Attachment 1:

- **1.0 – Vol. 6**
- **2.0 – Vol. 6**
- **3.0 – Vol. 6**

- **3.1 – Vol. 7**
- **3.2 – Vol. 7**

- **3.5 – Vol. 12**

- **3.9 – Vol. 17**

- **3.10 – Vol. 18**
- **4.0 – Vol. 18**

ATTACHMENT 1

REVISION D
ITS CHAPTER 1.0, CHAPTER 2.0, SECTION 3.0, SECTION 3.1,
SECTION 3.2, SECTION 3.5, SECTION 3.9, SECTION 3.10, AND
CHAPTER 4.0

SUMMARY OF CHANGES TO ITS CHAPTER 1.0

05/29/01

SUMMARY OF CHANGES TO ITS SECTION 1.0 - REVISION D

Source of Change	Summary of Change	Affected Pages
TSTF-52, R3	Deletes the definition of "La" from the ITS on the basis that "La" is adequately defined in Appendix J and in the Primary Containment Leakage Rate Testing Program description	ITS mark-up p 1.1-4 JFD CLB3 (JFDs p 1 of 4), JFD TA1 (JFDs p 4 of 4)
TSTF-205, R3	Channel Calibration, Channel Functional Test & Logic System Functional Test Definitions are revised to eliminate the ambiguity that the word "required" could include the entire list of components rather than just be representative of the types of components to be tested. Furthermore, these Definitions are revised to eliminate the conflict between the verbatim reading of the above proposed change and the phrase "...the entire channel/relay is tested..."	CTS mark-up, pp 2,3 of 12 DOC A7 (DOCs pp 3,4 of 14); DOC A8 (DOCs p 4 of 14); DOC A9 (DOCs p 4 of 14) ITS mark-up pp 1.1-1, 1.1-2, 1.1-5 JFD TA2 (JFDs p 4 of 4) Retyped ITS pp 1.1-1, 1.1-2, 1.1-4
TSTF-284, R3	Provides examples to better understand the difference between "met" & "performed"	ITS mark-up pp 1.4-1, 1.4-2, insert 1.4-2, 1.4-5, insert 1.4-5a, insert 1.4-5b JFD TA3 (JFDs p 4 of 4) Retyped ITS pp 1.4-1, 1.4-2, 1.4-7, 1.4-8
TSTF-332, R1	Isolation Instrumentation Response Time & Reactor Protection System Response Time Definitions are revised to be consistent with the allowances provided by NEDO-32291 A, titled "System Analysis for the Elimination of Selected Response Time Testing Requirements."	CTS mark-up, pp 3, 4, 8, 9 of 12 DOC A14 (DOCs p 6 of 14) ITS mark-up pp 1.1-4, insert 1.1-4, 1.1-6, insert 1.1-6 JFD TA4 (JFDs p 4 of 4) Retyped ITS p 1.1-3, 1.1-5
RAI 1.0-01	Provides Administrative DOC to justify previously proposed changes to MFLD & MCPR Definitions	CTS mark-up, pp 2, 3 of 12 DOC A10 (DOCs p 5 of 14)
RAI 1.0-02	Revises definition of "Dose Equivalent I-131" to be consistent with License Amendment Number 261	CTS mark-up, pp 7,10 of 12
RAI 1.0-03	Provides additional justification that there are no CTS ECCS Instrumenation Response Time Testing Requirements.	JFD CLB1 (JFDs p 1 of 4)
RAI 1.0-04	Provides reference to License Amendment Number 235 which approves use of NEDO -32291-A, titled "System Analysis for the Elimination of Selected Response Time Testing Requirements" for JAF.	JFD CLB2 (JFDs p 1 of 4)

05/29/01

SUMMARY OF CHANGES TO ITS SECTION 1.0 - REVISION D

Source of Change	Summary of Change	Affected Pages
License Amendments No. 261 & 268	Revises CTS mark-up to include latest CTS Amendment(s).	CTS mark-up pp 10, 11 of 12

ITS CONVERSION PACKAGE

SECTION 1.0 - USE AND APPLICATION

JAFNPP
IMPROVED TECHNICAL SPECIFICATION (ITS)

CONVERSION PACKAGE

Section 1.0 - USE AND APPLICATION

Table of Contents

The markup package for each Specification contains the following:

1. **Markup of the current Technical Specifications (CTS);**
2. **Discussion of changes (DOCs) to the CTS;**
3. **No significant hazards consideration (NSHC) for each less restrictive change (Lx) to the CTS;**
4. **Markup of the corresponding NUREG-1433 Specification;**
5. **Justification of differences (JFDs) from the NUREG; and**
6. **Retyped proposed Improved Technical Specifications (ITS).**

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 3.1

REACTIVITY CONTROL SYSTEMS

MARKUP OF CURRENT TECHNICAL SPECIFICATIONS (CTS)

1.0 USE AND APPLICATION

A1

TECHNICAL SPECIFICATIONS

1.1 1.0 DEFINITIONS

The succeeding frequently used terms are explicitly defined so that a uniform interpretation of the specifications may be achieved.

A2

A. Reportable Event - A reportable event shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.

A3

Add "NOTE"

A2

fuel, sources, or reactivity control

B. Core Alteration - The act of moving any component in the region above the core support plate, below the upper grid and within the shroud. Normal control rod movement with the control rod drive hydraulic system is not defined as a core alteration. Normal movement of in-core instrumentation is not defined as a core alteration.

5

L1

reactor vessel with the vessel head removed and fuel in the vessel.

provided there are no fuel assemblies in the associated core cell.

SRMs, LPRMs, IRMs, TIPs, or Special movable detectors (including undervessel replacement)

1

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

Amendment No. 1, 32, 110, 134

Chapter 1.0

1.0 (cont'd)

D. Cold Condition - Reactor coolant temperature ≤212°F.

D. Hot Standby Condition - Hot Standby condition means operation with coolant temperature >212°F, the Mode Switch in Start-up/Hot Standby and reactor pressure <1,040 psig.

E. Immediate - Immediate means that the required action will be initiated as soon as practicable considering the safe operation of the unit and the importance of the required action.

F. Instrumentation

1. Functional Test - A functional test is the manual operation or initiation of a system, subsystem, or component to verify that it functions within design tolerances (e.g., the manual start of a core spray pump to verify that it runs and that it pumps the required volume of water).

2. Instrument Channel Calibration - An instrument channel calibration means the adjustment of an instrument signal output so that it corresponds, within acceptable range, and accuracy, to a known value(s) of the parameter which the instrument monitors. Calibration shall encompass the entire instrument channel including actuation, alarm or trip.

3. Instrument Channel - An instrument channel means an arrangement of a sensor and auxiliary equipment required to generate and transmit to a trip system a single trip signal related to the plant parameter monitored by that instrument channel.

4. Instrument Check - An instrument check is a qualitative determination of acceptable operability by observation of instrument behavior during operation. This determination shall include, where possible, comparison of the instrument with other independent instruments measuring the same variable.

5. Instrument Channel Functional Test - An instrument channel functional test means the injection of a simulated signal into the instrument primary sensor where possible to verify the proper instrument channel response, alarm and/or initiating action.

6. Primary Containment Isolation Actuation Instrumentation Response Time for Main Steam Line Isolation is the time interval which begins when the monitored parameter exceeds the isolation actuation set point at the channel sensor and ends when the Main Steam Isolation Valve solenoids are de-energized (16A-K14, K16, K51, & K52 pilot solenoid relay contacts open). The response time may be measured in one continuous step or in overlapping segments, with verification that all components are tested.

7. 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.

8. Protective Action - An action initiated by the Protection System when limiting safety system setting is reached. A protective action can be at a channel or system level.

1.1 A4 MODE 4 Table 1.1-1 MODE 2 M1 and all reactor vessel head closure bolts fully tensioned M2 or refuel Section 1.3 A5 A1 L4 as close to the sensor as practicable A6 A16 A7 Insert 2-1 L3 or actual shall be that initiation Insert 2-3 required for OPERABILITY A1 indication and status to other indications or status derived from Channel channel parameter OPERABILITY A8 Insert 2-2 from until L2 A6 TSTF-205

INSERT 2-1 (A7)

all devices in the channel required for channel OPERABILITY and ~~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~~. TSTF-205, R3

INSERT 2-2 (A8)

of all devices in the channel required for channel 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.~~ TSTF-205, R3

INSERT 2-3 (A16)

receives the isolation signal (e.g., de-energization of the main steam isolation valve solenoids). The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC. TSTF-332, R1

(A14)

[1.1]

1.0 (cont'd)

9. Protective Function - A system protective action which results from the protective action of the channels monitoring a particular plant condition.

10. Reactor Protection System Response Time is the time interval which begins when the monitored parameter exceeds the reactor protection trip set point at the channel sensor and ends when the scram pilot valve solenoids are de-energized (05A-K14 scram contactors open). The response time may be measured in one continuous step or in overlapping segments, with verification that all components are tested. (L2)

any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC. (A14)

11. Simulated Automatic Actuation - Simulated automatic actuation means applying a simulated signal to the sensor to actuate the circuit in question.

12. Trip System - A trip system means an arrangement of instrument channel trip signals and auxiliary equipment required to initiate action to accomplish a protective 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 of two trip systems. (A19)

13. Sensor - A sensor is that part of a channel used to detect variations in a monitored variable and to provide a suitable signal to logic.

G. Limiting Conditions for Operation (LCO)

The limiting conditions for operation specify the minimum acceptable levels of system performance necessary to assure safe startup and operation of the facility. When these conditions are met, the plant can be operated safely and abnormal situations can be safely controlled. (A6)

H. Limiting Safety System Setting (LSSS)

The limiting safety system settings are settings on instrumentation which initiate the automatic protective action at a level such that the safety limits will not be exceeded. The region between the safety limit and these settings represent margin with normal operation lying below these settings. The margin has been established so that with proper operation of the instrumentation safety limits will never be exceeded.

[Table 1.1-1]

I. Modes of Operation (Operational Mode) (A24)

Mode - The reactor mode is established by the Mode Selector Switch. The modes include shutdown, refuel, startup/hot standby, and run which are defined as follows: (A17)

position, average reactor coolant temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.

