ATTACHMENT 1

VOLUME 3

KEWAUNEE POWER STATION
IMPROVED TECHNICAL
SPECIFICATIONS CONVERSION

ITS CHAPTER 1.0
USE AND APPLICATION

Revision 0

LIST OF ATTACHMENTS

1. **ITS Chapter 1.0**

ATTACHMENT 1

ITS Chapter 1.0, Use and Application

Current Technical Specification (CTS) Markup and Discussion of Changes (DOCs)

1.0 1.0 USE AND APPLICATION

1.1 **1.0 DEFINITIONS**

The following terms are defined for uniform interpretation of the specifications.

a. QUADRANT-TO-AVERAGE POWER TILT RATIO

The QUADRANT-TO-AVERAGE POWER TILT RATIO is defined as the ratio of maximum-to-average of the upper excore detector currents or that of the lower excore detector currents, whichever is greater. If one excore detector is out-of-service, then the three in-service units are used in computing the average.

b. SAFETY LIMITS

SAFETY LIMITS are the necessary quantitative restrictions placed upon those process variables that must be controlled in order to reasonably protect the integrity of certain of the physical barriers which guard against the uncontrolled release of radioactivity.

c. LIMITING SAFETY SYSTEM SETTINGS

LIMITING SAFETY SYSTEM SETTINGS are setpoints for automatic protective devices responsive to the variables on which SAFETY LIMITS have been placed. These setpoints are so chosen that automatic protective actions will correct the most severe, anticipated abnormal situation so that a SAFETY LIMIT is not exceeded.

d. LIMITING CONDITIONS FOR OPERATION

LIMITING CONDITIONS FOR OPERATION are those restrictions on reactor operation, resulting from equipment performance capability that must be enforced to ensure safe operation of the facility.

e. OPERABLE-OPERABILITY

A system or component is OPERABLE or has OPERABILITY when it is capable of performing its intended function within the required range. The system or component shall be considered to have this capability when: (1) it satisfies the LIMITING CONDITIONS FOR OPERATION defined in TS 3.0, and (2) it has been tested periodically in accordance with TS 4.0 and has met its performance requirements.

Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that is required for the system or component to perform its intended function is also capable of performing their related support functions.

f. OPERATING

A system or component is considered to be OPERATING when it is performing the intended function in the intended manner.

A02

INSERT 1

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

A01

INSERT 2

calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.

A04

INSERT 3

specified safety function(s) and when

g. CONTAINMENT SYSTEM INTEGRITY

CONTAINMENT SYSTEM INTEGRITY is defined to exist when: A03

1. The non-automatic Containment System isolation valves and blind flanges are closed, except as provided in TS 3.6.b.

2. The reactor containment vessel and shield building equipment hatches are properly closed.

See ITS 3.6.1 and 3.6.8

3. At least one door in both the personnel and the emergency airlocks is properly closed.

See ITS 3.6.2

4. The required automatic Containment System isolation valves are OPERABLE, except as provided in TS 3.6.b.

5. All requirements of TS 4.4 with regard to Containment System leakage and test frequency are satisfied.

See ITS 3.6.1

6. The Shield Building Ventilation System and the Auxiliary Building Special Ventilation System satisfy the requirements of TS 3.6.c.

See ITS 3.6.10 and 3.7.12

h. PROTECTIVE INSTRUMENTATION LOGIC

1. PROTECTION SYSTEM CHANNEL

A PROTECTION SYSTEM CHANNEL is an arrangement of components and modules as required to generate a single protective action signal when required by a plant condition. The channel loses its identity where single action signals are combined.

2. LOGIC CHANNEL

A LOGIC CHANNEL is a matrix of relay contacts which operate in response to PROTECTIVE SYSTEM CHANNEL signals to generate a protective action signal.

3. DEGREE OF REDUNDANCY

A03

DEGREE OF REDUNDANCY is defined as the difference between the number of OPERATING channels and the minimum number of channels which, when tripped, will cause an automatic shutdown.

4. PROTECTION SYSTEM

The PROTECTION SYSTEM consists of both the Reactor PROTECTION SYSTEM and the Engineered Safety Features System. The PROTECTION SYSTEM encompasses all electric and mechanical devices and circuitry (from sensors through actuated device) which are required to operate in order to produce the required protective function. Tests of the PROTECTION SYSTEM will be considered acceptable when tests are run in part and it can be shown that all parts satisfy the requirements of the system.

i. INSTRUMENTATION SURVEILLANCE

1. CHANNEL CHECK

A CHANNEL CHECK is a qualitative determination of acceptable OPERABILITY by observation of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication with other indications derived from independent channels measuring the same variable.

2. CHANNEL FUNCTIONAL TEST

A CHANNEL FUNCTIONAL TEST consists of injecting a simulated signal into the channel as close to the primary sensor as practicable to verify that it is OPERABLE, including alarm and/or trip initiating action.

3. CHANNEL CALIBRATION

A CHANNEL CALIBRATION consists of the adjustment of channel output as necessary, such that it responds with acceptable range and accuracy to known values of the parameter that the channel monitors. Calibration shall encompass the entire channel, including alarm and/or trip, and shall be deemed to include the CHANNEL FUNCTIONAL TEST.

4. SOURCE CHECK

A SOURCE CHECK shall be the qualitative assessment of channel response when the channel sensor is exposed to a source of increased radioactivity.

5. FREQUENCY NOTATION

The FREQUENCY NOTATION specified for the performance of surveillance requirements shall correspond to the intervals in Table TS 1.0-1.

A06

INSERT 4

OPERABILITY of all devices in the channel required for channel OPERABILITY. The COT shall include adjustments, as necessary, of the required alarm, interlock, and trip setpoints required for channel OPERABILITY such that the setpoints are within the necessary range and accuracy. The COT may be performed by means of any series of sequential, overlapping, or total channel steps.

A07

INSERT 5

The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY. 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.

Attachment 1, Volume 3, Rev. 0, Page 9 of 64

j. MODES

MODE	TITLE	REACTIVITY $\Delta k/k$ (k_{eff})	COOLANT TEMP T_{avg} (°F)	FISSION POWER % (a)
6	REFUELING (c)	$\leq -5\%$	≤ 140	~0
5	COLD SHUTDOWN (b)	$\leq -1\%$	≤ 200	~0
4	INTERMEDIATE SHUTDOWN (b) Hot	(1)	> 200 < 540	~0
3	HOT SHUTDOWN (b) Standby	(1)	≥ 540	~0
2	HOT STANDBY Startup	$\leq 0.25\%$	~T_{oper}	≤ 2
1	OPERATING Power Operation	$\leq 0.25\%$	~T_{oper}	≥ 2
LOW POWER PHYSICS TESTING		(To be specified by specific tests)		

(1) Refer to the required SHUTDOWN MARGIN as specified in the Core Operating Limits Report.

INSERT 6

k. REACTOR CRITICAL

The reactor is said to be critical when the neutron chain reaction is self-sustaining.

l. REFUELING OPERATION

REFUELING OPERATION is any operation involving movement of reactor vessel internal components (those that could affect the reactivity of the core) within the containment when the vessel head is unbolted or removed.

m. RATED POWER

RATED POWER is the steady-state reactor core output of 1772 MWt.

n. REPORTABLE EVENT

A REPORTABLE EVENT is defined as any of those conditions specified in 10 CFR 50.73.

A09

INSERT 6

(a) Excluding decay heat.

