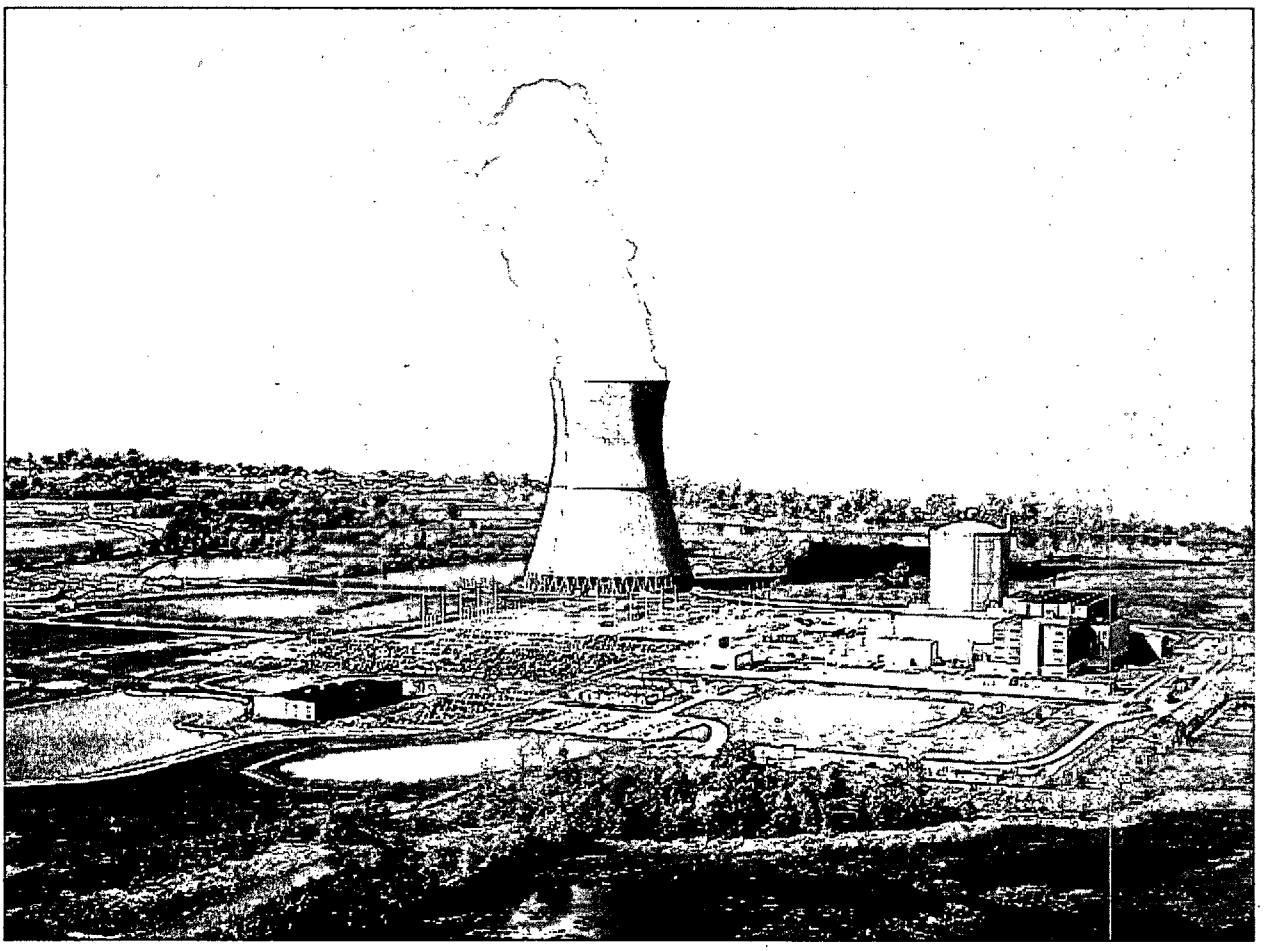
DAVIS-BESSE NUCLEAR POWER STATION
UNIT 1

IMPROVED TECHNICAL SPECIFICATION CONVERSION LICENSE AMENDMENT REQUEST



VOLUME 3 (Rev. 1)

CHAPTER 1.0 – USE AND APPLICATION

Summary of Changes
ITS Chapter 1.0

Change Description	Affected Pages
Added TSTF-475. TSTF-475 added clarifying words to Example 1.4-3 concerning the 25% grace allowance.	Page 57
Modified the definition for SHUTDOWN MARGIN to not include the statement "However, with all CONTROL RODS verified fully inserted by two independent means, it is not necessary to account for a stuck CONTROL ROD in the SDM calculation." This less restrictive allowance is not included because Davis-Besse does not desire to adopt it. This Change affects the CTS Markup, DOC L04 (deleted), ISTS Markup, JFD 12 (new), and NSHC L04 (deleted).	Pages 7, 8, 30, 37, 62, and 69

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ATTACHMENT 1

VOLUME 3

DAVIS-BESSE IMPROVED TECHNICAL SPECIFICATIONS CONVERSION

ITS CHAPTER 1.0 USE AND APPLICATION

Revision 1

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)

ITS

A01

1.0 USE AND APPLICATION

1.1 1.0 DEFINITIONS

DEFINED TERMS

NOTE

1.1 The DEFINED TERMS of this section appear in capitalized type and are applicable throughout these Technical Specifications and Bases. A02

THERMAL POWER

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

RATED THERMAL POWER (RTP)

1.3 RATED THERMAL POWER (RTP) shall be a total reactor core heat transfer rate to the reactor coolant of 2772 MWt. 2817 A18

OPERATIONAL MODE

1.4 An OPERATIONAL MODE shall correspond to any one inclusive combination of core reactivity condition, power level and average reactor coolant temperature specified in Table 1.1. A03

with fuel in the reactor vessel

, and reactor vessel head closure bolt tensioning

ACTION

1.5 ACTION shall be those additional requirements specified as corollary statements to each principal specification and shall be part of the specifications.

that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times

OPERABLE - OPERABILITY

1.6 A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s). 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 are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s). A04 A05

and when

and

or

and

specified safety A04

ITS

A01

1.1 DEFINITIONS

1.7 Deleted.

CONTAINMENT INTEGRITY

1.8 CONTAINMENT INTEGRITY shall exist when:

A06

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

1. Capable of being closed by the Safety Features Actuation System, or

2. Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except those approved to be open under administrative controls,

b. The equipment hatch is closed,

See ITS 3.6.1

c. Each air lock is in compliance with the requirements of Specification 3.6.1.3,

See ITS 3.6.2

d. The containment leakage rates are within the limits specified in the Containment Leakage Rate Testing Program, and

e. The sealing mechanism associated with each penetration (e.g., welds, bellows or O-rings) is OPERABLE.

See ITS 3.6.1

CHANNEL CALIBRATION

1.9 A CHANNEL CALIBRATION shall be the adjustment, as necessry, of the channel output such that it responds with necessary range and accuracy to known values of the parameter which the channel monitors. The CHANNEL CALIBRATION shall encompass the entire channel including the sensor and alarm and/or trip functions, and shall include the CHANNEL FUNCTIONAL TEST. CHANNEL CALIBRATION may be performed by any series of sequential, overlapping, or total channel steps such that the entire channel is calibrated.

in the

that

means of

all devices in the channel required for channel OPERABILITY

A07

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

A07

CHANNEL CHECK

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

, by observation,

to

ITS

A01

1.1 DEFINITIONS

CHANNEL FUNCTIONAL TEST

1.11 A CHANNEL FUNCTIONAL TEST shall be:

a. Analog channels - the injection of a simulated signal into the channel as close to the primary sensor as practicable to verify OPERABILITY including alarm and/or trip functions.

b. Bistable channels - the injection of a simulated signal into the channel sensor to verify OPERABILITY including alarm and/or trip functions.

or actual — L01

of all devices in the channel required for channel OPERABILITY — A08

L02

A08

INSERT 1

A08

CORE ALTERATION

1.12 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.