TSTF-332

Table 1.1-1 (A24)

Chapter 1.0 (A1)

~~1.0 (cont'd)~~

Reactor Mode Switch Position — add Shutdown (M1)

MODE 5 Refueling (b) (M1)

1. ~~Refuel~~ Mode - The reactor is in the refuel mode when the Mode Switch is in the Refuel Mode position. When the Mode Switch is in the Refuel position, the refueling interlocks are in service. (A25) [Reactor Mode Switch Position]

MODE 1 Power Operation (M4)

2. ~~Run~~ Mode - In this mode the reactor system pressure is at or above 850 psig and the Reactor Protection System is energized with APRM protection (excluding the 15 percent high flux trip) and the RBM interlocks in service. (A26)

MODE 3 MODE 4 (A24)

3. Shutdown Mode - The reactor is in the shutdown mode when the Reactor Mode Switch is in the Shutdown Mode position. [Reactor Mode Switch Position]

MODE 3 Hot Shutdown (a) (M1)

a. Hot shutdown means conditions as above with reactor coolant temperature >212°F.

MODE 4 Cold Shutdown (a) (M1)

b. Cold shutdown means conditions as above with reactor coolant temperature ≤212°F. ~~and the reactor vessel vented.~~ (L5)

MODE 2 Startup

4. Startup/Hot Standby - In this mode the low pressure main steam line isolation valve closure trip is bypassed, the Reactor Protection System is energized with APRM (15 percent) and IRM neutron monitoring (A27)

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

(b) One or more reactor vessel head closure bolts less than fully tensioned. (M1)

system trips and control rod withdrawal interlocks in service. (A27)

J. Operable - 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). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal ~~and~~ or emergency electrical power sources, cooling ~~or~~ and seal water, lubrication or 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). (A11)

K. Operating - Operating means that a system or component is performing its intended functions in its required manner. (A20)

L. Operating Cycle - Interval between the end of one refueling outage and the end of the subsequent refueling outage. (A21)

M. Primary Containment Integrity - Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied: (A22) See ITS: 3.6.1.1, 3.6.1.2, 3.6.1.3

1. All manual containment isolation valves on lines connected to the Reactor Coolant System or containment which are not required to be open during plant accident conditions are closed. These valves may be

See ITS: 3.6.1.3

total reactor core heat transfer rate to the reactor coolant of 2536 MWt A12

A1

1.1 1.0 (cont'd)

See ITS: 3.6.1.3

opened to perform necessary operational activities.

See ITS: 3.6.1.2 — 2. At least one door in each airlock is closed and sealed.

3. All automatic containment isolation valves are operable or de-activated in the isolated position.

See ITS: 3.6.1.3 — 4. All blind flanges and manways are closed. See ITS: 3.6.1.1

thermal

A12 — N. Rated Power - Rated power refers to operation at a reactor power of 2,536 MWt. This is also termed 100 percent power and is the maximum power level authorized by the operating license. Rated steam flow, rated coolant flow, rated nuclear system pressure, refer to the values of these parameters when the reactor is at rated power (Reference 1).

Table 1.1-1 MODES 1 and 2 — O. Reactor Power Operation - Reactor power operation is any operation with the Mode Switch in the Startup/Hot Standby or Run position with the reactor critical and above 1 percent rated thermal power. M4

A6 — P. Reactor Vessel Pressure - Unless otherwise indicated, reactor vessel pressures listed in the Technical Specifications are those measured by the reactor vessel steam space sensor.

A21 — Q. Refueling Outage - Refueling outage is the period of time between the shutdown of the unit prior to refueling and the startup of the Plant subsequent to that refueling.

A23 — R. Safety Limits - The safety limits are limits within which the reasonable maintenance of the fuel cladding integrity and the reactor coolant system integrity are assured. Violation of such a limit is cause for unit shutdown and review by the Nuclear Regulatory Commission before resumption of unit operation. Operation beyond such a limit may not in itself result in serious consequences but it indicates an operational

A23

deficiency subject to regulatory review.

A22

S. Secondary Containment Integrity - Secondary containment integrity means that the reactor building is intact and the following conditions are met: See ITS: 3.6.4.1

1. At least one door in each access opening is closed.

2. The Standby Gas Treatment System is operable. See ITS: 3.6.4.3

3. All automatic ventilation system isolation valves are operable or secured in the isolated position. See ITS: 3.6.4.2

T. Surveillance Frequency Notations / Intervals

The surveillance frequency notations / intervals used in these specifications are defined as follows:

Notations	Intervals	Frequency
D	Daily	At least once per 24 hours
W	Weekly	At least once per 7 days
M	Monthly	At least once per 31 days
Q	Quarterly or every 3 months	At least once per 92 days
SA	Semiannually or every 6 months	At least once per 184 days
A	Annually or Yearly	At least once per 366 days
18M	18 Months	At least once per 18 months (550 days)
R	Operating Cycle	At least once per 24 months (731 days)
S/U		Prior to each reactor startup
NA		Not applicable

A18

see ITS Section 5.5

Amendment No. ~~14, 134, 188, 227, 233,~~ 239

[1.1] 1.0 (cont'd)

U. Thermal Parameters (A1)

[1.1] 1. Minimum critical power ratio (MCPR) ~~Minimum value of~~ the ratio of that power in a fuel assembly which is calculated to cause some point in that fuel assembly to experience boiling transition to the actual assembly operating power ~~for all fuel assemblies in the core~~

A10: Shall be the smallest CPR that exists in the core for each type of fuel. The CPR is ... by application of the appropriate correlation(s)

2. ~~Fraction of Limiting Power Density - The ratio of the linear heat generation rate (LHGR) existing at a given location to the design LHGR.~~

3. Maximum Fraction of Limiting Power Density - The Maximum Fraction of Limiting Power Density (MFLPD) is the highest value existing in the core of the Fraction of Limiting Power Density (FLPD).

4. ~~Transition Boiling - Transition boiling means the boiling region between nucleate and film boiling. Transition boiling is the region in which both nucleate and film boiling occur intermittently with neither type being completely stable.~~ (A6)

V. ~~Electrically Disarmed Control Rod~~

~~To disarm a rod drive electrically, the four amphenol type plug connectors are removed from the drive insert and withdrawal solenoids rendering the rod incapable of withdrawal. This procedure is equivalent to valving out the drive and is preferred. Electrical disarming does not eliminate position indication.~~ (A6)

W. ~~Deleted~~

X. Staggered Test Basis

A Staggered Test Basis shall consist of:

a. ~~A test schedule for "n" systems, subsystems, trains or other designated components obtained by dividing the specified test interval into "n" equal subintervals.~~

b. ~~The testing of one system, subsystem, train or other designated component at the beginning of each subinterval.~~

Y. ~~Rated Recirculation Flow~~

~~That drive flow which produces a core flow of 77.0 x 10^6 lb/hr.~~ (A6)

(A13) 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.

Chapter 1.0

A1

3.1 LIMITING CONDITIONS FOR OPERATION

3.1 REACTOR PROTECTION SYSTEM

Applicability:

Applies to the instrumentation and associated devices which initiate the reactor scram.

Objective:

To assure the operability of the Reactor Protection System.

Specification:

A. The setpoints and minimum number of instrument channels per trip system that must be operable for each position of the reactor mode switch, shall be as shown in Table 3.1-1.

4.1 SURVEILLANCE REQUIREMENTS

4.1 REACTOR PROTECTION SYSTEM

Applicability:

Applies to the surveillance of the instrumentation and associated devices which initiate reactor scram.

Objective:

To specify the type of frequency of surveillance to be applied to the protection instrumentation.

Specification:

A. Instrumentation systems shall be functionally tested and calibrated as indicated in Tables 4.1-1 and 4.1-2 respectively.

The response time of the reactor protection system trip functions listed below shall be demonstrated to be within its limit once per 24 months. Neutron detectors are exempt from response time testing. Each test shall include at least one channel in each trip system. All channels in both trip systems shall be tested within two test intervals.

1. Reactor High Pressure (02-3PT-55A, B, C, D) *
2. Drywell High Pressure (05PT-12A, B, C, D)
3. Reactor Water Level-Low (L3) (02-3LT-101A, B, C, D) *
4. Main Steam Line Isolation Valve Closure (29PNS-80A2, B2, C2, D2) (29PNS-86A2, B2, C2, D2)
5. Turbine Stop Valve Closure (94PNS-101, 102, 103, 104)
6. Turbine Control Valve Fast Closure (94PS-200A, B, C, D)
7. APRM Fixed High Neutron Flux
8. APRM Flow Referenced Neutron Flux

See ITS: 3.3

1.1 RPS INSTRUMENTATION RESPONSE TIME

* Sensor is eliminated from response time testing for the RPS actuation logic circuits. Response time testing and conformance to the test acceptance criteria for the remaining channel components includes trip unit and relay logic.

A14

Amendment No. ~~227, 233, 235~~, 241

Page 8 of 12

TSTF-332

REVISION D

Chapter 1.0

A1

3.2 LIMITING CONDITIONS FOR OPERATION

3.2 INSTRUMENTATION

Applicability:

Applies to the plant instrumentation which either (1) initiates and controls a protective function, or (2) provides information to aid the operator in monitoring and assessing plant status during normal and accident conditions.

Objective:

To assure the operability of the aforementioned instrumentation.

Specifications:

A. Primary Containment Isolation Functions

When primary containment integrity is required, the limiting conditions of operation for the instrumentation that initiates primary containment isolation are given in Table 3.2-1.

4.2 SURVEILLANCE REQUIREMENTS

4.2 INSTRUMENTATION

Applicability:

Applies to the surveillance requirement of the instrumentation which either (1) initiates and controls protective function, or (2) provides information to aid the operator in monitoring and assessing plant status during normal and accident conditions.

Objective:

To specify the type and frequency of surveillance to be applied to the aforementioned instrumentation.

Specifications:

A. Primary Containment Isolation Functions

Instrumentation shall be functionally tested and calibrated as indicated in Table 4.2-1. System logic shall be functionally tested as indicated in Table 4.2-1.

The response time of the main steam isolation valve actuation instrumentation isolation trip functions listed below shall be demonstrated to be within their limits once per 24 months. Each test shall include at least one channel in each trip system. All channels in both trip systems shall be tested within two test intervals.

1. MSIV Closure - Reactor Low Water Level (L1) *
(02-3LT-57A,B and 02-3LT-58A,B)
2. MSIV Closure - Low Steam Line Pressure *
(02PT-134A,B,C,D)
3. MSIV Closure - High Steam Line Flow *
(02DPT-116A-D, 117A-D, 118A-D, 119A-D)

See ITS: 3.3

[1.1 ISOLATION INSTRUMENTATION RESPONSE TIME]

A14

* Sensor is eliminated from response time testing for the MSIV actuation logic circuits. Response time testing and conformance to the test acceptance criteria for the remaining channel components includes trip unit and relay logic.

