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919.362.2502

10 CFR 50.90

May 19, 2016  
Serial: HNP-16-040

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Shearon Harris Nuclear Power Plant, Unit 1  
Docket No. 50-400  
Renewed License No. NPF-63

**Subject:** Supplement to the Harris Nuclear Plant License Amendment Request to Revise Technical Specifications by Relocating Specific Surveillance Frequency Requirements to a Licensee Controlled Program (TAC MF6583)

**References:**

1. Duke Energy letter, Harris Nuclear Plant, Unit 1, *Application for Technical Specification Change Regarding Risk-Informed Justification for the Relocation of Specific Surveillance Frequency Requirements to a Licensee Controlled Program*, dated August 18, 2015 (ML15236A254).
2. Duke Energy letter, Harris Nuclear Plant, Unit 1, *Supplement to Harris Nuclear Plant Application for Technical Specification Change Regarding Risk-Informed Justification for the Relocation of Specific Surveillance Frequency Requirements to a Licensee Controlled Program*, dated September 29, 2015 (ML15272A443)
3. Nuclear Regulatory Commission letter, *Brunswick Steam Electric Plant, Unit Nos. 1 and 2; Shearon Harris Nuclear Power Plant, Unit 1; Catawba Nuclear Station, Units 1 and 2; McGuire Nuclear Station, Units 1 and 2; and Oconee Nuclear Station, Units 1, 2, and 3: Issuance of Amendments Regarding Adoption of TSTF-523 (CAC Nos. MF6413 Through MF6422)*, dated April 29, 2016 (ML16085A113)

Ladies and Gentlemen:

By letter dated August 18, 2015 (Reference 1), as supplemented by letter dated September 29, 2015 (Reference 2), Duke Energy Progress, Inc. (Duke Energy), submitted a License Amendment Request (LAR) proposing changes to the Technical Specifications (TS) for Shearon Harris Nuclear Power Plant, Unit 1 (HNP). The proposed amendment would modify HNP TS by relocating specific surveillance frequencies to a licensee-controlled program with the implementation of Nuclear Energy Institute (NEI) 04-10, "Risk-Informed Technical Specification Initiative 5B, Risk-Informed Method for Control of Surveillance Frequencies" (ML071360456).

Since the submittal of References 1 and 2, the Nuclear Regulatory Commission (NRC) has issued a license amendment by letter dated April 29, 2016 (Reference 3), that includes additional Surveillance Requirements (SR) that fall within the scope of this LAR. As such, their inclusion in this LAR is requested. This supplement to the original submittal in Reference 1 is an administrative change in the marked-up pages.

Attachment 1 to this letter provides the Reference 3 HNP TS pages showing the proposed changes. Attachment 2 provides the update to the Reference 1 Enclosure 6 cross-reference between Technical Specification Task Force (TSTF) Standard Technical Specifications (STS) Change TSTF-425, "Relocate Surveillance Frequencies to Licensee Control – RITSTF Initiative 5b," Revision 3 (ML090850642), and the HNP TS containing surveillance frequencies proposed for relocation. Revisions are indicated by a bar in the left hand margin of the attachment.

This additional information does not change the No Significant Hazards Determination provided in Reference 1. No Regulatory Commitments are contained in this letter.

In accordance with 10 CFR 50.91(b), HNP is providing the state of North Carolina with a copy of this supplemental correspondence.

Should you have any questions regarding this submittal, please contact John Caves, Regulatory Affairs Manager, at 919-362-2406.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on May 19, 2016.

Sincerely,



Benjamin C. Waldrep  
Vice President, Shearon Harris Nuclear Power Plant

Attachments:

1. Additional Proposed Technical Specification Changes
2. Updated Cross-Reference between HNP Technical Specifications and TSTF-425, Revision 3

cc: Mr. J. D. Austin, NRC Sr. Resident Inspector, HNP  
Mr. W. L. Cox, III, Section Chief, N.C. DHSR  
Ms. M. Barillas, NRC Project Manager, HNP  
Ms. Catherine Haney, NRC Regional Administrator, Region II

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**SERIAL HNP-16-040**

**ATTACHMENT 1**

**ADDITIONAL PROPOSED TECHNICAL SPECIFICATION CHANGES**

**SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1**

**DOCKET NO. 50-400**

**RENEWED LICENSE NUMBER NPF-63**

**(8 PAGES)**

REACTOR COOLANT SYSTEM  
HOT SHUTDOWN

SURVEILLANCE REQUIREMENTS

- 4.4.1.3.1 The required reactor coolant pump(s), if not in operation, shall be determined OPERABLE ~~once per 7 days~~ by verifying correct breaker alignments and indicated power availability.
- 4.4.1.3.2 The required steam generator(s) shall be determined OPERABLE by verifying wide range (WR) secondary side water level is greater than 74% or narrow range (NR) secondary side water level is greater than 30% ~~at least once per 12 hours~~.
- 4.4.1.3.3 At least one reactor coolant or RHR loop shall be verified in operation and circulating reactor coolant ~~at least once per 12 hours~~.
- 4.4.1.3.4 Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water ~~at least once per 31 days~~.\*

at the frequency specified in  
the Surveillance Frequency  
Control Program

\*Not required to be performed until 12 hours after entering MODE 4.

REACTOR COOLANT SYSTEM  
COLD SHUTDOWN - LOOPS FILLED

LIMITING CONDITION FOR OPERATION

- 3.4.1.4.1 At least one residual heat removal (RHR) loop shall be OPERABLE and in operation\*, and either:
- One additional RHR loop shall be OPERABLE\*\*, or
  - The secondary side water level of at least two steam generators shall be greater than 74% wide range (WR) or greater than 30% narrow range (NR).

APPLICABILITY: MODE 5 with reactor coolant loops filled\*\*\*.

ACTION:

- With one of the RHR loops inoperable and with less than the required steam generator water level, immediately initiate corrective action to return the inoperable RHR loop to OPERABLE status or restore the required steam generator water level as soon as possible.
- With no RHR loop in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required RHR loop to operation.