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

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

Attachment 1, Volume 3, Rev. 0, Page 11 of 64

o. RADIOLOGICAL EFFLUENTS

1. MEMBER(S) OF THE PUBLIC

MEMBER(S) OF THE PUBLIC shall include all persons who are not occupationally associated with the plant. This category does not include employees of the utility, 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 plant. A03

2. OFF-SITE DOSE CALCULATION MANUAL (ODCM)

The ODCM shall contain the current methodology and parameters used in: (1) the calculation of off-site doses due to radioactive gaseous and liquid effluents, (2) the calculation of gaseous and liquid effluent monitoring alarm/trip setpoints, and (3) the conduct of the Radiological Environmental Monitoring Program. The ODCM shall also contain: (1) the Radioactive Effluent Controls and Radiological Environmental Monitoring Programs required by TS 6.16.b, and (2) descriptions of the information that should be included in the Annual Radiological Environmental Operating and Radioactive Effluent Release Reports required by TS 6.9.b.1 and TS 6.9.b.2. See ITS 5.5

3. PROCESS CONTROL PROGRAM (PCP)

The PCP shall contain the current formulae, sampling, analyses, tests, and determinations to be made to ensure that the processing and packaging of solid radioactive wastes, based on demonstrated processing of actual or simulated wet solid wastes, will be accomplished in such a way as to ensure compliance with 10 CFR Part 20, 10 CFR Part 61, 10 CFR Part 71, Federal and State regulations, burial ground requirements, and other requirements governing the disposal of the radioactive waste. See CTS 6.0

4. SITE BOUNDARY

The SITE BOUNDARY shall be that line beyond which the land is neither owned, nor leased, nor otherwise controlled by the licensee. A03

5. UNRESTRICTED AREA

An UNRESTRICTED AREA shall be any area at or beyond the SITE BOUNDARY access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials, or any area within the SITE BOUNDARY used for residential quarters or for industrial, commercial, institutional, and/or recreational purposes. A03

Attachment 1, Volume 3, Rev. 0, Page 12 of 64

ITS

A01

ITS 1.0

1.1 Definitions

p. DOSE EQUIVALENT I-131

DOSE EQUIVALENT I-131 is that concentration of I-131 (μCi/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 as listed and calculated based on dose conversion factors derived from ICRP-30.

shall be; when inhaled; combined activities of iodine isotopes; microcuries per; that; ,

INSERT 7

DOSE CONVERSION FACTOR	ISOTOPE
1.0000	I-131
0.0059	I-132
0.1692	I-133
0.0010	I-134
0.0293	I-135

A15

q. CORE OPERATING LIMITS REPORT (COLR)

The COLR is the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific parameter limits shall be determined for each reload cycle in accordance with Specification 6.9.a.4. Plant operation within these limits is addressed in individual Specifications.

5.6.3

r. SHUTDOWN MARGIN (SDM)

SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming:

a. 1. All rod cluster control assemblies (RCCAs) are fully inserted except for the single RCCA of highest reactivity worth, which is assumed to be fully withdrawn. However, with all RCCAs verified fully inserted by two independent means (TS 3.10.e), it is not necessary to account for a stuck RCCA in the SDM calculation. With any RCCA not capable of being fully inserted, the reactivity worth of the RCCA must be accounted for in the determination of SDM, and

b. 2. In the OPERATING and HOT STANDBY MODES, the fuel and moderator temperatures are changed to the nominal zero power design temperature.

1 and 2; level

1.3 s. IMMEDIATELY

When "Immediately" is used as a completion time in a LCO, the required action should be pursued without delay and in a controlled manner.

A14

A15

INSERT 7

The determination of DOSE EQUIVALENT I-131 shall be performed using ICRP-30, 1979, Supplement to Part 1, page 192 – 212, Table titled, "Committed Dose Equivalent in Target Organs or Tissues per Intake of Unit Activity."

t. LEAKAGE

LEAKAGE shall be:

a. Identified LEAKAGE

1. LEAKAGE, such as that from pump seals or valve packing (except reactor coolant pump (RCP) seal water injection or leakoff), that is captured and conducted to collection systems or a sump or collecting tank, ,
2. LEAKAGE into the containment atmosphere from sources that are both specifically located and known either not to interfere with the operation of leakage detection systems or not to be pressure boundary LEAKAGE, or
3. Reactor Coolant System (RCS) LEAKAGE through a steam generator to the Secondary System (primary to secondary LEAKAGE);

b. Unidentified Leakage

All LEAKAGE (except RCP seal water injection or leakoff) that is not identified LEAKAGE, and

c. Pressure Boundary Leakage

LEAKAGE (except primary to secondary LEAKAGE) through a nonisolable fault in an RCS component body, pipe wall, or vessel wall.

Attachment 1, Volume 3, Rev. 0, Page 15 of 64

TABLE TS 1.0-1

FREQUENCY NOTATIONS

NOTATION	FREQUENCY
Shift (S)	At least once per 12 hours
Daily (D)	At least once per 24 hours
Weekly (W)	At least once per 7 days
Monthly (M)	At least once per 31 days
Quarterly (Q)	At least once per 92 days
Semiannual (SA)	At least once per 184 days
Refueling (R)	At least once per 18 months
Reactor Startup (S/U)	Prior to each reactor startup
N.A.	Not Applicable

A11

INSERT 8

A12

Add proposed ITS Sections
1.2 - Logical Connectors
1.3 - Completion Times
1.4 - Frequency

A13

A12

INSERT 8

ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
ACTUATION LOGIC TEST	An ACTUATION LOGIC TEST shall be the application of various simulated or actual input combinations in conjunction with each possible interlock logic state required for OPERABILITY of a logic circuit and the verification of the required logic output. The ACTUATION LOGIC TEST, as a minimum, shall include a continuity check of output devices.
AXIAL FLUX DIFFERENCE (AFD)	AFD shall be the difference in normalized flux signals between the top and bottom halves of a two section excore neutron detector.
DOSE EQUIVALENT XE-133	DOSE EQUIVALENT XE-133 shall be that concentration of Xe-133 (microcuries per gram) that alone would produce the same acute dose to the whole body as the combined activities on noble gas nuclides Kr-85m, Kr-85, Kr-87, Kr-88, Xe-131m, Xe-133m, Xe-133, Xe-135m, Xe-135, and Xe-138 actually present. If a specific noble gas nuclide is not detected, it should be assumed to be present at the minimum detectable activity. The determination of DOSE EQUIVALENT XE-133 shall be performed using effective dose conversion factors for air submersion listed in Table III.1 of EPA Federal Guidance report No. 12, 1993, "External Exposure to radionuclides in Air, Water, and Soil."
MODE	A MODE shall correspond to any one inclusive combination of core reactivity condition, power level, average reactor coolant temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.

Attachment 1, Volume 3, Rev. 0, Page 17 of 64

A12

INSERT 8 (continued)

PHYSICS TESTS	PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation. These tests are: a. Described in Chapter 13, "Initial Test and Operation," of the USAR; b. Authorized under the provisions of 10 CFR 50.59; or c. Otherwise approved by the Nuclear Regulatory Commission.
STAGGERED TEST BASIS	A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, channels, or other designated components are tested during *n* Surveillance Frequency intervals, where *n* is the total number of systems, subsystems, channels, or other designated components in the associated function.
THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.
TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT)	A TADOT shall consist of operating the trip actuating device and verifying the OPERABILITY of all devices in the channel required for trip actuating device OPERABILITY. The TADOT shall include adjustment, as necessary, of the trip actuating device so that it actuates at the required setpoint within the necessary accuracy. The TADOT may be performed by means of any series of sequential, overlapping, or total channel steps.

