1.0   USE AND APPLICATION

1.1   Definitions

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

Term	Definition
ACTIONS	ACTIONS shall be that part of a Specification that prescribes Required Actions to be taken under designated Conditions within specified Completion Times.
AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR)	The APLHGR shall be applicable to a specific planar height and is equal to the sum of the LHGRs heat generation rate per unit length of fuel rod for all the fuel rods in the specified bundle at the specified height divided by the number of fuel rods in the fuel bundle at the height.
CHANNEL CALIBRATION	A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel such that it responds within the necessary range and accuracy to specified values of the parameter that the channel monitors. The CHANNEL CALIBRATION shall encompass the entire channel, including the required sensor, alarm, display, and trip functions, and shall include the CHANNEL FUNCTIONAL TEST. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors may consist of an inplace qualitative assessment of sensor behavior and normal calibration of the remaining adjustable devices in the channel. The CHANNEL CALIBRATION may be performed by means of any series of sequential, overlapping, or total channel steps so that the entire channel is calibrated.
CHANNEL CHECK	A CHANNEL CHECK shall be the qualitative assessment, by observation, of channel behavior during operation. This determination shall include, where possible, comparison of the channel indication and status to other indications or status derived from independent instrument channels measuring the same parameter.

1.1   Definitions

CHANNEL FUNCTIONAL TEST	A CHANNEL FUNCTIONAL TEST shall be the injection of a simulated or actual signal into the channel as close to the sensor as practicable to verify OPERABILITY, including required alarm, interlock, display, and trip functions, and channel failure trips. The CHANNEL FUNCTIONAL TEST may be performed by means of any series of sequential, overlapping, or total channel steps so that the entire channel is tested.
COMPREHENSIVE FUNCTIONAL TEST	A COMPREHENSIVE FUNCTIONAL TEST (CoFT) is a set of tests that exercises each RPS, ESF, and MSIV closure Function by simulating accident events that exercise the inputs and outputs of the SSLC, NMS, PRRM, RPS/MSIV actuation logic and ESF actuation logic. A CoFT also simulates power failures, measures CPU and network performance, runs microprocessor-specific and application-specific diagnostics. Test inputs include out-of-range conditions to verify OPERABILITY of the SSLC electronics, alarms and displays.
CORE ALTERATION	CORE ALTERATION shall be the movement of any fuel, sources, or other reactivity control components within the reactor vessel with the vessel head removed and fuel in the vessel. Movement of startup range neutron monitors, local power range monitors, traversing incore probes, or special movable detectors (including undervessel replacement) is not considered a CORE ALTERATION. In addition, control rod movement with other than the normal control rod drive is not considered a CORE ALTERATION provided there are no fuel assemblies in the associated core cell. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.
CORE OPERATING LIMITS REPORT (COLR)	The COLR is the unit specific document that provides cycle specific parameter limits for the current reload cycle. These cycle specific limits shall be determined for each reload cycle in accordance with Specification 5.7.1.5 Plant operation within these limits is addressed in individual Specifications.

1.1   Definitions

DIVISION FUNCTIONAL TEST	The injection of simulated or actual signals into a division as close to the sensors as practicable to verify OPERABILITY of SENSOR CHANNELS and LOGIC CHANNELS in that division. The DIVISION FUNCTIONAL TEST may be performed by means of a series of sequential or overlapping steps. The test shall comprise all the equipment from the DTF inputs to LOGIC CHANNEL outputs. This test shall also verify that the inputs to the DTFs are the same as the information presented at the control room indicators.
DOSE EQUIVALENT I-131	DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries/gram) that alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in Table III of TID-14844, AEC, 1962, "Calculation of Distance Factors for Power and Test Reactor Sites" or those listed in Table E-7 of Regulatory Guide 1.109, Rev. 1, NRC, 1977 or ICRP 30, Supplement to Part 1, pages 192-212, Table titled "Committed Dose Equivalent in Target Organs or Tissues per Intake of Unit Activity."
$\bar{E}$-AVERAGE DISINTEGRATION ENERGY	$\bar{E}$ shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half lives > 15 minutes, making up at least 95% of the total noniodine activity in the coolant.
EMERGENCY CORE COOLING SYSTEM (ECCS) RESPONSE TIME	The ECCS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ECCS initiation setpoint at the channel sensor until the ECCS equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.

