UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 15, 2019

Mr. Ernest J. Kapopoulos, Jr.
Site Vice President
H. B. Robinson Steam Electric Plant
Duke Energy Progress, LLC
3581 West Entrance Road, RNPA01
Hartsville, SC 29550

SUBJECT: H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 – ISSUANCE OF AMENDMENT NO. 265 REGARDING ADOPTION OF TECHNICAL SPECIFICATIONS TASK FORCE (TSTF) TRAVELER TSTF-425, REVISION 3, "RELOCATE SURVEILLANCE FREQUENCIES TO LICENSEE CONTROL-RITSTF INITIATIVE 5b" (EPID L-2018-LLA-0104)

Dear Mr. Kapopoulos:

The U.S. Nuclear Regulatory Commission (NRC or Commission) has issued the enclosed Amendment No. 265 to Renewed Facility Operating License No. DPR-23 for the H. B. Robinson Steam Electric Plant, Unit No. 2 (Robinson). The amendment consists of changes to the technical specifications (TSs) in response to your application dated April 16, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18117A006), as supplemented by letters dated September 25, 2018, November 13, 2018, and July 16, 2019 (ADAMS Accession Nos. ML18269A009, ML18317A020, and ML19197A222, respectively).

The proposed amendment revises the Robinson TSs by relocating specific surveillance frequencies to a licensee-controlled program with the implementation of Nuclear Energy Institute (NEI) 04-10, Revision 1, "Risk-informed Technical Specification Initiative 5b, Risk-informed Method for Control of Surveillance Frequencies." Additionally, the change would add a new program, the Surveillance Frequency Control Program, to TS Section 5.0, "Administrative Controls." The changes are consistent with NRC-approved Technical Specifications Task Force (TSTF) Improved Standard Technical Specifications Change Traveler TSTF-425, Revision 3, "Relocate Surveillance Frequencies to Licensee Control–RITSTF [Risk-informed TSTF] Initiative 5b" (ADAMS Accession No. ML090850642). The *Federal Register* Notice published on July 6, 2009 (72 FR 31996) announced the availability of this TS improvement.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

Natreon J. Jordan, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-261

Enclosures:
1. Amendment No. 265 to DPR-23
2. Safety Evaluation

cc: Listserv

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUKE ENERGY PROGRESS, LLC

DOCKET NO. 50-261

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 265
Renewed License No. DPR-23

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Duke Energy Progress, LLC (the licensee), dated April 16, 2018, as supplemented by letters dated September 25, 2018, November 13, 2018, and July 16, 2019, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications, as indicated in the attachment to this license amendment, and paragraph 3.B. of Renewed Facility Operating License No. DPR-23 is hereby amended to read as follows:

   B. Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 265 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 120 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Undine Shoop, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Renewed Facility
Operating License and
Technical Specifications

Date of Issuance: August 15, 2019

ATTACHMENT TO LICENSE AMENDMENT NO. 265

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

RENEWED FACILITY OPERATING LICENSE NO. DPR-23

DOCKET NO. 50-261

Replace the following page of the renewed facility operating license with the revised page. The revised page is identified by amendment number and contains a line in the margin indicating the area of change.

REMOVE	INSERT
Page 3	Page 3

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT	REMOVE	INSERT
1.1-5	1.1-5	3.4-6	3.4-6
3.1-1	3.1-1	3.4-9	3.4-9
3.1-3	3.1-3	3.4-12	3.4-12
3.1-8	3.1-8	3.4-13	3.4-13
3.1-9	3.1-9	3.4-15	3.4-15
3.1-11	3.1-11	---	3.4-15a
3.1-14	3.1-14	3.4-17	3.4-17
3.1-21	3.1-21	3.4-18	3.4-18
3.2-3a	3.2-3a	3.4-20	3.4-20
3.2-6	3.2-6	3.4-22	3.4-22
3.2-7	3.2-7	3.4-27	3.4-27
3.2-14	3.2-14	3.4-28	3.4-28
---	3.2-15	3.4-32	3.4-32
3.3-8	3.3-8	3.4-33	3.4-33
3.3-9	3.3-9	3.4-34	3.4-34
3.3-10	3.3-10	3.4-36	3.4-36
3.3-11	3.3-11	3.4-39	3.4-39
3.3-12	3.3-12	3.4-40	3.4-40
---	3.3-12a	3.4-43	3.4-43
3.3-24	3.3-24	3.4-44	3.4-44
---	3.3-24a	3.4-46	3.4-46
3.3-31	3.3-31	3.4-47	3.4-47
3.3-34	3.3-34	3.4-51	3.4-51
3.3-36	3.3-36	3.5-2	3.5-2
3.3-38	3.3-38	3.5-3	3.5-3
3.3-41	3.3-41	3.5-5	3.5-5
3.3-42	3.3-42	3.5-6	3.5-6
3.3-46	3.3-46	3.5-7	3.5-7
3.4-2	3.4-2	3.5-11	3.5-11
3.4-4	3.4-4	3.6-6	3.6-6

Technical Specifications (continued)

REMOVE	INSERT	REMOVE	INSERT
3.6-10	3.6-10	3.8-6	3.8-6
3.6-11	3.6-11	3.8-7	3.8-7
3.6-12	3.6-12	3.8-8	3.8-8
3.6-13	3.6-13	3.8-9	3.8-9
3.6-14	3.6-14	3.8-10	3.8-10
3.6-16	3.6-16	3.8-11	3.8-11
3.6-17	3.6-17	3.8-12	3.8-12
3.6-19	3.6-19	3.8-18	3.8-18
3.6-20	3.6-20	3.8-19	3.8-19
3.6-21	3.6-21	3.8-20	3.8-20
3.7-12	3.7-12	3.8-21	3.8-21
3.7-13	3.7-13	3.8-25	3.8-25
3.7-15	3.7-15	3.8-26	3.8-26
3.7-17	3.7-17	3.8-29	3.8-29
3.7-19	3.7-19	3.8-31	3.8-31
3.7-20	3.7-20	3.8-34	3.8-34
3.7-21	3.7-21	3.8-36	3.8-36
3.7-21a	3.7-21a	3.9-1	3.9-1
3.7-24	3.7-24	3.9-3a	3.9-3a
3.7-27	3.7-27	3.9-5	3.9-5
3.7-28	3.7-28	3.9-7	3.9-7
3.7-29	3.7-29	3.9-9	3.9-9
3.7-30	3.7-30	3.9-10	3.9-10
3.7-31	3.7-31	3.9-12	3.9-12
3.7-33	3.7-33	5.0-22a	5.0-22a
3.8-4	3.8-4	---	5.0-22b
3.8-5	3.8-5		

D. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source, or special nuclear material without restriction to chemical or physical form for sample analysis or instrument and equipment calibration or associated with radioactive apparatus or components;

E. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by operation of the facility.

3. This renewed license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Section 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

A. Maximum Power Level

The licensee is authorized to operate the facility at a steady state reactor core power level not in excess of 2339 megawatts thermal.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 265 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

(1) For Surveillance Requirements (SRs) that are new in Amendment 176 to Final Operating License DPR-23, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 176. For SRs that existed prior to Amendment 176, including SRs with modified acceptance criteria and SRs whose frequency of performance is being extended, the first performance is due at the end of the first surveillance interval that begins on the date the Surveillance was last performed prior to implementation of Amendment 176.

1.1 Definitions

SHUTDOWN MARGIN (continued)	a. All rod cluster control assemblies (RCCAs) are fully inserted except for the single RCCA of highest reactivity worth, which is assumed to be fully withdrawn. With any RCCA not capable of being fully inserted, the reactivity worth of the RCCA must be accounted for in the determination of SDM; and b. In MODES 1 and 2, the fuel and moderator temperatures are changed to 547°F.
SLAVE RELAY TEST	A SLAVE RELAY TEST shall consist of energizing each slave relay and verifying the OPERABILITY of each slave relay. The SLAVE RELAY TEST shall include, as a minimum, a continuity check of associated testable actuation devices.
THERMAL POWER	THERMAL POWER shall be the total reactor core heat transfer rate to the reactor coolant.
TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT)	A TADOT shall consist of operating the trip actuating device and verifying the OPERABILITY of required alarm, interlock, display, and trip functions. The TADOT shall include adjustment, as necessary, of the trip actuating device so that it actuates at the required setpoint within the required accuracy.

3.1 REACTIVITY CONTROL SYSTEMS

3.1.1 SHUTDOWN MARGIN (SDM)

LCO 3.1.1 SDM shall be within the limits provided in the COLR.

APPLICABILITY: MODE 2 with $k_{eff} < 1.0$,
MODES 3, 4, and 5.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. SDM not within limit.	A.1 Initiate boration to restore SDM to within limit.	15 minutes

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.1.1	Verify SDM is within the limits provided in the COLR	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.2.1	----------NOTE---------- The predicted reactivity values may be adjusted (normalized) to correspond to the measured core reactivity prior to exceeding a fuel burnup of 60 effective full power days (EFPD) after each fuel loading. ----------	
	Verify measured core reactivity is within ± 1% Δk/k of predicted values.	Once prior to entering MODE 1 after each refueling AND --------NOTE-------- Only required after 60 EFPD ---------- In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time of Condition B not met.	C.1 Be in MODE 3.	6 hours
D. More than one rod not within alignment limit.	D.1.1 Verify SDM is within the limits provided in the COLR. OR D.1.2 Initiate boration to restore required SDM to within limit. AND D.2 Be in MODE 3.	1 hour 1 hour 6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.4.1	Verify individual rod positions within alignment limit.	In accordance with the Surveillance Frequency Control Program AND Once within 4 hours and in accordance with the Surveillance Frequency Control Program when the rod position deviation monitor is inoperable

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.1.4.2	Verify rod freedom of movement (trippability) by moving each rod not fully inserted in the core ≥ 10 steps in either direction.	In accordance with the Surveillance Frequency Control Program
SR 3.1.4.3	Verify rod drop time of each rod, from the fully withdrawn position, is ≤ 1.8 seconds from the beginning of decay of stationary gripper coil voltage to dashpot entry, with: a. T_{avg} ≥ 540°F; and b. All reactor coolant pumps operating.	Prior to reactor criticality after each removal of the reactor head

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.5.1	Verify each shutdown bank is within the limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.1.6.2	Verify each control bank insertion is within the limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program AND Once within 4 hours and in accordance with the Surveillance Frequency Control Program when the rod insertion limit monitor is inoperable
SR 3.1.6.3	Verify sequence and overlap limits specified in the COLR are met for control banks not fully withdrawn from the core.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. RCS lowest loop average temperature not within limit.	C.1 Restore RCS lowest loop average temperature to within limit.	15 minutes
D. Required Action and associated Completion Time of Condition C not met.	D.1 Be in MODE 3.	15 minutes

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.1.8.1	Perform a CHANNEL OPERATIONAL TEST on power range and intermediate range channels per SR 3.3.1.7, SR 3.3.1.8, and Table 3.3.1-1.	Within 7 days prior to initiation of PHYSICS TESTS
SR 3.1.8.2	Verify the RCS lowest loop average temperature is ≥ 530°F.	In accordance with the Surveillance Frequency Control Program
SR 3.1.8.3	Verify THERMAL POWER is ≤ 5% RTP.	In accordance with the Surveillance Frequency Control Program
SR 3.1.8.4	Verify SDM is within the limits provided in the COLR.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

----------NOTE----------

During power escalation at the beginning of each cycle, THERMAL POWER may be increased until an equilibrium power level has been achieved, at which a power distribution map is obtained.

SURVEILLANCE	FREQUENCY
SR 3.2.1.1 Verify $F^M_Q(X,Y,Z)$ is within steady state limit.	Once after each refueling prior to THERMAL POWER exceeding 75% RTP AND Once within 12 hours after achieving equilibrium conditions after exceeding, by ≥ 10% RTP, the THERMAL POWER at which $F^M_Q(X,Y,Z)$ was last verified AND In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS

----------NOTE----------

During power escalation at the beginning of each cycle, THERMAL POWER may be increased until an equilibrium power level has been achieved, at which a power distribution map is obtained:

SURVEILLANCE		FREQUENCY
SR 3.2.2.1	Verify $F^{M}_{\Delta H}(X,Y)$ is within steady state limit.	Once after each refueling prior to THERMAL POWER exceeding 75% RTP AND Once within 12 hours after achieving equilibrium conditions after exceeding, by ≥ 10% RTP, the THERMAL POWER at which $F^{M}_{\Delta H}(X,Y)$ was last verified AND In accordance with the Surveillance Frequency Control Program

(continued)

3.2 POWER DISTRIBUTION LIMITS

3.2.3 AXIAL FLUX DIFFERENCE (AFD)

LCO 3.2.3 The AFD in % flux difference units shall be maintained within the limits specified in the COLR.

----------NOTE----------
The AFD shall be considered outside limits when two or more OPERABLE excore channels indicate AFD to be outside limits.

APPLICABILITY: MODE 1 with THERMAL POWER ≥ 50% RTP.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. AFD not within limits.	A.1 Reduce THERMAL POWER to <50% RTP.	30 minutes

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.2.3.1	Verify AFD is within limits for each OPERABLE excore channel.	In accordance with the Surveillance Frequency Control Program AND Once within 1 hour and every 1 hour thereafter with the AFD monitor alarm inoperable

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.2.4.1	----------NOTES---------- 1. With input from one Power Range Neutron Flux channel inoperable and THERMAL POWER < 75% RTP, the remaining three power range channels can be used for calculating QPTR. 2. SR 3.2.4.2 may be performed in lieu of this Surveillance. --- Verify QPTR is within limit by calculation.	In accordance with the Surveillance Frequency Control Program AND Once within 12 hours and in accordance with the Surveillance Frequency Control Program with the QPTR alarm inoperable.

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.2.4.2	----------NOTE---------- Not required to be performed until 12 hours after input from one or more Power Range Neutron Flux channels are inoperable with THERMAL POWER ≥ 75% RTP. ----------	
	Verify QPTR is within limit using the movable incore detectors.	Once within 12 hours AND In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

----------NOTE----------
Refer to Table 3.3.1-1 to determine which SRs apply for each RPS Function.