Attachment 1, Volume 3, Rev. 0, Page 18 of 64

DISCUSSION OF CHANGES
ITS 1.0, USE AND APPLICATION

ADMINISTRATIVE CHANGES

A01 In the conversion of the Kewaunee Power Station (KPS) Current Technical Specifications (CTS) to the plant specific Improved Technical Specifications (ITS), certain changes (wording preferences, editorial changes, reformatting, revised numbering, etc.) are made to obtain consistency with NUREG-1431, Rev. 3.0, "Standard Technical Specifications-Westinghouse Plants" (ISTS).

These changes are designated as administrative changes and are acceptable because they do not result in technical changes to the CTS.

A02 CTS 1.0 states that "The following terms are defined for uniform interpretation of the specifications." The Note for ITS Section 1.1 states "The defined terms of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases." This changes the CTS by replacing the CTS 1.0 statement with a Note and adds a clarification phrase that the defined terms also apply to the Bases.

The ITS Section 1.0 Note serves the same purpose as the CTS 1.0 statement. ITS Section 1.1 Note clarifies that the defined terms also apply to the Bases. This change is consistent with formatting requirements in the ISTS and is consistent with the current use. This change is designated as administrative because it does not represent a technical change to the Technical Specifications.

A03 CTS Section 1.0 includes the following definitions:

- SAFETY LIMITS;
- LIMITING SAFETY SYSTEM SETTINGS;
- LIMITING CONDITIONS FOR OPERATION;
- OPERATING;
- CONTAINMENT SYSTEM INTEGRITY;
- PROTECTION SYSTEM CHANNEL;
- LOGIC CHANNEL;
- DEGREE OF REDUNDANCY;
- PROTECTION SYSTEM;
- SOURCE CHECK;
- REACTOR CRITICAL;
- REFUELING OPERATION;
- REPORTABLE EVENT;
- MEMBER(S) OF THE PUBLIC;
- SITE BOUNDARY; and
- UNRESTRICTED AREA.

The ITS does not use this terminology and the ITS Section 1.1 does not contain these terms in the ITS.

These changes are acceptable because the terms are not used as defined terms in the ITS. Discussions of any technical changes related to the deletion of these terms are included in the DOCs for the CTS sections in which the terms are

Attachment 1, Volume 3, Rev. 0, Page 19 of 64

DISCUSSION OF CHANGES
ITS 1.0, USE AND APPLICATION

used. These changes are designated as administrative because they eliminate defined terms that are no longer used.

A04 The CTS 1.0.e definition of OPERABLE-OPERABILITY requires a system or component to be capable of performing its "intended" function and all necessary support systems to also be capable of performing their "intended" function. The ITS Section 1.1 definition of OPERABLE-OPERABILITY requires the system, subsystem, train, component, or device to be capable of performing the "specified safety" function(s), and requires all necessary support systems that are required for the system, subsystem, train, component, or device to perform its "specified safety" function(s) to also be capable of performing their related support functions. This changes the CTS by altering the requirements to be able to perform "intended" functions to a requirement to be able to perform "specified safety" functions.

The purpose of the CTS and ITS definitions of OPERABLE-OPERABILITY is to ensure that the safety analysis assumptions regarding equipment and variables in the CTS and ITS are valid. This change is acceptable because the intent of both the CTS and ITS definitions is to address the safety function(s) assumed in the accident analysis and not encompass other non-safety functions a system may also perform. These non-safety functions are not assumed in the safety analysis and are not needed in order to protect the public health and safety. This change is consistent with the current interpretation and use of the terms OPERABLE and OPERABILITY. This change is designated as administrative as it does not change the current use and application of the Technical Specifications.

A05 The CTS 1.0.e definition of OPERABLE-OPERABILITY requires that all necessary normal and emergency electrical power sources be available for the system or component to be OPERABLE. The ITS Section 1.1 definition of OPERABLE-OPERABILITY will replace the phrase "normal and emergency electrical power sources" with "normal or emergency electrical power." This changes the CTS definition of OPERABLE-OPERABILITY by allowing a device to be considered OPERABLE with either normal or emergency power available.

The OPERABILITY requirements for normal and emergency power sources are clearly addressed in CTS 3.7.c. These requirements allow only the normal or the emergency electrical power source to be OPERABLE, provided its redundant system, train, or component (redundant to the system, train, or component with an inoperable power source) is OPERABLE. This effectively changes the current "and" to an "or." The existing requirements (CTS 3.7.c) 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." This change is designated administrative since the ITS definition, in combination with ITS 3.8.1 ACTIONS, is effectively the same as the CTS definition combined with CTS 3.7.c.

A06 CTS 1.0.i.2 defines a CHANNEL FUNCTIONAL TEST as "injecting a simulated signal into the channel as close to the primary sensor as practicable to verify that it is OPERABLE, including alarm and/or trip initiating action." ITS Section 1.1 renames the definition to CHANNEL OPERATIONAL TEST (COT), and defines it

Attachment 1, Volume 3, Rev. 0, Page 20 of 64

as "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 COT shall include adjustments, as necessary, of the required alarm, interlock, and trip setpoints required for channel OPERABILITY such that the setpoints are within the necessary range and accuracy. The COT may be performed by means of any series of sequential, overlapping, or total channel steps." The addition of use of an actual signal is discussed in DOC L01. This changes the CTS by stating that the COT shall include adjustments, as necessary, of the devices in the channel so that the setpoints are within the required range and accuracy, changes the example list of devices contained in the definition, and states that the test may be performed by means of any series of sequential, overlapping, or total channel steps.

- The CTS definition states that the CHANNEL FUNCTIONAL TEST shall verify that the channel is OPERABLE "including alarm and/or trip initiating action." The ITS states that the COT shall verify OPERABILITY of "all devices in the channel required for channel OPERABILITY."

  The change is acceptable because the statements are equivalent in that both require that the channel be verified to be OPERABLE. The CTS and the ITS use different examples of what is included in a channel, but this does not change the intent of the requirement. The ITS use of the phrase "all devices in the channel required for channel OPERABILITY" reflects the CTS understanding that the test includes only those portions of the channel needed to perform the safety function.

- The ITS states "The COT shall include adjustments, as necessary, of the required alarm, interlock, and trip setpoints required for channel OPERABILITY such that the setpoints are within the necessary range and accuracy."

  This change is acceptable because it clarifies that adjustments performed during a COT do not invalidate the test. This is consistent with the current implementation of the CHANNEL FUNCTIONAL TEST and does not result in a technical change to the Technical Specifications.

- The ITS states "The COT may be performed by means of any series of sequential, overlapping, or total channel steps."

  This change is acceptable because it states current industry practice. This is consistent with the current implementation of the CHANNEL FUNCTIONAL TEST and does not result in a technical change to the Technical Specifications.

These changes are designated as administrative because they do not result in a technical change to the Technical Specifications.

A07 CTS 1.0.i.3 defines a CHANNEL CALIBRATION as "the adjustment of channel output as necessary, such that it responds with acceptable range and accuracy to known values of the parameter that the channel monitors. Calibration shall

Attachment 1, Volume 3, Rev. 0, Page 21 of 64

DISCUSSION OF CHANGES
ITS 1.0, USE AND APPLICATION

encompass the entire channel, including alarm and/or trip, and shall be deemed to include the CHANNEL FUNCTIONAL TEST." ITS defines a CHANNEL CALIBRATION as "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. Calibration of instrument channels with resistance temperature detector (RTD) 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." This results in a number of changes to the CTS.

