accumulation, a reactor protection system initiated scram signal will occur. Thus, the SDV water level rod block signal provides an opportunity for the operator to take action to avoid a subsequent scram. No design basis accident (DBA) or transient takes credit for rod block signals initiated by the SDV instrumentation.

Comparison to Screening Criteria:

1. The SDV control rod block instrumentation is not used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a DBA.

2. The SDV control rod block instrumentation is not used to monitor a process variable that is an initial condition of a DBA or transient analysis.

3. The SDV control rod block instrumentation is not a part of a primary success path in the mitigation of a DBA or transient.

4. As discussed in Sections 3.5 and 6, and summarized in Table 4-1 (item 139) of NEDO-31466, the loss of the SDV control rod block function was found to be a nonsignificant risk contributor to core damage frequency and offsite releases. ComEd has reviewed this evaluation, considers it applicable to Dresden 2 and 3, and concurs with the assessment.

Conclusion:

Since the screening criteria have not been satisfied, the Control Rod Block Actuation LCO and Surveillances applicable to SDV instrumentation may be relocated to other plant controlled documents outside the Technical Specifications.

3/4.2.F ACCIDENT MONITORING

LCO Statement:

The accident monitoring instrumentation CHANNEL(s) shown in Table 3.2.F-1 shall be OPERABLE.

Discussion:

Each individual accident monitoring parameter has a specific purpose; however, the general purpose for all accident monitoring instrumentation is to provide sufficient information to confirm an accident is proceeding per prediction, i.e. automatic safety systems are performing properly, and deviations from expected accident course are minimal.

Comparison to Deterministic Screening Criteria:

The NRC position on application of the deterministic screening criteria to post-accident monitoring instrumentation is documented in letter dated May 7, 1988 from T.E. Murley (NRC) to R.F. Janecek (BWROG). The position was that the post-accident monitoring instrumentation table list should contain, on a plant specific basis, all Regulatory Guide 1.97 Type A instruments specified in the plant's Safety Evaluation Report (SER) on Regulatory Guide 1.97, and all Regulatory Guide 1.97 Category 1 instruments. Accordingly, this position has been applied to the Dresden 2 and 3 Regulatory Guide 1.97 instruments. Those instruments meeting these criteria have remained in Technical Specifications. The instruments not meeting these criteria have been relocated from the Technical Specifications to plant controlled documents.

The following summarizes the Dresden 2 and 3 position for those instruments currently in Technical Specifications.

> From NRC SER from D.R. Muller (NRC) to H.E. Bliss (ComEd), Title: Emergency Response Capability - Conformance to Regulatory Guide 1.97, Revision 2, Dresden Unit Nos. 2 and 3, dated September 1, 1988.

Type A Variables

1. Reactor vessel pressure
2. Reactor vessel water level
3. Torus water level
4. Torus water temperature
5. Drywell pressure - narrow range
6. Torus pressure

Other Type, Category 1 Variables

1. Drywell pressure - wide range
2. Drywell oxygen concentration
3. Drywell hydrogen concentration
4. Drywell radiation level

For other post-accident monitoring instrumentation currently in Technical Specifications, their loss is not risk-significant since the variables they monitor did not qualify as a Type A or Category 1 variable (one that is important to safety and needed by the operator, so that the operator can perform necessary normal actions).

Conclusion

Since the screening criteria have not satisfied for non-Regulatory Guide 1.97 Type A or Category 1 variable instruments, their associated LCO and Surveillances may be relocated to other plant controlled documents outside the Technical Specifications. The instruments to be relocated are as follows:

1. Drywell air temperature
2. Safety and relief valve position indicators - acoustic and temperature
3. (Source range) neutron monitoring

3/4.2.H EXPLOSIVE GAS MONITORING

LCO Statement:

The explosive gas monitoring instrumentation CHANNEL(s) shown in Table 3.2.H-1 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of specification 3.8.H are not exceeded.

Discussion:

The explosive gas monitoring instrumentation is provided to monitor the concentration of potentially explosive gas mixtures contained in the gaseous radwaste treatment system, which will help ensure that the concentration is maintained below the flammability limit of hydrogen. However, the offgas system is designed to contain detonations and will not affect the function of any safety related equipment. Neither the concentration of hydrogen in the offgas stream, nor the instrumentation used to monitor the hydrogen concentration, is an initial assumption of any design basis accident (DBA) or transient analysis.

Comparison to Screening Criteria:

1. The explosive gas monitoring instrumentation is not used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a DBA.

2. The explosive gas monitoring instrumentation is not used to monitor a process variable that is an initial condition of a DBA or transient analysis.

3. The explosive gas monitoring instrumentation is not part of a primary success path in the mitigation of a DBA or transient.

4. As discussed in Sections 3.5 and 6, and summarized in Table 4-1 (items 189 and 306) of NEDO-31466, the loss of the explosive gas monitoring instrumentation was found to be a non-significant risk contributor to core damage frequency and offsite releases. ComEd has reviewed this evaluation, considers it applicable to Dresden 2 and 3, and concurs with the assessment.

Conclusion:

Since the screening criteria have not been satisfied, the Explosive Gas Monitoring LCO and Surveillances may be relocated to other plant controlled documents outside the Technical Specifications.

3/4.2.I SUPPRESSION CHAMBER AND DRYWELL SPRAY ACTUATION

LCO Statement:

The suppression chamber and drywell spray actuation instrumentation CHANNEL(s) shown in Table 3.2.I-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.2.I-1.

Discussion:

The purpose of the Suppression Chamber and Drywell Spray Actuation instrumentation is to preclude inadvertent actuation of containment and suppression pool sprays during a LOCA. If a LOCA signal is present, the containment and suppression pool spray valves cannot be opened unless the reactor vessel water level is above the 2/3 core height level (to preclude diversion of LPCI when it is needed for core flooding) and the drywell pressure is $\geq$ 0.5 psig and $\leq$ 1.5 psig (indicative of a valid need for operating drywell and suppression pool sprays). If the instrumentation is inoperable such that it trips too soon or too late (or not at all), the LPCI System is not impacted.

If either of the two instruments trip too soon, the other instrument Function still ensures that flow is not diverted away from core flooding. In fact, the major contributor to potential flow diversion is suppression pool cooling, and its valves are only precluded from opening by the 2/3 core height instrument. The flow diverted by the drywell and suppression pool sprays is a small fraction of that diverted by suppression pool cooling. Thus, operability of LPCI is not impacted. While tripping of both the instruments allow the permissives for opening drywell and suppression pool spray valves to be met, inadvertent operation does not automatically result, since manual actions must still be taken to open the valves. In addition, if a LOCA signal is not present, this instrumentation does not preclude operation of the drywell and suppression pool spray valves. Therefore, inadvertent operation of drywell spray has been analyzed at Dresden 2 and 3 and does not result in containment failure due to operation of the reactor building-suppression chamber and the suppression chamber-drywell vacuum breakers. These vacuum breakers are controlled by Technical Specifications (current and proposed). Therefore, Operability of the Drywell Spray System and the Suppression Chamber Spray System are not impacted.

If the instruments trip too late or not at all, then no flow can be diverted by the drywell and suppression chamber sprays; thus LPCI is not affected. The only Technical Specification system affected in this case are the Drywell Spray System and the Suppression Chamber Spray System. A failure of the instrumentation to function would preclude the spray valves from being opened from the control room. However, these systems are manually controlled systems that are not needed for a minimum of 10 minutes following a DBA LOCA, and the valves could still be opened locally at the valve operator. In addition, the instruments could be overridden to allow operation from the control room. Therefore, failure of these instruments may not even result in the Drywell Spray System or the Suppression Chamber Spray System being inoperable.

3/4.2.I SUPPRESSION CHAMBER AND DRYWELL SPRAY ACTUATION (continued)

Comparison to Screening Criteria:

1. The suppression chamber and drywell spray actuation instrumentation is not used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a design basis accident (DBA).

2. The suppression chamber and drywell spray actuation instrumentation is not used to monitor a process variable that is an initial condition of a DBA or transient analysis.

3. The suppression chamber and drywell actuation instrumentation is not part of a primary success path in the mitigation of a DBA or transient.

4. As discussed in Appendix B (Page 1 of 3) of this document, the loss of the suppression chamber and drywell spray actuation instrumentation was found to be a non-significant risk contributor to core damage frequency and offsite releases.

Conclusion:

Since the screening criteria have not been satisfied, the Suppression Chamber and Drywell Spray Actuation LCO and Surveillances may be relocated to other plant controlled documents outside the Technical Specifications.

3/4.3.N ECONOMIC GENERATION CONTROL (EGC) SYSTEM

LCO Statement:

The economic generation control (EGC) system may be in operation with automatic flow control provided:

1. Core flow is within 65% to 100% of rated core flow, and

2. THERMAL POWER is ≥ to 20% of RATED THERMAL POWER.

Discussion:

The Economic Generation Control System was designed to allow the load dispatcher to control power output of the station within constraints of the system design. These constraints are well within the analyzed system setpoints utilized in design basis accident (DBA) and transient analyses. The Economic Generation Control System is not assumed in any of these analyses.

Comparison to Deterministic Screening Criteria:

1. The Economic Generation Control System is not used, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a DBA.

2. The Economic Generation Control System is not a process variable that is an initial condition of a DBA or transient analysis.

3. The Economic Generation Control System is not part of a primary success path in the mitigation of a DBA or transient.

4. As discussed in Section 3.5 and 6, and summarized in Table 4-1 (item 335), of NEDO-31466, Supplement 1, the loss of the Economic Generation Control System was found to be a non-significant risk contributor to core damage frequency and offsite releases. ComEd has reviewed this evaluation, considers it applicable to Dresden 2 and 3, and concurs with the assessment.

Conclusion:

Since the screening criteria have not been satisfied, the Economic Generation Control System LCO and Surveillances may be relocated to other plant controlled documents outside the Technical Specifications.

3/4.6.G LEAKAGE DETECTION SYSTEMS

LCO Statement:

The following reactor coolant system leakage detection systems shall be OPERABLE.

1. The primary containment atmosphere particulate radioactivity sampling system.

Discussion:

The primary containment atmosphere particulate radioactivity sampling system is not actually a system (i.e., a sensor, indicator, etc.), it is a penetration into the primary containment that personnel can attach a grab sample device. The grab sample obtained is then taken and analyzed using appropriate laboratory detectors/counting systems. There are other locations to obtain a grab sample of the primary containment; this is just the normal one utilized.

Comparison to Screening Criteria:

1. The primary containment atmosphere particulate radioactivity sampling system is not an instrument, thus it is not capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a design basis accident (DBA).

2. The primary containment atmosphere particulate radioactivity sampling system does not monitor a process variable that is an initial condition of a DBA or transient analysis.

3. The primary containment atmosphere particulate radioactivity sampling system is not part of a primary success path in the mitigation of a DBA or transient.

4. As discussed in Appendix B (Page 3 of 5) of this document, the loss of the primary containment atmosphere particulate radioactivity sampling system was found to be a non-significant risk contributor to core damage frequency and offsite releases.

Conclusion:

Since the screening criteria have not been satisfied, the primary containment atmosphere particulate radioactivity sampling system portion of the LCO and Surveillances may be relocated to other plant controlled documents outside the Technical Specifications.

3/4.6.N STRUCTURAL INTEGRITY

LCO Statement:

The structural integrity of ASME Code Class 1, 2 and 3 components shall be maintained in accordance with Specification 4.6.N.

Discussion:

The inspection programs for ASME Code Class 1, 2, and 3 components ensure that the structural integrity of these components will be maintained throughout the components' lives. Other Technical Specifications require important systems to be operable (for example, ECCS 3/4.5.A) and in a ready state for mitigative action. This Technical Specification is more directed toward prevention of component degradation and continued long term maintenance of acceptable structural conditions. Hence it is not necessary to retain this specification to ensure immediate operability of safety systems.

Comparison to Screening Criteria:

1. The inspections stipulated by this specification are not used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a DBA.

2. The inspections stipulated by this specification do not monitor process variables that are initial assumptions in a DBA or transient analysis.

3. The ASME Code Class 1, 2, and 3 components inspected per this Specification are assumed to function to mitigate a DBA. Their capability to perform this function is addressed by other Technical Specifications. This Technical Specification, however, only specifies inspection requirements for these components. Therefore, Criterion 3 is not satisfied.

4. As discussed in Sections 3.5 and 6, and summarized in Table 4-1 (item 216) of NEDO-31466, the assurance of operability of the entire system as verified in the system operability specification dominates the risk contribution of the system. As such, the lack of a long term assurance of structural integrity as stipulated by this Specification was found to be a non-significant risk contributor to core damage frequency and offsite releases. Furthermore, the requirement is currently covered by 10 CFR 50.55a and the plant's Inservice Inspection Program. ComEd has reviewed this evaluation, considers it applicable to Dresden 2 and 3, and concurs with the assessment.

Conclusion:

Since the screening criteria have not been satisfied, the Structural Integrity LCO and Surveillances may be relocated to other plant controlled documents outside the Technical Specifications.

3/4.7.L DRYWELL SPRAY

LCO Statement:

The Drywell Spray function of the low pressure coolant injection (LPCI)/containment cooling systems shall be OPERABLE with two independent subsystems, each subsystem consisting of:

a. One OPERABLE LPCI pump, and

b. An OPERABLE flow path capable of recirculating water from the suppression pool through a heat exchanger and the drywell spray nozzles.

Discussion:

The drywell spray function of the LPCI/containment cooling systems is utilized in post-LOCA conditions to condense steam in the drywell, thereby further lowering containment pressure. Emergency operating procedures direct manual initiation of the drywell spray function of the LPCI/containment cooling systems. However, in the analysis of the bounding event for containment pressurization due to the DBA, the drywell spray function of the LPCI/containment cooling systems was not utilized for mitigation of the event. The drywell spray function is not required for proper performance of the containment pressure suppression system.

Comparison to Screening Criteria:

1. The drywell spray function of the LPCI/containment cooling systems is not used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a design basis accident (DBA).

2. The drywell spray function of the LPCI/containment cooling systems is not capable of monitoring a process variable that is an initial condition of a DBA or transient analyses.

3. The drywell spray function of the LPCI/containment cooling systems is not part of a primary success path in the mitigation of a DBA or transient.

4. As discussed in Section 6, and summarized in Table 4-1 (item 368) of NEDO-31466, Supplement 1, the loss of the drywell spray function of the LPCI/containment cooling systems was found to be a non-significant risk contributor to core damage frequency and offsite releases. ComEd has reviewed this evaluation, considers it applicable to Dresden 2 and 3, and concurs with the assessment.

Conclusion:

Since the screening criteria have not been satisfied, the Drywell Spray function of Suppression Chamber and Drywell Spray LCO and Surveillances may be relocated to other plant controlled documents outside the Technical Specifications.

3/4.8.E FLOOD PROTECTION

LCO Statement:

Flood protection shall be available for all required safe shutdown systems, components and structures.

Discussion:

This Technical Specification has provisions for high river level. A high river water level is a preliminary indication of flood conditions. Flooding is not a design basis accident (DBA) or transient. In addition, flooding is not postulated to occur during any DBA or transient, thus river water level (as it pertains to flooding) is not credited in any safety analysis. The Flood Protection Technical Specification requirements were put in place to ensure that facility protective actions will be taken and operation will be terminated in the event of flood conditions. This requirement is adequately controlled in plant emergency procedures.

Comparison to Screening Criteria:

1. Flood protection requirements are not used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a DBA.

2. Flood protection requirements are not process variables that are initial conditions of a DBA or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

3. Flood protection requirements are not part of the primary success path that functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

4. As discussed in Appendix B (Page 4 of 5) of this document, the Flood Protection requirements not being met was found to be a non-significant risk contributor to core damage frequency and offsite releases.

Conclusion:

Since the screening criteria have not been satisfied, the Flood Protection LCO and Surveillances may be relocated to other plant controlled documents outside the Technical Specifications.

3/4.8.G SEALED SOURCE CONTAMINATION

LCO Statement:

Each sealed source containing radioactive material either in excess of 100 μCi of beta and/or gamma emitting material or 5 μCi of alpha emitting material shall be free of $\geq$ 0.005 μCi of removable contamination.

Discussion:

The limitations on sealed source contamination are intended to ensure that the total body or individual organ irradiation doses do not exceed allowable limits in the event of ingestion or inhalation. This is done by imposing a maximum limitation of $\leq$ 0.005 microcuries of removable contamination on each sealed source. This requirement and the associated Surveillance Requirements bear no relation to the conditions or limitations which are necessary to ensure safe reactor operation.

Comparison to Screening Criteria:

1. Sealed source contamination is not used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a design basis accident (DBA).

2. Sealed source contamination is not a process variable that is an initial condition of a DBA or transient analysis.

3. Sealed source contamination is not used in any part of a primary success path in the mitigation of a DBA or transient.

4. As discussed in Sections 3.5 and 6, and summarized in Table 4-1 (item 267) of NEDO-31466, the sealed source contamination being not within limits was found to be a non-significant risk contributor to core damage frequency and offsite releases. ComEd has reviewed this evaluation, considers it applicable to Dresden 2 and 3, and concurs with the assessment.

Conclusion:

Since the screening criteria have not been satisfied, the Sealed Source Contamination LCO and Surveillances may be relocated to other plant controlled documents outside the Technical Specifications.

3/4.10.E COMMUNICATIONS

LCO Statement:

Direct communication shall be maintained between the control room and refueling platform personnel.

Discussion:

Communication between the control room and refueling platform personnel is maintained to ensure that refueling personnel can be promptly informed of significant changes in the plant status or core reactivity condition during refueling. The communications allow for coordination of activities that require interaction between the control room and refueling platform personnel (such as the insertion of a control rod prior to loading fuel). However, the refueling system design accident or transient response does not take credit for communications.

Comparison to Screening Criteria:

1. Communications during any mode of plant operation is not used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary prior to a design basis accident (DBA).

2. Communications during any mode of plant operation is not used to indicate status of, or monitor a process variable that is an initial condition of a DBA or transient analysis.

3. Communication during any mode of plant operation does not contribute to a primary success path in the mitigation of a DBA or transient.

4. As discussed in Sections 3.5 and 6, and summarized in Table 4-1 (item 286) of NEDO-31466, the loss of communication was found to be a non-significant risk contributor to core damage frequency and offsite releases. ComEd has reviewed this evaluation, considers it applicable to Dresden 2 and 3, and concurs with the assessment.

Conclusion:

Since the screening criteria have not been satisfied, the Communications LCO and Surveillances may be relocated to other plant controlled documents outside the Technical Specifications.

APPENDIX B

DRESDEN 2 AND 3 SPECIFIC

RISK SIGNIFICANT EVALUATIONS

3/4.2.I SUPPRESSION CHAMBER AND DRYWELL SPRAY ACTUATION

LCO Statement:

The suppression chamber and drywell spray actuation instrumentation CHANNEL(s) shown in Table 3.2.I-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.2.I-1.

Description of Requirement:

The purpose of the Suppression Chamber and Drywell Spray Actuation instrumentation is to preclude inadvertent actuation of containment and suppression pool sprays during a LOCA. If a LOCA signal is present, the containment and suppression pool spray valves cannot be opened unless the reactor vessel water level is above the 2/3 core height level (to preclude diversion of LPCI when it is needed for core flooding) and the drywell pressure is ≥ 0.5 psig and ≤ 1.5 psig (indicative of a valid need for operating drywell and suppression pool sprays). If the instrument is inoperable such that it trips too soon or too late (or not at all), the LPCI System is not impacted.

Risk Justification:

a. Function affected by removal of LCO: Permissive to prevent inadvertent opening of drywell and suppression chamber spray valves with a LOCA signal present unless reactor vessel water level is > 2/3 core height and drywell pressure is ≥ 0.5 psig and ≤ 1.5 psig.

b. Effect of loss of the LCO item on the function: Potential exists to manually divert LPCI System to drywell and suppression chamber sprays when LOCA signal present and LPCI needed for core flooding or sprays not needed to decrease pressure.

c. Compensating provisions, redundancy and backups related to the loss of the LCO item: The Drywell Spray System and Suppression Pool Spray System are manually actuated systems. Thus, loss of the instruments will not automatically result in a spray actuation. Plant procedures, including emergency operating procedures, preclude operation of the spray valves during a LOCA until the two permissives are met.

d. Probability of loss of function: Low. Both equipment failure and an error of commission (i.e., attempting to initiate sprays when not required by procedures) would be necessary to lose this function. Intentional bypassing of the permissives by operators in accordance with procedures for beyond design basis events should not be considered a loss of function.

3/4.2.I SUPPRESSION CHAMBER AND DRYWELL SPRAY ACTUATION (continued)

e. Relative Significance: Low. A review of the LPCI/CCSW system in the IPE found that successful operation of containment spray and suppression pool cooling was judged to be possible. Failure of the permissives was modeled as a failure mechanism for containment spray. An error of commission in attempting to operate containment spray (when LPCI injection is required) does not appear to be modeled. Although containment spray could divert some flow from LPCI injection, this would not prevent use of the Core Spray System to avoid significant fuel failure. Therefore, failure of containment spray actuation instrumentation to preclude inadvertent actuation of containment sprays when vessel makeup is needed is judged to have a low relative significance with respect to a potential release.

Furthermore, for containment spray to occur using the LPCI System, LPCI pump discharge and the containment spray lines would be at a higher pressure than containment. Therefore, back-leakage of activity from containment would not occur, but the normal LPCI suction source (the suppression pool) could contain significant activity had fuel failure occurred. The LPCI System piping (including the containment spray lines) is designed for higher pressures than is primary containment. Therefore, in the unlikely case where the containment spray valves are opened with no LPCI pumps running, the containment spray lines are not judged to represent a significant leakage path of radioactivity from primary containment.

f. Risk Category: NS

3/4.6.G LEAKAGE DETECTION SYSTEMS

LCO Statement:

The following reactor coolant system leakage detection systems shall be OPERABLE.

1. The primary containment atmosphere particulate radioactivity sampling system.

Description of Requirements:

The primary containment atmosphere particulate radioactivity sampling system is not actually a system (i.e., a sensor, indicator, etc.); it is a penetration into the primary containment that personnel can attach a grab sample device. The grab sample obtained is then taken and analyzed using appropriate laboratory detectors/counting systems. The sample is used to identify leakage in the primary containment, but cannot quantify the leakage.

Risk Justification:

a. Function affected by removal of LCO: Capability to take a grab sample of the primary containment atmosphere.

b. Effect of loss of the LCO item on the function: Loss of capability to take a grab sample of the primary containment atmosphere from this specific location.

c. Compensating provisions, redundancy and backups related to the loss of the LCO item: Additional locations, including the post accident sampling system, to take a primary containment grab sample are available. In addition, the drywell floor drain sump monitoring system provides a better indication of actual unidentified leakage rate. This system is being maintained in the Technical Specifications. The primary containment atmosphere grab sample is not capable of providing quantified leakage rates.

d. Probability of loss of function: Medium. This is a manual action, but one that is done routinely. Isolation of the penetration normally used would not cause loss of this function, because alternate penetrations are available for use. For these reasons, the probability of loss of function is judged to fall into the medium category as used in NEDO-31466.

e. Relative Significance: Low. Grab samples required by this current Technical Specification are primarily of value in identifying the source of leakage. An independent system (drywell floor drain sump monitoring system) is used to detect leakage and that requirement is being maintained in Technical Specifications.

f. Risk Category: NS

3/4.8.E FLOOD PROTECTION

LCO Statement:

Flood protection shall be available for all required safe shutdown systems, components and structures.

Description of Requirements:

This Technical Specification has provisions for high river level. A high river water level is a preliminary indication of flood conditions. Flooding is not a design basis accident (DBA) or transient. In addition, flooding is not postulated to occur during any DBA or transient, thus river water level (as it pertains to flooding) is not credited in any safety analysis. The Flood Protection Technical Specification requirements were put in place to ensure that facility protective actions will be taken and operation will be terminated in the event of flood conditions.

Risk Justification:

a. Functions affected by removal of LCO: Capability of operators to initiate flood protection measures.

b. Effect of loss of the LCO item on the function: Loss of requirement to initiate flood protection measures.

c. Compensating provisions, redundancy and backups related to the loss of the LCO item: In addition to monitoring river water level, flood and rainfall forecasts are available to the operators to provide ample time to take preventive measures. The river level is routinely monitored during operator rounds in the intake structure. Control room operators can also monitor the water level from the control room.

d. Probability of loss of function: Medium. As discussed in the Dresden Individual Plant Examination of External Events (IPEEE) report submitted to the NRC in December 1997, an NRC evaluation included a 100-year flood level of 509.8 feet, slightly above the level requiring unit shutdown. Because river water levels are monitored routinely during operator rounds of the intake structure, failure to monitor river level is unlikely, even during normal weather. Therefore, information will be available to the operators for flood protection measures to be initiated in sufficient time in the event of a high river level.

   Dresden Nuclear Power Station is located where the DesPlaines and Kankakee Rivers join to form the Illinois River. Dresden Lock and Dam is located on the Illinois River a short distance downstream of Dresden Nuclear Power Station. River flooding of Dresden Nuclear Power Station would generally be prevented by the U.S. Corps of Engineers by opening Dresden Lock and Dam gates and by using a siphon to transfer warm water from the Dresden Cooling Lake to the Kankakee River.

The significance of the siphon is that the main flooding concern in the Dresden vicinity in recent decades has been the buildup of ice dams during a thaw of the Kankakee River. (For example, an early-1980's ice dam event caused downtown Wilmington and two lanes of Interstate 55 to be flooded.) The U.S. Corps of Engineers chose to install the siphon several years ago as a means of thawing river ice by using warm water that would be available from the cooling lake when one or both Dresden Nuclear Power Station units are operating.

Recent experience has been that the DesPlaines and Illinois Rivers in the vicinity of Dresden do not freeze over due to numerous power plants, refineries, and other plants discharging heat to the DesPlaines River upstream from Dresden Nuclear Power Station.

For these reasons, the probability of failing to monitor river water level concurrent with flood levels near the 100-year flood level and initiating flood protection measures is judged to fall into the medium category as used in NEDO-31466.

e. Relative Significance: Low. River flood levels exceeding the levels addressed by the current Technical Specifications would have little impact until a flood reached the non-safety related Service Water pump motors (approximately 513 ft.), well above the 500-year flood level of 511.6 ft. discussed in the 1997 Dresden IPEEE submittal report. As discussed in the IPEEE submittal, loss of non-safety related service water has a relatively low significance.

As discussed in the 1997 Dresden IPEEE submittal report, a past NRC staff evaluation for flooding found that the standard project flood (SPF) level for Dresden would range between 512 and 516 feet in elevation. Higher flood levels above nominal grade elevation (approximately 517 ft.) could lead to station blackout conditions, but would not prevent decay heat removal for extended periods using the Isolation Condensers. For these reasons, the relative significance of relocating this item from Technical Specifications is judged to fall into the low category as used in NEDO-31466.

f. Risk Category: NS

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.
AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)	The APLHGR shall be applicable to a specific planar height and is equal to the sum of the LHGRs for all the fuel rods in the specified bundle at the specified height divided by the number of fuel rods in the fuel bundle at the height.
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 the entire channel, including the required sensor, alarm, display, and trip functions, and shall include the CHANNEL FUNCTIONAL TEST. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps so that the entire channel is calibrated.
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 indication and status to other indications or

(continued)

1.1 Definitions

CHANNEL CHECK (continued)	status derived from independent instrument channels measuring the same parameter.
CHANNEL FUNCTIONAL TEST	A CHANNEL FUNCTIONAL TEST shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY, including required alarm, interlock, display, and trip functions, and channel failure trips. The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total channel steps so that the entire channel is tested.
CORE ALTERATION	CORE ALTERATION shall be the movement of any fuel, sources, or reactivity control components, within the reactor vessel with the vessel head removed and fuel in the vessel. The following exceptions are not considered to be CORE ALTERATIONS: a. Movement of source range monitors, local power range monitors, intermediate range monitors, traversing incore probes, or special movable detectors (including undervessel replacement); and b. Control rod movement, provided there are no fuel assemblies in the associated core cell. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.
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 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 thyroid dose

(continued)

1.1 Definitions

DOSE EQUIVALENT I-131 (continued)	conversion factors used for this calculation shall be those listed in Table III of TID-14844, AEC, 1962, "Calculation of Distance Factors for Power and Test Reactor Sites;" Table E-7 of Regulatory Guide 1.109, Rev. 1, NRC, 1977; or ICRP 30, Supplement to Part 1, page 192-212, Table titled, "Committed Dose Equivalent in Target Organs or Tissues per Intake of Unit Activity."
FUEL DESIGN LIMITING RATIO FOR CENTERLINE MELT (FDLRC)	The FDLRC shall be 1.2 times the LHGR existing at a given location divided by the product of the transient LHGR limit and the fraction of RTP.
LEAKAGE	LEAKAGE shall be:

a. <u>Identified LEAKAGE</u>

1. LEAKAGE into the drywell, such as that from pump seals or valve packing, that is captured and conducted to a sump or collecting tank; or

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

b. <u>Unidentified LEAKAGE</u>

All LEAKAGE into the drywell that is not identified LEAKAGE;

c. <u>Total LEAKAGE</u>

Sum of the identified and unidentified LEAKAGE; and

d. <u>Pressure Boundary LEAKAGE</u>

LEAKAGE through a nonisolable fault in a Reactor Coolant System (RCS) component body, pipe wall, or vessel wall.

(continued)

1.1 Definitions (continued)

LINEAR HEAT GENERATION RATE (LHGR)	The LHGR shall be the heat generation rate per unit length of fuel rod. It is the integral of the heat flux over the heat transfer area associated with the unit length.
LOGIC SYSTEM FUNCTIONAL TEST	A LOGIC SYSTEM FUNCTIONAL TEST shall be a test of all required logic components (i.e., all required relays and contacts, trip units, solid state logic elements, etc.) of a logic circuit, from as close to the sensor as practicable up to, but not including, the actuated device, to verify OPERABILITY. The LOGIC SYSTEM FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total system steps so that the entire logic system is tested.
MINIMUM CRITICAL POWER RATIO (MCPR)	The MCPR shall be the smallest critical power ratio (CPR) that exists in the core for each class of fuel. The CPR is that power in the assembly that is calculated by application of the appropriate correlation(s) to cause some point in the assembly to experience boiling transition, divided by the actual assembly operating power.
MODE	A MODE shall correspond to any one inclusive combination of mode switch position, average reactor coolant temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.
OPERABLE – OPERABILITY	A system, subsystem, division, 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, division, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 2527 MWt.