SURVEILLANCE		FREQUENCY
SR 3.3.1.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.2	----------NOTES---------- 1. Adjust NIS channel if absolute difference is > 2%. 2. Not required to be performed until 12 hours after THERMAL POWER is ≥ 15% RTP. --- Compare results of calorimetric heat balance calculation to Nuclear Instrumentation System (NIS) channel output.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.3	----------NOTES---------- 1. Adjust NIS channel if absolute difference is ≥ 3%. 2. Not required to be performed until 36 hours after THERMAL POWER is ≥ 15% RTP. --- Compare results of the incore detector measurements to NIS AFD.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.4	----------NOTE---------- This Surveillance must be performed on the reactor trip bypass breaker prior to placing the bypass breaker in service. --- Perform TADOT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.5	----------NOTE---------- Not required to be performed for the logic inputs from Source Range Neutron Flux detector prior to entering MODE 3 from MODE 2 until 4 hours after entry into MODE 3. --- Perform ACTUATION LOGIC TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.6	----------NOTE---------- Not required to be performed until 24 hours after THERMAL POWER is ≥ 50% RTP. --- Calibrate excore channels to agree with incore detector measurements.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.7	----------NOTE---------- Not required to be performed for source range instrumentation prior to entering MODE 3 from MODE 2 until 4 hours after entry into MODE 3. --- Perform COT.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.8	----------NOTE---------- This Surveillance shall include verification that interlocks P-6 and P-10 are in their required state for existing unit conditions. ---------- Perform COT.	-----NOTE----- Only required when not performed within the Frequency specified in the Surveillance Frequency Control Program ---------- Prior to reactor startup AND Four hours after reducing power below P-10 for power and intermediate instrumentation AND Four hours after reducing power below P-6 for source range instrumentation AND In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.9	----------NOTE---------- Verification of setpoint is not required. ----------	
	Perform TADOT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.10	----------NOTE---------- This Surveillance shall include verification that the time constants are adjusted to the prescribed values where applicable. ----------	
	Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.11	----------NOTE---------- Neutron detectors are excluded from CHANNEL CALIBRATION. ----------	
	Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.3.1.12	----------NOTE---------- This Surveillance shall include verification that the electronic dynamic compensation time constants are set at the required values, and verification of RTD response time constants. ---------- Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.13	Perform COT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.14	----------NOTE---------- Verification of setpoint is not required. ---------- Perform TADOT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.1.15	----------NOTE---------- Verification of setpoint is not required. ---------- Perform TADOT.	-------NOTE-------- Only required when not performed within previous 31 days ---------- Prior to reactor startup

SURVEILLANCE REQUIREMENTS

----------NOTES----------

1. Refer to Table 3.3.2-1 to determine which SRs apply for each ESFAS Function.

2. When a channel or train is placed in an inoperable status solely for the performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours provided the redundant train is OPERABLE.

SURVEILLANCE		FREQUENCY
SR 3.3.2.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.2	Perform ACTUATION LOGIC TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.3	Perform MASTER RELAY TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.4	Perform COT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.5	Perform SLAVE RELAY TEST.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.2.6	----------NOTE---------- Verification of setpoint not required for manual initiation functions. ---------- Perform TADOT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.2.7	Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
G. As required by Required Action E.1 and referenced in Table 3.3.3-1.	G.1 Initiate action in accordance with Specification 5.6.6.	Immediately

SURVEILLANCE REQUIREMENTS

----------NOTE----------
SR 3.3.3.1 and SR 3.3.3.2 apply to each PAM instrumentation Function in Table 3.3.3-1; except Functions 9, 22, 23, and 24. SR 3.3.3.3 applies only to Functions 9, 22, 23, and 24.

SURVEILLANCE		FREQUENCY
SR 3.3.3.1	Perform CHANNEL CHECK for each required instrumentation channel that is normally energized.	In accordance with the Surveillance Frequency Control Program
SR 3.3.3.2	----------NOTE---------- Neutron detectors are excluded from CHANNEL CALIBRATION. --- Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program
SR 3.3.3.3	----------NOTE---------- Verification of setpoint not required. --- Perform TADOT.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.3.4.1	Perform CHANNEL CHECK for each required instrumentation channel that is normally energized.	In accordance with the Surveillance Frequency Control Program
SR 3.3.4.2	Verify each required control circuit and transfer switch is capable of performing the intended function.	In accordance with the Surveillance Frequency Control Program
SR 3.3.4.3	----------NOTE---------- Neutron detectors are excluded from CHANNEL CALIBRATION. ---------- Perform CHANNEL CALIBRATION for each required instrumentation channel.	In accordance with the Surveillance Frequency Control Program
SR 3.3.4.4	Perform TADOT of the reactor trip breaker open/closed indication.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time not met.	D.1 Enter applicable Condition(s) and Required Action(s) for the associated DG made inoperable by LOP DG start instrumentation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.5.1	----------NOTE---------- Verification of setpoint not required. ---------- Perform TADOT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.5.2	Perform CHANNEL CALIBRATION with Trip Setpoints as follows: a. Loss of voltage Trip Setpoint of 328 V ± 10% with a time delay of ≤1 second (at zero voltage). b. Degraded voltage Trip Setpoint of 430 V ± 4 V with a time delay of 10 ± 0.5 seconds.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

----------NOTE----------
Refer to Table 3.3.6-1 to determine which SRs apply for each Containment Ventilation Isolation Function.

	SURVEILLANCE	FREQUENCY
SR 3.3.6.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.2	Perform ACTUATION LOGIC TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.3	Perform MASTER RELAY TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.4	Perform COT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.5	Perform SLAVE RELAY TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.6	----------NOTE---------- Verification of setpoint is not required. ---------- Perform TADOT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.6.7	Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time for Condition A or B not met in MODE 1, 2, 3, or 4.	C.1 Be in MODE 3. AND C.2 Be in MODE 5.	6 hours 36 hours
D. Required Action and associated Completion Time for Condition A or B not met during movement of irradiated fuel assemblies.	D.1 Suspend movement of irradiated fuel assemblies.	Immediately

SURVEILLANCE REQUIREMENTS

----------NOTE----------
Refer to Table 3.3.7-1 to determine which SRs apply for each CREFS Actuation Function.

SURVEILLANCE		FREQUENCY
SR 3.3.7.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.3.7.2	Perform COT.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.7.3	Perform ACTUATION LOGIC TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.7.4	Perform MASTER RELAY TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.7.5	Perform SLAVE RELAY TEST.	In accordance with the Surveillance Frequency Control Program
SR 3.3.7.6	Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

----------NOTE----------
Refer to Table 3.3.8-1 to determine which SRs apply for each AFW Function.

	SURVEILLANCE	FREQUENCY
SR 3.3.8.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.3.8.2	Perform COT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.8.3	----------NOTE---------- For Function 5, the TADOT shall include injection of a simulated or actual signal to verify channel OPERABILITY. --- Perform TADOT.	In accordance with the Surveillance Frequency Control Program
SR 3.3.8.4	Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.4.1.1	Verify pressurizer pressure is greater than or equal to the limit specified in the COLR.	In accordance with the Surveillance Frequency Control Program
SR 3.4.1.2	Verify RCS average temperature is less than or equal to the limit specified in the COLR.	In accordance with the Surveillance Frequency Control Program
SR 3.4.1.3	Verify RCS total flow rate is $\geq 97.3 \times 10^6$ lbm/hr and greater than or equal to the limit specified in the COLR.	In accordance with the Surveillance Frequency Control Program
SR 3.4.1.4	----------NOTE---------- Not required to be performed until 24 hours after $\geq$ 90% RTP. ---------- Verify by precision heat balance that RCS total flow rate is $\geq 97.3 \times 10^6$ lbm/hr and greater than or equal to the limit specified in the COLR.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.2.1	Verify RCS T_{avg} in each loop ≥ 530°F.	--------NOTE-------- Only required if low T_{avg} alarm not reset and any RCS loop T_{avg} < 543°F. ---------- In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. ----------NOTE---------- Required Action C.2 shall be completed whenever this Condition is entered. ---------- Requirements of LCO not met any time in other than MODE 1, 2, 3, or 4.	C.1 Initiate action to restore parameter(s) to within limits. AND C.2 Determine RCS is acceptable for continued operation.	Immediately Prior to entering MODE 4

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.3.1	----------NOTE---------- Only required to be performed during RCS heatup and cooldown operations and RCS inservice leak and hydrostatic testing. ----------	
	Verify RCS pressure, RCS temperature, and RCS heatup and cooldown rates are within the limits specified in Figures 3.4.3-1 and 3.4.3-2.	In accordance with the Surveillance Frequency Control Program

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.4 RCS Loops - MODES 1 and 2

LCO 3.4.4 Three RCS loops shall be OPERABLE and in operation.

APPLICABILITY: MODES 1 and 2.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of LCO not met.	A.1 Be in MODE 3.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.4.1	Verify each RCS loop is in operation.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.4.5.1	Verify required RCS loops are in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.5.2	Verify steam generator secondary side water levels are ≥ 16% for required RCS loops.	In accordance with the Surveillance Frequency Control Program
SR 3.4.5.3	----------NOTE---------- Only required to be met if LCO 3.4.5.a is required to be met. ---------- Verify the Rod Control System is not capable of rod withdrawal.	In accordance with the Surveillance Frequency Control Program
SR 3.4.5.4	----------NOTE---------- Only required to be met if LCO 3.4.5.b is required to be met. ---------- Verify the reactor trip breakers are open.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVELLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.4.5.5	----------NOTE---------- Only required to be met if LCO 3.4.5.c is required to be met. ---------- Verify the lift disconnect switches for all control rods not fully withdrawn are open.	In accordance with the Surveillance Frequency Control Program
SR 3.4.5.6	----------NOTE---------- Only required to be met if LCO 3.4.5.d is required to be met. ---------- Verify SDM is within required limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program
SR 3.4.5.7	Verify correct breaker alignment and indicated power are available to the required pump that is not in operation.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. One required loop or train inoperable. AND One required RHR train OPERABLE.	B.1	Be in MODE 5.	24 hours
C. Two required loops or trains inoperable. OR Required loop or train not in operation.	C.1	Suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet SDM of LCO 3.1.1.	Immediately
	AND		
	C.2	Initiate action to restore one loop or train to OPERABLE status and operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.6.1	Verify one RHR train or RCS loop is in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.6.2	Verify SG secondary side water levels are ≥ 16% for required RCS loops.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.6.3	Verify correct breaker alignment and indicated power are available to the required pump that is not in operation.	In accordance with the Surveillance Frequency Control Program

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One RHR train inoperable. AND Required SG secondary side water level not within limits.	A.1	Initiate action to restore a second RHR train to OPERABLE status. OR	Immediately
	A.2	Initiate action to restore required SG secondary side water level to within limits.	Immediately
B. Required RHR trains inoperable. OR No RHR train in operation.	B.1	Suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet SDM of LCO 3.1.1. AND	Immediately
	B.2	Initiate action to restore one RHR train to OPERABLE status and operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.7.1	Verify one RHR train is in operation.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVELLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.7.2	Verify SG secondary side water level is ≥ 16% in required SG.	In accordance with the Surveillance Frequency Control Program
SR 3.4.7.3	Verify correct breaker alignment and indicated power are available to the required RHR pump that is not in operation.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. Required RHR trains inoperable. OR No RHR train in operation.	B.1	Suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet SDM of LCO 3.1.1.	Immediately
	AND		
	B.2	Initiate action to restore one RHR train to OPERABLE status and operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.8.1	Verify one RHR train is in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.8.2	Verify correct breaker alignment and indicated power are available to the required RHR pump that is not in operation.	In accordance with the Surveillance Frequency Control Program

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition B or C not met.	D.1 Be in MODE 3. AND D.2 Be in MODE 4.	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.9.1	Verify pressurizer water level is within limits.	In accordance with the Surveillance Frequency Control Program
SR 3.4.9.2	Verify capacity of required pressurizer heaters is ≥ 125 kW.	In accordance with the Surveillance Frequency Control Program
SR 3.4.9.3	Verify required pressurizer heaters are capable of being powered from an emergency power supply.	In accordance with the Surveillance Frequency Control Program

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
F. (continued)	F.2	Restore one block valve to OPERABLE status.	2 hours
	AND		
	F.3	Restore remaining block valve to OPERABLE status.	72 hours
G. Required Action and associated Completion Time of Condition F not met.	G.1	Be in MODE 3.	6 hours
	AND		
	G.2	Be in MODE 4.	12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.11.1	----------NOTE---------- Not required to be met with block valve closed in accordance with the Required Action of Condition B or E. ----------	
	Perform a complete cycle of each block valve.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.11.2	----------NOTE---------- Not required to be performed until 12 hours after entry into MODE 3. ---------- Perform a complete cycle of each PORV.	In accordance with the Surveillance Frequency Control Program
SR 3.4.11.3	Perform a complete cycle of each solenoid air control valve and check valve on the nitrogen accumulators in PORV control systems.	In accordance with the Surveillance Frequency Control Program
SR 3.4.11.4	Verify accumulators are capable of operating PORVs through a complete cycle.	In accordance with the Surveillance Frequency Control Program

