B 3.9 REFUELING OPERATIONS

B 3.9.5 Residual Heat Removal (RHR) and Coolant Circulation–High Water Level

BASES

BACKGROUND

The purpose of the RHR System in MODE 6 is to remove decay heat and sensible heat from the Reactor Coolant System (RCS) to provide mixing of borated coolant and to prevent boron stratification (Ref. 1). Heat is removed from the RCS by circulating reactor coolant through the RHR heat exchanger(s), where the heat is transferred to the Component Cooling Water System. The coolant is then returned to the RCS via the RCS cold leg(s). Operation of the RHR System for normal cooldown or decay heat removal is manually accomplished from the control room. The heat removal rate is adjusted by controlling the flow of reactor coolant through the RHR heat exchanger(s) and the bypass. Mixing of the reactor coolant is maintained by this continuous circulation of reactor coolant through the RHR System.

APPLICABLE SAFETY ANALYSES

If the reactor coolant temperature is not maintained below 200°F, boiling of the reactor coolant could result. This could lead to a loss of coolant in the reactor vessel. Additionally, boiling of the reactor coolant could lead to a reduction in boron concentration in the coolant due to boron plating out on components near the areas of the boiling activity. The loss of reactor coolant and the reduction of boron concentration in the reactor coolant would eventually challenge the integrity of the fuel cladding, which is a fission product barrier. One train of the RHR System is required to be operational in MODE 6, with the water level ≥ 23 ft above the top of the reactor vessel flange, to prevent this challenge. The LCO does permit removal of the RHR loop from operation for short durations, under the condition that the boron concentration is not diluted. This conditional removal from operation of the RHR loop does not result in a challenge to the fission product barrier. RAI 3.9.5-1 R4

The RHR System satisfies Criterion 4 of 10 CFR 50.36(c)(2)(ii). R1

LCO

Only one RHR loop is required for decay heat removal in MODE 6, with the water level ≥ 23 ft above the top of the reactor vessel flange. Only one RHR loop is required to be

(continued)

BASES

LCO (continued)

OPERABLE, because the volume of water above the reactor vessel flange provides backup decay heat removal capability. At least one RHR loop must be OPERABLE and in operation to provide:

a. Removal of decay heat;

b. Mixing of borated coolant to minimize the possibility of criticality; and

c. Indication of reactor coolant temperature.

An OPERABLE RHR loop includes an RHR pump, a heat exchanger, valves, piping, instruments, and controls to ensure an OPERABLE flow path and to determine the RHR discharge temperature. The flow path starts in one of the RCS hot legs and is returned to at least one of the RCS cold legs.

The LCO is modified by a Note that allows the required operating RHR loop to be removed from operation for up to 1 hour per 8 hour period, provided no operations are permitted that would dilute the RCS boron concentration by introduction of coolant into the RCS with boron concentration less than required to meet the minimum boron concentration of LCO 3.9.1. Boron concentration reduction with coolant at boron concentrations less than required to assure the RCS boron concentration is maintained is prohibited because uniform concentration distribution cannot be ensured without forced circulation. This permits operations such as core mapping or alterations in the vicinity of the reactor vessel hot leg nozzles and RCS to RHR isolation valve testing. During this 1 hour period, decay heat is removed by natural convection to the large mass of water in the refueling cavity. | RAI 3.9.5-1 R4

APPLICABILITY

One RHR loop must be OPERABLE and in operation in MODE 6, with the water level $\geq$ 23 ft above the top of the reactor vessel flange, to provide decay heat removal. The 23 ft water level was selected because it corresponds to the 23 ft requirement established for fuel movement in LCO 3.9.7, "Refueling Cavity Water Level." Requirements for the RHR System in other MODES are covered by LCOs in Section 3.4, Reactor Coolant System (RCS). RHR loop requirements in MODE 6 with the water level < 23 ft are located in LCO 3.9.6, "Residual Heat Removal (RHR) and Coolant Circulation–Low Water Level."

BASES

LCO (continued)

b. Mixing of borated coolant to minimize the possibility of criticality; and

c. Indication of reactor coolant temperature.

This LCO is modified by two Notes. Note 1 permits the RHR pumps to be removed from operation for ≤ 15 minutes when switching from one train to another. The circumstances for stopping both RHR pumps are to be limited to situations when the outage time is short and the core outlet temperature is maintained > 10°F below saturation temperature. The Note prohibits boron dilution or draining operations when RHR forced flow is stopped. Note 2 allows one RHR loop to be inoperable for a period of 2 hours provided the other loop is OPERABLE and in operation. Prior to declaring the loop inoperable, consideration should be given to the existing unit configuration. This consideration should include that the core time to boil is short, there is no draining operation to further reduce RCS water and that the capability exists to inject borated water into the reactor vessel. This permits surveillance tests to be performed on the inoperable loop during a time when these tests are safe and possible. RAI 3.9.5-1 R4

An OPERABLE RHR loop consists of an RHR pump, a heat exchanger, valves, piping, instruments and controls to ensure an OPERABLE flow path and to determine the RHR discharge temperature. The flow path starts in one of the RCS hot legs and is returned to at least one of the RCS cold legs.

APPLICABILITY

Two RHR loops are required to be OPERABLE, and one RHR loop must be in operation in MODE 6, with the water level < 23 ft above the top of the reactor vessel flange, to provide decay heat removal. Requirements for the RHR System in other MODES are covered by LCOs in Section 3.4, Reactor Coolant System (RCS). RHR loop requirements in MODE 6 with the water level ≥ 23 ft are located in LCO 3.9.5, "Residual Heat Removal (RHR) and Coolant Circulation–High Water Level."

ACTIONS

A.1 and A.2

If less than the required number of RHR loops are OPERABLE, action shall be immediately initiated and continued until the RHR loop is restored to OPERABLE status and to operation

(continued)

CTS

3.9 REFUELING OPERATIONS

3.9.5 Residual Heat Removal (RHR) and Coolant Circulation—High Water Level

3.9.8.1

LCO 3.9.5 One RHR loop shall be OPERABLE and in operation.

NOTE

The required RHR loop may be removed from operation for ≤ 1 hour per 8 hour period, provided no operations are permitted that would cause reduction of the Reactor Coolant System boron concentration.

PAI 3.9.5-1 R4

TSTF-286

Action c.

(RCS), coolant with less than required to meet the minimum required boron concentration of LCO 3.9.1

introduction into

APPLICABILITY: MODE 6 with the water level ≥ 23 ft above the top of reactor vessel flange.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. RHR loop requirements not met.	A.1 Suspend operations involving a reduction in reactor coolant boron concentration.	Immediately
	AND	
	A.2 Suspend loading irradiated fuel assemblies in the core.	Immediately
	AND	
	A.3 Initiate action to satisfy RHR loop requirements.	Immediately
	AND	

Action b.

Suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet the boron concentration of LCO 3.9.1.

Action b.

Action a.

TSTF-286

(continued)

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INSERT

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

1. All RHR pumps may be removed from operation for ≤15 minutes when switching from one train to another provided: (3) RAI 3.9.5-1 R4

   a. The core outlet temperature is maintained > 10° F below saturation temperature;

   b. No operations are permitted that would cause a reduction of the Reactor Coolant System boron concentration; and

   c. No draining operations to further reduce RCS volume are permitted.

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

---

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

2. Consistent with TSTF-265, a Note is added to SR 3.9.6.2 which permits the performance of the SR to verify correct breaker alignment and power availability to be delayed until 24 hours after a required pump is not in operation. This provision is required because when pumps are swapped under the current requirements, the Surveillance is immediately not met on the pump taken out of operation. This change avoids entering an Action for a routine operational occurrence. The change is acceptable because adequate assurance exists that the pump is aligned to the correct breaker with power available because, prior to being removed from operation, the applicable pump had been in operation. Allowing 24 hours to perform the breaker alignment verification is acceptable because the pump was in operation, which demonstrated OPERABILITY, and because 24 hours is currently allowed by invoking SR 3.0.3. This is a new Surveillance Requirement not required in CTS 3.9.8.2.

3. The LCO Note is revised from stating that all RHR pumps may be de-energized to the all RHR pumps may be removed from operation to be consistent with a similar Note in LCO 3.9.5.

RAI 3.9.5-1 R4

B 3.9 REFUELING OPERATIONS

B 3.9.5 Residual Heat Removal (RHR) and Coolant Circulation—High Water Level

BASES

BACKGROUND

The purpose of the RHR System in MODE 6 is to remove decay heat and sensible heat from the Reactor Coolant System (RCS), as required by GDC 34, to provide mixing of borated coolant and to prevent boron stratification (Ref. 1). Heat is removed from the RCS by circulating reactor coolant through the RHR heat exchanger(s), where the heat is transferred to the Component Cooling Water System. The coolant is then returned to the RCS via the RCS cold leg(s). Operation of the RHR System for normal cooldown or decay heat removal is manually accomplished from the control room. The heat removal rate is adjusted by controlling the flow of reactor coolant through the RHR heat exchanger(s) and the bypass. Mixing of the reactor coolant is maintained by this continuous circulation of reactor coolant through the RHR System.

① RAI 3.9.5-1 RH

APPLICABLE SAFETY ANALYSES

If the reactor coolant temperature is not maintained below 200°F, boiling of the reactor coolant could result. This could lead to a loss of coolant in the reactor vessel. Additionally, boiling of the reactor coolant could lead to a reduction in boron concentration in the coolant due to boron plating out on components near the areas of the boiling activity. The loss of reactor coolant and the reduction of boron concentration in the reactor coolant would eventually challenge the integrity of the fuel cladding, which is a fission product barrier. One train of the RHR System is required to be operational in MODE 6, with the water level ≥ 23 ft above the top of the reactor vessel flange, to prevent this challenge. The LCO does permit de-energizing the RHR pump for short durations, under the condition that the boron concentration is not diluted. This conditional de-energizing of the RHR pump does not result in a challenge to the fission product barrier.

from operation

removal of ⑤

removal from operation

Although the RHR System does not meet a specific criterion of the NRC Policy Statement, it was identified in the NRC Policy Statement as an important contributor to risk

② RI TSTF-367

satisfies Criterion 4 of 10 CFR 50.36 (c)(2)(ii).

(continued)

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BASES

APPLICABLE SAFETY ANALYSES (continued)

reduction. Therefore, the RHR System is retained as a Specification.

TSTF-367 R1

LCO

Only one RHR loop is required for decay heat removal in MODE 6, with the water level ≥ 23 ft above the top of the reactor vessel flange. Only one RHR loop is required to be OPERABLE, because the volume of water above the reactor vessel flange provides backup decay heat removal capability. At least one RHR loop must be OPERABLE and in operation to provide:

a. Removal of decay heat;

b. Mixing of borated coolant to minimize the possibility of criticality; and

c. Indication of reactor coolant temperature.