1.1   Definitions

ISOLATION SYSTEM RESPONSE TIME	The ISOLATION SYSTEM RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its isolation initiation setpoint at the channel sensor until the isolation valves travel to their required positions. Times shall include diesel generator starting and sequence loading delays, where applicable. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.

LEAKAGE   LEAKAGE shall be:

a.   Identified LEAKAGE

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

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

b.   Unidentified LEAKAGE

All LEAKAGE into the drywell that is not identified LEAKAGE;

c.   Total LEAKAGE

Sum of the identified and unidentified LEAKAGE;

d.   Pressure Boundary LEAKAGE

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

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

1.1   Definitions

LOGIC CHANNEL

A LOGIC CHANNEL is defined as a set of interconnecting hardware and software components that process the inputs to produce an identifiable RPS trip signal or ESF actuation signal within a division. For the RPS, this includes the trip signal's associated TLU 2-out-of-4 voters, TLU bistable functions, operator controls, interlocks, data transmission, alarms, displays, division-of-sensors bypass, transmission lines out to the OLU inputs. Each ESF function will include the ESF actuation signal's associated DLC 2-out-of-4 voters, DLC bistable functions, operator controls, interlocks, data transmission, alarms, displays, division-of-sensors bypass, DCF, and, as applicable, transmission lines out to the input of the 2-out-of-2 voters. The ESF actuation signal includes the system actuation signal and all its associated device actuation signals generated in the DLC out to the 2-out-of-2 voter, if present.

LOGIC SYSTEM
FUNCTIONAL TEST

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

MINIMUM CRITICAL POWER
RATIO (MCPR)

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

MODE

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

1.1   Definitions

OPERABLE – OPERABILITY	A system, subsystem, division, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, displays, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, division, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
OUTPUT CHANNEL	An OUTPUT CHANNEL is defined as a set of interconnected components that process outputs from associated LOGIC CHANNELS to produce an identifiable signal that deenergizes scram solenoids, deenergizes MSIV Isolation solenoids, or energizes ESF device actuators within a division. For the RPS, this includes the signal's associated OLU, transmission lines, manual divisional trip and reset switches, trip logic output bypass switch, parallel load driver test switch, and scram pilot valve solenoid load drivers. For the MSIVs, this includes the signal's associated OLU, data transmission, manual divisional isolation and reset switches, trip logic output bypass switch, and MSIV isolation pilot valve solenoid load drivers. For the ESF, this includes the signal's associated DLC or 2-out-of-2 voter, as applicable, ESF Output Channel Bypass switch, and data transmission out to the ESF device actuator.
OUTPUT CHANNEL FUNCTIONAL TEST	An OUTPUT CHANNEL FUNCTIONAL TEST is the injection of simulated or actual signals into the OUTPUT CHANNEL to verify OPERABILITY.
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 DCD Tier 2;

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

c.   Otherwise approved by the Nuclear Regulatory Commission.

1.1   Definitions

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 5.7.1.6 Plant operation within these operating limits is addressed in LCO 3.4.9, "RCS Pressure and Temperature (P/T) Limits."
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3926 MWt.
REACTOR PUMP TRIP (RPT) SYSTEM RESPONSE TIME	The RPT SYSTEM RESPONSE TIME shall be that time interval from initial signal generation (by the associated turbine stop valve limit switch or the turbine control valve hydraulic oil pressure switch) to the trip of the inverters associated with the reactor internal pumps adjustable speed drives. 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.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
SENSOR CHANNEL	A SENSOR CHANNEL is defined as a set of interconnected hardware and software components that process an identifiable sensor signal within a division. This includes the sensor, data acquisition, signal conditioning, data transmission, alarms, displays, and all transmission lines in the division and between divisions associated with the sensor signal up to an input of a 2-out-of-4 voter or an input of a bistable function within the TLU or DLC.
SENSOR CHANNEL CALIBRATION	A SENSOR CHANNEL CALIBRATION is the adjustment, as necessary, of the SENSOR CHANNEL such that it responds within the specified range and accuracy to specified values of the parameter that the SENSOR CHANNEL monitors. The calibration may be performed by any series of sequential,