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
G. Two required PORVs inoperable. OR Required Action and associated Completion Time of Condition A, B, D, E, or F not met. OR LTOP System inoperable for any reason other than Condition A, B, C, D, E, or F.	G.1 Depressurize RCS and establish RCS vent of ≥ 4.4 square inches.	8 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.12.1	----------NOTE---------- Only required to be met when all RCS cold leg temperatures ≥ 175°F and requirements of LCO 3.4.12.b not met. ---------- Verify a maximum of one SI pump is capable of injecting into the RCS.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.4.12.2	----------NOTE---------- Only required to be met when any RCS cold leg temperature < 175°F and requirements of LCO 3.4.12.b not met. ---------- Verify no SI pumps capable of injecting into the RCS.	In accordance with the Surveillance Frequency Control Program
SR 3.4.12.3	Verify each accumulator isolation valve is closed and deenergized.	In accordance with the Surveillance Frequency Control Program
SR 3.4.12.4	----------NOTE---------- Only required to be met when complying with LCO 3.4.12.b. ---------- Verify RCS vent ≥ 4.4 square inches open.	In accordance with the Surveillance Frequency Control Program for unlocked open vent valve(s) AND In accordance with the Surveillance Frequency Control Program for locked open vent valve(s)
SR 3.4.12.5	Verify PORV block valve is open for each required PORV.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.12.6	---------- NOTE---------- Not required to be performed until 12 hours after decreasing RCS cold leg temperature to ≤ 350°F. ---------- Perform a COT on each required PORV, excluding actuation.	In accordance with the Surveillance Frequency Control Program
SR 3.4.12.7	Perform CHANNEL CALIBRATION for each required PORV actuation channel.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.13.1	----------NOTES---------- 1. Not required to be performed until 12 hours after establishment of steady state operation. 2. Not applicable to primary to secondary LEAKAGE. ---------- Verify RCS operational LEAKAGE is within limits by performance of RCS water inventory balance.	In accordance with the Surveillance Frequency Control Program
SR 3.4.13.2	----------NOTE---------- Not required to be performed until 12 hours after establishment of steady state operation. ---------- Verify primary to secondary LEAKAGE is ≤ 75 gallons per day through any one SG.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.14.1	----------NOTES---------- 1. Not required to be performed in MODES 3 and 4. 2. Not required to be performed on the RCS PIVs located in the RHR flow path when in the shutdown cooling mode of operation. 3. RCS PIVs actuated during the performance of this Surveillance are not required to be tested more than once if a repetitive testing loop cannot be avoided. ----------	
	Verify leakage from each RCS PIV is less than or equal to an equivalent of 5 gpm at an RCS pressure ≥ 2235 psig, and verify the margin between the results of the previous leak rate test and the 5 gpm limit has not been reduced by ≥ 50% for valves with leakage rates > 1.0 gpm.	In accordance with the INSERVICE TESTING PROGRAM and In accordance with the Surveillance Frequency Control Program AND Prior to entering MODE 2 whenever the unit has been in MODE 5 for 7 days or more, if leakage testing has not been performed in the previous 9 months AND (continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.14.1 (continued)		Within 24 hours following valve actuation due to automatic or manual action or flow through the valve
SR 3.4.14.2	Verify RHR System interlock prevents the valves from being opened with a simulated or actual RCS pressure signal > 474 psig.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. Required containment atmosphere radioactivity monitor inoperable. AND Required containment fan cooler condensate flow rate monitor inoperable.	D.1 OR D.2	Restore required containment atmosphere radioactivity monitor to OPERABLE status. Restore required containment fan cooler condensate flow rate monitor to OPERABLE status.	30 days 30 days
E. Required Action and associated Completion Time not met.	E.1 AND E.2	Be in MODE 3. Be in MODE 5.	6 hours 36 hours
F. All required monitors inoperable.	F.1	Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.15.1	Perform CHANNEL CHECK of the required containment atmosphere radioactivity monitor.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.4.15.2	Perform COT of the required containment atmosphere radioactivity monitor.	In accordance with the Surveillance Frequency Control Program
SR 3.4.15.3	Perform CHANNEL CALIBRATION of the required containment sump monitor.	In accordance with the Surveillance Frequency Control Program
SR 3.4.15.4	Perform CHANNEL CALIBRATION of the required containment atmosphere radioactivity monitor.	In accordance with the Surveillance Frequency Control Program
SR 3.4.15.5	Perform CHANNEL CALIBRATION of the required containment fan cooler condensate flow rate monitor.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time of Condition A not met. OR DOSE EQUIVALENT I-131 > 60 μCi/gm.	C.1 Be in MODE 3 with T_{avg} < 500 °F.	6 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.16.1	Verify reactor coolant gross specific activity ≤ 100/$\bar{E}$ μCi/gm.	In accordance with the Surveillance Frequency Control Program
SR 3.4.16.2	----------NOTE---------- Only required to be performed in MODE 1. ----------	
	Verify reactor coolant DOSE EQUIVALENT I-131 specific activity ≤ 0.25 μCi/gm.	In accordance with the Surveillance Frequency Control Program AND Between 2 and 6 hours after a THERMAL POWER change of ≥ 15% RTP within a 1 hour period

(continued)

SURVELLANCE REQUIREMENTS (continued)

SURVELLANCE		FREQUENCY
SR 3.4.16.3	----------NOTE---------- Not required to be performed until 31 days after a minimum of 2 effective full power days and 20 days of MODE 1 operation have elapsed since the reactor was last subcritical for ≥ 48 hours. ----------	
	Determine $\bar{E}$ from a sample taken in MODE 1 after a minimum of 2 effective full power days and 20 days of MODE 1 operation have elapsed since the reactor was last subcritical for ≥ 48 hours.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.4.17.1	Verify seal injection flow of ≥ 6 gpm to each RCP.	In accordance with the Surveillance Frequency Control Program
SR 3.4.17.2	Verify seal injection flow of ≥ 6 gpm to each RCP from each Makeup Water Pathway from the RWST.	In accordance with the Surveillance Frequency Control Program
SR 3.4.17.3	For Makeup Water Pathways from the RWST to be OPERABLE, SR 3.5.4.2 is applicable.	In accordance with SR 3.5.4.2

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition A or B not met.	D.1 Be in MODE 3. AND D.2 Reduce pressurizer pressure to ≤ 1000 psig.	6 hours 12 hours
E. Two or more accumulators inoperable.	E.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.5.1.1	Verify each accumulator isolation valve is fully open.	Once prior to removing power from the valve operator
SR 3.5.1.2	Verify borated water volume in each accumulator is ≥ 825 ft^3 and ≤ 841 ft^3.	In accordance with the Surveillance Frequency Control Program
SR 3.5.1.3	Verify nitrogen cover pressure in each accumulator is ≥ 600 psig and ≤ 660 psig.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVELLANCE		FREQUENCY
SR 3.5.1.4	Verify boron concentration in each accumulator is within the limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program AND -----NOTE------ Only required to be performed for affected accumulators ---------- Once within 6 hours after each solution volume increase of ≥ 70 gallons that is not the result of addition from the refueling water storage tank
SR 3.5.1.5	Verify control power is removed from each accumulator isolation valve operator.	In accordance with the Surveillance Frequency Control Program

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	B.2 Remove control power or air to valve.	24 hours
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. AND C.2 Be in MODE 4.	6 hours 12 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE				FREQUENCY
SR 3.5.2.1	Verify the following valves are in the listed position with control power to the valve operator removed.			In accordance with the Surveillance Frequency Control Program
	Number	Position	Function	
	SI-862 A&B	Open	Low Head Safety Injection (LHSI)	
	SI-863 A&B	Closed	LHSI	
	SI-864 A&B	Open	LHSI, High Head Safety Injection (HHSI)	
	SI-866 A&B	Closed	HHSI	
	SI-878 A&B	Open	HHSI	
SR 3.5.2.2	Verify each ECCS manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.			In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.5.2.3	Verify each ECCS pump's developed head at the test flow point is greater than or equal to the required developed head.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.5.2.4	Verify each ECCS automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.5.2.5	Verify each ECCS pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.5.2.6	Verify, by visual inspection, the ECCS containment sump suction inlet is not restricted by debris and the suction inlet strainers show no evidence of structural distress or abnormal corrosion.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE				FREQUENCY
SR 3.5.2.7	Verify the following valves in the listed position:			In accordance with the Surveillance Frequency Control Program
	Number	Position	Function	
	FCV-605	Closed/Motive Air Isolated	RHR	
	HCV-758	Closed/Motive Air Isolated	RHR	
SR 3.5.2.8	Verify the following manual valve is locked in the listed position			In accordance with the Surveillance Frequency Control Program
	Number	Position	Function	
	RHR-764	Locked Open	LHSI	

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.5.4.1	----------NOTE---------- Only required to be performed when ambient air temperature is < 45°F or > 100°F. ---------- Verify RWST borated water temperature is ≥ 45°F and ≤ 100°F.	In accordance with the Surveillance Frequency Control Program
SR 3.5.4.2	Verify RWST borated water volume is ≥ 300,000 gallons.	In accordance with the Surveillance Frequency Control Program
SR 3.5.4.3	Verify RWST boron concentration is within the limits specified in the COLR.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.6.2.1	----------NOTES---------- 1. An inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test. 2. Results shall be evaluated against acceptance criteria applicable to SR 3.6.1.1. ---------- Perform required air lock leakage rate testing in accordance with the Containment Leakage Rate Testing Program.	In accordance with the Containment Leakage Rate Testing Program.
SR 3.6.2.2	Verify only one door in the air lock can be opened at a time.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time not met. OR 42 inch penetration (Supply or Exhaust) purge valves open and 6 inch penetration (pressure or vacuum relief) valves open simultaneously.	D.1 Be in MODE 3. AND D.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.3.1	----------NOTE---------- The 42 inch and 6 inch valves may not be open simultaneously. ---------- Verify each 42 inch purge supply and exhaust valve and each 6 inch pressure and vacuum relief valve is closed, except when the valves are open for safety related reasons, or for tests or Surveillances that require the valves to be open.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.3.2	----------NOTE---------- Valves and blind flanges in high radiation areas may be verified by use of administrative controls. ----------	
	Verify each containment isolation manual valve and blind flange that is located outside containment and not locked, sealed or otherwise secured and required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls.	In accordance with the Surveillance Frequency Control Program for containment isolation manual valves (except Penetration Pressurization System valves with a diameter ≤ 3/8 inch) and blind flanges AND In accordance with the Surveillance Frequency Control Program for Penetration Pressurization System valves with a diameter ≤ 3/8 inch

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.3.3	----------NOTE---------- Valves and blind flanges in high radiation areas may be verified by use of administrative means. ----------	
	Verify each containment isolation manual valve and blind flange that is located inside containment and not locked, sealed or otherwise secured and required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls.	Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days
SR 3.6.3.4	Verify the isolation time of each automatic power operated containment isolation valve is within limits.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.6.3.5	Verify each automatic containment isolation valve that is not locked, sealed or otherwise secured in position, actuates to the isolation position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.3.6	Verify each 42 inch inboard containment purge valve is blocked to restrict the valve from opening > 70°.	In accordance with the Surveillance Frequency Control Program

3.6 CONTAINMENT SYSTEMS

3.6.4 Containment Pressure

LCO 3.6.4 Containment pressure shall be ≥ -0.8 psig and ≤ +1.0 psig.

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

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Containment pressure not within limits.	A.1	Restore containment pressure to within limits.	1 hour
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

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1	Verify containment pressure is within limits.	In accordance with the Surveillance Frequency Control Program

3.6 CONTAINMENT SYSTEMS

3.6.5 Containment Air Temperature

LCO 3.6.5 Containment average air temperature shall be ≤ 120°F.

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

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Containment average air temperature not within limit.	A.1	Restore containment average air temperature to within limit.	8 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

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.5.1	Verify containment average air temperature is within limit.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. Two containment cooling trains inoperable.	D.1	Restore one containment cooling train to OPERABLE status.	72 hours
E. Required Action and associated Completion Time of Condition C or D not met.	E.1	Be in MODE 3.	6 hours
	AND		
	E.2	Be in MODE 5.	36 hours
F. Two containment spray trains inoperable. OR Any combination of three or more trains inoperable.	F.1	Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.6.1	Verify each containment spray manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.6.2	Operate each containment cooling train fan unit for ≥ 15 minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.3	Verify cooling water flow rate to each cooling unit is ≥ 750 gpm.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.4	Verify each containment spray pump's developed head at the flow test point is greater than or equal to the required developed head.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.6.6.5	Verify each automatic containment spray valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.6	Verify each containment spray pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.7	Verify each containment cooling train starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.6.8	Verify each spray nozzle is unobstructed.	Following activities which could result in nozzle blockage

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.7.1	Verify each spray additive manual, power operated, and automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.6.7.2	Verify spray additive tank solution volume is ≥ 2505 gal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.7.3	Verify spray additive tank NaOH solution concentration is ≥ 30% by weight.	In accordance with the Surveillance Frequency Control Program
SR 3.6.7.4	Verify each spray additive automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

3.6 CONTAINMENT SYSTEMS

3.6.8 Isolation Valve Seal Water (IVSW) System

LCO 3.6.8 The IVSW System shall be OPERABLE.

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

ACTIONS

CONDITION		REQUIRED ACTION		COMPLETION TIME
A.	IVSW system inoperable.	A.1	Restore IVSW system 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

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.8.1	Verify IVSW tank pressure is ≥ 46.2 psig.	In accordance with the Surveillance Frequency Control Program
SR 3.6.8.2	Verify the IVSW tank volume is ≥ 85 gallons.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.8.3	Verify the opening time of each air operated header injection valve is within limits.	In accordance with the INSERVICE TESTING PROGRAM
SR 3.6.8.4	Verify each automatic valve in the IVSW System actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.6.8.5	Verify the IVSW dedicated nitrogen bottles will pressurize the IVSW tank to ≥ 46.2 psig.	In accordance with the Surveillance Frequency Control Program
SR 3.6.8.6	Verify total IVSW seal header flow rate is ≤ 124 cc/minute	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.4.1	Verify each AFW manual, power operated, and automatic valve in each water flow path, and in the steam supply flow path to the steam driven AFW pump, that is not locked, sealed, or otherwise secured in position, is in the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.7.4.2	----------NOTE---------- Not required to be performed for the steam driven AFW pump until 24 hours after ≥ 1000 psig in the steam generator. ----------	
	Verify the developed head of each AFW pump at the flow test point is greater than or equal to the required developed head.	In accordance with the Surveillance Frequency Control Program
SR 3.7.4.3	----------NOTE---------- Not applicable in MODE 4 when steam generator is being used for heat removal. ----------	
	Verify each AFW automatic valve that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.4.4	----------NOTES---------- 1. Not required to be performed for the steam driven AFW pump until 24 hours after ≥ 1000 psig in the steam generator. 2. Not applicable in MODE 4 when steam generator is being used for heat removal. ---------- Verify each AFW pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.4.5	----------NOTE---------- Not required to be performed for the steam driven AFW pump until prior to entering MODE 1. ---------- Verify proper alignment of the required AFW flow paths by verifying flow from the condensate storage tank to each steam generator.	Prior to entering MODE 2, whenever unit has been in MODE 5 or 6 for > 30 days
SR 3.7.4.6	Verify the AFW automatic bus transfer switch associated with discharge valve V2-16A operates automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

ACTIONS (Continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. SWS supply to AFW system inoperable.	C.1 Be in MODE 3. AND	6 hours
	C.2 Be in MODE 4, without reliance on steam generator for heat removal.	18 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.5.1	Verify the CST level is ≥ 35,000 gal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.5.2	Verify by administrative means OPERABILITY of backup SWS supply to the AFW System.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.7.6.1	----------NOTE---------- Isolation of CCW flow to individual components does not render the CCW System inoperable. ----------	
	Verify each required CCW manual, power operated, and automatic valve in the flow path servicing safety related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.7.6.2	Verify each required CCW pump starts automatically on an actual or simulated LOP DG Start undervoltage signal.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. Two Turbine Building loop isolation valves inoperable.	C.1	Close and deactivate one inoperable Turbine Building loop isolation valve.	2 hours
D. Required Actions and associated Completion Times of Conditions A, B, or C not met.	D.1	Be in MODE 3.	6 hours
	AND		
	D.2	Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.7.1	----------NOTE---------- Isolation of SWS flow to individual components does not render the SWS inoperable. ----------	
	Verify each SWS manual, power operated, and automatic valve in the flow path servicing safety related equipment, that is not locked, sealed, or otherwise secured in position, is in the correct position.	In accordance with the Surveillance Frequency Control Program
SR 3.7.7.2	Verify each SWS automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.7.7.3	Verify each SWS pump and SWS booster pump starts automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.7.4	Verify the SWS automatic bus transfer switch associated with Turbine Building loop isolation valve V6-16C operates automatically on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.8 Ultimate Heat Sink (UHS)

LCO 3.7.8 The UHS shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Service water temperature not within limit.	A.1 Verify required cooling capacity maintained. AND A.2 Verify service water temperature is ≤ 99°F.	1 hour AND Once per 12 hours thereafter Once per hour
B. Required Action and associated Completion Time not met. OR UHS inoperable for reasons other than Condition A.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.8.1	Verify water level of UHS is ≥ 218 ft mean sea level.	In accordance with the Surveillance Frequency Control Program
SR 3.7.8.2	Verify service water temperature is ≤ 97°F.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
H. Required Action and associated Completion Time of Condition G not met in MODE 1, 2, 3, or 4.	H.1 Be in MODE 3. AND H.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.9.1	Operate each CREFS train for ≥ 15 minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.7.9.2	Perform required CREFS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with VFTP
SR 3.7.9.3	Verify each CREFS train actuates on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program
SR 3.7.9.4	Perform required CRE maintenance and testing in accordance with the CRE Habitability Program.	In accordance with the CRE Habitability Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.10.1	Verify each CREATC WCCU train has the capability to remove the assumed heat load.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.11 Fuel Building Air Cleanup System (FBACS)

LCO 3.7.11 The FBACS shall be OPERABLE and operating.