A1

RADIOLOGICAL EFFLUENT TECHNICAL SPECIFICATION

[1.1] 1.0 DEFINITIONS

A. Dose Equivalent I-131

The Dose Equivalent I-131 is the concentration of I-131 (microcuries/gram) which 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 International Commission on Radiological Protection Publication 30 (ICRP-30), "Limits for Intake by Workers" or in NRC Regulatory Guide 1.109, Revision 1, October 1977.

that / shall be that

RAI 1.0-02

B. Instrument Channel Calibration
See Appendix A Technical Specifications.

C. Instrument Channel Functional Test
See Appendix A Technical Specifications.

D. Instrument Check
See Appendix A Technical Specifications.

E. Logic System Function Test
See Apppendix A Technical Specifications.

F. Members(s) of the Public
Member(s) of the Public includes all persons who are not occupationally associated with the facilities on the Entergy Nuclear FitzPatrick, LLC (ENF)/(NMPC) Niagara Mohawk Power Corporation site. This category does not include employees of the companies, its contractors or vendors. Also excluded from this category are persons who enter the site to service equipment or to make deliveries. This category does include persons who use portions of the site for recreational, occupational, or other purposes not associated with the plants.

G. Offgas Treatment System
The Offgas Treatment System is the system designed and installed to: reduce radioactive gaseous effluents by collecting primary coolant system offgases from the main condenser; and, providing for delay of the offgas for the purpose of reducing the total radioactivity prior to release to the environment.

A6

H. Offsite Dose Calculation Manual (ODCM)
The ODCM describes the methodology and parameters to be used in the calculation of offsite doses due to radioactive gaseous and liquid effluents and in the calculation of gaseous and liquid effluents monitoring instrumentation alarm/trip set points and in the conduct of the environmental monitoring program.

See ITS 5.5

I. Operable
See Appendix A Technical Specifications.

A6

A1

J. Process Control Program (PCP)

The PCP is a document which identifies the current formulas, sampling methods, analyses, tests, and determinations used to control the processing and packaging of solid radioactive wastes. The PCP controls these activities in such a way as to assure compliance with 10 CFR 20, 10 CFR 61, 10 CFR 71 and other applicable regulatory requirements governing the disposal of the radioactive waste.

K. Rated Thermal Power

See Rated Power, Appendix A Technical Specifications.

A6

L. Site Boundary

The Site Boundary is that line beyond which the land is not owned, leased, or otherwise controlled by ENF, ENO or NMPC. Refer to Figure 5.1-1 for the map of the site boundary with regard to liquid and gaseous releases.

See ITS Chapter 4.0

M. Solidification

Solidification is the conversion of wet wastes into a form that meets shipping and burial ground requirements.

N. Source Check

A Source Check is the qualification assessment of channel response when the channel sensor is exposed to a source of increased radioactivity.

O. Treatment

Any process which effectively reduces the concentration of radioactive material per unit measure released to the environment. This includes such processes as filtration, evaporation/condensation, settling/decanting, and solidification.

P. Unrestricted Area

An unrestricted area shall be any area at or beyond the site boundary access to which is not controlled by ENF or ENO for purposes of protection of individuals from exposure to radiation and radioactive material, or any area within the site boundary used for residential quarters or for industrial, commercial, institutional and/or recreational purposes.

The definition of unrestricted area used in implementing the Radiological Effluent Technical Specifications has been expanded over that in 10 CFR 20.3(a)(17). The unrestricted area boundary may coincide with the exclusion (fenced) area boundary, as defined in 10 CFR 100.3(a), but the unrestricted area does not include areas over water bodies. The concept of unrestricted areas, established at or beyond the site boundary, is utilized in the Limiting Conditions for Operation to keep levels of radioactive materials in liquid and gaseous effluents as low as is reasonably achievable, pursuant to 10 CFR 50.36a.

A6

AMD #268

Z. **Top of Active Fuel**

The Top of Active Fuel, corresponding to the top of the enriched fuel column of each fuel bundle, is located 352.5 inches above vessel zero, which is the lowest point in the inside bottom of the reactor vessel. (See General Electric drawing No. 919D690BD.)

AA. **Rod Density**

Rod density is the number of control rod notches inserted expressed as a fraction of the total number of control rod notches. All rods fully inserted is a condition representing 100 percent rod density.

AB. **Purge-Purging**

Purge or Purging is the controlled process of discharging air or gas from a confinement in such a manner that replacement air or gas is required to purify the confinement.

AC. **Venting**

Venting is the controlled process of releasing air or gas from a confinement in such a manner that replacement air or gas is not provided or required.

(A6)

(M3) (A5)

add 1.2 Logical Connectives
1.3 Completion Times
1.4 Frequency

[1.1] (AD) **Core Operating Limits Report (COLR)**

This report is the plant-specific document that provides the core operating limits for the current operating cycle. These cycle-specific operating limits shall be determined for each reload cycle in accordance with Specification ~~6.9.A.4~~ 5.6.5. Plant operation within these operating limits is addressed in individual Technical Specifications.

AE. **References**

1. General Electric Report NEDC-32016P-1, "Power Uprate Safety Analysis for James A. FitzPatrick Nuclear Power Plant," April 1993 (proprietary), including Errata and Addenda Sheet No. 1, dated January 1994.

(A12)

(A15)

add the following definitions:

ACTIONS
AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)
LEAKAGE,
LINEAR HEAT GENERATION RATE (LHGR)

SHUTDOWN MARGIN (SDM)
THERMAL POWER
TURBINE BYPASS SYSTEM RESPONSE TIME

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 1.0

USE AND APPLICATION

DISCUSSION OF CHANGES (DOCs) TO THE CTS

DISCUSSION OF CHANGES
ITS CHAPTER: 1.0 - USE AND APPLICATION

ADMINISTRATIVE CHANGES

A1 In the conversion of the James A. Fitzpatrick Nuclear Power Plant (JAFNPP) Current Technical Specification (CTS) to the proposed plant specific Improved Technical Specifications (ITS) certain wording preferences or conventions are adopted which do not result in technical changes. Editorial changes, reformatting, and revised numbering are adopted to make the ITS consistent with the conventions in NUREG-1433, "Standard Technical Specifications, General Electric Plants, BWR/4," Revision 1 (i.e., Improved Standard Technical Specifications (ISTS)).

A2 The CTS 1.0 introductory note, which discusses the reasons for the Definitions, is replaced with a more specific "Note" in ITS Section 1.1, before the first definition. This change is a presentation preference, and is an administrative change.

A3 The CTS 1.0.A definition of Reportable Event is not retained in the ITS. Since this definition only provides reference to 10 CFR 50.73, it is not necessary that it be repeated in the ITS. This change is administrative.

A4 The CTS 1.0.C definition of Cold Condition has been incorporated into ITS Table 1.1-1, MODES, as MODE 4, and the CTS 1.0.I.3.b definition of Cold Shutdown has been incorporated into ITS Table 1.1-1, as MODE 4. Table 1.1-1 retains the intent of the Cold Condition and Cold Shutdown definitions as used in the CTS, therefore, this change is considered administrative.

A5 Proposed Section 1.2, Logical Connectors, Section 1.3, Completion Times, and Section 1.4, Frequency, are being added to the ITS. These additions aid the understanding and use of the new format and style of presentation. Some conventions in applying the Tech Specs to unique situations have previously been the subject of debate and interpretation by the licensee and the NRC staff. Because the guidance in these proposed sections is presented in the ISTS as approved by the NRC staff, and the guidance is not a specific deviation from anything in the CTS, these additions are considered to be administrative. The following is a description of the added sections:

SECTION 1.2 - LOGICAL CONNECTORS

Proposed Section 1.2 provides specific examples of the logical connectors "AND" and "OR" and the numbering scheme associated with their use. This revision is being proposed consistent with the ISTS.

ADMINISTRATIVE CHANGES

A5 (continued)

SECTION 1.3 - COMPLETION TIMES

Proposed Section 1.3 provides proper use and interpretation of Completion Times. The proposed section also provides specific examples that aid the user in understanding Completion Times. The proposed Completion Times Section is consistent with the ISTS.

SECTION 1.4 - FREQUENCY

Proposed Section 1.4 provides proper use and interpretation of Surveillance Frequencies. The proposed section also provides specific examples that aid the user in understanding Surveillance Frequencies. The proposed Frequency Section is consistent with the ISTS.

In addition, the current definition of "Immediate" in CTS 1.0.E has been deleted since the concept is incorporated into Section 1.3.

A6 The following CTS/RETS definitions have been deleted because the CTS/RETS that use these definitions are not retained in the ITS or the equivalent ITS Specification will not use the defined term. The technical aspects of these changes are addressed in the Discussion of Changes (DOCs) for those specifications where the defined term or phrase is used in the ITS.

CTS definitions: Functional Test, Instrument Channel, Protective Action, Protective Function, Simulated Automatic Action, Sensor, Limiting Condition for Operation (LCO), Limiting Safety System Setting (LSSS), Reactor Vessel Pressure, Transition Boiling, Electrically Disarmed Control Rod, Rated Recirculation Flow, Top of Active Fuel, Rod Density, Purge-Purging, Venting.

RETS definitions: Instrument Channel Calibration, Instrument Channel Functional Test, Instrument Check, Logic System Functional Test, Member(s) of the Public, Off Gas Treatment System, Operable, Process Control Program (PCP), Rated Thermal Power, Site Boundary, Solidification, Source Check, Treatment, Unrestricted Area.

The removal of a definition that is not used in the ITS is an administrative change because it has no impact on the implementation of any existing requirement not addressed in the ITS development and has no adverse impact on safety.

ADMINISTRATIVE CHANGES

A7 The current definition of CTS 1.0.F.2, Instrument Channel Calibration, requires the tests to be performed on "the entire instrument channel including actuation, alarm or trip functions." As a requirement for OPERABILITY of a Technical Specification channel, not all channels will have a required actuation, alarm or trip function. Conversely, some channels may have a required display function. This is the intent of the existing wording, and therefore, the word "required" has been included in the ITS definition of CHANNEL CALIBRATION to more accurately reflect this intent. Since this change provides clarification only and does not technically change the requirements of the test, this change is administrative.

Specific CHANNEL CALIBRATION requirements for RTDs or thermocouples are added to the CTS 1.0.F.2 definition of Instrument Channel Calibration. 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 transmitter (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 which 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 types of sensors, the appropriate calibration at the Frequencies specified in the 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 channels and making the necessary adjustments to ensure range and accuracy. This "verification of OPERABILITY" of the sensing element (RTDs or thermocouples) is considered to be documentation of the currently accepted method for calibration of these instruments. As such, this change is administrative.