SURVEILLANCE REQUIREMENTS

- 4.4.1.4.1.1 The secondary side water level of at least two steam generators when required shall be determined to be within limits ~~at least once per 12 hours~~. ←
- 4.4.1.4.1.2 At least one RHR loop shall be determined to be in operation and circulating reactor coolant ~~at least once per 12 hours~~. ←
- 4.4.1.4.1.3 Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water ~~at least once per 31 days~~. ←

at the frequency specified in  
the Surveillance Frequency  
Control Program

\* The RHR pump may be deenergized for up to 1 hour provided: (1) no operations are permitted that would cause dilution of the Reactor Coolant System boron concentration, and (2) core outlet temperature is maintained at least 10°F below saturation temperature.

\*\* One RHR loop may be inoperable for up to 2 hours for surveillance testing provided the other RHR loop is OPERABLE and in operation.

\*\*\* A reactor coolant pump shall not be started with one or more of the Reactor Coolant System cold leg temperatures less than or equal to 325°F unless the secondary water temperature of each steam generator is less than 50°F above each of the Reactor Coolant System cold leg temperatures.



REACTOR COOLANT SYSTEM  
COLD SHUTDOWN - LOOPS NOT FILLED

LIMITING CONDITION FOR OPERATION

3.4.1.4.2 Two residual heat removal (RHR) loops shall be OPERABLE\* and at least one RHR loop shall be in operation.\*\*

APPLICABILITY: MODE 5 with reactor coolant loops not filled.

ACTION:

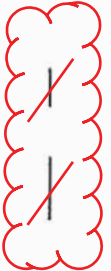
- a. With less than the above required RHR loops OPERABLE, immediately initiate corrective action to return the required RHR loops to OPERABLE status as soon as possible.
- b. With no RHR loop in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required RHR loop to operation.

SURVEILLANCE REQUIREMENTS

4.4.1.4.2.1 At least one RHR loop shall be determined to be in operation and circulating reactor coolant ~~at least once per 12 hours~~.

4.4.1.4.2.2 Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water ~~at least once per 31 days~~.

at the frequency specified in  
the Surveillance Frequency  
Control Program



\* One RHR loop may be inoperable for up to 2 hours for surveillance testing provided the other RHR loop is OPERABLE and in operation.

\*\* The RHR pump may be deenergized for up to 1 hour provided: (1) no operations are permitted that would cause dilution of the Reactor Coolant System boron concentration, and (2) core outlet temperature is maintained at least 10°F below saturation temperature.

## EMERGENCY CORE COOLING SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

<u>CP&amp;L Valve No.</u>	<u>EBASCO Valve No.</u>	<u>Valve Function</u>	<u>Valve Position</u>
1SI-107	2SI-V500SA-1	High Head Safety Injection to Reactor Coolant System Hot Legs	Closed
1SI-86	2SI-V501SB-1	High Head Safety Injection to Reactor Coolant System Hot Legs	Closed
1SI-52	2SI-V502SA-1	High Head Safety Injection to Reactor Coolant System Cold Legs	Closed
1SI-340	2SI-V579SA-1	Low Head Safety Injection to Reactor Coolant System Cold Legs	Open
1SI-341	2SI-V578SB-1	Low Head Safety Injection to Reactor Coolant System Cold Legs	Open
1SI-359	2SI-V587SA-1	Low Head Safety Injection to Reactor Coolant System Hot Legs	Closed

b. ~~At least once per 31 days~~ by:

1. Verifying that ECCS locations susceptible to gas accumulation are sufficiently filled with water, and
2. Verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.\*

c. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment sump and cause restriction of the pump suction during LOCA conditions. This visual inspection shall be performed:

1. For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and
2. Of the areas affected within containment at the completion of each containment entry when CONTAINMENT INTEGRITY is established.

At the frequency  
specified in the  
Surveillance  
Frequency  
Control Program

\* Not required to be met for system vent flow paths opened under administrative control.



## CONTAINMENT SYSTEMS

### 3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

#### CONTAINMENT SPRAY SYSTEM

#### LIMITING CONDITION FOR OPERATION

- 3.6.2.1 Two independent Containment Spray Systems shall be OPERABLE with each Spray System capable of taking suction from the RWST and transferring suction to the containment sump.

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

#### ACTION:

With one Containment Spray System inoperable, restore the inoperable Spray System to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable Spray System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours. Refer also to Specification 3.6.2.3 Action.

#### SURVEILLANCE REQUIREMENTS

- 4.6.2.1 Each Containment Spray System shall be demonstrated OPERABLE:

- a. ~~At least once per 31 days~~ by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position\*;
- b. By verifying that, on an indicated recirculation flow of at least 1832 gpm, each pump develops a differential pressure of greater than or equal to 186 psi when tested pursuant to the Inservice Testing Program;
- c. ~~At least once per 18 months~~ by:
  1. Verifying that each automatic valve in the flow path actuates to its correct position on a containment spray actuation test signal and
  2. Verifying that each spray pump starts automatically on a containment spray actuation test signal.
  3. Verifying that, coincident with an indication of containment spray pump running, each automatic valve from the sump and RWST actuates to its appropriate position following an RWST Lo-Lo test signal.
- d. ~~At least once per 10 years~~ by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.
- e. ~~At least once per 92 days~~ by verifying that containment spray locations susceptible to gas accumulation are sufficiently filled with water.

At the frequency specified in the Surveillance Frequency Control Program

\* Not required to be met for system vent flow paths opened under administrative control.

## REFUELING OPERATIONS

### 3/4.9.8 RESIDUAL HEAT REMOVAL AND COOLANT CIRCULATION HIGH WATER LEVEL

#### LIMITING CONDITION FOR OPERATION

3.9.8.1 At least one residual heat removal (RHR) loop shall be OPERABLE and in operation.\*

APPLICABILITY: MODE 6, with irradiated fuel in the vessel when the water level above the top of the reactor vessel flange is greater than or equal to 23 feet.

#### ACTION:

With no RHR loop OPERABLE and in operation, suspend all operations involving an increase in the reactor decay heat load or a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required RHR loop to OPERABLE and operating status as soon as possible. Close all containment penetrations providing direct access from the containment atmosphere to the outside atmosphere within 4 hours.