APPLICABILITY: During movement of irradiated fuel assemblies in the fuel building.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. The FBACS inoperable during movement of irradiated fuel assemblies in the fuel building.	A.1 Suspend movement of irradiated fuel assemblies in the fuel building.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.11.1	Operate the FBACS for ≥ 15 continuous minutes.	In accordance with the Surveillance Frequency Control Program
SR 3.7.11.2	Perform required FBACS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.11.3	----------NOTE---------- Not required to be met when the only movement of irradiated fuel is movement of the spent fuel shipping cask containing irradiated fuel. ----------	
	Verify the FBACS can maintain a negative pressure with respect to atmospheric pressure.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.12 Fuel Storage Pool Water Level

LCO 3.7.12 The fuel storage pool water level shall be ≥ 21 ft over the top of irradiated fuel assemblies seated in the storage racks.

APPLICABILITY: During movement of irradiated fuel assemblies in the fuel storage pool.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Fuel storage pool water level not within limit.	A.1 ----------NOTE---------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in the fuel storage pool.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.12.1	Verify the fuel storage pool water level is ≥ 21 ft above the top of the irradiated fuel assemblies seated in the storage racks.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.13 Fuel Storage Pool Boron Concentration

LCO 3.7.13 The fuel storage pool boron concentration shall be ≥ 1500 ppm.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Fuel storage pool boron concentration not within limit.	----------NOTE---------- LCO 3.0.3 is not applicable. ----------	
	A.1 Suspend movement of fuel assemblies in the fuel storage pool.	Immediately
	AND	
	A.2 Initiate action to restore fuel storage pool boron concentration to within limit.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.13.1	Verify the fuel storage pool boron concentration is within limit.	In accordance with the Surveillance Frequency Control Program

3.7 PLANT SYSTEMS

3.7.15 Secondary Specific Activity

LCO 3.7.15 The specific activity of the secondary coolant shall be ≤ 0.10 μCi/gm DOSE EQUIVALENT I-131.

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

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Specific activity not within limit.	A.1	Be in MODE 3.	6 hours
	AND		
	A.2	Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.15.1	Verify the specific activity of the secondary coolant is ≤ 0.10 μCi/gm DOSE EQUIVALENT I-131.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.8.1.1	Verify correct breaker alignment and indicated power availability for each offsite circuit.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.2	----------NOTES---------- 1. Performance of SR 3.8.1.7 satisfies this SR. 2. All DG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading. 3. A modified DG start involving idling and gradual acceleration to synchronous speed may be used for this SR as recommended by the manufacturer. When modified start procedures are not used, the time, voltage, and frequency tolerances of SR 3.8.1.7 must be met. ---------- Verify each DG starts from standby conditions and achieves steady state voltage ≥ 467 V and ≤ 493 V, and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.8.1.3	----------NOTES---------- 1. DG loadings may include gradual loading as recommended by the manufacturer. 2. Momentary transients outside the load range do not invalidate this test. 3. This Surveillance shall be conducted on only one DG at a time. 4. This SR shall be preceded by and immediately follow without shutdown a successful performance of SR 3.8.1.2 or SR 3.8.1.7. 5. During periods when a diesel generator is being operated for testing purposes, its protective trips need not be bypassed after the diesel generator has properly assumed the load on its bus. ---------- Verify each DG is synchronized and loaded and operates for ≥ 60 minutes at a load ≥ 2350 kW and ≤ 2500 kW.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.4	Verify each day tank contains ≥ 140 gallons of fuel oil.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.5	Check for and remove accumulated water from each day tank.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.8.1.6	Verify the fuel oil transfer system operates to automatically transfer fuel oil from storage tank to the day tank.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.7	----------NOTES---------- All DG starts may be preceded by an engine prelube period. ----------	
	Verify each DG starts from standby condition and achieves in ≤ 10 seconds, voltage ≥ 467 V and frequency ≥ 58.8 Hz, and after steady state conditions are reached, maintains voltage ≥ 467 V and ≤ 493 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.8	----------NOTES---------- 1. This Surveillance shall not be performed in MODE 1 or 2. 2. If performed with the DG synchronized with offsite power, it shall be performed at a power factor ≤ 0.9. ----------	
	Verify each DG rejects a load greater than or equal to its associated single largest post-accident load and does not trip on overspeed.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.9	----------NOTES---------- 1. All DG starts may be preceded by an engine prelube period. 2. This Surveillance shall not be performed in MODE 1, 2, 3, or 4. 3. During periods when a diesel generator is being operated for testing purposes, its protective trips need not be bypassed after the diesel generator has properly assumed the load on its bus. ---------- Verify on an actual or simulated loss of offsite power signal: a. De-energization of emergency buses; b. Load shedding from emergency buses; c. DG auto-starts from standby condition and: 1. energizes permanently connected loads in ≤ 10 seconds, 2. energizes auto-connected shutdown loads through automatic load sequencer, 3. maintains steady state voltage ≥ 467 V and ≤ 493 V, 4. maintains steady state frequency ≥ 58.8 Hz and ≤ 61.2 Hz, and 5. supplies permanently connected and auto-connected shutdown loads for ≥ 5 minutes.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.10	----------NOTES---------- 1 All DG starts may be preceded by prelube period. 2. This Surveillance shall not be performed in MODE 1 or 2. 3. During periods when a diesel generator is being operated for testing purposes, its protective trips need not be bypassed after the diesel generator has properly assumed the load on its bus. ---------- Verify on an actual or simulated Engineered Safety Feature (ESF) actuation signal each DG auto-starts from standby condition and: a. In ≤ 10 seconds after auto-start achieves voltage ≥ 467 V, and after steady state conditions are reached, maintains voltage ≥ 467 V and ≤ 493 V; b. In ≤ 10 seconds after auto-start achieves frequency ≥ 58.8 Hz, and after steady state conditions are reached, maintains frequency ≥ 58.8 Hz and ≤ 61.2 Hz; c. Operates for ≥ 5 minutes; d. Permanently connected loads remain energized from the offsite power system; and e. Emergency loads are energized through the automatic load sequencer from the offsite power system.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.11	Verify each DG's automatic trips are bypassed except engine overspeed.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.12	----------NOTES---------- 1. Momentary transients outside the load and power factor ranges do not invalidate this test. 2. This Surveillance shall not be performed in MODE 1 or 2. 3. During periods when a diesel generator is being operated for testing purposes, its protective trips need not be bypassed after the diesel generator has properly assumed the load on its bus. ---------- Verify each DG operating at a power factor ≤ 0.9 operates for ≥ 24 hours: a. For ≥ 1.75 hours loaded ≥ 2650 kW and ≤ 2750 kW; and b. For the remaining hours of the test loaded ≥ 2400 kW and ≤ 2500 kW.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.13	----------NOTES---------- 1. This Surveillance shall be performed within 5 minutes of shutting down the DG after the DG has operated ≥ 2 hours loaded ≥ 2400 kW and ≤ 2500 kW. Momentary transients outside of load range do not invalidate this test. 2. All DG starts may be preceded by an engine prelube period. --- Verify each DG starts and achieves, in ≤ 10 seconds, voltage ≥ 467 V, and frequency ≥ 58.8 Hz, and after steady state conditions are reached, maintains voltage ≥ 467 V and ≤ 493 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.14	----------NOTE---------- This Surveillance shall not be performed in MODE 1, 2, 3, or 4. --- Verify actuation of each sequenced load block is within ± 0.5 seconds of design setpoint for each emergency load sequencer.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.15	----------NOTES---------- 1. All DG starts may be preceded by an engine prelube period. 2. This Surveillance shall not be performed in MODE 1, 2, 3, or 4. 3. During periods when a diesel generator is being operated for testing purposes, its protective trips need not be bypassed after the diesel generator has properly assumed the load on its bus. ----------	
	Verify on an actual or simulated loss of offsite power signal in conjunction with an actual or simulated ESF actuation signal: a. De-energization of emergency buses; b. Load shedding from emergency buses; and c. DG auto-starts from standby condition and: 1. energizes permanently connected loads in ≤ 10 seconds, 2. energizes auto-connected emergency loads through load sequencer, 3. achieves steady state voltage ≥ 467 V and ≤ 493 V, 4. achieves steady state frequency ≥ 58.8 Hz and ≤ 61.2 Hz, and	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.1.15 (continued)	5. supplies permanently connected and auto connected emergency loads for ≥ 5 minutes.	
SR 3.8.1.16	----------NOTE---------- 1. This Surveillance shall not be performed in MODE 1 or 2. 2. SR 3.8.1.16 is not required to be met if 4.160 kV bus 2 and 480 V Emergency Bus 1 power supply is from a start up transformer. ---------- Verify automatic transfer capability of the 4.160 kV bus 2 and the 480 V Emergency bus 1 loads from the Unit auxiliary transformer to a start up transformer.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.17	----------NOTE---------- All DG starts may be preceded by an engine prelube period. ---------- Verify when started simultaneously from standby condition, each DG achieves, in ≤ 10 seconds, voltage ≥ 467 V and frequency ≥ 58.8 Hz, and after steady state conditions are reached, maintains voltage ≥ 467 V and ≤ 493 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	In accordance with the Surveillance Frequency Control Program
SR 3.8.1.18	----------NOTE---------- This Surveillance shall not be performed in MODE 1 or 2. ---------- Verify manual transfer of AC power sources from the normal offsite circuit to each alternate offsite circuit.	24 months

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.3.1	Verify ≥ 19,000 gallons of diesel fuel oil available to the DGs from the Unit 2 DG fuel oil storage tank AND ≥ 34,000 gallons available to the DGs from the combination of the Unit 1 IC turbine fuel oil storage tanks and the Unit 2 DG fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.2	Verify fuel oil properties of stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.3	Verify each DG air start receiver pressure is ≥ 210 psig.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.4	Check for and remove accumulated water from each fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program

3.8 ELECTRICAL POWER SYSTEMS

3.8.4 DC Sources - Operating

LCO 3.8.4 The Train A and Train B DC electrical power subsystems shall be OPERABLE.

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

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One DC electrical power subsystem inoperable.	A.1 Restore DC electrical power subsystem to OPERABLE status.	2 hours
B. Required Action and Associated Completion Time not met.	B.1 Be in MODE 3. AND B.2 Be in MODE 5.	6 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.4.1	Verify battery terminal voltage is ≥ 125.7 V on float charge.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.4.2	Verify battery cells, cell plates, and racks show no visual indication of physical damage or abnormal deterioration that could degrade battery performance.	In accordance with the Surveillance Frequency Control Program
SR 3.8.4.3	Remove visible terminal corrosion, verify battery cell to cell and terminal connections are clean and tight, and are coated with anti-corrosion material.	In accordance with the Surveillance Frequency Control Program
SR 3.8.4.4	Verify each battery charger supplies ≥ 300 amps at ≥ 125 V for ≥ 4 hours.	In accordance with the Surveillance Frequency Control Program
SR 3.8.4.5	----------NOTES---------- 1. The modified performance discharge test in SR 3.8.4.6 may be performed in lieu of the service test in SR 3.8.4.5. 2. This Surveillance shall not be performed in MODE 1, 2, 3, or 4. ---------- Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.4.6	----------NOTE---------- This Surveillance shall not be performed in MODE 1, 2, 3, or 4. ----------	
	Verify battery capacity is ≥ 80% for the "A" Battery and 91% for the "B" battery of the manufacturer's rating when subjected to a performance discharge test or a modified performance discharge test.	In accordance with the Surveillance Frequency Control Program AND In accordance with the Surveillance Frequency Control Program when battery shows degradation or has reached 85% of expected life with capacity < 100% of manufacturer's rating. AND In accordance with the Surveillance Frequency Control Program when battery has reached 85% of expected life with capacity ≥ 100% of manufacturer's rating.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met. OR One or more batteries with average electrolyte temperature of the representative cells < 67°F. OR One or more batteries with one or more battery cell parameters not within Category C values.	B.1 Declare associated battery inoperable.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.6.1	Verify battery cell parameters meet Table 3.8.6-1 Category A limits.	In accordance with the Surveillance Frequency Control Program

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.6.2	Verify battery cell parameters meet Table 3.8.6-1 Category B limits.	In accordance with the Surveillance Frequency Control Program AND Once within 24 hours after a battery discharge < 110 V AND Once within 24 hours after a battery overcharge > 150 V
SR 3.8.6.3	Verify average electrolyte temperature of representative cells is ≥ 67°F.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.7.1	Verify correct inverter voltage, frequency, and alignment to required AC instrument buses.	In accordance with the Surveillance Frequency Control Program
SR 3.8.7.2	Verify voltage availability and correct CVT alignment to required AC instrument buses.	In accordance with the Surveillance Frequency Control Program

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.2.3 Suspend operations involving positive reactivity additions that could result in loss of required SDM or boron concentration. AND	Immediately
	A.2.4 Initiate action to restore AC instrument bus sources to OPERABLE status.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.8.1	----------NOTE---------- Actual voltage and frequency measurement is not required for AC instrument buses supplied from CVTs. ----------	
	Verify correct inverter voltage, frequency, and alignments to required AC instrument buses.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
G. Two trains with inoperable distribution subsystems that result in a loss of safety function.	G.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.9.1	----------NOTE---------- Actual voltage measurement is not required for the AC vital buses supplied from the constant voltage transformers. ----------	
	Verify correct breaker alignments and voltage to AC, DC, and AC instrument bus electrical power distribution subsystems.	In accordance with the Surveillance Frequency Control Program
SR 3.8.9.2	Verify capability of the two molded case circuit breakers for AFW Header Discharge Valve to S/G "A", V2-16A to trip on overcurrent.	In accordance with the Surveillance Frequency Control Program
SR 3.8.9.3	Verify capability of the two molded case circuit breakers for Service Water System Turbine Building Supply Valve (emergency supply), V6-16C to trip on overcurrent.	In accordance with the Surveillance Frequency Control Program

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	A.2.3 Suspend operations involving positive reactivity additions that could result in loss of required SDM or boron concentration. AND	Immediately
	A.2.4 Initiate actions to restore required AC, DC, and AC instrument bus electrical power distribution subsystems to OPERABLE status. AND	Immediately
	A.2.5 Declare associated required residual heat removal subsystem(s) inoperable and not in operation.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.10.1	----------NOTE---------- Actual voltage measurement is not required for the AC vital buses supplied from constant voltage transformers. ----------	
	Verify correct breaker alignments and voltage to required AC, DC, and AC instrument bus electrical power distribution subsystems.	In accordance with the Surveillance Frequency Control Program

3.9 REFUELING OPERATIONS

3.9.1 Boron Concentration

LCO 3.9.1 Boron concentrations of the Reactor Coolant System, the refueling canal, and the refueling cavity shall be maintained within the limit specified in the COLR.

