

1 *General Directions: This Model SE provides the format and content to be used when preparing*
2 *the plant-specific SE of an LAR to adopt TSTF-567, Revision 1. The **bolded** bracketed*
3 *information shows text that should be filled in for the specific amendment; individual licensees*
4 *would furnish site-specific nomenclature or values for these bracketed items. The italicized*
5 *wording provides guidance on what should be included in each section and should not be*
6 *included in the SE.*

7 **DRAFT MODEL SAFETY EVALUATION**

8 **BY THE OFFICE OF NUCLEAR REACTOR REGULATION**

9 **TECHNICAL SPECIFICATIONS TASK FORCE TRAVELER**

10 **TSTF-567, REVISION 1**

11 **“ADD CONTAINMENT SUMP TS TO ADDRESS GSI-191 ISSUES”**

12 **USING THE CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS**

13 **(CAC NO. MF9568, EPID L-2017-PMP-0005)**

14
15
16 **1.0 INTRODUCTION**

17
18 By application dated **[enter date]**, (Agencywide Documents Access and Management System
19 (ADAMS) Accession No. **[MLXXXXXXXXXX]**), **[as supplemented by letters dated, [enter**
20 **date(s)]] [name of licensee]** (the licensee) submitted a license amendment request (LAR) for
21 **[name of facility (abbreviated name). applicable units]**.

22
23 The amendment would revise Limiting Condition for Operation (LCO) 3.5.2, “ECCS [Emergency
24 Core Cooling System]-Operating,” LCO 3.5.3, “ECCS-Shutdown,” and TS Section 5.5.15,
25 “Safety Function Determination Program (SFDP).” The proposed changes would also add a
26 new LCO, “Containment Sump,” to TS Section 3.6, “Containment Systems.” The proposed
27 changes are based on Technical Specifications Task Force (TSTF) Traveler TSTF-567,
28 Revision 1, “Add Containment Sump TS to Address GSI [Generic Safety Issue]-191 Issues,”
29 dated August 2, 2017 (ADAMS Accession No. ML17214A813). The U.S. Nuclear Regulatory
30 Commission (NRC or the Commission) issued a final safety evaluation (SE) approving
31 TSTF-567, Revision 1, on **[Month, Day, Year]** (ADAMS Accession No. **[MLXXXXXXXXXX]**).

32
33 **[The licensee has proposed several variations from the TS changes described in**
34 **TSTF-567. The variations are described in Section [2.2.5] of this SE and evaluated in**
35 **Section [X.X].]**

36
37 **[The supplemental letters dated [enter date(s)], provided additional information that**
38 **clarified the application, did not expand the scope of the application as originally**
39 **noticed, and did not change the NRC staff’s original proposed no significant hazards**
40 **consideration determination as published in the *Federal Register* on [enter date] (cite FR**
41 **reference).]**

1 **2.0 REGULATORY EVALUATION**

2
3 2.1 SYSTEM DESCRIPTION AND CHANGES TO THE TS

4
5 LCOs are the lowest functional capability or performance levels of equipment required for safe
6 operation of the facility. The actions associated with an LCO state conditions that typically
7 describe the ways in which the requirements of the LCO can fail to be met. Specified with each
8 stated condition are required action(s) and completion time(s).

9
10 2.1.1 LCO 3.5.2, "ECCS-Operating"

11
12 The function of the ECCS is to provide core cooling and negative reactivity to ensure the reactor
13 core is protected after any of the following accidents:

- 14
15 a. Loss-of-coolant accident (LOCA), coolant leakage greater than the capability of the
16 normal charging system,
17
18 b. Rod ejection accident,
19
20 c. Loss of secondary coolant accident, including uncontrolled steam release or loss of
21 feedwater, and
22
23 d. Steam generator tube rupture.

24
25 LCO 3.5.2 is applicable in Modes 1, 2, and 3 and requires that two independent ECCS trains be
26 operable to ensure that sufficient ECCS flow is available, assuming a single failure affecting
27 either train.