A06

SHUTDOWN MARGIN (SDM) SDM

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

c. There is no APSR ;

a. No change in axial power shaping rod position; and

b. All control rod assemblies (safety and regulating) are fully inserted except for the single rod assembly of highest reactivity worth which is assumed to be fully withdrawn.

full length CONTROL RODS

a. , INSERT 2 CONTROL ROD

A09

a. INSERT 3

IDENTIFIED LEAKAGE LEAKAGE LEAKAGE shall be:

A14

1.14 IDENTIFIED LEAKAGE shall be:

1 a. Leakage (except CONTROLLED LEAKAGE) into closed systems, such as pump seal or valve packing leaks that are captured and conducted to a sump or collecting tank; or

that from s is (except RCP seal water return flow)

2 b. 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

collection systems or ;

A10

A08 **INSERT 1**

The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total steps.

A09 **INSERT 2**

With any CONTROL ROD not capable of being fully inserted, the reactivity worth of these CONTROL RODS must be accounted for in the determination of SDM;

A14 **INSERT 3**

b. In MODES 1 and 2, the fuel and moderator temperatures are changed to the nominal zero power design level; and

ITS

A01

1.1 DEFINITIONS

3.

(RCS)

~~4.~~ Reactor coolant system leakage through a steam generator to the secondary system (primary to secondary leakage).

b.

UNIDENTIFIED LEAKAGE

(except RCP seal return flow) that

All

1.15 UNIDENTIFIED LEAKAGE shall be all leakage which is not IDENTIFIED LEAKAGE or CONTROLLED LEAKAGE.

; and

c.

PRESSURE BOUNDARY LEAKAGE

1.16 PRESSURE BOUNDARY LEAKAGE shall be leakage (except primary to secondary leakage) through a non-isolable fault in a Reactor Coolant System component body, pipe wall or vessel wall.

RCS

,

A10

CONTROLLED LEAKAGE

1.17 CONTROLLED LEAKAGE shall be that seal water flow from the reactor coolant pump seals.

A10

QUADRANT POWER TILT

(QPT)

QPT

shall be

1.18 QUADRANT POWER TILT is defined by the following equation and is expressed in percent.

as a percentage of the Power in any Core Quadrant (P_{quad}) to the Average Power of all Quadrants (P_{avg}).

QPT

QUADRANT POWER TILT = P_{quad}

$$100 \left(\frac{\text{Power in any core quadrant}}{\text{Average power of all quadrants}} - 1 \right)$$

P_{avg}

DOSE EQUIVALENT I-131

microcuries

1.19 DOSE EQUIVALENT I-131 shall be 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 those listed in Table III of TID-14844, "Calculation of Distance Factors for Power and Test Reactor Sites."

that

AEC, 1962,

Ē - AVERAGE DISINTEGRATION ENERGY

1.20 Ē-AVERAGE DISINTEGRATION ENERGY 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

or those listed in Table E-7 of Regulatory Guide 1.109, Rev. 1, NRC, 1977, or those listed in ICRP 30, Supplement to Part 1, page 192-212, Table titled, " Committed Dose Equivalent in Target Organs or Tissues per Intake of Unit Activity."

L03

ITS

A01

1.1 DEFINITIONS

per disintegration (in MeV) for isotopes, other than iodines, with half lives greater than 15 minutes, making up at least 95% of the total noniodine activity in the coolant.

STAGGERED TEST BASIS

1.21 A STAGGERED TEST BASIS shall consist of:

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

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

FREQUENCY NOTATION

1.22 The FREQUENCY NOTATION specified for the performance of Surveillance Requirements shall correspond to the intervals defined in Table 1.2.

AXIAL POWER IMBALANCE

1.23 AXIAL POWER IMBALANCE shall be the THERMAL POWER in the top half of the core expressed as a percentage of RATED THERMAL POWER minus the THERMAL POWER in the bottom half of the core expressed as a percentage of RATED THERMAL POWER.

1.24 DELETED

REACTOR PROTECTION SYSTEM RESPONSE TIME

1.25 The REACTOR PROTECTION SYSTEM RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its trip setpoint at the channel sensor until power interruption at the control rod drive breakers.

>, the, ing of one of the, , channels, other, INSERT 4, A11, A12, power, (RTP), , power, , RTP, (RPS), RPS, RPS, electrical, is, ed, trip, 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., A13

A11 **INSERT 4**

during the interval specified by the Surveillance Frequency, so that all systems, subsystems, trains, channels, or designated components are tested during *n* Surveillance Frequency intervals, where *n* is the total number of systems, subsystems, trains, channels, or designated components in the associated function.

ITS

A01

1.1 DEFINITIONS

S ACTUATION SYSTEM (SFAS)

SAFETY FEATURE RESPONSE TIME (SFAS)

1.26 The SAFETY FEATURE RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its SFAS actuation setpoint at the channel sensor until the safety features 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. A13

PHYSICS TESTS

1.27 PHYSICS TESTS shall be those tests performed to measure the fundamental nuclear characteristics of the reactor core and related instrumentation and 1) described in Chapter 14.0 of the FSAR, 2) authorized under the provisions of 10 CFR 50.59 or 1) otherwise approved by the Commission.

These tests are: a. ; c. ; b. U "Initial Tests and Operation," Section , Nuclear Regulatory

STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM RESPONSE TIME (SFRCS)

1.28 The STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its SFRCS actuation setpoint at the channel sensor until the 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.). SFRCS

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. A13

A01

DEFINITIONS

1.29 Deleted

1.30 Deleted

1.31 Deleted

OFFSITE DOSE CALCULATION MANUAL (ODCM)

1.32 The OFFSITE DOSE CALCULATION MANUAL (ODCM) shall contain the methodology and parameters used in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents, in the calculation of gaseous and liquid effluent monitoring Alarm/Trip Setpoints, and in the conduct of the Environmental Radiological Monitoring Program. The ODCM shall also contain (1) the Radioactive Effluent Controls and Radiological Environmental Monitoring Programs required by Section 6.8.4 and (2) descriptions of the information that should be included in the Annual Radiological Environmental Operating and Radioactive Effluent Release Reports required by Specifications 6.9.1.10 and 6.9.1.11.

See ITS 5.5

1.33 Deleted

1.34 Deleted

1.35 Deleted

1.36 Deleted

MEMBER(S) OF THE PUBLIC

1.37 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.

A06

SITE BOUNDARY

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

A06

ITS

A01

DEFINITIONS

UNRESTRICTED AREA

1.39 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. The definition of UNRESTRICTED AREA used in implementing the Radiological Effluent Technical Specifications has been expanded over that in 10 CFR 20.3(a)(17). The UNRESTRICTED AREA boundary may coincide with the exclusion (fenced) area boundary, as defined in 10 CFR 100.3(a), but the UNRESTRICTED AREA does not include areas over water bodies. The concept of UNRESTRICTED AREAS, established at or beyond the SITE BOUNDARY, is utilized in the LIMITING CONDITIONS FOR OPERATION to keep levels of radioactive materials in liquid and gaseous effluents as low as is reasonably achievable, pursuant to 10 CFR 50.36a.