APPLICABILITY: MODE 6.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Boron concentration not within limit.	A.1	Suspend CORE ALTERATIONS.	Immediately
	AND		
	A.2	Suspend positive reactivity additions.	Immediately
	AND		
	A.3	Initiate action to restore boron concentration to within limit.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.1.1	Verify boron concentration is within the limit specified in COLR.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.2.1	Perform CHANNEL CHECK.	In accordance with the Surveillance Frequency Control Program
SR 3.9.2.2	----------NOTE---------- Neutron detectors are excluded from CHANNEL CALIBRATION. ----------	
	Perform CHANNEL CALIBRATION.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.3.1	Verify each required containment penetration is in the required status.	In accordance with the Surveillance Frequency Control Program
SR 3.9.3.2	Verify each required containment ventilation valve actuates to the isolation position on an actual or simulated actuation signal.	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)	A.3	Initiate action to satisfy RHR train requirements.	Immediately
	AND		
	A.4	Close all containment penetrations providing direct access from containment atmosphere to outside atmosphere.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.4.1	Verify one RHR train is in operation.	In accordance with the Surveillance Frequency Control Program

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. (continued)	B.2	Initiate action to restore one RHR train to operation.	Immediately
	AND		
	B.3	Close all containment penetrations providing direct access from containment atmosphere to outside atmosphere.	4 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.5.1	Verify one RHR train is in operation.	In accordance with the Surveillance Frequency Control Program
SR 3.9.5.2	Verify correct breaker alignment and indicated power available to the required RHR pump that is not in operation.	In accordance with the Surveillance Frequency Control Program

3.9 REFUELING OPERATIONS

3.9.6 Refueling Cavity Water Level

LCO 3.9.6 Refueling cavity water level shall be maintained ≥ 23 ft above the top of reactor vessel flange.

APPLICABILITY: During movement of irradiated fuel assemblies within containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Refueling cavity water level not within limit.	A.1 Suspend movement of irradiated fuel assemblies within containment.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.6.1	Verify refueling cavity water level is ≥ 23 ft above the top of reactor vessel flange.	In accordance with the Surveillance Frequency Control Program

SURVEILLANCE REQUIREMETS

SURVEILLANCE		FREQUENCY
SR 3.9.7.1	Verify relative humidity of containment atmosphere to be processed by the Containment Purge Filter System is ≤ 70%.	In accordance with the Surveillance Frequency Control Program
SR 3.9.7.2	Verify the Containment Purge Filter System is in operation and maintaining containment pressure negative relative to the adjacent auxiliary building areas.	In accordance with the Surveillance Frequency Control Program
SR 3.9.7.3	Perform required Containment Purge Filter System filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP

5.5.17 Control Room Envelope Habitability Program (continued)

a. The definition of the CRE and the CRE boundary.
b. Requirements for maintaining the CRE boundary in its design condition, including configuration control and preventive maintenance.
c. Requirements for: (i) determining the unfiltered air inleakage past the CRE boundary into the CRE in accordance with the testing methods and at the frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CRE habitability at the frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0.
The following exception is taken to Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0:
1. Unfiltered air inleakage testing shall include the ability to deviate from the test methodology of ASTM-E741. These exceptions shall be documented in the test report.
d. Measurement, at designated locations, of the CRE pressure relative to external areas adjacent to the CRE boundary during the pressurization mode of operation by one train of the CREFS, operating at the flow rate required by the VFTP, at a frequency of 24 months on a STAGGERED TEST BASIS. The results shall be trended and used as part of the assessment of the CRE boundary.
e. The quantitative limits on unfiltered air inleakage into the CRE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air inleakage measured by the testing described in paragraph c. The unfiltered air inleakage limit for radiological challenges is the inleakage flow rate assumed in the licensing basis analyses of DBA consequences. For hazardous chemicals, inleakage rates shall be less than assumed in the licensing bases.
f. The provisions of SR 3.0.2 are applicable to the frequencies for assessing CRE habitability, determining CRE unfiltered inleakage, and measuring CRE pressure and assessing the CRE boundary as required by paragraphs c and d, respectively.

5.5.18 Surveillance Frequency Control Program

This program provides controls for Surveillance Frequencies. The program shall ensure that Surveillance Requirements specified in the Technical Specifications are performed at intervals sufficient to assure the associated Limiting Conditions for Operation are met.

(continued)

5.5.18 Surveillance Frequency Control Program (continued)

a. The Surveillance Frequency Control Program shall contain a list of Frequencies of those Surveillance Requirements for which the Frequency is controlled by the program.

b. Changes to the Frequencies listed in the Surveillance Frequency Control Program shall be made in accordance with NEI 04-10, "Risk-Informed Method for Control of Surveillance Frequencies," Revision 1.

c. The provisions of Surveillance Requirements 3.0.2 and 3.0.3 are applicable to the Frequencies established in the Surveillance Frequency Control Program.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 265 TO

RENEWED FACILITY OPERATING LICENSE NO. DPR-23

DUKE ENERGY PROGRESS, LLC

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

DOCKET NO. 50-261

1.0 INTRODUCTION

By letter dated April 16, 2018 (Reference 1), as supplemented by letters dated September 25, 2018, November 13, 2018, and July 16, 2019 (References 2, 3, and 4, respectively), Duke Energy Progress, LLC (Duke Energy, the licensee) requested changes to the Technical Specifications (TSs) for the H. B. Robinson Steam Electric Plant, Unit No. 2 (Robinson).

The proposed changes would revise the Robinson TSs to adopt the U.S. Nuclear Regulatory Commission (NRC or Commission)-approved Technical Specifications Task Force (TSTF) Standard Technical Specifications (STSs) Change Traveler TSTF-425, Revision 3, "Relocate Surveillance Frequencies to Licensee Control—RITSTF [Risk-Informed TSTF] Initiative 5b" (Reference 5) for Robinson. The *Federal Register* Notice published on July 6, 2009 (72 FR 31996) announced the availability of this TS improvement.

The supplemental letters dated November 13, 2018 and July 16, 2019, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on October 23, 2018 (83 FR 53512).

2.0 REGULATORY EVALUATION

2.1 Description of the Proposed Changes

The licensee proposed to modify the Robinson TSs by relocating specific surveillance frequencies to a licensee-controlled program (i.e., the Surveillance Frequency Control Program (SFCP)) in accordance with Nuclear Energy Institute (NEI) 04-10, Revision 1 (Reference 6). The licensee stated that the proposed change is consistent with the adoption of NRC-approved TSTF-425, Revision 3. When implemented, TSTF-425 relocates most periodic frequencies of

TS surveillances to the SFCP and provides requirements for the new program in the Administrative Controls section of the TSs. All surveillance frequencies can be relocated except the following:

- Frequencies that reference other approved programs for the specific interval, such as the Inservice Testing Program or the Primary Containment Leakage Rate Testing Program;

- Frequencies that are purely event-driven (e.g., "each time the control rod is withdrawn to the 'full out' position");

- Frequencies that are event-driven, but have a time component for performing the surveillance on a one-time basis once the event occurs (e.g., "within 24 hours after thermal power reaches ≥ [greater than or equal to] 95% RTP [rated thermal power"); and

- Frequencies that are related to specific conditions (e.g., battery degradation, age and capacity) or conditions for the performance of a surveillance requirement (e.g., "drywell to suppression chamber differential pressure decrease").

The licensee proposed to relocate specific surveillance frequencies from the following TS sections to the SFCP:

3.1 Reactivity Control Systems
3.2 Power Distribution Limits
3.3 Instrumentation
3.4 Reactor Coolant System (RCS)
3.5 Emergency Core Cooling Systems (ECCS)
3.6 Containment Systems
3.7 Plant Systems
3.8 Electrical Power Systems
3.9 Refueling Operations

The licensee proposed to add the SFCP to Robinson TS Section 5.0, "Administrative Controls," which will contain the existing specific surveillance frequencies from the current TSs for the affected specifications. The *Federal Register* notice published on July 6, 2009 (74 FR 31996), which announced the availability of TSTF-425, Revision 3, states that the addition of the SFCP to the TSs provides the necessary administrative controls to require that surveillance frequencies relocated to the SFCP are conducted at a frequency to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation (LCOs) will be met. The *Federal Register* notice also specifies that changes to surveillance frequencies in the SFCP would be made using the methodology contained in NEI 04-10, Revision 1, including qualitative considerations, results of risk analyses, sensitivity studies and any bounding analyses, and recommended monitoring of structures, systems, and components (SSCs), and are required to be documented. The licensee specified that the proposed TS 5.5.18, "Surveillance Frequency Control Program," provides controls for surveillance frequencies. The program shall ensure that Surveillance Requirements (SRs) specified in the TSs are performed at intervals sufficient to assure that the associated LCOs are met as discussed in Section 3.2 of this safety evaluation (SE). The proposed change to the Administrative Controls section of the TSs, include a specific

reference to NEI 04-10, Revision 1 as the basis for making any changes to the surveillance frequencies once they are relocated out of the TSs.

In a letter dated September 19, 2007 (Reference 7), the NRC staff approved the use of Topical Report (TR) NEI 04-10, Revision 1 as an acceptable methodology for referencing in licensing actions to the extent specified and under the limitations delineated in NEI 04-10, Revision 1. The associated SE could also be referenced as providing the basis for NRC acceptance of NEI 04-10, Revision 1.

The licensee noted other changes and deviations from TSTF-425, which are discussed in Section 3.3 of this SE.

2.2 Applicable Commission Policy Statements

In the "Final Policy Statement: Technical Specifications Improvements for Nuclear Power Plants," dated July 22, 1993 (58 FR 39132), the NRC addressed the use of probabilistic safety analysis (PSA, currently referred to as probabilistic risk assessment or PRA) in Standard Technical Specifications. In this 1993 publication, the NRC states (at 39135), in part:

> The Commission believes that it would be inappropriate at this time to allow requirements which meet one or more of the first three criteria [of Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.36] to be deleted from Technical Specifications based solely on PSA (Criterion 4). However, if the results of PSA indicate that Technical Specifications can be relaxed or removed, a deterministic review will be performed. . . .
>
> The Commission Policy in this regard is consistent with its Policy Statement on "Safety Goals for the Operation of Nuclear Power Plants," 51 FR 30028, published on August 21, 1986. The Policy Statement on Safety Goals states, in part, "* * * probabilistic results should also be reasonably balanced and supported through use of deterministic arguments. In this way, judgments can be made [by the decisionmaker] about the degree of confidence to be given these [probabilistic] estimates and assumptions. This is a key part of the process for determining the degree of regulatory conservatism that may be warranted for particular decisions. This defense-in-depth approach is expected to continue to ensure the protection of public health and safety."
>
> The Commission will continue to use PSA, consistent with its policy on Safety Goals, as a tool in evaluating specific line-item improvements to Technical Specifications, new requirements, and industry proposals for risk-based Technical Specification changes.

Approximately 2 years later the NRC provided additional detail concerning the use of PRA [PSA] in the "Final Policy Statement: Use of Probabilistic Risk Assessment in Nuclear Regulatory Activities," dated August 16, 1995 (60 FR 42622). In this publication, the NRC states, in part:

> The Commission believes that an overall policy on the use of PRA methods in nuclear regulatory activities should be established so that the many potential applications of PRA can be implemented in a consistent and predictable manner that would promote regulatory stability and efficiency. In addition, the

Commission believes that the use of PRA technology in NRC regulatory activities should be increased to the extent supported by the state-of-the-art in PRA methods and data and in a manner that complements the NRC's deterministic approach. . . .

PRA addresses a broad spectrum of initiating events by assessing the event frequency. Mitigating system reliability is then assessed, including the potential for multiple and common cause failures. The treatment therefore goes beyond the single failure requirements in the deterministic approach. The probabilistic approach to regulation is, therefore, considered an extension and enhancement of traditional regulation by considering risk in a more coherent and complete manner. . . .

Therefore, the Commission believes that an overall policy on the use of PRA in nuclear regulatory activities should be established so that the many potential applications of PRA can be implemented in a consistent and predictable manner that promotes regulatory stability and efficiency. This policy statement sets forth the Commission's intention to encourage the use of PRA and to expand the scope of PRA applications in all nuclear regulatory matters to the extent supported by the state-of-the-art in terms of methods and data. . . .

Therefore, the Commission adopts the following policy statement regarding the expanded NRC use of PRA:

(1) The use of PRA technology should be increased in all regulatory matters to the extent supported by the state-of-the-art in PRA methods and data and in a manner that complements the NRC's deterministic approach and supports the NRC's traditional defense-in-depth philosophy.

(2) PRA and associated analyses (e.g., sensitivity studies, uncertainty analyses, and importance measures) should be used in regulatory matters, where practical within the bounds of the state-of-the-art, to reduce unnecessary conservatism associated with current regulatory requirements, regulatory guides, license commitments, and staff practices. Where appropriate, PRA should be used to support the proposal for additional regulatory requirements in accordance with 10 CFR 50.109 (Backfit Rule). Appropriate procedures for including PRA in the process for changing regulatory requirements should be developed and followed. It is, of course, understood that the intent of this policy is that existing rules and regulations shall be complied with unless these rules and regulations are revised.

(3) PRA evaluations in support of regulatory decisions should be as realistic as practicable and appropriate supporting data should be publicly available for review.

(4) The Commission's safety goals for nuclear power plants and subsidiary numerical objectives are to be used with appropriate consideration of uncertainties in making regulatory judgments on the need for proposing and backfitting new generic requirements on nuclear power plant licensees.