- The CTS definition states, "calibration shall encompass the entire channel, including alarm and/or trip." The ITS states, "The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY."

  This change is acceptable because the statements are equivalent in that both require that all needed portions of the channel be tested. The ITS definition reflects the CTS understanding that the CHANNEL CALIBRATION includes only those portions of the channel needed to perform the safety function.

- The CTS states that the CHANNEL CALIBRATION "shall be deemed to include the CHANNEL FUNCTIONAL TEST." The ITS does not include this statement.

  This is acceptable because the eliminated CTS statement does not add any requirements. In both the CTS and the ITS, performance of a single test that fully meets the requirements of other tests can be credited for satisfying the other tests.

- The ITS adds the statement, "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 purpose of a CHANNEL CALIBRATION is to adjust the channel output so that the channel responds within the necessary range and accuracy to known values of the parameters that the channel monitors.

  This change is acceptable because resistance temperature detectors and thermocouples are designated such that they have a fixed input/output response, which cannot be adjusted or changed once installed. Calibration of a channel containing an RTD or thermocouple is performed by applying the RTD or thermocouple fixed input/output relationship to the remainder of the channel, and making the necessary adjustments to the adjustable devices in the remainder of the channel to obtain the necessary output range and accuracy. Therefore, unlike other sensors, an RTD or thermocouple is not actually calibrated. The ITS CHANNEL CALIBRATION allowance for channels containing RTDs and thermocouples is consistent with the CTS

Attachment 1, Volume 3, Rev. 0, Page 22 of 64

DISCUSSION OF CHANGES
ITS 1.0, USE AND APPLICATION

calibration practices of these channels. This information is included in the ITS to avoid confusion, but does not change the current CHANNEL CALIBRATION practices for these types of channels.

These changes are designated as administrative because they do not result in a technical change to the Technical Specifications.

A08 CTS 1.0.j describes operating conditions as REFUELING, COLD SHUTDOWN, INTERMEDIATE SHUTDOWN, HOT SHUTDOWN, HOT STANDBY, and OPERATING. ITS defines the reactor operating conditions in Table 1.1-1 as MODE 1 (Power Operation), MODE 2 (Startup), MODE 3 (Hot Standby), MODE 4 (Hot Shutdown), MODE 5 (Cold Shutdown), and MODE 6 (Refueling). This changes the CTS by reformatting the definitions and names for reactor operating conditions. Other changes associated with adopting the ITS MODES are discussed in DOCs A09, M01, and LA01.

The purpose of CTS 1.0.j is to define a set of operating conditions in terms of core reactivity, reactor power, and reactor coolant system temperature. These defined conditions are used in the Applicability and Actions associated with LCOs. The adoption of the ITS definitions of MODES is not, in itself, either more or less restrictive, and is done to establish consistency with the MODE definitions used throughout the ITS. This change is designated as administrative because it does not result in a technical change to the Technical Specifications.

A09 CTS 1.0.j, MODES, is revised. The corresponding table in ITS Section 1.1 is Table 1.1-1, MODES. The changes to the CTS are as follows:

- The CTS 1.0.j condition "REACTIVITY" is expressed in units of $\Delta k/k$. ITS Table 1.1-1 Reactivity Condition is expressed in units of k_{eff}.

  This change is acceptable because the Condition has not changed, just the units. The ITS value is equivalent or the same for the different MODES as the CTS value, unless modified by another DOC.

- The CTS 1.0.j Coolant Temp for HOT STANDBY and OPERATING is changed from $\sim T_{oper}$ to "NA" (not applicable) in ITS Table 1.1-1.

  This change is acceptable because ITS LCO 3.4.2, RCS Minimum Temperature for Criticality, provides the minimum reactor coolant temperature for MODE 1 and MODE 2 with $k_{eff} \geq 1.0$. Therefore, the $\sim T_{oper}$ coolant temperature does not provide any useful information in ITS Table 1.1-1, and is deleted from the CTS.

- The CTS 1.0.j, REFUELING limit on Coolant Temp ($\leq$ 140°F) is removed. In ITS Table 1.1-1, the MODE 6 average reactor coolant temperature limit is specified as "NA" (not applicable).

  This change is acceptable because it eliminates a conflict in the CTS definition of MODE. If the average coolant temperature exceeds the upper limit with one or more of the reactor vessel head closure bolts less than fully

Attachment 1, Volume 3, Rev. 0, Page 23 of 64

DISCUSSION OF CHANGES
ITS 1.0, USE AND APPLICATION

tensioned, the CTS Table could be misinterpreted as no MODE being applied. This is not the intent of the CTS or ITS MODE 6 definitions. By removing the temperature reference, this ambiguity is eliminated.

- CTS 1.0.j Reactivity condition for INTERMEDIATE SHUTDOWN and HOT SHUTDOWN (as shown in Note 1) is having the required SHUTDOWN MARGIN as specified in the Core Operating Limits Report (COLR). ITS Table 1.1-1 requires the Reactivity Condition of MODES 3 and 4 to be k_{eff} <0.99.

  CTS 1.0.j requires that the Reactivity condition be the required SHUTDOWN MARGIN as specified in the COLR. The required SHUTDOWN MARGIN will still be maintained in ITS 3.1.1, and ITS 3.1.1 requires that the SHUTDOWN MARGIN (SDM) be within the limits specified in the COLR. The ITS MODE definition will specify k_{eff} < 0.99 since this value ensures the unit is shutdown.

- The Fission Power % in CTS 1.0.j for REFUELING, COLD SHUTDOWN, INTERMEDIATE SHUTDOWN, and HOT SHUTDOWN is specified as ~0. ITS Table 1.1-1 reflects "NA" as the % RATED THERMAL POWER for Refueling, Cold Shutdown, Hot Shutdown, and Hot Standby MODES (MODES 6, 5, 4, and 3, respectively).

  This change is acceptable because the reactivity and plant equipment limitations in MODES 3, 4, 5, and 6 do not allow power operation. Therefore, it is not necessary to specify this limit in the MODE Table.

- CTS 1.0.j Fission Power break point for OPERATING and HOT STANDBY is changed from 2% to 5% in ITS Table 1.1-1 for MODES 1 and 2.

  This change can be administrative (if either the Applicability of an ITS and CTS Specification includes both MODES 1 and 2 or if the ITS Applicability is MODE 1 and the CTS Applicability is 5% RTP or higher), more restrictive (if the ITS Applicability includes MODE 2 but not MODE 1 and the CTS Applicability is specified as < 5% RTP or lower), or less restrictive (if the ITS Applicability includes MODE 1 but not MODE 2 and the CTS Applicability is specified as > 2% RTP). Therefore, the change will be evaluated at each occurrence where only one of the two MODES is included in a CTS Applicability and DOC with the appropriate classification (A, M, or L) will be written if required. Therefore, this change to the MODE Table is acceptable.

- The CTS 1.0.l phrase in the definition of REFUELING OPERATION "when the vessel head is unbolted or removed" is incorporated into ITS Table 1.1-1 as Note c. Note c states "One or more reactor vessel head closure bolts less than fully tensioned."

  This change is acceptable because the revised phrase is consistent with the current interpretation and usage. REFUELING is currently declared when the first vessel head closure bolt is detensioned. This change also eliminates a redundant phrase. The reactor vessel head cannot be removed unless the reactor vessel head closure bolts are unbolted. Since “reactor vessel head

Attachment 1, Volume 3, Rev. 0, Page 24 of 64

DISCUSSION OF CHANGES
ITS 1.0, USE AND APPLICATION

unbolted" is already specified in the CTS 1.o.l definition, including "or removed" is unnecessary.