#### SURVEILLANCE REQUIREMENTS

4.9.8.1.1 At least one RHR loop shall be verified in operation and circulating reactor coolant at a flow rate of greater than or equal to 2500 gpm ~~at least once per 12 hours.~~

4.9.8.1.2 Verify required RHR loop locations susceptible to gas accumulation are sufficiently filled with water ~~at least once per 31 days.~~

at the frequency specified in  
the Surveillance Frequency  
Control Program

\*The RHR loop may be removed from operation for up to 1 hour per 2-hour period during the performance of CORE ALTERATIONS and core loading verification in the vicinity of the reactor vessel hot legs.

REFUELING OPERATIONS  
LOW WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.8.2 Two independent residual heat removal (RHR) loops shall be OPERABLE, and at least one RHR loop shall be in operation.\*


APPLICABILITY: MODE 6, with irradiated fuel in the vessel when the water level above the top of the reactor vessel flange is less than 23 feet.

ACTION:

- a. With less than the required RHR loops OPERABLE, immediately initiate corrective action to return the required RHR loops to OPERABLE status or to establish greater than or equal to 23 feet of water above the reactor vessel flange as soon as possible.
- b. With no RHR loop in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required RHR loop to operation. Close all containment penetrations providing direct access from the containment atmosphere to the outside atmosphere within 4 hours.

SURVEILLANCE REQUIREMENTS

- 4.9.8.2.1 At least one RHR loop shall be verified in operation and circulating reactor coolant at a flow rate of greater than or equal to 2500 gpm ~~at least once per 12 hours~~ whenever the water level is at or above the reactor vessel flange.
- 4.9.8.2.2 At least one RHR loop shall be verified in operation and circulating reactor coolant at a flow rate of greater than or equal to 900 gpm ~~at least once per 12 hours~~ whenever the water level is below the reactor vessel flange.
- 4.9.8.2.3 Verify RHR loop locations susceptible to gas accumulation are sufficiently filled with water ~~at least once per 31 days~~.



at the frequency specified in  
the Surveillance Frequency  
Control Program

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\*The operating RHR loop may be removed from operation for up to 1 hour per 2-hour period during the performance of CORE ALTERATIONS and core loading verification in the vicinity of the reactor vessel hot legs.



U.S. Nuclear Regulatory Commission  
Serial HNP-16-040  
Attachment 2

**SERIAL HNP-16-040**

**ATTACHMENT 2**

**UPDATED CROSS-REFERENCE BETWEEN HNP TECHNICAL SPECIFICATIONS  
AND TSTF-425, REVISION 3**

**SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1**

**DOCKET NO. 50-400**

**RENEWED LICENSE NUMBER NPF-63**

**(23 PAGES)**

**Cross-Reference between Shearon Harris Nuclear Power Plant, Unit 1 (HNP) Technical Specifications and TSTF-425, Revision 3 (NUREG-1431 Mark-up)**

For HNP plant-specific surveillances that do not have a corresponding surveillance included in the NUREG-1431 mark-ups provided in TSTF-425, Duke Energy evaluated these surveillance frequencies against the four exclusion criteria delineated in TSTF-425, Revision 3. The four criteria which exclude surveillance frequencies from being relocated are:

- 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 reaching  $\geq 95\%$ RTP”);
- 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).

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.1.1.1 SHUTDOWN MARGIN – MODES 1 and 2</b>		
4.1.1.1.1.b Verify control bank withdrawal within limits		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.1.1.1.2 Verify measured core reactivity within predicted value	3.1.2.1	
<b>3.1.1.2 SHUTDOWN MARGIN – MODES 3, 4, and 5</b>		
4.1.1.2.b Verify Shutdown Margin		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.



HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.1.2.1 Boration Systems – Flow Path – Shutdown</b>		
4.1.2.1.b Verify boric acid flow path valve positions		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
<b>3.1.2.2 Boration Systems – Flow Path - Operating</b>		
4.1.2.2.b Verify boric acid flow path valve positions		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.1.2.2.c Verify boric acid flow path automatic valve actuation		
4.1.2.2.d Verify boric acid flow path flow rate		
<b>3.1.2.3 Boration Systems – Charging Pump – Shutdown</b>		
4.1.2.3.2 Demonstrate all but one charging/safety injection pumps inoperable	3.4.12.1 3.4.12.2	
<b>3.1.2.5 Boration Systems – Borated Water Source – Shutdown</b>		
4.1.2.5.a.1 Verify borated water source boron concentration		Requirements for Modes 5 and 6 were not specified in NUREG-1431, however similar changes for Modes 1 through 4 were done in TSTF-425 SR 3.5.4.2 and 3.5.4.3. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.1.2.5.a.2 Verify borated water source volume		
4.1.2.5.a.3 Verify boric acid tank solution temperature		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above..
4.1.2.5.b Verify RWST temperature	3.5.4.1	Requirements for Modes 5 and 6 were not specified in NUREG-1431. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.1.2.6 Boration Systems – Borated Water Source – Operating</b>		
4.1.2.6.a.1 Verify borated water source boron concentration		Relocation of Frequencies is consistent with intent of TSTF-425. TSTF-425 SR 3.5.4.3 and 3.5.6.3 are not a direct correlation but contain similar actions and frequencies.
4.1.2.6.a.2 Verify borated water source volume		Relocation of Frequencies is consistent with intent of TSTF-425. TSTF-425 SR 3.5.4.2 and 3.5.6.2 are not a direct correlation but contain similar actions and frequencies.
4.1.2.6.a.3 Verify boric acid tank solution temperature		Relocation of Frequencies is consistent with intent of TSTF-425. TSTF-425 SR 3.5.4.1 and 3.5.6.1 are not a direct correlation but contain similar actions and frequencies.
4.1.2.6.b Verify RWST temperature	3.5.4.1	
<b>3.1.3.1 Movable Control Assemblies – Group Height</b>		
4.1.3.1.1 Verify individual rod position within group demand limit	3.1.4.1	
4.1.3.1.2 Verify rod freedom of movement	3.1.4.2	
<b>3.1.3.2 Position Indication Systems – Operating</b>		
4.1.3.2 Verify Demand Position Indication System and Digital Rod Position Indication System agree		Note, this not applied to NUREG-1431 SR 3.1.7.1 due to event-driven Frequency. Relocation of HNP frequency, specified as 12 hours, is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.
<b>3.1.3.3 Position Indication Systems – Shutdown</b>		
4.1.3.3 Verify digital rod position indicators agree with the demand position indicators		Note not applied to NUREG-1431 SR 3.1.7.1 due to event-driven Frequency. Relocation of HNP frequency, specified as 18 months, is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.1.3.4 Rod Drop Time</b>		
4.1.3.4 Demonstrate rod drop time of shutdown and control rods		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
<b>3.1.3.5 Shutdown Rod Insertion Limit</b>		
4.1.3.5 Verify each shutdown rod fully withdrawn	3.1.5.1	
<b>3.1.3.6 Control Rod Insertion Limits</b>		
4.1.3.6 Verify each control bank within insertion limits	3.1.6.2	
<b>3.2.1 Axial Flux Difference</b>	3.2.3A	
4.2.1.1.a Verify AFD with AFD Monitor Alarm Operable	3.2.3.1	NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.2.1.3 Determine target AFD		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
<b>3.2.2 Heat Flux Hot Channel Factor (FQ(Z))</b>		
4.2.2.2.d.2 Verify measured values of $F_Q(Z)$	3.2.1.1	
<b>3.2.3 Nuclear Enthalpy Rise Hot Channel Factor</b>		
4.2.3.2 Verify $F_{\Delta H}^N$	3.2.2.1	
<b>3.2.4 Quadrant Power Tilt Ratio</b>		
4.2.4.1.a Verify QPTR by calculation with alarm Operable	3.2.4.1	
4.2.4.2 Verify QPTR using movable incore detectors	3.2.4.2	