(continued)

1.1 Definitions (continued)

REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from the opening of the sensor contact until the opening of the trip actuator. 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.
SHUTDOWN MARGIN (SDM)	SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical assuming that: a. The reactor is xenon free; b. The moderator temperature is 68°F; and c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn. With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.
STAGGERED TEST BASIS	A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during *n* Surveillance Frequency intervals, where *n* is the total number of systems, subsystems, channels, or other designated components in the associated function.
THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.
TURBINE BYPASS SYSTEM RESPONSE TIME	The TURBINE BYPASS SYSTEM RESPONSE TIME shall be that time interval from when the turbine bypass control unit generates a turbine bypass valve flow signal until the turbine bypass valves travel to their required positions. 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.

Table 1.1-1 (page 1 of 1)
MODES

MODE	TITLE	REACTOR MODE SWITCH POSITION	AVERAGE REACTOR COOLANT TEMPERATURE (°F)
1	Power Operation	Run	NA
2	Startup	Refuel[(a)] or Startup/Hot Standby	NA
3	Hot Shutdown[(a)]	Shutdown	> 212
4	Cold Shutdown[(a)]	Shutdown	$\leq$ 212
5	Refueling[(b)]	Shutdown or Refuel	NA

(a) All reactor vessel head closure bolts fully tensioned.

(b) One or more reactor vessel head closure bolts less than fully tensioned.

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.

(continued)

1.2 Logical Connectors

EXAMPLES (continued)

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.

(continued)

1.2 Logical Connectors

EXAMPLES (continued)

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 time of 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. 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 time of discovery of the situation that required entry into the Condition. Once a Condition has been entered, subsequent divisions, 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.

(continued)

1.3 Completion Times

DESCRIPTION (continued)

However, when a subsequent division, 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 first 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:

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 extension does not apply to those Specifications that have exceptions that allow completely separate re-entry into the Condition (for each division, 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 . . ." Example 1.3-3 illustrates one use of this type of Completion Time. The 10 day Completion Time specified for Condition A and B in Example 1.3-3 may not be extended.

EXAMPLES

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

(continued)

1.3 Completion Times

EXAMPLES (continued)

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.	12 hours
	AND	
	B.2 Be in MODE 4.	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 12 hours AND in MODE 4 within 36 hours. A total of 12 hours is allowed for reaching MODE 3 and a total of 36 hours (not 48 hours) is allowed for reaching MODE 4 from the time that Condition B was entered. If MODE 3 is reached within 6 hours, the time allowed for reaching MODE 4 is the next 30 hours because the total time allowed for reaching MODE 4 is 36 hours.

If Condition B is entered while in MODE 3, the time allowed for reaching MODE 4 is the next 36 hours.

(continued)

1.3 Completion Times

EXAMPLES (continued)

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 4.	12 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, Conditions 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.

(continued)

1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-2 (continued)

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.

(continued)

1.3 Completion Times

EXAMPLES (continued)

EXAMPLE 1.3-3

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One Function X subsystem inoperable.	A.1 Restore Function X subsystem to OPERABLE status.	7 days AND 10 days from discovery of failure to meet the LCO
B. One Function Y subsystem inoperable.	B.1 Restore Function Y subsystem to OPERABLE status.	72 hours AND 10 days from discovery of failure to meet the LCO
C. One Function X subsystem inoperable. AND One Function Y subsystem inoperable.	C.1 Restore Function X subsystem to OPERABLE status. OR C.2 Restore Function Y subsystem to OPERABLE status.	72 hours 72 hours

(continued)

1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-3 (continued)

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

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 subsystem was declared inoperable (i.e., initial entry into Condition A).

The Completion Times of Conditions A and B are modified by a logical connector, with a separate 10 day Completion Time measured from the time it was discovered the LCO was not met. In this example, without the separate Completion Time, it would be 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. The separate Completion Time modified by the phrase "from discovery of failure to meet the LCO" is designed to prevent indefinite continued operation while not meeting the LCO. This Completion Time allows for an exception to the normal "time zero" for beginning the Completion Time "clock". In this instance, the Completion Time "time zero" is specified as commencing at the time the LCO was initially not met, instead of at the time the associated Condition was entered.

(continued)

1.3 Completion Times

EXAMPLES (continued)

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. <u>AND</u> B.2 Be in MODE 4.	12 hours 36 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 (plus the extension) expires while one or more valves are still inoperable, Condition B is entered.

(continued)

1.3 Completion Times

EXAMPLE (continued)

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.	12 hours 36 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.

(continued)

1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-5 (continued)

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

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 $\leq$ 50% RTP.	Once per 8 hours 8 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours

(continued)

1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-6 (continued)

Entry into Condition A offers a choice between Required Action A.1 or A.2. Required Action A.1 has 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 completed 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.

(continued)

1.3 Completion Times

EXAMPLES (continued)

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.	12 hours
	AND	
	B.2 Be in MODE 4.	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. 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

(continued)

1.3 Completion Times

EXAMPLES	EXAMPLE 1.3-7 (continued) 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.
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 Limiting Condition for Operation (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.

Sometimes special situations dictate when the requirements of a Surveillance are to be met. They are "otherwise stated" conditions allowed by SR 3.0.1. They may be stated as clarifying Notes in the Surveillance, as part of the Surveillance, or both. Example 1.4-4 discusses these special situations.

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.

The use of "met" or "performed" in these instances conveys specific meanings. A Surveillance is "met" only when the acceptance criteria are satisfied. Known failure of the requirements of a Surveillance, even without a Surveillance specifically being "performed," constitutes a Surveillance not "met." "Performance" refers only to the requirement to specifically determine the ability to meet the acceptance criteria. SR 3.0.4 restrictions would not apply if both the following conditions are satisfied:

(continued)

1.4 Frequency

DESCRIPTION (continued)

a. The Surveillance is not required to be performed; and

b. The Surveillance is not required to be met or, even if required to be met, is not known to be failed.

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.

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 interval specified in the 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 Examples 1.4-3 and 1.4-4), 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

(continued)

1.4 Frequency

EXAMPLES

EXAMPLE 1.4-1 (continued)

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. Failure to do so would result in a violation of SR 3.0.4.

EXAMPLE 1.4-2

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
Verify flow is within limits.	Once within 12 hours after $\geq$ 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 $\geq$ 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.

(continued)

1.4 Frequency

EXAMPLES (continued)

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 within the "specified Frequency." Therefore, if the Surveillance were not performed within the 7 day interval (plus the extension allowed by SR 3.0.2), 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.

(continued)

1.4 Frequency

EXAMPLES (continued)

EXAMPLE 1.4-4

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
------------------NOTE------------------ Only required to be met in MODE 1. -- Verify leakage rates are within limits.	24 hours

Example 1.4-4 specifies that the requirements of this Surveillance do not have to be met until the unit is in MODE 1. The interval measurement for the Frequency of this Surveillance continues at all times, as described in Example 1.4-1. However, the Note constitutes an "otherwise stated" exception to the Applicability of this Surveillance. Therefore, if the Surveillance were not performed within the 24 hour interval (plus the extension allowed by SR 3.0.2), but the unit was not in MODE 1, there would be no failure of the SR nor failure to meet the LCO. Therefore, no violation of SR 3.0.4 occurs when changing MODES, even with the 24 hour Frequency exceeded, provided the MODE change was not made into MODE 1. Prior to entering MODE 1 (assuming again that the 24 hour Frequency were not met), SR 3.0.4 would require satisfying the SR.

A.1

ITS Chapter 1.0

1.1 1.0 DEFINITIONS

Note to Definitions

~~The following terms are defined so that uniform interpretation of these specifications may be achieved.~~ The defined terms of this Section appear in capitalized type and ~~shall be~~ are applicable throughout these Technical Specifications and Bases.

A.1

ACTIONS

ACTIONS shall be that part of a Specification ~~which~~ that prescribes ~~remedial measures~~ Actions to be taken required under designated conditions within specified Completion Times.

AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)

The ~~AVERAGE PLANAR LINEAR HEAT GENERATION RATE~~ (APLHGR) shall be applicable to a specific planar height and is equal to the sum of the ~~LINEAR HEAT GENERATION RATE(s)~~ LHGRs for all the fuel rods in the specified bundle at the specified height divided by the number of fuel rods in the fuel bundle at the height.

A.2

~~CHANNEL~~

~~A CHANNEL shall be an arrangement of a sensor and associated components used to evaluate plant variables and generate a single protective action signal. A CHANNEL terminates and loses its identity where single action signals are combined in a TRIP SYSTEM or logic system.~~

A.1

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 ~~which~~ that the CHANNEL monitors. The CHANNEL CALIBRATION shall encompass the entire CHANNEL including the required sensor, ~~and~~ alarm, and/~~or~~ trip functions, 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 ~~such~~ so that the entire CHANNEL is calibrated.

A.3 , display,

A.4 INSERT 1

CHANNEL CHECK

A CHANNEL CHECK shall be the qualitative assessment, by observation, of CHANNEL behavior during operation ~~by observation~~. This determination shall include, where possible, comparison of the CHANNEL indication and/~~or~~ status ~~with~~ to other indications ~~and~~/or status derived from independent instrument CHANNEL(s) measuring the same parameter.

INSERT 1

Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel.

A.1

ITS Chapter 1.0

1.1 1.0 DEFINITIONS

CHANNEL FUNCTIONAL TEST

A CHANNEL FUNCTIONAL TEST shall be: A.1

a. Analog CHANNEL(s) - the injection of a simulated (or actual) signal into the CHANNEL as close to the sensor as practicable to verify OPERABILITY including required alarm, interlock, display, and/or trip functions and CHANNEL failure trips. A.1 A.3

b. Bistable CHANNEL(s) - the injection of a simulated signal into the sensor to verify OPERABILITY including required alarm and/or trip functions. A.3 L.1

The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total CHANNEL steps such so that the entire CHANNEL is tested. A.1

CORE ALTERATION

CORE ALTERATION shall be the movement of any fuel, sources, or reactivity control components, within the reactor vessel with the vessel head removed and fuel in the vessel. The following exceptions are not considered to be CORE ALTERATIONS:

a. Movement of source range monitors, local power range monitors, intermediate range monitors, traversing incore probes, or special movable detectors (including undervessel replacement); and

b. Control rod movement, provided there are no fuel assemblies in the associated control core cell. A.1

Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.

CORE OPERATING LIMITS REPORT (COLR)

The CORE OPERATING LIMITS REPORT (COLR) shall be is the unit specific document that provides core operating cycle specific parameter limits for the current operating reload cycle. These cycle specific core operating limits shall be determined for each operating reload cycle in accordance with Specification 6.9 5.6.5. Plant operation within these operating limits is addressed in individual specifications. A.1

CRITICAL POWER RATIO (CPR)

The CRITICAL POWER RATIO (CPR) shall be the ratio of is that power in the assembly which that is calculated by application of the applicable NRC approved critical power appropriate correlation(s) to cause some point in the assembly to experience transition boiling, divided by the actual assembly operating power.

A.5 Insert into MCPR definition on page 1-4.

DOSE EQUIVALENT I-131

DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries/gram) which 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 thyroid dose conversion factors used for this calculation shall be those listed in Table III of TID-14844, AEC, 1962, "Calculation of Distance Factors For Power and Test Reactor Sites."

add the two additional thyroid dose conversion factor methods L.2

A.1

ITS Chapter 1.0

1.1 ## 1.0 DEFINITIONS

~~FRACTION OF RATED THERMAL POWER (FRTP)~~
~~The FRACTION OF RATED THERMAL POWER (FRTP) shall be the measured THERMAL POWER divided by the RATED THERMAL POWER.~~ LA.1

~~FREQUENCY NOTATION~~
~~The FREQUENCY NOTATION specified for the performance of Surveillance Requirements shall correspond to the intervals defined in Table 1-1.~~ A.6

~~FUEL DESIGN LIMITING RATIO (FDLRX)~~
~~The FUEL DESIGN LIMITING RATIO (FDLRX) shall be the limit used to assure that the fuel operates within the end-of-life steady-state design criteria by, among other items, limiting the release of fission gas to the cladding plenum.~~ A.2

FUEL DESIGN LIMITING RATIO ~~for~~ CENTERLINE MELT (FDLRC)
The ~~FUEL DESIGN LIMITING RATIO for CENTERLINE MELT (FDLRC)~~ shall be ~~the limit used to assure that the fuel will neither experience centerline melt nor exceed 1% plastic cladding strain for transient overpower events beginning at any power and terminating at 120% of RATED THERMAL POWER.~~ 1.2 times the LHGR existing at a given location divided by the product of the transient LHGR and the fraction of RTP. A.1

A.7 a. Identified LEAKAGE
~~IDENTIFIED~~ LEAKAGE
~~IDENTIFIED~~ LEAKAGE shall be: ~~a)~~ 1) leakage into ~~primary containment collection systems~~ the drywell, such as pump seal or valve packing ~~leaks~~, that is captured and conducted to a sump or collecting tank; or ~~b)~~ 2) leakage into the ~~primary containment~~ drywell atmosphere from sources that are both specifically located and known either not to interfere with the operation of ~~the~~ leakage detection systems or not to be ~~PRESSURE BOUNDARY~~ LEAKAGE. A.8 A.1 that from A.7

~~LIMITING CONTROL ROD PATTERN (LCRP)~~
~~A LIMITING CONTROL ROD PATTERN (LCRP) shall be a pattern which results in the core being on a thermal hydraulic limit, i.e., operating on a limiting value for APLHGR, LHGR, or MCPR.~~ A.2

LINEAR HEAT GENERATION RATE (LHGR)
The ~~LINEAR HEAT GENERATION RATE (LHGR)~~ shall be the heat generation rate per unit length of fuel rod. It is the integral of the heat flux over the heat transfer area associated with the unit length. A.1

LOGIC SYSTEM FUNCTIONAL TEST ~~(LSFT)~~
A LOGIC SYSTEM FUNCTIONAL TEST ~~(LSFT)~~ shall be a test of all required logic components, (i.e., all required relays and contacts, trip units, solid state logic elements, etc.) of a logic circuit, from as close to the sensor as practicable up to, but not including, the actuated device, to verify OPERABILITY. The LOGIC SYSTEM FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total system steps so that the entire logic system is tested. A.1

A.1

ITS Chapter 1.0

1.1

1.0 DEFINITIONS

critical power ratio ( ) that

MINIMUM CRITICAL POWER RATIO (MCPR)

The ~~MINIMUM CRITICAL POWER RATIO (MCPR)~~ shall be the smallest CPR ~~which~~ exists in the core for each class of fuel. Insert definition of CPR from page 1-2 — A.1 A.5

OFFSITE DOSE CALCULATION MANUAL (ODCM)

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/Trip Setpoints, and in the conduct of the Environmental Radiological Monitoring Program. The ODCM shall also contain (1) the Radioactive Effluent Controls and Radiological Environmental Monitoring Programs required by Specification 6.8 and (2) descriptions of the information that should be included in the Annual Radiological Environmental Operating and Annual Radioactive Effluent Release Reports required by Specification 6.9. — A.9 moved to Specification 5.5

OPERABLE - OPERABILITY

A system, subsystem, ~~train~~ division, 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 ~~or~~ and seal water, lubrication, ~~or~~ and other auxiliary equipment that are required for the system, subsystem, ~~train~~ division, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s). — A.1

~~OPERATIONAL~~ MODE

~~An OPERATIONAL MODE, i.e.,~~ MODE, shall ~~be~~ correspond to any one inclusive combination of mode switch position, ~~and~~ average reactor coolant temperature, ~~as~~ and reactor vessel head closure bolt tensioning, specified in Table ~~1.2~~ 1.1-1 with fuel in the reactor vessel. — A.10

~~PHYSICS TESTS~~

~~PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation and 1) described in Chapter 14 of the UFSAR, 2) authorized under the provisions of 10 CFR 50.59, or 3) otherwise approved by the Commission.~~ — A.2

d. ~~PRESSURE BOUNDARY~~ LEAKAGE

~~PRESSURE BOUNDARY~~ LEAKAGE ~~shall be leakage~~ through a nonisolable fault in a Reactor Coolant System RCS component body, pipe wall, or vessel wall. — A.7

A.1

1.1 **1.0 DEFINITIONS**

~~PRIMARY CONTAINMENT INTEGRITY (PCI)~~
~~PRIMARY CONTAINMENT INTEGRITY (PCI) shall exist when:~~ A.11

~~a. All primary containment penetrations required to be closed during accident conditions are either:~~

~~1) Capable of being closed by an OPERABLE primary containment automatic isolation valve system, or~~ LA.3

~~2) Closed by at least one manual valve, blind flange, or deactivated automatic valve secured in its closed position, except for valves that are open under administrative control as permitted by Specification 3.7.D.~~

~~b. All primary containment equipment hatches are closed and sealed.~~

~~c. Each primary containment air lock is in compliance with the requirements of Specification 3.7.C.~~

~~d. The primary containment leakage rates are maintained within the limits of Specification 3.7.A.~~

~~e. The suppression chamber is in compliance with the requirements of Specification 3.7.K.~~

~~f. The sealing mechanism associated with each primary containment penetration; e.g., welds, bellows or O-rings, is OPERABLE.~~ LA.3

~~PROCESS CONTROL PROGRAM (PCP)~~
~~The PROCESS CONTROL PROGRAM (PCP) shall contain the current formulas, sampling, analysis, test, and determinations to be made to ensure that processing and packaging of solid radioactive wastes based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way as to assure compliance with 10 CFR Parts 20, 61, and 71, State regulations, burial ground requirements, and other requirements governing the disposal of solid radioactive waste.~~ A.12 moved to Chapter 5.0

RATED THERMAL POWER (RTP)
~~RATED THERMAL POWER (RTP)~~ shall be a total reactor core heat transfer rate to the reactor coolant of 2527 MWT. A.1

REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME
The ~~REACTOR PROTECTION SYSTEM (RPS)~~ RESPONSE TIME shall be ~~the~~ that time interval ~~for each trip function~~ from the opening of the sensor contact ~~up to and including~~ until the opening of the trip actuator. 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. A.1 A.19

A.1

1.1 1.0 DEFINITIONS

~~REPORTABLE EVENT~~
~~A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.~~ — A.2

~~SECONDARY CONTAINMENT INTEGRITY (SCI)~~
~~SECONDARY CONTAINMENT INTEGRITY (SCI) shall exist when:~~

~~a. All secondary containment penetrations required to be closed during accident conditions are either:~~

~~1) Capable of being closed by an OPERABLE secondary containment automatic isolation valve system, or~~

~~2) Closed by at least one manual valve, blind flange, or deactivated automatic damper secured in its closed position, except as permitted by Specification 3.7.O.~~ — A.11

~~b. All secondary containment hatches and blowout panels are closed and sealed.~~ — LA.3

~~c. The standby gas treatment system is in compliance with the requirements of Specification 3.7.P.~~

~~d. At least one door in each access to the secondary containment is closed.~~

~~e. The sealing mechanism associated with each secondary containment penetration; e.g., welds, bellows or O-rings, is OPERABLE.~~ — LA.3

~~f. The pressure within the secondary containment is less than or equal to the value required by Specification 4.7.N.1.~~

SHUTDOWN MARGIN (SDM)
~~SHUTDOWN MARGIN (SDM)~~ shall be the amount of reactivity by which the reactor is (c) that: Y subcritical or would be subcritical assuming all control rods are fully inserted except for the (1) single control rod of highest reactivity worth which is assumed to be fully withdrawn ~~and the reactor is in the shutdown condition; cold, i.e.~~ 68°F; and xenon free. (3) (2) INSERT 2 — A.13 — A.1

a. The reactor is b. The moderator temperature is

~~SOURCE CHECK~~
~~A SOURCE CHECK shall be the qualitative assessment of CHANNEL response when the CHANNEL sensor is exposed to a radioactive source.~~ — A.2

~~STEADY STATE LINEAR HEAT GENERATION RATE (SLHGR)~~
~~The STEADY STATE LINEAR HEAT GENERATION RATE (SLHGR) shall be the limit which protects against exceeding the fuel end-of-life steady state design criteria.~~ — LA.2

Add proposed definition of STAGGERED TEST BASIS — A.14

A.13 INSERT 2

With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.

A.1

1.1 **1.0 DEFINITIONS**

THERMAL POWER

THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.

~~TRANSIENT LINEAR HEAT GENERATION RATE (TLHGR)~~

~~The TRANSIENT LINEAR HEAT GENERATION RATE (TLHGR) shall be the limit which protects against fuel centerline melting and 1% plastic cladding strain during transient conditions throughout the life of the fuel.~~ LA.1

~~TRIP SYSTEM~~

~~A TRIP SYSTEM shall be an arrangement of instrument CHANNEL trip signals and auxiliary equipment required to initiate action to accomplish a protective trip function. A TRIP SYSTEM may require one or more instrument CHANNEL trip signals related to one or more plant parameters in order to initiate TRIP SYSTEM action. Initiation of protective action may require the tripping of a single TRIP SYSTEM or the coincident tripping of two TRIP SYSTEMs.~~ A.2

b. ~~UNIDENTIFIED~~ LEAKAGE A.7

A11 ~~UNIDENTIFIED~~ LEAKAGE ~~shall be all leakage in the primary containment which~~ into the drywell that is not ~~IDENTIFIED~~ LEAKAGE; A.8

Add proposed definition of TURBINE BYPASS SYSTEM RESPONSE TIME. A.14

c. Total LEAKAGE Sum of the identified and unidentified LEAKAGE; and

A.1

TABLE 1-1

SURVEILLANCE FREQUENCY NOTATION

	NOTATION	FREQUENCY
1. Shift	S	At least once per 12 hours
2. Day	D	At least once per 24 hours
3. Week	W	At least once per 7 days
4. Month	M	At least once per 31 days
5. Quarter	Q	At least once per 92 days
6. Semiannual	SA	At least once per 184 days
7. Annual	A	At least once per 366 days
8. Sesquiannual	E	At least once per 18 months (550 days)
9. Startup	S/U	Prior to each reactor startup
10. Not Applicable	NA	Not applicable

A.6

A.1

TABLE ~~1-2~~ 1.1-1

~~OPERATIONAL~~ MODES — A.1

MODE	TITLE	REACTOR MODE SWITCH POSITION	AVERAGE REACTOR COOLANT TEMPERATURE (°F)
	1. POWER OPERATION	Run	~~Any temperature~~ NA
	2. STARTUP	Refuel[(a)] or Startup/Hot Standby	~~Any temperature~~ NA
	3. HOT SHUTDOWN[(a)]	Shutdown[(a)(d)]	> 212
	4. COLD SHUTDOWN[(a)]	Shutdown[(a)(e)]	≤ 212
	5. REFUELING[(b)]	Shutdown or Refuel[(a)(b)]	~~≤ 140°F~~ NA

M.1 A.15 A.16 A.1 A.17 M.1

All reactor vessel head closure bolts fully tensioned.

~~TABLE NOTATIONS~~ — A.1

(a) The reactor mode switch may be placed in the Run, Startup/Hot Standby or Refuel position to test the switch interlock functions provided the control rods are verified to remain fully inserted by a second licensed operator or other technically qualified individual. — A.15 moved to LCO 3.10.1

(b) The reactor mode switch may be placed in the Refuel position while a single control rod drive is being removed from the reactor pressure vessel per Specification 3.10.I. — A.15 moved to LCO 3.10.3

A.17 ~~(c)~~ (b) ~~Fuel in the reactor vessel with~~ One or more reactor vessel head closure bolts less than fully tensioned ~~or with the head removed.~~ — A.1

(d) ~~See Special Test Exceptions 3.12.A, 3.12.B and 3.12.C.~~ — A.16

(e) The reactor mode switch may be placed in the Refuel position while a single control rod is being moved provided the one-rod-out interlock is OPERABLE. — A.15 moved to LCO 3.10.2 and LCO 3.10.3

(f) ~~When there is no fuel in the reactor vessel, the reactor is considered not to be in any OPERATIONAL MODE. The reactor mode switch may then be in any position or may be inoperable.~~ — A.1

Add proposed Sections 1.2, 1.3, and 1.4 — A.18

A.1

ITS Chapter 1.0

3.3 - LIMITING CONDITIONS FOR OPERATION

A. SHUTDOWN MARGIN (SDM)

The SHUTDOWN MARGIN (SDM) shall be equal to or greater than:

1. 0.38% Δk/k with the highest worth control rod analytically determined, or
2. 0.28% Δk/k with the highest worth control rod determined by test.

APPLICABILITY:

OPERATIONAL MODE(s) 1, 2, 3, 4, and 5.

ACTION:

With the SHUTDOWN MARGIN less than specified:

1. In OPERATIONAL MODE 1 or 2, restore the required SHUTDOWN MARGIN within 6 hours or be in at least HOT SHUTDOWN within the next 12 hours.
2. In OPERATIONAL MODE 3 or 4, immediately verify all insertable control rods to be fully inserted and suspend all activities that could reduce the SHUTDOWN MARGIN. In OPERATIONAL MODE 4, establish SECONDARY CONTAINMENT INTEGRITY within 8 hours.
3. In OPERATIONAL MODE 5, suspend CORE ALTERATION(s) and other activities that could reduce the SHUTDOWN MARGIN and fully insert all insertable control rods within 1 hour. Establish SECONDARY CONTAINMENT INTEGRITY within 8 hours.

4.3 - SURVEILLANCE REQUIREMENTS

A. SHUTDOWN MARGIN

The SHUTDOWN MARGIN shall be determined to be equal to or greater than that specified at any time during the operating cycle:

See ITS 3.1.1

1. By demonstration, prior to or during the first startup after each refueling outage.
2. Within 24 hours after detection of a withdrawn control rod that is immovable, as a result of excessive friction or mechanical interference, or known to be unscrammable. The required SHUTDOWN MARGIN shall be verified acceptable with an increased allowance for the withdrawn worth of the immovable or unscrammable control rod.
3. By calculation, prior to each fuel movement during the fuel loading sequence.

A.13 Replaced with INSERT 2

ADMINISTRATIVE

A.1 In the conversion of the Dresden 2 and 3 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1433, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 The definitions of CHANNEL, FUEL DESIGN LIMITING RATIO (FDLRX), LIMITING CONTROL ROD PATTERN (LCRP), PHYSICS TESTS, REPORTABLE EVENT, SOURCE CHECK, and TRIP SYSTEM are deleted since specific Specifications referring to them no longer contain their use, or no longer are retained in the Dresden 2 and 3 ITS. Discussion of the technical aspects of this change are addressed in each Specification where the phrase was used. The removal of a definition is considered administrative, with no impact of its own.

A.3 As a requirement for OPERABILITY of a Technical Specification channel, not all channels will have a "required" sensor, alarm, or channel failure trip function. Conversely, some channels may have a "required" display or interlock function. This is perceived as the intent of the Dresden 2 and 3 CTS definitions of CHANNEL CALIBRATION, CHANNEL FUNCTIONAL TEST, and LOGIC SYSTEM FUNCTIONAL TEST, and therefore, the revised wording in the ITS for these definitions more accurately reflects this intent.

Since the list of equipment functions in the definition of CHANNEL FUNCTIONAL TEST (e.g., alarm and/or trip functions) is intended to provide examples of attributes which must potentially be OPERABLE, dependent on whether it is "required" or not, the list can be applied to both analog and bistable channels, and the separate definition/requirement for analog and bistable channels can be combined into one common definition.

Additionally, the phrase "or actual," in reference to the injected signal for the CHANNEL FUNCTIONAL TEST, has been added as an explicit option to the currently required simulated signal. Some tests are performed by insertion of the actual signal into the logic (e.g., rod block interlocks). For others, there is no reason why an actual signal would preclude satisfactory performance of the test. Use of an actual signal instead of a "simulated" signal will not affect the performance of the channel. OPERABILITY can be adequately demonstrated in either case since the channel itself can not discriminate between "actual" or "simulated."

ADMINISTRATIVE

A.3 (cont'd) Various interpretations of the Dresden 2 and 3 CTS definitions of CHANNEL CALIBRATION, CHANNEL FUNCTIONAL TEST, and LOGIC SYSTEM FUNCTIONAL TEST could lead to a conclusion that these changes introduce some degree of flexibility and/or restriction. However, it is generally accepted that these changes reflect the underlying intent of the Dresden 2 and 3 CTS requirement and are therefore appropriately considered as "Administrative" changes.

A.4 Specific CHANNEL CALIBRATION requirements for thermocouples and RTDs have been added. The intent of a CHANNEL CALIBRATION is to adjust the channel output so that the channel responds with known range and accuracy. Most instrument channels contain an adjustable transmitter (sensor) which is also subject to drift. Thus, for most channels, a CHANNEL CALIBRATION includes adjustments to the sensor to re-establish proper input/output relationships. Certain types of sensing elements, by their design, construction, and application have an inherent resistance to drift. They are designed such that they have a fixed input/output response which cannot be adjusted or changed once installed. When a credible mechanism that can cause change or drift in this fixed response does not exist, it is unnecessary to test them in the same manner as the other remaining devices in the channel to demonstrate proper operation. RTDs and thermocouples are sensing elements that fall into such a category.

Thus, for these sensors, the appropriate calibration at the Frequencies specified in the Dresden 2 and 3 Technical Specifications would consist of a verification of OPERABILITY of the sensing element and a calibration of the remaining adjustable devices in the channel. Calibration of the adjustable devices in the channel is performed by applying the sensing elements' (RTDs or thermocouples) fixed input/output relationships to the remainder of the channel and making the necessary adjustments to ensure range and accuracy.

This Dresden 2 and 3 ITS "verification of OPERABILITY" of the sensing element (RTDs or thermocouples) is considered to be explicitly defining the currently accepted method for calibration of these instruments. As such, this change is considered to be administrative.

A.5 The current definition of CRITICAL POWER RATIO, as editorially marked up, has been incorporated into the proposed definition of MINIMUM CRITICAL POWER RATIO. No separate use of CPR is made in the Dresden 2 and 3 ITS.

ADMINISTRATIVE (continued)

A.6 The definition of FREQUENCY NOTATION and CTS Table 1-1 have been deleted since the abbreviations in Table 1.1 are no longer used. All Surveillance Requirement Frequencies in the Dresden 2 and 3 ITS are directly specified.