28
29 LCO 3.5.2 helps ensure the following acceptance criteria for ECCS, established by Title 10 of
30 the *Code of Federal Regulations* (10 CFR) 50.46, will be met following a LOCA:

- 31
32 a. Maximum fuel element cladding temperature is ≤ 2200 degrees Fahrenheit ($^{\circ}\text{F}$),
33
34 b. Maximum cladding oxidation is ≤ 0.17 times the total cladding thickness before
35 oxidation,
36
37 c. Maximum hydrogen generation from a zirconium water reaction is ≤ 0.01 times the
38 hypothetical amount generated if all of the metal in the cladding cylinders surrounding
39 the fuel, excluding the cladding surrounding the plenum volume, were to react,
40
41 d. Core is maintained in a coolable geometry, and
42
43 e. Adequate long-term core cooling capability is maintained.

44
45 LCO 3.5.2 also limits the potential for a post-trip return to power following a main steam line
46 break event and ensures that containment temperature limits are met.
47

1 2.1.2 LCO 3.5.3, "ECCS-Shutdown"

2
3 LCO 3.5.3 is applicable in Mode 4 and requires one of the two independent (and redundant)
4 ECCS trains to be operable to ensure that sufficient ECCS flow is available to the core following
5 a design-basis accident.

6
7 2.1.3 TS Section 5.5.15, "Safety Function Determination Program (SFDP)"

8
9 Section 5.5.15 establishes the Safety Function Determination Program (SFDP) which
10 implements the requirements of LCO 3.0.6. The SFDP ensures loss of safety function is
11 detected and appropriate actions are taken. Upon entry into LCO 3.0.6, an evaluation shall be
12 made to determine if loss of safety function exists. Additionally, other appropriate actions may
13 be taken as a result of the support system inoperability and corresponding exception to entering
14 supported system(s) condition(s) and required action(s).

15
16 2.2 PROPOSED CHANGES TO THE TECHNICAL SPECIFICATIONS

17
18 The proposed changes would revise LCO 3.5.2, "ECCS-Operating", LCO 3.5.3,
19 "ECCS-Shutdown," and Section 5.5.15, "Safety Function Determination Program." The
20 proposed changes would also add a new TS LCO, "Containment Sump" to Section 3.6,
21 "Containment Systems." The proposed changes are described below.

22
23 2.2.1 Proposed Changes to LCO 3.5.2, "ECCS-Operating"

24
25 LCO 3.5.2 currently contains Surveillance Requirement (SR) 3.5.2.[9], which requires the
26 following at a frequency **[of 18 months][in accordance with the Surveillance Frequency**
27 **Control Program (SFCP)]**:

28
29 Verify, by visual inspection, each ECCS train containment sump
30 suction inlet is not restricted by debris and suction inlet trash racks
31 and screens show no evidence of structural distress or abnormal
32 corrosion.

33
34 The licensee proposed to modify and move SR 3.5.2.[9] from LCO 3.5.2 and include it in the
35 new containment sump LCO.

36
37 This change is evaluated in Section 3.1 of this SE.

38
39 2.2.2 Proposed Changes to LCO 3.5.3, "ECCS-Shutdown"

40
41 LCO 3.5.3 currently contains SR 3.5.3.1 which refers to applicable SRs under LCO 3.5.2. One
42 of those referenced SRs is SR 3.5.2.[9], as described in Section 2.2.1 of this SE.

43
44 Because the licensee proposed to move SR 3.5.2.[9] from LCO 3.5.2 and include it in the new
45 containment sump LCO, the licensee also proposed to delete the reference to SR 3.5.2.[9] in
46 SR 3.5.3.1.

47
48 This change is evaluated in Section 3.2 of this SE.

49

1 2.2.3 Proposed Changes to TS Section 5.5.15, "Safety Function Determination
2 Program (SFDP)"
3

4 The licensee proposed to add the following sentence at the end of TS Section 5.5.15:

5
6 When a loss of safety function is caused by the inoperability of a
7 single Technical Specification support system, the appropriate
8 Conditions and Required Actions to enter are those of the support
9 system.

10
11 This change is evaluated in Section 3.3 of this SE.