RHR discharge (3)

An OPERABLE RHR loop includes an RHR pump, a heat exchanger, valves, piping, instruments, and controls to ensure an OPERABLE flow path and to determine the low end temperature. (3) The flow path starts in one of the RCS hot legs and is returned to the RCS cold legs.

at least one of

operation

The LCO is modified by a Note that allows the required operating RHR loop to be removed from service for up to 1 hour per 8 hour period, provided no operations are permitted that would cause a reduction of the RCS boron concentration. Boron concentration reduction is prohibited because uniform concentration distribution cannot be ensured without forced circulation. This permits operations such as core mapping or alterations in the vicinity of the reactor vessel hot leg nozzles and RCS to RHR isolation valve testing. During this 1 hour period, decay heat is removed by natural convection to the large mass of water in the refueling cavity.

(5) PHI B 3.9.5-4 R4

dilute

TSTF-286

by introduction of coolant into the RCS with boron concentration less than required to meet the minimum boron concentration of LCO 3.9.1

with coolant at boron concentrations less than required to assure the RCS boron concentration is maintained

APPLICABILITY

One RHR loop must be OPERABLE and in operation in MODE 6, with the water level ≥ 23 ft above the top of the reactor vessel flange, to provide decay heat removal. The 23 ft water level was selected because it corresponds to the 23 ft

(continued)

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1. North Anna Units 1 and 2 were designed and constructed on the basis of the proposed General Design Criteria, published in 1966. Since February 20, 1971, when the General Design Criteria for Nuclear Power Plants, Appendix A to 10 CFR Part 50, were published, the Company attempted to comply with the intent of the newer criteria to the extent practical, recognizing previous design commitments. The NRC's Safety Evaluation Report for North Anna Units 1 and 2 reviewed the plant against 10 CFR Part 50, Appendix A and concluded that the facility design conforms to the intent of the newer criteria. The North Anna UFSAR contains discussions comparing the design of the plant to the 10 CFR 50, Appendix A, General Design Criteria. Bases references to the 10 CFR 50, Appendix A criteria have been replaced with references to the appropriate section of the UFSAR.

2. The criteria of the NRC Final Policy Statement on Technical Specifications Improvements have been included in 10 CFR 50.36(c)(2)(ii). Criterion 4 describes systems which are important contributors to risk. Therefore, references in the ISTS Bases to the NRC Final Policy Statement are revised in the ITS Bases to reference the appropriate 10 CFR 50.36 Criterion.

3. Changes are made (additions, deletions, and/or changes) to the ISTS which reflect the plant specific nomenclature, number, reference, system description, analysis, or licensing basis description.

4. The brackets have been removed and the proper plant specific information/value has been provided.

5. Changes are made to the Bases to be consistent with changes made to the ITS.

RAI 3.9.5-1 R4

INSERT

This LCO is modified by two Notes. Note 1 permits the RHR pumps to be removed from operation for ≤ 15 minutes when switching from one train to another. The circumstances for removing both RHR pumps from operation are to be limited to situations when the outage time is short and the core outlet temperature is maintained > 10 °F below saturation temperature. The Note prohibits boron dilution or draining operations when RHR forced flow is stopped. Note 2 allows one RHR loop to be inoperable for a period of 2 hours provided the other loop is OPERABLE and in operation. Prior to declaring the loop inoperable, consideration should be given to the existing unit configuration. This consideration should include that the core time to boil is short, there is no draining operation to further reduce RCS water and that the capability exists to inject borated water into the reactor vessel. This permits surveillance tests to be performed on the inoperable loop during a time when these tests are safe and possible.

(6) RAI 3.9.5-1 R4

1. North Anna Units 1 and 2 were designed and constructed on the basis of the proposed General Design Criteria, published in 1966. Since February 20, 1971, when the General Design Criteria for Nuclear Power Plants, Appendix A to 10 CFR Part 50, were published, the Company attempted to comply with the intent of the newer criteria to the extent practical, recognizing previous design commitments. The NRC's Safety Evaluation Report for North Anna Units 1 and 2 reviewed the plant against 10 CFR Part 50, Appendix A and concluded that the facility design conforms to the intent of the newer criteria. The North Anna UFSAR contains discussions comparing the design of the plant to the 10 CFR 50, Appendix A, General Design Criteria. Bases references to the 10 CFR 50, Appendix A criteria have been replaced with references to the appropriate section of the UFSAR.

2. The criteria of the NRC Final Policy Statement on Technical Specifications Improvements have been included in 10 CFR 50.36(c)(2)(ii). Criterion 4 describes systems which are important contributors to risk. Therefore, references in the ISTS Bases to the NRC Final Policy Statement are revised in the ITS Bases to reference the appropriate 10 CFR 50.36 Criterion.

3. Changes are made (additions, deletions, and/or changes) to the ISTS which reflect the plant specific nomenclature, number, reference, system description, analysis, or licensing basis description.

4. The brackets have been removed and the proper plant specific information/value has been provided.

5. Consistent with TSTF-265, a Note is added to SR 3.9.6.2 which permits the performance of the SR to verify correct breaker alignment and power availability to be delayed until 24 hours after a required pump is not in operation. This provision is required because when pumps are swapped under the current requirements, the Surveillance is immediately not met on the pump taken out of operation. This change avoids entering an Action or invoking SR 3.0.3 for a routine operational occurrence. The change is acceptable because adequate assurance exists that the pump is aligned to the correct breaker with power available because, prior to being removed from operation, the applicable pump had been in operation. Allowing 24 hours to perform the breaker alignment verification is acceptable because the pump was in operation, which demonstrated OPERABILITY, and because 24 hours is currently allowed by invoking SR 3.0.3. This is a new Surveillance Requirement not required in CTS 3.9.8.2.

6. Changes are made to the Bases to be consistent with changes made to the ITS.

RAI 3.9.5-1 R4

This change is acceptable because ITS LCO 3.0.3 requirements are consistent with those stated in the CTS. This change is designated as administrative because it does not result in technical changes to the CTS.

MORE RESTRICTIVE CHANGES

M.1 CTS 3.9.8.1, Action c., states that the RHR loop may be removed from operation for up to 1 hour per 8 hour period during the performance of CORE ALTERATIONS in the vicinity of the reactor pressure vessel hot legs. ITS LCO 3.9.5 Notes states that the required RHR loop may be removed from operation for ≤ 1 hour per 8 hour period, provided no operations are permitted that would cause introduction into the Reactor Coolant System, coolant with boron concentration less than required to meet the minimum required boron concentration of LCO 3.9.1. This results in two changes to the CTS. First, the allowance to remove RHR from operation is no longer restricted to CORE ALTERATIONS in the vicinity of the reactor pressure vessel hot legs. Second, the use of the allowance in the ITS is predicated on prohibiting operations that will cause introduction into the RCS, coolant with a boron concentration less than required to meet the boron concentration of LCO 3.9.1. RAI 3.9.5-1 R4

This change is acceptable because it applies appropriate controls during periods when RHR is not in operation. The ITS requirement prohibiting operations which would cause a reduction in the RCS boron concentration below that required to maintain the required shutdown margin is necessary to avoid unexpected reactivity changes. Under the ITS definition of CORE ALTERATIONS, many activities which would be considered CORE ALTERATIONS in the CTS, such are core mapping, are not considered CORE ALTERATIONS in the ITS. Therefore, the application of the allowance is expanded in the ITS to cover other activities beyond CORE ALTERATIONS. This change is nominally less restrictive, but represents no practical operational change, and the overall change is considered more restrictive. This change is designated as more restrictive because it imposes a new condition to be met when an RHR loop is not in operation.

M.2 CTS Surveillance 4.9.8.1.2 states that one RHR loop must be verified to be in operation and a. if the RCS temperature is > 140 °F or the time since entry into MODE 3 is < 100 hours, circulating reactor coolant at a flow rate ≥ 3000 gpm, or b. if the RCS temperature is ≤ 140 °F or the time since entry into MODE 3 is ≥ 100 hours, circulating reactor coolant at a flow rate ≥ 2000 gpm. ITS SR 3.9.5.1 requires verification that one RHR loop is in operation and circulating reactor coolant at a flow rate of ≥ 3000 gpm. This changes the CTS by eliminating the option to reduce RHR flow to 2000 gpm when RCS temperature is ≤ 140 °F or the time since entry into MODE 3 is < 100 hours.

occurring during the repair period. The Required Actions ensure that the RCS boron concentration is maintained within the limits of LCO 3.9.1, "Refueling Boron Concentration," which is sufficient to ensure that adequate shutdown margin is maintained. This change is designated as less restrictive because less stringent Required Actions are being applied in the ITS than were applied in the CTS.

L.5 *(Category 1 – Relaxation of LCO Requirements)* ITS 3.9.6 is modified by two LCO Notes. Note 1 allows all RHR pumps to be removed from operation for ≤ 15 minutes when switching from one train to another, provided several conditions are met. Note 2 allows one required RHR loop to be inoperable for up to 2 hours for Surveillance testing, provided that the other loop is OPERABLE and in operation. CTS 3.9.8.2 does not contain these allowances. This changes the CTS by providing allowing the LCO to not be met. RAI 3.9.5-1 R4

The purpose of ITS 3.9.6 is to ensure sufficient decay heat removal is available in the specified MODES and conditions. This change is acceptable because the LCO requirements continue to ensure that the structures, systems, and components are maintained consistent with the safety analyses and licensing basis. The ITS Notes allow normal operational evolutions, such as pump swapping and surveillance testing, to be performed while in the applicability of the specification. These evolutions are necessary to demonstrate RHR OPERABILITY. This change is designated as less restrictive because less stringent LCO requirements are being applied in the ITS than were applied in the CTS.

North Anna Improved Technical Specifications (ITS) Review Comments
ITS Section 3.9, Refueling Operations

RAI 3.9.6-1
ITS 3.9.6 RHR and Coolant Circulation - Low Water Level
STS 3.9.6 RHR and Coolant Circulation - Low Water Level
ITS SR 3.9.6.2 Note
STS SR 3.9.6.2
JFD-2

NRC RAI: The ITS SR 3.9.6.2 adds a Note, not present in the STS SR 3.9.6.2, and not addressed by TSTF-265. **Comment**: While it appears that this note is similar to that added by TSTF-265 in STS SR 3.4.5.3, TSTF-265 does not add it to SR 3.9.6.2. Explain why the note is needed in SR 3.9.6.2.

Response: The North Anna ITS submittal acknowledges that the addition of the Note to SR 3.9.6.2 is not part of TSTF-265. JFD 2 was supplied to describe the change. JFD 2 states, "Consistent with TSTF-265...". The addition of this Note addresses an oversight in TSTF-265. TSTF-265 adds the SR Note to SR 3.4.8.2. ITS 3.4.8 also applies to Conditions in which two RHR loops are required to be OPERABLE. As stated in the justification for TSTF-265, without the Note each time the RHR loops are swapped, the applicable SR (SR 3.4.8.2) must be declared not met for the loop taken out of service and SR 3.0.3 must be entered for a missed Surveillance. This justification applies equally to SR 3.9.6.2. Therefore, the Note has been added to SR 3.9.6.2.