A06

1.40 Deleted

(COLR)

CORE OPERATING LIMITS REPORT

COLR

1.1 1.41 The CORE OPERATING LIMITS REPORT is the unit-specific document that provides core operating limits for the current reload cycle. These cycle-specific core operating limits shall be determined for each reload cycle in accordance with Specification 6.9.1.7. Plant operation within these core operating limits is addressed in individual specifications.

cycle specific parameter

5.6.3

REFUELING INTERVAL

1.42 A REFUELING INTERVAL is a period of time ≤ 730 days.

A12

INSERT 5

A15

A15

1.1

INSERT 5

ALLOWABLE THERMAL POWER	ALLOWABLE THERMAL POWER shall be the maximum reactor core heat transfer rate to the reactor coolant permitted by consideration of the number and configuration of reactor coolant pumps (RCPs) in operation.
AXIAL POWER SHAPING RODS (APSRs)	APSRs shall be control components used to control the axial power distribution of the reactor core. The APSRs are positioned manually by the operator and are not trippable.
CONTROL RODS	CONTROL RODS shall be all full length safety and regulating rods that are used to shut down the reactor and control power level during maneuvering operations.
NUCLEAR HEAT FLUX HOT CHANNEL FACTOR (F_Q)	F_Q shall be the maximum local linear power density in the core divided by the core average fuel rod linear power density, assuming nominal fuel pellet and fuel rod dimensions.
NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR ($F^N_{\Delta H}$)	$F^N_{\Delta H}$ shall be the ratio of the integral of linear power along the fuel rod on which minimum departure from nucleate boiling ratio occurs, to the average fuel rod power.
PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)	The PTLR is the unit specific document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates, for the current reactor vessel fluence period. These pressure and temperature limits shall be determined for each fluence period in accordance with Specification 5.6.4.

ITS

A01

Table 1.1-1

TABLE 1.1 -1 (page 1 of 1) (a)

OPERATIONAL MODES

MODE	REACTIVITY CONDITION, K_{eff}	%RATED THERMAL POWER*	AVERAGE COOLANT TEMPERATURE
1. POWER OPERATION	≥ 0.99	> 5%	≥ 280°F
2. STARTUP	≥ 0.99	≤ 5%	≥ 280°F
3. HOT STANDBY	< 0.99	0	≥ 280°F
4. HOT SHUTDOWN (b)	< 0.99	0	280°F > T_{avg} > 200°F
5. COLD SHUTDOWN (b)	< 0.99	0	≤ 200°F
6. REFUELING** (c)	≤ 0.95 NA	0	≤ 140°F NA

NA A16

NA A16

NA LA01

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

(a) * Excluding decay heat.

(c) ** Reactor vessel head unbolted or removed and fuel in the vessel.

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

Moved to definition of MODE, page 1 of 14

A03

A03

DAVIS-BESSE, UNIT 1 1-7

A01

ITS

TABLE 1.2

FREQUENCY NOTATION

NOTATION	FREQUENCY
S	At least once per 12 hours.
D	At least once per 24 hours.
W	At least once per 7 days.
M	At least once per 31 days.
Q	At least once per 92 days.
SA	At least once per 6 months. *
A	At least once per 12 months. *
E	At least once per 18 months. *
R	At least once per 24 months. *
S/U	Prior to each reactor startup.
N/A	Not applicable.

*In these Technical Specifications, 6 months is defined to be 184 days, 12 months is defined to be 366 days, 18 months is defined to be 550 days, and 24 months is defined to be 730 days.

A12

Add proposed Sections 1.2, 1.3, and 1.4

A17

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A01

ITS

3/4.1 REACTIVITY CONTROL SYSTEMS

3/4.1.1 BORATION CONTROL

SHUTDOWN MARGIN

LIMITING CONDITION FOR OPERATION

See ITS 3.1.1, ITS 3.1.8, and ITS 3.1.9

3.1.1.1 The SHUTDOWN MARGIN shall be ≥ 1% Δk/k.

APPLICABILITY: MODES 1, 2*, 3**, 4 and 5.

See ITS 3.1.1, ITS 3.1.2, ITS 3.1.8, ITS 3.1.9, and ITS 3.2.1

ACTION:

With the SHUTDOWN MARGIN < 1% Δk/k, immediately initiate and continue boration at ≥ 25 gpm of 7875 ppm boron or its equivalent, until the required SHUTDOWN MARGIN is restored.

See ITS 3.1.1, ITS 3.1.8, ITS 3.1.9, and ITS 3.2.1

SURVEILLANCE REQUIREMENTS

4.1.1.1.1 The SHUTDOWN MARGIN shall be determined to be ≥ 1% Δk/k:

See ITS 3.1.1 and ITS 3.2.1

1.1 a. Within one hour after detection of an inoperable control rod(s) and at least once per 12 hours thereafter while the rod(s) is inoperable. If the inoperable control rod is immovable or untrippable, the above required SHUTDOWN MARGIN shall be increased by an amount at least equal to the withdrawn worth of the immovable or untrippable control rod(s).

See ITS 3.1.4

A09

b. When in MODES 1 or 2#, at least once per 12 hours, by verifying that regulating rod groups withdrawal is within the limits of Specification 3.1.3.6.

c. When in MODE 2## within 4 hours prior to achieving reactor criticality by verifying that the predicted critical control rod position is within the limits of Specification 3.1.3.6.

See ITS 3.2.1

d. Prior to initial operation above 5% RATED THERMAL POWER after each fuel loading by consideration of the factors of e. below, with the regulating rod groups at the maximum insertion limit of Specification 3.1.3.6.

See ITS 3.1.1

*See Special Test Exception 3.10.4

**See LCO 3.7.9, Steam Generator Level, for additional SHUTDOWN MARGIN requirements.

#With $k_{eff} \geq 1.0$

##With $k_{eff} < 1.0$

See ITS 3.1.1 and ITS 3.2.1

See ITS 3.1.1

See ITS 3.2.1

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DISCUSSION OF CHANGES
ITS CHAPTER 1.0, USE AND APPLICATION

ADMINISTRATIVE CHANGES

A01 In the conversion of the Davis-Besse 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-1430, Rev. 3.1, "Standard Technical Specifications-Babcock and Wilcox Plants" (ISTS).

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

A02 The CTS 1.1 states "The DEFINED TERMS of this section appear in capitalized type and are applicable throughout these Technical Specifications." The Note to 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 1.1 definition of "DEFINED TERMS" 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 1.1 definition. 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 1.4 defines OPERATIONAL MODES and Table 1.1, "OPERATIONAL MODES," provide a listing of the MODES. ITS Section 1.1 includes a definition of MODES and Table 1.1-1, "MODES." This changes the CTS MODE definitions in several ways:

- The phrase "Reactor vessel head unbolted or removed" in CTS Table 1.1 Note ** is replaced with "One or more reactor vessel head closure bolts less than fully tensioned" in ITS Table 1.1-1 Note c.

  This change is acceptable because the revised phrase is consistent with the current interpretation and usage. MODE 6 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 unbolted" is already specified in the CTS Note, including "or removed" is unnecessary.

- The CTS Table 1.1 Note ** condition "fuel in the vessel" is moved to the ITS MODE definition.

  This change is acceptable because it moves information within the Technical Specifications with no change in intent. Each MODE in the Table includes fuel in the vessel.

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DISCUSSION OF CHANGES
ITS CHAPTER 1.0, USE AND APPLICATION

- 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 Note ** 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.

- For consistency with the Notes in ITS Table 1.1-1, the ITS definition of MODE adds "reactor vessel head closure bolt tensioning" to the list of characteristics that define a MODE. Currently, the CTS definition does not include this clarification.

  This change is acceptable because the definition of MODE should be consistent with the MODE table in order to avoid confusion. This change is made only for consistency and results in no technical changes to the Technical Specifications.