12
13 2.2.4 Proposed Addition of a New Containment Sump LCO
14

15 The licensee proposed to add LCO 3.6.[8] requiring the containment sump to be operable
16 during Modes 1, 2, 3, and 4. Condition A specifies that if the containment sump is inoperable
17 due to containment accident generated and transported debris exceeding the analyzed limits,
18 Required Actions A.1, A.2, and A.3 require immediate initiation of action to mitigate containment
19 accident generated and transported debris, performing SR 3.4.13.1 once per 24 hours and
20 restoring the containment sump to operable status in 90 days, respectively. The SR 3.4.13.1
21 requires verification that the reactor coolant system (RCS) operational leakage is within limits by
22 performance of RCS water inventory balance.

23
24 Condition B specifies that if the containment sump is inoperable for reasons other than
25 Condition A, Required Action B.1 requires restoration of the containment sump to operable
26 status **[within 72 hours][in accordance with the Risk Informed Completion Time (RICT)**
27 **Program]**. Required Action B.1 is modified by two notes which directs entering the applicable
28 conditions and required actions of LCO 3.5.2, "ECCS-Operating," and LCO 3.5.3,
29 "ECCS-Shutdown," for ECCS trains made inoperable by the containment sump and entering the
30 applicable conditions and required actions of LCO 3.6.6, "Containment Spray and Cooling
31 Systems," for CSS trains made inoperable by the containment sump.

32
33 Condition C specifies that if required action and associated completion time (CT) under
34 Condition A and B are not met, Required Actions C.1 and C.2 require licensees to be in Mode 3
35 in 6 hours and Mode 5 in 36 hours, respectively.

36
37 The licensee proposed to expand and relocate an SR currently located in LCO 3.5.2. The new
38 SR requires the licensee to verify, by visual inspection, the containment sump does not show
39 structural damage, abnormal corrosion, or debris blockage **[every 18 months][in accordance**
40 **with the SFCP]**.

41
42 *{NOTE: If the plant has more than one containment sump, include the following paragraph :}*
43 **[Plant name]'s containment sump design includes more than one containment sump. [Enter**
44 **additional details of the plant's containment sump design and justification detailing why**
45 **the new proposed LCO is applicable.]** The new containment sump LCO proposed is
46 applicable to plants that have more than one containment sump.

47
48 The licensee also proposed a conforming change to the TS Table of Contents to reflect the
49 addition of the new containment sump LCO.

50
51 This change is evaluated in Section 3.4 of this SE.

1
2 2.2.5 Variations from TSTF-567, Revision 1
3

4 {NOTE: Technical reviewers and/or project manager to discuss variations from the approved
5 traveler and whether they are acceptable. Choose the applicable paragraphs based on
6 information provided in the LAR.}
7

8 **[The licensee is not proposing any variations from the TS changes described in
9 TSTF-567 or the applicable parts of the NRC staff's safety evaluation (SE) of TSTF-567.]**

10
11 **[The licensee is proposing the following variations from the TS changes described in
12 TSTF-567 or the applicable parts of the NRC staff's safety evaluation (SE) of TSTF-567.
13 These variations do not affect the applicability of TSTF-567 or the NRC staff's SE to the
14 proposed license amendment.]**

15
16 **[The [PLANT] TS utilize different [numbering][and][titles] than the Standard Technical
17 Specifications on which TSTF-567 was based. Specifically, [describe differences
18 between the plant-specific TS numbering and/or titles and the TSTF-567 numbering
19 and/or titles.] These differences are editorial and do not affect the applicability of
20 TSTF-567 to the [PLANT] TS.]**

21
22 {NOTE: Use of a RICT for Required Action B.1, is a permissible variation, but requires
23 plant-specific review. Therefore, use of a RICT will remove the LAR from the CLIIP.}

24 **[The licensee is proposing the use of a RICT Program for Required Action B.1.
25 Additional plant-specific technical information and justification, consistent with the
26 justification provided when adopting [TSTF-505 or the plant-specific RICT Program], was
27 provided in the submittal. This SE does not approve the use of the RICT Program. The
28 NRC staff's evaluation of the proposed RICT for Required Action B.1 is in Section 3.4 of
29 this SE.]**