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.2.5 DNB Parameters</b>		
4.2.5.1 Verify RCS Tavg, Pressurizer pressure, and RCS total flow rate.	3.4.1.1 3.4.1.2 3.4.1.3	
4.2.5.2 Verify RCS total flow rate by precision heat balance	3.4.1.4	
<b>3.3.1 Reactor Trip System Instrumentation</b>		
4.3.1.1, Table 4.3-1 Channel Check (Shiftly)	3.3.1.1	
4.3.1.1, Table 4.3-1 Channel Calibration (Daily)	3.3.1.2	
4.3.1.1, Table 4.3-1 Channel Calibration (Monthly)	3.3.1.3	
4.3.1.1, Table 4.3-1 Channel Calibration (Quarterly)		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.3.1.1, Table 4.3-1 Channel Calibration (Refueling)	3.3.1.10 3.3.1.12	
4.3.1.1, Table 4.3-1 Analog Channel Operational Test (Quarterly)	3.3.1.7 3.3.1.8	
4.3.1.1, Table 4.3-1 Analog Channel Operational Test (Refueling)	3.3.1.13	
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4.3.1.1, Table 4.3-1 Trip Actuating Device Operational Test (Quarterly)	3.3.1.9	
4.3.1.1, Table 4.3-1 Trip Actuating Device Operational Test (Monthly)	3.3.1.4	
4.3.1.1, Table 4.3-1 Actuation Logic Test (Monthly)	3.3.1.5	
4.3.1.2 Verify Reactor Trip System Response Time	3.3.1.16	
<b>3.3.2 Engineered Safety Features Actuation System Instrumentation</b>		
4.3.2.1, Table 4.3-2 Channel Check (Shiftly)	3.3.2.1	
4.3.2.1, Table 4.3-2 Channel Calibration (Refueling)	3.3.2.9 3.3.5.3	

<b>HNP TS Surveillance Requirement (SR)</b>	<b>Similar TSTF-425 SR Number</b>	<b>Discussion of Differences</b>
4.3.2.1, Table 4.3-2 Analog Channel Operational Test (Quarterly)	3.3.2.5	
4.3.2.1, Table 4.3-2 Trip Actuating Device Operational Test (Monthly)	3.3.2.7	
4.3.2.1, Table 4.3-2 Trip Actuating Device Operational Test (Refueling)	3.3.2.8	
4.3.2.1, Table 4.3-2 Actuation Logic Test (Monthly)	3.3.2.2 3.3.2.3 3.3.5.2	
4.3.2.1, Table 4.3-2 Master Relay Test (Monthly)	3.3.2.4	
4.3.2.1, Table 4.3-2 Slave Relay Test (Quarterly)	3.3.2.6	
4.3.2.1, Table 4.3-2 Slave Relay Test (Refueling)		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.3.2.2 Verify ESFAS Response Times	3.3.2.10	
<b>3.3.3.1 Radiation Monitoring for Plant Operations</b>		
4.3.3.1, Table 4.3-3 Channel Check (Shiftly)	3.3.6.1 3.3.7.1 3.3.8.1 3.4.15.1	
4.3.3.1, Table 4.3-3 Channel Calibration (Refueling)	3.3.6.9 3.3.7.9 3.3.8.5 3.4.15.3 3.4.15.4	
4.3.3.1, Table 4.3-3 Digital Channel Operational Test (Quarterly)	3.3.6.6 3.3.7.2 3.3.8.2 3.4.15.2	



HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.3.4.5.a Remote Shutdown System</b>		
4.3.3.5.1, Table 4.3-6 Channel Check (Monthly)	3.3.4.1	
4.3.3.5.1, Table 4.3-6 Channel Calibration (Refueling)	3.3.4.3	
4.3.3.5.2 Verify control circuit and transfer switch capable of function	3.3.4.2	
<b>3.3.3.6 Accident Monitor Instrumentation</b>		
4.3.3.6, Table 4.3-7 Channel Check (Monthly)	3.3.3.1	
4.3.3.6, Table 4.3-7 Calibration (Refueling)	3.3.3.2	
<b>3.4.1.1 Reactor Coolant Loops and Coolant Circulation – Startup and Power Operation</b>		
4.4.1.1 Verify RCS loops in operation	3.4.4.1	
<b>3.4.1.2 Reactor Coolant Loops and Coolant Circulation – Hot Standby</b>		
4.4.1.2.1 Verify correct breaker alignment	3.4.5.3	
4.4.1.2.2 Verify Steam generator secondary side water levels	3.4.5.2	
4.4.1.2.3 Verify required RCS loops in operation	3.4.5.1	
<b>3.4.1.3 Reactor Coolant Loops and Coolant Circulation – Hot Shutdown</b>		
4.4.1.3.1 Verify correct breaker alignment	3.4.6.3	
4.4.1.3.2 Verify SG secondary side water level	3.4.6.2	
4.4.1.3.3 Verify required RHR or RCS loop operation	3.4.6.1	
4.4.1.3.4 Verify locations susceptible to gas accumulation sufficiently filled with water		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.4.1.4.1 Reactor Coolant Loops and Coolant Circulation – Cold Shutdown – Loops Filled</b>		
4.4.1.4.1.1 Verify SG secondary side water level	3.4.7.2	
4.4.1.4.1.2 Verify required RHR loop operation	3.4.7.1	
4.4.1.4.1.3 Verify locations susceptible to gas accumulation sufficiently filled with water		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
<b>3.4.1.4.2 Reactor Coolant Loops and Coolant Circulation – Cold Shutdown – Loops Not Filled</b>		
4.4.1.4.2.1 Verify required RHR loop operation	3.4.8.1	
4.4.1.4.2.2 Verify locations susceptible to gas accumulation sufficiently filled with water		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
<b>3.4.3 Pressurizer</b>		
4.4.3.1 Verify pressurizer water level	3.4.9.1	
4.4.3.2.c Verify pressurizer heater group capacity	3.4.9.2	
<b>3.4.4 Relief Valves</b>		
4.4.4.1.a Channel Calibration of actuation instrumentation		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.4.4.1.b Perform cycle of PORV	3.4.11.2	
4.4.4.2 Perform cycle of block valve	3.4.11.1	
4.4.4.3 Demonstrate accumulator Operable		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.4.6.1 Reactor Coolant System Leakage – Leakage Detection Systems</b>		
4.4.6.1.a, Table 4.3-3 Channel Check (radioactivity monitor)	3.4.15.1	
4.4.6.1.a, Table 4.3-3 Digital Channel Operational Test (airborne and particulate radioactivity monitors)	3.4.15.2	
4.4.6.1.a, Table 4.3-3 Channel Calibration (airborne and particulate radioactivity monitor)	3.4.15.4	
4.4.6.1.b Channel Calibration (Reactor Cavity Sump Level and Flow Monitoring System)	3.4.15.3	
<b>3.4.6.2 Reactor Coolant System Operational Leakage</b>		
4.4.6.2.1.a Monitor containment airborne gaseous or particulate radioactivity monitor	3.4.15.1	
4.4.6.2.1.b Monitor containment sump inventory and Flow Monitoring System		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.4.6.2.1.c Measure controlled leakage to reactor coolant pump seals	3.5.5.1	
4.4.6.2.1.d Verify RCS operational leakage	3.4.13.1	
4.4.6.2.1.e Monitor Reactor Head Flange Leakoff System		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.4.6.2.2.a Verify PIV leakage	3.4.14.1	
4.4.6.2.3 Verify primary to secondary leakage	3.4.13.2	
<b>3.4.7 Reactor Coolant System Chemistry</b>		
4.4.7, Table 4.4-3 sample Dissolve Oxygen		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.4.7, Table 4.4-3 sample Chloride		
4.4.7, Table 4.4-3 sample Fluoride		

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.4.8 Reactor Coolant System Specific Activity</b>		
4.4.8, Table 4.4-4 Verify gross specific activity	3.4.16.1	
4.4.8, Table 4.4-4 Verify Dose Equivalent I-131	3.4.16.2	
4.4.8, Table 4.4-4 Determine $\bar{E}$	3.4.16.3	
<b>3.4.9.1 Pressure/Temperature Limits – Reactor Coolant System</b>		
4.4.9.1 Verify RCS pressure, temperature, and heatup and cooldown rates	3.4.3.1	
<b>3.4.9.2 Pressure/Temperature Limits – Reactor Coolant System</b>		
4.4.9.2.1 Verify RCS pressure, temperature, and heatup and cooldown rates	3.4.3.1	
<b>3.4.9.4 Reactor Coolant System Overpressure Protection System</b>	<b>3.4.12</b>	
4.4.9.4.1.a Perform Analog Channel Operational Test	3.4.12.8	
4.4.9.4.1.b Perform Channel Calibration	3.4.12.9	
4.4.9.4.1.c Verify PORV isolation valve open	3.4.12.6	
4.4.9.4.2 Verify required vent open	3.4.12.5	
<b>3.4.11 Reactor Coolant System Vents</b>		
4.4.11.2.a Verify manual isolation valve position		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.4.11.2.b Cycle each vent path valve		
4.4.11.2.c Verify flow through vent path		
<b>3.5.1 Accumulators – Cold Leg Injection</b>		
4.5.1.1.a.1 Verify borated water volume and nitrogen cover pressure	3.5.1.2 3.5.1.3	
4.5.1.1.a.2 Verify accumulator isolation valves open	3.5.1.1	
4.5.1.1.b Verify boron concentration	3.5.1.4	
4.5.1.1.c Verify isolation valve operator power removed	3.5.1.5	

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.5.2 ECCS – T<sub>avg</sub> Greater Than or Equal to 350°F</b>		
4.5.2.a.1 Verify valves in correct position with power removed	3.5.2.1	
4.5.2.b.1 Verify ECCS locations susceptible to gas accumulation sufficiently filled with water	3.5.2.3	NUREG-1431 addresses ECCS piping in general. HNP TS was adjusted to address locations susceptible to gas accumulation. Relocation of this frequency remains consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.5.2.b.2 Verify ECCS valve position	3.5.2.2	HNP TS adjusted to provide footnote: “Not required to be met for system vent flow paths opened under administrative control.” Relocation of this frequency remains consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.5.2.d.1 Verify RHR System automatic interlock function	3.4.14.2	
4.5.2.d.2 Verify sump suction strainers	3.5.2.8	
4.5.2.e.1 Verify ECCS automatic valves actuate automatically	3.5.2.5	
4.5.2.e.2 Verify ECCS pumps start automatically	3.5.2.6	
4.5.2.g.2 Verify ECCS throttle valve stop position	3.5.2.7	
<b>3.5.4 Refueling Water Storage Tank</b>		
4.5.4.a.1 Verify RWST water volume	3.5.4.2	
4.5.4.a.2 Verify RWST boron concentration	3.5.4.3	
4.5.4.b Verify RWST water temperature	3.5.4.1	
<b>3.6.1.1 Primary Containment – Containment Integrity</b>	<b>3.6.1.1</b>	
4.6.1.1.a Verify all penetrations not capable of automatic isolation is isolated	3.6.3.3	
<b>3.6.1.3 Containment Air Locks</b>		
4.6.1.3 Verify only one door can be opened at a time	3.6.2.2	
<b>3.6.1.4 Containment Systems – Internal Pressure</b>		
4.6.1.4 Verify containment pressure	3.6.4A.1	



HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.6.1.5 Containment Systems – Air Temperature</b>		
4.6.1.5 Verify containment air temperature	3.6.5A.1	
<b>3.6.1.7 Containment Systems – Containment Ventilation Systems</b>		
4.6.1.7.1 Verify each 42-inch purge makeup and exhaust valve sealed closed and closed	3.6.3.1	
4.6.1.7.2 Perform leakage rate testing on each containment purge valve (2-42 inch valves and 2-8 inch valves)	3.6.3.7	
<b>3.6.2.1 Containment Spray System</b>		
4.6.2.1.a Verify each containment spray valve in correct position	3.6.6A.1	HNP TS adjusted to provide footnote: “Not required to be met for system vent flow paths opened under administrative control.” Relocation of this frequency remains consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.6.2.1.c.1 Verify automatic containment spray valves actuate	3.6.6A.5	
4.6.2.1.c.2 Verify containment spray pumps automatically start	3.3.6A.6	
4.6.2.1.c.3 Verify automatic valves from sump and RWST actuate to correct position	3.6.6A.5	
4.6.2.1.d Verify spray nozzles unobstructed	3.6.6A.8	
4.6.2.1.e Verify locations susceptible to gas accumulation sufficiently filled with water		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
<b>3.6.2.2 Spray Additive System</b>		
4.6.2.2.a Verify spray additive valves in correct position	3.6.7.1	
4.6.2.2.b.1 Verify spray additive tank solution volume	3.6.7.2	
4.6.2.2.b.2 Verify spray additive tank solution concentration	3.6.7.3	
4.6.2.2.c Verify automatic spray additive valves actuate	3.6.7.4	
4.6.2.2.d Verify spray additive flow rate	3.6.7.5	

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.6.2.3 Containment Cooling System</b>		
4.6.2.3.a.1 Operate containment cooling train fan	3.6.6A.2	
4.6.2.3.a.2 Verify containment cooling train cooling water flow	3.6.6A.3	
4.6.2.3.b Verify containment cooling trains automatically start	3.6.6A.7	
<b>3.6.3 Containment Isolation Valves</b>		
4.6.3.2.a Verify 'Phase A' automatic containment isolation valves actuate	3.6.3.8	
4.6.3.2.b Verify 'Phase B' automatic containment isolation valves actuate	3.6.3.8	
4.6.3.2.c Verify purge makeup and exhaust. and containment vacuum relief valves actuate	3.6.3.8	
4.6.3.2.d Verify automatic containment isolation valves receiving an 'S' signal actuate	3.6.3.8	
4.6.3.2.e Verify Main Steam Isolation Valves actuate	3.7.2.2	
4.6.3.2.f Verify Main Feedwater Isolation Valves actuate	3.7.3.2	
<b>3.7.1.2 Auxiliary Feedwater System</b>		
4.7.1.2.1.a.1 Demonstrate each motor-driven pump satisfies performance requirements		Note not applied to NUREG-1431, SR 3.7.5.2 because Frequency is "In accordance with the Inservice Test Program." HNP Frequency is "At least once per 92 days on a STAGGERED TEST BASIS." Relocation of this frequency is consistent with the intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.7.1.2.1.a.2 Demonstrate turbine-driven pump satisfies performance requirements		
4.7.1.2.1.b.1 Verify AFW valves in correct position	3.7.5.1	
4.7.1.2.1.b.2 Verify CST suction isolation valves open	3.7.5.1	
4.7.1.2.1.c.3 Verify AFW automatic valves automatically actuate	3.7.5.3	
4.7.1.2.1.c.1 Verify motor-driven AFW pumps start automatically	3.7.5.4	
4.7.1.2.1.c.2 Verify turbine-driven AFW pump starts automatically	3.7.5.4	

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.7.1.3 Condensate Storage Tank (CST)</b>		
4.7.1.3.1 Verify CST level	3.7.6.1	
4.7.1.3.2 Verify each Emergency Service Water Valve supplying AFW is open	3.7.8.1	
<b>3.7.1.4 Plant Systems – Specific Activity</b>		
4.7.1.4 Table 4.7-1 Gross Radioactivity Determination or Isotopic Analysis for Dose Equivalent I-131	3.7.18.1	
4.7.1.4 Table 4.7-1 Isotopic Analysis for Dose Equivalent I-131 (gross radioactivity indicates $\leq 10\%$ of limit)	3.7.18.1	
<b>3.7.2 Steam Generator Pressure/Temperature Limitation</b>		
4.7.2 Verify steam generator pressure		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.
<b>3.7.3 Component Cooling Water</b>		
4.7.3.a Verify CCW valves in correct position	3.7.7.1	
4.7.3.b.1 Verify automatic CCW valves automatically actuate	3.7.7.2	
4.7.3.b.2 Verify CCW pumps automatically start	3.7.7.3	
4.7.3.b.3 Verify each automatic valve serving gross failed fuel detector and sample system heat exchangers automatically actuates	3.7.7.2	
<b>3.7.4 Emergency Service Water System</b>		
4.7.4.a Verify each valve in correct position	3.7.8.1	
4.7.4.b.1 Verify each automatic valve automatically actuates	3.7.8.2	
4.7.4.b.2 Verify each emergency service water pump and each emergency service water booster pump automatically starts	3.7.8.3	
<b>3.7.5 Ultimate Heat Sink (UHS)</b>		
4.7.5 Verify UHS water temperature and water level	3.7.9.1 3.7.9.2	