1.1   Definitions

SENSOR CHANNEL CALIBRATION (continued)	overlapping, or total SENSOR CHANNEL test steps so that the entire SENSOR CHANNEL is calibrated. Calibration of instrument channels with resistance temperature detector (RTD) or thermocouple sensors shall consist of an inplace cross calibration of the sensing elements and normal calibration of the remaining adjustments in the channel. Whenever a sensing element is replaced, the next required inplace cross calibration consists of comparing the other sensing elements with the recently installed sensing element.
SENSOR CHANNEL CHECK	A SENSOR CHANNEL CHECK is the qualitative assessment, by observation, of a SENSOR CHANNEL's behavior during operation. This observation shall include comparison of this SENSOR CHANNEL's indication to other indications derived from independent SENSOR CHANNELS. This check shall be performed so as to examine as much of the SENSOR CHANNEL as practicable.
SHUTDOWN MARGIN (SDM)	SDM shall be the amount of reactivity by which the reactor is subcritical or would be subcritical assuming that:

a.   The reactor is xenon free;

b.   The moderator temperature is 20°C; and

c   All control rods are fully inserted except for the control rod pair of highest reactivity worth, which is assumed to be fully withdrawn.

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

NOTE: A control rod pair consists of two control rods which are connected to the same, shared scram accumulator. All control rods share an accumulator except for the center control rod which has its own accumulator.

1.1   Definitions

_____

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 $\underline{n}$
                              Surveillance Frequency intervals, where $\underline{n}$ is the total number
                              of systems, subsystems, channels, or other designated
                              components in the associated function.

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

TURBINE BYPASS SYSTEM   The TURBINE BYPASS SYSTEM RESPONSE TIME consists
RESPONSE TIME   of two components:

                              a.   The time from initial movement of the main turbine stop
                                    valve or control valve until 80% of the turbine bypass
                                    capacity is established; and

                              b.   The time from initial movement of the main turbine stop
                                    valve or control valve until initial movement of the turbine
                                    bypass valve.

                              The response time may be measured by means of any series
                              of sequential, overlapping, or total steps so that the entire
                              response time is measured.

_____

Table 1.1-1 (page 1 of 1)
MODES

MODE	TITLE	REACTOR MODE SWITCH POSITION	AVERAGE REACTOR COOLANT TEMPERATURE °C
1	Power Operation	Run	NA
2	Startup	Refuel[(a)] or Startup/Hot Standby	NA
3	Hot Shutdown[(a)]	Shutdown	> 93
4	Cold Shutdown[(a)]	Shutdown	$\leq$ 93
5	Refueling[(b)]	Shutdown or Refuel	NA

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

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

1.0   USE AND APPLICATION

1.2   Logical Connectors

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

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

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

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

EXAMPLES   The following examples illustrate the use of logical connectors.

1.2   Logical Connectors

EXAMPLES
(continued)

EXAMPLE 1.2-1

ACTIONS

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

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

1.2   Logical Connectors

EXAMPLES   EXAMPLE 1.2-2
(continued)
                  ACTIONS

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

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

1.0   USE AND APPLICATION

1.3   Completion Times

PURPOSE

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

BACKGROUND

Limiting Conditions for Operation (LCOs) specify minimum requirements for ensuring safe operation of the unit. The ACTIONS associated with an LCO state Conditions that typically describe the ways in which the requirements of the LCO can fail to be met. Specified with each stated Condition are Required Action(s) and Completion Time(s).

DESCRIPTION

The Completion Time is the amount of time allowed for completing a Required Action. It is referenced to the time of discovery of a situation (e.g., inoperable equipment or variable not within limits) that requires entering an ACTIONS Condition unless otherwise specified, providing the unit is in a MODE or specified condition stated in the Applicability of the LCO. Required Actions must be completed prior to the expiration of the specified Completion Time. An ACTIONS Condition remains in effect and the Required Actions apply until the Condition no longer exists or the unit is not within the LCO Applicability.

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

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

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

1.3   Completion Times

DESCRIPTION
(continued)

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

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

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

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

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

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

The above Completion Time extension does not apply to a Completion Time with a modified "time zero." This modified "time zero" may be expressed as a repetitive time (i.e., "once per 8 hours," where the Completion Time is referenced from a previous completion of the Required Action versus the time of Condition entry) or as a time modified by the phrase "from discovery . . ." Example 1.3-3 illustrates one use of this type of Completion Time. The 10 day Completion Time specified for Conditions A and B in Example 1.3-3 may not be extended.