North Anna Power Station
Summary of Changes Not Associated with RAIs

Section 3.9

This letter includes changes to North Anna Power Station's Improved Technical Specifications (ITS) submittal that are not associated with responses to the NRC's requests for additional information. The following table summarizes these changes and identifies the affected pages of Section 3.9.

Source of Change	Summary of Change	Affected Pages
Internal comment	Revised ITS 3.9.2 to be more consistent with ISTS 3.9.2 and ITS 3.1.8. • Added Condition Note from the ISTS to the ITS to require performance of a boron concentration measurement when a valve is found to be inadvertently open. Without the Note, Required Action A.3 would never be performed, as Required Action A.2 restores compliance with LCO. • Changed time allowed to perform SR 3.9.1.1 from one to four hours. Unit 1 CTS does not require performance of SR 3.9.1.1. Unit 2 CTS allows one hour. ISTS 3.9.2 allows four hours. • CTS and original ITS submittal require suspension of positive reactivity additions and Core Alterations. ISTS only requires suspension of Core Alterations. Revised ITS to be consistent with ISTS.	Typed ITS Pages: 3.9.2-1 Typed ITS Bases Pages: B 3.9.2-2 B 3.9.2-3 ISTS Mark-up Page: 3.9-2 ISTS JFD Page: ITS 3.9.2: 1 ISTS Bases Mark-up Pages: B 3.9-6 B 3.9-7 CTS Mark-up Pages: ITS 3.9.2: Page 1 of 1 (Units 1 and 2) Discussion of Changes (DOC) Pages: ITS 3.9.2: 1 through 4
Internal comment	In ISTS Bases mark-up, changed valve designation from "2-CH140" to "2-CH-140." Typed ITS Bases are correct.	ISTS Bases Mark-up Page: Insert to B 3.9-5
WOG-ED-11	Added the word "the" before "COLR."	Typed ITS Page: 3.9.1-1 ISTS Mark-up Page: 3.9-1

3.9 REFUELING OPERATIONS

3.9.2 Primary Grade Water Flow Path Isolation Valves–MODE 6

LCO 3.9.2 Each valve used to isolate primary grade water flow paths shall be secured in the closed position.

---------- NOTE ----------
Primary grade water flow path isolation valves may be opened under administrative control for planned boron dilution or makeup activities.

APPLICABILITY: MODE 6.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME	
A. ---------NOTE--------- Required Action A.3 must be completed whenever Condition A is entered. ---------- One or more valves not secured in closed position.	A.1	Suspend CORE ALTERATIONS.	Immediately	R4
	AND			
	A.2	Secure valves in closed position.	15 minutes	
	AND			
	A.3	Perform SR 3.9.1.1.	4 hours	R4

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.2.1	Verify each valve in the affected flow path that isolates primary grade water flow paths is locked, sealed, or otherwise secured in the closed position.	Within 15 minutes following a boron dilution or makeup activity

BASES

LCO (continued)

The LCO is modified by a Note which allows the primary grade water flow path isolation valves to be opened under administrative control for planned boron dilution or makeup activities.

APPLICABILITY

In MODE 6, this LCO is applicable to prevent an inadvertent boron dilution event by ensuring isolation of primary grade water flow paths to the RCS.

In MODES 3, 4, and 5, LCO 3.1.8, Primary Grade Water Flow Path Isolation Valves, requires the primary grade water flow paths to the RCS to be isolated to prevent an inadvertent boron dilution.

In MODES 1 and 2, the boron dilution accident was analyzed and was found to be capable of being mitigated.

ACTIONS

A.1 R4

Continuation of CORE ALTERATIONS is contingent upon maintaining the unit in compliance with this LCO. With any valve used to isolate primary grade water flow paths not locked, sealed or otherwise secured in the closed position, all operations involving CORE ALTERATIONS must be suspended immediately. The Completion Time of "immediately" for performance of Required Action A.1 shall not preclude completion of movement of a component to a safe position.

Condition A has been modified by a Note to require that Required Action A.3 be completed whenever Condition A is entered. R4

A.2

Preventing inadvertent dilution of the reactor coolant boron concentration is dependent on maintaining the primary grade water flow path isolation valves secured closed. Locking, sealing, or securing the valves in the closed position ensures that the valves cannot be inadvertently opened. The Completion Time of 15 minutes provides sufficient time to close, lock, seal, or otherwise secure the flow path isolation valve.

BASES

ACTIONS (continued)

A.3 R4

Due to the potential of having diluted the boron concentration of the reactor coolant, SR 3.9.1.1 (verification of boron concentration) must be performed to demonstrate that the required boron concentration exists. The Completion Time of 4 hours is sufficient to obtain and analyze a reactor coolant sample for boron concentration. R4

SURVEILLANCE REQUIREMENTS

SR 3.9.2.1

These valves are to be locked, sealed, or otherwise secured closed to isolate possible dilution paths. The likelihood of a significant reduction in the boron concentration during MODE 6 operations is remote due to the large mass of borated water in the refueling cavity and the fact that the primary grade water flow paths are isolated, precluding a dilution. The boron concentration is checked every 72 hours during MODE 6 under SR 3.9.1.1. The Frequency is based on verifying that the isolation valves are locked, sealed, or otherwise secured within 15 minutes following a boron dilution or makeup activity. This Frequency is based on engineering judgment and is considered reasonable in view of other administrative controls that will ensure that the valve opening is an unlikely possibility.

REFERENCES

1. UFSAR, Section 15.2.4.

Primary Grade → Unborated Water Source Isolation Valves 3.9.2 (1)

Flow Path

MODE 6

CTS

3.9 REFUELING OPERATIONS

3.9.2 Unborated Water Source Isolation Valves — MODE 6 (1)

3.1.1.3.2

LCO 3.9.2 Each valve used to isolate unborated water sources shall be secured in the closed position. (1)

Insert

primary grade

flow paths

APPLICABILITY: MODE 6.

ACTIONS

3.1.1.3.2

NOTE

Separate Condition entry is allowed for each unborated water source isolation valve. (2)

CONDITION	REQUIRED ACTION		COMPLETION TIME	
Action A. NOTE Required Action A.3 must be completed whenever Condition A is entered. One or more valves not secured in closed position.	A.1	Suspend CORE ALTERATIONS.	Immediately	R4
	AND			
	A.2	Initiate actions to secure valve in closed position.	Immediately (4) 15 minutes	
	AND			
	A.3	Perform SR 3.9.1.1.	4 hours	R4

R4

Rev. 4

JUSTIFICATION FOR DEVIATIONS
ITS 3.9.2, PRIMARY GRADE WATER FLOW PATH ISOLATION VALVES - MODE 6

1. The North Anna boron dilution analysis requires the primary grade water flow path isolation valves to be locked, sealed, or secured in the closed position in MODES 3, 4, 5 and 6. ITS 3.1.8, Primary Grade Water Flow Path Isolation Valves, was created to provide these requirements in MODES 3, 4, and 5. ISTS 3.9.2 is renamed to "Primary Grade Water Flow Path Isolation Valves - MODE 6" to differentiate between the titles of LCO 3.1.8 and LCO 3.9.2.

   ISTS 3.9.2 is modified to reflect the North Anna boron dilution analysis. An LCO Note is added which allows the primary grade water flow path isolation valves to be opened under administrative control for planned boron dilution or makeup activities. This is permitted under the CTS and the accident analysis.

2. The ISTS 3.9.2 "separate entry condition" note is deleted as it is not necessary and is eliminated for consistency with the CTS. Under Section 1.3, a subsequent entry into the Condition would allow the full Completion Times of 15 minutes and 1 hour from the subsequent entry to complete the Required Actions. R4

3. Not used.

4. The ISTS Action to immediately initiate actions to secure the valve in a closed position is changed to be consistent with the CTS requirement to secure the valve within 15 minutes. This Completion Time is sufficient to close and lock, seal, or otherwise secure the isolation valve. R4

5. Not used.

6. The ISTS Surveillance 3.9.2.1 is changed to the CTS requirement to verify each valve in the affected flowpath that isolates primary grade water flow paths is locked, sealed, or otherwise secured in the closed position within 15 minutes following a boron dilution or makeup activity. This change is necessary as the CTS allows the isolation valves to be opened under administrative control, so more frequent verification of the valve position is necessary than the ITS Frequency of 31 days. This periodic Frequency also eliminates the need for the ISTS Condition Note which states Required Action A.3 (performance of SR 3.9.1.1) is required whenever Condition A is entered. Under the North Anna ITS, opening of an primary grade water flow path isolation valve would require performance of SR 3.9.2.1.

BASES (continued)

APPLICABILITY

In MODE 6, this LCO is applicable to prevent an inadvertent boron dilution event by ensuring isolation of all sources of unborated water to the RCS.

primary grade water flow paths

Insert 1

For all other MODES, the boron dilution accident was analyzed and was found to be capable of being mitigated.

ACTIONS

The ACTIONS table has been modified by a Note that allows separate Condition entry for each unborated water source isolation valve.

A.1

primary grade flow paths locked, sealed or otherwise

Continuation of CORE ALTERATIONS is contingent upon maintaining the unit in compliance with this LCO. With any valve used to isolate unborated water sources not secured in the closed position, all operations involving CORE ALTERATIONS must be suspended immediately. The Completion Time of "immediately" for performance of Required Action A.1 shall not preclude completion of movement of a component to a safe position.

Condition A has been modified by a Note to require that Required Action A.3 be completed whenever Condition A is entered.

A.2

Locking, sealing, or

Preventing inadvertent dilution of the reactor coolant boron concentration is dependent on maintaining the unborated water isolation valves secured closed. Securing the valves in the closed position ensures that the valves cannot be inadvertently opened. The Completion Time of "immediately" requires an operator to initiate actions to close an open valve and secure the isolation valve in the closed position immediately. Once actions are initiated, they must be continued until the valves are secured in the closed position.

primary grade

flow path

15 minutes provides sufficient time to close, lock, seal, or otherwise secure the flow path isolation valve.

(continued)

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BASES

ACTIONS (continued)

A.3

Due to the potential of having diluted the boron concentration of the reactor coolant, SR 3.9.1.1 (verification of boron concentration) must be performed whenever Condition A is entered to demonstrate that the required boron concentration exists. The Completion Time of 4 hours is sufficient to obtain and analyze a reactor coolant sample for boron concentration.