TSTF-205

CTS 1.0.F.2 definition of Instrument Channel Calibration does not provide an allowance to perform the test "by means of any series of sequential, overlapping, or total channel steps."

ADMINISTRATIVE CHANGES

A7 (continued)

These words are included in the ITS definition of CHANNEL CALIBRATION. Since this change provides clarification only and does not technically change the requirements of the test (the entire channel is still calibrated), this change is administrative.

A8 The CTS 1.0.F.5 definition of Instrument Channel Functional Test states that "... injection of a simulated signal into the instrument primary sensor where possible to verify the proper instrument channel response, alarm and/or initiating action." The ITS definition of CHANNEL FUNCTIONAL TEST states that it "... shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable (L3) to verify OPERABILITY, of all devices in the channel required for channel OPERABILITY."

The CTS 1.0.F.5 definition of Instrument Channel Functional Test includes proper response of "...alarm and/or initiating action." As a requirement for OPERABILITY of a Technical Specification channel, not all channels may have the same functions and therefore, the word "required" has been included in the ITS definition of CHANNEL FUNCTIONAL TEST to more accurately reflect this intent. Since this change provides clarification only and does not technically change the requirements of the test, this change is administrative.

CTS 1.0.F.5 definition of Instrument Channel Functional Test does not provide an allowance to perform the test "by means of any series of sequential, overlapping, or total channel steps." These words are included in the ITS definition of CHANNEL FUNCTIONAL TEST. Since this change provides clarification only and does not technically change the requirements of the test (the entire channel is still tested), this change is administrative.

A9 CTS 1.0.F.7 definition of LSFT requires a "test of all required logic components (i.e., all required relays and contacts, trip units, solid state logic elements, etc.)." As a requirement for OPERABILITY of a Technical Specification channel, not all channels will have a required relay or contact, trip unit, or solid state logic element. Conversely, some channels may have a required display function. This is the intent of the existing wording, and therefore, the words "all logic components required for OPERABILITY" have been used in the ITS definition of LOGIC SYSTEM FUNCTIONAL TEST to more accurately reflect this intent. Since this change provides clarification only and does not technically change the requirements of the test, this change is administrative.

TSTF-205, R3 edit

RAI 1.0-01

ADMINISTRATIVE CHANGES

A10 The CTS 1.0.U.1 and 1.0.U.2 definitions are revised for clarity and for consistency with ISTS wording between these two definitions that provide minimum and maximum values for specific parameters, e.g., MCPR and MFLPD. The MCPR clarification provided is specifying that the calculation is accomplished "by application of the appropriate correlations(s)." The consistency is provided by first indicating that the minimum CPR is "the smallest CPR that exists in the core for each type of fuel," and then define the CPR. This change also negates the need for the phrase at the end of the CTS definition that the minimum is "for all fuel assemblies in the core" since that is now clarified in the first sentence that describes the minimum CPR. A second change for consistency is to incorporate the FLPD definition into the MFLPD definition. These wording revisions do not change the technical requirements, but only the presentation format. Thus, this change is administrative.

A11 The CTS 1.0.J Definition of Operable requires the availability of, "... all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment ..." The ITS definition of OPERABLE - OPERABILITY specifies, "... all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment ..." This is an administrative change because operability requirements for normal and emergency power sources are clearly addressed in CTS 3.0.E. These requirements allow only the normal or the emergency electrical power source to be OPERABLE, provided all the redundant systems, subsystems, trains, components, and devices (redundant to the systems, subsystems, trains, components, and devices with an inoperable power source) are OPERABLE. This effectively changes the current "and" to an "or." The existing requirements (CTS 3.9) are incorporated into ITS 3.8.1 ACTIONS for when a normal (offsite) or emergency (diesel generator) power source is inoperable. Therefore, the ITS definition now uses the word "or" instead of the current word "and." Since the ITS requirements are effectively the same as the CTS requirements, this change is considered administrative. In ITS 3.8.1, new times are provided to perform the determination of OPERABILITY of the redundant systems, et. al. This change is discussed in the Discussion of Changes for ITS: 3.8.1.

ADMINISTRATIVE CHANGES

A12 The CTS 1.0.N definition of Rated Power (including Reference 1) refers to both a steady state nuclear steam supply output and reactor core thermal power. The ITS definition of RATED THERMAL POWER includes only reactor core thermal power, consistent with NUREG-1433, Revision 1. This is an administrative change which provides clarification consistent with the CTS reference to reactor power of 2536 MWt and the Facility Operating License, Paragraph 2.C.(2), specification of Maximum Power Level as reactor core power level.

A13 The CTS 1.0.X definition of Staggered Test Basis specifies testing "n" systems, subsystems, channels or other designated components within one surveillance interval where "n" is the total number of systems, subsystems, channels or other designated components. The ITS specifies testing "n" systems, subsystems, channels or other designated components within "n" surveillance intervals. The impact of the change in the definition is evaluated for each applicable surveillance where a change is determined to be either more or less restrictive. Therefore, this is an administrative change with no adverse impact on safety. This change is consistent with NUREG-1433, Revision 1.

TSTF-332

A14 The CTS 1.0.F.6 and 1.0.F.10 definitions for isolation instrumentation response time and for reactor protection system response time do not contain allowance to exclude testing for sensors if the requirements of NEDO-32291-A and Supplement 1 are satisfied. However, CTS 4.1.A footnote * does provide this allowance and specifically identifies the instrumentation as approved for such exclusion for the reactor protection system. Similarly, CTS 4.2.A footnote * provides this allowance for the isolation instrumentation associated with the main steam isolation valves. The relocation of this exclusion from the instrumentation specifications to the definitions does not change the technical requirements, but only the presentation format. Thus, this change is administrative.

A15 During the ITS development certain definitions which are not part of the CTS have been added consistent with NUREG-1433, Revision 1. These definitions are:

ACTIONS
AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)
LEAKAGE
LINEAR HEAT GENERATION RATE (LHGR)
SHUTDOWN MARGIN (SDM)
THERMAL POWER
TURBINE BYPASS SYSTEM RESPONSE TIME

ADMINISTRATIVE CHANGES

A15 (continued)

Discussion of the technical aspects of these additions is addressed in each Specification where the definition is used. Therefore, these changes are administrative, and have no adverse impact on safety.

A16 The CTS 1.0.F.6 Primary Containment Isolation Actuation Instrumentation Response Time definition for the Main Steam Isolation Valves (MSIV) has been modified to address the ISOLATION INSTRUMENTATION RESPONSE TIME of all isolation valves. At the current time the ISOLATION INSTRUMENTATION RESPONSE TIME is only required for the MSIVs since the safety analysis indicates that the other valves are not sensitive to instrumentation response time. This change will provide additional flexibility by allowing the definition of ISOLATION INSTRUMENTATION RESPONSE TIME to apply to all isolation valves and if any future safety analysis indicates that additional valves must be tested the appropriate changes will be made to the surveillances of proposed ITS 3.3.6.1. Since the actual technical requirements are not changing, this change is considered administrative.

A17 The CTS 1.0.I definition of Mode only includes the position of the reactor mode switch. The ITS definition of MODE also includes applicability for the average reactor coolant temperature, the reactor vessel head closure bolt tensioning, and that fuel is in the vessel. These added clarifying statements are considered administrative since they are conveyed in the definitions describing the different Modes.

A18 The CTS 1.0.T definition of Surveillance Frequency Notation/Intervals is deleted since all Surveillance Requirement Frequencies in the JAFNPP ITS are numerically specified. Since any changes to the current Frequencies are addressed in the Discussion of Changes for the associated ITS, this deletion is considered administrative. This change is consistent with NUREG-1433, Revision 1.

ADMINISTRATIVE CHANGES

A19 The CTS 1.0.F.12 Trip System definition is proposed to be deleted. This definition is not used to provide specific requirements found in the CTS or ITS (i.e., the CTS and ITS do not require a certain number of Trip Systems to be OPERABLE, but use "Trip System" as a header column to describe how many channels are required per Trip System). The removal of this definition is considered administrative, with no impact of its own. The deletion of this definition is consistent with NUREG-1433, Revision 1.

A20 The CTS 1.0.K definition of Operating is deleted because this state of a system does not need to be explicitly defined when considering whether or not the design function can be met. Whether a system is Operating or shutdown does not provide relief concerning Operability requirements. The definition of OPERABLE - OPERABILITY is sufficient in this case. Operability is assumed until the system, etc., is found to be inoperable by failure anytime or during the performance of the SR at the specified Frequencies. The deletion of this definition is consistent with NUREG-1433, Revision 1. The removal of a definition is considered administrative with no impact of its own.

A21 The definitions of CTS 1.0.L Operating Cycle and CTS 1.0.Q Refueling Outage, which are used as Surveillance Requirement Frequencies in the CTS, are deleted since the nomenclature is no longer used in the ITS. All Surveillance Requirement Frequencies in the ITS are directly specified (e.g., 24 months).

A22 The definitions of CTS 1.0.M, Primary Containment Integrity and CTS 1.0.S, Secondary Containment Integrity are deleted from the ITS. This is done because of the confusion associated with these definitions compared to their use in their respective LCOs. 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 (ITS 3.6). Therefore, the change is an administrative presentation preference adopted by the ISTS.

A23 The definition of CTS 1.0.R Safety Limits is deleted since it is duplicative of the information and requirements provided in 10 CFR 50.36 and in proposed Chapter 2.0, Safety Limits. The intent and requirements of this definition are not changed in 10 CFR 50.36 and in the proposed wording of Chapter 2.0.

A24 CTS 1.0.I includes the different Modes of Operation (Operational Mode) of the plant (Refuel Mode, Run Mode, Shutdown Mode, and Startup/Hot Standby Mode). These CTS requirements (or definitions) have been

ADMINISTRATIVE CHANGES

A24 (continued)

converted into ITS Table 1.1-1 titled "MODES". The CTS definition of Mode has been modified as discussed in A17. Additional changes to the existing Modes within CTS 1.0.I are discussed in A25, A26, A27, M1, M4, and L5. This change simply changes the format of the current definitions into a Table consistent with the conventions of the ITS and therefore is considered an administrative change.

A25 The statement in CTS 1.0.I.1 (the definition for the Refuel Mode) that the refueling interlocks are in service when the mode switch is in the Refuel position has been deleted. This statement does not specify any specific requirements with respect to the Operability of the Refuel interlocks. The current requirements in CTS 3.10 specify the Operability requirements concerning the refueling interlocks. Any changes to the current requirements in CTS 3.10 are discussed in the Discussion of Changes for ITS 3.9.1, 3.9.2, 3.9.3, 3.10.5 and 3.10.6, therefore the removal of this statement in the definition of the Refuel Mode (see Table 1.1-1 of ITS) is considered administrative. This change is consistent with NUREG-1433, Revision 1.