These changes are designated as administrative because they clarify the application of the MODES and no technical changes to the MODE definitions are made. The clarifications are consistent with the current use and application of the MODES.

A04 The CTS 1.6 definition of OPERABLE-OPERABILITY requires a system, subsystem, train, component or device to be capable of performing its "specified function(s)" and all necessary support systems to also be capable of performing their "function(s)." 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 requirement to be able to perform "functions" to a requirement to be able to perform "safety functions."

The purpose of the CTS and ITS definitions of OPERABLE-OPERABILITY are to ensure that the safety analysis assumptions regarding equipment and variables 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.

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DISCUSSION OF CHANGES
ITS CHAPTER 1.0, USE AND APPLICATION

A05 The CTS 1.6 definition of OPERABLE-OPERABILITY requires that all necessary normal and emergency electrical power sources be available for the system, subsystem, train, component, or device 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 sources." 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 3.0.5. These requirements allow only the normal or the emergency electrical power source to be OPERABLE, provided its redundant system(s), subsystem(s), train(s), component(s), and device(s) (redundant to the systems, subsystems, trains, components, and devices with an inoperable power source) are OPERABLE. This effectively changes the current "and" to an "or." The existing requirements (CTS 3.0.5) 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." In ITS 3.8.1, new times are provided to perform the determination of OPERABILITY of the redundant systems, et. al. This change is discussed in the Discussion of Changes (DOCs) for ITS 3.8.1. This change is designated administrative since the ITS definition is effectively the same as the CTS definition.

A06 CTS Section 1.0 includes the following definitions:

- CONTAINMENT INTEGRITY;
- CORE ALTERATIONS;
- MEMBER(S) OF THE PUBLIC;
- SITE BOUNDARY; and
- UNRESTRICTED AREA

The ITS does not use this terminology and ITS Section 1.1 does not contain these definitions.

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

A07 CTS 1.9 defines CHANNEL CALIBRATION and states "The CHANNEL CALIBRATION shall encompass the entire channel including the sensor and alarm and/or trip functions." ITS 1.0 defines a CHANNEL CALIBRATION and states "The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY." It also states, "Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an in-place qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. This results in a number of changes to the CTS.

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DISCUSSION OF CHANGES
ITS CHAPTER 1.0, USE AND APPLICATION

- The CTS definition states "CHANNEL CALIBRATION shall encompass the entire channel including the sensor and alarm and/or trip functions." The ITS definition 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 ITS definition adds the statement "Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an in place qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel." This allowance is not specifically stated in the CTS definition.

  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 RTDs and thermocouples are designed 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 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 1.11 defines CHANNEL FUNCTIONAL TEST for "Analog channels" as "the injection of a simulated signal into the channel as close to the primary sensor as practicable to verify OPERABILITY including alarm and/or trip functions." CTS 1.11 also defines CHANNEL FUNCTIONAL TEST for "Bistable channels" as "the injection of a simulated signal into the channel sensor to verify OPERABILITY including alarm and/or trip functions." ITS Section 1.1 defines CHANNEL FUNCTIONAL TEST 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" and states that the test "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 addition of use of an "actual" signal is discussed in DOC L02 while the allowance

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to inject the signal "as close to the sensor as practicable" in lieu of "into" the sensor is discussed in DOC L03.

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

  This 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 definition states "The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total channel steps." The CTS definition does not include this statement.

  This change is acceptable because it states current Industry practice, and is not specifically prohibited by the CTS. 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.

A09 CTS 1.13 provides a definition of SHUTDOWN MARGIN. CTS 4.1.1.1.1 provides an exception to the SHUTDOWN MARGIN definition, such that if a control rod is immovable or untrippable the SDM is modified (increased) by an amount at least equal to the withdrawn worth of the immovable or untrippable control rod(s). The ITS definition of SHUTDOWN MARGIN (SDM) includes a statement that "With any CONTROL ROD not capable of being fully inserted, the reactivity worth of these CONTROL RODS must be accounted for in the determination of SDM." This change revises the Technical Specifications definition of SHUTDOWN MARGIN to include the statement that "With any CONTROL ROD not capable of being fully inserted, the reactivity worth of these CONTROL RODS must be accounted for in the determination of SDM."

This change is acceptable because the CTS Surveillance Requirement 4.1.1.1.1 for SDM requires that if an inoperable control rod is immovable or untrippable, the SHUTDOWN MARGIN be increased by an amount at least equal to the withdrawn worth of the immovable or untrippable control rod. This change incorporates this requirement into the Technical Specification definition. This change is designated as administrative because it does not result in a technical change to the Technical Specifications.

DISCUSSION OF CHANGES
ITS CHAPTER 1.0, USE AND APPLICATION

A10 CTS Section 1.0 provides definitions for CONTROLLED LEAKAGE, IDENTIFIED LEAKAGE, PRESSURE BOUNDARY LEAKAGE, and UNIDENTIFIED LEAKAGE. ITS Section 1.1 includes these requirements in one definition called LEAKAGE (which includes three categories: identified LEAKAGE, unidentified LEAKAGE, and pressure boundary LEAKAGE). This changes the CTS by incorporating the definitions into the ITS LEAKAGE definition with no technical changes. As a result, the ITS will not contain a defined term, "CONTROLLED LEAKAGE." Other changes to the LEAKAGE Specification (related to deleting the CONTROLLED LEAKAGE requirements) will be discussed in the Discussion of Changes for ITS 3.4.13, "RCS Operational LEAKAGE."

This change is acceptable because it results in no technical changes to the Technical Specifications. The deletion of the separately defined CONTROLLED LEAKAGE in the CTS is acceptable because the ITS definitions for identified LEAKAGE and unidentified LEAKAGE have been revised to include references to seal water flow from the reactor coolant seals (i.e., reactor coolant pump seal return flow), replacing the defined term CONTROLLED LEAKAGE in these definitions. This change is designated as administrative because it does not result in technical changes to the Technical Specifications.

A11 The CTS 1.21 definition of STAGGERED TEST BASIS states, "A STAGGERED TEST BASIS shall consist of: a. A test schedule for n systems, subsystems, trains or designated components obtained by dividing the specified test interval into *n* equal subintervals, b. The testing of one system, subsystem, train or designated components at the beginning of each subinterval." The ITS Section 1.1 definition states, "A STAGGERED TEST BASIS shall consist of the testing of one of the systems, subsystems, trains, channels, or other designated components during the interval specified by the Surveillance Frequency, so that all systems, subsystems, trains, channels, or other designated components are tested during *n* Surveillance Frequency intervals, where *n* is the total number of systems, subsystems, trains, channels, or other designated components in the associated function." This changes the CTS to specify the frequency of a Surveillance on one system, subsystem, train, or other designated component in the Frequency column of the ITS instead of specifying the frequency in which all systems, subsystems, trains, or other designated components must be tested.

This change is acceptable because the testing frequency of components on a STAGGERED TEST BASIS is not changed. Unlike the CTS definition, the ITS definition allows the Surveillance interval for one subsystem to be specified in the Frequency column of the applicable Surveillance Requirements, independent of the number of subsystems. As an example, consider a three channel system tested on a STAGGERED TEST BASIS. The CTS would specify testing every three months on a STAGGERED TEST BASIS, which results in one channel being tested each month (three equal subintervals). Under the ITS definition, the Surveillance Frequency would be monthly on a STAGGERED TEST BASIS and, one channel would also be tested each month. In both the CTS and ITS definitions, all channels are tested every three months. Each test under the CTS definition would be performed at the beginning of the subinterval. Under the ITS definition, each Surveillance Frequency starts at the beginning of the CTS definition subinterval. Thus, there are no net changes in the testing interval. This change represents an editorial preference in the ITS. This change is designated

as administrative as no technical changes are made to the Technical Specifications.