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.7.6 Control Room Emergency Filtration System</b>		
4.7.6.a Operate each train	3.7.10.1	
4.7.6.b.1 Verify cleanup system satisfies in-place penetration and bypass leakage testing acceptance criteria		Note not applied to NUREG-1431, SR 3.7.10.2 because Frequency is in accordance with the Ventilation Filter Testing Program (VFTP). HNP Frequency is "18 months." Relocation of these frequencies is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above
4.7.6.b.2 Verify methyl iodide penetration within limits		
4.7.6.d.1 Verify HEPA filter and charcoal adsorber pressure drop		
4.7.6.d.2 Verify system automatically actuates	3.7.10.3	
4.7.6.d.3 Verify system maintains positive pressure	3.7.10.4	
4.7.6.d.4 Verify heater capacity		Note not applied to NUREG-1431, SR 3.7.10.2 because Frequency is in accordance with the Ventilation Filter Testing Program (VFTP). HNP Frequency is "18 months." Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above
<b>3.7.7 Reactor Auxiliary Building (RAB) Emergency Exhaust System</b>		
4.7.7.a Operate each train	3.7.12.1	
4.7.7.b.1 Verify cleanup system satisfies in-place penetration and bypass leakage testing acceptance criteria		Note not applied to NUREG-1431, SR 3.7.12.2 because Frequency is in accordance with the Ventilation Filter Testing Program (VFTP). HNP Frequency is "18 months." Relocation of these frequencies is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.7.7.b.2 Verify methyl iodide penetration within limits		
4.7.7.d.1 Verify HEPA filter and charcoal adsorber pressure drop		
4.7.7.d.2 Verify system automatically actuates	3.7.12.3	
4.7.7.d.3 Verify system maintains positive pressure	3.7.12.4	

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
4.7.7.d.4 Verify filter cooling bypass valve locked		NUREG-1431 does not specify a similar requirement. NUREG-1431, SR 3.7.12.5 requires verification that the filter bypass damper can be closed. Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.7.7.d.5 Verify heater capacity		Note not applied to NUREG-1431, SR 3.7.12.2 because Frequency is in accordance with the Ventilation Filter Testing Program (VFTP). HNP Frequency is "18 months." Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above
<b>3.7.13 Essential Services Chilled Water System</b>		
4.7.13.1 Verify non-essential portions automatically isolate		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above
4.7.13.2 Verify systems starts automatically		
<b>3.7.14 Fuel Storage Pool Boron Concentration</b>		
4.7.14 Verify boron concentration	3.7.16.1	
<b>3.8.1.1 AC Sources - Operating</b>	<b>3.8.1</b>	
4.8.1.1.1.a Verify correct breaker alignment	3.8.1.1	
4.8.1.1.1.b Verify transfer of power from offsite circuit to alternate circuit	3.8.1.8	
4.8.1.1.2.a.1 Verify each day tank level	3.8.1.4	
4.8.1.1.2.a.2 Verify main fuel oil storage tank level	3.8.3.1	
4.8.1.1.2.a.3 Verify fuel oil transfer system operates	3.8.1.6	
4.8.1.1.2.a.4 Verify each DG starts from standby conditions/steady state	3.8.1.2	
4.8.1.1.2.a.5 Verify each DG is synchronized and loaded	3.8.1.3	
4.8.1.1.2.a.6 Verify air start receiver pressure	3.8.3.4	

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
4.8.1.1.2.a.7 Verify DG is aligned to associated emergency buses		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above
4.8.1.1.2.b.1 Check for and remove accumulated water from day tank	3.8.1.5	
4.8.1.1.2.b.2 Check/remove accumulated water from fuel oil storage tank	3.8.3.5	
4.8.1.1.2.d Verify total particulate from sample of fuel oil storage tank		Note not applied to NUREG-1431, SR 3.8.3.2 because Frequency is in accordance with the Diesel Fuel Oil Testing Program. Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above
4.8.1.1.2.e Verify each DG starts from standby conditions/quick start	3.8.1.7	
4.8.1.1.2.f.2 Verify DG rejects load $\geq 1078$ KW, stabilizes without tripping any safety-related load		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above
4.8.1.1.2.f.3 Verify interval between each timed load block	3.8.1.18	
4.8.1.1.2.f.4 Verify on loss of offsite power signal, de-energization, load shedding and auto-start	3.8.1.11	
4.8.1.1.2.f.5 Verify DG starts on safety injection test signal	3.8.1.12	
4.8.1.1.2.f.6 Verify on LOOP in conjunction with ECCS initiation signal	3.8.1.19	
4.8.1.1.2.f.7 Verify each DG operates for > 24 hours	3.8.1.14	
4.8.1.1.2.f.9 Verify DG capability to synchronize with offsite power, transfer loads to offsite power and proceed through shutdown sequence	3.8.1.16	
4.8.1.1.2.f.11 Verify DG rejects load between 6200 and 6400 KW	3.8.1.9 3.8.1.10	
4.8.1.1.2.f.12 Verify ECCS initiation signal overrides test mode	3.8.1.17	

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
4.8.1.1.2.f.13 Verify DG automatic trips bypassed on ECCS initiation signal	3.8.1.13	
4.8.1.1.2.f.14 Verify each DG starts from standby conditions/quick restart	3.8.1.15	
4.8.1.1.2.g Verify simultaneous DG starts	3.8.1.20	
4.8.1.1.2.h.1 Drain each main fuel oil storage tank, remove sediment and clean		Note not applied to NUREG-1431, SR 3.8.3.2 because Frequency is in accordance with the Diesel Fuel Oil Testing Program. Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above
4.8.1.1.2.h.2 Perform pressure test of diesel fuel oil piping		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above
<b>3.8.2.1 DC Sources – Operating</b>		
4.8.2.1.a.1 Verify parameters in Table 4.8-2 meet Category A limits		HNP has not incorporated generic change TSTF-360, 'DC Electrical rewrite.' TSTF-425 relocates the frequencies of many of the DC Sources – Operating and Battery Parameter SRs. Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above
4.8.2.1.a.2 Verify total battery terminal voltage		
4.8.2.1.b.1 Verify parameters in Table 4.8-2 meet Category B limits		
4.8.2.1.b.2 Verify no visible corrosion at terminals and connectors		
4.8.2.1.b.3 Verify average electrolyte temperature of 10 connected cells		
4.8.2.1.c.1 Verify cells, cell plates and racks show no physical damage		
4.8.2.1.c.2 Verify cell-to-cell and terminal connections clean and tight		
4.8.2.1.c.3 Verify resistance of cell-to-cell and terminal connections		
4.8.2.1.c.4 Verify battery charger capacity	3.8.4.2	