- ITS Table 1.1-1 contains a new Note b, which applies to MODES 4 and 5. Note b states "All reactor vessel head closure bolts fully tensioned." This Note is the opposite of CTS 1.0.l statement concerning REFUELING OPERATION described above. And ITS Table 1.1-1 Note c.

  This change is acceptable because it avoids a conflict between the definition of MODE 6 and the other MODES should RCS temperature increase above the CTS MODE 6 temperature limit while a reactor vessel head closure bolt is less than fully tensioned. This ITS Note is included only for clarity. It is consistent with the current use of MODES 4 and 5 and does not result in any technical change to the application of the MODES.

- CTS 1.0.j uses the condition FISSION POWER %. ITS Table 1.1-1 uses the condition % RATED THERMAL POWER and includes Note a, which states that decay heat is excluded.

  This change is acceptable since the CTS 1.0.j condition FISSION POWER means that decay heat is not included. Since the ITS uses the term RATED THERMAL POWER, which does include decay heat, an exception must be added.

- The CTS 1.0.j condition of Reactivity for OPERATING and HOT STANDBY specifies < 0.25% $\Delta k/k$. ITS Table 1.1-1 specifies a Reactivity (in k_{eff}) of $\geq$ 0.99.

  This change is acceptable since it still ensures either MODE 1 or 2 is entered when the reactor has a $\Delta k/k$ of -1% or higher (i.e., k_{eff} of $\geq$ 0.99). Even though the CTS states the MODES cover any Reactivity condition below 0.25% $\Delta k/k$, which could include -1% $\Delta k/k$ and more negative, the two CTS MODES are only applicable when at normal operating temperature. This could only occur when approaching criticality (i.e., -1% $\Delta k/k$ or less negative). Furthermore, while the CTS defines the maximum $\Delta k/k$ as 0.25% and the ITS now defines it such that it covers Reactivity conditions higher than 0.25% $\Delta k/k$, in reality, the reactivity condition cannot be at a steady state value as high as 0.25% $\Delta k/k$ (since reactor power would increase until a reactor trip occurred). Therefore, this change continues to maintain the intent of the CTS.

These changes are designated as administrative because they do not result in a technical change to the Technical Specifications.

A10 CTS 1.0.m defines RATED POWER as "RATED POWER is the steady-state reactor core output of 1772 MWt." ITS 1.1 defines RATED THERMAL POWER (RTP) as "RTP shall be a total reactor core heat transfer rate to the reactor coolant of 1772 MWt."

Attachment 1, Volume 3, Rev. 0, Page 25 of 64

DISCUSSION OF CHANGES
ITS 1.0, USE AND APPLICATION

This change is acceptable because it more clearly defines RATED THERMAL POWER. This change is designated as administrative because it does not result in a technical change to the Technical Specifications.

A11 CTS 1.0.i.5 provides a definition of FREQUENCY NOTATION and includes CTS Table TS 1.0-1, which lists these notations. The ITS will not contain this information in Section 1.1, but will state the requirements in each Surveillance.

This change is acceptable because each ITS Surveillance Requirement (SR) provides the specific frequency without relying on a notation (e.g., "31 days" versus "M"). Providing the specific frequencies in the Surveillance Requirements eliminates the need for the FREQUENCY NOTATION definition and CTS Table TS 1.0-1. Any Surveillance Frequency altered by the elimination of the definition and table will be addressed in a DOC for the affected section. This change is designated as administrative because it does not change any SR frequencies or result in a technical change to the Technical Specifications.

A12 ITS Section 1.1 provides the following definitions:

- ACTIONS;
- ACTUATION LOGIC TEST;
- AXIAL FLUX DIFFERENCE (AFD);
- DOSE EQUIVALENT XE-133;
- MODE;
- PHYSICS TESTS;
- STAGGERED TEST BASIS;
- THERMAL POWER; and
- TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT).

These items are not defined in the CTS. This changes the CTS by adding the above terms.

This change is acceptable because these changes do not impose any new requirements or alter existing requirements. Any technical changes due to the addition of these terms or definitions will be addressed in the DOCs for those sections of the Technical Specifications in which the terms are used. These changes are designated as administrative as they add defined terms which involve no technical changes to the Technical Specifications.

A13 ITS Sections 1.2, 1.3, and 1.4 contain information that is not in the CTS. This change to the CTS adds explanatory information on the ITS usage that is not applicable to the CTS. The added sections are:

- Section 1.2 – Logical Connectors

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

Attachment 1, Volume 3, Rev. 0, Page 26 of 64

DISCUSSION OF CHANGES
ITS 1.0, USE AND APPLICATION

- Section 1.3 – Completion Times

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

- Section 1.4 – Frequency

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

This change is acceptable because it aids in the understanding and use of the format and presentation style of the ITS. The addition of these sections does not add or delete technical requirements, and will be discussed specifically in those Technical Specifications where application of the added sections results in a change. This change is designated as administrative because it does not result in a technical change to the Technical Specifications.

A14 CTS 1.0.s includes the definition of IMMEDIATELY. It states "When Immediately is used as a completion time in an LCO, the required action should be pursued without delay and in a controlled manner." The ITS includes Section 1.3, "Completion Times," which describes the meaning of the term "immediately" when used as a Completion Time. It states "When "immediately" is used, the Required Action should be pursued without delay and in a controlled manner." This changes the CTS by moving the definition of "Immediately" to ITS 1.3 as a description of when "immediately" is used as a Completion Time.

The purpose of the CTS definition of Immediate is to ensure 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. In the ITS, the meaning of the word "immediately" is described in ITS Section 1.3. Although the wording is not identical, the intent is the same. These changes are designated as administrative because they do not represent a technical change to the Technical Specifications.

A15 CTS 1.0.p states, in part, "The thyroid dose conversion factors used for this calculation shall be listed and calculated based on dose conversion factors derived from ICRP-30. In addition, CTS 1.0.p contains a table that gives a dose conversion factor for various isotopes (I-131, I-132, I-133, I-134, I-135). ITS 1.1 defines DOSE EQUIVALENT I-131, in part, as "The determination of DOSE EQUIVALENT I-131 shall be performed using ICRP-30, 1979, Supplement to Part 1, page 192 – 212, Table titled, "Committed Dose Equivalent in Target Organs or Tissues per Intake of Unit Activity." The ITS 1.1 definition for DOSE EQUIVALENT I-131 does not include this table. This changes the CTS by providing more detail of the specific ICRP reference.

This change is acceptable because it gives the specific location in the controlling document for DOSE EQUIVALENT I-131 instead of referring to a Table in

Attachment 1, Volume 3, Rev. 0, Page 27 of 64

DISCUSSION OF CHANGES
ITS 1.0, USE AND APPLICATION

Technical Specifications. This change is designated as administrative because it does not result in a technical change to the Technical Specifications.

MORE RESTRICTIVE CHANGES

M01 CTS 1.0.j states that the INTERMEDIATE SHUTDOWN T_{avg} is between 200°F and 540°F. Additionally, CTS 1.0.j states that the HOT SHUTDOWN T_{avg} is greater than or equal to 540°F. ITS Table 1.1-1 states that MODE 4, Hot Shutdown, T_{avg} is between 200°F and 350°F and MODE 3, Hot Standby, T_{avg} is greater than 350°F. This changes the transition point from INTERMEDIATE SHUTDOWN to HOT SHUTDOWN from 540°F to 350°F.