A26 The details in CTS 1.0.I.2 (definition of Run Mode) that the Reactor Protection System is energized with APRM protection (excluding the 15 percent high flux trip) and the RBM interlocks are in service when in the Run Mode have been deleted. The requirements for the Operability of the Reactor Protection and RBM are currently addressed in CTS 1/2.1, 2.2 and 3/4.1.A for RPS and CTS 3/4.2.C and 3/4.3.B.5 for RBM interlocks. Any changes to the current requirements will be discussed in the Discussion of Changes for ITS 3.3.1.1 and 3.3.2.1, therefore, the deletion of these details are considered administrative. This change is consistent with NUREG-1433, Revision 1.

A27 The details in CTS 1.0.I.4 (the definition of the Startup/Hot Standby Mode), that when the mode switch is in the Startup/Hot Standby position, the low pressure main steam line isolation valve closure trip is bypassed, the Reactor Protection System is energized with APRM (15 percent), and IRM neutron monitoring system trips and control rod withdrawal interlocks are in service have been deleted. The requirements for the Operability of the Reactor Protection and control rod withdrawal interlocks are currently addressed in CTS 1/2.1, 2.2 and 3/4.1.A for RPS and CTS 2.1, 3/4.2.C, 3/4.3.B.3 and 3/4.3.B.5 for control rod blocks. Any changes to the current requirements will be discussed in the Discussion of Changes for ITS 3.3.1.1 and 3.3.2.1, therefore the deletion of these details are considered administrative. This change is consistent with NUREG-1433, Revision 1.

TECHNICAL CHANGES - MORE RESTRICTIVE

M1 The status of the reactor vessel head closure bolts (all fully tensioned or one or more not fully tensioned) has been added to the CTS definitions of Cold Condition (CTS 1.0.C), Refuel Mode (CTS 1.0.I.1), Hot Shutdown (CTS 1.0.I.3.a) and Cold Shutdown (CTS 1.0.I.3.b). The added head closure status in the CTS definitions (ITS Table 1.1-1, MODES 3, 4, and 5) addresses plant conditions satisfying more than one MODE. The intent of this change is to provide clarity and completeness in avoiding any potential misinterpretation, and as such could be considered administrative. However, since the change eliminates 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:

- Clarifying the CTS definition of Hot Shutdown (ITS MODE 3) and Cold Shutdown (ITS MODE 4) with a footnote stating "all reactor vessel head closure bolts fully tensioned" and clarifying the definition of Refueling (ITS MODE 5), derived from the CTS definition of Refuel Mode, with a footnote stating "one or more reactor vessel head closure bolts less than fully tensioned" eliminates the overlap in defined MODES when the mode switch is in the "Shutdown" position with the vessel head detensioned. It is not the intent of the ITS to allow an option of whether to apply ITS MODE 4 (Cold Shutdown) applicable LCOs or to apply ITS MODE 5 (Refueling) applicable LCOs. This change precludes an unacceptable interpretation. This change has no adverse impact on safety.

M2 CTS 1.0.D includes the definition of the Hot Standby Condition. This condition includes coolant temperature of > 212°F, the Mode Switch in Startup/Hot Standby, and reactor pressure < 1040 psig. In the ITS, this Condition is known as MODE 2 and is reflected in ITS Table 1.1-1 and includes both the Refuel (with all reactor vessel head closure bolts fully tensioned as identified in footnote a) and Startup/Hot Standby positions of the Reactor Mode Switch. The ITS definition of MODE 2 does not include any restrictions on pressure or temperature. Therefore, whenever the Mode Switch is in the Refuel (with all reactor vessel head closure bolts fully tensioned) or the Startup/Hot Standby positions the plant will be considered to be in MODE 2. The removal of these requirements from the definition and the addition of the Refuel position will in effect increase the overall Applicability of those LCOs which reference this condition. Thus, the LCOs will also be Applicable when temperature is ≤ 212°F or pressure is ≥ 1040 psig and the Mode Switch is in the Refuel (with all reactor vessel head closure bolts fully tensioned) position. Since the Applicability of the CTS Specifications will be broader in the ITS, this change is considered more restrictive.

TECHNICAL CHANGES - MORE RESTRICTIVE

M2 (continued)

This change is necessary to ensure the LCOs are applied when intended to be applicable to ensure safe operation of the facility.

M3 ITS Section 1.3 describes Completion Times in order to direct the ITS user on how to correctly apply Completion Times in the ITS. One specific requirement in Section 1.3 describes is the use of Completion Times for the case in which two subsystems become inoperable concurrently without a note which allows the Conditions to be entered separately. In this case, if one subsystem were restored (within the Completion Time for two subsystems inoperable), the shorter of 24 hours or the remainder of the subsystem's completion time (for one subsystem inoperable) is allowed to restore the other subsystem to OPERABLE status. Currently, depending on the situation, JAFNPP may take the remainder of the Completion Time of the subsystem which is inoperable even if this time is greater than 24 hours. Thus, the addition of this more restrictive requirement of Section 1.3 is necessary to maintain consistency with NUREG-1433, Revision 1. This change has no adverse impact on safety.

M4 CTS 1.0.0 defines "Reactor Power Operation" to be any operation with the Reactor Mode Switch in the Startup/Hot Standby (M2) or Run position with the reactor critical and above 1% rated thermal power. In addition, CTS 1.0.I and 1.0.I.2 define the Run Mode to be when the Reactor Mode Switch is in the Run position and reactor system pressure is at or above 850 psig. In the ITS, these explicit definitions are not retained, however; the CTS LCOs which currently reference these Modes will use the terms MODE 1 (Reactor Mode Switch in Run) and MODE 2 (Reactor Mode Switch in Startup/Hot Standby) as reflected in ITS Table 1.1-1. Since the requirement that the reactor must be critical and above 1% rated thermal power has been deleted, and since the pressure limitation has been removed for the Run Mode Applicability, this change is considered more restrictive on plant operations since the CTS LCOs which currently reference these definitions will be applicable even if the reactor is not critical, even if thermal power is at or below 1% rated thermal power, and even if reactor pressure is below 850 psig. This change is necessary to ensure the LCOs are applied to ensure the safety analysis assumptions can be met. This change is consistent with NUREG-1433, Revision 1.

TECHNICAL CHANGES - LESS RESTRICTIVE (GENERIC)

None

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L1 The CTS 1.0.B definition of Core Alteration is revised so that the term will only apply to those activities that create the potential for a reactivity excursion and warrant special precautions or controls in the ITS. Currently, a Core Alteration is defined as "the act of moving any component in the region above the core support plate, below the upper grid and within the shroud." The normal control rod movement (using the control rod hydraulic system) and the movement of in-core instrumentation are specifically exempted from the definition. The reason an activity should be exempted from the definition is that the activity does not create the potential for a reactivity excursion and therefore special precautions or controls are not warranted. However, movement of control rods with the control rod hydraulic system, even though exempted from the current definition, does create the potential for a reactivity excursion and is an activity that warrants special precautions (Refueling Interlocks, CTS 3.10.A).

The ITS definition for CORE ALTERATIONS is intended to identify those activities that affect reactivity within the reactor vessel with the head removed and fuel in the vessel. The new definition is consistent with the UFSAR 14.5.4 analysis which identifies those activities which may result in a positive reactivity interaction (control rod removal error during refueling, fuel assembly insertion error during refueling). As a result, the term CORE ALTERATIONS will identify those activities that create the potential for a reactivity excursion and warrant special controls and precautions. Therefore, under the revised definition, in-vessel movement of instruments, cameras, lights, tools, etc., will not be classified as CORE ALTERATIONS since the movement of these components will not result in a change in core reactivity. However, the normal control rod movement with the head removed is included in the proposed definition of CORE ALTERATIONS because the potential for a reactivity excursion exists.

It should also be noted that control rod movement is not considered a CORE ALTERATION provided there are no fuel assemblies in the associated core cell. The removal of the four fuel bundles surrounding a control rod very significantly reduces the reactivity worth of the associated control rod to the point where removal of that rod no longer has the potential to cause a reactivity excursion. This fact is recognized in the design of the control rod velocity limiter which precludes removal of a control rod from the top of the core prior to the removal of the four associated fuel bundles.

In addition, the proposed definition has also been modified by providing an allowance that the suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position. This is the

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L1 (continued)

current interpretation of an action that requires suspension of Core Alterations, since it is not desirable to immediately stop moving a component (e.g., stop the movement with the component suspended from the refueling grapple over the core). Therefore, this part of the change is considered administrative.

L2 The specific contact numbers in definitions CTS 1.0.F.6, Primary Containment Isolation Actuation Instrumentation Response Time, and in CTS 1.0.F.10, Reactor Protection System Response Time, are proposed to be deleted. It is unnecessary for the Technical Specifications to prescribe component identification numbers. These details are not necessary to ensure the associated response time testing is performed correctly. The proposed definitions in the ITS, the requirements of ITS 3.3.1.1 and 3.3.6.1 (which describes the instrumentation) and the associated Surveillance Requirements are adequate to ensure the required instrumentation is maintained Operable within the required response time. The Bases also provides a description of the type of instrumentation required by each of these specifications.

L3 The CTS 1.0.F.5 definition of Instrument Channel Functional Test requires the injection of a simulated signal into the instrument. The words "or actual" in reference to the injected signal, have been included in the ITS definition of CHANNEL FUNCTIONAL TEST. Some CHANNEL FUNCTIONAL TESTS can be 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 the existing requirement, which limits use to a simulated signal, will not affect the performance of the channel. OPERABILITY can be adequately demonstrated in either case since the channel itself cannot discriminate between "actual" or "simulated".

L4 The CTS 1.0.F.5 definition of Instrument Channel Functional Test requires, the injection of a simulated signal "into the instrument primary sensor where possible." This requirement has been changed in the ITS definition of CHANNEL FUNCTIONAL TEST to allow the signal to be injected "as close to the sensor as practicable." 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 to prevent their initiation during the test, or increases the scope of the test to include multiple tests

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L4 (continued)

of the other logic channels. Either method significantly increases the difficulty of performing the surveillance. Allowing initiation of the signal close to the sensor provides a complete test of the logic channel while significantly reducing the probability of undesired initiation. In addition, the sensor is still being checked during a CHANNEL CALIBRATION.