A.7 The current definitions for IDENTIFIED LEAKAGE, PRESSURE BOUNDARY LEAKAGE, and UNIDENTIFIED LEAKAGE have been combined into one proposed defined term: LEAKAGE. The definitions of each of the categories of LEAKAGE are consistent with the current Dresden 2 and 3 definitions. In addition, a new definition has been added: Total LEAKAGE. Total LEAKAGE is defined as the sum of the identified and unidentified LEAKAGE. This definition is consistent with the use of the term in CTS 3/4.6.H, "Operational Leakage" (ITS 3.4.4). Therefore, this change is considered administrative.

A.8 As specified in the second portion of the current definition of IDENTIFIED LEAKAGE (proposed LEAKAGE definition), the intended leakage is that which occurs into the drywell space (i.e., containment atmosphere). The "collection systems" specified in the first portion of the definition are intended to be those for collection of leakages into the drywell space. “All Leakage” specified in the current definition of UNIDENTIFIED LEAKAGE refers to leakage into the drywell space. This change is a clarification of the term, and therefore the revised wording more accurately reflects this intent.

A.9 The definition of OFFSITE DOSE CALCULATION MANUAL has been moved to proposed Specification 5.5.1 in accordance with the BWR ISTS, NUREG-1433, Rev. 1. Any technical changes to this definition is addressed in the Discussion of Changes for ITS: Section 5.5.

A.10 OPERATIONAL MODE has been replaced with a definition of MODE to be consistent with terminology used in the Dresden 2 and 3 ITS. Since their use is interchangeable, this change is considered to be editorial. Two additional clarifying statements are added to indicate that defined MODES in proposed Table 1.1-1 apply only when fuel is in the reactor vessel and that reactor vessel head closure bolt tensioning is a parameter. This intent is conveyed by CTS Table 1.2, footnote (c).

A.11 The definitions of PRIMARY CONTAINMENT INTEGRITY and SECONDARY CONTAINMENT INTEGRITY have been deleted because these definitions duplicate requirements that are appropriately contained in Specifications. This was also done because of the confusion associated with these definitions compared to their use in their respective LCOs. Some of the details of the PRIMARY CONTAINMENT INTEGRITY and SECONDARY CONTAINMENT INTEGRITY definitions are relocated to the ITS 3.6.1.1

ADMINISTRATIVE

A.11 (cont'd) Bases and ITS 3.6.4.1 Bases, respectively (refer to Discussion of Change LA.3 below for detailed discussion). The change is editorial in that all the requirements are specifically addressed in the LCOs for the Primary Containment and Secondary Containment, along with the remainder of the LCOs in the Containment Systems Section. Specifically:

- CTS PRIMARY CONTAINMENT INTEGRITY definition items a.1 and a.2: adequately addressed by ITS LCO 3.6.1.3 and associated SRs 3.6.1.3.2, 3.6.1.3.3, and 3.6.1.3.7.
- CTS PRIMARY CONTAINMENT INTEGRITY definition items b and f: adequately addressed by the Primary Containment Leakage Rate Testing Program requirements of the ITS SR 3.6.1.1.1 Type A leakage test.
- CTS PRIMARY CONTAINMENT INTEGRITY definition item c: adequately addressed by ITS LCO 3.6.1.2.
- CTS PRIMARY CONTAINMENT INTEGRITY definition item d: adequately addressed by ITS LCO 3.6.1.1 and ITS SR 3.6.1.3.10.
- CTS PRIMARY CONTAINMENT INTEGRITY definition item e: adequately addressed by ITS LCOs 3.6.1.1, 3.6.2.1, and 3.6.2.2.
- CTS SECONDARY CONTAINMENT INTEGRITY definition items a.1 and a.2: adequately addressed by ITS LCO 3.6.4.2 and associated SRs 3.6.4.2.1 and 3.6.4.2.3.
- CTS SECONDARY CONTAINMENT INTEGRITY definition items b and e: "closed and sealed" requirements for hatches, blowout panels, and sealing mechanisms are adequately addressed by the leakage testing requirements of ITS SR 3.6.4.1.3.
- CTS SECONDARY CONTAINMENT INTEGRITY definition item c: adequately addressed by ITS LCO 3.6.4.3.
- CTS SECONDARY CONTAINMENT INTEGRITY definition item d: adequately addressed by ITS SR 3.6.4.1.2.
- CTS SECONDARY CONTAINMENT INTEGRITY definition item f: adequately addressed by ITS SR 3.6.4.1.1.

A.12 The definition of PROCESS CONTROL PROGRAM has been moved to the Administrative Controls Chapter (Chapter 5.0). Any technical changes to this definition is addressed in the Discussion of Changes for CTS: 6.13.

A.13 The definition of SHUTDOWN MARGIN has been modified to address stuck control rods. This is consistent with the Dresden 2 and 3 CTS requirement found in CTS 4.3.A.2 to account for the worth of a stuck control rod. The movement of this requirement to the SDM definition is considered to be editorial.

ADMINISTRATIVE (continued)

A.14 Definitions of STAGGERED TEST BASIS and TURBINE BYPASS SYSTEM RESPONSE TIME have been added to be consistent with their usage throughout the Dresden 2 and 3 ITS. Any impact of these definitions will be addressed in each Specification where the definitions are used. As such, this represents an editorial preference.

A.15 CTS Table 1.2, footnotes (a), (b), and (e), have been moved to LCO requirements in the Special Operations Section (currently titled "Special Test Exceptions"). Any technical changes to these footnotes are addressed in the Discussion of Changes for ITS: 3.10.1, ITS: 3.10.2, and ITS: 3.10.3.

A.16 CTS Table 1.2, footnote (d), referencing Special Test Exceptions 3.12.A, 3.12.B, and 3.12.C, have been deleted. This footnote only serves as a cross reference and is not needed. This is consistent with the BWR ISTS, NUREG-1433, Rev. 1.

A.17 The intent of applying the MODE definition only when fuel is in the vessel, as specified in CTS Table 1.2, footnote (c), has been moved to the definition of MODE (refer also to Discussion of Change A.10 above). In addition, since the vessel head can only be removed if the head closure bolts are less than fully tensioned, there is no purpose in including "or with the head removed."

A.18 The following sections are added to the Technical Specifications. These additions aid in the understanding and use of the new format and presentation style. Some conventions in applying the Technical Specifications to unusual situations have been the subject of debate and varying interpretation between the licensee and the NRC Staff. Because the guidance in these proposed sections establishes positions not previously formalized, the guidance is considered administrative. These sections are consistent with the BWR ISTS, NUREG-1433, Rev. 1. The added sections are as follows:

SECTION 1.2 - LOGICAL CONNECTORS

Section 1.2 provides specific examples of the logical connectors "AND" and "OR" and the numbering sequence associated with their use.

SECTION 1.3 - COMPLETION TIMES

Section 1.3 provides proper use and interpretation of Completion Times. The Section also provides specific examples that aid the user in understanding Completion Times.

ADMINISTRATIVE

A.18 (cont'd) SECTION 1.4 - FREQUENCY

Section 1.4 provides proper use and interpretation of the Surveillance Frequency. The Section also provides specific examples that aid the user in understanding Surveillance Frequency.

A.19 The CTS definition of REACTOR PROTECTION SYSTEM RESPONSE TIME is revised to allow the associated time to be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. Currently, this level of detail for test performance is not addressed in this definition. The assessment of the response time in this manner is adequate to demonstrate the associated components are OPERABLE provided the entire channel is tested by combining the results of each of the partial step tests. In addition, performing the tests in this manner allows for greater flexibility and reduces the possibility of an undesired initiation. Since the Dresden 2 and 3 ITS continue to require the entire channel response time to be tested within the required frequency, the changes to the CTS definition is considered to be administrative. The allowance to test in this manner is currently allowed for other tests as indicated in the CTS definition for CHANNEL CALIBRATION, CHANNEL FUNCTIONAL TEST, and LOGIC SYSTEM FUNCTIONAL TEST.

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 CTS Table 1.2 has been modified by a) the addition of the head closure status (proposed footnote (a)) to MODES 3 and 4, b) the addition of the refuel mode switch position to MODE 2 (including footnote (a)), and c) the deletion of the coolant temperature limit of MODE 5. These changes address plant conditions not previously satisfying a defined MODE, or satisfying more than one MODE. The intent of these changes is to provide clarity and completeness in avoiding any potential misinterpretation, and as such could be considered administrative. However, since the changes eliminate the potential to interpret certain plant conditions such that no MODE, or a less restrictive MODE would exist, this change is discussed and justified as a "more restrictive" change. Specifically:

- STARTUP MODE will now include the mode switch position of "Refuel" when the head closure bolts are fully tensioned (proposed footnote "(a)"). This is currently a plant condition which has no corresponding MODE and could therefore be incorrectly interpreted as

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 (cont'd) not requiring the application of the majority of Technical Specifications. By defining this plant condition as STARTUP MODE, sufficiently conservative restrictions will be applied by the applicable LCOs.

- Clarifying the shutdown MODES with a new footnote (a) stating "all reactor vessel head closure bolts fully tensioned" eliminates the overlap in defined MODES when the mode switch is in "Shutdown" position: with the vessel head detensioned, both the definition of REFUEL as well as COLD SHUTDOWN could apply. It is not the intent of the Technical Specification to allow an option of whether to apply REFUEL applicable LCOs or to apply COLD SHUTDOWN applicable LCOs. This change precludes an unacceptable interpretation.

- The definition of REFUEL would cease to be applicable when average coolant temperature exceeded 140° F. With the mode switch in "Refuel" a plant condition which has no corresponding MODE exists. This could therefore be incorrectly interpreted as not requiring the application of the majority of Technical Specifications. By defining the REFUEL MODE as including plant conditions with no specific coolant temperature range, sufficiently conservative restrictions will be applied by the applicable LCOs during all fueled conditions with the vessel head closure bolts detensioned.

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

LA.1 The definition of FRACTION OF RATED POWER (FRTP) and TRANSIENT LINEAR HEAT GENERATION RATE (TLHGR) are used only in one proposed Specification (ITS 3.2.4). As such, the definitions have been moved to the Bases for ITS 3.2.4, Average Power Range Monitor (APRM) Gain and Setpoint. The requirements of ITS 3.2.4 and the associated Surveillance Requirements are sufficient to ensure APRM gains and setpoints are appropriately controlled. The information in the definitions of FRTP and TLHGR is not required in the ITS for proper interpretation of the Specification. However, for additional clarity, the definitions of FRTP and TLHGR have been included in the Bases. This is consistent with the BWR ISTS, NUREG-1433, Rev. 1. Therefore, the relocated definitions are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

LA.2 The definition of STEADY STATE LINEAR HEAT GENERATION RATE (SLHGR) is used in only one proposed Specification (ITS 3.2.3). As such, the definition has been moved to the Bases for ITS 3.2.3, "LHGR." The requirements of ITS 3.2.3 and the associated Surveillance Requirements are sufficient to ensure the SLHGR is appropriately controlled and determined. The information in the definition of SLHGR is not required in the ITS for proper interpretation. However, for additional clarity, the definition of SLHGR has been included in the Bases. Therefore, the relocated definition is not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

LA.3 The CTS definitions for PRIMARY CONTAINMENT INTEGRITY and SECONDARY CONTAINMENT INTEGRITY are deleted because these definitions duplicate requirements that are appropriately contained in other Specifications (refer to Discussion of Change A.11 above for detailed discussion). However, items a, b, c, and f from the CTS PRIMARY CONTAINMENT INTEGRITY definition are relocated to the ITS 3.6.1.1 Bases and items b and e from the CTS SECONDARY CONTAINMENT INTEGRITY definition are relocated to the ITS 3.6.4.1 Bases, stating the necessity for these requirements as they relate to maintaining Operability of the respective primary containment and secondary containment. This is acceptable since these details do not impact the requirements to maintain the primary containment and secondary containment (including associated support systems and components) Operable. Therefore, the relocated portions of the definitions are not required to be in the ITS to provide adequate protection of the public health and safety. Changes to the Bases will be controlled by the provisions of the proposed Bases Control Program described in Chapter 5 of the ITS.

"Specific"

L.1 The proposed CHANNEL FUNCTIONAL TEST (CFT) definition combining analog and bistable channel requirements results in an allowance for the bistable channel test signal to be injected "as close to the sensor as practicable" in lieu of "into the sensor," as is currently required by the CFT definition. Injecting a signal at the sensor would in some cases involve significantly increased probabilities of initiating undesired circuits during the test since several logic channels are often associated with a particular sensor. Performing the test by injection of a signal at the sensor requires jumpering of the other logic channels

TECHNICAL CHANGES - LESS RESTRICTIVE

L.1 (cont'd) to prevent their initiation during the test, or increases the scope of the test to include multiple tests of the other logic channels. Either method significantly increases the difficulty of performing the surveillance. Allowing initiation of the signal close to the sensor as practicable provides a sufficient test of the logic channel while significantly reducing this probability of undesired initiation. In addition, the CHANNEL CALIBRATION will ensure the sensor is tested since the test requires a verification of the entire channel.

L.2 The CTS definition of DOSE EQUIVALENT I-131 requires that the DOSE EQUIVALENT I-131 be calculated using the thyroid dose conversion factors found in Table III of TID 14844, "Calculation of Distance Factors for Power and Test Reactor Sites." The ITS allows DOSE EQUIVALENT I-131 to be calculated using any one of three thyroid dose conversion factors; TID-14844 (1962), Table E-7 of Regulatory Guide 1.109, Rev. 1 (1977), or Supplement 1 to ICRP-30 (1980). TID-14844 thyroid dose conversion factors result in higher doses and lower allowable activity levels than the other two references and are, therefore, conservative.

Using thyroid dose conversion factors other than those given in TID-14844 results in lower doses and higher allowable activity but is justified by the discussion given in the Federal Register (FR page 23360 Vl 56 No 98 May 21, 1991). This discussion accompanied the final rulemaking on 10 CFR 20 by the NRC. In that discussion, the NRC stated that they were incorporating modifications to existing concepts and recommendations of the ICRP and NCRP into NRC regulations. Incorporation of the methodology of ICRP-30 into the part 20 revision was specifically mentioned with the changes being made resulting from changes in the scientific techniques and parameters used in calculating dose. In a response to a specific question as to whether or not the ICRP 30 dose parameters should be used, the NRC stated that "Appropriate parameters for calculating organ doses can be found in ICRP-30 and its supplements.....". Lastly, Commissioner Curtis provided additional views of the revised 10 CFR 20 with respect to the backfit rule. In that discussion, he stated that the AEC, when they issued the original part 20, had emphasized that the standards were subject to change with the development of new knowledge and experience. He went on to say that the limits given in the revised 10 CFR 20 were based on up-to-date metabolic models and dose factors. This Federal Register entry shows clearly that, in general, the NRC was updating 10 CFR 20 to incorporate ICRP-30 recommendations and data. Given this discussion, it is concluded that using ICRP thyroid dose conversion factors to calculate DOSE

TECHNICAL CHANGES - LESS RESTRICTIVE

L.2 (cont'd) EQUIVALENT I-131 is acceptable. Also, the Reg Guide 1.109 thyroid dose conversion factors are higher than the ICRP-30 thyroid dose conversion factors for all five iodine isotopes in question. Therefore, using Reg Guide 1.109 thyroid dose conversion factors to calculate DOSE EQUIVALENT I-131 is more conservative than ICRP-30 and is therefore acceptable.

RELOCATED SPECIFICATIONS

None

<CTS>

1.0 USE AND APPLICATION

<1.0>

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
<A.1>	ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
<A.1>	AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)	The APLHGR shall be applicable to a specific planar height and is equal to the sum of the [LHGRs] ~~[heat generation rate per unit length of fuel rod]~~ [1] for all the fuel rods in the specified bundle at the specified height divided by the number of fuel rods in the fuel bundle [at the height].
<A.4>	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 the entire channel, including the required sensor, alarm, display, and trip functions, and shall include the CHANNEL FUNCTIONAL TEST. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps so that the entire channel is calibrated.
<A.1>	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 indication and status to other indications or

(continued)

<CTS>

<1.0> 1.1 Definitions

CHANNEL CHECK (continued)
: status derived from independent instrument channels measuring the same parameter.

<L.1> CHANNEL FUNCTIONAL TEST
: A CHANNEL FUNCTIONAL TEST shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY, including required alarm, interlock, display, and trip functions, and channel failure trips. The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total channel steps so that the entire channel is tested.

<A.1> CORE ALTERATION
: CORE ALTERATION shall be the movement of any fuel, sources, or reactivity control components, within the reactor vessel with the vessel head removed and fuel in the vessel. The following exceptions are not considered to be CORE ALTERATIONS:

a. Movement of source range monitors, local power range monitors, intermediate range monitors, traversing incore probes, or special movable detectors (including undervessel replacement); and

b. Control rod movement, provided there are no fuel assemblies in the associated core cell.

Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.

<A.1> 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 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.

<L.2> 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 thyroid dose

(continued)

<CTS>

<1.0>

1.1 Definitions

<L.2>

DOSE EQUIVALENT I-131 (continued)	conversion factors used for this calculation shall be those listed in [Table III of TID-14844, AEC, 1962, "Calculation of Distance Factors for Power and Test Reactor Sites" or those listed in Table E-7 of Regulatory Guide 1.109, Rev. 1, NRC, 1977, or ICRP 30, Supplement to Part 1, page 192-212, Table titled, "Committed Dose Equivalent in Target Organs or Tissues per Intake of Unit Activity"]. 1
EMERGENCY CORE COOLING SYSTEM (ECCS) RESPONSE TIME	The ECCS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ECCS initiation setpoint at the channel sensor until the ECCS 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.
END OF CYCLE RECIRCULATION PUMP TRIP (EOC RPT) SYSTEM RESPONSE TIME	The EOC RPT SYSTEM RESPONSE TIME shall be that time interval from initial signal generation by [the associated turbine stop valve limit switch or from when the turbine control valve hydraulic oil control oil pressure drops below the pressure switch setpoint] to complete suppression of the electric arc between the fully open contacts of the recirculation pump circuit breaker. 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, [except for the breaker arc suppression time, which is not measured but is validated to conform to the manufacturer's design value]. 2
ISOLATION SYSTEM RESPONSE TIME	The ISOLATION SYSTEM RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its isolation initiation setpoint at the channel sensor until the isolation valves travel to their required positions. 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,

<A.1> INSERT 1 3

(continued)

$\boxed{3}$ INSERT 1

FUEL DESIGN LIMITING RATIO FOR CENTERLINE MELT (FDLRC)	The FDLRC shall be 1.2 times the LHGR existing at a given location divided by the product of the transient LHGR limit and the fraction of RTP.

<CTS>

<1.0> 1.1 Definitions

ISOLATION SYSTEM RESPONSE TIME (continued)	overlapping, or total steps so that the entire response time is measured.	2
L_a	The maximum allowable primary containment leakage rate, L_a, shall be [ ]% of primary containment air weight per day at the calculated peak containment pressure (P_a).	4
<A.7> LEAKAGE	LEAKAGE shall be:	

a. Identified LEAKAGE

1. LEAKAGE into the drywell, such as that from pump seals or valve packing, that is captured and conducted to a sump or collecting tank; or

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

b. Unidentified LEAKAGE

All LEAKAGE into the drywell that is not identified LEAKAGE;

c. Total LEAKAGE

Sum of the identified and unidentified LEAKAGE; and 5

d. Pressure Boundary LEAKAGE

LEAKAGE through a nonisolable fault in a Reactor Coolant System (RCS) component body, pipe wall, or vessel wall.

<A.1> [LINEAR HEAT GENERATION RATE (LHGR)] — [The LHGR shall be the heat generation rate per unit length of fuel rod. It is the integral of the heat flux over the heat transfer area associated with the unit length.] 1

(continued)

<1.0> 1.1 Definitions (continued)

<A.1> LOGIC SYSTEM FUNCTIONAL TEST

A LOGIC SYSTEM FUNCTIONAL TEST shall be a test of all required logic components (i.e., all required relays and contacts, trip units, solid state logic elements, etc.) of a logic circuit, from as close to the sensor as practicable up to, but not including, the actuated device, to verify OPERABILITY. The LOGIC SYSTEM FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total system steps so that the entire logic system is tested.

[~~MAXIMUM FRACTION OF LIMITING POWER DENSITY (MFLPD)~~

~~The MFLPD shall be the largest value of the fraction of limiting power density in the core. The fraction of limiting power density shall be the LHGR existing at a given location divided by the specified LHGR limit for that bundle type.~~] 3

<A.5> MINIMUM CRITICAL POWER RATIO (MCPR)

The MCPR shall be the smallest critical power ratio (CPR) that exists in the core [for each class of fuel]. The CPR is that power in the assembly that is calculated by application of the appropriate correlation(s) to cause some point in the assembly to experience boiling transition, divided by the actual assembly operating power. 1

<A.10> MODE

A MODE shall correspond to any one inclusive combination of mode switch position, average reactor coolant temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.

<A.1> OPERABLE – OPERABILITY

A system, subsystem, division, 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, division, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).

<A.2> ~~PHYSICS TESTS~~

~~PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation.~~ 2

(continued)

<CTS>

<1.0>

1.1 Definitions

~~PHYSICS TESTS (continued)~~	~~These tests are:~~ ~~a. Described in Chapter [14, Initial Test Program] of the FSAR;~~ ~~b. Authorized under the provisions of 10 CFR 50.59; or~~ ~~c. Otherwise approved by the Nuclear Regulatory Commission.~~ 2
~~PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)~~	~~The PTLR is the unit specific document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates, for the current reactor vessel fluence period. These pressure and temperature limits shall be determined for each fluence period in accordance with Specification 5.6.6. Plant operation within these operating limits is addressed in LCO 3.4.10, "RCS Pressure and Temperature (P/T) Limits."~~ 6
<A.1> RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of ~~[2436]~~ 2527 MWt. 1
<A.19> REACTOR PROTECTION 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 opening of the trip actuator ~~the channel sensor until~~ contact ~~de-energization of the scram pilot valve solenoids~~ opening of the. 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. 7
<A.13> SHUTDOWN MARGIN (SDM)	SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical assuming that: a. The reactor is xenon free; b. The moderator temperature is 68°F; and c. All control rods are fully inserted except for the single control rod of highest reactivity worth, which is assumed to be fully withdrawn.

(continued)

<CTS>

<1.0> 1.1 Definitions

	SHUTDOWN MARGIN (SDM) (continued)	With control rods not capable of being fully inserted, the reactivity worth of these control rods must be accounted for in the determination of SDM.
<A.14>	STAGGERED TEST BASIS	A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during *n* Surveillance Frequency intervals, where *n* is the total number of systems, subsystems, channels, or other designated components in the associated function.
<A.1>	THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.
<A.14> [1]	TURBINE BYPASS SYSTEM RESPONSE TIME	The TURBINE BYPASS SYSTEM RESPONSE TIME ~~consists of two components:~~ ~~a. The time from initial movement of the main turbine stop valve or control valve until 80% of the turbine bypass capacity is established; and~~ ~~b. The time from initial movement of the main turbine stop valve or control valve until initial movement of the turbine bypass valve.~~ 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. [1]

shall be that interval from when the turbine bypass control unit generates a turbine bypass valve flow signal until the turbine bypass valves travel to their required positions. [1]

<CTS>

<Table 1-2>

Table 1.1-1 (page 1 of 1)
MODES

MODE	TITLE	REACTOR MODE SWITCH POSITION	AVERAGE REACTOR COOLANT TEMPERATURE (°F)
1	Power Operation	Run	NA
2	Startup	Refuel[(a)] or Startup/Hot Standby	NA
3	Hot Shutdown[(a)]	Shutdown	> ~~[200]~~ 212 1
4	Cold Shutdown[(a)]	Shutdown	≤ ~~[200]~~
5	Refueling[(b)]	Shutdown or Refuel	NA

(a) All reactor vessel head closure bolts fully tensioned.

(b) One or more reactor vessel head closure bolts less than fully tensioned.

<CTS>

1.0 USE AND APPLICATION

<A.18>
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 <u>AND</u> and <u>OR</u>. 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.

(continued)

<CTS>

<A.18> 1.2 Logical Connectors

EXAMPLES (continued)

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. D 5

(continued)

<CTS>

<A.18> 1.2 Logical Connectors

EXAMPLES (continued)

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.

<CTS>

1.0 USE AND APPLICATION

<A.18>

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~~(s). 5

DESCRIPTION

The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of 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. 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 time of discovery of the situation that required entry into the Condition.

Once a Condition has been entered, subsequent divisions, 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.

(continued)

<CTS>

<A.18> 1.3 Completion Times

DESCRIPTION (continued)

However, when a <u>subsequent</u> division, 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:

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 extension~~s~~ d~~o~~es not apply to those Specifications that have exceptions that allow completely separate re-entry into the Condition (for each division, 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. 5

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 . . ." Example 1.3-3 illustrates one use of this type of Completion Time. The 10 day Completion Time specified for Condition A and B in Example 1.3-3 may not be extended.

(continued)

<CTS>

<A.1B> 1.3 Completion Times (continued)

EXAMPLES

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

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 4.	12 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 12 hours AND in MODE 4 within 36 hours. A total of 12 hours is allowed for reaching MODE 3 and a total of 36 hours (not 48 hours) is allowed for reaching MODE 4 from the time that Condition B was entered. If MODE 3 is reached within 6 hours, the time allowed for reaching MODE 4 is the next 30 hours because the total time allowed for reaching MODE 4 is 36 hours.

If Condition B is entered while in MODE 3, the time allowed for reaching MODE 4 is the next 36 hours.

(continued)

<CTS>

<A.18> 1.3 Completion Times

EXAMPLES (continued)

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 4.	12 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, Conditions 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.

(continued)

<A.18> 1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-2 (continued)

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.

(continued)

<A.18> 1.3 Completion Times

EXAMPLES (continued)

EXAMPLE 1.3-3

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One Function X subsystem inoperable.	A.1 Restore Function X subsystem to OPERABLE status.	7 days AND 10 days from discovery of failure to meet the LCO
B. One Function Y subsystem inoperable.	B.1 Restore Function Y subsystem to OPERABLE status.	72 hours AND 10 days from discovery of failure to meet the LCO
C. One Function X subsystem inoperable. AND One Function Y subsystem inoperable.	C.1 Restore Function X subsystem to OPERABLE status. OR C.2 Restore Function Y subsystem to OPERABLE status.	72 hours 72 hours

(continued)

<CTS>

<AJB> 1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-3 (continued)

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

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 subsystem was declared inoperable (i.e., initial entry into Condition A).

The Completion Times of Conditions A and B are modified by a logical connector, with a separate 10 day Completion Time measured from the time it was discovered the LCO was not met. In this example, without the separate Completion Time, it would be 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. The separate Completion Time modified by the phrase "from discovery of failure to meet the LCO" is designed to prevent indefinite continued operation while not meeting the LCO. This Completion Time allows for an exception to the normal "time zero" for beginning the Completion Time "clock". In this instance, the Completion Time "time zero" is specified as commencing at the time the LCO was initially not met, instead of at the time the associated Condition was entered.

(continued)

<CTS>

<A.18> 1.3 Completion Times

EXAMPLES (continued)

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.	12 hours 36 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 (plus the extension) expires while one or more valves are still inoperable, Condition B is entered.

(continued)

<A.18> 1.3 Completion Times

EXAMPLE (continued)

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. <u>AND</u> B.2 Be in MODE 4.	12 hours 36 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.

(continued)

<CTS>

<A.18> 1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-5 (continued)

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

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.	12 hours

(continued)

<A.18> 1.3 Completion Times

EXAMPLES

EXAMPLE 1.3-6 (continued)

Entry into Condition A offers a choice between Required Action A.1 or A.2. Required Action A.1 has 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 completed 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. 1 5

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.

(continued)

<CTS>

<A.1B> 1.3 Completion Times

EXAMPLES (continued)

EXAMPLE 1.3-7

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One subsystem inoperable.	A.1 Verify affected subsystem isolated. AND A.2 Restore subsystem to OPERABLE status.	1 hour AND Once per 8 hours thereafter 72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 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. 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

(continued)

<A.1B> 1.3 Completion Times

EXAMPLES	EXAMPLE 1.3-7 (continued) 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.
IMMEDIATE COMPLETION TIME	When "Immediately" is used as a Completion Time, the Required Action should be pursued without delay and in a controlled manner.

<CTS>

1.0 USE AND APPLICATION

<A.18> 1.4 Frequency

PURPOSE

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

DESCRIPTION

5

Limiting Condition for Operation (

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.

Sometimes special situations dictate when the requirements of a Surveillance are to be met. They are "otherwise stated" conditions allowed by SR 3.0.1. They may be stated as clarifying Notes in the Surveillance, as part of the Surveillance, or both. Example 1.4-4 discusses these special situations.

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.

The use of "met" or "performed" in these instances conveys specific meanings. A Surveillance is "met" only when the acceptance criteria are satisfied. Known failure of the requirements of a Surveillance, even without a Surveillance specifically being "performed," constitutes a Surveillance not "met." "Performance" refers only to the requirement to specifically determine the ability to meet the acceptance

(continued)

<A.18> 1.4 Frequency

DESCRIPTION (continued)

criteria. SR 3.0.4 restrictions would not apply if both the following conditions are satisfied:

a. The Surveillance is not required to be performed; and

b. The Surveillance is not required to be met or, even if required to be met, is not known to be failed.

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.

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 interval specified in the 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

(continued)

<CTS>

<A.18> 1.4 Frequency

EXAMPLES

EXAMPLE 1.4-1 (continued)

otherwise modified (refer to Examples 1.4-3 and 1.4-4), 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. Failure to do so would result in a violation of SR 3.0.4.

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.

(continued)

<CTS>

<A.18> 1.4 Frequency

EXAMPLES

EXAMPLE 1.4-2 (continued)

"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.

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 within the "specified Frequency." Therefore, if the Surveillance were not performed within the 7 day interval (plus the extension allowed by SR 3.0.2), 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.