SURVEILLANCE REQUIREMENTS

SR 3.9.2.1

locked, sealed, or otherwise

These valves are to be secured closed to isolate possible dilution paths. The likelihood of a significant reduction in the boron concentration during MODE 6 operations is remote due to the large mass of borated water in the refueling cavity and the fact that all unborated water the primary grade sources are isolated, precluding a dilution. The boron concentration is checked every 72 hours during MODE 6 under SR 3.9.1.1. This Surveillance demonstrates that the valves are closed through a system walkdown. The 31 day Frequency is based on engineering judgment and is considered reasonable in view of other administrative controls that will ensure that the valve opening is an unlikely possibility.

flow paths

Insert

This Frequency

REFERENCES

1. FSAR, Section 15.2.4.
2. NUREG-0800, Section 15.4.6

Rev. 4

A.1

ITS

REACTIVITY CONTROL SYSTEMS

BORON DILUTION

VALVE POSITION

Insert proposed LCO 3.9.2
Insert proposed LCO 3.9.2 Note

LIMITING CONDITION FOR OPERATION

LCO 3.9.2

3.1.1.3.2 The following valves shall be locked, sealed or otherwise secured in the closed position except during planned boron dilution or makeup activities. | A.2

a. 1-CH-217 or

b. 1-CH-220, 1-CH-241, FCV-1114B and FCV-1113B. LA.2

APPLICABILITY: MODES 3, 4, 5, and 6 <See ITS 3.1.8>

ACTION: Insert ITS Condition A Note M.1 | R4

With the above valves not locked, sealed or otherwise secured in the closed position:

a. In MODES 3 and 4 be in COLD SHUTDOWN within 30 hours <See ITS 3.1.8>

Action A.1, A.2

b. In MODES 5 and 6 suspend all operations involving positive reactivity changes or CORE ALTERATIONS and lock, seal or otherwise secure the valves in the closed position within 15 minutes. L.1 | R4

Action A.3

Insert Proposed ITS 3.9.2, Action A.3 M.1

SURVEILLANCE REQUIREMENTS

SR 3.9.2.1

4.1.1.3.2 The above listed valves shall be verified to be locked, sealed or otherwise secured in the closed position within 15 minutes after a planned boron dilution or makeup activity. |

A.1

8-27-90

REACTIVITY CONTROL SYSTEM

BOREON DILUTION

VALVE POSITION

ITS

Insert proposed LCO 3.9.2
Insert proposed LCO 3.9.2 Note

LIMITING CONDITION FOR OPERATION

LCO 3.9.2

3.1.1.3.2 ~~The following valves shall be locked, sealed or otherwise secured in the closed position except during planned boron dilution or makeup activities:~~ A.2

a. ~~2-CH-140 or~~

b. ~~2-CH-160, 2-CH-156, FCV-2114B and FCV-2113B.~~ LA.2

APPLICABILITY: MODES ~~3, 4, 5, and~~ 6. < See ITS 3.1.9 >

ACTION: Insert Condition A Note M.1 R4

Action A.1, A.2, A.3

With the above valves not locked, sealed or otherwise secured in the closed position: 1) suspend all operations involving ~~positive reactivity changes or~~ CORE ALTERATIONS, 2) lock, seal ~~or otherwise secure~~ the valves in the closed position within 15 minutes, ~~and~~ 3) ~~verify~~ that the ~~SHUTDOWN MARGIN is greater than or equal to 1.77% delta k/k~~ within 60 minutes. L.1 R4

Perform SR 3.9.1.1 within 4 hours LA.1 R4

SURVEILLANCE REQUIREMENTS

SR 3.9.2.1

4.1.1.3.2 The above listed valves shall be verified to be locked, sealed or otherwise secured in the closed position within 15 minutes after a planned boron dilution or makeup activity.

DISCUSSION OF CHANGES
ITS 3.9.2, PRIMARY GRADE WATER FLOW PATH ISOLATION VALVES - MODE 6

ADMINISTRATIVE CHANGES

A.1 In the conversion of the North Anna Current Technical Specifications (CTS) to the plant specific Improved Technical Specifications (ITS), certain changes (wording preferences, editorial changes, reformatting, revised numbering, etc.) are made to obtain consistency with NUREG-1431, Rev. 1, "Standard Technical Specifications-Westinghouse Plants" (ISTS).

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

A.2 CTS 3.1.1.3.2 states, "The following valves shall be locked, sealed or otherwise secured in the closed position except during planned boron dilution or makeup activities." ITS LCO 3.9.2 states, "Each valve used to isolate primary grade water flow paths shall be secured in the closed position." A Note to the LCO states, "Primary grade water flow path isolation valves may be opened under administrative control for planned boron dilution or makeup activities." ITS SR 3.9.2.1 states, "Verify each valve that isolates primary grade water flow paths is locked, sealed, or otherwise secured in the closed position."

This change is acceptable because the technical requirements have not changed. In the ITS, requirements that valves be locked, sealed, or otherwise secured are located in the Surveillances, not the LCO. Under SR 3.0.1, the SRs provide requirements necessary to meet the LCO. Therefore, moving the requirement from the LCO to the SR has no effect. The addition of the phrase "under administrative control" to the LCO Note is consistent with the ITS conventions and does not change the application of the Note as, according to UFSAR Section 15.2.4, strict administrative controls are applied to the operation of the primary grade water flow path isolation valves. This change is designated as administrative because it does not result in a technical change to the specifications.

MORE RESTRICTIVE CHANGES

M.1 Unit 1 CTS 3.1.1.3.2 states that when the primary grade water flow path isolation valves are not locked, sealed, or otherwise secured in the closed position in MODE 6, all operations involving positive reactivity changes or CORE ALTERATIONS must be suspended, and the valves must be locked, sealed, or secured in the closed position within 15 minutes. Unit 2 CTS 3.1.1.3.2 states that when the primary grade water flow path isolation valves are not locked, sealed, or otherwise secured in the closed position, all operations involving positive reactivity changes or CORE ALTERATIONS must be suspended, the isolation valves must be locked, sealed, or otherwise secured in the closed position within 15 minutes, and SHUTDOWN MARGIN must be verified greater than or equal to 1.77% $\Delta k/k$ within 60 minutes. ITS 3.9.2 Actions state than when one or more valves are not secured in the closed position, CORE ALTERATIONS must be suspended immediately, the primary grade water flow paths must be isolated within 15 minutes and the boron concentration must be verified per SR 3.9.1.1 within 4 hours. ITS 3.9.2, R4

Condition A, is modified by a Note requiring that Required Action A.3, the SHUTDOWN MARGIN verification, be performed whenever Condition A is entered. This changes the Unit 1 CTS by adding a requirement to verify the RCS boron concentration within 4 hours and by changing the shutdown margin requirement from 1.77%Δk/k to a reference to SR 3.9.1.1 and changes the Unit 1 and Unit 2 CTS by adding a Note requiring performance of the SHUTDOWN MARGIN determination whenever a primary grade water flow path isolation valve is inadvertently opened.

This change is acceptable because it establishes reasonable compensatory measures for a failure to close the primary grade water flow path isolation valves. SR 3.9.1.1 requires verification that the RCS boron concentration is within the limits provided in the COLR. It is performed to verify that any inadvertent boron dilution that may have occurred has been detected and corrected. The Completion Time of 4 hours is reasonable, based on the time required to request and have analyzed an RCS water sample to determine the boron concentration. This change also makes the Unit 1 and Unit 2 requirements the same. This change is designated as more restrictive because it adds requirements to the CTS. R4

RELOCATED SPECIFICATIONS

None

REMOVED DETAIL CHANGES

LA.1 *(Type 5 – Removal of Cycle-Specific Parameter Limits from the Technical Specifications to the Core Operating Limits Report)* Unit 2 CTS 3.1.1.3.2 Action states that with the primary grade water flow path isolation valves not locked, sealed, or otherwise secured in the closed position, verify the SHUTDOWN MARGIN is greater than or equal to 1.77% Δk/k within 60 minutes. ITS 3.9.2, Action A.4, states this requirement as, "Perform SR 3.9.1.1" within 1 hour. ITS SR 3.9.1.1 requires verification that the RCS boron concentration is within the limit provided in the COLR. This changes the CTS by moving the SHUTDOWN MARGIN value to the COLR.

The removal of these cycle-specific parameter limits from the Technical Specifications and their relocation into the COLR is acceptable because these limits are developed or utilized under NRC-approved methodologies. The NRC documented in Generic Letter 88-16, Removal of Cycle-Specific Parameter Limits From the Technical Specifications, that this type of information is not necessary to be included in the Technical Specifications to provide adequate protection of public health and safety. The ITS still retains requirements and Surveillances that verify that the cycle-specific parameter limits are being met. ITS 3.9.1, Boron Concentration, is based on verifying that the required SHUTDOWN MARGIN is maintained in MODE 6. Also, this change is acceptable because the removed information will be adequately controlled in the COLR under the requirements provided in ITS 5.6.5, Core Operating Limits Report. ITS 5.6.5 ensures that

the applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems limits, and nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met. This change is designated as a less restrictive removal of detail change because information relating to cycle-specific parameter limits is being removed from the Technical Specifications.

LA.2 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* Unit 1 CTS 3.1.1.3.2 states "The following valves shall be locked, sealed, or otherwise secured in the closed position except during planned boron dilution or makeup activities: a. 1-CH-217 or b. 1-CH-220, 1 CH-241, FCV 1114B and FCV-1113B." Unit 2 CTS 3.1.1.3.2 states "The following valves shall be locked, sealed, or otherwise secured in the closed position except during planned boron dilution or makeup activities: a. 2-CH-140 or b. 2-CH-160, 2 CH-156, FCV 2114B and FCV-2113B." ITS 3.9.2 states, "Primary grade water flow paths shall be isolated from the RCS." ITS 3.9.2 LCO Note states, "Primary grade water flow path isolation valves may be opened under administrative control for planned boron dilution or makeup activities." This changes the CTS by relocating the list of primary grade water flow path isolation valves to the ITS Bases. The other changes in CTS 3.1.1.3.2 are discussed in DOC A.2.

The removal of these details, which are related to system design, from the Technical Specifications is acceptable because this type of information is not necessary to be included in the Technical Specifications to provide adequate protection of public health and safety. The ITS still retains the requirement that the primary grade water flow path isolation valves be closed and the valves be verified to be locked, sealed, or otherwise secured. Listing the valves in the LCO is inconsistent with the ITS conventions. Also, this change is acceptable because the removed information will be adequately controlled in the ITS Bases. Changes to the Bases are controlled by the Technical Specification Bases Control Program in Chapter 5. This program provides for the evaluation of changes to ensure the Bases are properly controlled. This change is designated as a less restrictive removal of detail change because information relating to system design is being removed from the Technical Specifications.