L5 The CTS 1.0.I.3.b definition of Cold Shutdown requires the reactor vessel to be vented. The ITS definition of MODE 4 does not include this requirement. ITS 3.4.8, Residual Heat Removal - Cold Shutdown, provides more prescriptive requirements to assure adequate decay heat removal capabilities in MODE 4. Also, the ITS 3.4.9, RCS Pressure and Temperature (P/T) Limits, provides requirements to preclude the reactor vessel from exceeding pressure limits. Therefore, the need to have reactor vessel vented in the definition is unnecessary.

TECHNICAL CHANGES - RELOCATIONS

None

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 1.0

USE AND APPLICATION

NO SIGNIFICANT HAZARDS CONSIDERATION (NSHC) FOR LESS RESTRICTIVE CHANGES

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L1 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change identified as "Technical Changes - Less Restrictive" and has determined that it does not involve a significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10 CFR 50.92. The bases for the determination that the proposed change does not involve a significant hazards consideration are discussed below.

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

   The definition of Core Alteration is revised so that the term will only apply to those activities that create the potential for a reactivity excursion. The movement of a control rod in a loaded cell with the Control Rod Drive Hydraulic System will now be considered a Core Alteration since there is a potential for a reactivity excursion. On the other hand, the proposed change will allow movement of a control rod in a defueled cell and the in-vessel movement of instruments, cameras, lights, tools, etc... to not be considered CORE ALTERATIONS. The removal of the four fuel assemblies surrounding a control rod significantly reduces the reactivity worth of the associated control rod to the point where removal of that rod no longer has the potential to cause a reactivity excursion. In addition, the in-vessel movement of instruments, cameras, lights, tools, etc... do no result create the potential for a reactivity excursion. The probability of an unexpected positive reactivity insertion event is not significantly increased by the in-vessel movement of a control rod in a defueled cell or during the movement of these other components. Therefore, this change does not significantly increase the probability of an accident previously analyzed. The intent of the change is to ensure those activities that create the potential for a reactivity excursion are included in the CORE ALTERATION definition. This will ensure that when CORE ALTERATIONS are performed and a potential for a reactivity excursion exists the appropriate protection is available to mitigate the consequences. Since those events which can cause a reactivity excursion are included in the definition the consequences of the UFSAR safety analysis will be bounded by the existing analysis. Therefore, this change does not significantly increase the 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 physical modification to the plant. The movement of a control rod in a loaded cell (one or more fuel

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L1 CHANGE

2. (continued)

assemblies) with the Control Rod Drive Hydraulic System will now be considered a Core Alteration since there is a potential for a reactivity excursion. On the other hand, the proposed change will allow movement of a control rod in a defueled cell and the in-vessel movement of instruments, cameras, lights, tools, etc... to not be considered CORE ALTERATIONS since these operations have a very low potential for a reactivity excursion. The removal of the four fuel assemblies surrounding a control rod significantly reduces the reactivity worth of the associated control rod to the point where removal of that rod no longer has the potential to cause a reactivity excursion. Movement of a control rod, other than with the normal control rod drive, involves unlatching and withdrawal/insertion from over-vessel handling equipment. These activities necessitate, by design, the removal of the associated four fuel assemblies (which will be a Core Alteration). With this configuration (no fuel in the cell), the proposed change will allow movement of a "reactivity control component (the associated control rod)," while not imposing requirements unique to CORE ALTERATIONS. (Note: Other requirements, such as those for handling loads over irradiated fuel, will remain applicable.) Since the reactivity effects of this control rod movement are more than compensated for by the initial removal of the fuel assemblies, the allowance to not include this activitiy in the ITS does not create the possibility of a new or different kind of accident from any accident previously evaluated. In addition, the movement of instruments, cameras, lights, tools, etc...will no longer be considered to be a CORE ALTERATION since these operations do not cause a reactivity excursion. These activities will be controlled by plant procedures and do not warrant special control for activities which have the potential to cause a reactivity excursion. Therefore, the removal of this portion from the definition will not cause this activity to 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 definition of Core Alteration is revised so that the term will only apply to those activities that create the potential for a reactivity excursion. The movement of a control rod in a loaded cell (one or more fuel assemblies) with the Control Rod Drive Hydraulic System will now be considered a Core Alteration since there is a potential for a reactivity

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L1 CHANGE

3. (continued)

excursion. On the other hand, the proposed change will allow movement of a control rod in a defueled cell and the in-vessel movement of instruments, cameras, lights, tools, etc... to not be considered CORE ALTERATIONS since these operations have a very low potential for a reactivity excursion. The removal of the four fuel assemblies surrounding a control rod significantly reduces the reactivity worth of the associated control rod to the point where removal of that rod no longer has the potential to cause a reactivity excursion. The intent of the change is to ensure those activities that create the potential for a reactivity excursion are included in the CORE ALTERATION definition. This will ensure that when CORE ALTERATIONS are performed and a potential for a reactivity excursion exists the appropriate protection is available to mitigate the consequences (e.g. secondary containment Operability). Since those activities which can cause a reactivity excursion are included in the definition the consequences of the UFSAR safety analysis will be bounded by the existing analysis. The margin of safety is in fact increased as a result of this change since the definition better defines those activities which can cause a reactivity excursion. The Applicability of the current Technical Specifications which reference Core Alterations will in effect be expanded to cover all postulated activities which may significantly increase core reactivity. Therefore, the margin of a safety is not significantly reduced as a result of this change.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L2 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change identified as "Technical Changes - Less Restrictive" and has determined that it does not involve a significant hazards consideration. This determination has been performed in accordance with the criteria set forth in 10 CFR 50.92. The bases for the determination that the proposed change does not involve a significant hazards consideration are discussed below.

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

   The proposed change would delete the Instrument I.D. numbers from the CTS definitions. The Reactor Protection System (RPS) Instrumentation and the Primary Containment Isolation Instrumentation are not considered as an initiators of any previously evaluated accident. The proposed change will not impact the ability of the RPS or Primary Containment Isolation Instrumentation to perform its intended function. Therefore, the proposed change will not increase the probability of any accident previously evaluated. Additionally, while the RPS and Primary Containment Isolation Instrumentation are assumed to mitigate accidents, this change does not affect the capability of the RPS and Primary Containment Isolation Instrumentation to initiate a reactor scram or isolation, respectively when needed. Therefore, the proposed change will not increase the consequences of any 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 physical modification to the plant. The RPS and Primary Containment Isolation Instrumentation provides signals to initiate a reactor scram or isolation, respectively. However, under the proposed change, Operability of the RPS and Primary Containment Isolation Instrumentation are not impacted. Therefore, it 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 would delete the Instrument I.D. numbers from the CTS definitions. However, these details are not necessary to ensure the RPS and Primary Containment Isolation Instrumentation is maintained Operable within the associated response time requirements. The requirements of ITS 3.3.1.1 and ITS 3.3.6.1 (which describes the instrumentation) and associated Surveillance Requirements are adequate

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L2 CHANGE

3. (continued)

to ensure the required instrumentation are maintained Operable within the response time requirements. The proposed change will not impact the ability of the RPS and Primary Containment Isolation Instrumentation to perform its associated function. Therefore, this change does not involve a significant reduction in a margin of safety.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L3 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conclusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   The words "or actual" in reference to the injected signal, have been added to the definition of CHANNEL FUNCTIONAL TEST. This does not impose a requirement to create an "actual" signal, nor does it eliminate any restriction on producing an "actual" signal. While creating an "actual" signal could increase the probability of an event, existing procedures and 10 CFR 50.59 control of revisions to them dictate the acceptability of generating this signal. The proposed change does not affect the procedures governing plant operation or the acceptability of creating these signals; it simply allows such a signal to be utilized in evaluating the acceptance criteria for OPERABILITY of an instrument channel. Therefore, the change does not involve a significant increase in the probability of an accident previously evaluated.

   Since the function of the channel remains unaffected, and no changes result to any setpoints, the change does not involve a significant increase in the 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?

   Use of an "actual" signal instead of the existing requirement, which limits use to a simulated signal, will not affect the performance of the channel. OPERABILITY is adequately demonstrated in either case since the channel itself cannot discriminate between "actual" or "simulated." Therefore, the change does not involve a significant reduction in a margin of safety.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L4 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conclusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   Testing of instrument channels 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.

TECHNICAL CHANGES - LESS RESTRICTIVE (SPECIFIC)

L5 CHANGE

New York Power Authority has evaluated the proposed Technical Specification change and has concluded that it does not involve a significant hazards consideration. Our conclusion is in accordance with the criteria set forth in 10 CFR 50.92. The bases for the conclusion that the proposed change does not involve a significant hazards consideration are discussed below.

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

   The probability and consequences of an accident is not affected since the venting requirement is not assumed to be an initiator or mitigator of any accident previously evaluated. The deletion of the venting requirement for MODE 4 will not affect the probability or consequences of an accident because decay heat removal capability and reactor vessel pressurization concerns are adequately covered in the Residual Heat Removal (RHR) – Cold Shutdown Specification (LCO 3.4.8) and the RCS Pressure and Temperature (P/T) Limits Specification (LCO 3.4.9). 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?

   The proposed changes do not introduce any new mode of plant operation and will not involve any physical modifications to the plant. The deletion of the venting requirement for MODE 4 will not place the plant in an unanalyzed condition because temperature will be controlled via the RHR – Cold Shutdown and RCS Pressure/Temperature Limits Specifications (LCO 3.4.8 and LCO 3.4.9). Therefore, this change will 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 venting of the reactor vessel in MODE 4 for decay heat removal and reactor vessel pressurization concerns are adequately addressed by the requirements in LCO 3.4.8 and LCO 3.4.9. The safety analysis is unaffected because the current analysis assumptions are still being maintained. Therefore, this change does not involve a significant reduction in a margin to safety.

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 1.0

USE AND APPLICATION

MARKUP OF NUREG-1433, REVISION 1 SPECIFICATION

[1.0] 1.0 USE AND APPLICATION

[1.0] 1.1 Definitions

[1.0] [DOC A2]

---NOTE---

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

	Term	Definition
[A15]	ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
[A15]	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) for all the fuel rods in the specified bundle at the specified height divided by the number of fuel rods in the fuel bundle (assembly) (at the height). [DB3] [PA5]
[1.0.F.2]	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. [TA2: all devices in the channel required for channel OPERABILITY and] 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. [TSTF-205]
[1.0.F.4]	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

1.1 Definitions

	CHANNEL CHECK (continued)	status derived from independent instrument channels measuring the same parameter.
[1.0.F.5]	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.
TA2	of all devices in the channel required for channel OPERABILITY	TSTF-205
[1.0.B]	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: (PA1) 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.
[1.0.AD]	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.
[RETS 1.0.A]	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)

REVISION D

CTS

1.1 Definitions

[RETS 1.0.A]

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"].