30
31 2.3 APPLICABLE REGULATORY REQUIREMENTS AND GUIDANCE
32

33 2.3.1 Technical Specifications
34

35 Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36(a)(1) requires each
36 applicant for a license authorizing operation of a utilization facility to include in the application
37 proposed TSs. A summary statement of the bases or reasons for such specifications
38

39 The regulation at 10 CFR 50.36(b) requires:
40

41 Each license authorizing operation of a ... utilization facility ... will
42 include technical specifications. The technical specifications will
43 be derived from the analyses and evaluation included in the safety
44 analysis report, and amendments thereto, submitted pursuant to
45 [10 CFR] 50.34 ["Contents of applications; technical information"].
46 The Commission may include such additional technical
47 specifications as the Commission finds appropriate.
48

49 The categories of items required to be in the TSs are provided in 10 CFR 50.36(c). As required
50 by 10 CFR 50.36(c)(2)(i), the TSs will include LCOs, which are the lowest functional capability
51 or performance levels of equipment required for safe operation of the facility. Per

1 10 CFR 50.36(c)(2)(i), when an LCO of a nuclear reactor is not met, the licensee shall shut
2 down the reactor or follow any remedial action permitted by the TSs until the condition can be
3 met.

4
5 The regulation at 10 CFR 50.36(c)(3) requires TSs to include SRs, which are requirements
6 relating to test, calibration, or inspection to assure that the necessary quality of systems and
7 components is maintained, that facility operation will be within safety limits, and that the LCOs
8 will be met.

9
10 The regulation at 10 CFR 50.36(c)(5) requires TSs to include administrative controls, which “are
11 the provisions relating to organization and management, procedures, recordkeeping, review and
12 audit, and reporting necessary to assure operation of the facility in a safe manner.”

13 14 2.3.2 Guidance

15
16 The guidance that the NRC staff considered in its review of this LAR included the following:

- 17
18 • NUREG-0800, Revision 3, “Standard Review Plan for the Review of Safety Analysis Reports
19 for Nuclear Power Plants: LWR [Light-Water Reactor] Edition,” Chapter 16, “Technical
20 Specifications,” dated March 2010 (ADAMS Accession No. ML100351425), provides
21 guidance on review of TSs.

22
23 {NOTE: Choose applicable STS}

- 24 • **[U.S. Nuclear Regulatory Commission, “Standard Technical Specifications,
25 Babcock and Wilcox Plants,” NUREG-1430, Volume 1, “Specifications,” Revision 4.0,
26 dated April 2012 (ADAMS Accession No. ML12100A177).**

27
28 **U.S. Nuclear Regulatory Commission, “Standard Technical Specifications,
29 Westinghouse Plants,” NUREG-1431, Volume 1, “Specifications,” Revision 4.0, dated
30 April 2012 (ADAMS Accession No. ML12100A222).**

31
32 **U.S. Nuclear Regulatory Commission, “Standard Technical Specifications,
33 Combustion Engineering Plants,” NUREG-1432, Volume 1, “Specifications,” Revision 4.0,
34 dated April 2012 (ADAMS Accession No. ML12102A165).]**

35 36 **3.0 TECHNICAL EVALUATION**

37 38 **3.1 PROPOSED CHANGES TO LCO 3.5.2, “ECCS-OPERATING”**

39
40 The licensee proposed to modify and move SR 3.5.2.[9] from LCO 3.5.2 to the new containment
41 sump LCO. Therefore, the licensee proposed deletion of SR 3.5.2.[9].

42
43 The new SR does not limit the visual inspection to the suction inlet, trash racks and screens as
44 currently required by the TSs, but instead requires inspection of the entire containment sump
45 system. The containment sump system consists of the containment drainage flow paths, any
46 design features upstream of the containment sump that are credited in the containment debris
47 analysis, the containment sump strainers (or screens), the pump suction trash racks, and the
48 inlet to the ECCS and CSS piping.