<b>HNP TS Surveillance Requirement (SR)</b>	<b>Similar TSTF-425 SR Number</b>	<b>Discussion of Differences</b>
4.8.2.1.d Verify battery capacity is adequate to maintain emergency loads	3.8.4.3	
4.8.2.1.e Verify battery capacity during performance discharge test	3.8.6.6	
<b>3.8.3.1 Onsite Power Distribution - Operating</b>		
4.8.3.1 Verify correct breaker alignment/power to distribution subsystems and indicated voltage	3.8.9.1 3.8.7.1	
<b>3.8.3.2 Onsite Power Distribution - Shutdown</b>	<b>3.8.10</b>	
4.8.3.2 Verify correct breaker alignment/power to distribution subsystems and indicated voltage	3.8.10.1 3.8.8.1	
<b>3.8.4.1 Containment Penetration Conductor Overcurrent Protective Devices</b>		
4.8.4.1.a.1.a Channel Calibration of protective relays		Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.8.4.1.a.1.b System functional test		
4.8.4.1.a.2 Functionally testing representative sample		
4.8.4.1.b Subject each breaker to inspection and preventative maintenance		
<b>3.8.4.2 Motor-Operated Valves Thermal Overload Protection</b>		
4.8.4.2.a Perform Trip Actuation Device Operational Test		Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above
<b>3.9.1.a Boron Concentration</b>		
4.9.1.1 Verify boron concentration	3.9.1.1	
4.9.1.2 Verify valves closed	3.9.2.1	
<b>3.9.2 Refueling Operations – Instrumentation</b>		
4.9.2.a Channel Check	3.9.3.1	
4.9.2.b Channel Calibration	3.9.3.2	
<b>3.9.4 Containment Building Penetrations</b>		
4.9.4.a Verify each containment penetration in required status	3.9.4.1	
4.9.4.b Verify containment purge and containment pre-entry purge makeup and exhaust valve automatically actuate	3.9.4.2	



HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.9.8.1 Residual Heat Removal and Coolant Circulation – High Water Level</b>		
4.9.8.1.1 Verify one RHR loop	3.9.5.1	
4.9.8.1.2 Verify locations susceptible to gas accumulation sufficiently filled with water		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.
<b>3.9.8.2 Residual Heat Removal and Coolant Circulation – Low Water Level</b>		
4.9.8.2.1 Verify one RHR loop and flow rate with level at or above vessel flange	3.9.6.1	NUREG-1431 does not differentiate between above or below vessel flange. Relocation of these frequencies is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.9.8.2.2 Verify one RHR loop and flow rate with level below vessel flange		
4.9.8.2.3 Verify locations susceptible to gas accumulation sufficiently filled with water		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.
<b>3.9.9 Containment Ventilation Isolation System</b>		
4.9.9 Verify automatic isolation on actuation signal and ability to close from control switch	3.3.6.4 3.3.6.6	
<b>3.9.10 Water Level – Reactor Vessel</b>		
4.9.10 Verify water level	3.9.7.1	
<b>3.9.11 Water Level – New and Spent Fuel Pools</b>		
4.9.11 Verify water level	3.7.15.1	
<b>3.9.12 Fuel Handling Building Emergency Exhaust System</b>		
4.9.12.a Operate each train	3.7.13.1	
4.9.12.b.1 Verify cleanup system satisfies in-place penetration and bypass leakage testing acceptance criteria		Note not applied to NUREG-1431, SR 3.7.13.2 because Frequency is in accordance with the Ventilation Filter Testing Program (VFTP).
4.9.12.b.2 Verify methyl iodide penetration within limits		

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
4.9.12.d.1 Verify HEPA filter and charcoal adsorber pressure drop		HNP Frequency is "18 months." Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.9.12.d.2 Verify system automatically actuates	3.7.13.3	
4.9.12.d.3 Verify system maintains negative pressure	3.7.13.4	
4.9.12.d.5 Verify heater capacity		Note not applied to NUREG-1431, SR 3.7.13.2 because Frequency is in accordance with the Ventilation Filter Testing Program (VFTP). HNP Frequency is "18 months." Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.
<b>3.10.1 Special Test Exceptions – Shutdown Margin</b>		
4.10.1.1 Verify position of shutdown and control rods		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.
<b>3.10.2 Special Test Exceptions – Group Height, Insertion, and Power Distribution Limits</b>		
4.10.2.1 Verify Thermal Power level $\leq 85\%$		NUREG-1431 does not specify a similar requirement. Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.
4.10.2.2.a Verify $F_Q(Z)$ within limits		
4.10.2.2.b Verify $F_{\Delta H}^N$ within limits		
<b>3.10.3 Special Test Exceptions – Physics Tests</b>		
4.10.3.1 Verify Thermal Power $\leq 5\%$	3.1.8.3	
4.10.3.3 Verify $T_{avg}$	3.1.8.2	
<b>3.10.4 Special Test Exceptions – Reactor Coolant Loops</b>		
4.10.4.1 Verify Thermal Power $< P-7$	3.4.19.1	

HNP TS Surveillance Requirement (SR)	Similar TSTF-425 SR Number	Discussion of Differences
<b>3.10.5 Special Test Exceptions – Position Indication System – Shutdown</b>		
4.10.5 Verify Demand Position Indication System and Digital Rod Position Indication System agree		Note not applied to NUREG-1431, SR 3.1.7.1, due to event-driven Frequency. HNP Frequency is "24 hours." Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.
<b>3.11.2.5 Explosive Gas Mixture</b>		
4.11.2.5 Verify hydrogen and oxygen in Gaseous Radwaste Treatment System within limits		These requirements are typically relocated to the Explosive Gas and Storage Tank Radioactivity Monitoring Program (NUREG-1431, 5.5.12) during ITS conversion. The HNP Frequency is "At least once per 12 hours." Relocation of this frequency is consistent with intent of TSTF-425 and does not qualify for the exclusions discussed above.
<b>6.8.4.p Programs (Surveillance Frequency Control Program)</b>	<b>5.5.18</b>	