(continued)

<CTS>

<A.1B> 1.4 Frequency

EXAMPLES

EXAMPLE 1.4-3 (continued)

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. was 5

EXAMPLE 1.4-4

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
------------------NOTE------------------ Only required to be met in MODE 1. -- Verify leakage rates are within limits.	24 hours

Example 1.4-4 specifies that the requirements of this Surveillance do not have to be met until the unit is in MODE 1. The interval measurement for the Frequency of this Surveillance continues at all times, as described in Example 1.4-1. However, the Note constitutes an "otherwise stated" exception to the Applicability of this Surveillance. Therefore, if the Surveillance were not performed within the 24 hour interval (plus the extension allowed by SR 3.0.2), but the unit was not in MODE 1, there would be no failure of the SR nor failure to meet the LCO. Therefore, no violation of SR 3.0.4 occurs when changing MODES, even with the 24 hour Frequency exceeded, provided the MODE change was not made into MODE 1. Prior to entering MODE 1 (assuming again that the 24 hour Frequency were not met), SR 3.0.4 would require satisfying the SR. was 5

1. The brackets have been removed and the proper plant specific information has been provided.

2. The definitions of ECCS RESPONSE TIME, EOC-RPT SYSTEM RESPONSE TIME, ISOLATION SYSTEM RESPONSE TIME, and PHYSICS TESTS have been deleted since they are not used in the Dresden 2 and 3 ITS.

3. The definition of FUEL DESIGN LIMITING RATIO FOR CENTERLINE MELT (FDLRC) has been added, consistent with the current Dresden 2 and 3 CTS. FDLRC, while not exactly the same as MAXIMUM FRACTION OF LIMITING POWER DENSITY (MFLPD), is the Seimens Power Corporation (SPC) term utilized for APRM setdown in lieu of the GE term MFLPD. Since Dresden uses SPC fuel, the term FDLRC will be maintained and the term MFLPD will not be adopted.

4. A Primary Containment Leakage Rate Testing Program has been added to Section 5.5, consistent with the letter from C. I. Grimes (NRC) to D. J. Modeen (NEI), dated November 2, 1995. This letter transmitted the draft ITS pages marked up to reflect Appendix J, Option B testing requirements. The Program includes the definition of L_a, therefore, the definition in Section 1.1 is not needed. This change is also consistent with TSTF-52.

5. Typographical/grammatical error corrected.

6. The utilization of a Pressure and Temperature Limits Report (PTLR) requires the development, and NRC approval, of detailed methodologies for future revisions to P/T limits. At this time, Dresden 2 and 3 does not have the necessary methodologies submitted to the NRC for review and approval. Therefore, the proposed presentation removes references to the PTLR and proposes that the specific limits and curves be included in the P/T Limits Specification (ITS 3.4.9).

7. The current method for measuring the RPS RESPONSE TIME has been maintained. This is consistent with Dresden 2 and 3 current licensing basis.

GENERIC NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: CHAPTER 1.0 - USE AND APPLICATION

ADMINISTRATIVE CHANGES
("A.x" Labeled Comments/Discussions)

In accordance with the criteria set forth in 10 CFR 50.92, ComEd has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   The proposed change involves reformatting, renumbering, and rewording the existing Technical Specifications. The reformatting, renumbering, and rewording process involves no technical changes to the existing Technical Specifications. As such, this change is administrative in nature and does not impact initiators of analyzed events or assumed mitigation of accident or transient events. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or changes in methods governing normal plant operation. The proposed change will not impose any new or eliminate any old requirements. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

   The proposed change will not reduce a margin of safety because it has no impact on any safety analyses assumptions. This change is administrative in nature. Therefore, the change does not involve a significant reduction in a margin of safety.

TECHNICAL CHANGES - MORE RESTRICTIVE
("M.x" Labeled Comments/Discussions)

In accordance with the criteria set forth in 10 CFR 50.92, ComEd has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   The proposed change provides more stringent requirements for operation of the facility. These more stringent requirements do not result in operation that will increase the probability of initiating an analyzed event and do not alter assumptions relative to mitigation of an accident or transient event. The more restrictive requirements continue to ensure process variables, structures, systems, and components are maintained consistent with the safety analyses and licensing basis. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or changes in the methods governing normal plant operation. The proposed change does impose different requirements. However, these changes are consistent with the assumptions in the safety analyses and licensing basis. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

   The imposition of more restrictive requirements either has no impact on or increases the margin of plant safety. As provided in the discussion of the change, each change in this category is by definition, providing additional restrictions to enhance plant safety. The change maintains requirements within the safety analyses and licensing basis. Therefore, this change does not involve a significant reduction in a margin of safety.

"GENERIC" LESS RESTRICTIVE CHANGES:
RELOCATING DETAILS TO TECHNICAL SPECIFICATION BASES, UFSAR, TRM, OR OTHER PLANT CONTROLLED DOCUMENTS
("LA.x" Labeled Comments/Discussions)

In accordance with the criteria set forth in 10 CFR 50.92, ComEd has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   The proposed change relocates certain details from the Technical Specifications to the Bases, UFSAR, TRM, or other plant controlled documents. The Bases, UFSAR, TRM, and other plant controlled documents containing the relocated information will be maintained in accordance with 10 CFR 50.59. In addition to 10 CFR 50.59 provisions, the Technical Specification Bases are subject to the change control provisions in the Administrative Controls Chapter of the ITS. The UFSAR is subject to the change control provisions of 10 CFR 50.71(e), and the plant procedures and other plant controlled documents are subject to controls imposed by plant administrative procedures, which endorse applicable regulations and standards. Since any changes to the Bases, UFSAR, TRM, or other plant controlled documents will be evaluated per the requirements of the Bases Control Program in Chapter 5.0 of the ITS or 10 CFR 50.59, no increase (significant or insignificant) in the probability or consequences of an accident previously evaluated will be allowed. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. The proposed change will not impose or eliminate any requirements, and adequate control of the information will be maintained. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

   The proposed change will not reduce a margin of safety because it has no impact on any safety analysis assumptions. In addition, the details to be transposed from the Technical Specifications to the Bases, UFSAR, TRM, or other plant controlled

"GENERIC" LESS RESTRICTIVE CHANGES:
RELOCATING DETAILS TO TECHNICAL SPECIFICATION BASES, UFSAR, TRM, OR OTHER PLANT CONTROLLED DOCUMENTS
("LA.x" Labeled Comments/Discussions)

3. (continued)

documents are the same as the existing Technical Specifications. Since any future changes to these details in the Bases, UFSAR, TRM, or other plant controlled documents will be evaluated per the requirements of 10 CFR 50.59, no reduction (significant or insignificant) in a margin of safety will be allowed. Based on 10 CFR 50.92, the existing requirement for NRC review and approval of revisions, to these details proposed for relocation, does not have a specific margin of safety upon which to evaluate. However, since the proposed change is consistent with the BWR Standard Technical Specifications, NUREG-1433, Rev. 1, approved by the NRC Staff, revising the Technical Specifications to reflect the approved level of detail ensures no significant reduction in the margin of safety.

L.1 CHANGE

In accordance with the criteria set forth in 10 CFR 50.92, ComEd has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   Testing of bistable instrument channels during CHANNEL FUNCTIONAL TESTS such that the test signal does not include the "sensor" will significantly reduce the complications associated with performance of a surveillance on a sensor that provides input to multiple logic channels. The sensor will still be checked during a channel calibration. This reduction of complication will not affect the failure probability of the equipment but may reduce the probability of personnel error during the surveillance. Such reductions will not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   The possibility of a new or different kind of accident from any accident previously evaluated is not created because the proposed change does not introduce a new mode of plant operation and does not involve physical modification to the plant.

3. Does this change involve a significant reduction in a margin of safety?

   This change does not involve a change to the limits or limiting condition of operation; only the method for performing a surveillance is changed. Since the proposed method affects only a single logic channel rather than potentially affecting multiple logic channels simultaneously, the change does not involve a significant reduction in a margin of safety.

L.2 CHANGE

In accordance with the criteria set forth in 10 CFR 50.92, ComEd has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously considered?

   The proposed use of Regulatory Guide 1.109 and ICRP 30 thyroid dose conversion factors to calculate DOSE EQUIVALENT I-131 is a change in analysis methodology which does not include a physical change to the plant, a new mode of plant operation, or a change in surveillance frequency. Therefore, the probability of a previously analyzed accident would not increase. If Regulatory Guide 1.109 and ICRP 30 thyroid dose conversion factors are used to calculate maximum dose equivalent iodine specific activity, the total iodine activity (in units of μCi/gm) will increase and this activity is used to calculate the doses resulting from a Main Steam Line Break (MSLB) or other analyzed accident. The calculated thyroid doses resulting from a MSLB or other analyzed accident would not increase as the same dose conversion factors used to calculate the DOSE EQUIVALENT I-131 thyroid activity would also be used to calculate the offsite thyroid doses. However, these dose conversion factors would be less than TID-14844 thyroid dose conversion factors used to calculate doses given in the UFSAR. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated because the proposed change does not introduce a new mode of plant operation and does not require physical modification of the plant.

3. Does this change involve a significant reduction in a margin of safety?

   The proposed change only refines the method of calculating thyroid doses and DOSE EQUIVALENT I-131 activity and would result in the thyroid doses not changing significantly since the same dose factors would be used to calculate the thyroid doses and DOSE EQUIVALENT I-131 activity. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

ENVIRONMENTAL ASSESSMENT
ITS: CHAPTER 1.0 - USE AND APPLICATION

In accordance with the criteria set forth in 10 CFR 50.21, ComEd has evaluated this proposed Technical Specification change for identification of licensing and regulatory actions requiring environmental assessment, determined it meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9) and as such, has determined that no irreversible consequences exist in accordance with 10 CFR 50.92(b). This determination is based on the fact that this change is being proposed as an amendment to a license issued pursuant to 10 CFR which changes a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or which changes an inspection or a surveillance requirement, and the amendment meets the following specific criteria:

1. The amendment involves no significant hazards consideration.

   As demonstrated in the No Significant Hazards Consideration, this proposed amendment does not involve any significant hazards consideration.

2. There is no significant change in the type or significant increase in the amounts of any effluents that may be released offsite.

   The proposed change will not result in changes in the operation or configuration of the facility. There will be no change in the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste, nor will the proposal result in any change in the normal radiation levels within the plant. Therefore, there will be no change in the types or significant increase in the amounts of any effluents released offsite resulting from this change.

3. There is no significant increase in individual or cumulative occupational radiation exposure.

   The proposed change will not result in changes in the operation or configuration of the facility which impact radiation exposure. There will be no change in the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste, nor will the proposal result in any change in the normal radiation levels within the plant. Therefore, there will be no increase in individual or cumulative occupational radiation exposure resulting from this change.

Therefore, based upon the above evaluation, ComEd has concluded that no irreversible consequences exist with the proposed change.

2.0 SAFETY LIMITS (SLs)

2.1 SLs

2.1.1 Reactor Core SLs

2.1.1.1 With the reactor steam dome pressure < 785 psig or core flow < 10% rated core flow:

THERMAL POWER shall be ≤ 25% RTP.

2.1.1.2 With the reactor steam dome pressure ≥ 785 psig and core flow ≥ 10% rated core flow:

For Unit 2 two recirculation loop operation, MCPR shall be ≥ 1.09 for cycle exposures ≤ 13,800 MWd/MTU and ≥ 1.12 for cycle exposures > 13,800 MWd/MTU, or for Unit 2 single recirculation loop operation, MCPR shall be ≥ 1.10 for cycle exposures ≤ to 13,800 MWd/MTU and ≥ 1.13 for cycle exposures > 13,800 MWd/MTU.

For Unit 3 two recirculation loop operation, MCPR shall be ≥ 1.10, or for single recirculation loop operation, MCPR shall be ≥ 1.11.

2.1.1.3 Reactor vessel water level shall be greater than the top of active irradiated fuel.

2.1.2 Reactor Coolant System Pressure SL

Reactor steam dome pressure shall be ≤ 1345 psig.

2.2 SL Violations

With any SL violation, the following actions shall be completed within 2 hours:

2.2.1 Restore compliance with all SLs; and

2.2.2 Insert all insertable control rods.

B 2.0 SAFETY LIMITS (SLs)

B 2.1.1 Reactor Core SLs

BASES

BACKGROUND

UFSAR Section 3.1.2.2.1 (Ref. 1) requires, and SLs ensure, that specified acceptable fuel design limits are not exceeded during steady state operation, normal operational transients, and anticipated operational occurrences (AOOs).

The fuel cladding integrity SL is set such that no significant fuel damage is calculated to occur if the limit is not violated. Because fuel damage is not directly observable, a stepback approach is used to establish an SL, such that the MCPR is not less than the limit specified in Specification 2.1.1.2. MCPR greater than the specified limit represents a conservative margin relative to the conditions required to maintain fuel cladding integrity.

The fuel cladding is one of the physical barriers that separate the radioactive materials from the environs. The integrity of this cladding barrier is related to its relative freedom from perforations or cracking. Although some corrosion or use related cracking may occur during the life of the cladding, fission product migration from this source is incrementally cumulative and continuously measurable. Fuel cladding perforations, however, can result from thermal stresses, which occur from reactor operation significantly above design conditions.

While fission product migration from cladding perforation is just as measurable as that from use related cracking, the thermally caused cladding perforations signal a threshold beyond which still greater thermal stresses may cause gross, rather than incremental, cladding deterioration. Therefore, the fuel cladding SL is defined with a margin to the conditions that would produce onset of transition boiling (i.e., MCPR = 1.00). These conditions represent a significant departure from the condition intended by design for planned operation. The MCPR fuel cladding integrity SL ensures that during normal operation and during AOOs, at least 99.9% of the fuel rods in the core do not experience transition boiling.

(continued)

BASES

BACKGROUND (continued)	Operation above the boundary of the nucleate boiling regime could result in excessive cladding temperature because of the onset of transition boiling and the resultant sharp reduction in heat transfer coefficient. Inside the steam film, high cladding temperatures are reached, and a cladding water (zirconium water) reaction may take place. This chemical reaction results in oxidation of the fuel cladding to a structurally weaker form. This weaker form may lose its integrity, resulting in an uncontrolled release of activity to the reactor coolant. The reactor vessel water level SL ensures that adequate core cooling capability is maintained during all MODES of reactor operation. Establishment of Emergency Core Cooling System initiation setpoints higher than this SL provides margin such that the SL will not be reached or exceeded.
APPLICABLE SAFETY ANALYSES	The fuel cladding must not sustain damage as a result of normal operation and AOOs. The reactor core SLs are established to preclude violation of the fuel design criterion that a MCPR limit is to be established, such that at least 99.9% of the fuel rods in the core would not be expected to experience the onset of transition boiling. The Reactor Protection System setpoints (LCO 3.3.1.1, "Reactor Protection System (RPS) Instrumentation"), in combination with the other LCOs, are designed to prevent any anticipated combination of transient conditions for Reactor Coolant System water level, pressure, and THERMAL POWER level that would result in reaching the MCPR Safety Limit. Cores with fuel that is all from one vendor utilize that vendor's critical power correlation for determination of MCPR. For cores with fuel from more than one vendor, the MCPR is calculated for all fuel in the core using the licensed critical power correlations. This may be accomplished by using each vendor's correlation for the vendor's respective fuel. Alternatively, a single correlation can be used for all fuel in the core. For fuel that has not been manufactured by the vendor supplying the critical power correlation, the input parameters to the reload vendor's correlation are adjusted using benchmarking data to yield conservative results compared with the critical power results from the co-resident fuel.

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)

2.1.1.1 Fuel Cladding Integrity

The use of the Siemens Power Corporation correlation (ANFB) is valid for critical power calculations at pressures > 600 psia and bundle mass fluxes > 0.1×10^6 lb/hr-ft^2 (Refs. 2 and 3). For operation at low pressures or low flows, the fuel cladding integrity SL is established by a limiting condition on core THERMAL POWER, with the following basis:

> Since the pressure drop in the bypass region is essentially all elevation head, the core pressure drop at low power and flows will always be > 4.5 psi. Analyses show that with a bundle flow of 28×10^3 lb/hr (approximately a mass velocity of 0.25×10^6 lb/hr-ft^2), bundle pressure drop is nearly independent of bundle power and has a value of 3.5 psi. Thus, the bundle flow with a 4.5 psi driving head will be > 28×10^3 lb/hr. Full scale critical power test data taken at pressures from 14.7 psia to 800 psia indicate that the fuel assembly critical power at this flow is approximately 3.35 MWt. With the design peaking factors, this corresponds to a THERMAL POWER > 50 % RTP. Thus, a THERMAL POWER limit of 25% RTP for reactor pressure < 785 psig is conservative. Although the ANFB correlation is valid at reactor steam dome pressures > 600 psia, applications of the fuel cladding integrity SL at reactor steam dome pressure < 785 psig is conservative.

2.1.1.2 MCPR

The MCPR SL ensures sufficient conservatism in the operating MCPR limit that, in the event of an AOO from the limiting condition of operation, at least 99.9% of the fuel rods in the core would be expected to avoid boiling transition. The margin between calculated boiling transition (i.e., MCPR = 1.00) and the MCPR SL is based on a detailed statistical procedure that considers the uncertainties in monitoring the core operating state. One specific uncertainty included in the SL is the uncertainty inherent

(continued)

BASES

APPLICABLE SAFETY ANALYSES

2.1.1.2 MCPR (continued)

in the ANFB critical power correlation. References 2, 3, and 4 describe the methodology used in determining the MCPR SL.

The ANFB critical power correlation is based on a significant body of practical test data, providing a high degree of assurance that the critical power, as evaluated by the correlation, is within a small percentage of the actual critical power being estimated. As long as the core pressure and flow are within the range of validity of the ANFB correlation, the assumed reactor conditions used in defining the SL introduce conservatism into the limit because bounding high radial power factors and bounding flat local peaking distributions are used to estimate the number of rods in boiling transition. Still further conservatism is induced by the tendency of the ANFB correlation to overpredict the number of rods in boiling transition. These conservatisms and the inherent accuracy of the ANFB correlation provide a reasonable degree of assurance that there would be no transition boiling in the core during sustained operation at the MCPR SL. If boiling transition were to occur, there is reason to believe that the integrity of the fuel would not be compromised. Significant test data accumulated by the NRC and private organizations indicate that the use of a boiling transition limitation to protect against cladding failure is a very conservative approach. Much of the data indicate that BWR fuel can survive for an extended period of time in an environment of boiling transition.

2.1.1.3 Reactor Vessel Water Level

During MODES 1 and 2 the reactor vessel water level is required to be above the top of the active irradiated fuel to provide core cooling capability. With fuel in the reactor vessel during periods when the reactor is shut down, consideration must be given to water level requirements due to the effect of decay heat. If the water level should drop below the top of the active irradiated fuel during this period, the ability to remove decay heat is reduced. This

(continued)

BASES

APPLICABLE SAFETY ANALYSES

2.1.1.3 Reactor Vessel Water Level (continued)

reduction in cooling capability could lead to elevated cladding temperatures and clad perforation in the event that the water level becomes < 2/3 of the core height. The reactor vessel water level SL has been established at the top of the active irradiated fuel to provide a point that can be monitored and to also provide adequate margin for effective action.

SAFETY LIMITS

The reactor core SLs are established to protect the integrity of the fuel clad barrier to prevent the release of radioactive materials to the environs. SL 2.1.1.1 and SL 2.1.1.2 ensure that the core operates within the fuel design criteria. SL 2.1.1.3 ensures that the reactor vessel water level is greater than the top of the active irradiated fuel in order to prevent elevated clad temperatures and resultant clad perforations.

APPLICABILITY

SLs 2.1.1.1, 2.1.1.2, and 2.1.1.3 are applicable in all MODES.

SAFETY LIMIT VIOLATIONS

2.2

Exceeding an SL may cause fuel damage and create a potential for radioactive releases in excess of 10 CFR 100, "Reactor Site Criteria," limits (Ref. 5). Therefore, it is required to insert all insertable control rods and restore compliance with the SLs within 2 hours. The 2 hour Completion Time ensures that the operators take prompt remedial action and also ensures that the probability of an accident occurring during this period is minimal.

(continued)

BASES (continued)

REFERENCES

1. UFSAR, Section 3.1.2.2.1.

2. ANF-524(P)(A) and Supplements 1 and 2, Advanced Nuclear Fuels Corporation Critical Power Methodology for Boiling Water Reactors, (as specified in Technical Specification 5.6.5).

3. ANF-1125(P)(A) and Supplements 1 and 2, ANFB Critical Power Correlation, Advanced Nuclear Fuels Corporation, (as specified in Technical Specification 5.6.5).

4. ANF-1125(P)(A), Supplement 1, Appendix E, ANFB Critical Power Correlation Determination of ATRIUM-9B Additive Constant Uncertainties, Siemens Power Corporation, (as specified in Technical Specification 5.6.5).

5. 10 CFR 100.

B 2.0 SAFETY LIMITS (SLs)

B 2.1.2 Reactor Coolant System (RCS) Pressure SL

BASES

BACKGROUND

The SL on reactor steam dome pressure protects the RCS against overpressurization. In the event of fuel cladding failure, fission products are released into the reactor coolant. The RCS then serves as the primary barrier in preventing the release of fission products into the atmosphere. Establishing an upper limit on reactor steam dome pressure ensures continued RCS integrity. According to UFSAR Sections 3.1.2.2.5, and 3.1.2.2.6 (Ref. 1), the reactor coolant pressure boundary (RCPB) shall be designed with sufficient margin to ensure that the design conditions are not exceeded during normal operation and anticipated operational occurrences (AOOs).

During normal operation and AOOs, RCS pressure is limited from exceeding the design pressure by more than 10%, in accordance with Section III of the ASME Code (Ref. 2). To ensure system integrity, all RCS components are hydrostatically tested at 125% of design pressure, in accordance with ASME Code requirements, prior to initial operation when there is no fuel in the core. Following inception of unit operation, RCS components shall be pressure tested in accordance with the requirements of ASME Code, Section XI (Ref. 3).

Overpressurization of the RCS could result in a breach of the RCPB, reducing the number of protective barriers designed to prevent radioactive releases from exceeding the limits specified in 10 CFR 100, "Reactor Site Criteria" (Ref. 4). If this occurred in conjunction with a fuel cladding failure, fission products could enter the containment atmosphere.

(continued)

BASES (continued)

APPLICABLE SAFETY ANALYSES

The RCS safety/relief valves and the Reactor Protection System Reactor Vessel Steam Dome Pressure—High Function have settings established to ensure that the RCS pressure SL will not be exceeded.

The RCS pressure SL has been selected such that it is at a pressure below which it can be shown that the integrity of the system is not endangered. The reactor pressure vessel is designed to Section III of the ASME, Boiler and Pressure Vessel Code, 1963 Edition, including Addenda through the summer of 1964 and Code Case Interpretations applicable on February 8, 1965 (Ref. 5), which permits a maximum pressure transient of 110%, 1345 psig, of design pressure 1250 psig. The SL of 1345 psig, as measured in the reactor steam dome, is equivalent to 1375 psig at the lowest elevation of the RCS. The RCS is designed to the USAS Power Piping Code, Section B31.1, 1967 Edition (Ref. 6), and ASME, Boiler and Pressure Vessel Code, Section I, 1965 Edition, including Addenda winter 1966 (Ref. 7) for the reactor recirculation piping, which permits a maximum pressure transient of 120% of a design pressure of 1175 psig for suction piping and 1325 psig for discharge piping. The RCS pressure SL is selected to be the lowest transient overpressure allowed by the applicable codes.

SAFETY LIMITS

The maximum transient pressure allowable in the RCS pressure vessel under the ASME Code, Section III, is 110% of design pressure. The maximum transient pressure allowable in the RCS piping, valves, and fittings is 120% of the design pressure of 1175 psig for suction piping. The most limiting of these allowances is the 110% of the RCS pressure vessel design pressure; therefore, the SL on maximum allowable RCS pressure is established at 1345 psig as measured at the reactor steam dome.

APPLICABILITY

SL 2.1.2 applies in all MODES.

SAFETY LIMIT VIOLATIONS

2.2

Exceeding the RCS pressure SL may cause RCS failure and create a potential for radioactive releases in excess of 10 CFR 100, "Reactor Site Criteria," limits (Ref. 4).

(continued)

BASES

SAFETY LIMIT VIOLATIONS	2.2 (continued) Therefore, it is required to insert all insertable control rods and restore compliance with the SL within 2 hours. The 2 hour Completion Time ensures that the operators take prompt remedial action and also assures that the probability of an accident occurring during this period is minimal.

REFERENCES

1. UFSAR Sections 3.1.2.2.5, and 3.1.2.2.6.
2. ASME, Boiler and Pressure Vessel Code, Section III, Article NB-7000.
3. ASME, Boiler and Pressure Vessel Code, Section XI, Article IWB-5000.
4. 10 CFR 100.
5. ASME, Boiler and Pressure Vessel Code, Section III, 1963 Edition, Addenda summer of 1964 and Code Case Interpretations applicable on February 8, 1965.
6. ASME, USAS, Power Piping Code, Section B31.1, 1967 Edition.
7. ASME, Boiler and Pressure Vessel Code, Section I, 1965 Edition, Addenda winter 1966.

2.0 SAFETY LIMITS ~~AND LIMITING SAFETY SYSTEM SETTINGS~~ A.2

moved to ITS 3.3.1.1

2.1 SAFETY LIMITS

THERMAL POWER, Low Pressure or Low Flow

2.1.1.1 2.1.A THERMAL POWER shall not exceed 25% of RATED THERMAL POWER with the reactor vessel steam dome pressure less than 785 psig or core flow less than 10% of rated flow.

APPLICABILITY: OPERATIONAL MODE(s) 1 and 2. M.1

ACTION:

2.2 With THERMAL POWER exceeding 25% of RATED THERMAL POWER and the reactor vessel steam dome pressure less than 785 psig or core flow less than 10% of rated flow, be in at least HOT SHUTDOWN within 2 hours ~~and comply with the requirements of Specification 6.7.~~ A.3

the following:
Unit 2: 1.09 for cycle exposures less than or equal to 13,800 MWd/MTU
1.12 for cycle exposures greater than 13,800 MWd/MTU, and
Unit 3: 1.10 A.4

THERMAL POWER, High Pressure and High Flow

2.1.1.2 2.1.B The MINIMUM CRITICAL POWER RATIO (MCPR) shall not be less than ~~1.10 for Unit 3 and 1.09 for Unit 2~~ with the reactor vessel steam dome pressure greater than or equal to 785 psig and core flow greater than or equal to 10% of rated flow. During single recirculation loop operation, this MCPR limit shall be increased by 0.01.

APPLICABILITY: OPERATIONAL MODE(s) 1 and 2. M.1

ACTION:

2.2 With MCPR less than the above applicable limit and the reactor vessel steam dome pressure greater than or equal to 785 psig and core flow greater than or equal to 10% of rated flow, be in at least HOT SHUTDOWN within 2 hours ~~and comply with the requirements of Specification 6.7.~~ A.3

A.1

2.0 SAFETY LIMITS AND LIMITING SAFETY SYSTEM SETTINGS A.2

moved to ITS 3.3.1.1

Reactor Coolant System Pressure

2.1.2 2.1.C The reactor coolant system pressure, as measured in the reactor vessel steam dome, shall not exceed 1345 psig.

APPLICABILITY: OPERATIONAL MODE(s) 1, 2, 3 and 4. M.1

ACTION:

2.2 With the reactor coolant system pressure, as measured in the reactor vessel steam dome, above 1345 psig, be in at least HOT SHUTDOWN with reactor coolant system pressure less than or equal to 1345 psig within 2 hours ~~and comply with the requirements of Specification 6.7.~~ A.3

Reactor Vessel Water Level

2.1.1.3 2.1.D The reactor vessel water level shall be ~~greater than or equal to twelve inches~~ above the top of active irradiated fuel[a]. L.1

APPLICABILITY: OPERATIONAL MODE(s) 3, 4 and 5. M.1

ACTION: L.1

within 2 hours L.2

2.2 With the reactor vessel water level at or below ~~twelve inches above~~ the top of the active irradiated fuel, ~~manually initiate the ECCS to~~ restore the water level, ~~after depressurizing the reactor vessel, if required,~~ ~~and comply with the requirements of Specification 6.7.~~ A.3

L.1

~~a The top of active irradiated fuel is defined to be 360 inches above vessel zero.~~

A.1

2.0 SAFETY LIMITS AND LIMITING SAFETY SYSTEM SETTINGS

A.2

moved to ITS 3.3.1.1

2.2 LIMITING SAFETY SYSTEM SETTINGS

Reactor Protection System (RPS) Instrumentation Setpoints

2.2.A The reactor protection system instrumentation setpoints shall be set consistent with the Trip Setpoint values shown in Table 2.2.A-1.

APPLICABILITY: As shown in Table 3.1.A-1.

ACTION:

With a reactor protection system instrumentation setpoint less conservative than the value shown in the Trip Setpoint column of Table 2.2.A-1, declare the CHANNEL inoperable and apply the applicable ACTION statement requirement of Specification 3.1.A until the CHANNEL is restored to OPERABLE status with its setpoint adjusted consistent with the Trip Setpoint value.

A.1

A.2 moved to ITS 3.3.1.1

TABLE 2.2.A-1

REACTOR PROTECTION SYSTEM INSTRUMENTATION SETPOINTS

Functional Unit	Trip Setpoint
1. Intermediate Range Monitor:	
a. Neutron Flux - High	≤120/125 divisions of full scale
b. Inoperative	NA
2. Average Power Range Monitor:	
a. Setdown Neutron Flux - High	≤15% of RATED THERMAL POWER
b. Flow Biased Neutron Flux - High	
1) Dual Recirculation Loop Operation	
a) Flow Biased	≤0.58W[a] + 62%, with a maximum of
b) High Flow Maximum	≤120% of RATED THERMAL POWER
2) Single Recirculation Loop Operation	
a) Flow Biased	≤0.58W[a] + 58.5%, with a maximum of
b) High Flow Maximum	≤116.5% of RATED THERMAL POWER
c. Fixed Neutron Flux - High	≤120% of RATED THERMAL POWER
d. Inoperative	NA
3. Reactor Vessel Steam Dome Pressure - High	≤1060 psig
4. Reactor Vessel Water Level - Low	≥144 inches above top of active fuel[b]
5. Main Steam Line Isolation Valve - Closure	≤10% closed
6. Deleted	

a W shall be the recirculation loop flow expressed as a percentage of the recirculation loop flow which produces a rated core flow of 98 million lbs/hr.

b The top of active fuel is defined to be 360 inches above vessel zero.