This change is acceptable because it allows transition into a MODE/Condition where the equipment is no longer required for safe shutdown. This change is designated as more restrictive because it encompasses a narrower range of reactor operating conditions during power ascension and descension.

RELOCATED SPECIFICATIONS

None

REMOVED DETAIL CHANGES

LA01 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS 1.0.j, "MODES," states that REFUELING is restricted to Reactivity $\Delta k/k$ of $\leq$ -5%. ITS Table 1.1-1, "MODES" does not contain this restriction.

This change is acceptable because the core reactivity requirements for MODE 6 are covered in ITS 3.9.1, "Boron Concentration," by requiring the boron concentration in the Reactor Coolant System to be maintained within the limits specified in the COLR. The LCO section of the 3.9.1 Bases states "The boron concentration limit specified in the COLR ensures that a core k_{eff} of ≤ 0.95 is maintained during fuel handling operations." Moving this detail from the MODE Table to the LCO 3.9.1 Bases eliminates the potential to misinterpret the MODE table and not apply the MODE 6 requirements if one or more of the reactor vessel head closure bolts are less than fully tensioned, fuel is in the reactor vessel, and core reactivity exceeds a k_{eff} of 0.95. ITS LCO 3.9.1 will ensure that the appropriate reactivity conditions are maintained in MODE 6, so it is not necessary to have this restriction in the MODE Table in order to provide adequate protection of the public health and safety. Once moved to the Bases, any changes to the core reactivity requirements will be controlled by the Technical Specifications Bases Control Program described in Chapter 5 of the ITS. This change is designated a less restrictive movement of detail because it moves information from the Technical Specifications to the Bases.

Attachment 1, Volume 3, Rev. 0, Page 28 of 64

DISCUSSION OF CHANGES
ITS 1.0, USE AND APPLICATION

LESS RESTRICTIVE CHANGES

L01 The CTS 1.0.i.2 definition of CHANNEL FUNCTIONAL TEST requires the use of a "simulated" signal when performing the test. ITS Section 1.1 renames the CTS definition to CHANNEL OPERATIONAL TEST (COT) as discussed in DOC A06. The ITS Section 1.1 COT definition allows the use of an actual or simulated signal when performing the test. This changes the CTS by allowing the use of unplanned actuations to perform the Surveillance if sufficient information is collected to satisfy the surveillance test requirements.

This change is acceptable because the channel itself cannot discriminate between an "actual" or "simulated" signal and, therefore, the results of the testing are unaffected by the type of signal used to initiate the test. This change is designated as less restrictive because it allows an actual signal to be credited for a Surveillance where only a simulated signal was previously allowed.

Attachment 1, Volume 3, Rev. 0, Page 29 of 64

Improved Standard Technical Specifications (ISTS) Markup and Justification for Deviations (JFDs)

CTS

1.0 USE AND APPLICATION

1.0 1.1 Definitions

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

	Term	Definition
DOC A12	ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
DOC A12	ACTUATION LOGIC TEST	An ACTUATION LOGIC TEST shall be the application of various simulated or actual input combinations in conjunction with each possible interlock logic state required for OPERABILITY of a logic circuit and the verification of the required logic output. The ACTUATION LOGIC TEST, as a minimum, shall include a continuity check of output devices.
DOC A12	AXIAL FLUX DIFFERENCE (AFD)	AFD shall be the difference in normalized flux signals between the [top and bottom halves of a two section excore neutron detector]. (1)
1.0.i.3	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. 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.
1.0.i.1	CHANNEL CHECK	A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication and status to other indications or status derived from independent instrument channels measuring the same parameter.

CTS

1.1 Definitions

1.0.i.2	CHANNEL OPERATIONAL TEST (COT)	A COT 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 COT shall include adjustments, as necessary, of the required alarm, interlock, and trip setpoints required for channel OPERABILITY such that the setpoints are within the necessary range and accuracy. The COT 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. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.
1.0.q	CORE OPERATING LIMITS REPORT (COLR)	The COLR is the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific parameter limits shall be determined for each reload cycle in accordance with Specification 5.6.3. Plant operation within these limits is addressed in individual Specifications.
1.0.p	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 [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"].
	$\bar{E}$ - AVERAGE DISINTEGRATION ENERGY	$\bar{E}$ shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half lives > [15] minutes, making up at least 95% of the total noniodine activity in the coolant.

INSERT 1

INSERT 1A

TSTF-471-A

TSTF-490-A

2

TSTF-490-A

CTS

2 TSTF-490-A **INSERT 1**

1.0.p DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries per gram) that alone would produce the same dose when inhaled as the combined activities of iodine isotopes I-131, I-132, I-133, I-134, and I-135 actually present. The determination of DOSE EQUIVALENT I-131 shall be performed using

---------- Reviewer's Note ----------
The first set of thyroid dose conversion factors shall be used for plants licensed to 10 CFR 100.11. The following Committed Dose Equivalent (CDE) or Committed Effective Dose Equivalent (CEDE) conversion factors shall be used for plants licensed to 10 CFR 50.67.

[thyroid dose conversion factors from:

a. Table III of TID-14844, AEC, 1962, "Calculation of Distance Factors for Power and Test Reactor Sites," or

b. Table E-7 of Regulatory Guide 1.109, Rev. 1, NRC, 1977, or

c. ICRP-30, 1979, Supplement to Part 1, page 192-212, Table titled, "Committed Dose Equivalent in Target Organs or Tissues per Intake of Unit Activity," or .

d. Table 2.1 of EPA Federal Guidance Report No. 11, 1988, "Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion."

OR

Committed Dose Equivalent (CDE) or Committed Effective Dose Equivalent (CEDE) dose conversion factors from Table 2.1 of EPA Federal Guidance Report No. 11.]

2 TSTF-490-A **INSERT 1A**

DOC A12 DOSE EQUIVALENT XE-133 DOSE EQUIVALENT XE-133 shall be that concentration of Xe-133 (microcuries per gram) that alone would produce the same acute dose to the whole body as the combined activities on noble gas nuclides Kr-85m, Kr-85, Kr-87, Kr-88, Xe-131m, Xe-133m, Xe-133, Xe-135m, Xe-135, and Xe-138 actually present. If a specific noble gas nuclide is not detected, it should be assumed to be present at the minimum detectable activity. The determination of

Attachment 1, Volume 3, Rev. 0, Page 33 of 64

2 TSTF-490-A

INSERT 1A (continued)

DOSE EQUIVALENT XE-133 shall be performed using [effective dose conversion factors for air submersion listed in Table III.1 of EPA Federal Guidance report No. 12, 1993, "External Exposure to radionuclides in Air, Water, and Soil" or the average gamma disintegration energies as provided in ICRP Publication 38, "Radionuclide Transformations," or similar source.]

Insert Page 1.1-2b

CTS

1.1 Definitions

ENGINEERED SAFETY FEATURE (ESF) RESPONSE TIME	The ESF RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. In lieu of measurement, response time may be verified for selected components provided that the components and methodology for verification have been previously reviewed and approved by the NRC.

7

1.0.t LEAKAGE

LEAKAGE shall be:

a. Identified LEAKAGE

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

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

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

b. Unidentified LEAKAGE

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

3

c. Pressure Boundary LEAKAGE

LEAKAGE (except primary to secondary LEAKAGE) through a nonisolable fault in an RCS component body, pipe wall, or vessel wall.