INSERT 1.1-1 — CLB7 — CLB7 — RAI 1.0-02

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.

CLB1

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].

DB1

CLB2 — INSTRUMENTATION

[1.0.F.6]

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,

CLB2

(continued)

receives the isolation signal (e.g., de-energization of the main steam isolation valve solenoids).

REVISION D

RAI 1.0-02

INSERT 1.1-1

... International Commission on Radiological Protection Publication 30 (ICRP-30), "Limits for Intake by Workers" or in ...

CTS 1.1 Definitions (INSTRUMENTATION) (CLB2)

ISOLATION SYSTEM RESPONSE TIME (continued) — overlapping, or total steps so that the entire response time is measured. ← INSERT 1.1-2 (TA4)

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). (TA1)

TSTF-332

TSTF-52

[DOC A15] 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;

d. Pressure Boundary LEAKAGE

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

[A15] [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.] (DB2)

(continued)

REVISION D

TSTF-332

INSERT 1.1-2

In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC.

CTS

1.1 Definitions (continued)

[1.0.F.7]	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.
[1.0.U.3] [1.0.U.2]	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.
[1.0.U.1]	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.
[1.0.I]	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.
[1.0.J]	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).
	PHYSICS TESTS	PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation.

TA2 required for OPERABILITY CLB4 PA2 type X1 TSTF-205

(continued)

REVISION D

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. X1
	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." X2
[1.0.N]	RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of [2436] 2536 MWt. CLB5
[1.0.F.10]	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 channel sensor until de-energization of the scram pilot valve solenoids. 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. ← INSERT 1.1-3 TA4
[A15]	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.

TSTF-332

(continued)

REVISION D

TSTF-332

INSERT 1.1-3

In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC.

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.

[1.0.X] 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.

[A15] THERMAL POWER

THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant. X3

[A15] 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.

[A15]

[1.0.I]

[1.0.C]

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
4	Cold Shutdown(a)	Shutdown	≤ [200] ← 212
5	Refueling(b)	Shutdown or Refuel	NA

CLB6

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

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

REVISION D

1.0 USE AND APPLICATION

[A5]

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)

[A5] 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)

[A5]

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.

[A5]

1.0 USE AND APPLICATION

1.3 Completion Times

PA4

PURPOSE

The purpose of this section is to establish the Completion Time convention and to provide guidance for its use.

plant

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 Times(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 (plant) 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 (plant) is not within the LCO Applicability. PA4

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 not 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

[AS] 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 extensions do 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. PA1

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)

1.3 Completion Times (continued)

[A5] 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)

1.3 Completion Times

[A5] 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

[A5] 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

[A5] 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~~ 12 hours — PA3 ~~72~~ 12 hours

(continued)

1.3 Completion Times

[A5] 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

[A5]

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)

1.3 Completion Times

[A5] 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

[A5] 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. Place channel in trip PA3	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

[A5] 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 complete within the first 8 hour interval. If Required Action A.1 is followed and the Required Action is not met within the Completion Time (plus the extension allowed by SR 3.0.2), Condition B is entered. If Required Action A.2 is followed and the Completion Time of 8 hours is not met, Condition B is entered.

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

(continued)

1.3 Completion Times

[A5] 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

[A5]

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

[A5] PURPOSE

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

DESCRIPTION

Each Surveillance Requirement (SR) has a specified Frequency in which the Surveillance must be met in order to meet the associated ~~LCO~~ Limiting Condition for Operation. An understanding of the correct application of the specified Frequency is necessary for compliance with the SR. PA1

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.~~ TA3 TSTF-284

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)

1.4 Frequency

[A5] INSERT 1.4-1 TA3

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.

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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

PA4 plant

(continued)

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INSERT 1.4-1

Some Surveillances contain notes that modify the Frequency of performance of the conditions during which the acceptance criteria must be satisfied. For these Surveillances, the MODE entry restrictions of SR 3.0.4 may not apply. Such a Surveillance is not required to be performed prior to entering a MODE or other specified condition in the Applicability of the associated LCO if any of the following three conditions are satified:

a. The Surveillance is not require to be met in the MODE or other specified condition to be entered; or

b. The Surveillance is required to be met in the MODE or other specified condition to be entered, but has been performed within the specified Frequency (i.e., it is current) and is known not to be failed; or

c. The Surveillance is required to be met, but not performed, in the MODE or other specified condition to be entered, and is known not to be failed.

Examples 1.4-3, 1.4-4, 1.4-5, and 1.4-6 discuss these special situations.

1.4 Frequency

[A5] 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.

plant PA4

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)

1.4 Frequency

[A5] 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)

1.4 Frequency

[A5] EXAMPLES

EXAMPLE 1.4-3 (continued) plant PA4

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.

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

plant PA4

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.

PA4 plant

TA3 INSERT 1.4-2

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INSERT 8 1.4-2

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EXAMPLES (continued)

EXAMPLE 1.4-5

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
-------------------NOTE------------------- Only required to be performed in MODE 1. --	
Perform complete cycle of the valve.	7 days

The interval continues, whether or not the unit (plant) operation is in MODE 1, 2, or 3 (the assumed Applicability of the associated LCO) between performances. PA4

As the Note modifies the required performance of the Surveillance, the Note is construed to be part of the "specified Frequency." Should the 7 day interval be exceeded while operation is not in MODE 1, this Note allows entry into and operation in MODES 2 and 3 to perform the Surveillance. The Surveillance is still considered to be performed within the "specified Frequency" if completed prior to entering MODE 1. Therefore, if the Surveillance were not performed within the 7 day (plus the extension allowed by SR 3.0.2) interval, but operation was not in MODE 1, 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 result in entry into MODE 1.

Once the unit (plant) reaches MODE 1, the requirement for the Surveillance to be performed within its specified Frequency applies and would require that the Surveillance had been performed. If the Surveillance were not performed prior to (entering) MODE 1, there would then be a failure to perform a Surveillance within the specified Frequency, and the provisions of SR 3.0.3 would apply. PA4

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INSERT 4 1.4-2 (continued)

EXAMPLE 1.4-[6] 7

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
-----------------NOTE----------------- Not required to be met in MODE 3. -------------------------------------- Verify parameter is within limits.	24 hours

Example 1.4-[6] 7 specifies that the plant requirements of this Surveillance do not have to be met while the unit is in MODE 3 (the assumed Applicability of the associated LCO is MODES 1, 2, and 3). 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), and the unit was in MODE 3, 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 to enter MODE 3, even with the 24 hour Frequency exceeded, provided the MODE change does not result in entry into MODE 2. Prior to entering MODE 2 (assuming again that the 24 hour Frequency were not met), SR 3.0.4 would require satisfying the SR. PA4

INSERT Page 1.4-5b

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 1.0

USE AND APPLICATION

JUSTIFICATION FOR DIFFERENCES (JFDs) FROM NUREG-1433, REVISION 1

RETENTION OF EXISTING REQUIREMENT (CLB)

RAI 1.0-03

CLB1 The definition of EMERGENCY CORE COOLING SYSTEM (ECCS) RESPONSE TIME does not exist in the CTS and is not adopted in the ITS. Since no requirements for ECCS response time testing exist in the CTS, no definition is necessary. The mechanical (valve) portion of the response time (i.e., valve stroke times) does not need to be included since it is redundant to the valve stroke time requirements specified in ASME Section XI, which is required by proposed Specification 5.5.7, the IST Program. In addition, generic studies have shown that instrumentation response time changes (increasing times), that could impact safety, do not normally vary such that they would not be detected during other required surveillances (e.g., Channel Calibrations). Since the addition of these tests would be a major burden, with little gain in safety, the SR's associated with these tests have not been added for any ECCS instrumentation.

edit

CLB2 The ISOLATION SYSTEM RESPONSE TIME definition has been modified to only include the instrumentation portion of the response time. The isolation valve portion of the response time (i.e., valve stroke times) does not need to be included since it is redundant to the valve stroke time requirements specified in ASME Section XI, which is required by proposed Specification 5.5.7, the IST Program. In addition, specific Surveillance Requirements in LCO 3.6.1.3, Primary Containment Isolation Valves, also require the valve stroke times to be verified. The requirement to include diesel generator starting and loading times has been deleted since they are redundant to the diesel generator Surveillance Requirements in LCO 3.8.1, AC Sources - Operating. This deletion was recommended in both NUREG-1366 and Generic Letter 93-05. Due to these changes, the definition has been renamed to be ISOLATION INSTRUMENTATION RESPONSE TIME. The definition of ISOLATION SYSTEM RESPONSE TIME is modified to reflect that response time testing is not required for any of the isolation systems and associated isolation actuation instrumentation, with the exception of the main steam isolation valves (MSIVs); and that the response time is the interval from the time when the monitored parameter exceeds its setpoint until the MSIV solenoids are de-energized, consistent with current licensing basis. These changes are consistent with the CTS 1.0.F.6 definition for isolation instrumentation response time and CTS 4.2.A footnote * as previously approved. The footnote in CTS 4.2.A which provides an allowance to exclude testing for sensors is based on the requirements of NEDO-32291-A and Supplement 1 as documented in Amendment 235.

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CLB3 Not Used

RETENTION OF EXISTING REQUIREMENT (CLB)

CLB4 The ISTS definition for MAXIMUM FRACTION OF LIMITING POWER DENSITY (MFLPD) has been retained in the JAFNPP consistent with the current licensing basis described in CTS 1.0.U.2 and 1.0.U.3.

CLB5 The ITS 1.1 definition for RATED THERMAL POWER (RTP) has been revised to reflect the JAFNPP current licensing basis value of 2536 MWt, as indicated in CTS 1.0.N.

CLB6 The ITS 1.1 Table 1.1-1, MODES, has been revised to reflect the JAFNPP current licensing basis values, of > 212°F for Hot Shutdown and ≤ 212°F for Cold Shutdown, as indicated in CTS 1.0.I.3.a and 1.0.I.3.b.

CLB7 The brackets have been removed and the thyroid dose conversion factors used will be those listed in NRC Regulatory Guide 1.109 or ICRP-30 consistent with the current definition.

PLANT-SPECIFIC WORDING PREFERENCE OR MINOR EDITORIAL IMPROVEMENT (PA)

PA1 Editorial changes have been made for enhanced clarity or to correct a grammatical/typographical error.