49
50 The NRC staff concludes the proposed change is acceptable since the existing requirements
51 are either unchanged or expanded and continue to ensure the containment sump is unrestricted

1 (i.e., unobstructed) and stays in proper operating condition. The proposed change meets the
2 requirements of 10 CFR 50.36(c)(3) because it provides SRs to assure the necessary quality of
3 systems and components are maintained, that facility operation will be within safety limits, and
4 that the LCOs will be met.

5
6 3.2 PROPOSED CHANGES TO LCO 3.5.3, "ECCS-SHUTDOWN"
7

8 The licensee proposed to delete the reference to SR 3.5.2.[9] in SR 3.5.3.1.
9

10 The NRC staff concludes the proposed change is acceptable since SR 3.5.2.[9] was modified
11 and relocated to the new containment sump LCO. The existing SR on the containment sump is
12 augmented (by requiring inspection of additional sump components) and moved to the new
13 specification, and a duplicative requirement to perform the SR in TS 3.5.3 is removed. The new
14 specification retains or expands the existing requirements on the containment sump and the
15 actions to be taken when the containment sump is inoperable with the exception of adding new
16 actions to be taken when the containment sump is inoperable due to containment accident
17 generated and transported debris exceeding the analyzed limits. The new action provides time
18 to evaluate and correct the condition instead of requiring an immediate plant shutdown. The
19 proposed change meets the requirements of 10 CFR 50.36(c)(3) because it provides SRs to
20 assure the necessary quality of systems and components are maintained, that facility operation
21 will be within safety limits, and that the LCOs will be met.
22

23 3.3 PROPOSED CHANGES TO SECTION 5.5.15, "SAFETY FUNCTION
24 DETERMINATION PROGRAM (SFDP)"
25

26 LCO 3.0.6 states:
27

28 When a supported system LCO is not met solely due to a support
29 system LCO not being met, the Conditions and Required Actions
30 associated with this supported system are not required to be
31 entered. Only the support system LCO ACTIONS are required to
32 be entered. This is an exception to LCO 3.0.2 for the supported
33 system. In this event, an evaluation shall be performed in
34 accordance with Specification 5.5.15, "Safety Function
35 Determination Program (SFDP)." If a loss of safety function is
36 determined to exist by this program, the appropriate Conditions
37 and Required Actions of the LCO in which the loss of safety
38 function exists are required to be entered.
39

40 When a support system's Required Action directs a supported
41 system to be declared inoperable or directs entry into Conditions
42 and Required Actions for a supported system, the applicable
43 Conditions and Required Actions shall be entered in accordance
44 with LCO 3.0.2.
45

46 When a loss of safety function is determined to exist, the SFDP requires entry into the
47 appropriate conditions and required actions of the LCO in which the loss of safety function
48 exists. Where a loss of function is solely due to a single TS support system (e.g., a single
49 containment sump train) the appropriate LCO is the LCO for that support system. When the
50 loss of function is the result of multiple support systems, the appropriate LCO is the LCO for the
51 supported systems.

1
2 The licensee proposed to add the following statement to TS 5.5.12, “[W]hen a loss of safety
3 function is caused by the inoperability of a single Technical Specification support system, the
4 appropriate Conditions and Required Actions to enter are those of the support system.”
5

6 The NRC staff finds that the proposed addition to TS 5.5.12 clarifies the intent of the allowance
7 (not to enter the Conditions and Required Actions) provided by LCO 3.0.6 and the SFDP for
8 single-train support systems. The NRC staff concludes the proposed change is acceptable
9 since the actions for the support system LCO adequately address the inoperability of that
10 system. Therefore, as required by 10 CFR 50.36(c)(5), it continues to provide adequate
11 administrative controls to assure safe operation.
12

13 3.4 PROPOSED ADDITION OF CONTAINMENT SUMP LCO

14 3.4.1 Considerations of the LCO

15
16
17 The licensee proposed to add a new LCO to address operability requirements of the
18 containment sump. The numbering for this new LCO is LCO 3.6.[8].
19