CTS

1.1 Definitions

MASTER RELAY TEST	A MASTER RELAY TEST shall consist of energizing all master relays in the channel required for channel OPERABILITY and verifying the OPERABILITY of each required master relay. The MASTER RELAY TEST shall include a continuity check of each associated required slave relay. The MASTER RELAY TEST may be performed by means of any series of sequential, overlapping, or total steps.

8

DOC A12

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

1.0.e

OPERABLE – OPERABILITY	A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).

DOC A12

PHYSICS TESTS	PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation. These tests are: a. Described in Chapter [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.

3 " and Operation," U ; 1 3 5 3 ;

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 and the low temperature overpressure protection arming temperature, for the current reactor vessel fluence period. These pressure and temperature limits shall be determined for each fluence period in accordance with Specification 5.6.4.

6

CTS

1.1 Definitions

1.0.a	QUADRANT POWER TILT RATIO (QPTR)	QPTR shall be the ratio of the maximum upper excore detector calibrated output to the average of the upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of the lower excore detector calibrated outputs, whichever is greater.
1.0.m	RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of ~~[2893]~~ 1772 MWt. (1)
	REACTOR TRIP SYSTEM (RTS) RESPONSE TIME	The RTS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RTS trip setpoint at the channel sensor until loss of stationary gripper coil voltage. 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. (7)
1.0.r	SHUTDOWN MARGIN (SDM)	SDM shall be the instantaneous amount of reactivity by which the reactor is subcritical or would be subcritical from its present condition assuming: a. All rod cluster control assemblies (RCCAs) are fully inserted except for the single RCCA of highest reactivity worth, which is assumed to be fully withdrawn. However, with all RCCAs verified fully inserted by two independent means, it is not necessary to account for a stuck RCCA in the SDM calculation. With any RCCA not capable of being fully inserted, the reactivity worth of the RCCA must be accounted for in the determination of SDM; and (3) b. In MODES 1 and 2, the fuel and moderator temperatures are changed to the ~~[~~nominal zero power design ~~level]~~ temperature. level (1)
	SLAVE RELAY TEST	A SLAVE RELAY TEST shall consist of energizing all slave relays in the channel required for channel OPERABILITY and verifying the OPERABILITY of each required slave relay. The SLAVE RELAY TEST shall include a continuity check of associated required testable actuation devices. The SLAVE RELAY TEST may be performed by means of any series of sequential, overlapping, or total steps. (8)

Attachment 1, Volume 3, Rev. 0, Page 37 of 64

CTS

1.1 Definitions

DOC A12	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.
DOC A12	THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.
DOC A12	TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT)	A TADOT shall consist of operating the trip actuating device and verifying the OPERABILITY of all devices in the channel required for trip actuating device OPERABILITY. The TADOT shall include adjustment, as necessary, of the trip actuating device so that it actuates at the required setpoint within the necessary accuracy. The TADOT may be performed by means of any series of sequential, overlapping, or total channel steps.

Attachment 1, Volume 3, Rev. 0, Page 38 of 64

CTS

1.0.j

Table 1.1-1 (page 1 of 1)
MODES

MODE	TITLE	REACTIVITY CONDITION (k_{eff})	% RATED THERMAL POWER[(a)]	AVERAGE REACTOR COOLANT TEMPERATURE (°F)
1	Power Operation	≥ 0.99	> 5	NA
2	Startup	≥ 0.99	≤ 5	NA
3	Hot Standby	< 0.99	NA	≥ [350]
4	Hot Shutdown[(b)]	< 0.99	NA	[350] > T_{avg} > [200]
5	Cold Shutdown[(b)]	< 0.99	NA	≤ [200]
6	Refueling[(c)]	NA	NA	NA

1

(a) Excluding decay heat.

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

1.0.l (c) One or more reactor vessel head closure bolts less than fully tensioned.

Attachment 1, Volume 3, Rev. 0, Page 39 of 64

CTS

1.0 USE AND APPLICATION

DOC A13

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 indentations 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.

CTS

1.2 Logical Connectors

DOC A13

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.

CTS

1.2 Logical Connectors

DOC A13

EXAMPLES (continued)

EXAMPLE 1.2-2

ACTIONS

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

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

CTS

1.0 USE AND APPLICATION

DOC A13

1.3 Completion Times

PURPOSE	The purpose of this section is to establish the Completion Time convention and to provide guidance for its use.
BACKGROUND	Limiting Conditions for Operation (LCOs) specify minimum requirements for ensuring safe operation of the unit. The ACTIONS associated with an LCO state Conditions that typically describe the ways in which the requirements of the LCO can fail to be met. Specified with each stated Condition are Required Action(s) and Completion Time(s).
DESCRIPTION	The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., inoperable equipment or variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO. Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability. If situations are discovered that require entry into more than one Condition at a time within a single LCO (multiple Conditions), the Required Actions for each Condition must be performed within the associated Completion Time. When in multiple Conditions, separate Completion Times are tracked for each Condition starting from the time of discovery of the situation that required entry into the Condition. Once a Condition has been entered, subsequent trains, 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. However, when a subsequent train, subsystem, component, or variable expressed in the Condition is discovered to be inoperable or not within limits, the Completion Time(s) may be extended. To apply this Completion Time extension, two criteria must first be met. The subsequent inoperability: a. Must exist concurrent with the first inoperability; and

3

CTS

DOC A13

1.3 Completion Times

DESCRIPTION (continued)

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

3

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

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

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

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 5.	6 hours 36 hours

CTS

DOC A13

1.3 Completion Times

EXAMPLES (continued)

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

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

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

EXAMPLE 1.3-2

ACTIONS

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

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

CTS

DOC A13

1.3 Completion Times

EXAMPLES (continued)

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.

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.

CTS

DOC A13

1.3 Completion Times

EXAMPLES (continued)

EXAMPLE 1.3-3

ACTIONS

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

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

CTS

DOC A13

EXAMPLES (continued)

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.

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

EXAMPLE 1.3-4

ACTIONS

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

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

CTS

DOC A13

1.3 Completion Times

EXAMPLES (continued)

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

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

EXAMPLE 1.3-5

ACTIONS

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

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

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

CTS

DOC A13

1.3 Completion Times

EXAMPLES (continued)

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

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

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

EXAMPLE 1.3-6

ACTIONS

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

CTS

DOC A13

1.3 Completion Times

EXAMPLES (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.

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 5.	6 hours 36 hours

CTS

DOC A13

1.3 Completion Times

EXAMPLES (continued)

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 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.

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

CTS

DOC A13

1.0 USE AND APPLICATION

1.4 Frequency

PURPOSE	The purpose of this section is to define the proper use and application of Frequency requirements.
DESCRIPTION	Each Surveillance Requirement (SR) has a specified Frequency in which the Surveillance must be met in order to meet the associated LCO. An understanding of the correct application of the specified Frequency is necessary for compliance with the SR. The "specified Frequency" is referred to throughout this section and each of the Specifications of Section 3.0, Surveillance Requirement (SR) Applicability. The "specified Frequency" consists of the requirements of the Frequency column of each SR as well as certain Notes in the Surveillance column that modify performance requirements. 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 criteria. Some Surveillances contain notes that modify the Frequency of performance or 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 satisfied:

CTS

DOC A13

1.4 Frequency

DESCRIPTION (continued)

a. The Surveillance is not required 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.

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.