A.1

TABLE 2.2.A-1 (Continued)

A.2
moved to ITS 3.3.1.1

REACTOR PROTECTION SYSTEM INSTRUMENTATION SETPOINTS

Functional Unit	Trip Setpoint
7. Drywell Pressure - High	≤2 psig
8. Scram Discharge Volume Water Level - High	≤40.4 gallons (Unit 2) ≤41 gallons (Unit 3)
9. Turbine Stop Valve - Closure	≤10% closed
10. Turbine EHC Control Oil Pressure - Low	≥900 psig
11. Turbine Control Valve Fast Closure	≥460 psig EHC fluid pressure
12. Turbine Condenser Vacuum - Low	≥21 inches Hg vacuum
13. Reactor Mode Switch Shutdown Position	NA
14. Manual Scram	NA

DISCUSSION OF CHANGES
ITS: CHAPTER 2.0 - SAFETY LIMITS

ADMINISTRATIVE

A.1 In the conversion of the Dresden 2 and 3 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1433, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 The CTS 2.2 requirements for the Limiting Safety System Settings are being moved to Section 3.3 of the ITS in accordance with the format of the BWR ISTS, NUREG-1433, Revision 1. Any technical changes to these requirements will be discussed in the Discussion of Changes for ITS: 3.3.1.1.

A.3 The details contained in the Actions of CTS 2.1.A, 2.1.B, 2.1.C, and 2.1.D to comply with the requirements of Specification 6.7 are proposed to be deleted. The format of the proposed Technical Specifications does not include providing cross references. In addition, Specification 6.7 has been deleted from the Technical Specifications (see Discussion of Changes for CTS: 6.7 in proposed Chapter 5.0). Therefore, the existing references to Specification 6.7 serve no functional purpose and its removal is an administrative change.

A.4 These changes to CTS 2.1.B are provided in the Dresden 2 and 3 ITS consistent with the Technical Specification Change Request submitted to the NRC for approval per ComEd letter JMHLTR #99-0076, dated August 3, 1999. As such, these changes are considered administrative.

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 The APPLICABILITY of each of the SLs in CTS 2.1.A, 2.1.B, 2.1.C, and 2.1.D is extended to all MODES of operation. Although it is physically impossible to violate some SLs in some MODES, any SL violation should receive the same attention and response. This change represents an additional restriction on plant operation.

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

None

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

"Specific"

L.1 CTS 2.1.D requires the reactor vessel water level to be greater than or equal to 12 inches above the top of active irradiated fuel during operations in MODES 3, 4, and 5. The CTS definition of top of active irradiated fuel (Footnote (a) to CTS 2.1.D) is 360 inches above vessel zero (which is the lowest point in the inside bottom of the reactor vessel). ITS 2.1.1.3 requires the reactor vessel water level be maintained greater than the top of the active irradiated fuel in all MODES.

This change is considered less restrictive because the proposed reactor vessel water level SL is 12 inches less than the CTS limit. The CTS limit of 12 inches above the top of active irradiated fuel was established to ensure cooling of the reactor fuel. The proposed limit continues to ensure adequate cooling of the fuel. The CTS and ITS Bases state (and plant design and operating license bases conservatively confirm) that below 2/3 core height is where elevated cladding temperature and clad perforation would occur from decay heat without adequate cooling capability. With the reactor vessel water level at or above the top of active irradiated fuel, the fuel will be adequately cooled.

The current and proposed Technical Specifications impose requirements to ensure the reactor fuel is adequately cooled in all MODES. Plant emergency operating procedures require entry when level is reduced below the Allowable Value for the low level scram, which is at least 12 feet higher than the top of active irradiated fuel. The plant emergency core cooling systems (ECCS) are required to initiate automatically prior to reaching the proposed reactor vessel water level SL. The proposed ITS automatic actuation level (Allowable Value) for the high and low pressure ECCS is 84 inches above the top of active irradiated fuel, which is 132 inches above 2/3 core height in all required MODES. Therefore, in the event a loss of vessel water level occurs, there is an overhead water level of 84 inches above the top of active irradiated fuel when ECCS actuation occurs and an additional 48 inches more before getting to the 2/3 core height level. These values provide sufficient time to take effective action for maintaining or restoring the water level. This is also true in ITS MODE 5 with the vessel head removed for refueling, although automatic ECCS actuation is not always required. In MODE 5, monitoring methods and alarms of a loss of reactor vessel water level remain available to ensure that effective action would be taken before the level reached the proposed SL.

TECHNICAL CHANGES - LESS RESTRICTIVE

L.1 (cont'd) The Allowable Value for ECCS actuation and the requirement that the ECCS must be OPERABLE will ensure that the accident analysis can be met. Core damage will be precluded since the reactor water level is maintained above 2/3 core height. In addition, the emergency operating procedures are required to be entered whenever the reactor vessel water level is at or below the Allowable Value for the low level scram (≤ 12 feet above the top of active irradiated fuel). As a result, the water level recovery process will begin prior to reaching the Technical Specification SL and the level will be required to be recovered to at least 12 feet above the SL. This recovery can be accomplished by using all available water injection methods and sources.

Based on the above evaluation, ComEd has concluded that the proposed 12 inch reduction in the reactor vessel water level SL is acceptable. The proposed Specification and the plant emergency operating procedures will ensure that the fuel will be adequately cooled in all MODES.

L.2 The required action of CTS 2.1.D has been made less specific to allow operator flexibility in determining the best method to restore the reactor vessel water level. Directions for the methods of restoring reactor vessel water level (manually initiate the ECCS, after depressurizing the reactor vessel, if required) are removed from the Technical Specifications. This detail of how to restore the reactor vessel water level is not necessary to ensure restoration of the reactor vessel water level in a timely manner. The action to restore compliance with the Safety Limit has been maintained in ITS SL 2.2.1, which provides a 2 hour Completion Time for restoration of the limit. The time frame for completion of the action is consistent with the allowed time to restore other Safety Limit violations and allows appropriate actions to be evaluated by the operator and completed in a timely manner. In addition, restoration of reactor vessel water level is part of a coordinated response to an unplanned transient governed by emergency operating procedures.

RELOCATED SPECIFICATIONS

None.

DISCUSSION OF CHANGES
ITS: CHAPTER 2.0 - SAFETY LIMITS BASES

The Bases of the current Technical Specifications for this chapter (pages B 2-1 through B 2-11) have been completely replaced by revised Bases that reflect the format and applicable content of Dresden 2 and 3 ITS Chapter 2.0, consistent with the BWR ISTS, NUREG-1433, Rev. 1. The revised Bases are as shown in the Dresden 2 and 3 ITS Bases.

<CTS>

2.0 SAFETY LIMITS (SLs)

2.1 SLs

2.1.1 Reactor Core SLs

<2.1.A> 2.1.1.1 With the reactor steam dome pressure < 785 psig or core flow < 10% rated core flow:

THERMAL POWER shall be ≤ 25% RTP.

<2.1.B> 2.1.1.2 With the reactor steam dome pressure ≥ 785 psig and core flow ≥ 10% rated core flow:

MCPR shall be ≥ [1.07] for two recirculation loop operation or ≥ [1.08] for single recirculation loop operation.

<2.1.D> 2.1.1.3 Reactor vessel water level shall be greater than the top of active irradiated fuel.

<2.1.C> 2.1.2 Reactor Coolant System Pressure SL

1345 2

Reactor steam dome pressure shall be ≤ 1325 psig.

2.2 SL Violations

within 2 hours

TSTF-5

<2.1.A Act>
<2.1.B Act>
<2.1.C Act>
<2.1.D Act>

With any SL violation, the following actions shall be completed:

2.2.1 Within 1 hour, notify the NRC Operations Center, in accordance with 10 CFR 50.72.

2.2.2 Within 2 hours:

2.2.2.1 Restore compliance with all SLs; and

2.2.2.2 Insert all insertable control rods.

2.2.3 Within 24 hours, notify the [General Manager—Nuclear Plant and Vice President—Nuclear Operations].

TSTF-65 Changes not shown

(continued)

For Unit 2 two recirculation loop operation, MCPR shall be ≥ 1.09 for cycle exposures ≤ 13,800 MWd/MTU, and ≥ 1.12 for cycle exposures > 13,800 MWd/MTU, or for unit 2 single loop operation, MCPR shall be ≥ 1.10 for cycle exposures ≤ 13,800 MWd/MTU and ≥ 1.13 for cycle exposures > 13,800 MWd/MTU.

For Unit 3 two recirculation loop operation, MCPR shall be ≥ 1.10, or for single recirculation loop operation, MCPR shall be ≥ 1.11.

1

2.0 SLs

TSTF-5

2.2 SL Violations (continued)

2.2.4 Within 30 days, a Licensee Event Report (LER) shall be prepared pursuant to 10 CFR 50.73. The LER shall be submitted to the NRC and the [General Manager—Nuclear Plant and Vice President—Nuclear Operations].

2.2.5 Operation of the unit shall not be resumed until authorized by the NRC.

TSTF-65
changes not
shown.

JUSTIFICATIONS FOR DEVIATIONS FROM NUREG-1433, REVISION 1
ITS: CHAPTER 2.0 - SAFETY LIMITS

1. The brackets have been removed and the proper plant specific information/value has been provided.

2. Changes have been made (additions, deletions, and/or changes to the NUREG) to reflect the plant specific nomenclature, number, reference, system description, analysis description, or licensing basis description.

B 2.0 SAFETY LIMITS (SLs)

B 2.1.1 Reactor Core SLs

BASES

BACKGROUND

1 UFSAR, Section 3.1.2.2.1

~~GDC 10~~ (Ref. 1) requires, and SLs ensure, that specified acceptable fuel design limits are not exceeded during steady state operation, normal operational transients, and anticipated operational occurrences (AOOs).

The fuel cladding integrity SL is set such that no significant fuel damage is calculated to occur if the limit is not violated. Because fuel damage is not directly observable, a stepback approach is used to establish an SL, such that the MCPR is not less than the limit specified in Specification 2.1.1.2 ~~for both General Electric Company (GE) and Advanced Nuclear Fuel Corporation (ANF) fuel~~. MCPR greater than the specified limit represents a conservative margin relative to the conditions required to maintain fuel cladding integrity. 3

The fuel cladding is one of the physical barriers that separate the radioactive materials from the environs. The integrity of this cladding barrier is related to its relative freedom from perforations or cracking. Although some corrosion or use related cracking may occur during the life of the cladding, fission product migration from this source is incrementally cumulative and continuously measurable. Fuel cladding perforations, however, can result from thermal stresses, which occur from reactor operation significantly above design conditions.

While fission product migration from cladding perforation is just as measurable as that from use related cracking, the thermally caused cladding perforations signal a threshold beyond which still greater thermal stresses may cause gross, rather than incremental, cladding deterioration. Therefore, the fuel cladding SL is defined with a margin to the conditions that would produce onset of transition boiling (i.e., MCPR = 1.00). These conditions represent a significant departure from the condition intended by design for planned operation. The MCPR fuel cladding integrity SL ensures that during normal operation and during AOOs, at least 99.9% of the fuel rods in the core do not experience transition boiling.

(continued)

BASES

BACKGROUND (continued)

Operation above the boundary of the nucleate boiling regime could result in excessive cladding temperature because of the onset of transition boiling and the resultant sharp reduction in heat transfer coefficient. Inside the steam film, high cladding temperatures are reached, and a cladding water (zirconium water) reaction may take place. This chemical reaction results in oxidation of the fuel cladding to a structurally weaker form. This weaker form may lose its integrity, resulting in an uncontrolled release of activity to the reactor coolant.

4 INSERT B2.1.1 BKGRD

APPLICABLE SAFETY ANALYSES

The fuel cladding must not sustain damage as a result of normal operation and AOOs. The reactor core SLs are established to preclude violation of the fuel design criterion that ~~an~~ MCPR limit is to be established, such that at least 99.9% of the fuel rods in the core would not be expected to experience the onset of transition boiling. 5

The Reactor Protection System setpoints (LCO 3.3.1.1, "Reactor Protection System (RPS) Instrumentation"), in combination with the other LCOs, are designed to prevent any anticipated combination of transient conditions for Reactor Coolant System water level, pressure, and THERMAL POWER level that would result in reaching the MCPR Safety ~~l~~imit. 6

1 Insert ASA-1

~~2.1.1.1a Fuel Cladding Integrity [General Electric Company (GE) Fuel]~~

~~GE critical power correlations are applicable for all critical power calculations at pressures ≥ 785 psig and core flows ≥ 10% of rated flow. For operation at low pressures or low flows, another basis is used, as follows:~~ 7

Since the pressure drop in the bypass region is essentially all elevation head, the core pressure drop at low power and flows will always be > 4.5 psi. Analyses ~~(Ref. 2)~~ show that with a bundle flow of 28×10^3 lb/hr (approximately a mass velocity of 0.25×10^6 lb/hr-ft^2), bundle pressure drop is nearly independent of bundle power and has a value of 3.5 psi. Thus, the bundle flow with a 4.5 psi driving head will be > 28×10^3 lb/hr. Full scale ~~ATLAS~~ critical power test data taken at pressures from 14.7 psia to 800 psia

Move to Page B2.0-3 as indicated 1

(continued)

$\boxed{4}$ INSERT B 2.1.1 BKGRD

The reactor vessel water level SL ensures that adequate core cooling capability is maintained during all MODES of reactor operation. Establishment of Emergency Core Cooling System initiation setpoints higher than this SL provides margin such that the SL will not be reached or exceeded.

$\boxed{1}$ Insert ASA-1

Cores with fuel that is all from one vendor utilize that vendor's critical power correlation for determination of MCPR. For cores with fuel from more than one vendor, the MCPR is calculated for all fuel in the core using the licensed critical power correlations. This may be accomplished by using each vendor's correlation for the vendor's respective fuel. Alternatively, a single correlation can be used for all fuel in the core. For fuel that has not been manufactured by the vendor supplying the critical power correlation, the input parameters to the reload vendor's correlation are adjusted using benchmarking data to yield conservative results compared with the critical power results from the co-resident fuel.

Although the ANFB correlation is valid at reactor steam dome pressure > 600 psia, application of the full cladding integrity SL at reactor steam dome pressure < 785 psig is conservative.

BASES

APPLICABLE SAFETY ANALYSES

~~2.1.1.1a Fuel Cladding Integrity [General Electric Company (GE) Fuel] (continued)~~ 7

move this paragraph below as indicated

indicate that the fuel assembly critical power at this flow is approximately 3.35 MWt. With the design peaking factors, this corresponds to a THERMAL POWER > 50 % RTP. Thus, a THERMAL POWER limit of 25% RTP for reactor pressure < 785 psig is conservative. 1

7

2.1.1.1~~b~~ Fuel Cladding Integrity ~~[Advanced Nuclear Fuel Corporation (ANF) Fuel]~~ Siemens Power Corporation 3

The use of the ~~XN-3~~ (ANFB) correlation is valid for critical power calculations at pressures > ~~580~~ 600 psig and bundle mass fluxes > 0.~~25~~ 10 x 10^6 lb/hr-ft^2 (Ref. ~~2~~ 2 and 3). For operation at low pressures or low flows, the fuel cladding integrity SL is established by a limiting condition on core THERMAL POWER, with the following basis: 1

move from Page B2.0-2 and above

~~Provided that the water level in the vessel downcomer is maintained above the top of the active fuel, natural circulation is sufficient to ensure a minimum bundle flow for all fuel assemblies that have a relatively high power and potentially can approach a critical heat flux condition. For the ANF 9x9 fuel design, the minimum bundle flow is > 30 x 10^3 lb/hr. For the ANF 8x8 fuel design, the minimum bundle flow is > 28 x 10^3 lb/hr. For all designs, the coolant minimum bundle flow and maximum flow area are such that the mass flux is always > 0.25 x 10^6 lb/hr-ft^2. Full scale critical power tests taken at pressures down to 14.7 psia indicate that the fuel assembly critical power at 0.25 x 10^6 lb/hr-ft^2 is approximately 3.35 MWt. At 25% RTP, a bundle power of approximately 3.35 MWt corresponds to a bundle radial peaking factor of > 3.0, which is significantly higher than the expected peaking factor. Thus, a THERMAL POWER limit of 25% RTP for reactor pressures < 785 psig is conservative.~~ 1

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)

7

~~2.1.1.2a MCPR [GE Fuel]~~

~~The fuel cladding integrity SL is set such that no significant fuel damage is calculated to occur if the limit is not violated. Since the parameters that result in fuel damage are not directly observable during reactor operation, the thermal and hydraulic conditions that result in the onset of transition boiling have been used to mark the beginning of the region in which fuel damage could occur. Although it is recognized that the onset of transition boiling would not result in damage to BWR fuel rods, the critical power at which boiling transition is calculated to occur has been adopted as a convenient limit. However, the uncertainties in monitoring the core operating state and in the procedures used to calculate the critical power result in an uncertainty in the value of the critical power. Therefore, the fuel cladding integrity SL is defined as the critical power ratio in the limiting fuel assembly for which more than 99.9% of the fuel rods in the core are expected to avoid boiling transition, considering the power distribution within the core and all uncertainties.~~

~~The MCPR SL is determined using a statistical model that combines all the uncertainties in operating parameters and the procedures used to calculate critical power. The probability of the occurrence of boiling transition is determined using the approved General Electric Critical Power correlations. Details of the fuel cladding integrity SL calculation are given in Reference 2. Reference 2 also includes a tabulation of the uncertainties used in the determination of the MCPR SL and of the nominal values of the parameters used in the MCPR SL statistical analysis.~~

7

2.1.1.2~~b~~ MCPR ~~[ANF Fuel]~~ 3

The MCPR SL ensures sufficient conservatism in the operating MCPR limit that, in the event of an AOO from the limiting condition of operation, at least 99.9% of the fuel rods in the core would be expected to avoid boiling transition. The margin between calculated boiling transition (i.e., MCPR = 1.00) and the MCPR SL is based on a detailed statistical procedure that considers the uncertainties in monitoring the core operating state. One specific uncertainty included in the SL is the uncertainty inherent

(continued)

BASES

7 3

APPLICABLE SAFETY ANALYSES

2.1.1.2b) MCPR ~~[ANF Fuel]~~ (continued)

≤ 2.3 and 4

in the XN-3 critical power correlation. Reference 2 describes the methodology used in determining the MCPR SL. 1

1 ANFB

The XN-3 critical power correlation is based on a significant body of practical test data, providing a high degree of assurance that the critical power, as evaluated by the correlation, is within a small percentage of the actual critical power being estimated. As long as the core pressure and flow are within the range of validity of the XN-3 correlation, the assumed reactor conditions used in defining the SL introduce conservatism into the limit because bounding high radial power factors and bounding flat local peaking distributions are used to estimate the number of rods in boiling transition. Still further conservatism is induced by the tendency of the XN-3 correlation to overpredict the number of rods in boiling transition. These conservatisms and the inherent accuracy of the XN-3 correlation provide a reasonable degree of assurance that there would be no transition boiling in the core during sustained operation at the MCPR SL. If boiling transition were to occur, there is reason to believe that the integrity of the fuel would not be compromised. Significant test data accumulated by the NRC and private organizations indicate that the use of a boiling transition limitation to protect against cladding failure is a very conservative approach. Much of the data indicate that BWR fuel can survive for an extended period of time in an environment of boiling transition.

2.1.1.3 Reactor Vessel Water Level

irradiated 6

During MODES 1 and 2 the reactor vessel water level is required to be above the top of the active fuel to provide core cooling capability. With fuel in the reactor vessel during periods when the reactor is shut down, consideration must be given to water level requirements due to the effect of decay heat. If the water level should drop below the top of the active irradiated fuel during this period, the ability to remove decay heat is reduced. This reduction in cooling capability could lead to elevated cladding temperatures and clad perforation in the event that the water level becomes < 2/3 of the core height. The reactor vessel water level SL has been established at the top of the

(continued)

BASES

APPLICABLE SAFETY ANALYSES

2.1.1.3 Reactor Vessel Water Level (continued)

active irradiated fuel to provide a point that can be monitored and to also provide adequate margin for effective action.

SAFETY LIMITS

The reactor core SLs are established to ~~protect the~~ integrity of the fuel clad barrier to prevent ~~the release of~~ radioactive materials to the environs. [5] SL 2.1.1.1 and SL 2.1.1.2 ensure that the core operates within the fuel design criteria. SL 2.1.1.3 ensures that the reactor vessel water level is greater than the top of the active irradiated fuel in order to prevent elevated clad temperatures and resultant clad perforations.

APPLICABILITY

SLs 2.1.1.1, 2.1.1.2, and 2.1.1.3 are applicable in all MODES.

SAFETY LIMIT VIOLATIONS

~~2.2.1~~ TSTF-5

~~If any SL is violated, the NRC Operations Center must be notified within 1 hour, in accordance with 10 CFR 50.72 (Ref. 4).~~

TSTF-5

2.2.2

Exceeding an SL may cause fuel damage and create a potential for radioactive releases in excess of 10 CFR 100, "Reactor Site Criteria," limits (Ref. 5). Therefore, it is required to insert all insertable control rods and restore compliance with the SLs within 2 hours. The 2 hour Completion Time ensures that the operators take prompt remedial action and also ensures that the probability of an accident occurring during this period is minimal.

[1] 5 4

(continued)

BASES

TSTF-65 Changes not shown

SAFETY LIMIT VIOLATIONS (continued)

2.2.3

~~If any SL is violated, the [senior management of the nuclear plant and the utility Vice President—Nuclear Operations] shall be notified within 24 hours. The 24 hour period provides time for plant operators and staff to take the appropriate immediate action and assess the condition of the unit before reporting to the appropriate utility management.~~

2.2.4

~~If any SL is violated, a Licensee Event Report shall be prepared and submitted within 30 days to the NRC in accordance with 10 CFR 50.73 (Ref. 6). A copy of the report shall also be provided to the [senior management of the nuclear plant and the utility Vice President—Nuclear Operations].~~

TSTF-5

2.2.5

~~If any SL is violated, restart of the unit shall not commence until authorized by the NRC. This requirement ensures the NRC that all necessary reviews, analyses, and actions are completed before the unit begins its restart to normal operation.~~

REFERENCES

1. ~~10 CFR 50, Appendix A, GDC 10.~~ UFSAR, Section 3.1.2.2.1
~~2. NEDE-24011-P-A (latest approved revision).~~
~~3. XN-NF524(A), Revision 1, November 1983.~~ INSERT REF
~~4. 10 CFR 50.72.~~
5. 10 CFR 100. 5 4
~~6. 10 CFR 50.73.~~

1

TSTF-5

$\boxed{1}$ INSERT REF

2. ANF-524(P)(A) and Supplements 1 and 2, Advanced Nuclear Fuels Corporation Critical Power Methodology for Boiling Water Reactors, (as specified in Technical Specification 5.6.5).

3. ANF-1125(P)(A) and Supplements 1 and 2, ANFB Critical Power Correlation, Advanced Nuclear Fuels Corporation, (as specified in Technical Specification 5.6.5).

4. ANF-1125(P)(A), Supplement 1, Appendix E, ANFB Critical Power Correlation Determination of ATRIUM-9B Additive Constant Uncertainties, Siemens Power Corporation, (as specified in Technical Specification 5.6.5).

B 2.0 SAFETY LIMITS (SLs)

B 2.1.2 Reactor Coolant System (RCS) Pressure SL

BASES

BACKGROUND

The SL on reactor steam dome pressure protects the RCS against overpressurization. In the event of fuel cladding failure, fission products are released into the reactor coolant. The RCS then serves as the primary barrier in preventing the release of fission products into the atmosphere. Establishing an upper limit on reactor steam dome pressure ensures continued RCS integrity. According to ~~10 CFR 50, Appendix A, GDC 14, "Reactor Coolant Pressure Boundary," and GDC 15, "Reactor Coolant System Design"~~ (Ref. 1), the reactor coolant pressure boundary (RCPB) shall be designed with sufficient margin to ensure that the design conditions are not exceeded during normal operation and anticipated operational occurrences (AOOs). 1

UFSAR, Sections 3.1.2.2.5 and 3.1.2.2.6

During normal operation and AOOs, RCS pressure is limited from exceeding the design pressure by more than 10%, in accordance with Section III of the ASME Code (Ref. 2). To ensure system integrity, all RCS components are hydrostatically tested at 125% of design pressure, in accordance with ASME Code requirements, prior to initial operation when there is no fuel in the core. ~~Any further hydrostatic testing with fuel in the core may be done under LCO 3.10.1, "Inservice Leak and Hydrostatic Testing Operation."~~ 7 Following inception of unit operation, RCS components shall be pressure tested in accordance with the requirements of ASME Code, Section XI (Ref. 3).

Overpressurization of the RCS could result in a breach of the RCPB, reducing the number of protective barriers designed to prevent radioactive releases from exceeding the limits specified in 10 CFR 100, "Reactor Site Criteria" (Ref. 4). If this occurred in conjunction with a fuel cladding failure, fission products could enter the containment atmosphere.

(continued)

1

and ASME, Boiler and Pressure Vessel Code, Section I, 1965 Edition, including Addenda winter 1966 (Ref. 7)

BASES (continued)

APPLICABLE SAFETY ANALYSES

The RCS safety/relief valves and the Reactor Protection System Reactor Vessel Steam Dome Pressure—High Function have settings established to ensure that the RCS pressure SL will not be exceeded.

Summer of 1964 and Code Case Interpretations applicable on February 8, 1965

8

The RCS pressure SL has been selected such that it is at a pressure below which it can be shown that the integrity of the system is not endangered. The reactor pressure vessel is designed to Section III of the ASME, Boiler and Pressure Vessel Code, 1963 ~~1971~~ Edition, including Addenda through the ~~Winter of 1972~~ (Ref. 5), which permits a maximum pressure transient of 110%, 1375 psig, of design pressure 1250 psig. The SL of 1345 ~~1325~~ psig, as measured in the reactor steam dome, is equivalent to 1375 psig at the lowest elevation of the RCS. The RCS is designed to the USAS ~~Nuclear~~ Power Piping Code, Section B31.1, 1967 ~~1969~~ Edition, ~~including Addenda through July 1, 1970~~ (Ref. 6), for the reactor recirculation piping, which permits a maximum pressure transient of 120% ~~110%~~ of a design pressure of 1175 ~~1250~~ psig for suction piping and 1325 ~~1500~~ psig for discharge piping. The RCS pressure SL is selected to be the lowest transient overpressure allowed by the applicable codes.

7 8 1 1

SAFETY LIMITS

The maximum transient pressure allowable in the RCS pressure vessel under the ASME Code, Section III, is 110% of design pressure. The maximum transient pressure allowable in the RCS piping, valves, and fittings is 120% ~~110%~~ of the design pressure of 1175 ~~1250~~ psig for suction piping ~~and 1500 psig for discharge piping~~. The most limiting of these allowances is the 110% of the RCS pressure vessel ~~suction piping~~ design pressure; therefore, the SL on maximum allowable RCS pressure is established at 1345 ~~1325~~ psig as measured at the reactor steam dome.

1 1 7

APPLICABILITY

SL 2.1.2 applies in all MODES.

(continued)

BASES (continued)

SAFETY LIMIT VIOLATIONS

TSTF-5

~~2.2.1~~

~~If any SL is violated, the NRC Operations Center must be notified within 1 hour, in accordance with 10 CFR 50.72 (Ref. 7).~~

2.2.2

Exceeding the RCS pressure SL may cause ~~immediate~~ RCS failure and create a potential for radioactive releases in excess of 10 CFR 100, "Reactor Site Criteria," limits (Ref. 4). Therefore, it is required to insert all insertable control rods and restore compliance with the SL within 2 hours. The 2 hour Completion Time ensures that the operators take prompt remedial action and also assures that the probability of an accident occurring during this period is minimal.

6

TSTF-65 changes not shown

TSTF-5

~~2.2.3~~

~~If any SL is violated, the appropriate [senior management of the nuclear plant and the utility Vice President—Nuclear Operations] shall be notified within 24 hours. The 24 hour period provides time for plant operators and staff to take the appropriate immediate action and assess the condition of the unit before reporting to appropriate utility management.~~

~~2.2.4~~

~~If any SL is violated, a Licensee Event Report shall be prepared and submitted within 30 days to the NRC in accordance with 10 CFR 50.73 (Ref. 8). A copy of the report shall also be provided to the [senior management of the nuclear plant and the utility Vice President—Nuclear Operations].~~

~~2.2.5~~

~~If any SL is violated, restart of the unit shall not commence until authorized by the NRC. This requirement ensures the NRC that all necessary reviews, analyses, and~~

(continued)

BASES

SAFETY LIMIT VIOLATIONS

~~2.2.5 (continued)~~

TSTF-5

~~actions are completed before the unit begins its restart to normal operation.~~

REFERENCES

1

UFSAR, Sections 3.1.2.2.5 and 3.1.2.2.6

1. ~~10 CFR 50, Appendix A, GDC 14, GDC 15, and GDC 28.~~ 5
2. ASME, Boiler and Pressure Vessel Code, Section III, Article NB-7000.
3. ASME, Boiler and Pressure Vessel Code, Section XI, Article IW-5000. B 5
4. 10 CFR 100.
5. ASME, Boiler and Pressure Vessel Code, Section III, [1971] 1963 Edition[s], Addenda [Winter of 1972]. Summer of 1964 and Code Case Interpretations applicable on February 8, 1965 B
6. ASME, USAS, (Nuclear) Power Piping Code, Section B31.1, [1969] 1967 Edition[, Addenda, July 1, 1970]. B 1
7. ~~10 CFR 50.72.~~ TSTF-5
8. ~~10 CFR 50.73.~~
7. ASME, Boiler and Pressure Vessel Code, Section I, 1965 Edition, Addenda winter 1966. 1

JUSTIFICATION FOR DEVIATIONS FROM NUREG-1433, REVISION 1
ITS BASES: CHAPTER 2.0 - SAFETY LIMITS

1. Changes have been made (additions, deletions, and/or changes to the NUREG) to reflect the plant specific nomenclature, number, reference, system description, analysis description, or licensing basis description.

2. Not used.

3. The brackets have been removed and the information/value deleted since the stepback approach is applicable to all types of fuel in the reactor. There is no need to differentiate between fuel vendors.

4. A description of the reactor vessel water level SL has been added, consistent with the background description of the other SLs.

5. Typographical/grammatical error corrected.

6. Editorial change made for clarity.

7. Changes have been made to reflect those changes made to the Specification.

8. The brackets have been removed and the proper plant specific information/value has been provided.

GENERIC NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: CHAPTER 2.0 - SAFETY LIMITS

ADMINISTRATIVE CHANGES
("A.x" Labeled Comments/Discussions)

In accordance with the criteria set forth in 10 CFR 50.92, ComEd has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   The proposed change involves reformatting, renumbering, and rewording the existing Technical Specifications. The reformatting, renumbering, and rewording process involves no technical changes to the existing Technical Specifications. As such, this change is administrative in nature and does not impact initiators of analyzed events or assumed mitigation of accident or transient events. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or changes in methods governing normal plant operation. The proposed change will not impose any new or eliminate any old requirements. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

   The proposed change will not reduce a margin of safety because it has no impact on any safety analyses assumptions. This change is administrative in nature. Therefore, the change does not involve a significant reduction in a margin of safety.