20 The containment sump supports the post-accident operation of the ECCS and CSS. However,
21 only the current ECCS TS LCOs contain SRs related to the containment sump and the TS do
22 not specify required actions that specifically address an inoperable containment sump. If the
23 containment sump were found to be inoperable, as an ECCS and CSS support system, those
24 respective LCOs would not be met. In order to address concerns related with to containment
25 sump operability due to debris accumulation described in GSI-191, “Assessment of Debris
26 Accumulation on Pressurized-Water Reactor Sump Performance,” the licensee proposed to add
27 a new specification to address containment sump inoperability and create a condition for when
28 the sump is inoperable due to analyzed containment accident generated and transported debris.
29

30 Based on the above evaluation, the NRC staff determined that proposed LCO satisfies the
31 requirements of 10 CFR 50.36(c)(2)(i) because the LCO specifies the lowest functional
32 capability or performance levels of equipment required for safe operation of the facility. There is
33 reasonable assurance that the required actions to be taken when the LCO is not met can be
34 conducted without endangering the health and safety of the public.
35

36 3.4.2 Considerations of the Applicability

37
38 The new LCO requires the containment sump to be operable during Modes 1, 2, 3, and 4. The
39 ECCS and CSS LCOs currently in TS are applicable during Modes 1, 2, 3, and 4.
40

41 The NRC staff finds the proposed applicability is acceptable because the applicability is
42 consistent with the applicability of the ECCS and CSS LCOs, the containment sump supported
43 systems.
44

45 3.4.3 Considerations of Condition A

46
47 The licensee has analyzed the susceptibility of the ECCS and CSS to the adverse effects of
48 post-accident debris blockage and operation with debris-laden fluids. The licensee has
49 established **[Final Safety Analysis Report]** limits on the allowable quantities of containment
50 accident generated debris that could be transported to the containment sump based on its
51 current plant configuration. In the current TSs, if unanalyzed debris sources are discovered

1 inside containment, if errors are discovered in debris-related analyses, or if a previously
2 unevaluated phenomenon that can affect containment sump performance is discovered, the
3 containment sump, and the supported ECCS and CSS, may be inoperable and the TSs require
4 an immediate plant shutdown with no time provided to evaluate the condition.

5
6 In order to address this situation and to provide sufficient time to evaluate the condition, the
7 licensee proposed Condition A, which is applicable when the containment sump is inoperable
8 due to containment accident generated and transported debris exceeding the analyzed limits.
9 Under Condition A, the operability of the containment sump with respect to debris is based on a
10 quantity of debris evaluated and determined to be acceptable by the licensee. Emergent
11 nonconforming or degraded conditions affecting the quantity of analyzed debris shall be
12 evaluated using a deterministic process.

13
14 Under Condition A, Required Action A.1 mandates immediate action to be initiated to mitigate
15 the condition. In its submittal, the licensee provided the following examples of mitigating
16 actions:

- 17
18 • Removing the debris source from containment or preventing the
19 debris from being transported to the containment sump;
- 20
21 • Evaluating the debris source against the assumptions in the
22 analysis;
- 23
24 • Deferring maintenance that would affect availability of the affected
25 systems and other LOCA mitigating equipment;
- 26
27 • Deferring maintenance that would affect availability of primary
28 defense-in-depth systems, such as containment coolers;
- 29
30 • Briefing operators on LOCA debris management actions; or
- 31
32 • Applying an alternative method to establish new limits.
- 33

34 The NRC staff finds the proposed Required Action A.1 and its completion time (CT) are
35 acceptable because they place urgency on the appropriate actions that could mitigate or reduce
36 the impact of the identified conditions.

37
38 Concurrently, Required Action A.2 mandates SR 3.4.13.1, the RCS water inventory balance, to
39 be performed at an increased frequency of once per 24 hours. An unexpected increase in RCS
40 leakage could be indicative of an increased potential for an RCS pipe break, which could result
41 in debris being generated and transported to the containment sump.

42
43 The NRC staff finds the proposed Required Action A.2 and its CT are acceptable because the
44 more frequent monitoring allows operators to act in a timely fashion to minimize the potential for
45 an RCS pipe break while the containment sump is inoperable.

46
47 In addition, Required Action A.3 requires the inoperable containment sump to be restored to
48 operable status in 90 days.