A12 CTS 1.22 provides a definition of FREQUENCY NOTATION and includes CTS Table 1.2, which lists these notations. CTS 1.42 provides a definition for "REFUELING INTERVAL." 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 1.2. Any Surveillance Frequencies 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.

A13 CTS 1.25 provides a definition of REACTOR PROTECTION SYSTEM RESPONSE TIME, CTS 1.26 provides a definition of SAFETY FEATURE RESPONSE TIME, and CTS 1.28 provides a definition of STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM RESPONSE TIME. ITS Section 1.1 modifies the definitions to more fully describe how the tests are performed. The ITS states that the "response time test may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured." Currently, the CTS does not describe this manner of testing.

This change is acceptable because the ITS definitions are consistent with current plant practices. Also, the definitions are consistent with the guidance provided in IEEE 338-1977, Section 6.3.4, "Response Time Verification Tests," although Davis Besse is not committed to this standard. The results of the test are unaffected by this allowance. This change is designated as administrative as it does not result in a technical change to the response time tests.

A14 CTS 1.13 provides a definition of SHUTDOWN MARGIN. The ITS definition of SHUTDOWN MARGIN includes a statement that "In MODES 1 and 2, the fuel and moderator temperatures are changed to the nominal zero power design level." This change revises the Technical Specifications to include the statement that "In MODES 1 and 2, the fuel and moderator temperatures are changed to the nominal zero power design level."

The CTS 1.13 definition does not provide guidance on the disposition of fuel and moderator temperatures in the calculation of SHUTDOWN MARGIN. The addition of this requirement is considered a clarification of the definition that describes the reactor conditions at which the SHUTDOWN MARGIN is calculated in MODES 1 and 2. The addition of this description is consistent with the standard methods used for calculating SHUTDOWN MARGIN and does not represent a technical change to the calculation of SHUTDOWN MARGIN. As such, this change is consistent with current practice and is acceptable. This change is designated as administrative because it does not result in a technical change to the specification.

DISCUSSION OF CHANGES
ITS CHAPTER 1.0, USE AND APPLICATION

A15 ITS Section 1.1 provides definitions of ALLOWABLE THERMAL POWER, AXIAL POWER SHAPING RODS (APSRs), CONTROL RODS, NUCLEAR HEAT FLUX HOT CHANNEL FACTOR, (F_Q), NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR ($F^N_{\Delta H}$). These terms are not defined in the CTS. This changes the CTS by adding the above terms.

The purpose of these ITS definitions is to define terms used in various ITS Specifications. This change is acceptable because the definitions do not impose any new requirements or alter existing requirements. Any technical changes due to the addition of these definitions will be addressed in the DOCs for the sections of the Technical Specifications in which the definitions are used. These changes are designated as administrative as they add defined terms that do not involve a technical change to the Technical Specifications.

A16 CTS Table 1.1, OPERATIONAL MODES, is revised. The corresponding table in ITS Section 1.1 is Table 1.1-1, MODES. The changes to the CTS are:

- The CTS Table 1.1 minimum average reactor coolant temperature for MODES 1 and 2 is changed from ≥ 280°F 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 limits for MODE 1 and MODE 2 with $k_{eff} \geq 1.0$. Therefore, the 280°F minimum temperature does not provide any useful information in ITS Table 1.1-1, and is deleted from the CTS.

- The CTS Table 1.1 MODE 6 upper limit on average reactor coolant temperature (≤ 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 MODE Table. If the average coolant temperature exceeds the upper limit with the reactor vessel head closure bolts less than fully tensioned, the CTS Table could be misinterpreted as no MODE being applicable. This is not the intent of the CTS or ITS MODE 6 definitions. By removing the temperature reference, this ambiguity is eliminated.

- The RATED THERMAL POWER limit of 0% in CTS Table 1.1 for MODES 3, 4, 5, and 6 is changed in ITS Table 1.1-1 to "NA" (not applicable).

  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 have these restrictions in the MODE Table.

These changes are designated as administrative because they result in no technical changes to the Technical Specifications.

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DISCUSSION OF CHANGES
ITS CHAPTER 1.0, USE AND APPLICATION

A17 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 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.

- 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 use and 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.

A18 This change to CTS 1.3 is provided in the Davis-Besse ITS consistent with License Amendment Request No. 05-0007, submitted to the USNRC for approval in FENOC letter Serial Number 3198, from Mark B. Bezilla (FENOC) to USNRC, dated April 12, 2007. As such, this change is administrative.

MORE RESTRICTIVE CHANGES

None

RELOCATED SPECIFICATIONS

None

REMOVED DETAIL CHANGES

LA01 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS Table 1.1, "OPERATIONAL MODES," states that MODE 6 is restricted to reactivity conditions with $k_{eff} \leq 0.95$. ITS Table 1.1-1, "MODES,"

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does not contain this restriction. This changes the CTS by moving this requirement to the Bases.

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 Applicable Safety Analysis section of the 3.9.1 Bases states "The required boron concentration limit and unit refueling procedures that demonstrate the correct fuel loading plan (including full core mapping) ensure the k_{eff} of the core will remain < 0.95 during refueling operation." 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 the reactor vessel head closure bolts are less than fully tensioned, fuel is in the reactor vessel, and core reactivity exceeds a keff 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 requirement 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.

LESS RESTRICTIVE CHANGES

L01 The CTS 1.1 definition of CHANNEL FUNCTIONAL TEST requires the use of a "simulated" signal when performing the test. The ITS Section 1.1 CHANNEL FUNCTIONAL TEST 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.

L02 CTS 1.11 defines CHANNEL FUNCTIONAL TEST for the "Bistable channels" as the injection of a simulated signal "into the channel sensor." ITS Section 1.1 defines CHANNEL FUNCTIONAL TEST as the injection of a simulated or actual signal "into the channel as close to the sensor as practicable." This changes the CTS by allowing a signal to be injected "in the channel as close to the sensor as practicable" instead of "into the channel sensor."

The purpose of a CHANNEL FUNCTIONAL TEST is to ensure a channel is OPERABLE. This change allows a CHANNEL FUNCTIONAL TEST to be performed by injecting a signal "as close to the sensor as practicable" instead of "into the channel sensor." Injecting a signal into the channel sensor would, in some cases, involve significantly increased probabilities of initiating undesired circuits during the test since several logic channels are often associated with a

particular sensor. Performing the test by injection of a signal into the channel sensor could also require jumpering of the other logic channels to prevent their initiation during the test or increasing the scope of the tests to include multiple tests of the other logic channels. Either method significantly increases the difficulty of performing the surveillance. Allowing initiation of the signal close to the sensor in lieu of into the sensor provides a complete test of the logic channel while significantly reducing the probability of undesired initiation. In addition, the sensor is still being checked during a CHANNEL CALIBRATION. This change is designated as less restrictive because the ITS definition of CHANNEL FUNCTIONAL TEST will allow the test to be performed injecting a signal "into the channel as close to the sensor as practicable" instead of "into the channel sensor."

L03 The CTS 1.19 definition of DOSE EQUIVALENT I-131 requires that the DOSE EQUIVALENT I-131 be calculated using the thyroid dose conversion factors listed in Table III of TID 14844, "Calculation of Distance Factors for Power and Test Reactor Sites." The ITS allows DOSE EQUIVALENT I-131 to be calculated using any one of three thyroid dose conversion factors: TID-14844 (1962); Table E-7 of RG 1.109, Rev. 1 (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." This changes the CTS by allowing two additional methods, ICRP 30, Supplement to Part 1 or Table E-7 of RG 1.109, Rev. 1 (1977), to be used to calculate DOSE EQUIVALENT I-131.