EXAMPLES

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

1.3   Completion Times

EXAMPLES
(continued)

EXAMPLE 1.3-1

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours

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

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

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

1.3   Completion Times

EXAMPLES   EXAMPLE 1.3-2
(continued)
                  ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One pump inoperable.	A.1 Restore pump to OPERABLE status.	7 days
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours

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

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

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

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.

1.3   Completion Times

EXAMPLES   EXAMPLE 1.3-2 (continued)

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

1.3   Completion Times

EXAMPLES
(continued)

EXAMPLE 1.3-3

ACTIONS

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

When one Function X subsystem and one Function Y subsystem are inoperable, Condition A and Condition B are concurrently applicable. The Completion Times for Condition A and Condition B are tracked separately for each subsystem, starting from the time each subsystem was declared

---

1.3   Completion Times

EXAMPLES   EXAMPLE 1.3-3 (continued)

inoperable and the Condition was entered. A separate Completion Time
is established for Condition C and tracked from the time the second
subsystem was declared inoperable (i.e., the time the situation described
in Condition C was discovered).

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

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

1.3   Completion Times

EXAMPLES
(continued)

EXAMPLE 1.3-4

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more valves inoperable.	A.1 Restore valve(s) to OPERABLE status.	4 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours

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

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

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

1.3   Completion Times

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EXAMPLES   EXAMPLE 1.3-5
(continued)
                   ACTIONS
                   ---NOTE--
                   Separate Condition entry is allowed for each inoperable valve.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more valves inoperable.	A.1 Restore valve to OPERABLE status.	4 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours

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

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

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

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

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1.3   Completion Times

EXAMPLES
(continued)

<u>EXAMPLE 1.3-6</u>

<u>ACTIONS</u>

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One channel inoperable.	A.1 Perform SR 3.x.x.x. <u>OR</u> A.2 Reduce THERMAL POWER to $\leq$ 50% RTP.	Once per 8 hours 8 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours

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 is entered and the initial performance of Required Action A.1 must be completed within the first 8 hour interval. If Required Action A.1 is followed and the Required Action is not met within the Completion Time (plus the extension allowed by SR 3.0.2), Condition B is entered. If Required Action A.2 is followed and the Completion Time of 8 hours is not met, Condition B is entered.

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

1.3   Completion Times

EXAMPLES
(continued)

EXAMPLE 1.3-7

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One subsystem inoperable.	A.1 Verify affected subsystem isolated.	1 hour AND Once per 8 hours thereafter
	AND	
	A.2 Restore subsystem to OPERABLE status.	72 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours

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

If after Condition A is entered, Required Action A.1 is not met within either the initial 1 hour or any subsequent 8 hour interval from the previous performance (plus the extension allowed by SR 3.0.2), Condition B is entered. The Completion Time clock for Condition A does not stop after Condition B is entered, but continues from the time Condition A was initially entered. If Required Action A.1 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.

1.3   Completion Times

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

1.0   USE AND APPLICATION

1.4   Frequency

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

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

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

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

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

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

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

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

1.4   Frequency

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

                  EXAMPLE 1.4-1

                  SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
Perform CHANNEL CHECK.	12 hours

Example 1.4-1 contains the type of SR most often encountered in the
Technical Specifications (TS). The Frequency specifies an interval
(12 hours) during which the associated Surveillance must be performed at
least one time. Performance of the Surveillance initiates the subsequent
interval. Although the Frequency is stated as 12 hours, an extension of
the time interval to 1.25 times the interval specified in the Frequency is
allowed by SR 3.0.2 for operational flexibility. The measurement of this
interval continues at all times, even when the SR is not required to be met
per SR 3.0.1 (such as when the equipment is inoperable, a variable is
outside specified limits, or the unit is outside the Applicability of the LCO).
If the interval specified by SR 3.0.2 is exceeded while the unit is in a
MODE or other specified condition in the Applicability of the LCO, and the
performance of the Surveillance is not otherwise modified (refer to
Examples 1.4-3 and 1.4-4), then SR 3.0.3 becomes applicable.

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

1.4   Frequency

EXAMPLES   EXAMPLE 1.4-2
(continued)

SURVEILLANCE REQUIREMENTS

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

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

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

1.4   Frequency

EXAMPLES   EXAMPLE 1.4-3
(continued)
                  SURVEILLANCE REQUIREMENTS

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

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

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

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

1.4   Frequency

EXAMPLES   EXAMPLE 1.4-4
(continued)
                 SURVEILLANCE REQUIREMENTS

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

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