49

1 The NRC staff finds the proposed Required Action A.3 and its CT are acceptable because they
2 provide a reasonable amount of time to diagnose, plan and possibly reduce the severity of, or
3 mitigate the unanalyzed debris condition and prevent a loss of ECCS and CSS safety function.
4 In addition, 90 days is adequate given the conservatism in the analysis and the proposed
5 compensatory actions required to be implemented immediately by Required Action A.1. Also,
6 as discussed later in this SE section, the new SR will require visual inspection of the
7 containment sump system (including the containment drainage flow paths, any design features
8 upstream of the containment sump that are credited in the containment debris analysis, the
9 containment sump strainers, the pump suction trash racks, and the inlet to the ECCS and CSS
10 piping for evidence of structural degradation, potential for debris bypass, and presence of
11 corrosion or debris blockage) to ensure no loose debris is present and there is no evidence of
12 structural distress or abnormal corrosion.

13
14 *{NOTE: If the plant has more than one containment sump, include the following paragraph,*
15 *ensuring the plant-specific containment sump design aligns with this justification and modifying*
16 *accordingly .}*

17 **[Specifically for Condition A, multiple containment sumps are considered part of a single**
18 **support system. The NRC staff finds this proposed change is acceptable since it is a**
19 **conservative assumption. The plant is designed so that one sump will remain operable**
20 **with the design-basis debris load. The second sump is assumed to be out of service due**
21 **to a single failure in the ECCS or CSS. The single sump in a plant with multiple sumps is**
22 **equivalent to the sump in a plant with only one sump because the multiple sumps are**
23 **considered to be part of a single support system. In any case where the single failure did**
24 **not occur, the second sump would be in service and provide significant additional**
25 **surface area for debris to collect, thus reducing the severity of the effects of the debris.**
26 **The second sump provides redundancy in these cases.]**

27 28 3.4.4 Considerations of Condition B

29
30 Condition B specifies the required actions for when the containment sump is inoperable for
31 reasons other than containment accident generated and transported debris exceeding the
32 analyzed limits.

33
34 Required Action B.1 requires restoring the containment sump to operable status and is modified
35 by two notes. These two notes direct entry into the conditions and required actions for the
36 supported systems (ECCS and CSS). Since Required Action B.1 directs entry to the
37 corresponding ECCS and CSS LCOs, these notes retain the existing TS actions for ECCS or
38 CSS trains made inoperable by a containment sump inoperable for reasons other than
39 containment accident generated and transported debris exceeding the analyzed limits. The
40 proposed CT for Required Action B.1 is **[72 hours or in accordance with the RICT Program]**.

41
42 *{NOTE: If the licensee has a previously approved Risk-Informed Completion Time (RICT)*
43 *Program in TS Section 5.0, Administrative Controls, use this paragraph and revise the last*
44 *sentence of the following paragraph.}*

45 **[The licensee has an NRC-approved [adoption of TSTF-505, “Provide Risk-Informed**
46 **Extended Completion Times – RITSTF Initiative 4B,”][plant-specific RICT Program] and**
47 **has a Risk-Informed Completion Time (RICT) Program in TS Section 5.0, “Administrative**
48 **Controls.” Therefore, the licensee has proposed to calculate a RICT for Required**
49 **Action B.1. [Insert NRC staff technical evaluation of proposed use of a RICT.]**

50

1 The NRC staff finds the proposed change is acceptable since it continues to provide remedial
2 actions for when the containment sump is inoperable for reasons other than Condition A and
3 ensures safe operation of the plant. In addition, the proposed CT of 72 hours is acceptable
4 since it provides a reasonable time for repairs, and there is a low probability of an accident
5 occurring during this period necessitating the containment sump.

6 7 3.4.5 Considerations of Condition C

8
9 If operators are unable to restore the affected containment sump to operable status under
10 Condition A or B, Required Action C.1 requires the unit to be in Mode 3 in 6 hours followed by
11 Mode 5 in 36 hours, as required by Required Action C.2.