TECHNICAL CHANGES - MORE RESTRICTIVE
("M.x" Labeled Comments/Discussions)

In accordance with the criteria set forth in 10 CFR 50.92, ComEd has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   The proposed change provides more stringent requirements for operation of the facility. These more stringent requirements do not result in operation that will increase the probability of initiating an analyzed event and do not alter assumptions relative to mitigation of an accident or transient event. The more restrictive requirements continue to ensure process variables, structures, systems, and components are maintained consistent with the safety analyses and licensing basis. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or changes in the methods governing normal plant operation. The proposed change does impose different requirements. However, these changes are consistent with the assumptions in the safety analyses and licensing basis. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

   The imposition of more restrictive requirements either has no impact on or increases the margin of plant safety. As provided in the discussion of the change, each change in this category is by definition, providing additional restrictions to enhance plant safety. The change maintains requirements within the safety analyses and licensing basis. Therefore, this change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: CHAPTER 2.0 - SAFETY LIMITS

L.1 CHANGE

In accordance with the criteria set forth in 10 CFR 50.92, ComEd has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   This proposed change provides a less stringent reactor vessel water level Safety Limit requirement. This requirement does not result in any operation that will increase the probability of initiating an analyzed event. The proposed change will not alter assumptions relative to mitigation of an accident or transient event. The safety analysis assumes that water level above the top of the active irradiated fuel is a point that can be monitored and also provides adequate margin above 2/3 core height to allow effective action to be taken prior to reaching the 2/3 core height. Below 2/3 core height, elevated fuel cladding temperature and clad perforation would occur. The proposed change to the Safety Limit will not alter any of the safety analysis assumptions, nor will the change alter any process variables or operation of structures, systems, or components as described in the safety analysis. Therefore, this change will not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   This proposed change provides a less stringent reactor vessel water level Safety Limit requirement. This change will not alter the plant configuration (no new or different types of equipment will be installed), or the methods governing normal plant operation. This change imposes different requirements for reactor vessel water level than exist in the current Safety Limits. However, the change still ensures that the water level is adequately maintained. The safety analysis assumes that water level does not drop below 2/3 core height. The proposed change requires water level to be maintained above the top of the active irradiated fuel, which is greater than the level assumed in the safety analysis. Thus, the proposed change is bounded by the current analysis. It is therefore, concluded that this change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the change involve a significant reduction in a margin of safety?

   This proposed change provides a less stringent reactor vessel water level Safety Limit requirement. The proposed Safety Limit will require the water level to be maintained above the top of active irradiated fuel. The safety analysis assumes that water level above the top of the active irradiated fuel is a point that can be monitored and also

L.1 CHANGE

3. (continued)

provides adequate margin above 2/3 core height to allow effective action to be taken prior to reaching the 2/3 core height. Below 2/3 core height, elevated fuel cladding temperature and clad perforation would occur. In addition, the emergency operating procedures are required to be entered whenever the reactor vessel water level is at or below the Allowable Value for the low level scram (≥ 12 feet above the top of active irradiated fuel). Thus, the proposed change is consistent with the current safety analysis assumptions and the margin of safety is unaffected since the reactor vessel water level is not allowed to drop below 2/3 core height. Therefore, this proposed change does not involve a significant reduction in a margin of safety.

L.2 CHANGE

In accordance with the criteria set forth in 10 CFR 50.92, ComEd has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   This change proposes to remove the explicit details of methods for restoring reactor vessel water level (manually initiate the ECCS, after depressurizing the reactor vessel, if required). The method used to restore reactor vessel water level is not assumed in the initiation of any analyzed event. Therefore, the proposed change does not affect the probability of an accident. Also, the consequences of an accident are not affected by this change since the action to restore compliance with the reactor vessel water level Safety Limit within 2 hours is maintained in ITS SL 2.2.1. In addition, restoration of the reactor vessel water level Safety Limit is part of a coordinated response to an unplanned transient governed by emergency operating procedures. Since restoration of the reactor vessel water level Safety Limit will still be required as part of the coordinated response to the event, consequences of previously analyzed accidents are not impacted by the removal of the explicit method for restoring reactor vessel water level. Therefore, this change does not significantly increase the consequences of any previously analyzed accident.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   The proposed change will not create the possibility of an accident. This change will not physically alter the plant (no new or different type of equipment will be installed). The change does not affect methods governing normal plant operation or the planned response to off-normal conditions. Therefore, this change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the change involve a significant reduction in a margin of safety?

   This change proposes to remove the explicit details of methods for restoring reactor vessel water level (manually initiate the ECCS, after depressurizing the reactor vessel, if required). If the reactor vessel water level Safety Limit is violated, restoration of reactor vessel water level is required by ITS SL 2.2.1. In addition, restoration of the reactor vessel water level Safety Limit is part of a coordinated response to an unplanned transient governed by emergency operating procedures. The requirements

L.2 CHANGE

3. (continued)

of ITS SL 2.2.1 are considered to be adequate to ensure the reactor vessel water level is restored to within required limits. Since restoration of the reactor vessel water level will still be required by both Technical Specifications and as part of the coordinated response to the transient, the margin of safety is not impacted by this change. Therefore, this change does not involve a significant reduction in a margin of safety.

ENVIRONMENTAL ASSESSMENT
ITS: CHAPTER 2.0 - SAFETY LIMITS

In accordance with the criteria set forth in 10 CFR 50.21, ComEd has evaluated this proposed Technical Specification change for identification of licensing and regulatory actions requiring environmental assessment, determined it meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9) and as such, has determined that no irreversible consequences exist in accordance with 10 CFR 50.92(b). This determination is based on the fact that this change is being proposed as an amendment to a license issued pursuant to 10 CFR which changes a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or which changes an inspection or a surveillance requirement, and the amendment meets the following specific criteria:

1. The amendment involves no significant hazards consideration.

   As demonstrated in the No Significant Hazards Consideration, this proposed amendment does not involve any significant hazards consideration.

2. There is no significant change in the type or significant increase in the amounts of any effluents that may be released offsite.

   The proposed change will not result in changes in the operation or configuration of the facility. There will be no change in the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste, nor will the proposal result in any change in the normal radiation levels within the plant. Therefore, there will be no change in the types or significant increase in the amounts of any effluents released offsite resulting from this change.

3. There is no significant increase in individual or cumulative occupational radiation exposure.

   The proposed change will not result in changes in the operation or configuration of the facility which impact radiation exposure. There will be no change in the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste, nor will the proposal result in any change in the normal radiation levels within the plant. Therefore, there will be no increase in individual or cumulative occupational radiation exposure resulting from this change.

Therefore, based upon the above evaluation, ComEd has concluded that no irreversible consequences exist with the proposed change.

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 and LCO 3.0.7.

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 13 hours; and

b. MODE 4 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, and 3.

LCO 3.0.4

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

(continued)

3.0 LCO APPLICABILITY

LCO 3.0.4 (continued)	Exceptions to this Specification are stated in the individual Specifications. LCO 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, and 3.
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 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, an evaluation shall be performed in accordance with Specification 5.5.11, "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 Operations LCOs in Section 3.10 allow specified Technical Specifications (TS) requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with Special Operations LCOs is optional. When a Special Operations LCO is desired to be met but is not met, the ACTIONS of the Special Operations

(continued)

3.0 LCO APPLICABILITY

LCO 3.0.7 (continued)	LCO shall be met. When a Special Operations 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	LCOs, including associated ACTIONS, shall apply to each unit individually, unless otherwise indicated. Whenever the LCO refers to a system or component that is shared by both units, the ACTIONS will apply to both units simultaneously.

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 less. This delay period is permitted to allow performance of the Surveillance.

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.

(continued)

3.0 SR APPLICABILITY (continued)

SR 3.0.4	Entry into a MODE or other specified condition in the Applicability of an LCO shall not be made unless the LCO's Surveillances have been met within their specified Frequency. 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 a shutdown of the unit. SR 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, and 3.
SR 3.0.5	SRs shall apply to each unit individually, unless otherwise indicated.

B 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

BASES

LCOs	LCO 3.0.1 through LCO 3.0.7 establish the general requirements applicable to all Specifications in Sections 3.1 through 3.10 and apply at all times, unless otherwise stated.
LCO 3.0.1	LCO 3.0.1 establishes the Applicability statement within each individual Specification as the requirement for when the LCO is required to be met (i.e., when the unit is in the MODES or other specified conditions of the Applicability statement of each Specification).

LCO 3.0.2

LCO 3.0.2 establishes that upon discovery of a failure to meet an LCO, the associated ACTIONS shall be met. The Completion Time of each Required Action for an ACTIONS Condition is applicable from the point in time that an ACTIONS Condition is entered. The Required Actions establish those remedial measures that must be taken within specified Completion Times when the requirements of an LCO are not met. This Specification establishes that:

a. Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification; and

b. Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified.

There are two basic types of Required Actions. The first type of Required Action specifies a time limit in which the LCO must be met. This time limit is the Completion Time to restore an inoperable system or component to OPERABLE status or to restore variables to within specified limits. If this type of Required Action is not completed within the specified Completion Time, a shutdown may be required to place the unit in a MODE or condition in which the Specification is not applicable. (Whether stated as a Required Action or not, correction of the entered Condition is an action that may always be considered upon entering ACTIONS.) The second type of Required Action specifies the remedial measures that permit continued operation of the

(continued)

BASES

LCO 3.0.2 (continued)

unit that is not further restricted by the Completion Time. In this case, compliance with the Required Actions provides an acceptable level of safety for continued operation.

Completing the Required Actions is not required when an LCO is met or is no longer applicable, unless otherwise stated in the individual Specifications.

The nature of some Required Actions of some Conditions necessitates that, once the Condition is entered, the Required Actions must be completed even though the associated Condition no longer exists. The individual LCO's ACTIONS specify the Required Actions where this is the case. An example of this is in LCO 3.4.9, "RCS Pressure and Temperature (P/T) Limits."

The Completion Times of the Required Actions are also applicable when a system or component is removed from service intentionally. The reasons for intentionally relying on the ACTIONS include, but are not limited to, performance of Surveillances, preventive maintenance, corrective maintenance, or investigation of operational problems. Entering ACTIONS for these reasons must be done in a manner that does not compromise safety. Intentional entry into ACTIONS should not be made for operational convenience. Additionally, if intentional entry into ACTIONS would result in redundant equipment being inoperable, alternatives should be used instead. Doing so limits the time both subsystems/divisions of a safety function are inoperable and limits the time conditions exist which may result in LCO 3.0.3 being entered. Individual Specifications may specify a time limit for performing an SR when equipment is removed from service or bypassed for testing. In this case, the Completion Times of the Required Actions are applicable when this time limit expires, if the equipment remains removed from service or bypassed.

When a change in MODE or other specified condition is required to comply with Required Actions, the unit may enter a MODE or other specified condition in which another Specification becomes applicable. In this case, the Completion Times of the associated Required Actions would apply from the point in time that the new Specification becomes applicable and the ACTIONS Condition(s) are entered.

(continued)

BASES (continued)

LCO 3.0.3

LCO 3.0.3 establishes the actions that must be implemented when an LCO is not met and:

a. An associated Required Action and Completion Time is not met and no other Condition applies; or

b. The condition of the unit is not specifically addressed by the associated ACTIONS. This means that no combination of Conditions stated in the ACTIONS can be made that exactly corresponds to the actual condition of the unit. Sometimes, possible combinations of Conditions are such that entering LCO 3.0.3 is warranted; in such cases, the ACTIONS specifically state a Condition corresponding to such combinations and also that LCO 3.0.3 be entered immediately.

This Specification delineates the time limits for placing the unit in a safe MODE or other specified condition when operation cannot be maintained within the limits for safe operation as defined by the LCO and its ACTIONS. It is not intended to be used as an operational convenience that permits routine voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable.

Upon entering LCO 3.0.3, 1 hour is allowed to prepare for an orderly shutdown before initiating a change in unit operation. This includes time to permit the operator to coordinate the reduction in electrical generation with the load dispatcher to ensure the stability and availability of the electrical grid. The time limits specified to reach lower MODES of operation permit the shutdown to proceed in a controlled and orderly manner that is well within the specified maximum cooldown rate and within the capabilities of the unit, assuming that only the minimum required equipment is OPERABLE. This reduces thermal stresses on components of the Reactor Coolant System and the potential for a plant upset that could challenge safety systems under conditions to which this Specification applies. The use and interpretation of specified times to complete the actions of LCO 3.0.3 are consistent with the discussion of Section 1.3, Completion Times.

(continued)

BASES

LCO 3.0.3 (continued)

A unit shutdown required in accordance with LCO 3.0.3 may be terminated and LCO 3.0.3 exited if any of the following occurs:

a. The LCO is now met.

b. A Condition exists for which the Required Actions have now been performed.

c. ACTIONS exist that do not have expired Completion Times. These Completion Times are applicable from the point in time that the Condition is initially entered and not from the time LCO 3.0.3 is exited.

The time limits of Specification 3.0.3 allow 37 hours for the unit to be in MODE 4 when a shutdown is required during MODE 1 operation. If the unit is in a lower MODE of operation when a shutdown is required, the time limit for reaching the next lower MODE applies. If a lower MODE is reached in less time than allowed, however, the total allowable time to reach MODE 4, or other applicable MODE, is not reduced. For example, if MODE 3 is reached in 10 hours, then the time allowed for reaching MODE 4 is the next 27 hours, because the total time for reaching MODE 4 is not reduced from the allowable limit of 37 hours. Therefore, if remedial measures are completed that would permit a return to MODE 1, a penalty is not incurred by having to reach a lower MODE of operation in less than the total time allowed.

In MODES 1, 2, and 3, LCO 3.0.3 provides actions for Conditions not covered in other Specifications. The requirements of LCO 3.0.3 do not apply in MODES 4 and 5 because the unit is already in the most restrictive Condition required by LCO 3.0.3. The requirements of LCO 3.0.3 do not apply in other specified conditions of the Applicability (unless in MODE 1, 2, or 3) because the ACTIONS of individual Specifications sufficiently define the remedial measures to be taken.

Exceptions to LCO 3.0.3 are provided in instances where requiring a unit shutdown, in accordance with LCO 3.0.3, would not provide appropriate remedial measures for the associated condition of the unit. An example of this is in LCO 3.7.8, "Spent Fuel Storage Pool Water Level." LCO 3.7.8 has an Applicability of "During movement of irradiated fuel

(continued)

BASES

LCO 3.0.3 (continued)

assemblies in the spent fuel storage pool." Therefore, this LCO can be applicable in any or all MODES. If the LCO and the Required Actions of LCO 3.7.8 are not met while in MODE 1, 2, or 3, there is no safety benefit to be gained by placing the unit in a shutdown condition. The Required Action of LCO 3.7.8 of "Suspend movement of fuel assemblies in the spent fuel storage pool" is the appropriate Required Action to complete in lieu of the actions of LCO 3.0.3. These exceptions are addressed in the individual Specifications.

LCO 3.0.4

LCO 3.0.4 establishes limitations on changes in MODES or other specified conditions in the Applicability when an LCO is not met. It precludes placing the unit in a MODE or other specified condition stated in that Applicability (e.g., Applicability desired to be entered) when the following exist:

a. Unit conditions are such that the requirements of the LCO would not be met in the Applicability desired to be entered; and

b. Continued noncompliance with the LCO requirements, if the Applicability were entered, would result in the unit being required to exit the Applicability desired to be entered to comply with the Required Actions.

Compliance with Required Actions that permit continued operation of the unit for an unlimited period of time in a MODE or other specified condition provides an acceptable level of safety for continued operation. This is without regard to the status of the unit before or after the MODE change. Therefore, in such cases, entry into a MODE or other specified condition in the Applicability may be made in accordance with the provisions of the Required Actions. The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

The provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability

(continued)

BASES

LCO 3.0.4 (continued)

that are required to comply with ACTIONS. In addition, the provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown.

Exceptions to LCO 3.0.4 are stated in the individual Specifications. The exceptions allow entry into MODES or other specified conditions in the Applicability when the associated ACTIONS to be entered do not provide for continued operation for an unlimited period of time. Exceptions may apply to all the ACTIONS or to a specific Required Action of a Specification.

Surveillances do not have to be performed on the associated inoperable equipment (or on variables outside the specified limits), as permitted by SR 3.0.1. Therefore, changing MODES or other specified conditions while in an ACTIONS Condition, either in compliance with LCO 3.0.4 or where an exception to LCO 3.0.4 is stated, is not a violation of SR 3.0.1 or SR 3.0.4 for those Surveillances that do not have to be performed due to the associated inoperable equipment. However, SRs must be met to ensure OPERABILITY prior to declaring the associated equipment OPERABLE (or variable within limits) and restoring compliance with the affected LCO.

LCO 3.0.4 is only applicable when entering MODE 3 from MODE 4, MODE 2 from MODE 3 or 4, or MODE 1 from MODE 2. Furthermore, LCO 3.0.4 is applicable when entering any other specified condition in the Applicability only while operating in MODE 1, 2, or 3. The requirements of LCO 3.0.4 do not apply in MODES 4 and 5, or in other specified conditions of the Applicability (unless in MODE 1, 2, or 3) because the ACTIONS of individual specifications sufficiently define the remedial measures to be taken.

LCO 3.0.5

LCO 3.0.5 establishes the allowance for restoring equipment to service under administrative controls when it has been removed from service or declared inoperable to comply with ACTIONS. The sole purpose of this Specification is to provide an exception to LCO 3.0.2 (e.g., to not comply with the applicable Required Action(s)) to allow the performance of required testing to demonstrate:

(continued)

BASES

LCO 3.0.5 (continued)

a. The OPERABILITY of the equipment being returned to service; or

b. The OPERABILITY of other equipment.

The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the required testing to demonstrate OPERABILITY. This Specification does not provide time to perform any other preventive or corrective maintenance.

An example of demonstrating the OPERABILITY of the equipment being returned to service is reopening a containment isolation valve that has been closed to comply with Required Actions and must be reopened to perform the required testing.

An example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to prevent the trip function from occurring during the performance of required testing on another channel in the other trip system. A similar example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to permit the logic to function and indicate the appropriate response during the performance of required testing on another channel in the same trip system.

LCO 3.0.6

LCO 3.0.6 establishes an exception to LCO 3.0.2 for support systems that have an LCO specified in the Technical Specifications (TS). This exception is provided because LCO 3.0.2 would require that the Conditions and Required Actions of the associated inoperable supported system's LCO be entered solely due to the inoperability of the support system. This exception is justified because the actions that are required to ensure the plant is maintained in a safe condition are specified in the support system LCO's Required Actions. These Required Actions may include entering the supported system's Conditions and Required Actions or may specify other Required Actions.

When a support system is inoperable and there is an LCO specified for it in the TS, the supported system(s) are required to be declared inoperable if determined to be

(continued)

BASES

LCO 3.0.6 (continued)

inoperable as a result of the support system inoperability. However, it is not necessary to enter into the supported systems' Conditions and Required Actions unless directed to do so by the support system's Required Actions. The potential confusion and inconsistency of requirements related to the entry into multiple support and supported systems' LCO's Conditions and Required Actions are eliminated by providing all the actions that are necessary to ensure the plant is maintained in a safe condition in the support system's Required Actions.

However, there are instances where a support system's Required Action may either direct a supported system to be declared inoperable or direct entry into Conditions and Required Actions for the supported system. This may occur immediately or after some specified delay to perform some other Required Action. Regardless of whether it is immediate or after some delay, 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.

Specification 5.5.11, "Safety Function Determination Program (SFDP)," ensures loss of safety function is detected and appropriate actions are taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other limitations, remedial actions, or compensatory actions may be identified as a result of the support system inoperability and corresponding exception to entering supported system Conditions and Required Actions. The SFDP implements the requirements of LCO 3.0.6.

Cross division checks to identify a loss of safety function for those support systems that support safety systems are required. The cross division check verifies that the supported systems of the redundant OPERABLE support system are OPERABLE, thereby ensuring safety function is retained. If this evaluation determines that a loss of safety function exists, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

(continued)

BASES

LCO 3.0.6 (continued)

This loss of safety function does not require the assumption of additional single failures or loss of offsite power. Since operation is being restricted in accordance with the ACTIONS of the support system, any resulting temporary loss of redundancy or single failure protection is taken into account. Similarly, the ACTIONS for inoperable offsite circuit(s) and inoperable diesel generator(s) provide the necessary restriction for cross division inoperabilities. This explicit cross division verification for inoperable AC electrical power sources also acknowledges that supported system(s) are not declared inoperable solely as a result of inoperability of a normal or emergency electrical power source (refer to the definition of OPERABLE - OPERABILITY).

When a loss of safety function is determined to exist, and the SFDP requires entry into the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists, consideration must be given to the specific type of function affected. Where a loss of function is solely due to a single Technical Specification support system (e.g., loss of automatic start due to inoperable instrumentation, or loss of pump suction source due to low tank level) the appropriate LCO is the LCO for the support system. The ACTIONS for a support system LCO adequately addresses the inoperabilities of that system without reliance on entering its supported system LCO. When the loss of function is the result of multiple support systems, the appropriate LCO is the LCO for the supported system.

LCO 3.0.7

There are certain special tests and operations required to be performed at various times over the life of the unit. These special tests and operations are necessary to demonstrate select unit performance characteristics, to perform special maintenance activities, and to perform special evolutions. Special Operations LCOs in Section 3.10 allow specified TS requirements to be changed to permit performances of these special tests and operations, which otherwise could not be performed if required to comply with the requirements of these TS. Unless otherwise specified, all the other TS requirements remain unchanged. This will ensure all appropriate requirements of the MODE or other specified condition not directly associated with or required to be changed to perform the special test or operation will remain in effect.

(continued)

BASES

LCO 3.0.7 (continued)	The Applicability of a Special Operations LCO represents a condition not necessarily in compliance with the normal requirements of the TS. Compliance with Special Operations LCOs is optional. A special operation may be performed either under the provisions of the appropriate Special Operations LCO or under the other applicable TS requirements. If it is desired to perform the special operation under the provisions of the Special Operations LCO, the requirements of the Special Operations LCO shall be followed. When a Special Operations LCO requires another LCO to be met, only the requirements of the LCO statement are required to be met regardless of that LCO's Applicability (i.e., should the requirements of this other LCO not be met, the ACTIONS of the Special Operations LCO apply, not the ACTIONS of the other LCO). However, there are instances where the Special Operations LCO's ACTIONS may direct the other LCOs' ACTIONS be met. The Surveillances of the other LCO are not required to be met, unless specified in the Special Operations LCO. If conditions exist such that the Applicability of any other LCO is met, all the other LCO's requirements (ACTIONS and SRs) are required to be met concurrent with the requirements of the Special Operations LCO.
LCO 3.0.8	LCO 3.0.8 establishes the applicability of each Specification to both Unit 2 and Unit 3 operation. Whenever a requirement applies to only one unit, or is different for each unit, this will be identified in the appropriate section of the Specification (e.g., Applicability, Surveillance, etc.) with parenthetical reference, Notes, or other appropriate presentation within the body of the requirement.

B 3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

BASES

SRs

SR 3.0.1 through SR 3.0.4 establish the general requirements applicable to all Specifications in Sections 3.1 through 3.10 and apply at all times, unless otherwise stated.

SR 3.0.1

SR 3.0.1 establishes the requirement that SRs must be met during the MODES or other specified conditions in the Applicability for which the requirements of the LCO apply, unless otherwise specified in the individual SRs. This Specification is to ensure that Surveillances are performed to verify the OPERABILITY of systems and components, and that variables are within specified limits. Failure to meet a Surveillance within the specified Frequency, in accordance with SR 3.0.2, constitutes a failure to meet an LCO.

Systems and components are assumed to be OPERABLE when the associated SRs have been met. Nothing in this Specification, however, is to be construed as implying that systems or components are OPERABLE when:

a. The systems or components are known to be inoperable, although still meeting the SRs; or

b. The requirements of the Surveillance(s) are known to be not met between required Surveillance performances.

Surveillances do not have to be performed when the unit is in a MODE or other specified condition for which the requirements of the associated LCO are not applicable, unless otherwise specified. The SRs associated with a Special Operations LCO are only applicable when the Special Operations LCO is used as an allowable exception to the requirements of a Specification.

Unplanned events may satisfy the requirements (including applicable acceptance criteria) for a given SR. In this case, the unplanned event may be credited as fulfilling the performance of the SR.

Surveillances, including Surveillances invoked by Required Actions, do not have to be performed on inoperable equipment

(continued)

BASES

SR 3.0.1 (continued)

because the ACTIONS define the remedial measures that apply. Surveillances have to be met and performed in accordance with SR 3.0.2, prior to returning equipment to OPERABLE status.

Upon completion of maintenance, appropriate post maintenance testing is required to declare equipment OPERABLE. This includes ensuring applicable Surveillances are not failed and their most recent performance is in accordance with SR 3.0.2. Post maintenance testing may not be possible in the current MODE or other specified conditions in the Applicability due to the necessary unit parameters not having been established. In these situations, the equipment may be considered OPERABLE provided testing has been satisfactorily completed to the extent possible and the equipment is not otherwise believed to be incapable of performing its function. This will allow operation to proceed to a MODE or other specified condition where other necessary post maintenance tests can be completed.

Some examples of this process are:

a. Control Rod Drive maintenance during refueling that requires scram testing at $\geq$ 800 psig. However, if other appropriate testing is satisfactorily completed and the scram time testing of SR 3.1.4.3 is satisfied, the control rod can be considered OPERABLE. This allows startup to proceed to reach 800 psig to perform other necessary testing.

b. High pressure coolant injection (HPCI) maintenance during shutdown that requires system functional tests at a specified pressure. Provided other appropriate testing is satisfactorily completed, startup can proceed with HPCI considered OPERABLE. This allows operation to reach the specified pressure to complete the necessary post maintenance testing.

SR 3.0.2

SR 3.0.2 establishes the requirements for meeting the specified Frequency for Surveillances and any Required Action with a Completion Time that requires the periodic performance of the Required Action on a "once per..." interval.

(continued)

BASES

SR 3.0.2 (continued)

SR 3.0.2 permits a 25% extension of the interval specified in the Frequency. This extension facilitates Surveillance scheduling and considers plant operating conditions that may not be suitable for conducting the Surveillance (e.g., transient conditions or other ongoing Surveillance or maintenance activities).

The 25% extension does not significantly degrade the reliability that results from performing the Surveillance at its specified Frequency. This is based on the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the SRs. The exceptions to SR 3.0.2 are those Surveillances for which the 25% extension of the interval specified in the Frequency does not apply. These exceptions are stated in the individual Specifications. The requirements of regulations take precedence over the TS. Therefore, when a test interval is specified in the regulations, the test interval cannot be extended by the TS, and the SR includes a Note in the Frequency stating "SR 3.0.2 is not applicable."

As stated in SR 3.0.2, the 25% extension also does not apply to the initial portion of a periodic Completion Time that requires performance on a "once per..." basis. The 25% extension applies to each performance after the initial performance. The initial performance of the Required Action, whether it is a particular Surveillance or some other remedial action, is considered a single action with a single Completion Time. One reason for not allowing the 25% extension to this Completion Time is that such an action usually verifies that no loss of function has occurred by checking the status of redundant or diverse components or accomplishes the function of the inoperable equipment in an alternative manner.

The provisions of SR 3.0.2 are not intended to be used repeatedly merely as an operational convenience to extend Surveillance intervals (other than those consistent with refueling intervals) or periodic Completion Time intervals beyond those specified.

(continued)

BASES (continued)

SR 3.0.3

SR 3.0.3 establishes the flexibility to defer declaring affected equipment inoperable or an affected variable outside the specified limits when a Surveillance has not been completed within the specified Frequency. A delay period of up to 24 hours or up to the limit of the specified Frequency, whichever is less, applies from the point in time that it is discovered that the Surveillance has not been performed in accordance with SR 3.0.2, and not at the time that the specified Frequency was not met. This delay period provides adequate time to complete Surveillances that have been missed. This delay period permits the completion of a Surveillance before complying with Required Actions or other remedial measures that might preclude completion of the Surveillance.

The basis for this delay period includes consideration of unit conditions, adequate planning, availability of personnel, the time required to perform the Surveillance, the safety significance of the delay in completing the required Surveillance, and the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the requirements.

When a Surveillance with a Frequency based not on time intervals, but upon specified unit conditions or operational situations, is discovered not to have been performed when specified, SR 3.0.3 allows the full delay period of 24 hours to perform the Surveillance.

SR 3.0.3 also provides a time limit for completion of Surveillances that become applicable as a consequence of MODE changes imposed by Required Actions.

Failure to comply with specified Frequencies for SRs is expected to be an infrequent occurrence. Use of the delay period established by SR 3.0.3 is a flexibility which is not intended to be used as an operational convenience to extend Surveillance intervals.

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specified limits and the Completion Times of the Required Actions for the applicable

(continued)

BASES

SR 3.0.3 (continued)

LCO Conditions begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period, then the equipment is inoperable, or the variable is outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the Completion Time of the ACTIONS, restores compliance with SR 3.0.1.

SR 3.0.4

SR 3.0.4 establishes the requirement that all applicable SRs must be met before entry into a MODE or other specified condition in the Applicability.

This Specification ensures that system and component OPERABILITY requirements and variable limits are met before entry into MODES or other specified conditions in the Applicability for which these systems and components ensure safe operation of the unit.

The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

However, in certain circumstances, failing to meet an SR will not result in SR 3.0.4 restricting a MODE change or other specified condition change. When a system, subsystem, division, component, device, or variable is inoperable or outside its specified limits, the associated SR(s) are not required to be performed per SR 3.0.1, which states that Surveillances do not have to be performed on inoperable equipment. When equipment is inoperable, SR 3.0.4 does not apply to the associated SR(s) since the requirement for the SR(s) to be performed is removed. Therefore, failing to perform the Surveillance(s) within the specified Frequency, on equipment that is inoperable, does not result in an SR 3.0.4 restriction to changing MODES or other specified conditions of the Applicability. However, since the LCO is not met in this instance, SR 3.0.4 will govern any restrictions that may (or may not) apply to MODE or other specified condition changes.