2.3 Applicable Regulations

In 10 CFR 50.36, "Technical specifications," the NRC established its regulatory requirements related to the content of TSs. Pursuant to 10 CFR 50.36, TSs are required to include items in the following five specific categories related to station operation: (1) safety limits, limiting safety system settings, and limiting control settings; (2) LCOs; (3) SRs; (4) design features; and (5) administrative controls. These categories will remain in the Robinson TSs.

Section 50.36(c)(3) of 10 CFR states, "[s]urveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met."

Existing regulatory requirements, such as 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants" (i.e., the Maintenance Rule), and 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," require licensee monitoring of surveillance test failures and implementing corrective actions to address such failures. Such failures can result in the licensee increasing the frequency of a surveillance test. In addition, by having the proposed TSs require that changes to the frequencies listed in the SFCP be made in accordance with NEI 04-10, Revision 1, the licensee will be required to monitor the performance of SSCs for which surveillance frequencies are decreased to assure reduced testing does not adversely impact the SSCs.

2.4 Applicable NRC Regulatory Guides and Review Plans

Regulatory Guide (RG) 1.174, Revision 3 "An Approach for Using Probabilistic Risk Assessment in Risk-informed Decisions on Plant-Specific Changes to the Licensing Basis," dated January 2018 (Reference 8), describes an acceptable risk-informed approach for assessing the nature and impact of proposed permanent licensing-basis changes by considering engineering issues and applying risk insights. This RG also provides risk acceptance guidelines for evaluating the results of such evaluations.

RG 1.177, Revision 1, "An Approach for Plant-Specific, Risk-informed Decisionmaking: Technical Specifications," dated May 2011 (Reference 9), describes an acceptable risk-informed approach specifically for assessing proposed TS changes.

RG 1.200, Revision 2, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-informed Activities," dated March 2009 (Reference 10), describes an acceptable approach for determining whether the quality of the PRA, in total or the parts that are used to support an application, is sufficient to provide confidence in the results, such that the PRA can be used in regulatory decisionmaking for light-water reactors (LWRs).

NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," Chapter 19, Section 19.2, "Review of Risk Information Used to Support Permanent Plant-Specific Changes to the Licensing Basis: General Guidance," dated June 2007 (Reference 11), provides general guidance for evaluating the technical basis for proposed risk-informed changes. Guidance on evaluating PRA technical adequacy is provided in NUREG-0800, Chapter 19, Section 19.1, Revision 3, "Determining the Technical Adequacy of Probabilistic Risk Assessment for Risk-informed License Amendment Requests After Initial Fuel Load," dated September 2012 (Reference 12). More specific guidance related to risk-informed TS changes is provided in NUREG-0800, Chapter 16, Section 16.1, Revision 1, "Risk-informed

Decision Making: Technical Specifications," dated March 2007 (Reference 13), which includes changes to surveillance test intervals (i.e., surveillance frequencies) as part of risk-informed decisionmaking. Section 19.2 of NUREG-0800 references the same criteria as RG 1.174, Revision 3, and RG 1.177, Revision 1, and states that a risk-informed application should be evaluated to ensure that the proposed changes meet the following key principles:

- The proposed change meets the current regulations, unless it is explicitly related to a requested exemption or rule change.
- The proposed change is consistent with the defense-in-depth philosophy.
- The proposed change maintains sufficient safety margins.
- When proposed changes result in an increase in core damage frequency (CDF) or risk, the increase(s) should be small and consistent with the intent of the Commission's Safety Goal Policy Statement.
- The impact of the proposed change should be monitored using performance measurement strategies.

3.0 TECHNICAL EVALUATION

The licensee's adoption of TSTF-425, Revision 3, would provide for administrative relocation of applicable surveillance frequencies to the SFCP, and would provide for the addition of the SFCP to the Administrative Controls sections of TSs. The changes to the Administrative Controls section of the TSs will also require the application of NEI 04-10, Revision 1, for any changes to surveillance frequencies within the SFCP. The licensee's application for the changes described in TSTF-425, Revision 3, included documentation regarding the PRA technical adequacy consistent with the requirements of RG 1.200, Revision 2. NEI 04-10, Revision 1, states that PRA methods are used with plant performance data and other considerations to identify and justify modifications to the surveillance frequencies of equipment at nuclear power plants. This is consistent with guidance provided in RG 1.174, Revision 3, and RG 1.177, Revision 1, in support of changes to surveillance test intervals.

3.1 Key Safety Principles

RG 1.177, Revision 1, identifies five key safety principles required for risk-informed changes to TSs. Each of these principles is addressed by NEI 04-10, Revision 1. Sections 3.1.1 through 3.1.5 of this SE contain a discussion of the five principles, including the NRC staff's evaluation of how the licensee's license amendment request (LAR) satisfies each principle.

3.1.1 Key Principle 1: The Proposed Change Meets Current Regulations

Section 50.36(c)(3) of 10 CFR requires that TSs include surveillances, which are "requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met." The licensee is required by its TSs to perform surveillance tests, calibration, or inspection on specific safety-related equipment (e.g., reactivity control, power distribution, electrical, and instrumentation) to verify system operability. Surveillance frequencies are based primarily upon deterministic methods, such as engineering judgment,

operating experience, and manufacturer's recommendations. The licensee's use of NRC-approved methodologies identified in NEI 04-10, Revision 1, provide a way to establish risk-informed surveillance frequencies that complement the deterministic approach and supports the NRC's traditional defense-in-depth philosophy.

The SRs would remain in the TSs, as required by 10 CFR 50.36(c)(3). This change is analogous with other NRC-approved TS changes in which the SRs are retained in TSs, but the related surveillance frequencies are relocated to licensee-controlled documents, such as surveillances performed in accordance with the Inservice Testing Program and the Primary Containment Leakage Rate Testing Program. Thus, this proposed change complies with 10 CFR 50.36(c)(3) by retaining the requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCOs will be met.

The regulatory requirements in 10 CFR 50.65 and 10 CFR Part 50, Appendix B, and the monitoring that would be required by NEI 04-10, Revision 1, will ensure that surveillance frequencies are sufficient to assure that the requirements of 10 CFR 50.36(c)(3) are satisfied and that any performance deficiencies will be identified, and appropriate corrective actions taken. The licensee's proposed SFCP ensures that SRs specified in the TSs are performed at intervals sufficient to assure the above regulatory requirements are met. Based on the above, the NRC staff concludes that the proposed change meets the first key safety principle of RG 1.177, Revision 1, by complying with current regulations.

3.1.2 Key Principle 2: The Proposed Change Is Consistent with the Defense-in-depth Philosophy

The defense-in-depth philosophy (i.e., the second key safety principle of RG 1.177, Revision 1) is maintained if:

- A reasonable balance is preserved among prevention of core damage, prevention of containment failure, and consequence mitigation.

- Over-reliance on programmatic activities to compensate for weaknesses in plant design is avoided.

- System redundancy, independence, and diversity are preserved commensurate with the expected frequency, consequences of challenges to the system, and uncertainties (e.g., no risk outliers). (Because the scope of the proposed methodology is limited to the revision of surveillance frequencies, the redundancy, independence, and diversity of plant systems are not impacted.)

- Defenses against potential common cause failures (CCFs) are preserved, and the potential for the introduction of new CCF mechanisms is assessed.

- Independence of barriers is not degraded.

- Defenses against human errors are preserved.

- The intent of the plant's design criteria is maintained.

The changes to the Administrative Controls section of the TSs will require the application of NEI 04-10, Revision 1, for any changes to surveillance frequencies within the SFCP.

NEI 04-10, Revision 1, uses both the CDF and the large early release frequency (LERF) metrics to evaluate the impact of proposed changes to surveillance frequencies. In accordance with RG 1.174, Revision 3, and RG 1.177, Revision 1, changes to the CDF and the LERF are evaluated using a comprehensive risk analysis, which assesses the impact of proposed changes, including contributions from human errors and CCFs. This also included the NRC staff's evaluation of how the licensee addressed unmodeled human failure events (HFEs) for steam generator tube rupture (SGTR) accident sequences. Defense-in-depth is also included in the methodology explicitly as a qualitative consideration outside of the risk analysis, as is the potential impact on detection of component degradation that could lead to an increased likelihood of CCFs. NRC staff determined that the licensee's use of multiple risk metrics of CDF and LERF and controlling their change resulting from the implementation of this initiative would maintain a balance between prevention of core damage, prevention of containment failure, and consequence mitigation. Redundancy, diversity and independence of safety systems were considered as part of the risk categorization to ensure that these qualities are not adversely affected. Independence of barriers and defense against CCFs were also considered. The improved understanding of the relative importance of plant components to risk resulting from the development of this program should promote an improved overall understanding of how the SSCs contribute to a plant's defense-in-depth. Based on this, the NRC staff concludes that both the quantitative risk analysis and the qualitative considerations provide reasonable assurance that defense-in-depth is maintained to ensure protection of public health and safety, satisfying the second key safety principle of RG 1.177, Revision 1.

3.1.3 Key Principle 3: The Proposed Change Maintains Sufficient Safety Margins

The engineering evaluation that will be conducted by the licensee under the SFCP when frequencies are revised will assess the impact of the proposed frequency change to assure that sufficient safety margins are maintained. The guidelines used for making that assessment will include ensuring that the proposed surveillance test frequency change is not in conflict with approved industry codes and standards, ensuring that it does not adversely affect any assumptions or inputs to the safety analysis, or, if such inputs are affected, justification is provided to ensure sufficient safety margin will continue to exist.

The design, operation, testing methods, and acceptance criteria for SSCs, specified in applicable codes and standards (or alternatives approved for use by the NRC), will continue to be met as described in the plant licensing bases (including the Updated Final Safety Analysis Report and TS Bases), because these are not affected by changes to the surveillance frequencies. Similarly, there is no impact to safety analysis acceptance criteria as described in the plant licensing basis. On this basis, the NRC staff concludes that safety margins are maintained by the proposed methodology, and, therefore, the third key safety principle of RG 1.177, Revision 1, is satisfied.

3.1.4 Key Principle 4: Change in Risk is Consistent with the Safety Goal Policy Statement

The guidance in RG 1.177, Revision 1, provides a framework for evaluating the risk impact of proposed changes to surveillance frequencies that requires identification of the risk contribution from impacted surveillances, determination of the risk impact from the change to the proposed surveillance frequency, and performance of sensitivity and uncertainty evaluations. The changes to the Administrative Controls section of the TSs will require application of NEI 04-10,

Revision 1, in the SFCP. NEI 04-10, Revision 1, satisfies the intent of RG 1.177, Revision 1, which provides guidance for evaluation of the change in risk, and for assuring that such changes are small by providing the technical methodology to support risk-informed TSs for control of surveillance frequencies.

3.1.4.1 Quality of the PRA

The quality of the licensee's PRA must be commensurate with the safety significance of the proposed TS change and the role the PRA plays in justifying the change. That is, the greater the change in risk or the greater the uncertainty in that risk from the requested TS change, or both, the more rigor that must go into ensuring the quality of the PRA.

The PRA is used to determine each proposed surveillance frequency change's potential impact on risk, due to impacts from internal events, fires, seismic, other external events, and from shutdown conditions. Consideration is made of both CDF and LERF metrics. Where quantitative risk models are unavailable, bounding analyses or other conservative quantitative evaluations are performed. A qualitative screening analysis may be used when the surveillance frequency impact on plant risk can be shown to be negligible or zero. The NRC staff reviewed the licensee's peer review resolutions/dispositions to peer review facts and observations (F&Os) for the internal event PRA (IEPRA), including internal flooding in the LAR. External hazards information was also reviewed. The objective of the PRA quality review is to determine whether the Robinson PRA model used to implement the SFCP is of sufficient scope, level of detail, and technical adequacy to support the adjustment of the surveillance test intervals.

RG 1.200, Revision 2, provides regulatory guidance for assessing the technical adequacy of a PRA. The current revision (i.e., Revision 2) of this RG endorses, with clarifications and qualifications, the use of the following:

1. American Society of Mechanical Engineers/American Nuclear Society (ASME/ANS) RA-Sa-2009, "Addenda to ASME RA-S-2008 Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications" (hereafter, referred to as the ASME/ANS PRA Standard) (Reference 14);

2. NEI 00-02, "Probabilistic Risk Assessment (PRA) Peer Review Process Guidance" (Reference 15); and

3. NEI 05-04, Revision 2, "Process for Performing Internal Events PRA Peer Reviews Using the ASME/ANS PRA Standard" (Reference 16).

The licensee performed an assessment of the PRA models used to support the SFCP using the guidance of RG 1.200, Revision 2, to ensure that the PRA models are capable of determining the change in risk due to changes to surveillance frequencies of SSCs, using plant-specific data and models. Capability Category II of the NRC-endorsed PRA standard is the target capability level for supporting requirements for the internal events PRA for this application. Any identified deficiencies to those requirements are assessed further to determine any impacts to proposed decreases to surveillance frequencies, including the use of sensitivity studies where appropriate, in accordance with NEI 04-10, Revision 1.

In Attachment 2 to the LAR dated April 16, 2018 (Reference 1), the licensee specified that a full-scope peer review of the internal events PRA was performed in May 2010, against RG 1.200, Revision 2. The internal flooding PRA (IFPRA) was peer reviewed in August 2015

against RG 1.200, Revision 2. A full-scope peer review of the fire PRA was performed in May 2013, against RG 1.200, Revision 2. The NRC staff reviewed the results for the peer review of the internal events and flooding PRAs and the associated facts and observations (F&O) closure review. These results were described in Attachment 2 to the LAR. The results were also supplemented by previous docketed information on PRA quality, submitted to the NRC in the integrated leak rate test interval license amendment dated November 19, 2015 (Reference 17), and the transition to adopt the National Fire Protection Association (NFPA)-805 dated February 3, 2017 (Reference 18).

In the LAR, the licensee specified, that in August 2017, an F&O closure review was performed by an independent team on all internal events, internal flooding, and fire finding-level F&Os. The F&O closure review was performed using the process documented in Appendix X (Reference 19) to the guidance provided in NEI 05-04 (Reference 16), NEI 07-12 (Reference 20), and NEI 12-13 (Reference 21), concerning the process to "Close Out of Facts and Observations." The NRC staff accepted a final version of Appendix X in the letter dated May 3, 2017 (Reference 22), which implements a methodology to close out F&Os. Consequently, in Attachment 2 of the LAR, the licensee submitted all the F&Os from the peer reviews. For each F&O, the licensee provided a disposition for this application. The staff reviewed the licensee's resolution of all the peer review findings and assessed the potential impact of the findings on the implementation of TS 5.5.18 "Surveillance Frequency Control Program." The staff requested additional information in an e-mail dated October 12, 2018 (Reference 23), to clarify the licensee's disposition for some of the findings as described in the following paragraphs.