Attachment 1, Volume 3, Rev. 0, Page 54 of 64

CTS

DOC A13

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 stated Frequency is allowed by SR 3.0.2 for operational flexibility. The measurement of this interval continues at all times, even when the SR is not required to be met per SR 3.0.1 (such as when the equipment is inoperable, a variable is outside specified limits, or the unit is outside the Applicability of the LCO). If the interval specified by SR 3.0.2 is exceeded while the unit is in a MODE or other specified condition in the Applicability of the LCO, and the performance of the Surveillance is not otherwise modified (refer to Example 1.4-3), then SR 3.0.3 becomes applicable.

If the interval as specified by SR 3.0.2 is exceeded while the unit is not in a MODE or other specified condition in the Applicability of the LCO for which performance of the SR is required, then SR 3.0.4 becomes applicable. The Surveillance must be performed within the Frequency requirements of SR 3.0.2, as modified by SR 3.0.3, prior to entry into the MODE or other specified condition or the LCO is considered not met (in accordance with SR 3.0.1) and LCO 3.0.4 becomes applicable.

CTS

DOC A13

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 25% 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.

CTS

DOC A13

1.4 Frequency

EXAMPLES (continued)

EXAMPLE 1.4-3

SURVEILLANCE REQUIREMENTS

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

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

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

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(plus the extension allowed by SR 3.0.2)

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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.

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(plus the extension allowed by SR 3.0.2)

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CTS

DOC A13

EXAMPLES (continued)

EXAMPLE 1.4-4

SURVEILLANCE REQUIREMENTS

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

Example 1.4-4 specifies that the requirements of this Surveillance do not have to be met until the unit is in MODE 1. The interval measurement for the Frequency of this Surveillance continues at all times, as described in Example 1.4-1. However, the Note constitutes an "otherwise stated" exception to the Applicability of this Surveillance. Therefore, if the Surveillance ~~were~~ was 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~~ was not met), SR 3.0.4 would require satisfying the SR.

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DOC A13

1.4 Frequency

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 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.

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Once the unit 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.

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CTS

DOC A13

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 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~~ was 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~~ was not met), SR 3.0.4 would require satisfying the SR.

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JUSTIFICATION FOR DEVIATIONS
ITS 1.0, USE AND APPLICATION

1. The ISTS contains bracketed information and/or values that are generic to all Westinghouse vintage plants. The brackets are removed and the proper plant specific information/value is provided. This is acceptable since the generic specific information/value is revised to reflect the current plant design.

2. For the definition of DOSE EQUIVALENT 1-131, TSTF-490-A, Rev. 0, provided four different thyroid dose conversion factor methods for when the plant is licensed to 10 CFR 100.11 and a single method for when the plant is licensed to 10 CFR 50.67. An NRC reviewer's note is included that provides this information. The NRC Reviewer's Note has been deleted. This information is for the NRC reviewer to be keyed in to what is needed to meet this requirement. This is not meant to be retained in the final version of the plant specific submittal. Kewaunee Power Station is licensed to item c, therefore this option will be maintained. For the definition of DOSE EQUIVALENT XE-133, the first dose conversion factor document, EPA Federal Guidance report No. 12, will be used.

3. These punctuation corrections have been made consistent with the Writer's Guide for the Improved Standard Technical Specifications, TSTF-GG-05-01, Section 5.1.3.

4. Typographical/grammatical error corrected.

5. Changes are made (additions, deletions, and/or changes) to the ISTS which reflect the plant specific nomenclature, number, reference, system description, analysis, or licensing basis description.

6. KPS does not propose to use a PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR) and will not relocate the Pressure and Temperature limits from the Technical Specifications. The current limits will be retained in the ITS. Therefore, the definition of PTLR has not been incorporated into the ITS.

7. The definitions of ENGINEERED SAFETY FEATURE (ESF) RESPONSE TIME and REACTOR TRIP SYSTEM (RTS) RESPONSE TIME) are not included in the KPS ITS since the definitions are not used in Section 3.3, "Instrumentation." The response time tests which included the definitions are not being added to the KPS ITS in Section 3.3. For further information on why the response time tests are not included, refer to the Justification for Deviations for ITS 3.3.1, RPS Instrumentation," and ITS 3.3.2, "ESFAS Instrumentation," in Section 3.3.

8. The definitions of MASTER RELAY TEST and SLAVE RELAY TEST are not included in the KPS ITS since the definitions are not used in Section 3.3, "Instrumentation." The master and slave relay tests which included the definitions are not being added to the KPS ITS in Section 3.3. For further information on why the master and slave relay tests are not included, refer to the Justification for Deviations for ITS 3.3.2, "ESFAS Instrumentation," ITS 3.3.6, "Containment Purge and Vent Isolation Instrumentation," and ITS 3.3.7, "Control Room Post Accident Recirculation (CRPAR) System Actuation Instrumentation," in Section 3.3.

Attachment 1, Volume 3, Rev. 0, Page 61 of 64

Specific No Significant Hazards Considerations (NSHCs)

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS 1.0, USE AND APPLICATION

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGE L01

Kewaunee Power Station (KPS) is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, Rev. 3, "Standard Technical Specifications, Westinghouse Plants." The proposed change involves making the Current Technical Specifications (CTS) less restrictive. Below is the description of this less restrictive change and the determination of No Significant Hazards Considerations for conversions to NUREG-1431.

The CTS 1.0.i.2 definition of CHANNEL FUNCTIONAL TEST requires the use of a "simulated" signal when performing this test. The ITS Section 1.1 CHANNEL FUNCTIONAL TEST definition allows the use of an "actual or simulated" signal when performing this test. This changes the CTS by allowing the use of unplanned actuations to perform the Surveillance if sufficient information is collected to satisfy the surveillance test requirements.

This change is acceptable because the channel itself cannot discriminate between an "actual" or "simulated" signal and, therefore, the results of the testing are unaffected by the type of signal used to initiate the test. This change is designated as less restrictive because it allows an actual signal to be credited for a Surveillance where only a simulated signal was previously allowed.

An evaluation has been performed to determine whether or not a significant hazards consideration is involved with this proposed Technical Specification change by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

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

Response: No.

The proposed change adds an allowance that an actual as well as a simulated signal can be credited during the CHANNEL FUNCTIONAL TEST. This change allows taking credit for unplanned actuations if sufficient information is collected to satisfy the surveillance test requirements. This change is acceptable because the channel itself cannot discriminate between an "actual" or "simulated" signal, and the proposed requirement does not change the technical content or validity of the test. This change will not affect the probability of an accident. The source of the signal sent to components during a Surveillance is not assumed to be an initiator of any USAR Chapter 14 analyzed event. The consequence of an accident is not affected by this change. The results of the testing and, therefore, the likelihood of discovering an inoperable component, are unaffected. As a result the assurance that equipment will be available to mitigate the consequences of an accident is unaffected. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Attachment 1, Volume 3, Rev. 0, Page 63 of 64

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATIONS
ITS 1.0, USE AND APPLICATION

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

Response: No.

The proposed change adds an allowance that an actual as well as a simulated signal can be credited during the CHANNEL FUNCTIONAL TEST. This change will not physically alter the plant (no new or different type of equipment will be installed). The change also does not require any new or revised operator actions. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

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

Response: No.

The proposed change adds an allowance that an actual as well as simulated signal can be credited during the CHANNEL FUNCTIONAL TEST. The margin of safety is not affected by this change. This change allows taking credit for unplanned actuations if sufficient information is collected to satisfy the surveillance test requirements. This change is acceptable because the channel itself cannot discriminate between an "actual" or "simulated" signal." As a result the proposed requirement does not change the technical content or validity of the test. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, it is concluded that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, there is a finding of "no significant hazards consideration."

Attachment 1, Volume 3, Rev. 0, Page 64 of 64