LESS RESTRICTIVE CHANGES

L.1 *(Category 4 – Relaxation of Required Action)* Unit 1 CTS 3.1.1.3.2 states that when the primary grade water flow path isolation valves are not locked, sealed, or otherwise secured in the closed position in MODE 6, all operations involving positive reactivity changes or CORE ALTERATIONS must be suspended, and the valves must be locked, sealed, or secured in the closed position within 15 minutes. Unit 2 CTS 3.1.1.3.2 states that when the primary grade water flow path isolation valves are not locked, sealed, or otherwise secured in the closed position, all operations involving positive reactivity changes or CORE ALTERATIONS must be suspended, the isolation valves must be locked, sealed, or otherwise secured in the closed position within 15 minutes, and SHUTDOWN MARGIN must be verified greater than or equal to 1.77% Δk/k within 60

R4

minutes. ITS 3.9.2 Actions state than when one or more valves are not secured in the closed position, CORE ALTERATIONS must be suspended immediately, the primary grade water flow paths must be isolated within 15 minutes and the boron concentration must be verified per SR 3.9.1.1 within 4 hours. This changes the Unit 1 and Unit 2 CTS by eliminating the requirement to suspend positive reactivity additions and changes the Unit 2 CTS by allowing 4 hours to determine the SHUTDOWN MARGIN. The addition of the SHUTDOWN MARGIN measurement to the Unit1 CTS is discussed in DOC M.1.

The purpose of CTS 3.1.1.3.2 is to appropriately respond to the inadvertent opening of a primary grade water flow isolation valve. This change is acceptable because the Required Actions are used to establish remedial measures that must be taken in response to the degraded conditions in order to minimize risk associated with continued operation while providing time to repair inoperable features. The Required Actions are consistent with safe operation under the specified Condition, considering the OPERABLE status of the redundant systems or features. This includes the capacity and capability of remaining systems or features, a reasonable time for repairs or replacement, and the low probability of a DBA occurring during the repair period. Suspension of positive reactivity additions is not necessary in MODE 6. The only significant positive reactivity additions that can be made in MODE 6 are a boron dilution and movement of fuel or reactivity components. ITS Required Action A.3 requires the closure of the primary grade water flow path isolation valves which eliminates the possibility of significant boron dilution. Required Action A.2 requires the suspension of CORE ALTERATIONS, which eliminates the possibility of movement of fuel or reactivity components within the reactor vessel. Therefore, the prohibition of positive reactivity changes is unneeded. Allowing 4 hours instead of 1 hour to perform the Unit 2 SHUTDOWN MARGIN determination is acceptable as 4 hours is an appropriate time to request a boron sample, allow the boron sample to be taken and analyzed, and to report the result. The other Required Actions are sufficient to ensure that the existing SHUTDOWN MARGIN is not reduced during the time needed to determine the SHUTDOWN MARGIN. This change is designated as less restrictive because less stringent Required Actions are being applied in the ITS than were applied in the CTS. R4

INSERT

For Unit 1, primary grade water flow paths may be isolated from the RCS by closing valve 1-CH-217 or 1-CH-220, , 1-CH-241, FCV-1114B and FCV-1113B. For Unit 2, primary grade water flow paths may be isolated from the RCS by closing valve 2-CH-140, or 2-CH-160, 2-CH-156, FCV-2114B, and FCV-2113B. | R4

The LCO is modified by a Note which allows the primary grade water flow path isolation valves to be opened under administrative control for planned boron dilution or makeup activities.

3.9 REFUELING OPERATIONS

3.9.1 Boron Concentration

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

APPLICABILITY: MODE 6.

NOTE

Only applicable to the refueling canal and refueling cavity when connected to the RCS.

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 the COLR.	72 hours

R4

CTS

3.9 REFUELING OPERATIONS

3.9.1 Boron Concentration

(RCS)

3.9.1 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. (1)

TSTF-272

APPLICABILITY: MODE 6.

NOTE
Only applicable to the refueling canal and refueling cavity when connected to the RCS.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
3.9.1 Action 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
4.9.1.2 SR 3.9.1.1	Verify boron concentration is within the limit specified in COLR.	72 hours

WOG-ED-11 | R4

the

ITS 5.0
QA Questions

North Anna Power Station
Units 1 and 2
Improved TS Review Comments – NRC QA Branch
ITS Chapter 5.0, Administrative Controls

5.0 Administrative Controls

5.0-01

NRC RAI: Comment: A revised (or marked up) Quality Assurance (QA) Topical Report, incorporating the proposed relocations of administrative Current Technical Specifications (CTS), should be submitted for review in conjunction with the proposed technical specification changes.

Response: The Company will take the action proposed in the Comment. A revised QA Topical Report will be provided for review.

5.0-02

NRC RAI: Relocation of administrative Technical Specifications (TS) to quality assurance programs is addressed by Administrative Letter 95-06, which is available on the NRC web. As discussed in the administrative letter, certain TS administrative requirements may be relocated intact (i.e., without change) to the QA topical.

Comment: For TS requirements that are not relocated intact, additional justification should be provided, particularly with respect to deviations from the applicable regulatory guides and standards listed in Table 17.2-0 of the QA Topical. The licensee should identify those changes that would be relocated intact and provide additional justification for those that are not.

Response: The Company will take the action proposed in the Comment. All requirements determined appropriate for relocation from the CTS to the QA Topical Report will be relocated intact. The guidance in NRC Administrative Letter 95-06 has been reviewed and evaluated as part of the determination of which items are to be relocated from the CTS to the QA Topical Report. The relocation of CTS 6.2.3, Station Nuclear Safety, is addressed by DOC LA.4. The relocation of requirements in CTS 6.5, 6.6.1.b, 6.8.2, 6.8.3, and 6.15.b, which specify the function, composition, use of alternates, meeting frequency, quorum, responsibilities, authority, and records of the Station Nuclear Safety and Operating Committee (SNSOC) and the Management Safety Review Committee (MSRC), and the use of consultants, reviews and audits for the MSRC, is addressed by DOC LA.6. Both DOC LA.4. and DOC LA.6 specify that the relocated requirements will be relocated to the QA Topical Report, which is controlled under 10 CFR 50.54(a)(3).

5.0-03

NRC RAI: With regard to the review and audit functions (CTS 6.5), the applicable basis statement (LA.6) states that the requirements would be relocated to the QA Topical Report where subsequent changes would be controlled under 10 CFR

50.59. **Comment:** Please confirm that subsequent changes to these QA commitments would be controlled under 10 CFR 50.54(a)(3) or 50.54(a)(4).

Response: The Company will take the action proposed in the Comment. DOC LA.6 will be modified to specify that the CTS 6.5 requirements will be relocated to the QA Topical Report, which is controlled under 10 CFR 50.54(a)(3).

5.0-04

NRC RAI: With regard to NUREG-0737, independent safety engineering (ISE) function (TS 6.2.3), the licensee proposes to relocate these requirements to the Updated Final Safety Analysis Report, where these changes would be controlled under 10 CFR 50.59. The ISE function is considered to be part of the licensee's plan for conducting reviews of operating phase activities, as described in NUREG-0800, Standard Review Plan 13.4. **Comment:** Accordingly, the ISE function should be relocated to the QA Topical, where subsequent changes would be controlled under 10 CFR 50.54(a)(3) or 50.54(a)(4).

Response: The Company will take the action proposed in the Comment. DOC LA.4 will be modified to specify that the requirements will be relocated to the QA Topical Report, which is controlled under 10 CFR 50.54(a)(3).

components within the cyclic or transient design limits. Also, this change is acceptable because the removed information will be adequately controlled in the UFSAR. The UFSAR is controlled under 10 CFR 50.59 which ensures changes are properly evaluated. This change is designated as a less restrictive removal of detail change because information relating to system design is being removed from the Technical Specifications.

LA.3 CTS 6.8.4.b, "In-Plant Radiation Monitoring," describes a program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. ITS 5.0 does not require such a program. This change moves the requirements of CTS 6.8.4.b to the UFSAR.

The purpose of CTS 6.8.4.b is to ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This change is acceptable because it does not affect the health and safety of members of the public. The ITS still requires appropriate post-accident monitoring in accordance with ITS 3.3.3. The UFSAR is controlled under 10 CFR 50.59 which ensures changes are properly evaluated. This change is designated as a less restrictive, removal of detail, because information is being relocated from the Technical Specifications.

LA.4 CTS 6.2.3 specifies the function, composition, responsibility, and authority of the Station Nuclear Safety (SNS). ITS 5.2 does not contain this requirement. This changes the CTS by deleting the requirements of CTS 6.2.3 and relocating them to the QA Topical Report.

QA RAI 5.0-04 R4

The purpose of CTS 6.2.3 is to specify the function, composition, responsibility, and authority of Station Nuclear Safety. This change is acceptable because there are no changes to the current requirements since the requirements are being moved to the QA Topical Report. Additionally, changes to the QA Topical Report are controlled in accordance with 10 CFR 50.54(a)(3). These controls are adequate to assure any change is properly reviewed. This change is designated as a less restrictive, removal of detail, because information is being removed from the Technical Specifications.

QA RAI 5.0-04 R4

LA.5 *(Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting Problems)* CTS 4.7.7.1 (Control Room Emergency Ventilation System) and 4.7.8.1 (Safeguards Area Ventilation System) specify the Surveillance Requirements and Frequencies for demonstrating OPERABILITY. ITS 5.5.10, "Ventilation Filter Testing Program (VFTP)" does not include some of the Surveillance Requirements and Frequencies specified in the CTS. This changes the CTS by moving these details to the VFTP.

The removal of these details for performing surveillance requirements from the Technical Specifications is acceptable because this type of information is not necessary to be included in the Technical Specifications to provide adequate protection of public health and safety. The ITS still retains the requirements to

perform tests on the ventilation filters in a manner consistent with Regulatory Positions C.5.a, C.5.c, C.5.d, and C.6.b of Regulatory Guide 1.52, Revision 2, and ANSI N510, 1975. Also, this change is acceptable because these types of procedural details will be adequately controlled in VFTP. This change is designated as a less restrictive removal of detail change because procedural details for meeting Technical Specification requirements are being removed from the Technical Specifications.

LA.6 CTS 6.5, 6.6.1.b, 6.8.2, 6.8.3, and 6.15.b specify the function, composition, use of alternates, meeting frequency, quorum, responsibilities, authority, and records of the Station Nuclear Safety and Operating Committee (SNSOC) and the Management Safety Review Committee (MSRC). CTS 6.5 also specifies the use of consultants, reviews and audits for the MSRC. ITS 5.0 does not contain these requirements. This changes the CTS by relocating the requirements for the SNSOC and MSRC to the QA Topical Report.