12
13 The NRC staff finds this proposed condition and its required actions are acceptable because the
14 condition is consistent with the STSs and requires the operators to place the unit in a condition
15 in which the LCO no longer applies. In addition, the proposed CTs allow a reasonable amount
16 of time to decrease from full power conditions to the required plant conditions in an orderly
17 manner and without challenging plant systems.

18 19 3.4.6 Considerations of the New SR

20
21 The licensee proposed a new SR in the new containment sump LCO. This SR was originally
22 located in LCO 3.5.2 and referred to in LCO 3.5.3. The numbering for this new SR is
23 SR 3.6.8.[1]. The frequency of the new SR is **[18 months][as specified in the SFCP]**.

24
25 The proposed SR requires verification, by visual inspection, that the containment sump does not
26 show structural damage, abnormal corrosion, or debris blockage.

27
28 The new SR is stated in generic terms and expands the scope of the required visual inspection
29 to include the entire containment sump system. The entire containment sump system consists
30 of the containment drainage flow paths, the containment sump strainers (or screens), the pump
31 suction trash racks, and the inlet to the ECCS and CSS piping.

32
33 The NRC staff finds the proposed new SR is acceptable since it expands the scope of
34 inspection of the original SR. In addition, the proposed frequency is acceptable since it is the
35 same as that currently required by the TSs. Therefore, the NRC staff finds that, as required by
36 10 CFR 50.36(c)(3), the necessary quality of systems will be maintained in accordance with the
37 associated LCOs.

38 39 3.4.7 Considerations of Changes to Table of Contents

40
41 The licensee also proposed a conforming change to the Table of Contents to include the new
42 containment sump LCO. This conforming change is acceptable since it is an editorial change to
43 support the inclusion of the new containment sump TS LCO.

44 45 3.4.8 Conclusion Regarding Proposed Containment Sump LCO

46
47 The new containment sump LCO retains and expands the existing TS requirements with the
48 exception of the addition of Condition A. Condition A provides a condition for an inoperable
49 containment sump due to containment accident generated and transported debris exceeding the
50 analyzed limits.

51

1 The NRC staff reviewed the proposed changes against the regulations and concludes that the
2 changes continue to meet the requirements of 10 CFR 50.36(c)(2), 50.36(c)(3) and 50.36(c)(5),
3 for the reasons discussed above, and thus provide reasonable assurance that adoption of these
4 TSs will have the requisite requirements and controls to operate safely. Therefore, the NRC
5 staff concludes that the proposed TS changes are acceptable.

6 7 3.5 VARIATIONS

8
9 **[Insert evaluation of any variations discussed in Section 2.2.5]**

10 11 3.6 TECHNICAL EVALUATION CONCLUSION

12
13 The NRC staff determined that the proposed changes meet the standards for TS in
14 10 CFR 50.36(b). The proposed changes to the SR assure that the necessary quality of
15 systems and components is maintained, that facility operation will be within safety limits, and
16 that the LCOs will be met, and satisfy 10 CFR 50.36(c)(3)

17 18 4.0 STATE CONSULTATION

19
20 *This section is to be prepared by the plant project manager.*

21
22 In accordance with the Commission's regulations, the **[Name of State]** State official was notified
23 of the proposed issuance of the amendment(s) on **[date]**. The State official had **[no]** comments.
24 **[If comments were provided, they should be addressed here.]**

25 26 5.0 ENVIRONMENTAL CONSIDERATION

27
28 *This section is to be prepared by the plant project manager in accordance with current*
29 *procedures.*

30 31 6.0 CONCLUSION

32
33 *This section is to be prepared by the plant project manager.*

34
35 The Commission has concluded, based on the considerations discussed above, that: (1) there
36 is reasonable assurance that the health and safety of the public will not be endangered by
37 operation in the proposed manner, (2) there is reasonable assurance that such activities will be
38 conducted in compliance with the Commission's regulations, and (3) the issuance of the
39 amendment(s) will not be inimical to the common defense and security or to the health and
40 safety of the public.

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7.0 REFERENCES

Optional section to be prepared by the PM and primary reviewers. If document is publicly available, the ADAMS Accession No. should be listed.

{NOTE: These are the principal contributors for the model SE of the traveler. Replace these names with those who prepared the plant-specific SE.}

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