PA2 The definition of MINIMUM CRITICAL POWER RATIO (MCPR) is modified to refer to "type" of fuel, rather than "class" of fuel, consistent with plant specific terminology.

PA3 NUREG-1433, Revision 1, ISTS 1.3, Example 1.3-3 and Example 1.3-6 (ITS Example 1.3-3 and Example 1.3-6) are revised to more adequately reflect JAFNPP specific Technical Specifications ACTIONS rather than PWR specific Technical Specifications ACTIONS.

In Example 1.3-3, the Completion Times for Condition C are revised from "72 hours" to "12 hours." The JAFNPP ITS does not contain any Conditions similar to Example 1.3-3 Condition C; where the Completion Time for restoring multiple LCO requirements in a separate Condition is the same as the Completion Time for restoring a single LCO requirement. The discussion for Example 1.3-3 explains how multiple Condition entry works in the example, how separate Completion Times are tracked for each Condition in the example, and the proper application of the maximum Completion Time in Conditions A and B of the example. However, no Completion Times are ever made, with the exception of the maximum Completion Time, in the discussion of Example 1.3-3. The maximum Completion Time is not modified by this change.

PLANT-SPECIFIC WORDING PREFERENCE OR MINOR EDITORIAL IMPROVEMENT (PA)

PA3 (continued)

In Example 1.3-6, Required Action A.2 is revised from "Reduce THERMAL POWER to ≤ 50% RTP" to "Place channel in trip." The JAFNPP ITS does not contain any Conditions similar to Example 1.3-6 Condition A; where optional Required Actions exist for an instrument channel inoperable and one of the Required Actions is to reduce power. The discussion for Example 1.3-6 explains how multiple Condition entry works in the example, how the logical connector works in the example, and the proper application of the Completion Time for Required Actions A.1 and A.2 of the example. However, no reference to the specific details of the Required Actions is ever made in the discussion of Example 1.3-6. Specific references to the Completion Times are made in the discussion of Example 1.3-6. The Completion Times are not modified by this change.

The examples in Specification 1.3 are provided to help ensure the Completion Time convention in the JAFNPP ITS is understood and properly applied. No changes are required to the existing discussions of the examples as a result of these changes to the examples. Therefore, these changes do not impact the discussions of the associated examples. The changes are only to make the examples JAFNPP specific. As a result, the changes do not impact the examples' use in helping to ensure the ITS Completion Time convention is understood and properly applied.

PA4 Changes have been made (additions, deletions, and/or changes to the NUREG) to reflect the plant specific nomenclature.

PA5 Changes have been made to be consistent with other places in the ITS.

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB1 The definition of END OF CYCLE RECIRCULATION PUMP TRIP (EOC RPT) SYSTEM RESPONSE TIME is not adopted in the ITS. The EOC RPT feature is not part of the JAFNPP design.

DB2 The brackets have been removed and the ISTS 1.1 definition for LINEAR HEAT GENERATION RATE (LHGR) has been included at JAFNPP since ISTS 3.2.3, "LINEAR HEAT GENERATION RATE", is retained and the definition is used in other places in the Bases.

DB3 The brackets have been removed from the APLHGR definition and the definition retained as described in the NUREG. Reference to LHGR has been deleted since it is defined in a different definition. The definition is consistent with current interpretation of the use of the

PLANT-SPECIFIC DIFFERENCE IN THE DESIGN (DB)

DB3 (continued)

term in the CTS.

DIFFERENCE BASED ON AN APPROVED TRAVELER (TA)

TSTFs Ref'd

TA1 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler number 52, Revision 3, have been incorporated into the revised Improved Technical Specifications.

TA2 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler number 205, Revision 3, have been incorporated into the revised Improved Technical Specifications.

TA3 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler number 284, Revision 3, have been incorporated into the revised Improved Technical Specifications.

TA4 The changes presented in Technical Specification Task Force (TSTF) Technical Specification Change Traveler number 332, Revision 1, have been incorporated into the revised Improved Technical Specifications.

DIFFERENCE BASED ON A SUBMITTED, BUT PENDING TRAVELER (TP)

None

DIFFERENCE FOR OTHER REASONS THAN ABOVE (X)

X1 The ISTS 1.1 definition for PHYSICS TESTS is not retained at JAFNPP since it is not used. NUREG-1433, Revision 1, ISTS 3.10.9, "Recirculation Loops—Testing," referring to the PHYSICS TESTS definition, is not included in the JAFNPP ITS. The justification for differences from NUREG-1433, Revision 1, for ITS 3.10, Special Operations, addresses not including ISTS 3.10.9 in the JAFNPP ITS.

X2 The ISTS 1.1 definition for RCS PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR) is not retained in the JAFNPP ITS since NRC approved methodology for the development of RCS pressure and temperature limits does not exist at JAFNPP.

X3 The ISTS 1.1 definition for TURBINE BYPASS SYSTEM RESPONSE TIME has been included consistent with, NUREG-1433, Revision 1, and the inclusion of ITS 3.7.6 Main Turbine Bypass System (M1) at JAFNPP.

JAFNPP

IMPROVED STANDARD TECHNICAL SPECIFICATIONS (ISTS) CONVERSION

ITS: 1.0

USE AND APPLICATION

RETYPED PROPOSED IMPROVED TECHNICAL SPECIFICATIONS (ITS)

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 heat generation rate per unit length of fuel rod for all the fuel rods in the specified assembly at the specified height divided by the number of fuel rods in the fuel assembly 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 all devices in the channel required for channel OPERABILITY and 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.
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 status derived from independent instrument channels measuring the same parameter.

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(continued)

1.1 Definitions (continued)

TSTF-205

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 of all devices in the channel required for channel OPERABILITY. The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total channel steps.

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 plant 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.

RAI 1.0-02

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 conversion factors used for this calculation shall be those listed in International Commission on Radiological Protection Publication 30 (ICRP-30), "Limits for Intake by Workers," or in NRC Regulatory Guide 1.109, Rev. 1, 1977.

(continued)

1.1 Definitions (continued)

TSTF-332

ISOLATION INSTRUMENTATION RESPONSE TIME

The ISOLATION INSTRUMENTATION RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its isolation initiation setpoint at the channel sensor until the isolation valve receives the isolation signal (e.g., de-energization of the main steam isolation valve solenoids). The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC.

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;

d. Pressure Boundary LEAKAGE

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

(continued)

1.1 Definitions (continued)

TSTF-205

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 logic components required for OPERABILITY 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.
MINIMUM CRITICAL POWER RATIO (MCPR)	The MCPR shall be the smallest critical power ratio (CPR) that exists in the core for each type 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).

(continued)

1.1 Definitions (continued)

RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 2536 MWt.
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 channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC.
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 <u>n</u> Surveillance Frequency intervals, where <u>n</u> is the total number of systems, subsystems, channels, or other designated components in the associated function.

TSTF-332

(continued)

1.1 Definitions (continued)

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 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.

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	≤ 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 plant. 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 Times(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 plant 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 plant 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.

(continued)

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)

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.	12 hours 12 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. 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)

1.3 Completion Times

EXAMPLES (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 Place channel in trip.	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 complete within the first 8 hour interval. If Required Action A.1 is followed and the Required Action is not met within the Completion Time (plus the extension allowed by SR 3.0.2), Condition B is entered. If Required Action A.2 is followed and the Completion Time of 8 hours is not met, Condition B is entered.

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

(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. 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)

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.

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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.

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)

1.4 Frequency

DESCRIPTION (continued)

criteria. Some Surveillances contain notes that modify the Frequency of performance of the conditions during which the acceptance criteria must be satisfied. For these Surveillances, the MODE entry restrictions of SR 3.0.4 may not apply. Such a Surveillance is not required to be performed prior to entering a MODE or other specified condition in the Applicability of the associated LCO if any of the following three conditions are satified:

a. The Surveillance is not require to be met in the MODE or other specified condition to be entered; or

b. The Surveillance is required to be met in the MODE or other specified condition to be entered, but has been performed within the specified Frequency (i.e., it is current) and is known not to be failed; or

c. The Surveillance is required to be met, but not performed, in the MODE or other specified condition to be entered, and is known not to be failed.

Examples 1.4-3, 1.4-4, 1.4-5, and 1.4-6 discuss these special situations.

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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.

(continued)

1.4 Frequency

EXAMPLES (continued)

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 plant is outside the Applicability of the LCO). If the interval specified by SR 3.0.2 is exceeded while the plant 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 plant 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.

(continued)

1.4 Frequency

EXAMPLES (continued)

EXAMPLE 1.4-2

SURVEILLANCE REQUIREMENTS

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

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

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

(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 plant 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 plant 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 plant 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 plant 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.

(continued)

1.4 Frequency

EXAMPLES (continued)

EXAMPLE 1.4-5

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
-----------------NOTE----------------- Only required to be met in MODE 1. -------------------------------------- Perform complete cycle of the valve.	7 days

The interval continues, whether or not the plant operation is in MODE 1, 2, or 3 (the assumed Applicability of the associated LCO) between performances.

As the Note modifies the required performance of the Surveillance, the Note is construed to be part of the "specified Frequency." Should the 7 day interval be exceeded while operation is not in MODE 1, this Note allows entry into and operation in MODES 2 and 3 to perform the Surveillance. The Surveillance is still considered to be performed within the "specified Frequency" if completed prior to entering MODE 1. Therefore, if the Surveillance were not performed within the 7 day (plus the extension allowed by SR 3.0.2) interval, but operation was not in MODE 1, 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 result in entry into MODE 1.

Once the plant reaches MODE 1, the requirement for the Surveillance to be performed within its specified Frequency applies and would require that the Surveillance had been performed. If the Surveillance were not performed prior to entering MODE 1, three would then be a failure to perform a Surveillance within the specified Frequency, and the provisions of SR 3.0.3 would apply.

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(continued)

1.4 Frequency

EXAMPLES (continued)

EXAMPLE 1.4-6

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
-----NOTE----- Not required to be met in MODE 3. -----	
Verify parameter is within limits.	24 hours

Example 1.4-6 specifies that the requirements of this Surveillance do not have to be met while the plant is in MODE 3 (the assumed Applicability of the associated LCO is MODES 1, 2, and 3). 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), and the unit was in MODE 3, 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 to enter MODE 3, even with the 24 hour Frequency exceeded, provided the MODE change does not result in entry into MODE 2. Prior to entering MODE 2 (assuming again that the 24 hour Frequency were not met), SR 3.0.4 would require satisfying the SR.

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