QA RAI 5.0-03 R4

The purpose of CTS 6.5, 6.6.1.b, 6.8.2, 6.8.3, and 6.15.b is to specify the function, composition, use of alternates, meeting frequency, quorum, responsibilities, authority, and records of the Station Nuclear Safety and Operating Committee (SNSOC) and the Management Safety Review Committee (MSRC), and the use of consultants, reviews and audits for the MSRC. The removal of these details from the Technical Specifications is acceptable because this type of information is not necessary to be included in the Technical Specifications to provide adequate protection of public health and safety. The description of the means by which the SNSOC and MSRC support the Technical Specifications and perform other tasks is moved to the QA Topical Report. Also, this change is acceptable because these types of procedural details will be adequately controlled in the QA Topical Report. The QA Topical Report is controlled under 10 CFR 50.54(a)(3) which ensures changes are properly evaluated. This change is designated as a less restrictive removal of detail change because information concerning the SNSOC and MSRC is being relocated from the Technical Specifications.

QA RAI 5.0-03 R4

LA.7 *(Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting Problems)* CTS 3.11.1.4, Liquid Holdup Tanks, imposes limits on the quantity of radioactive material contained in each tank. CTS 3.11.2.5, Explosive Gas Mixture, limits the oxygen concentration in the Waste Gas Decay Tanks to ensure that the concentration of potentially explosive gas mixtures in the Waste Gas Decay Tanks is maintained below the flammability limits for hydrogen and oxygen. CTS 3.11.2.6, Gas Storage Tanks, imposes limits on the quantity of radioactive material contained in each tank. ITS 5.5.11, "Explosive Gas and Storage Tank Radioactivity Monitoring Program," does not contain the specific requirements, Applicability, Actions, and Surveillance Requirements in CTS 3.11.1.4, CTS 3.11.2.5, and CTS 3.11.2.6. This changes the CTS by moving this information to the TRM.

The removal of these details for performing actions and surveillance requirements from the Technical Specifications is acceptable because this type of information is not

ITS 5.0

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NAPS- ITS Section 5.0

5.01 ITS 5.3.1, CTS 6.3.1, JFD 1

NRC RAI: Note in bracket or STS 5.3.1 requires minimum staff qualifications to meet Regulatory Guide 1.8, Rev 2, 1987 or more recent revisions. ITS 5.31 refers to Regulatory Guide 1.8, September 1975. The unit staff already defined SS, Assistant SS, etc, and should not be used ITS. **Comment:** The licensee to retain STS wording or provide detailed justifications for the proposed change.

Response: The Company will take the action proposed in the Comment, with certain modifications. JFD 20 is added to justify not adopting the phrase "the staff not covered by," incorporating the reference to the SS, assistant SS, etc., and adopting the CTS staff manning criteria. All of the information incorporated in this portion of ITS 5.3.1 reflects the CTS requirements.

CTS

5.0 ADMINISTRATIVE CONTROLS

6.3

5.3 Unit Staff Qualifications

Reviewer's Note: Minimum qualifications for members of the unit staff shall be specified by use of an overall qualification statement referencing an ANSI Standard acceptable to the NRC staff or by specifying individual position qualifications. Generally, the first method is preferable; however, the second method is adaptable to those unit staffs requiring special qualification statements because of unique organizational structures.

(8)

6.3.1 "X"

5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of [Regulatory Guide 1.8, Revision 2, 1987, or more recent revisions, or ANSI Standard acceptable to the NRC staff]. The [staff not covered by Regulatory Guide 1.8] shall meet or exceed the minimum qualifications of [Regulations, Regulatory Guides, or ANSI Standards acceptable to NRC staff].

(1)

(1)

TSTF-258

INSERT →

10 CFR 55.59(c) and 55.31(a)(4)

ANSI 3.1 (12/79 Draft) for comparable positions. Exceptions to this requirement are specified in VEPCO's QA Topical Report, VEP-1, "Quality Assurance Program, Operational Phase." The radiation protection manager shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.

SS, Assistant SS, Control Room Operator - Nuclear, and the individual providing advisory technical support to the unit operations shift crew,

(20)

RAI 5.0-01 R4

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Rev. 4

amount that would result in concentrations greater than, rather than less than, the limits of 10 CFR 20, Appendix B, Table 2, Column 2 in case of the specified event. ISTS 5.5.12.c is also modified to clarify that the radioactivity limits exclude limits on tritium. These changes are consistent with the current licensing basis and guidance in NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants," section 4.4.

19. ISTS 5.5.7 is modified to state that the provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Reactor Coolant Pump Flywheel Inspection Program surveillance frequency. This allowance is consistent with the current licensing basis, and is consistent with the NUREG-1431 format of retaining these allowances for other current Technical Specification requirements that have been moved to Section 5.0.

20. The discussion in ISTS 5.3.1 regarding qualifications of staff not covered by Regulatory Guide 1.8 is replaced with a statement that the shift supervisor, assistant shift supervisor, Control Room Operator – Nuclear, and the individual providing advisory support to the unit operations shift crew are required to meet or exceed the minimum qualifications of 10 CFR 55.59(c) and 55.31(a)(4). These requirements are consistent with the CTS, and the CTS requirements do not include qualifications of staff not covered by Regulatory Guide 1.8. RAI 5.0-01 R4

21. References in ISTS 5.5.12 to the "offgas system" are not adopted. NAPS does not include an offgas system, which is usually associated with boiling water reactors. RAI 5.0-07 R4

22. This bracketed requirement is deleted because it is not applicable to North Anna. The following requirements are renumbered, where applicable, to reflect this deletion. RAI 5.0-08 R4

23. The requirement to include a preplanned alternate method of monitoring in case of Post Accident Monitoring (PAM) instrumentation inoperability is not adopted. The NAPS design does not have alternate methods of monitoring if the PAM instrumentation is inoperable. R4

NAPS- ITS Section 5.0

5.02 ITS 5.4.1, CTS 6.8.1.g, L32

NRC RAI: DOC L32 states that the change to PCP is acceptable due to the fact that "Compliance with the specified requirements governing the disposal of radioactive waste is still required." **Comment:** Licensee needs to provide information and justify how the CTS requirements are being complied in ITS with CTS requirements are being removed. Revise the DOC to reflect this compliance.

Response: The Company will take the action proposed in the Comment. DOC L.32 will be modified to provide this justification. Compliance with the requirements governing the disposal of radioactive waste in 10 CFR Parts 20, 61, and 71, are still required. In addition, requirements with state regulations, burial ground requirements, and other requirements governing the disposal of radioactive waste referenced in CTS 6.8.1.g will be complied with, as required, but not as requirements in ITS 5.4.1.

quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days. Determination of projected dose contributions from radioactive effluents in accordance with the methodology and parameters in the ODCM at least every 31 days." This changes the CTS by not requiring that a projection of the dose contribution for the current calendar quarter and the current calendar year be performed every 31 days.

The purpose of the portions of CTS 6.8.4.e.5 is to determine the cumulative dose contributions for the current calendar quarter and current calendar year and to then project the dose contributions in the future. This is necessary to assess current and future compliance with offsite dose limits. This change is acceptable because the requirements continue to ensure that the appropriate programs are maintained consistent with the licensing basis. The current wording could be construed to require projection for the current quarter and current year. This misleading wording was promulgated in Generic Letter 89-01. The NRC has agreed that the proposed wording represents the intent of the requirements in their approval of TSTF-308, Revision 1. This change is designated as less restrictive because less stringent requirements are being applied in the ITS than were applied in the CTS.

L.32 CTS 1.22 describes the Process Control Program (PCP). CTS 6.14 (Unit 1) and CTS 6.13 (Unit 2) specifies the change control for the PCP. CTS 6.8.1.g requires written procedures be established, implemented, and maintained to cover PCP implementation. The ITS does not specify requirements for the PCP. This changes the CTS by removing the requirements associated with the contents and maintenance of the PCP.

The purpose of CTS 1.22, CTS 6.14 (Unit 1), CTS 6.13 (Unit 2), and 6.8.1.g is to describe requirements for the PCP in order to assure compliance with 10 CFR Parts 20, 61, and 71, State regulations, burial ground requirements, and other requirements governing the disposal of radioactive waste. This change is acceptable because the requirements for the PCP change control are not required to be in the ITS to provide adequate protection of the public health and safety. The requirements of 10 CFR Parts 20, 61, and 71 will continue to be complied with, and NAPS will also continue to comply with appropriate state regulations, burial ground requirements, and other requirements governing the disposal of radioactive waste. This change is designated as less restrictive because the specific manner in which regulations are being met is being removed from the Technical Specifications.

RAI 5.0-02 R4

L.33 *(Category 6 – Relaxation Of Surveillance Requirement Acceptance Criteria)* CTS 4.7.7.2.c states that the relative humidity at which the laboratory test samples of the charcoal adsorber are tested is 95%. ITS 5.5.10.c states that the relative humidity at which the laboratory test samples of the charcoal adsorber are tested is 70%. This changes the CTS by relaxing the criteria for the test of the charcoal adsorber to a 70% humidity level instead of 95%.

NAPS- ITS Section 5.0

5.03 ITS 5.5.6, CTS 4.4.10.1.1, Insert 2

NRC RAI: A reference of TSTF-237 was provided as reason for changes to STS 5.5.7 [proposed ITS 5.5.6], changes proposed in TSTF-237 provide exception to the recommendations of Regulatory Guide 1.14, Rev 1, Regulatory position C.4.b, and allow for an acceptable inspection method. **Comment:** Licensee to provide JFD for the proposed INSERT 2 or retain STS wording and adopt the "INSERT" that came with TSTF-237, Rev 1.

Response: The Company will take the action proposed in the Comment. JFD 1 will be provided to document that information from the CTS will be provided to replace the bracketed information in the insert associated with TSTF-237.

INSERT 1

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Radioactive Effluent Controls Program surveillance frequency.

INSERT 2

[In lieu of Position C.4.b(1) and C.4.b(2), a qualified in-place UT examination over the volume from the inner bore of the flywheel to the circle one-half of the outer radius or a surface examination (MT and/or PT) of exposed surfaces of the removed flywheels may be conducted at approximately 10 year intervals coinciding with the Inservice Inspection schedule as required by ASME Section XI.]

once every 10 years by a qualified inplace UT examination over the volume from the inner bore of the flywheel to the circle of one-half the outer radius or a surface examination (MT and/or PT) of exposed surfaces defined by the volume of disassembled flywheels.

RAI 5.0-03 R4 (1)

INSERT 3

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Reactor Coolant Pump Flywheel Inspection Program surveillance frequency.

NAPS- ITS Section 5.0

5.04 ITS 5.5.8, CTS 4.4.5.2, JFD 7, new INSERT to page ITS page 5.0.11

NRC RAI: Comment: Explain why JFD 7 is applicable to the proposed ITS 5.5.8. Explain content of new INSERT such as where they [e.g.; items in the INSERT] are relocated from, and revise JFD 7 to include these reasons.

Response: The Company will take the action proposed in the Comment. JFD 7 is applicable to ITS 5.5.8 because it deletes ISTS 5.5.6, and causes the renumbering of subsequent Programs in ITS section 5.5. The INSERT provides CTS information into the brackets of ISTS 5.5.9, and is addressed by JFD 1.