(continued)

BASES

SR 3.0.4 (continued)	The provisions of SR 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of SR 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown. The precise requirements for performance of SRs are specified such that exceptions to SR 3.0.4 are not necessary. The specific time frames and conditions necessary for meeting the SRs are specified in the Frequency, in the Surveillance, or both. This allows performance of Surveillances when the prerequisite condition(s) specified in a Surveillance procedure require entry into the MODE or other specified condition in the Applicability of the associated LCO prior to the performance or completion of a Surveillance. A Surveillance that could not be performed until after entering the LCO Applicability would have its Frequency specified such that it is not "due" until the specific conditions needed are met. Alternately, the Surveillance may be stated in the form of a Note as not required (to be met or performed) until a particular event, condition, or time has been reached. Further discussion of the specific formats of SRs' annotation is found in Section 1.4, Frequency. SR 3.0.4 is only applicable when entering MODE 3 from MODE 4, MODE 2 from MODE 3 or 4, or MODE 1 from MODE 2. Furthermore, SR 3.0.4 is applicable when entering any other specified condition in the Applicability only while operating in MODE 1, 2, or 3. The requirements of SR 3.0.4 do not apply in MODES 4 and 5, or in other specified conditions of the Applicability (unless in MODE 1, 2, or 3) because the ACTIONS of individual Specifications sufficiently define the remedial measures to be taken.
SR 3.0.5	SR 3.0.5 establishes the applicability of each Surveillance to both Unit 2 and Unit 3 operation. Whenever a requirement applies to only one unit, or is different for each unit, this will be identified with parenthetical reference, Notes, or other appropriate presentation within the SR.

A.1

 A.2

3.0 - LIMITING CONDITIONS FOR OPERATION (LCO)

LCO 3.0.1 A. ~~Compliance with the Limiting Conditions for Operation contained in the succeeding Specifications is required during the OPERATIONAL MODE(s) or other conditions specified therein; except that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met, except as provided in Specification 3.0.E.~~ A.3 A.2

Insert 1

LCO 3.0.2 B. ~~Noncompliance with a Specification shall exist when the requirements of the Limiting Condition for Operation and associated ACTION requirements are not met within the specified time interval, except as provided in Specification 3.0.E. If the Limiting Condition for Operation is restored prior to expiration of the specified time intervals, completion of the ACTION requirements is not required.~~ A.4

Insert 2

A.2

LCO 3.0.3 C. ~~When a Limiting Condition for Operation is not met, except as provided in the associated ACTION requirements, within one hour ACTION shall be initiated to place the unit in an OPERATIONAL MODE in which the Specification does not apply by placing it, as applicable, in:~~ A.5

Insert 3

~~1. At least HOT SHUTDOWN within the next 12 hours, and~~

~~2. At least COLD SHUTDOWN within the subsequent 24 hours.~~

~~Where corrective measures are completed that permit operation under the ACTION requirements, the ACTION may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation. Exceptions to these requirements are stated in the individual Specifications.~~

~~This Specification is not applicable in OPERATIONAL MODE 4 or 5.~~

A.6 or that part of a shutdown of the unit

A.2

LCO 3.0.4 D. When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall not be made except 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. This Specification shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. Exceptions to ~~these requirements~~ this Specification are stated in the individual Specifications. A.6

LCO 3.0.5 E. 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 Specification ~~3.0.A and~~ 3.0.B for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY. A.2 A3

add proposed LCO 3.0.6 A.7

add proposed LCO 3.0.7 A.8

add proposed LCO 3.0.8 A.13

A.6 LCO 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, and 3.

A.3 INSERT 1

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

AH INSERT 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.

A.5 INSERT 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 13 hours; and

b. MODE 4 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, and 3.

A.1

A.2

Applicability 3/4.0

3.0 4.0 - SURVEILLANCE REQUIREMENTS (SR)

SRs in the Applicability LCOs

SR 3.0.1 A. Surveillance Requirements shall be met during the ~~reactor~~ ~~OPERATIONAL~~ MODE(s) or other conditions ~~specified~~ for individual Limiting Conditions for Operation unless otherwise stated in ~~an individual Surveillance Requirement~~. Insert 4 A.9 A.10

SR 3.0.2 B. Each Surveillance Requirement shall be performed within the specified surveillance interval with a maximum allowable extension not to exceed 25 percent of the surveillance interval. Insert 5 L.1 M.1

SR 3.0.3 C. Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.B, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation. A.9 moved to SR 3.0.1 The time limits of the ACTION requirements are applicable at the time it is identified that a Surveillance Requirement has not been performed. The ACTION requirements may be delayed for up to 24 hours to permit the completion of the surveillance when the allowable outage time limits of the ACTION requirements are less than 24 hours. Insert 6 L.2 Surveillance requirements do not have to be performed on inoperable equipment. A.9 moved to SR 3.0.1

SR 3.0.4 D. Entry into an OPERATIONAL MODE or other specified applicable condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the applicable surveillance interval or as otherwise specified. This provision shall not prevent passage through or to OPERATIONAL MODE(s) as required to comply with ACTION requirements. Insert 7 A.11

E. Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2, and 3 components shall be applicable as follows:

1. Inservice Inspection of ASME Code Class 1, 2, and 3 components and inservice testing of ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR Part 50, Section 50.55a(g) and 50.55a(f), respectively, except where specific written relief has been granted by the Commission pursuant to 10 CFR Part 50, Section 50.55a(g)(6)(i) or 50.55a(f)(6)(i), respectively.

A.12 moved to ITS Section 5.5

add proposed SR 3.0.5 A.13

A.9 INSERT 4

the SRs. 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.

INSERT 5

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. A.10

For Frequencies specified as "once," the above interval extension does not apply. M.1

If a Completion Time requires periodic performance on a "once per ....." basis, the above Frequency extension applies to each performance after the initial performance. L.1

Exceptions to this Specification are stated in the individual Specifications. A.10

L.2 INSERT 6

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 less. This delay period is permitted to allow performance of the Surveillance.

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.

A.11 INSERT 7

Entry into a MODE or other specified condition in the Applicability of an LCO shall not be made unless the LCO's Surveillances have been met within their specified Frequency. 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 a shutdown of the unit.

SR 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, and 3.

A.2

3.0 4.0 - SURVEILLANCE REQUIREMENTS (SR)

2. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications:

ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice inspection and testing activities	Required Frequencies for performing inservice inspection and testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

3. The provisions of Specification 4.0.B are applicable to the above required frequencies for performing inservice inspection and testing activities.

4. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.

5. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

6. The Inservice Inspection Program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the staff positions on schedule, methods, and personnel and sample expansion included in Generic Letter 88-01 or in accordance with alternate measures approved by the NRC staff.

A.12
moved to ITS Section 5.5

DISCUSSION OF CHANGES
ITS: SECTION 3.0 - LCO AND SR APPLICABILITY

ADMINISTRATIVE

A.1 In the conversion of the Dresden 2 and 3 current Technical Specifications (CTS) to the proposed plant specific Improved Technical Specifications (ITS), certain wording preferences or conventions are adopted that do not result in technical changes (either actual or interpretational). Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the BWR Standard Technical Specifications, NUREG-1433, Rev. 1 (i.e., the Improved Standard Technical Specifications (ISTS)).

A.2 Editorial rewording and renumbering is made consistent with the overall BWR ISTS, NUREG-1433, Rev. 1, ISTS conventions. During the Dresden 2 and 3 ITS development certain wording preferences or conventions were adopted which resulted in no technical changes (either actual or interpretational) to the Technical Specifications. In the specific case of the Applicability Section, the new section number is 3.0 with the current 3.0 series being renumbered LCO 3.0.X and the current 4.0 series being renumber SR 3.0.X.

A.3 The following administrative changes have been made to CTS 3.0.A:

The phrase "Compliance with...is required" is replaced with the phrase "LCOs shall be met." This change was made to be consistent with other LCO 3.0 Specifications and the concept of an LCO being met, versus complying with an LCO.

"OPERATIONAL MODE(s)" is changed to "MODES" and "conditions specified therein" was changed to "specified conditions in the Applicability," to be consistent with the BWR ISTS, NUREG-1433, Rev. 1, terminology.

The phrase "that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met, except as provided in Specification 3.0.E" was changed to "as provided in LCO 3.0.2 and LCO 3.0.7." LCO 3.0.2 addresses the requirement of meeting the associated ACTIONS when not meeting a Limiting Condition for Operation. Therefore, the exception to CTS 3.0.E (ITS LCO 3.0.5) is not needed in proposed LCO 3.0.1, and the reference to CTS 3.0.A in CTS 3.0.E (ITS LCO 3.0.5) has been deleted. LCO 3.0.7 addresses another situation when an LCO requirement is allowed not to be met. The requirements remain essentially unchanged, albeit in a combination of proposed LCO 3.0.1 and LCO 3.0.2. The added exception to LCO 3.0.7 is discussed below in Discussion of Change A.8.

ADMINISTRATIVE (continued)

A.4 The following administrative changes have been made to CTS 3.0.B:

The lead-in sentence "Noncompliance with a Specification shall exist when..." is replaced with "Upon discovery of a failure to meet an LCO..." This elimination of the definition of "noncompliance" is administrative in that the Technical Specifications make no use of it. This first sentence is conceptually relocated from CTS 3.0.A (see Discussion of Change A.3 above). The addition of the exception to LCO 3.0.6 is due to its inclusion in Dresden 2 and 3 ITS. Refer to the associated discussion below in Discussion of Change A.7.

The phrase "restored" is changed to "met or is no longer applicable;" "time intervals" is changed to "Completion Time(s);" and "ACTION requirements" is changed to "Required Action(s)," to be consistent with the BWR ISTS, NUREG-1433, Rev. 1, terminology. Also, the phrase "unless otherwise stated" is added consistent with current Dresden 2 and 3 TS exceptions found in a few LCOs. This clarity avoids potential misapplication of those requirements.

A.5 The following administrative changes have been made to CTS 3.0.C:

The phrase "except as provided in the associated ACTION requirements" is replaced with "and the associated Actions are not met, an associated Action is not provided, or if directed by the associated Actions" to cover all potential possibilities that require entry into LCO 3.0.3.

"OPERATIONAL MODE" is changed to "MODE or other specified condition" to be consistent with the BWR ISTS, NUREG-1433, Rev. 1.

The times to reach each MODE are revised to include the 1 hour allowed by CTS 3.0.C for initiating the shutdown. Also, the time represents the total time allowed from the entry into LCO 3.0.3, replacing the current presentation where each time is referenced as "the next," or "the subsequent."

The phrase "under the ACTION requirements...failure to meet the Limiting Condition for Operation" is changed to "in accordance with the LCO or Actions, completion of the actions required by LCO 3.0.3 is not required," to specifically state that LCO 3.0.3 actions do not have to be completed.

The sentence "This Specification is not applicable in OPERATIONAL MODE 4 or 5" is changed to "LCO 3.0.3 is only applicable in MODES 1, 2, and 3." This administrative change is made in conjunction with relocating all current exceptions to LCO 3.0.3 for Specifications whose Applicability is other than MODES 1, 2, or 3, to be encompassed by the proposed LCO 3.0.3.

ADMINISTRATIVE (continued)

A.6 The following administrative changes have been made to CTS 3.0.D:

The statement "or that are part of a shutdown of the unit" has been added to the sentence "This Specification shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS." In addition, the sentence "LCO 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, and 3," has also been added. This new wording is consistent with the BWR ISTS, NUREG-1433, Rev. 1. A review of the current and proposed Specifications has been performed to determine the affects of these allowances on the current and proposed Specifications. The review has determined that this change does not provide any additional allowances to change MODES beyond those that currently exist, except where justified in individual Specifications (as described in the individual Specifications Discussion of Changes). Therefore, these changes are considered administrative.

A.7 LCO 3.0.6 is added to provide guidance regarding the appropriate ACTIONS to be taken when a single inoperability (a support system) also results in the inoperability of one or more related systems (supported system(s)). In the current TS, based on the intent and interpretation provided by the NRC over the years, there has been an ambiguous approach to the combined support/supported inoperability. Some of this history is summarized:

- Guidance provided in the June 13, 1979 NRC memorandum from Brian K. Grimes (Assistant Director for Engineering and Projects) to Samuel E. Bryan (Assistant Director for Field Coordination) would indicate an intent/interpretation consistent with the proposed LCO 3.0.6 - without the necessity of also requiring additional ACTIONS. That is, only the inoperable support system ACTIONS need be taken.

- Guidance provided by the NRC in their April 10, 1980 letter to all Licensees, regarding the definition of OPERABILITY and its impact as a support system on the remainder of the current TS, would indicate a similar philosophy of not taking ACTIONS for the inoperable supported equipment. However, in this case, additional actions (similar to the proposed Safety Function Determination Program actions) were addressed and required.

- Generic Letter 91-18 and a plain-English reading of the existing TS provide an interpretation that inoperability, even as a result of a Technical Specification support system inoperability, requires all associated ACTIONS to be taken.

ADMINISTRATIVE

A.7 (cont'd)

- Certain current Specifications contain ACTIONS such as "Declare the {supported system} inoperable and take the ACTIONS of {its Specification}." In many cases the supported system would likely already be considered inoperable. The implication of this presentation is that the ACTIONS of the inoperable supported system would not have been taken without the specific direction to do so.

Considering the history of disagreement and misunderstandings in this area, the BWR ISTS, NUREG-1433, Rev. 1, was developed, with the Industry input and approval of the NRC, to include LCO 3.0.6, and a new program, Specification 5.5.11, Safety Function Determination Program. Since its function is to clarify existing ambiguities and to maintain actions within the realm of previous interpretations, this new provision is deemed to be administrative in nature.

A.8 LCO 3.0.7 is added to provide guidance regarding the meeting of Special Operations LCOs in Section 3.10. These Special Operations LCOs allow specified Technical Specification requirements to be changed (made applicable in part or whole, or suspended) to permit the performance of special tests or operations which otherwise could not be performed. If the Special Operations LCOs did not exist, many of the special tests and operations necessary to demonstrate select plant performance characteristics, special maintenance activities and special evolutions could not be performed. LCO 3.0.7 eliminates the confusion which would otherwise exist as to which LCOs apply during the performance of a special test or operation. This is consistent with the intent of the current Special Test Exceptions; however, without this specific allowance to change the requirements of another LCO, a conflict of requirements could be incorrectly interpreted to exist. Therefore, this change provides only administrative clarity.

A.9 The following administrative changes have been made to CTS 4.0.A and CTS 4.0.C:

Proposed SR 3.0.1 is constructed to more completely present the relationship between Surveillance Requirements and meeting the requirements of the LCO. In this regard, the concepts within CTS 4.0.C are combined with CTS 4.0.A into proposed SR 3.0.1.

The second sentence of SR 3.0.1 (as shown in Insert 4), "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," is proposed to clarify existing intent that is not explicitly stated.

ADMINISTRATIVE

A.9 (cont'd) The concept (editorially rewritten) found in the first sentence of CTS 4.0.C, has been moved to the third sentence of SR 3.0.1; "Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO, except as provided in SR 3.0.3." The sentence "Surveillance requirements do not have to be performed on inoperable equipment" is moved from the last sentence of CTS 4.0.C, to proposed SR 3.0.1. Since all LCOs do not deal exclusively with equipment OPERABILITY, a clarifying phrase is also added: "or variables outside specified limits."

A.10 The following administrative change has been made to CTS 4.0.B:

The first paragraph, "The specified Frequency for each Surveillance Requirement 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," was added to clearly establish what constituted meeting the specified Frequency of each Surveillance Requirement. Also, the sentence "Exceptions to this Specification are stated in the individual Specifications" is added to acknowledge the explicit use of exceptions in various Surveillances.

A.11 The following administrative change has been made to CTS 4.0.D:

The phrase "Entry into an OPERATIONAL MODE or other specified applicable condition" has been changed to "Entry into a MODE or other specified condition in the Applicability of an LCO." This new wording is consistent with the terminology of the BWR ISTS, NUREG-1433, Rev. 1.

The phrase "...passage through or to OPERATIONAL MODE(s) as required to comply with ACTION requirements," is reworded to "entry into 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."

The sentence "SR 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, and 3" has also been added. This new wording is consistent with the BWR ISTS, NUREG-1433, Rev. 1. A review of the current and proposed Specifications has been performed to determine the affects of this allowance on the current and proposed Specifications. The review has determined that this change does not provide any additional allowances to change MODES beyond those that currently exist, except where justified in individual Specifications (as described in the individual Specifications Discussion of Changes). Therefore, this change is considered administrative.

ADMINISTRATIVE (continued)

A.12 The CTS 4.0.E requirement for Inservice Testing and Inspection has been moved to proposed Specification 5.5.6 in accordance with the BWR ISTS, NUREG-1433, Rev. 1. Any technical changes to this requirement will be addressed in the Discussion of Changes for ITS Section 5.5.

A.13 LCO 3.0.8 and SR 3.0.5 have been added to reflect the use of the LCO's and SR's for dual unit sites. LCO 3.0.8 specifies that the LCO's including associated ACTIONS, shall apply to each unit individually, unless otherwise indicated. Whenever the LCO refers to a system or component that is shared by both units, the ACTIONS will apply to both units simultaneously. SR 3.0.5 specifies that SRs apply to each unit individually, unless otherwise indicated. Since the application is consistent with current practice, this change is considered administrative.

TECHNICAL CHANGES - MORE RESTRICTIVE

M.1 The statement, "For Frequencies specified as "once," the above interval extension does not apply," was added to CTS 4.0.B (proposed SR 3.0.2) to clarify that the 1.25 times the interval specified in the Frequency does not apply to certain Surveillances. This is because the interval extension concept is based on scheduling flexibility for repetitive performances, and these Surveillances are not repetitive in nature, and essentially have no "interval...as measured from the previous performance." This precludes the ability to extend these performances, and is therefore an additional restriction. The current Specification can be seen to allow the extension to apply to all Surveillances.

TECHNICAL CHANGES - LESS RESTRICTIVE

"Generic"

None

TECHNICAL CHANGES - LESS RESTRICTIVE (continued)

"Specific"

L.1 The statement "If a Completion Time requires periodic performance on a "once per..." basis, the above Frequency extension applies to each performance after the initial performance," was added to CTS 4.0.B (proposed SR 3.0.2) to allow the 1.25 times the interval specified in the Frequency concept to apply to periodic Required Actions. This provides the consistency in scheduling flexibility for all performances of periodic requirements, whether they are Surveillances or Required Actions. The intent remains to perform the activity, on the average, once during each specified interval.

L.2 Proposed SR 3.0.3 allows that, at the time it is discovered that the Surveillance has not been performed, the requirement to declare the equipment inoperable (LCO not met) may be delayed for up to 24 hours regardless as to whether the Completion Times of the Actions are 24 hours or less, as is currently allowed in CTS 4.0.C. This is based on NRC Generic Letter 87-09 which states, "It is overly conservative to assume that systems or components are inoperable when a surveillance has not been performed. The opposite is in fact the case, the vast majority of surveillances demonstrate that systems or components in fact are operable. When a Surveillance is missed, it is primarily a question of operability that has not been verified by the performance of the required surveillance."

Based on consideration of plant conditions, adequate planning, availability of personnel, the time required to perform the Surveillance and the safety significance of the delay in completing the Surveillance, the NRC concluded in the Generic Letter that 24 hours is an acceptable time limit for completing a missed Surveillance when the allowable outage times of the ACTIONS are less than the 24 hour limit or a shutdown is required to comply with ACTIONS.

However, it stands to reason that since 24 hours has been determined to be an acceptable time limit for completing the Surveillance, this 24 hour deferral should apply to all systems or components, regardless of whether or not their ACTIONS Completion Time is 24 hours or less. This is primarily because shorter Completion Times are generally provided for more safety significant Required Actions. Therefore, if a 24 hour delay can be safely applied to a Required Action with a short (e.g., 2 hour) Completion Time, there should be less of a safety impact when a 24 hour delay is applied to a Required Action with a long (e.g., 7 day) Completion Time. Furthermore, consistent application of

TECHNICAL CHANGES - LESS RESTRICTIVE

L.2 (cont'd) the 24 hour delay regardless of Completion Time is critical to eliminating potential confusion and misapplication. For example, some ACTIONS have more than one Completion Time; some > 24 hours and others ≤ 24 hours. The confusion associated with the application of the 24 hour deferral to the Completion Times of this example's Required Actions, illustrates the potential for misapplication throughout the Technical Specifications. In addition, the limit of 24 hours is not applicable if the specified Frequency of the missed Surveillance is less than 24 hours. In cases such as these, the specified Frequency would dictate the delay period. Therefore, the proposed SR 3.0.3 has eliminated the restriction that the extension only apply to outage times less than 24 hours, as is currently allowed in CTS 4.0.C.

The second and third paragraphs of proposed SR 3.0.3 are added to clearly state the actions to take if the Surveillance is not performed within the delay period or the Surveillance fails when performed. This clarification will help avoid confusion as to when the Completion Time(s) of the Required Action(s) begin in various situations.

RELOCATED SPECIFICATIONS

None

DISCUSSION OF CHANGES
ITS: SECTION 3.0 - LCO AND SR APPLICABILITY BASES

The Bases of the current Technical Specifications for this section (pages B 3/4.0-1 through B 3/4.0-6) have been completely replaced by revised Bases that reflect the format and applicable content of ITS Section 3.0, consistent with the BWR ISTS, NUREG-1433, Rev. 1. The revised Bases are as shown in the ITS Bases.

<CTS>

<3.0> 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

<3.0.A> 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 and LCO 3.0.7.

<3.0.B> 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.

<3.0.C> 1 TSTF-208 changes not adopted

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 2 within 7 hours;~~

a ~~b~~. MODE 3 within 13 hours; and

b ~~c~~. MODE 4 within 37 hours.

1

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, and 3.

<3.0.D> LCO 3.0.4 When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall not be made except 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. This

(continued)

<CTS>

3.0 LCO APPLICABILITY

<3.0.D>

LCO 3.0.4 (continued)

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.

Exceptions to this Specification are stated in the individual Specifications. ~~These exceptions allow entry into MODES or other specified conditions in the Applicability when the associated ACTIONS to be entered allow unit operation in the MODE or other specified condition in the Applicability only for a limited period of time.~~ TSTF-104

LCO 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, and 3.

~~[Reviewer's Note: LCO 3.0.4 has been revised so that changes in MODES or other specified conditions in the Applicability that are part of a shutdown of the unit shall not be prevented. In addition, LCO 3.0.4 has been revised so that it is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, and 3. The MODE change restrictions in LCO 3.0.4 were previously applicable in all MODES. Before this version of LCO 3.0.4 can be implemented on a plant-specific basis, the licensee must review the existing technical specifications to determine where specific restrictions on MODE changes or Required Actions should be included in individual LCOs to justify this change; such an evaluation should be summarized in a matrix of all existing LCOs to facilitate NRC staff review of a conversion to the STS.]~~ 2

<3.0.E>

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.

(continued)

3.0 LCO APPLICABILITY (continued)

<A.7> 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 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, TSTF-166 an ~~additional~~ evaluation~~s and limitations may be required~~ shall be performed TSTF-166 in accordance with Specification 5.5.~~02~~, 11 3 "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.

<A.8> LCO 3.0.7

Special Operations LCOs in Section 3.10 allow specified Technical Specifications (TS) requirements to be changed to permit performance of special tests and operations. Unless otherwise specified, all other TS requirements remain unchanged. Compliance with Special Operations LCOs is optional. When a Special Operations LCO is desired to be met but is not met, the ACTIONS of the Special Operations LCO shall be met. When a Special Operations 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.

4

<A.13> Insert LCO 3.0.8

4 Insert LCO 3.0.8

LCO 3.0.8 LCOs, including associated ACTIONS, shall apply to each unit individually, unless otherwise indicated. Whenever the LCO refers to a system or component that is shared by both units, the ACTIONS will apply to both units simultaneously.

3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

<4.0.A>

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.

<4.0.B>

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.

<4.0.C>

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 less. This delay period is permitted to allow performance of the Surveillance.

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

(continued)

3.0 SR APPLICABILITY

<4.0.C>	SR 3.0.3 (continued)	declared not met, and the applicable Condition(s) must be entered.
<4.0.D>	SR 3.0.4	Entry into a MODE or other specified condition in the Applicability of an LCO shall not be made unless the LCO's Surveillances have been met within their specified Frequency. 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 a shutdown of the unit. SR 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, and 3. ~~[Reviewer's Note: SR 3.0.4 has been revised so that changes in MODES or other specified conditions in the Applicability that are part of a shutdown of the unit shall not be prevented. In addition, SR 3.0.4 has been revised so that it is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, and 3. The MODE change restrictions in SR 3.0.4 were previously applicable in all MODES. Before this version of SR 3.0.4 can be implemented on a plant-specific basis, the licensee must review the existing technical specifications to determine where specific restrictions on MODE changes or Required Actions should be included in individual LCOs to justify this change; such an evaluation should be summarized in a matrix of all existing LCOs to facilitate NRC staff review of a conversion to the STS.]~~ 2
<A.13>	SR 3.0.5	SRs shall apply to each unit individually, unless otherwise indicated. 4

1. The requirement of LCO 3.0.3 that the unit be in MODE 2 within 7 hours has not been adopted in the Dresden 2 and 3 ITS. This was previously accepted by the NRC in the SER for Amendments Nos. 131 (Unit 2) and 125 (Unit 3), from John F. Stang (NRC) to D.L. Farrar (ComEd), dated February 16, 1995, which originally added the STS words to CTS 3.0.C. As a result, the changes from TSTF-208 for this requirement have not been adopted.

2. The bracketed "Reviewer's Note" has been deleted. This information is for the NRC reviewer to be keyed in to what is needed to meet this requirement. This is not meant to be retained in the final version of the plant specific submittal.

3. The appropriate LCO number has been provided.

4. LCO 3.0.8 and SR 3.0.5 have been added to address the application of the LCOs and SRs for dual unit sites with a common set of Technical Specifications. This addition is consistent with the NRC approved ITS for the Braidwood and Byron Stations.

B 3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

BASES

LCOs

LCO 3.0.1 through LCO 3.0.7 establish the general requirements applicable to all Specifications in Sections 3.1 through 3.10 and apply at all times, unless otherwise stated. 1

LCO 3.0.1

LCO 3.0.1 establishes the Applicability statement within each individual Specification as the requirement for when the LCO is required to be met (i.e., when the unit is in the MODES or other specified conditions of the Applicability statement of each Specification).

LCO 3.0.2

LCO 3.0.2 establishes that upon discovery of a failure to meet an LCO, the associated ACTIONS shall be met. The Completion Time of each Required Action for an ACTIONS Condition is applicable from the point in time that an ACTIONS Condition is entered. The Required Actions establish those remedial measures that must be taken within specified Completion Times when the requirements of an LCO are not met. This Specification establishes that:

a. Completion of the Required Actions within the specified Completion Times constitutes compliance with a Specification; and

b. Completion of the Required Actions is not required when an LCO is met within the specified Completion Time, unless otherwise specified.

There are two basic types of Required Actions. The first type of Required Action specifies a time limit in which the LCO must be met. This time limit is the Completion Time to restore an inoperable system or component to OPERABLE status or to restore variables to within specified limits. If this type of Required Action is not completed within the specified Completion Time, a shutdown may be required to place the unit in a MODE or condition in which the Specification is not applicable. (Whether stated as a Required Action or not, correction of the entered Condition is an action that may always be considered upon entering

(continued)

BASES

LCO 3.0.2 (continued)

ACTIONS.) The second type of Required Action specifies the remedial measures that permit continued operation of the unit that is not further restricted by the Completion Time. In this case, compliance with the Required Actions provides an acceptable level of safety for continued operation.

Completing the Required Actions is not required when an LCO is met or is no longer applicable, unless otherwise stated in the individual Specifications.

The nature of some Required Actions of some Conditions necessitates that, once the Condition is entered, the Required Actions must be completed even though the associated Condition~~s~~ no longer exist~~s~~. The individual LCO's ACTIONS specify the Required Actions where this is the case. An example of this is in LCO 3.4.~~10~~ 9, "RCS Pressure and Temperature (P/T) Limits." 2 3

The Completion Times of the Required Actions are also applicable when a system or component is removed from service intentionally. The reasons for intentionally relying on the ACTIONS include, but are not limited to, performance of Surveillances, preventive maintenance, corrective maintenance, or investigation of operational problems. Entering ACTIONS for these reasons must be done in a manner that does not compromise safety. Intentional entry into ACTIONS should not be made for operational convenience. Additionally, if intentional entry into ACTIONS ~~Alternatives that~~ would ~~not~~ result in redundant equipment being inoperable, alternatives should be used instead. Doing so limits the time both subsystems/divisions of a safety function are inoperable and limits the time ~~other~~ conditions exist which may result in LCO 3.0.3 being entered. Individual Specifications may specify a time limit for performing an SR when equipment is removed from service or bypassed for testing. In this case, the Completion Times of the Required Actions are applicable when this time limit expires, if the equipment remains removed from service or bypassed. TSTF-122

When a change in MODE or other specified condition is required to comply with Required Actions, the unit may enter a MODE or other specified condition in which another Specification becomes applicable. In this case, the Completion Times of the associated Required Actions would apply from the point in time that the new Specification becomes applicable and the ACTIONS Condition(s) are entered.

(continued)

BASES (continued)

LCO 3.0.3

LCO 3.0.3 establishes the actions that must be implemented when an LCO is not met and:

a. An associated Required Action and Completion Time is not met and no other Condition applies; or

b. The condition of the unit is not specifically addressed by the associated ACTIONS. This means that no combination of Conditions stated in the ACTIONS can be made that exactly corresponds to the actual condition of the unit. Sometimes, possible combinations of Conditions are such that entering LCO 3.0.3 is warranted; in such cases, the ACTIONS specifically state a Condition corresponding to such combinations and also that LCO 3.0.3 be entered immediately.

This Specification delineates the time limits for placing the unit in a safe MODE or other specified condition when operation cannot be maintained within the limits for safe operation as defined by the LCO and its ACTIONS. It is not intended to be used as an operational convenience that permits routine voluntary removal of redundant systems or components from service in lieu of other alternatives that would not result in redundant systems or components being inoperable.