IEPRA F&O AS-A5, AS-B3, LE-C4, and LE-D5 specified that thermally-induced SGTR accident sequences were missing from the Robinson PRA. The NRC staff identified that unmodeled HFEs for SGTR accident sequences may impact the PRA results for the implementation of TS 5.5.18 "Surveillance Frequency Control Program." In the disposition to these F&Os, the licensee specified that a sensitivity study demonstrated that unmodeled HFEs to isolate a ruptured steam generator following a SGTR has a minimal impact on the PRA results and is, therefore, acceptable for the adoption of TSTF-425. However, the licensee made no mention of HFEs for thermally-induced SGTRs. In PRA Request for Additional Information (RAI) 01.a dated October 12, 2018, the staff requested confirmation regarding whether the licensee's sensitivity study also included the thermally-induced SGTR accident sequence. In response to PRA RAI 01.a by letter dated November 13, 2018 (Reference 3), the licensee states that thermally-induced SGTR accident sequences will only occur after core damage on a steam generator that is faulted (i.e., has a secondary steam leak). As a result, there is little or no opportunity for an operator to isolate the ruptured steam generator, so the HFEs for thermally-induced SGTR accident sequences were not included in the sensitivity study. Implementation Item ii in the Attachment to the licensee's RAI response states, in part, that the licensee will include these HFEs in the Robinson PRA model prior to the adoption of TSTF-425. If the licensee determines that the update is a PRA model upgrade, then a focused-scope peer review will be conducted, and any findings as a result will be resolved and closed per an NRC-approved process prior to the adoption of TSTF-425. The staff finds this resolution acceptable because the licensee will update its PRA model consistent with NRC-approved guidance prior to the adoption of TSTF-425.

IFPRA F&O IFEV-A7-1 specified that all human-induced events were screened as potential flood sources, however some may have been improperly screened. The licensee's disposition specified that these events were becoming less frequent. During the review of the LAR, the NRC staff identified that there have been two Information Notices (IN) IN 2007-01

(Reference 24) and IN 2016-11 (Reference 25), related to observed events at nuclear plants regarding maintenance-induced floods. Therefore, in PRA RAI 01.b, the staff requested the industry-approved screening justification to exclude maintenance-induced floods from the PRA model. In response to PRA RAI 02.d, the licensee specified that it will review the industry flooding data, and any maintenance-induced flooding events that are not screened out at Robinson will be added to the updated Robinson PRA model. Implementation Item i, in the Attachment of the licensee's RAI responses states, in part, that the licensee will update the Robinson IFPRA model to account for maintenance-induced flooding events using industry-accepted methodology. If the licensee determines that the update is a PRA model upgrade, then a focused-scope peer review will be conducted and any findings, as a result, will be resolved and closed, per an NRC-approved process, prior to the implementation of TSTF-425. The staff finds this resolution acceptable because the licensee will update its PRA model consistent with NRC-approved guidance prior to the implementation of TSTF-425.

IFPRA F&O IFSN-A8-1 specified that the assumed door heights at which the door fails when constraining water may not be appropriate. The licensee's disposition concludes that the majority of components will fail at or around 1 foot (ft) to 3 ft and will have minimal impact on the implementation of TS 5.5.18 "Surveillance Frequency Control Program." The NRC staff noted that the licensee's disposition does not discuss whether this assumption is a bounding assessment for this application. In PRA RAI 01.c, the staff requested justification, through a sensitivity study, that the assumed door failure heights would not impact the relocation of surveillance frequencies. In response to PRA RAI 01.c, the licensee specified that the door failure height was taken from Electric Power Research Institute (EPRI) Internal Flood Guidelines (EPRI TR-1019194) in lieu of a plant specific value. The licensee also specified that the difference between the generic EPRI door failure height and the door specific failure height at Robinson would be very small since the doors at Robinson are typical of nuclear power plant doors. Therefore, the licensee concluded that the generic door failure height is appropriate because small differences, if any, between the generic EPRI door failure height and the door specific failure height at Robinson would lead to a negligible difference in the calculated operator isolation failure probability. The staff finds that the generic door failure height used by the licensee is acceptable because it does not have a significant impact on the time available for operators to isolate the flood source prior to the door failing, and therefore, has a minimal impact on the isolation failure probability. The staff finds that the generic door height used by the licensee does not have a significant impact on internal flooding analysis for the implementation of TS 5.5.18 "Surveillance Frequency Control Program."

IFPRA F&O IFSN-A8-2 specified that flood propagation through door gaps was not included in the analysis. In the disposition, the licensee states that one scenario was identified where the additional flood path would affect additional equipment. However, the scenario was not reevaluated since the additional time for water accumulation is considered to be beneficial by increasing the likelihood of the operator(s) successfully isolating the flood source. The NRC staff noted that the exclusion of impacted SSCs from scenarios would decrease the SSCs contribution to risk and therefore, impact its risk importance values. In PRA RAI 01.d, the staff requested justification that the exclusion of the additional equipment impacts does not impact the implementation of TS 5.5.18 "Surveillance Frequency Control Program." In response to PRA RAI 01.d, the licensee specified that the only flood area of importance with significant door gaps is a large open area that would not allow for water to accumulate. As a result, this would preclude the accumulation of water and the development of a large hydrostatic head. The staff finds the licensee's treatment of flood propagation through door gaps to be acceptable for this application because the flood area of importance in the Robinson PRA is a large open area that

precludes the accumulation of water and it would not impact SSCs applicable to the relocation of surveillance frequencies.

In the Robinson LAR to implement 10 CFR 50.69 dated April 5, 2018 (Reference 26), the licensee specified that the current method of crediting incipient detection is similar to the guidance in NUREG-2180, "Determining the Effectiveness, Limitations, and Operator Response for Very Early Warning Fire Detection Systems in Nuclear Facilities" (Reference 27). The NRC staff notified the industry, by letter dated July 1, 2016 (Reference 28), of the retirement of an earlier method, Frequently Asked Question (FAQ) 08-0046, and to evaluate the impact of this change to the licensee's PRA. It is unclear to the staff what differences exist between the guidance in NUREG-2180 and the licensee's approach. In PRA RAI 03 (Reference 23), the staff requested for the licensee to justify, if FAQ 08-0046 was used for incipient detection, and why its use has no impact on the implementation of TS 5.5.18 "Surveillance Frequency Control Program." In response to RAI 03 (Reference 3), the licensee provided more clarification regarding the information provided in the LAR on incipient detection and specified that the methodology used for crediting incipient detection at Robinson is in accordance with NUREG-2180. The staff finds the licensee's methodology for crediting incipient detection acceptable because the licensee used NRC-approved guidance instead of the retired guidance in FAQ 08-0046.

RG 1.200, Revision 2, provides guidance for determining the technical adequacy of the PRA by comparing the PRA to the relevant parts of the ASME/ANS PRA Standard using a peer review process. The NRC staff has reviewed the peer review results and the licensee's resolution of the results and finds that the quality and level of detail of the PRA is sufficient to support the implementation of TS 5.5.18 "Surveillance Frequency Control Program." The staff finds that the licensee has followed the guidance and submitted the results of the peer review, which has met the requirement of 10 CFR 50.36(c)(3). Therefore, the staff concludes that the level of PRA quality is sufficient to support implementation of TS 5.5.18 "Surveillance Frequency Control Program" and is consistent with Regulatory Position 2.3.1, "Technical Adequacy of the PRA," of RG 1.177, Revision 1.

3.1.4.2 Scope of the PRA

The proposed changes to the Administrative Controls section of the TSs would require the licensee to evaluate each proposed change to a relocated surveillance frequency using NEI 04-10, Revision 1, to determine its potential impact on CDF and LERF risk from internal events, fires, seismic, other external events, and shutdown conditions.

The licensee has at-power internal events and internal flooding PRA models, as well as an at-power fire PRA model to support the adoption of NFPA-805. In accordance with NEI 04-10, Revision 1, the licensee will use these models to perform quantitative evaluations to support the development of changes to surveillance frequencies in the SFCP. The NRC staff finds this approach acceptable because the NRC-approved methodology in NEI 04-10, Revision 1, allows for more refined analysis to be performed to support changes to surveillance frequencies in the SFCP.

In Attachment 2 to the LAR, the licensee stated that in cases where a PRA of sufficient scope or quantitative risk models were unavailable, it uses bounding analyses or other conservative quantitative evaluations. A qualitative screening analysis may be used when the surveillance frequency impact on plant risk is shown to be negligible or zero. Currently, the licensee does not have a high winds, external flooding, or seismic PRA model that has been evaluated against

the ASME/ANS PRA Standard, as clarified by RG 1.200, Revision 2. The licensee provided the process for screening external events hazards, and the methodology is consistent with the guidance in NEI 04-10, Revision 1.

In Attachment 2 to the LAR, the licensee stated that low power and shutdown risk will be assessed under a shutdown risk management program. This program provides guidelines for outage risk management to maintain defense-in-depth and to control key safety functions. The program will also allow for qualitative and bounding analyses to provide justification for the acceptability of proposed surveillance frequency changes. The licensee will use the shutdown risk management program to assess shutdown risk for proposed surveillance frequency changes in accordance with the guidance in NEI 04-10, Revision 1.

The NRC staff concludes that by application of NEI 04-10, Revision 1, the licensee's evaluation methodology is sufficient to ensure the scope of the risk contribution of each surveillance frequency change is properly identified for evaluation, and is consistent with Regulatory Position 2.3.2, "Scope of the Probabilistic Risk Assessment for Technical Specification Change Evaluations," of RG 1.177, Revision 1.

3.1.4.3 PRA Modeling

The licensee's methodology includes the determination of whether the SSCs affected by a proposed change to a surveillance frequency are modeled in the PRA. Where the SSC is directly or implicitly modeled, a quantitative evaluation of the risk impact may be performed. The methodology adjusts the failure probability of the impacted SSCs, including any impacted CCF modes based on the proposed change to the surveillance frequency. Where the SSC is not modeled in the PRA, bounding analyses are performed to characterize the impact of the proposed change to the surveillance frequency. Potential impacts on the risk analyses due to screening criteria and truncation levels are addressed by the requirements for PRA technical adequacy consistent with guidance contained in RG 1.200, Revision 2, and by sensitivity studies identified in NEI 04-10, Revision 1.

NRC Memorandum, "Assessment of The Nuclear Energy Institute 16-06, 'Crediting Mitigating Strategies in Risk-informed Decision Making,' Guidance for Risk-informed Changes to Plants Licensing Basis," dated May 30, 2017 (Reference 29), provides the NRC staff's assessment of challenges to incorporating FLEX equipment and strategies into a PRA model in support of risk-informed decisionmaking in accordance with the guidance of RG 1.200. The LAR did not specify whether the licensee has incorporated FLEX mitigating strategies and associated equipment into the PRA models at Robinson. In PRA RAI 04, the staff requested further information and clarification on whether the licensee has incorporated FLEX mitigating strategies and associated equipment into the PRA models at Robinson. In response to PRA RAI 04, the licensee specified that FLEX mitigating strategies and associated equipment have not been incorporated into the current Robinson PRA models. The NRC staff finds that the staff's assessment in NEI 16-06 is not applicable to Robinson Unit 2. Therefore, the staff concludes that through the application of NEI 04-10, Revision 1, the PRA modeling is sufficient to ensure an acceptable evaluation of risk for the proposed changes in surveillance frequency, and is consistent with Regulatory Position 2.3.3, "Probabilistic Risk Assessment Modeling," of RG 1.177, Revision 1.

3.1.4.4 Assumptions for Time Related Failure Contributions

The failure probabilities of SSCs modeled in PRAs may include a standby time-related contribution and a cyclic demand-related contribution. The NEI 04-10, Revision 1, criteria adjust the time-related failure contribution of SSCs affected by the proposed change to a surveillance frequency. This is consistent with the guidance in RG 1.177, Revision 1, Section 2.3.3, which permits separation of the failure rate contributions into demand and standby for evaluation of SRs. If the available data do not support distinguishing between the time-related failures and demand failures, then the change to surveillance frequency is conservatively assumed to impact the total failure probability of the SSC, including both standby and demand contributions. The SSC failure rate (per unit time) is assumed to be unaffected by the change in test frequency, such that the failure probability is assumed to increase linearly with time. This assumption will be confirmed by the required monitoring and feedback implemented after the change in surveillance frequency is implemented. The NEI 04-10, Revision 1, process requires consideration of qualitative sources of information with regards to potential impacts of test frequency on SSC performance, including industry and plant-specific operating experience, vendor recommendations, industry standards, and code-specified test intervals. Thus, the process is not reliant upon risk analyses as the sole basis for the proposed changes.

The potential benefits of a reduced surveillance frequency, including reduced downtime and reduced potential for restoration errors, test-caused transients, and test-caused wear of equipment, are identified qualitatively, but are not quantitatively assessed. Thus, the NRC staff concludes that the licensee applied NEI 04-10, Revision 1, to employ reasonable assumptions with regards to extensions of surveillance test intervals, and the requested changes are consistent with Regulatory Position 2.3.4, "Assumptions in Completion Time and Surveillance Frequency Evaluations," of RG 1.177, Revision 1.

3.1.4.5 Sensitivity and Uncertainty Analysis

The proposed amended TSs would require that changes to the frequencies listed in the SFCP be made in accordance with NEI 04-10, Revision 1. Therefore, the licensee will be required to have sensitivity studies that assess the impact of uncertainties from key assumptions of the PRA, uncertainty in the failure probabilities of the affected SSCs, impact on the frequency of initiating events, and any identified deviations from Capability Category II of the ASME/ANS PRA Standard.

In Attachment 2 to the LAR (Reference 1), the licensee provided the list of key assumptions and sources of modeling uncertainty that were reviewed for the internal events, internal flooding, and fire PRAs. This table includes disposition for the assumptions and modeling uncertainties. The NRC staff noted that the industry guidance for identifying assumptions and model uncertainties identifies 71 possible sources of uncertainty. Therefore, in PRA RAI 02 (Reference 23), the staff requested clarification regarding the process used and additional details that specify the exact source of uncertainty and assumption. In response to PRA RAI 02 (Reference 3), the licensee provided the details of the process that was used to identify the key sources of uncertainty and key assumptions for the implementation of TS 5.5.18 "Surveillance Frequency Control Program." The staff finds that the methodology provided by the licensee in its RAI response is in accordance with the relevant NRC-accepted guidance found in NUREG-1855, Revision 1, "Guidelines on the Treatment of Uncertainties Associated with PRAs in Risk-informed Decision Making," (Reference 30) and EPRI TR-1016737, "Treatment of Parameter and Modeling Uncertainty for Probabilistic Risk Assessments" (Reference 31).