The purpose of the defined term is to provide acceptable methods for computing DOSE EQUIVALENT I-131. Using thyroid dose conversion factors other than those given in TID-14844 results in lower doses and higher allowable activity but is justified by the discussion given in the Federal Register (FR page 23360 Vl 56 No 98 May 21, 1991). This discussion accompanied the final rulemaking on 10 CFR 20 by the NRC. In that discussion, the NRC stated that they were incorporating modifications to existing concepts and recommendations of the ICRP and NCRP into NRC regulations. Incorporation of the methodology of ICRP 30 into the 10 CFR 20 revision was specifically mentioned with the explanation that changes being made result from changes in the scientific techniques and parameters used in calculating dose. In a response to a specific question as to whether or not the ICRP 30 dose parameters should be used, the NRC stated "Appropriate parameters for calculating organ doses can be found in ICRP 30 and its supplements..." Lastly, Commissioner Curtis provided additional views of the revised 10 CFR 20 with respect to the backfit rule. In that discussion, he stated that the AEC, when they issued the original 10 CFR 20, had emphasized that the standards were subject to change with the development of new knowledge and experience. He went on to say that the limits given in the revised 10 CFR 20 were based on up-to-date metabolic models and dose factors. This Federal Register entry shows clearly that, in general, the NRC was updating 10 CFR 20 to incorporate ICRP-30 recommendations and data. Given this discussion, it is concluded that using ICRP thyroid dose conversion factors to calculate DOSE EQUIVALENT I-131 is acceptable. In addition, RG 1.109 was developed by the NRC for the purpose of evaluating compliance with 10 CFR 50, Appendix I. The RG 1.109 thyroid dose conversion factors are higher than the ICRP 30 thyroid dose conversion factors for all five iodine isotopes in question. Therefore, using RG 1.109 thyroid dose conversion factors to calculate DOSE

DISCUSSION OF CHANGES
ITS CHAPTER 1.0, USE AND APPLICATION

EQUIVALENT I-131 is more conservative than ICRP 30 and is therefore acceptable.

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

CTS 1.0 USE AND APPLICATION

1.1 Definitions

---NOTE---

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

	Term	Definition
1.5	ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
DOC A15	ALLOWABLE THERMAL POWER	ALLOWABLE THERMAL POWER shall be the maximum reactor core heat transfer rate to the reactor coolant permitted by consideration of the number and configuration of reactor coolant pumps (RCPs) in operation.
1.23	AXIAL POWER IMBALANCE	AXIAL POWER IMBALANCE shall be the power in the top half of the core, expressed as a percentage of RATED THERMAL POWER (RTP), minus the power in the bottom half of the core, expressed as a percentage of RTP.
DOC A15	AXIAL POWER SHAPING RODS (APSRs)	APSRs shall be control components used to control the axial power distribution of the reactor core. The APSRs are positioned manually by the operator and are not trippable.
1.9	CHANNEL CALIBRATION	A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds within the necessary range and accuracy to known values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass all devices in the channel required for channel OPERABILITY and the CHANNEL FUNCTIONAL TEST. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps.
1.10	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

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CTS

1.1 Definitions

1.10 CHANNEL CHECK (continued)

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

1.11 CHANNEL FUNCTIONAL TEST A CHANNEL FUNCTIONAL TEST shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY of all devices in the channel required for channel OPERABILITY.

The ESFAS CHANNEL FUNCTIONAL TEST shall also include testing of ESFAS safety related bypass functions for each channel affected by bypass operation. (9)

The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total steps. (6)

DOC A15 CONTROL RODS CONTROL RODS shall be all full length safety and regulating rods that are used to shut down the reactor and control power level during maneuvering operations.

~~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.~~ (TSTF -471)

1.41 CORE OPERATING LIMITS REPORT (COLR) The COLR is the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific limits shall be determined for each reload cycle in accordance with Specification 5.6.3. Plant operation within these limits is addressed in individual Specifications.

1.19 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 those listed in ICRP 30, Supplement to Part 1, page 192-212, table titled, "Committed Dose Equivalent in Target Organs or Tissues per Intake of Unit Activity". (1)

CTS

1.1 Definitions

1.20 **Ē - AVERAGE DISINTEGRATION ENERGY**

Ē 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. (1)

STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM

1.28 ~~EMERGENCY FEEDWATER INITIATION AND CONTROL (EFIC) RESPONSE TIME~~

moved to page 1.1-6

(SFRCS)

SFRCS

The ~~EFIC~~ RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ~~EFIC~~ actuation setpoint at the channel sensor until the ~~emergency feedwater~~ equipment is capable of performing its ~~function~~ (i.e., ~~valves~~ travel to their required positions, ~~pumps 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. (5) (5) (8)

SFRCS

safety

SFAS

1.26 ~~ENGINEERED SAFETY FEATURE (ESF) RESPONSE TIME~~

moved to page 1.1-6

S ACTUATION SYSTEM (SFAS)

The ~~ESF~~ RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ~~ESF~~ actuation setpoint at the channel sensor until the ~~ESF~~ equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured. (6)

SFAS

DOC A10 **LEAKAGE**

LEAKAGE shall be:

1.14 a. Identified LEAKAGE

1.14.a 1. LEAKAGE, such as that from pump seals or valve packing (except RCP seal ~~water injection or leakoff~~), that is captured and conducted to collection systems or a sump or collecting tank; (4)

return flow

1.14.b 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 (2)

;

CTS	1.1 Definitions	
DOC A10	LEAKAGE (continued)	
1.14.c		3. Reactor Coolant System (RCS) LEAKAGE through a steam generator to the Secondary System (primary to secondary LEAKAGE);
1.15		b. Unidentified LEAKAGE All LEAKAGE (except RCP seal water injection or leakoff) that is not identified LEAKAGE; and (4) (2)
1.16		c. Pressure Boundary LEAKAGE LEAKAGE (except primary to secondary LEAKAGE) through a nonisolable fault in an RCS component body, pipe wall, or vessel wall.
1.4	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.
DOC A15	NUCLEAR HEAT FLUX HOT CHANNEL FACTOR, $F_Q(Z)$	$F_Q(Z)$ shall be the maximum local linear power density in the core divided by the core average fuel rod linear power density, assuming nominal fuel pellet and fuel rod dimensions. (10) (3)
DOC A15	NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR, $F^N_{\Delta H}$	$F^N_{\Delta H}$ shall be the ratio of the integral of linear power along the fuel rod on which minimum departure from nucleate boiling ratio occurs, to the average fuel rod power. (3)
1.6	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).

CTS

1.1 Definitions

1.27 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; (1)

b. Authorized under the provisions of 10 CFR 50.59; or (2)

c. Otherwise approved by the Nuclear Regulatory Commission.

DOC A15 PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR)

The PTLR is the unit specific document that provides the reactor vessel pressure and temperature limits, including heatup and cooldown rates, for the current reactor vessel fluence period. These pressure and temperature limits shall be determined for each fluence period in accordance with Specification 5.6.4.

1.18 QUADRANT POWER TILT (QPT)

QPT shall be defined by the following equation and is expressed as a percentage of the Power in any Core Quadrant (P_{quad}) to the Average Power of all Quadrants (P_{avg}). (3)

$$QPT = 100 [(P_{quad} / P_{avg}) - 1]$$

1.3 RATED THERMAL POWER (RTP)

RTP shall be a total reactor core heat transfer rate to the reactor coolant of [2544] MWt. (1)

1.25 REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME

The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until electrical power is interrupted at the control rod drive trip breakers. 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.