NAPS- ITS Section 5.0

5.05 ITS 5.5.9, CTS 6.8.4.c, JFD 4

NRC RAI: JFD 7 states that "Reference to low pressure turbine disc stress corrosion cracking associated with the secondary water chemistry program is deleted because it is not applicable to NAPS. Does this mean that NAPS has no such turbine disk in the system? The JFD further states that there has been no evidence of low pressure turbine disc stress corrosion cracking at NAPS. Please explain how is this conclusion was reached and based on what information? **Comment:** Licensee to adopt STS wording or revise JFD to provide detailed justification.

Response: The Company will take the action proposed in the Comment. ISTS wording will be adopted, JFD 4 is deleted, and DOC M.22 is added with appropriate CTS markups.

5.5 Programs and Manuals

5.5.9 Secondary Water Chemistry Program

This program provides controls for monitoring secondary water chemistry to inhibit SG tube degradation and low pressure turbine disc stress corrosion cracking. The program shall include: RAI 5.0-05 R4

a. Identification of a sampling schedule for the critical variables and control points for these variables;

b. Identification of the procedures used to measure the values of the critical variables;

c. Identification of process sampling points, which shall include monitoring the discharge of the condensate pumps for evidence of condenser in leakage;

d. Procedures for the recording and management of data;

e. Procedures defining corrective actions for all off control point chemistry conditions; and

f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events, which is required to initiate corrective action.

5.5.10 Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems in general conformance with the frequencies and requirements of Regulatory Positions C.5.a, C.5.c, C.5.d, and C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, and ANSI N510-1975.

a. Demonstrate for each of the ESF systems that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < 1.0% when tested in accordance

(continued)

CTS

5.5 Programs and Manuals (continued)

6.8.4.c 5.5.10 (9) Secondary Water Chemistry Program (7)

RAI 5.0-05 R4

This program provides controls for monitoring secondary water chemistry to inhibit SG tube degradation and low pressure turbine disc stress corrosion cracking. The program shall include:

a. Identification of a sampling schedule for the critical variables and control points for these variables;

b. Identification of the procedures used to measure the values of the critical variables;

c. Identification of process sampling points, which shall include monitoring the discharge of the condensate pumps for evidence of condenser in leakage;

d. Procedures for the recording and management of data;

e. Procedures defining corrective actions for all off control point chemistry conditions; and

f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events, which is required to initiate corrective action.

(10) 5.5.11 Ventilation Filter Testing Program (VFTP) (7)

in general conformance with

4.7.7.1
4.7.8.1
4.9.12 requirements of Regulatory Positions C.5.a, C.5.c, C.5.d, and C.6.b of ANSI 1975

A program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems at the frequencies specified in [Regulatory Guide], and (3) (1) in accordance with [Regulatory Guide 1.52, Revision 2, March 1978, and (1) (3) ASME N510-[1989] and AG-1].

4.7.7.1.b.1
4.7.7.1.e

a. Demonstrate for each of the ESF systems that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < [0.05]% when tested in accordance with [Regulatory Guide 1.52, Revision 2, and ASME N510-[1989]] at the system flowrate specified below [± 10%]. (1.0) (1) (3) (1) ANSI

Regulatory Positions C.5.a and C.5.c of 1975

ESF Ventilation System	Flowrate
Main Control Room/Emergency Switchgear Room (MCR/ESGR) Emergency Ventilation System (EVS)	[ ]	1000 cfm
Emergency Core Cooling System (ECCS) Pump Room Exhaust Air Cleanup System (PREACS)		

INSERT

Nominal accident flow for a single train actuation

(1) R4 (15)

(continued)

Rev. 4

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

2. The statement in ISTS 5.2.2.f is modified to state, "The Superintendent Operations shall hold (or have previously held) a Senior Reactor Operator License for North Anna or a similar design Pressurized Water Reactor plant. The Supervisor Shift Operations shall hold an active Senior Reactor Operator License for North Anna Power Station." This is consistent with the current licensing basis.

3. Changes are made (additions, deletions, and/or changes) to the ISTS which reflect the plant specific nomenclature, number, reference, system description, analysis, or licensing basis description.

4. Not used. RAI 5.0-05 R4

5. ISTS 5.6.6, "Reactor Coolant System (RCS) Pressure and Temperature Limits Report (PTLR)," is not adopted in the ITS. CTS Figures 3.4-2 and 3.4-3, which provide Reactor Coolant System heatup and cooldown limitations, respectively, were adopted in ITS Specification 3.4.3, "RCS Pressure and Temperature (P/T) Limits." Subsequent Specifications are renumbered accordingly.

6. Not used. R4

7. The ISTS 5.5.6 requirement, "Pre-Stressed Concrete Containment Tendon Surveillance Program," is not adopted because it is not applicable to the North Anna design. The ISTS 5.6.9 requirement, "Tendon Surveillance Report," is also not adopted. The containment at North Anna is a steel-lined, heavily reinforced concrete structure with vertical cylindrical wall and hemispherical dome, supported on a flat base mat. Subsequent Specifications are renumbered accordingly.

8. The information contained in the reviewer's note is not retained.

9. Not used. R4

10. The ISTS 5.5.13.a.3 requirement to determine a clear and bright appearance with proper color as part of determining acceptability of new fuel oil prior to addition to the storage tanks is not adopted, and a test for water and sediment being ≤ 0.05 percent is adopted instead. The water and sediment test is adopted because the diesel fuel oil is dyed.

11. The ISTS 5.5.13.c requirement to determine, "Total particulate concentration of the fuel oil" every 31 days is modified. ITS 5.5.12.c adds the word "stored" in front of the term "fuel oil" to clarify that the test is to be performed on stored fuel oil rather than new fuel oil. The frequency of the test is changed from 31 days to 92 days based on plant operating practice of conducting the test every 92 days, test history indicating that the

b. In-Plant Radiation Monitoring

A program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

(i) Training of personnel,

(ii) Procedures for monitoring, and

(iii) Provisions for maintenance of sampling and analysis equipment.

(LA.3)

5.5.9

c. Secondary Water Chemistry

A program for monitoring of secondary water chemistry to inhibit steam generator tube degradation. This program shall include:

(and low pressure turbine disc stress corrosion cracking) (M.22) RAI 50-05 R4

(i) Identification of a sampling schedule for the critical variables and control points for these variables,

(ii) Identification of the procedures used to measure the values of the critical variables,

(iii) Identification of process sampling points, which shall include monitoring the discharge of the condensate pumps for evidence of condenser inleakage,

(iv) Procedures for the recording and management of data,

(v) Procedures defining corrective actions for all control (off) point chemistry conditions, and (A.35)

(vi) A procedure identifying (a) the authority responsible for the interpretation of the data, and (b) the sequence and timing of administrative events required to initiate corrective action.

5.5.3

d. Post-Accident Sampling

A program which will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. The program shall include the following:

(i) Training of personnel,

(ii) Procedures for sampling and analysis,

(iii) Provisions for maintenance of sampling and analysis equipment.

(A.1)

ITS 5.0

12-9-92

ITS

ADMINISTRATIVE CONTROLS

b. In-Plant Radiation Monitoring

A program which will ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

(i) Training of personnel,

(ii) Procedures for monitoring, and

(iii) Provisions for maintenance of sampling and analysis equipment.

(LA.3)

5.5.9

c. Secondary Water Chemistry

A program for monitoring of secondary water chemistry to inhibit steam generator tube degradation. This program shall include:

(and low pressure turbine disc stress corrosion cracking)

(M.22) RAI 5.0-05 R4

(i) Identification of a sampling schedule for the critical variables and control points for these variables,

(ii) Identification of the procedures used to measure the values of the critical variables,

(iii) Identification of process sampling points, which shall include monitoring the discharge of the condensate pumps for evidence of condenser inleakage,

(iv) Procedures for the recording and management of data,

(v) Procedures defining corrective actions for all control point chemistry conditions, and

(off)

(A.35)

(vi) A procedure identifying (a) the authority responsible for the interpretation of the data, and (b) the sequence and timing of administrative events required to initiate corrective action.

5.5.3

d. Post-Accident Sampling

A program which will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. The program shall include the following:

(i) Training of personnel,

(ii) Procedures for sampling and analysis,

(iii) Provisions for maintenance of sampling and analysis equipment.

assembly is modified to include flow contribution from the Auxiliary Building central exhaust system fans. The system flow rate specified for CTS 4.7.8.1.b.1, 4.7.8.1.d, 4.7.8.1.e, and 4.7.8.1.f is changed to, "Nominal accident flow for a single train actuation." The system flow rate specified for CTS 4.7.8.1.b.3 is changed to, "...one ECCS PREACS train provides greater than the minimum required cooling flow for ECCS equipment." CTS 4.7.8.1.d.1 is changed to state that the flow rate used for testing the pressure drop across the HEPA filter and charcoal adsorber assembly is ≤ 39,200 cfm. A Note is added to CTS 4.7.8.1 that states, "Nominal accident flow for a single train actuation is greater than the minimum required cooling flow for ECCS equipment operation, and ≤ 39,200 cfm, which is the maximum flow rate providing an acceptable residence time within the charcoal adsorber." These changes are acceptable because they add requirements for system components consistent with the intent of NUREG 1431. Specific testing values are changed to properly accommodate these changes in system testing.

References to specific values for testing filter banks, except for pressure drop testing, is replaced with a requirement to perform the test with one train of ECCS PREACS aligned in the post-accident flow configuration. An explanation is added to clarify that flow is acceptable if it is greater than or equal to the minimum required cooling flow for ECCS equipment, and if it has less than the maximum design flow rate of the filter bank (39,200 cfm). The proposed surveillance requirement parameters establish operability of the ventilation system to provide cooling to ECCS equipment and to provide filtration of potential airborne radioactivity prior to being exhausted to the atmosphere. The ECCS PREACS surveillance requirements will ensure that a single train will provide the necessary exhaust flow rate from the ECCS pump rooms. Each ECCS PREACS train includes a HEPA filter and a charcoal adsorber assembly for this purpose. The design (maximum) flow rate for one filter bank is 39,200 cfm, which is based on providing a minimum residence time within the charcoal adsorber. Surveillance requirements will ensure that the flow rate through the filter bank is below the maximum flow rate. Based on testing and engineering evaluation, the maximum pressure drop parameter across the HEPA filter and charcoal adsorber is changed from < 6 inches water gauge to <5 inches water gauge.

These changes are acceptable because they provide additional assurance that the required functions are provided by the ECCS PREACS by adding additional equipment required to be OPERABLE and testing requirements appropriate for the equipment configuration at NAPS. This change is designated as more restrictive because additional equipment and respective acceptance criteria are being added.