Where the sensitivity analyses identify a potential impact on the proposed change, revised surveillance frequencies are considered along with any qualitative considerations that may bear on the results of such sensitivity studies. The licensee will also be required to perform monitoring and feedback of SSC performance once the revised surveillance frequencies are implemented.

The NRC staff finds that the licensee searched for, identified, and evaluated sources of uncertainty in its fire PRA consistent with the relevant guidance in NUREG-1855, Revision 1, and EPRI TR-1016737. Therefore, the staff concludes that through the application of NEI 04-10, Revision 1, the licensee appropriately considered the possible impact of PRA model uncertainty and sensitivity to key assumptions and model limitations, and that the LAR is consistent with Regulatory Position 2.3.5, "Sensitivity and Uncertainty Analyses Relating to Assumptions in Technical Specification Change Evaluations," of RG 1.177, Revision 1.

3.1.4.6 Acceptance Guidelines

In accordance with NEI 04-10, Revision 1, as required by proposed TS 5.5.18, the licensee will be required to quantitatively evaluate the change in total risk (including internal and external events contributions) in terms of CDF and LERF for both the individual risk impact of a proposed change in surveillance frequency and the cumulative impact from all individual changes to surveillance frequencies. Each individual change to a surveillance frequency must show a risk impact below $1x10^{-6}$ per year for change to CDF, and below $1x10^{-7}$ per year for change to LERF. These changes to CDF and LERF are consistent with the acceptance criteria in RG 1.174, Revision 3, for very small changes in risk. Where the RG 1.174, Revision 3, acceptance criteria are not met, the process in NEI 04-10, Revision 1, either considers revised surveillance frequencies, which are consistent with RG 1.174, Revision 3, or the process terminates without permitting the proposed changes. Where quantitative results are unavailable for comparison with the acceptance guidelines, appropriate qualitative analyses are required to demonstrate that the associated risk impact of a proposed change to surveillance frequency is negligible or zero. Otherwise, bounding quantitative analyses are required to demonstrate that the risk impact is at least one order of magnitude lower than the RG 1.174, Revision 3, acceptance guidelines for very small changes in risk. In addition, in assessing each individual SSC surveillance frequency change, the cumulative impact of all changes must result in a risk impact of less than $1x10^{-5}$ per year for change to CDF, and less than $1x10^{-6}$ per year for change to LERF. The total CDF and LERF must be reasonably shown to be less than $1x10^{-4}$ per year and $1x10^{-5}$ per year, respectively. These values are consistent with the acceptance criteria of RG 1.174, Revision 3, as referenced by RG 1.177, Revision 1, for changes to surveillance frequencies.

Consistent with the NRC staff's SE, dated September 19, 2007, for NEI 04-10, Revision 1 (Reference 7), the TS SFCP will require the licensee to calculate the total change in risk (i.e., the cumulative risk) by comparing a baseline model that uses failure probabilities based on surveillance frequencies prior to being changed, per the SFCP, to a revised model that uses failure probabilities based on the changed surveillance frequencies. The staff further notes that the licensee includes a provision to exclude the contribution to cumulative risk from individual changes to surveillance frequencies associated with insignificant risk increases (i.e., less than $5x10^{-8}$ CDF and $5x10^{-9}$ LERF) once the baseline PRA models are updated to include the effects of the revised surveillance frequencies.

The quantitative acceptance guidance of RG 1.174, Revision 3, is supplemented by qualitative information to evaluate the proposed changes to surveillance frequencies, including industry

and plant-specific operating experience, vendor recommendations, industry standards, the results of sensitivity studies, and SSC performance data and test history. The final acceptability of the proposed change is based on these considerations and not solely on the PRA results. Post-implementation performance monitoring and feedback are also required to ensure continued reliability of the components. The licensee's application of NEI 04-10, Revision 1 provides acceptable methods for evaluating the risk increase associated with proposed changes to surveillance frequencies, consistent with Regulatory Position 2.4, "Acceptance Guidelines for Technical Specifications Changes," of RG 1.177, Revision 1. Therefore, the NRC staff concludes that the proposed methodology satisfies the fourth key safety principle of RG 1.177, Revision 1, by assuring any increase in risk is small, consistent with the intent of the Commission's Safety Goal Policy Statement.

3.1.5 Key Principle 5: Performance Monitoring Strategies

The licensee's adoption of TSTF-425, Revision 3, requires application of NEI 04-10, Revision 1 in the SFCP. NEI 04-10, Revision 1, provides for performance monitoring of SSCs whose surveillance frequencies have been revised as part of a feedback process to ensure that the change in test frequency has not resulted in degradation of equipment performance and operational safety. The monitoring and feedback includes consideration of Maintenance Rule monitoring of equipment performance. In the event of SSC performance degradation, the surveillance frequency will be reassessed in accordance with the methodology, and any corrective actions that may be required by the Maintenance Rule will be applied. The performance monitoring and feedback specified in NEI 04-10, Revision 1, is sufficient to reasonably assure acceptable SSC performance, and is consistent with Regulatory Position 3.2, "Maintenance Rule Control," of RG 1.177, Revision 1. Thus, the NRC staff concludes that the fifth key safety principle of RG 1.177, Revision 1 is satisfied.

3.2 Addition of Surveillance Frequency Control Program to Administrative Controls

The licensee proposed including the SFCP and specific requirements into Robinson TS 5.5.18, as follows:

> Surveillance Frequency Control Program
>
> This program provides controls for Surveillance Frequencies. The program shall ensure that Surveillance Requirements specified in the Technical Specifications are performed at intervals sufficient to assure that the associated Limiting Conditions for Operation are met.
>
> a. The Surveillance Frequency Control Program shall contain a list of Frequencies of those Surveillance Requirements for which the Frequency is controlled by the program.
>
> b. Changes to the Frequencies listed in the Surveillance Frequency Control Program shall be made in accordance with NEI 04-10, "Risk-informed Method for Control of Surveillance Frequencies," Revision 1.
>
> c. The provisions of Surveillance Requirements 3.0.2 and 3.0.3 are applicable to the Frequencies established in the Surveillance Frequency Control Program.

Based on its review in SE Section 3.1, above, the NRC staff finds that the proposed program is consistent with the model application of TSTF-425. Furthermore, the addition of TS 5.5.18 will ensure that surveillance frequencies are properly identified, are changed in accordance with an NRC-approved methodology and are performed to ensure LCOs are met. This will ensure the language in the SFCP remains consistent with 10 CFR 50.36(c)(5), in that the licensee's organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner, is maintained. Therefore, proposed TS 5.5.18 is acceptable.

3.3 Deviations from TSTF-425 and Other Changes

In Section 2.2 of the LAR, the licensee specified that the proposed amendment is consistent with the Standard Technical Specifications changes described in TSTF-425, Revision 3. Additionally, in Section 2.2, the licensee proposes variations or deviations from TSTF-425. These variations or deviations are discussed below.

Attachment 5 of the LAR provides a cross-reference between TSTF-425 (NUREG-1431, "Standard Technical Specifications, Westinghouse Plants, Revision 4.0, Volume 1, Specifications (Reference 32)) Surveillances and the Robinson Surveillances included in this amendment request. Attachment 5 also includes a summary description of the referenced TSTF-425 TS Surveillances, which is provided for information purposes only and is not intended to be a verbatim description of the TS Surveillances. The cross-reference in Attachment 5 of the LAR highlights the following:

- The Surveillances included in TSTF-425 and corresponding Robinson Surveillances have differing Surveillance numbers.

- The Surveillances included in TSTF-425 that are not contained in the Robinson TS.

- The Robinson plant-specific Surveillances that are not contained in TSTF-425 Surveillances and, therefore, are not included in the TSTF-425 markups.

There are Surveillances contained in TSTF-425 that are not contained in the Robinson TSs. Therefore, the NUREG–1431 markups included in TSTF-425 for these surveillances are not applicable to Robinson. The licensee specified, in the LAR, that this is considered to be an appropriate change from TSTF-425 with no impact on the NRC staff's model SE, dated July 6, 2009 (74 FR 31996).

Robinson TSs include plant-specific Surveillances that are not contained in NUREG-1431 and, therefore, are not included in the NUREG-1431 markups provided in TSTF-425. The licensee has determined that the implementation of TS 5.5.18 "Surveillance Frequency Control Program" is consistent with TSTF-425, Revision 3 and with the NRC staff's model SE, dated July 6, 2009 (74 FR 31996), including the scope exclusions identified in Section 1.0, "Introduction," of the model SE.

3.4 Summary and Conclusions

The NRC staff has reviewed the licensee's proposed relocation of some surveillance frequencies to a licensee-controlled document and controlling changes to Surveillance Frequencies in accordance with a new program, the SFCP, by the proposed addition of TS 5.5.18 to the Administrative Controls section of the TSs. This amendment does not relocate

surveillance frequencies that reference other approved programs for the specific interval, are purely event-driven or are event-driven but have a time component for performing the surveillance on a one-time basis once the event occurs or are related to specific conditions.

The SFCP, described in TS 5.5.18 references NEI 04-10, Revision 1, which provides a risk-informed methodology using plant-specific risk insights and performance data to revise surveillance frequencies within the SFCP. This methodology supports relocating surveillance frequencies from TSs to a licensee-controlled document, provided those frequencies are changed in accordance with the NEI 04-10, Revision 1, which is specified in the Administrative Controls section of the TSs.

The licensee's proposed adoption of NRC-approved TSTF-425, Revision 3 and risk-informed methodology of NEI 04-10, Revision 1, as referenced in the Administrative Controls section of TSs, satisfies the key principles of risk-informed decisionmaking applied to changes to TSs, as delineated in RG 1.174 and RG 1.177, in that:

- The proposed change meets current regulations.
- The proposed change is consistent with defense-in-depth philosophy.
- The proposed change maintains sufficient safety margins.
- Increases in risk resulting from the proposed change are small and consistent with the Commission's Safety Goal Policy Statement.
- The impact of the proposed change is monitored with performance measurement strategies.

Based on the above evaluation, the NRC staff concludes that, with the proposed relocation of surveillance frequencies to a licensee-controlled document and administratively controlled in accordance with the TS SFCP, the licensee continues to meet the requirements in 10 CFR 50.36 because the SFCP provides the necessary administrative controls to require that Surveillances related to testing, calibration, and inspection are conducted at a frequency to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCOs will be met. Changes to Frequencies in the SFCP would be evaluated using the methodology and probabilistic risk guidelines contained in NEI 04-10, Revision 1, as approved by NRC letter, dated September 19, 2007.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of South Carolina official was notified of the proposed issuance of the amendment on June 11, 2019. The State official expressed no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes surveillance requirements. The NRC staff has determined that there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding

that the amendment involves no significant hazards consideration published in the *Federal Register* on October 23, 2018 (83 FR 53512), and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

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

7.0 REFERENCES

1. Kapopoulos, E. Jr., Duke Energy, letter to U. S. Nuclear Regulatory Commission, "Application for Technical Specifications Change Regarding Risk-informed Justification for the Relocation of Specific Surveillance Frequency Requirements to a Licensee Controlled Program (Adoption of TSTF-425, Revision 3), dated April 16, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18117A006).

2. Kapopoulos, E. Jr., Duke Energy, letter to U. S. Nuclear Regulatory Commission, "Corrected Technical Specification Pages for TSTF-425 License Amendment Request," dated September 25, 2018 (ADAMS Accession No. ML18269A009).

3. Donahue, J., Duke Energy, letter to U.S. Nuclear Regulatory Commission, "Response to NRC Request for Additional Information (RAI) Regarding Application to Adopt TSTF-425, Revision 3, dated November 13, 2018 (ADAMS Accession No. ML18317A020).

4. Snider, S., Duke Energy, letter to U.S. Nuclear Regulatory Commission, "Clean Technical Specifications Pages Regarding Application to Adopt TSTF-425, Revision 3, dated July 16, 2019 (ADAMS Accession No. ML19197A222).

5. Technical Specifications Task Force, letter and enclosure to U.S. Nuclear Regulatory Commission, "Transmittal of TSTF-425, Revision 3, 'Relocate Surveillance Frequencies to Licensee Control - RITSTF Initiative 5b,'" dated March 18, 2009 (ADAMS Accession No. ML090850642).

6. Nuclear Energy Institute, "Risk-informed Technical Specifications Initiative 5b, Risk-informed Method for Control of Surveillance Frequencies," NEI 04-10, Revision 1, dated April 2007 (ADAMS Accession No. ML071360456).

7. Nieh, H. K., U.S. Nuclear Regulatory Commission, letter to Biff Bradley, Nuclear Energy Institute, "Final Safety Evaluation for Nuclear Energy Institute (NEI) Topical Report (TR) 04-10, Revision 1, 'Risk-informed Technical Specifications Initiative 5b, Risk-informed Method for Control of Surveillance Frequencies,' (TAC No. MD6111)," dated September 19, 2007 (ADAMS Accession No. ML072570267).

8. U.S. Nuclear Regulatory Commission, "An Approach for Using Probabilistic Risk Assessment in Risk-informed Decisions on Plant-Specific Changes to the Licensing Basis," Regulatory Guide 1.174, Revision 3, dated January 2018 (ADAMS Accession No. ML17317A256).

9. U.S. Nuclear Regulatory Commission, "An Approach for Plant-Specific, Risk-informed Decisionmaking: Technical Specifications," Regulatory Guide 1.177, Revision 1, dated May 2011 (ADAMS Accession No. ML100910008).

10. U.S. Nuclear Regulatory Commission "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-informed Activities," Regulatory Guide 1.200, Revision 2, dated March 2009 (ADAMS Accession No. ML090410014).

11. U.S. Nuclear Regulatory Commission, "Review of Risk Information Used to Support Permanent Plant-Specific Changes to the Licensing Basis: General Guidance," NUREG-0800, Section 19.2, dated June 2007 (ADAMS Accession No. ML071700658).

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13. U.S. Nuclear Regulatory Commission, "Risk-informed Decision Making: Technical Specifications," NUREG-0800, Section 16.1, Revision 1, dated March 2007 (ADAMS Accession No. ML070380228).

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Date: August 15, 2019

SUBJECT: H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 – ISSUANCE OF AMENDMENT NO. 265 REGARDING ADOPTION OF TECHNICAL SPECIFICATIONS TASK FORCE (TSTF) TRAVELER TSTF-425, REVISION 3, "RELOCATE SURVEILLANCE FREQUENCIES TO LICENSEE CONTROL-RITSTF INITIATIVE 5b" (EPID L-2018-LLA-0104) DATED AUGUST 15, 2019

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ADAMS Accession No. ML19158A307 *by memo **by e-mail

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