Upon entering LCO 3.0.3, 1 hour is allowed to prepare for an orderly shutdown before initiating a change in unit operation. This includes time to permit the operator to coordinate the reduction in electrical generation with the load dispatcher to ensure the stability and availability of the electrical grid. The time limits specified to reach lower MODES of operation permit the shutdown to proceed in a controlled and orderly manner that is well within the specified maximum cooldown rate and within the capabilities of the unit, assuming that only the minimum required equipment is OPERABLE. This reduces thermal stresses on components of the Reactor Coolant System and the potential for a plant upset that could challenge safety systems under conditions to which this Specification applies. The use and interpretation of specified times to complete the actions of LCO 3.0.3 are consistent with the discussion of Section 1.3, Completion Times.

(continued)

BASES

LCO 3.0.3 (continued)

A unit shutdown required in accordance with LCO 3.0.3 may be terminated and LCO 3.0.3 exited if any of the following occurs:

a. The LCO is now met.

b. A Condition exists for which the Required Actions have now been performed.

c. ACTIONS exist that do not have expired Completion Times. These Completion Times are applicable from the point in time that the Condition is initially entered and not from the time LCO 3.0.3 is exited.

The time limits of Specification 3.0.3 allow 37 hours for the unit to be in MODE 4 when a shutdown is required during MODE 1 operation. If the unit is in a lower MODE of operation when a shutdown is required, the time limit for reaching the next lower MODE applies. If a lower MODE is reached in less time than allowed, however, the total allowable time to reach MODE 4, or other applicable MODE, is not reduced. For example, if MODE 2 is reached in 2 hours, then the time allowed for reaching MODE 3 is the next 11 hours, because the total time for reaching MODE 3 is not reduced from the allowable limit of 13 hours. Therefore, if remedial measures are completed that would permit a return to MODE 1, a penalty is not incurred by having to reach a lower MODE of operation in less than the total time allowed.

In MODES 1, 2, and 3, LCO 3.0.3 provides actions for Conditions not covered in other Specifications. The requirements of LCO 3.0.3 do not apply in MODES 4 and 5 because the unit is already in the most restrictive Condition required by LCO 3.0.3. The requirements of LCO 3.0.3 do not apply in other specified conditions of the Applicability (unless in MODE 1, 2, or 3) because the ACTIONS of individual Specifications sufficiently define the remedial measures to be taken.

Exceptions to LCO 3.0.3 are provided in instances where requiring a unit shutdown, in accordance with LCO 3.0.3, would not provide appropriate remedial measures for the associated condition of the unit. An example of this is in LCO 3.7.8, "Spent Fuel Storage Pool Water Level." LCO 3.7.8 has an Applicability of "During movement of irradiated fuel

(continued)

BASES

LCO 3.0.3 (continued)

assemblies in the spent fuel storage pool." Therefore, this LCO can be applicable in any or all MODES. If the LCO and the Required Actions of LCO 3.7.8 are not met while in MODE 1, 2, or 3, there is no safety benefit to be gained by placing the unit in a shutdown condition. The Required Action of LCO 3.7.8 of "Suspend movement of ~~irradiated~~ fuel assemblies in the spent fuel storage pool" is the appropriate Required Action to complete in lieu of the actions of LCO 3.0.3. These exceptions are addressed in the individual Specifications. 8

LCO 3.0.4

LCO 3.0.4 establishes limitations on changes in MODES or other specified conditions in the Applicability when an LCO is not met. It precludes placing the unit in a MODE or other specified condition stated in that Applicability (e.g., Applicability desired to be entered) when the following exist:

a. Unit conditions are such that the requirements of the LCO would not be met in the Applicability desired to be entered; and

b. Continued noncompliance with the LCO requirements, if the Applicability were entered, would result in the unit being required to exit the Applicability desired to be entered to comply with the Required Actions.

Compliance with Required Actions that permit continued operation of the unit for an unlimited period of time in a MODE or other specified condition provides an acceptable level of safety for continued operation. This is without regard to the status of the unit before or after the MODE change. Therefore, in such cases, entry into a MODE or other specified condition in the Applicability may be made in accordance with the provisions of the Required Actions. The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

The provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability

(continued)

The exceptions allow entry into MODES or other specified conditions in the Applicability when the associated ACTIONS to be entered do not provide for continued operation for an unlimited period of time.

TSTF-104

BASES

LCO 3.0.4 (continued)

that are required to comply with ACTIONS. In addition, the provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown.

Exceptions to LCO 3.0.4 are stated in the individual Specifications. Exceptions may apply to all the ACTIONS or to a specific Required Action of a Specification.

LCO 3.0.4 is only applicable when entering MODE 3 from MODE 4, MODE 2 from MODE 3 or 4, or MODE 1 from MODE 2. Furthermore, LCO 3.0.4 is applicable when entering any other specified condition in the Applicability only while operating in MODE 1, 2, or 3. The requirements of LCO 3.0.4 do not apply in MODES 4 and 5, or in other specified conditions of the Applicability (unless in MODE 1, 2, or 3) because the ACTIONS of individual specifications sufficiently define the remedial measures to be taken. 5

~~[In some cases (e.g., ..) these ACTIONS provide a Note that states "While this LCO is not met, entry into a MODE or other specified condition in the Applicability is not permitted, unless required to comply with ACTIONS." This Note is a requirement explicitly precluding entry into a MODE or other specified condition of the Applicability.]~~ 6

Surveillances do not have to be performed on the associated inoperable equipment (or on variables outside the specified limits), as permitted by SR 3.0.1. Therefore, changing MODES or other specified conditions while in an ACTIONS Condition, either in compliance with LCO 3.0.4 or where an exception to LCO 3.0.4 is stated, is not a violation of SR 3.0.1 or SR 3.0.4 for those Surveillances that do not have to be performed due to the associated inoperable equipment. However, SRs must be met to ensure OPERABILITY prior to declaring the associated equipment OPERABLE (or variable within limits) and restoring compliance with the affected LCO.

LCO 3.0.5

LCO 3.0.5 establishes the allowance for restoring equipment to service under administrative controls when it has been removed from service or declared inoperable to comply with ACTIONS. The sole purpose of this Specification is to provide an exception to LCO 3.0.2 (e.g., to not comply with the applicable Required Action(s)) to allow the performance

2 ~~LCO 3.0.5~~

(continued)

2

BASES

LCO 3.0.5 (continued)

TSTF-165 required testing

of SRs to demonstrate:

a. The OPERABILITY of the equipment being returned to service; or

b. The OPERABILITY of other equipment.

required testing to demonstrate OPERABILITY

The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the ~~allowed SRs~~. This Specification does not provide time to perform any other preventive or corrective maintenance.

An example of demonstrating the OPERABILITY of the equipment being returned to service is reopening a containment isolation valve that has been closed to comply with Required Actions and must be reopened to perform the ~~SRs~~.

TSTF-165 required testing

An example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to prevent the trip function from occurring during the performance of ~~an SR~~ on another channel in the other trip system. A similar example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to permit the logic to function and indicate the appropriate response during the performance of ~~an SR~~ on another channel in the same trip system.

LCO 3.0.6

LCO 3.0.6 establishes an exception to LCO 3.0.2 for support systems that have an LCO specified in the Technical Specifications (TS). This exception is provided because LCO 3.0.2 would require that the Conditions and Required Actions of the associated inoperable supported system LCO be entered solely due to the inoperability of the support system. This exception is justified because the actions that are required to ensure the plant is maintained in a safe condition are specified in the support system LCO's Required Actions. These Required Actions may include entering the supported system's Conditions and Required Actions or may specify other Required Actions. 's 2

2 ~~LCO 3.0.6~~

When a support system is inoperable and there is an LCO

(continued)

2

BASES

LCO 3.0.6

(continued)

specified for it in the TS, the supported system(s) are required to be declared inoperable if determined to be inoperable as a result of the support system inoperability. However, it is not necessary to enter into the supported systems' Conditions and Required Actions unless directed to do so by the support system's Required Actions. The potential confusion and inconsistency of requirements related to the entry into multiple support and supported systems' LCOs' Conditions and Required Actions are eliminated by providing all the actions that are necessary to ensure the plant is maintained in a safe condition in the support system's Required Actions. 2

However, there are instances where a support system's Required Action may either direct a supported system to be declared inoperable or direct entry into Conditions and Required Actions for the supported system. This may occur immediately or after some specified delay to perform some other Required Action. Regardless of whether it is immediate or after some delay, 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.

11 3

Specification 5.5.12, "Safety Function Determination Program (SFDP)," ensures loss of safety function is detected and appropriate actions are taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other limitations, remedial actions, or compensatory actions may be identified as a result of the support system inoperability and corresponding exception to entering supported system Conditions and Required Actions. The SFDP implements the requirements of LCO 3.0.6.

Cross division checks to identify a loss of safety function for those support systems that support safety systems are required. The cross division check verifies that the supported systems of the redundant OPERABLE support system are OPERABLE, thereby ensuring safety function is retained. If this evaluation determines that a loss of safety function exists, the appropriate Conditions and Required Actions of

12

TSTF-71 changes not adopted

(continued)

TSTF-71 changes not adopted 12

BASES

2 3

Insert LCO 3.0.6

LCO 3.0.6 (continued)

the LCO in which the loss of safety function exists are required to be entered.

TSTF -273

LCO 3.0.7

There are certain special tests and operations required to be performed at various times over the life of the unit. These special tests and operations are necessary to demonstrate select unit performance characteristics, to perform special maintenance activities, and to perform special evolutions. Special Operations LCOs in Section 3.10 allow specified TS requirements to be changed to permit performances of these special tests and operations, which otherwise could not be performed if required to comply with the requirements of these TS. Unless otherwise specified, all the other TS requirements remain unchanged. This will ensure all appropriate requirements of the MODE or other specified condition not directly associated with or required to be changed to perform the special test or operation will remain in effect.

The Applicability of a Special Operations LCO represents a condition not necessarily in compliance with the normal requirements of the TS. Compliance with Special Operations LCOs is optional. A special operation may be performed either under the provisions of the appropriate Special Operations LCO or under the other applicable TS requirements. If it is desired to perform the special operation under the provisions of the Special Operations LCO, the requirements of the Special Operations LCO shall be followed. When a Special Operations LCO requires another LCO to be met, only the requirements of the LCO statement are required to be met regardless of that LCO's Applicability (i.e., should the requirements of this other LCO not be met, the ACTIONS of the Special Operations LCO apply, not the ACTIONS of the other LCO). However, there are instances where the Special Operations LCO's ~~ACTIONS~~ may direct the other LCOs' ACTIONS be met. The Surveillances of the other LCO are not required to be met, unless specified in the Special Operations LCO. If conditions exist such that the Applicability of any other LCO is met, all the other LCO's requirements (ACTIONS and SRs) are required to be met concurrent with the requirements of the Special Operations LCO. 2

10

Insert LCO 3.0.8

TSTF-273

Insert LCO 3.0.6

This loss of safety function does not require the assumption of additional single failures or loss of offsite power. Since operation is being restricted in accordance with the ACTIONS of the support system, any resulting temporary loss of redundancy or single failure protection is taken into account. Similarly, the ACTIONS for inoperable offsite circuit(s) and inoperable diesel generator(s) provide the necessary restriction for cross ~~train~~ inoperabilities. This explicit cross ~~train~~ verification for inoperable AC electrical power sources also acknowledges that supported system(s) are not declared inoperable solely as a result of inoperability of a normal or emergency electrical power source (refer to the definition of OPERABILITY). OPERABLE - 2

3 division

When a loss of safety function is determined to exist, and the SFDP requires entry into the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists, consideration must be given to the specific type of function affected. Where a loss of function is solely due to a single Technical Specification support system (e.g., loss of automatic start due to inoperable instrumentation, or loss of pump suction source due to low tank level) the appropriate LCO is the LCO for the support system. The ACTIONS for a support system LCO adequately addresses the inoperabilities of that system without reliance on entering its supported system LCO. When the loss of function is the result of multiple support systems, the appropriate LCO is the LCO for the supported system.

10

Insert LCO 3.0.8

LCO 3.0.8 LCO 3.0.8 establishes the applicability of each Specification to both Unit 2 and Unit 3 operation. Whenever a requirement applies to only one unit, or is different for each unit, this will be identified in the appropriate section of the Specification (e.g., Applicability, Surveillance, etc.) with parenthetical reference, Notes, or other appropriate presentation within the body of the requirement.

B 3.0 SURVEILLANCE REQUIREMENT (SR) APPLICABILITY

BASES

SRs

SR 3.0.1 through SR 3.0.4 establish the general requirements applicable to all Specifications in Sections 3.1 through 3.10 and apply at all times, unless otherwise stated. 1

SR 3.0.1

SR 3.0.1 establishes the requirement that SRs must be met during the MODES or other specified conditions in the Applicability for which the requirements of the LCO apply, unless otherwise specified in the individual SRs. This Specification is to ensure that Surveillances are performed to verify the OPERABILITY of systems and components, and that variables are within specified limits. Failure to meet a Surveillance within the specified Frequency, in accordance with SR 3.0.2, constitutes a failure to meet an LCO.

Systems and components are assumed to be OPERABLE when the associated SRs have been met. Nothing in this Specification, however, is to be construed as implying that systems or components are OPERABLE when:

a. The systems or components are known to be inoperable, although still meeting the SRs; or

b. The requirements of the Surveillance(s) are known to be not met between required Surveillance performances.

Surveillances do not have to be performed when the unit is in a MODE or other specified condition for which the requirements of the associated LCO are not applicable, unless otherwise specified. The SRs associated with a Special Operations LCO are only applicable when the Special Operations LCO is used as an allowable exception to the requirements of a Specification.

Surveillances, including Surveillances invoked by Required Actions, do not have to be performed on inoperable equipment because the ACTIONS define the remedial measures that apply. Surveillances have to be met and performed in accordance with SR 3.0.2, prior to returning equipment to OPERABLE status.

(continued)

TSTF-8

Unplanned events may satisfy the requirements (including applicable acceptance criteria) for a given SR. In this case, the unplanned event may be credited as fulfilling the performance of the SR. ~~This allowance includes those SRs whose performance is normally precluded in a given MODE or other specified condition.~~ 11

BASES

SR 3.0.1 (continued)

Upon completion of maintenance, appropriate post maintenance testing is required to declare equipment OPERABLE. This includes ensuring applicable Surveillances are not failed and their most recent performance is in accordance with SR 3.0.2. Post maintenance testing may not be possible in the current MODE or other specified conditions in the Applicability due to the necessary unit parameters not having been established. In these situations, the equipment may be considered OPERABLE provided testing has been satisfactorily completed to the extent possible and the equipment is not otherwise believed to be incapable of performing its function. This will allow operation to proceed to a MODE or other specified condition where other necessary post maintenance tests can be completed.

Some examples of this process are:

a. Control Rod Drive maintenance during refueling that requires scram testing at ≥ [800 psig]. However, if other appropriate testing is satisfactorily completed and the scram time testing of SR 3.1.4.3 is satisfied, the control rod can be considered OPERABLE. This allows startup to proceed to reach [800 psig] to perform other necessary testing. 9 7

b. High pressure coolant injection (HPCI) maintenance during shutdown that requires system functional tests at a specified pressure. Provided other appropriate testing is satisfactorily completed, startup can proceed with HPCI considered OPERABLE. This allows operation to reach the specified pressure to complete the necessary post maintenance testing.

SR 3.0.2

SR 3.0.2 establishes the requirements for meeting the specified Frequency for Surveillances and any Required Action with a Completion Time that requires the periodic performance of the Required Action on a "once per..." interval.

SR 3.0.2 permits a 25% extension of the interval specified in the Frequency. This extension facilitates Surveillance scheduling and considers plant operating conditions that may not be suitable for conducting the Surveillance (e.g.,

(continued)

BASES

SR 3.0.2 (continued)

transient conditions or other ongoing Surveillance or maintenance activities).

The 25% extension does not significantly degrade the reliability that results from performing the Surveillance at its specified Frequency. This is based on the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the SRs. The exceptions to SR 3.0.2 are those Surveillances for which the 25% extension of the interval specified in the Frequency does not apply. These exceptions are stated in the individual Specifications. ~~An example of where SR 3.0.2 does not apply is a Surveillance with a Frequency of "in accordance with 10 CFR 50, Appendix J, as modified by approved exemptions."~~ The requirements of regulations take precedence over the TS. ~~The TS cannot in and of themselves extend a test interval specified in the regulations. Therefore, there is a Note in the Frequency stating, "SR 3.0.2 is not applicable."~~ 8

8 INSERT SR 3.0.2

As stated in SR 3.0.2, the 25% extension also does not apply to the initial portion of a periodic Completion Time that requires performance on a "once per..." basis. The 25% extension applies to each performance after the initial performance. The initial performance of the Required Action, whether it is a particular Surveillance or some other remedial action, is considered a single action with a single Completion Time. One reason for not allowing the 25% extension to this Completion Time is that such an action usually verifies that no loss of function has occurred by checking the status of redundant or diverse components or accomplishes the function of the inoperable equipment in an alternative manner.

The provisions of SR 3.0.2 are not intended to be used repeatedly merely as an operational convenience to extend Surveillance intervals (other than those consistent with refueling intervals) or periodic Completion Time intervals beyond those specified.

SR 3.0.3

SR 3.0.3 establishes the flexibility to defer declaring affected equipment inoperable or an affected variable outside the specified limits when a Surveillance has not been completed within the specified Frequency. A delay

(continued)

8 INSERT SR 3.0.2

Therefore, when a test interval is specified in the regulations, the test interval cannot be extended by the TS, and the SR includes a Note in the Frequency stating "SR 3.0.2 is not applicable."

BASES

SR 3.0.3 (continued)

period of up to 24 hours or up to the limit of the specified Frequency, whichever is less, applies from the point in time that it is discovered that the Surveillance has not been performed in accordance with SR 3.0.2, and not at the time that the specified Frequency was not met.

This delay period provides adequate time to complete Surveillances that have been missed. This delay period permits the completion of a Surveillance before complying with Required Actions or other remedial measures that might preclude completion of the Surveillance. 2

The basis for this delay period includes consideration of unit conditions, adequate planning, availability of personnel, the time required to perform the Surveillance, the safety significance of the delay in completing the required Surveillance, and the recognition that the most probable result of any particular Surveillance being performed is the verification of conformance with the requirements.

When a Surveillance with a Frequency based not on time intervals, but upon specified unit conditions or operational situations, is discovered not to have been performed when specified, SR 3.0.3 allows the full delay period of 24 hours to perform the Surveillance.

SR 3.0.3 also provides a time limit for completion of Surveillances that become applicable as a consequence of MODE changes imposed by Required Actions.

Failure to comply with specified Frequencies for SRs is expected to be an infrequent occurrence. Use of the delay period established by SR 3.0.3 is a flexibility which is not intended to be used as an operational convenience to extend Surveillance intervals.

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period, then the equipment is inoperable, or the variable is outside the specified limits and the Completion Times of the

(continued)

BASES

SR 3.0.3 (continued)

Required Actions for the applicable LCO Conditions begin immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the Completion Time of the ACTIONS, restores compliance with SR 3.0.1.

SR 3.0.4

SR 3.0.4 establishes the requirement that all applicable SRs must be met before entry into a MODE or other specified condition in the Applicability.

This Specification ensures that system and component OPERABILITY requirements and variable limits are met before entry into MODES or other specified conditions in the Applicability for which these systems and components ensure safe operation of the unit.

The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

However, in certain circumstances, failing to meet an SR will not result in SR 3.0.4 restricting a MODE change or other specified condition change. When a system, subsystem, division, component, device, or variable is inoperable or outside its specified limits, the associated SR(s) are not required to be performed per SR 3.0.1, which states that surveillances do not have to be performed on inoperable equipment. When equipment is inoperable, SR 3.0.4 does not apply to the associated SR(s) since the requirement for the SR(s) to be performed is removed. Therefore, failing to perform the Surveillance(s) within the specified Frequency , on equipment that is inoperable, does not result in an SR 3.0.4 restriction to changing MODES or other specified conditions of the Applicability. However, since the LCO is not met in this instance, LCO 3.0.4 will govern any restrictions that may (or may not) apply to MODE or other specified condition changes.

2

9

The provisions of SR 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of LCO SR 3.0.4 shall not prevent changes in MODES

(continued)

BASES

SR 3.0.4 (continued)

or other specified conditions in the Applicability that result from any unit shutdown.

The precise requirements for performance of SRs are specified such that exceptions to SR 3.0.4 are not necessary. The specific time frames and conditions necessary for meeting the SRs are specified in the Frequency, in the Surveillance, or both. This allows performance of Surveillances when the prerequisite condition(s) specified in a Surveillance procedure require entry into the MODE or other specified condition in the Applicability of the associated LCO prior to the performance or completion of a Surveillance. A Surveillance that could not be performed until after entering the LCO Applicability would have its Frequency specified such that it is not "due" until the specific conditions needed are met. Alternately, the Surveillance may be stated in the form of a Note as not required (to be met or performed) until a particular event, condition, or time has been reached. Further discussion of the specific formats of SRs' annotation is found in Section 1.4, Frequency.

SR 3.0.4 is only applicable when entering MODE 3 from MODE 4, MODE 2 from MODE 3 or 4, or MODE 1 from MODE 2. Furthermore, SR 3.0.4 is applicable when entering any other specified condition in the Applicability only while operating in MODE 1, 2, or 3. The requirements of SR 3.0.4 do not apply in MODES 4 and 5, or in other specified conditions of the Applicability (unless in MODE 1, 2, or 3) because the ACTIONS of individual Specifications sufficiently define the remedial measures to be taken.

$\boxed{10}$ Insert SR 3.0.5

$\boxed{10}$ Insert SR 3.0.5

SR 3.0.5 SR 3.0.5 establishes the applicability of each Surveillance to both Unit 2 and Unit 3 operation. Whenever a requirement applies to only one unit, or is different for each unit, this will be identified with parenthetical reference, Notes, or other appropriate presentation within the SR.

JUSTIFICATION FOR DEVIATIONS FROM NUREG-1433, REVISION 1
ITS BASES: SECTION 3.0 - LCO AND SR APPLICABILITY

1. The LCO and SR Applicability only apply to Specifications in Sections 3.1 through 3.10; they do not apply to Specifications in Chapters 4.0 and 5.0. Therefore, this statement has been added for clarity.

2. Typographical/grammatical error corrected.

3. The correct LCO number or plant specific nomenclature, as appropriate, has been provided.

4. Changes were made to provide a better example. These changes are required due to changes to the LCO.

5. The paragraph has been moved, consistent with change package BWR-26, C.1. This change was inadvertently left out when NUREG-1433, Revision 1 was promulgated.

6. The bracketed "Reviewer's Note" has been deleted. This information is for the NRC reviewer to be keyed in to what is needed to meet this requirement. This is not meant to be retained in the final version of the plant specific submittal.

7. The brackets have been removed and the proper plant specific information/value has been provided.

8. Changes have been made to reflect these changes made to the Specifications in other Sections.

9. These words have been added for clarity. Failing to perform the Surveillance(s) within the specified Frequency does not result in an SR 3.0.4 restriction only if the equipment is already inoperable.

10. Changes have been made to reflect changes made to the Specification.

11. TSTF-8 adds a clarification to the Bases of SR 3.0.1 that allows credit to be taken for unplanned events that satisfy Surveillances. This clarification also states that this allowance also includes those SRs whose performance is precluded in a given MODE or other specified condition. This portion of the TSTF has not been adopted. As documented in Part 9900 of the NRC Inspection Manual, Technical Guidance - Licensee Technical Specifications Interpretations, and in the ITS Bases Control Program, neither the Technical Specification Bases nor Licensee generated interpretations can be used to change the Technical Specification requirements. Thus, if the Technical Specifications preclude performance of an SR in certain MODES (as is the case for some SRs), the Bases cannot change the Technical Specifications requirement and allow the SR to be credited for being performed in the restricted MODES, even if the performance is unplanned. Therefore, only the first part of the TSTF-8 change to the Bases of SR 3.0.1 has been adopted.

12. TSTF-71, Rev. 2 provides specific examples of when a loss of safety function exists. ComEd does not believe that this bracketed information is appropriate for the Bases of LCO 3.0.6. This information is more appropriately located in the procedures that implement the Safety Function Determination Program (SFDP). In addition, the format of the inserts added by the TSTF is not consistent with the form of the ISTS. As stated in the justification for the TSTF, the TSTF does not alter the technical content of LCO 3.0.6. Therefore, since the TSTF information is bracketed, it is acceptable not to adopt this TSTF in the ITS, and put similar examples into the plant specific SFDP.

ADMINISTRATIVE CHANGES
("A.x" Labeled Comments/Discussions)

In accordance with the criteria set forth in 10 CFR 50.92, ComEd has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   The proposed change involves reformatting, renumbering, and rewording the existing Technical Specifications. The reformatting, renumbering, and rewording process involves no technical changes to the existing Technical Specifications. As such, this change is administrative in nature and does not impact initiators of analyzed events or assumed mitigation of accident or transient events. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or changes in methods governing normal plant operation. The proposed change will not impose any new or eliminate any old requirements. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

   The proposed change will not reduce a margin of safety because it has no impact on any safety analyses assumptions. This change is administrative in nature. Therefore, the change does not involve a significant reduction in a margin of safety.

TECHNICAL CHANGES - MORE RESTRICTIVE
("M.x" Labeled Comments/Discussions)

In accordance with the criteria set forth in 10 CFR 50.92, ComEd has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   The proposed change provides more stringent requirements for operation of the facility. These more stringent requirements do not result in operation that will increase the probability of initiating an analyzed event and do not alter assumptions relative to mitigation of an accident or transient event. The more restrictive requirements continue to ensure process variables, structures, systems, and components are maintained consistent with the safety analyses and licensing basis. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   The proposed change does not involve a physical alteration of the plant (no new or different type of equipment will be installed) or changes in the methods governing normal plant operation. The proposed change does impose different requirements. However, these changes are consistent with the assumptions in the safety analyses and licensing basis. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

   The imposition of more restrictive requirements either has no impact on or increases the margin of plant safety. As provided in the discussion of the change, each change in this category is by definition, providing additional restrictions to enhance plant safety. The change maintains requirements within the safety analyses and licensing basis. Therefore, this change does not involve a significant reduction in a margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATION
ITS: SECTION 3.0 - LCO AND SR APPLICABILITY

L.1 CHANGE

In accordance with the criteria set forth in 10 CFR 50.92, ComEd has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   The application of the 25% extension to Required Action Completion Times which have a specified frequency on a periodic "once per" basis has been determined to not significantly degrade the reliability that results from performing the surveillance at a specified frequency. As stated in Generic Letter 87-09, "The vast majority of surveillances do in fact demonstrate that systems or components are operable." Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   The possibility of a new or different kind of accident from any accident previously evaluated is not created because the proposed change does not introduce a new mode of plant operation and does not involve physical modification to the plant.

3. Does this change involve a significant reduction in a margin of safety?

   The application of the 25% extension to Required Action Completion Times which have a specified frequency on a periodic "once per" basis has been determined to not significantly degrade the reliability that results from performing the surveillance at a specified frequency. As stated in Generic Letter 87-09, "The vast majority of surveillances do in fact demonstrate that systems or components are operable." Therefore, the proposed change does not involve a significant reduction in the margin of safety.

L.2 CHANGE

In accordance with the criteria set forth in 10 CFR 50.92, ComEd has evaluated this proposed Technical Specifications change and determined it does not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   The change does not result in any hardware or operating procedure changes. The Surveillance Frequencies are not assumed to be the initiator of any analyzed event. The change will not allow continuous operation such that a single failure will preclude the associated function from being performed. This change will allow delay in the entry into the Required Actions for up to 24 hours when a Surveillance Requirement has not been performed within the requirements of proposed SR 3.0.2. It is overly conservative to assume that systems or components are inoperable when a Surveillance Requirement has not been performed. In fact, the opposite is the case; the vast majority of Surveillance Requirements performed demonstrate that systems or components are operable. When a Surveillance Requirement is not performed within the requirements of SR 3.0.2, it is primarily a question of operability that has not been verified by the performance of the Surveillance Requirement. Therefore, the probability of occurrence or the consequences of an accident previously evaluated are not significantly increased since the most likely outcome of performing a Surveillance is that it does in fact demonstrate the system or component is operable.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   The possibility of a new or different kind of accident from any accident previously evaluated is not created because the proposed change does not introduce a new mode of plant operation and does not involve physical modification to the plant.

3. Does this change involve a significant reduction in a margin of safety?

   The increased time allowed for the performance of a Surveillance Requirement discovered to have not been performed within the requirements of SR 3.0.2 is acceptable based on the small probability of an event requiring the associated component. The requested allowance will provide sufficient time to perform the missed Surveillances in an orderly manner. Without the 24 hour delay, it is possible that the missed Surveillance would force a plant shutdown; thus, the plant could be shutting down while the missed Surveillance is being performed. As a result of the

L.2 CHANGE

3. (continued)

delay, the potential for human error will be reduced. As such, any reduction in the margin of safety will be insignificant and offset by the benefit gained in plant safety due to avoidance of unnecessary plant transients and shutdowns.

ENVIRONMENTAL ASSESSMENT
ITS: SECTION 3.0 - LCO AND SR APPLICABILITY

In accordance with the criteria set forth in 10 CFR 50.21, ComEd has evaluated this proposed Technical Specification change for identification of licensing and regulatory actions requiring environmental assessment, determined it meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9) and as such, has determined that no irreversible consequences exist in accordance with 10 CFR 50.92(b). This determination is based on the fact that this change is being proposed as an amendment to a license issued pursuant to 10 CFR which changes a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or which changes an inspection or a surveillance requirement, and the amendment meets the following specific criteria:

1. The amendment involves no significant hazards consideration.

   As demonstrated in the No Significant Hazards Considertion, this proposed amendment does not involve any significant hazards consideration.

2. There is no significant change in the type or significant increase in the amounts of any effluents that may be released offsite.

   The proposed change will not result in changes in the operation or configuration of the facility. There will be no change in the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste, nor will the proposal result in any change in the normal radiation levels within the plant. Therefore, there will be no change in the types or significant increase in the amounts of any effluents released offsite resulting from this change.

3. There is no significant increase in individual or cumulative occupational radiation exposure.

   The proposed change will not result in changes in the operation or configuration of the facility which impact radiation exposure. There will be no change in the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste, nor will the proposal result in any change in the normal radiation levels within the plant. Therefore, there will be no increase in individual or cumulative occupational radiation exposure resulting from this change.

Therefore, based upon the above evaluation, ComEd has concluded that no irreversible consequences exist with the proposed change.