SFAS definition (from page 1.1-3)

1.1 Definitions

5

1.13 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 full length CONTROL RODS (safety and regulating) are fully inserted except for the single CONTROL ROD of highest reactivity worth, which is assumed to be fully withdrawn. However, with all CONTROL RODS verified fully inserted by two independent means, it is not necessary to account for a stuck CONTROL ROD in the SDM calculation. With any CONTROL ROD not capable of being fully inserted, the reactivity worth of these CONTROL RODS must be accounted for in the determination of SDM. 12 2

b. In MODES 1 and 2, the fuel and moderator temperatures are changed to the nominal zero power design level; and 1 2

c. There is no change in APSR position.

1.21 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. 7 trains, 6

SFRCS definition (from page 1.1-3)

1.2 THERMAL POWER

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

CTS

Table 1.1

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	≥ [~~330~~] 280	1
4	Hot Shutdown[b]	< 0.99	NA	[~~330~~] > T_{avg} > [200]	1
5	Cold Shutdown[b]	< 0.99	NA	≤ [200]	1
6	Refueling[c]	NA	NA	NA	

(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.

1.0 USE AND APPLICATION

1.2 Logical Connectors

DOC A17

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 A17 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.

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CTS

1.2 Logical Connectors

DOC A17

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

1.3 Completion Times

DOC A17	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 <u>not</u> result in separate entry into the Condition, unless specifically stated. The Required Actions of the Condition continue to apply to each additional failure, with Completion Times based on initial entry into the Condition. However, when a <u>subsequent</u> train, subsystem, component, or variable, expressed in the Condition, is discovered to be inoperable or not within limits, the Completion Time(s) may be extended. To apply this Completion Time extension, two criteria must first be met. The subsequent inoperability: a. Must exist concurrent with the <u>first</u> inoperability ; and (2) b. Must remain inoperable or not within limits after the first inoperability is resolved.

CTS

1.3 Completion Times

DOC A17

DESCRIPTION (continued)

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 ; 2

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.	6 hours
	AND	
	B.2 Be in MODE 5.	36 hours

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

CTS

1.3 Completion Times

DOC A17

EXAMPLES (continued)

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.

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.

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1.3 Completion Times

DOC A17

EXAMPLES (continued)

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

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

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1.3 Completion Times

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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

1.3 Completion Times

DOC A17

EXAMPLES (continued)

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).

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

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

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1.3 Completion Times

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EXAMPLES (continued)

EXAMPLE 1.3-4

ACTIONS

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

3

3

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

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

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

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1.3 Completion Times

DOC A17

EXAMPLES (continued)

EXAMPLE 1.3-5

ACTIONS

NOTE
Separate Condition entry is allowed for each inoperable valve.

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

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

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

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

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1.3 Completion Times

DOC A17

EXAMPLES (continued)

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

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.

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1.3 Completion Times

EXAMPLES (continued)

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EXAMPLE 1.3-7

ACTIONS

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

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

If after Condition A is entered, Required Action A.1 is not met within either the initial 1 hour or any subsequent 8 hour interval from the previous performance (plus the extension allowed by SR 3.0.2), Condition B is entered. 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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1.3 Completion Times

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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.

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CTS 1.0 USE AND APPLICATION

1.4 Frequency

DOC A17	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 2 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. (3) (3) 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 preformed 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: (3)

CTS

1.4 Frequency

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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.

3

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.

CTS

1.4 Frequency

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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

1.4 Frequency

DOC A17

EXAMPLES (continued)

EXAMPLE 1.4-2

SURVEILLANCE REQUIREMENTS

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

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

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

CTS

1.4 Frequency

DOC A17

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.

(plus the extension allowed by SR 3.0.2)

was 3

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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.

(plus the extension allowed by SR 3.0.2)

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1.4 Frequency

EXAMPLES (continued)

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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. 3 3

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1.4 Frequency

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EXAMPLES (continued)

EXAMPLE 1.4-5

SURVEILLANCE REQUIREMENTS

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

performed (11)

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~~ was (3) not performed within the 7 day (plus the extension allowed by SR 3.0.2) interval, but operation was not in MODE 1, it would not constitute a failure of the SR or failure to meet the LCO. Also, no violation of SR 3.0.4 occurs when changing MODES, even with the 7 day Frequency not met, provided operation does not result in entry into MODE 1.

Once the unit 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~~ was (3) 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.

CTS

1.4 Frequency

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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 not performed within the 24 hour interval (plus the extension allowed by SR 3.0.2), and the unit was in MODE 3, there would be no failure of the SR nor failure to meet the LCO. Therefore, no violation of SR 3.0.4 occurs when changing MODES to enter MODE 3, even with the 24 hour Frequency exceeded, provided the MODE change does not result in entry into MODE 2. Prior to entering MODE 2 (assuming again that the 24 hour Frequency were not met), SR 3.0.4 would require satisfying the SR.

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was 3

was 3

JUSTIFICATION FOR DEVIATIONS
ITS CHAPTER 1.0, USE AND APPLICATION

1. The brackets are removed and the proper plant specific information/value is provided.

2. 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.

3. Typographical/grammatical error corrected.

4. ISTS Section 1.0 definitions for identified LEAKAGE and unidentified LEAKAGE include an exception that states "except RCP seal water injection or leakoff." The purpose of this exception is to exclude this type of leakage from being part of the ITS 3.4.13, "RCS Operational LEAKAGE," requirements. Previously this exception was covered by its own definition, CONTROLLED LEAKAGE, as shown in Davis-Besse CTS definition 1.17. This exception has been changed in the ITS for both the identified and unidentified LEAKAGE definitions to "except RCP seal return flow." These revised words are consistent with the current Davis-Besse definition of CONTROLLED LEAKAGE ("seal water flow from the reactor coolant pump seals") and are more accurate. Seal water flow from the RCP seals (i.e., RCP seal return flow) is the normal controlled RCP seal leakoff that is returned to the makeup tank. The ISTS words "or leakoff" imply that the identified and unidentified LEAKAGE exception includes RCP upper seal leakoff, which is not returned to the makeup tank and is actual identified LEAKAGE.

5. The definition of EMERGENCY FEEDWATER INITIATION AND CONTROL (EFIC) RESPONSE TIME has been changed to STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM (SFRCS) RESPONSE TIME consistent with plant terminology. Due to the definition title change, it has been moved to the correct alphabetical location.

6. The definition of ENGINEERED SAFETY FEATURE (ESF) RESPONSE TIME has been changed to SAFETY FEATURES ACTUATION SYSTEM (SFAS) RESPONSE TIME consistent with plant terminology. Due to the definition title change, it has been moved to the correct alphabetical location.

7. The definition of STAGGERED TEST BASIS has been modified to include the term "trains" in the discussion. This change is consistent with the current definition in CTS 1.21.

8. The definition of EMERGENCY FEEDWATER INITIATION AND CONTROL (EFIC) RESPONSE TIME states "Times shall include diesel generator starting and sequence loading delays, where applicable." The Davis-Besse definition in CTS 1.28 does not include this statement and it has not been included in the STEAM AND FEEDWATER RUPTURE CONTROL SYSTEM (SFRCS) RESPONSE TIME definition in the ITS. The SFRCS RESPONSE TIME specified in the Technical Requirements Manual does not include any allowance for emergency diesel generator starting and sequence loading delays. Response of the timed equipment is not dependent on the presence of AC electrical power, with the exception of the main feedwater stop valves (MFSVs). The main feedwater control valves (MFCVs) and the startup feedwater control valves (SFCVs) are credited for main feedwater isolation. The MFCVs and SFCVs are air operated

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with no reliance on AC electrical power. Therefore, the SFRCS safety function is not dependent on the emergency diesel generator response.

9. This statement has been deleted consistent with TSTF-124. This TSTF was previously approved and was incorporated into NUREG-1430, Rev. 2. However, this portion of the TSTF was inadvertently not incorporated. A similar deletion in the CHANNEL CALIBRATION definition was properly incorporated.

10. Editorial change made consistent with plant specific terminology.

11. The word "met" has been changed to "performed" consistent with TSTF-284, Rev. 3. This TSTF was previously approved and was incorporated into NUREG-1430, Rev. 2. However, this portion of the TSTF was inadvertently incorporated incorrectly.

12. The definition for SHUTDOWN MARGIN has been modified to not include the statement "However, with all CONTROL RODS verified fully inserted by two independent means, it is not necessary to account for a stuck CONTROL ROD in the SDM calculation." Davis-Besse does not desire to adopt this less restrictive allowance.

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Specific No Significant Hazards Considerations (NSHCs)

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10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGE L01

Davis-Besse is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1430, Rev. 3.1, "Standard Technical Specifications, Babcock and Wilcox 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 conversion to NUREG-1430.

The CTS 1.1 definition of CHANNEL FUNCTIONAL TEST requires the use of a "simulated" signal when performing the test. The ITS Section 1.1 CHANNEL FUNCTIONAL TEST 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.

An evaluation has been performed to determine whether or not a significant hazards consideration is involved with these proposed Technical Specification changes 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 UFSAR Chapter 15 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.

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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 a 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."

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10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGE L02

Davis-Besse is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1430, Rev. 3.1, "Standard Technical Specifications, Babcock and Wilcox 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 conversion to NUREG-1430.

CTS 1.11 defines CHANNEL FUNCTIONAL TEST for the "Bistable channels" as the injection of a simulated signal "into the channel sensor." ITS Section 1.1 defines CHANNEL FUNCTIONAL TEST as the injection of a simulated or actual signal "into the channel as close to the sensor as practicable." This changes the CTS by allowing a signal to be injected "in the channel as close to the sensor as practicable" instead of "into the channel sensor."

The purpose of a CHANNEL FUNCTIONAL TEST is to ensure a channel is OPERABLE. This change allows a CHANNEL FUNCTIONAL TEST to be performed by injecting a signal "as close to the sensor as practicable" instead of "into the channel sensor." Injecting a signal into the channel sensor would, in some cases, involve significantly increased probabilities of initiating undesired circuits during the test since several logic channels are often associated with a particular sensor. Performing the test by injection of a signal into the channel sensor could also require jumpering of the other logic channels to prevent their initiation during the test or increasing the scope of the tests to include multiple tests of the other logic channels. Either method significantly increases the difficulty of performing the surveillance. Allowing initiation of the signal close to the sensor in lieu of into the sensor provides a complete test of the logic channel while significantly reducing the probability of undesired initiation. In addition, the sensor is still being checked during a CHANNEL CALIBRATION. This change is designated as less restrictive because the ITS definition of CHANNEL FUNCTIONAL TEST will allow the test to be performed injecting a signal "into the channel as close to the sensor as practicable" instead of "into the channel sensor."

An evaluation has been performed to determine whether or not a significant hazards consideration is involved with these proposed Technical Specification changes 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.

   Testing of instrument channels such that the test signal does not include the "sensor" will significantly reduce the complications associated with performance of a surveillance on a sensor that provides input to multiple logic channels. The sensor will still be checked during a CHANNEL CALIBRATION. This reduction of complication will not affect the failure probability of the equipment but may reduce the probability of personnel error during the surveillance. Such

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reductions will not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

   Response: No.

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

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

   Response: No.

   This change does not involve a change to the limits or limiting condition of operation; only the method for performing a surveillance is changed. Since the proposed method affects only a single logic channel rather than potentially affecting multiple logic channels simultaneously, and the sensor is adequately tested during a CHANNEL CALIBRATION, the 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."

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10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGE L03

Davis-Besse is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1430, Rev. 3.1, "Standard Technical Specifications, Babcock and Wilcox 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 conversion to NUREG-1430.

The CTS 1.19 definition of DOSE EQUIVALENT I-131 requires that the DOSE EQUIVALENT I-131 be calculated using the thyroid dose conversion factors listed in Table III of TID 14844, "Calculation of Distance Factors for Power and Test Reactor Sites." The ITS allows DOSE EQUIVALENT I-131 to be calculated using any one of three thyroid dose conversion factors: TID-14844 (1962); Table E-7 of RG 1.109, Rev. 1 (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." This changes the CTS by allowing two additional methods, ICRP 30, Supplement to Part 1 or Table E-7 of RG 1.109, Rev. 1 (1977), to be used to calculate DOSE EQUIVALENT I-131.

The purpose of the defined term is to provide acceptable methods for computing DOSE EQUIVALENT I-131. Using thyroid dose conversion factors other than those given in TID-14844 results in lower doses and higher allowable activity but is justified by the discussion given in the Federal Register (FR page 23360 VI 56 No 98 May 21, 1991). This discussion accompanied the final rulemaking on 10 CFR 20 by the NRC. In that discussion, the NRC stated that they were incorporating modifications to existing concepts and recommendations of the ICRP and NCRP into NRC regulations. Incorporation of the methodology of ICRP 30 into the 10 CFR 20 revision was specifically mentioned with the explanation that changes being made result from changes in the scientific techniques and parameters used in calculating dose. In a response to a specific question as to whether or not the ICRP 30 dose parameters should be used, the NRC stated "Appropriate parameters for calculating organ doses can be found in ICRP 30 and its supplements..." Lastly, Commissioner Curtis provided additional views of the revised 10 CFR 20 with respect to the backfit rule. In that discussion, he stated that the AEC, when they issued the original 10 CFR 20, had emphasized that the standards were subject to change with the development of new knowledge and experience. He went on to say that the limits given in the revised 10 CFR 20 were based on up-to-date metabolic models and dose factors. This Federal Register entry shows clearly that, in general, the NRC was updating 10 CFR 20 to incorporate ICRP-30 recommendations and data. Given this discussion, it is concluded that using ICRP thyroid dose conversion factors to calculate DOSE EQUIVALENT I-131 is acceptable. In addition, RG 1.109 was developed by the NRC for the purpose of evaluating compliance with 10 CFR 50, Appendix I. The RG 1.109 thyroid dose conversion factors are higher than the ICRP 30 thyroid dose conversion factors for all five iodine isotopes in question. Therefore, using RG 1.109 thyroid dose conversion factors to calculate DOSE EQUIVALENT I-131 is more conservative than ICRP 30 and is therefore acceptable.

An evaluation has been performed to determine whether or not a significant hazards consideration is involved with these proposed Technical Specification changes by

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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 use of Regulatory Guide 1.109 or ICRP 30 thyroid dose conversion factors to calculate DOSE EQUIVALENT I-131 is a change in analysis methodology which does not include a physical change to the plant, a new mode of plant operation, or a change in surveillance frequency. Therefore, the probability of a previously analyzed accident would not increase. Dose consequences in the applicable accident analyses were evaluated utilizing an iodine activity associated with 1% failed fuel. Since the reactor coolant activity used in the accident analyses is significantly higher than the Technical Specification limit, the method for determining DOSE EQUIVALENT I-131 does not affect consequences of previously evaluated accidents. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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 does not create the possibility of a new or different kind of accident from any accident previously evaluated because the proposed change does not introduce a new mode of plant operation and does not require physical modification of the plant. 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 only refines the method of calculating thyroid doses and DOSE EQUIVALENT I-131 activity. Using these methods would not result in the thyroid doses changing significantly, since the same dose factors would be used to calculate the thyroid doses and DOSE EQUIVALENT I-131 activity. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

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."

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