M.22 CTS 6.8.4.c, "Secondary Water Chemistry," requires, "A program for monitoring of secondary water chemistry to inhibit steam generator tube degradation." ITS 5.5.10, "Secondary Water Chemistry Program," states, "This program provides controls for monitoring secondary water chemistry to inhibit SG tube degradation and low pressure turbine disc stress corrosion cracking." This changes CTS by adding the fact that the Secondary Water Chemistry Program provides controls for monitoring

RAI 5.0-05 R4

secondary water chemistry to inhibit low pressure turbine disc stress corrosion cracking in addition to SG tube degradation.

This change is acceptable because it clarifies that secondary water chemistry could contribute to low pressure turbine disc stress corrosion cracking, and this is another reason secondary water chemistry is monitored. This change is designated as more restrictive because an additional reason for the Secondary Water Chemistry Program is added.

RAI 5.0-05 R4

M.23 Unit 1 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." Unit 2 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." ITS 5.7.1.c states, "Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." ITS 5.7.2.c states, "Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." This changes the CTS by requiring that for personnel to be exempt from the RWP issuance requirement, they must be qualified in radiation protection procedures, or escorted by a qualified individual in high radiation areas. Changing the term "Health Physics" to "radiation protection" is addressed by DOC L.11.

RAI 5.0-11 5.0-13 R4

The purpose of CTS 6.12 footnote "*" is to provide an allowance for qualified personnel to not have to issue an RWP during the performance of their assigned radiation protection duties. This change is acceptable because it provides added assurance that the personnel performing radiation protection duties, or performing escort duties, will maintain personnel exposure to within established limits. These changes are designated as more restrictive because the criteria that personnel must meet in order to perform the duties specified are more specific.

M.24 CTS Table 6.2-1 requires that with both units in MODE 5 or 6 or defueled, two Auxiliary Operators (AOs) be part of the staff manning, one AO assigned to each unit. ITS 5.2.2.a states, "Two unit sites with both units shutdown or defueled require a total of three non-licensed operators for the two units." This changes the CTS by requiring three AOs with both units shutdown or defueled. Other changes to the AO requirements are addressed by DOC L.9.

R4

NAPS- ITS Section 5.0

5.06 ITS 5.5.10.d, CTS 4.7.7.1.d, JFD 16, new INSERT to page 5.0-13

NRC RAI: Format not consistent with other ITS formats that have adopted in same ITS section. **Comment:** Licensee to re arrange parameters and adopt STS Table format.

Response: The Company will take the action proposed in the Comment. The ISTS Table format is adopted, and JFD 16 is deleted. The CTS markups are revised to reference the revised ITS section number.

5.5 Programs and Manuals

5.5.10 Ventilation Filter Testing Program (VFTP)

c. (continued)

value specified below when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and relative humidity specified below.

ESF Ventilation System	Penetration	RH
MCR/ESGR EVS	2.5%	70%
ECCS PREACS	5%	70%

d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified below when tested in accordance with ANSI N510-1975 at the system flowrate specified below. RAI 5.0-06 R4 RAI 5.0-06 R4

ESF Ventilation System	Delta P	Flowrate
MCR/ESGR EVS	4 inches W.G.	1000 ± 10% cfm
ECCS PREACS	5 inches W.G.	≤ 39,200 cfm

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP test frequencies.

5.5.11 Explosive Gas and Storage Tank Radioactivity Monitoring Program

This program provides controls for potentially explosive gas mixtures contained in the Gaseous Waste System, the quantity of radioactivity contained in gas storage tanks, and the quantity of radioactivity contained in unprotected outdoor liquid storage tanks. The gaseous radioactivity quantities shall be determined following the methodology in Branch Technical Position (BTP) ETSB 11-5, "Postulated Radioactive Release due to Waste Gas System Leak or Failure". The liquid radwaste quantities shall be determined in accordance with Standard Review Plan, Section 15.7.3, "Postulated Radioactive Release due to Tank Failures". RAI 5.0-07 R4

The program shall include:

a. The limits for concentrations of hydrogen and oxygen in the Gaseous Waste System and a surveillance program to ensure the limits are maintained. Such limits shall be appropriate to the system's design criteria (i.e., whether or not the system is designed to withstand a hydrogen explosion); RAI 5.0-07 R4

CTS

5.5 Programs and Manuals

4.7.7.1.d

5.5.(11)(10) Ventilation Filter (ANSI) Testing Program (VFTP) (continued)

(Revision 2) and ASME N510-(1989) (1975) at the system flowrate specified below [± 10%]:

ESF Ventilation System	Delta P	Flowrate
MCR/ESGR EVS	4 inches W.G.	1000 cfm ± 10%
ECCS PREACS	5 inches W.G.	≤ 39,200 cfm

RAI 5.0-06 R4

e. Demonstrate that the heaters for each of the ESF systems dissipate the value specified below [± 10%] when tested in accordance with [ASME N510-1989].

ESF Ventilation System	Wattage

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP test frequencies.

5.5.(12)(11) Explosive Gas and Storage Tank Radioactivity Monitoring Program

New

This program provides controls for potentially explosive gas mixtures contained in the [Waste Gas Holdup System] (Gaseous Waste), [the quantity of radioactivity contained in gas storage tanks or fed into the offgas treatment system, and the quantity of radioactivity contained in unprotected outdoor liquid storage tanks]. The gaseous radioactivity quantities shall be determined following the methodology in [Branch Technical Position (BTP) ETSB 11-5, "Postulated Radioactive Release due to Waste Gas System Leak or Failure"]. The liquid radwaste quantities shall be determined in accordance with [Standard Review Plan, Section 15.7.3, "Postulated Radioactive Release due to Tank Failures"].

RAI 5.0-7 R4

The program shall include:

3.11.2.5

a. The limits for concentrations of hydrogen and oxygen in the (Gaseous Waste) [Waste Gas Holdup System] and a surveillance program to ensure the limits are maintained. Such limits shall be

RAI 5.0-7 R4

(continued)

"fuel oil" to clarify that the test is to be performed on stored fuel oil rather than new fuel oil. The frequency of the test is changed from 31 days to 92 days based on plant operating practice of conducting the test every 92 days, test history indicating that the interval is appropriate, and there being no current Technical Specification requirement to perform the test.

12. The ISTS 5.5.11.e bracketed requirement to demonstrate ESF systems ventilation filter heater heat dissipation capability is not adopted. The ESF systems ventilation systems heaters at NAPS are not required for Operability of the ventilation systems, they are only required for performance of the surveillance test. A separate test in the Technical Specifications is not warranted and is consistent with the current licensing basis.

13. Face velocity is not adopted as one of the required parameters for testing charcoal adsorbers in ISTS 5.5.11.c. The system does not have a face velocity greater than 110 percent of 0.203 m/s (40 ft/min), and according to TSTF-362 is thus not required to be specified in the ITS.

14. ISTS 5.5.15 Containment Leakage Rate Testing Program air lock testing acceptance criterion d.2.b) is not adopted. ISTS 5.5.15.d.2.b) states, "For each door, leakage rate is $\leq$ 0.01 L_a when pressurized to $\geq$ 10 psig." North Anna uses criterion 5.5.15.d.2.a), which states, "Overall air lock leakage rate is $\leq 0.05\ L_a$ when tested at $\geq P_a$." Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995, endorses NEI 94-01, which specifies criteria which the airlock doors are required to meet. ISTS 5.5.15.d.2.a), in conjunction with the commitment that the program shall be in accordance with the guidelines contained in contained in Regulatory Guide 1.163, provides an acceptable leakage rate criterion for the air lock doors, and ISTS 5.5.15.d.2.b) is not required.

RAI 5.0-09 R4

15. An explanation is added to ISTS 5.5.11.a and ISTS 5.5.11.b for the phrase, "Nominal accident flow for a single train actuation," which is used for the ECCS PREACS flowrate designated. Use of nominal accident flow is a better measure than a specific flow value of whether the filters will perform their function, since this is the flow that will occur in case of a DBA. This explanation is consistent with current licensing basis and plant design.

16. Not used.

RAI 5.0-06 R4

17. STS 5.5.15.d.1 is modified to specifically address containment leakage rate requirements prior to entering a MODE where containment OPERABILITY is required, and during operation where containment OPERABILITY is required. The requirements adopted in ITS 5.5.15.d.1 are consistent with the CTS requirements, and encompass the requirements of ISTS 5.5.15.d.1.

18. ISTS 5.5.12.c is modified to clarify that the surveillance program described limits the radioactivity contained in the specified outdoor liquid radwaste tanks to less than the

A.1

ITS 5.0

ITS

INSERT →

A.5

A.23

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

4.7.7.1 Each control room emergency ventilation system shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 hours with the heaters on.

See ITS 3.7.10

b. At least once per ~~18~~ months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system by:

LA.5

5.5.10.a
5.5.10.b

1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 1000 cfm ± 10% ~~(except as shown in Specifications 4.7.7.1e and f.)~~.

LA.5

5.5.10.c

2. Verifying ~~, within 31 days after removal,~~ that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows the methyl iodide penetration less than or equal to 2.5% when tested in accordance with ASTM D 3803-1989 at a temperature of 30°C (86°F) and a relative humidity of 70%.

5.5.10.a
5.5.10.b

3. Verifying a system flow rate of 1000 cfm ± 10% during system operation when tested in accordance with ANSI N510-1975.

c. ~~Within 31 days of completing 720 hours of charcoal adsorber operation,~~ verify that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows the methyl iodide penetration less than or equal to 2.5% when tested in accordance with ASTM D 3803-1989 at a temperature of 30°C (86°F) and a relative humidity of 70%.

LA.5

5.5.10.c

d. ~~At least once per 18 months by:~~

LA.5

5.5.10.d

1. Verifying that the pressure drop across the demister filter, HEPA filter and charcoal adsorber is < 4 inches Water Gauge while operating the filter train at a flow rate of 1000 cfm ± 10%.

RAI 5.0-06 R4

A.1

ITS 5.0

A.5

A.23

ITS INSERT →

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

4.7.7.1 Each control room emergency ventilation system shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 hours with the heaters on.

See ITS 3.7.10

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system by:

LA.S

5.5.10.a 1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 1000 cfm ± 10% (except as shown in Specifications 4.7.7.1e. and f.).

5.5.10.b

LA.S

5.5.10.c 2. Verifying, within 31 days after removal, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows the methyl iodide penetration less than or equal to 2.5% when tested in accordance with ASTM D 3803-1989 at a temperature of 30°C (86°F) and a relative humidity of 70%.

5.5.10.a 3. Verifying a system flow rate of 1000 cfm ± 10% during system operation when tested in accordance with ANSI N510-1975.

5.5.10.b

c. Within 31 days of completing 720 hours of charcoal adsorber operation, verify that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows the methyl iodide penetration less than or equal to 2.5% when tested in accordance with ASTM D 3803-1989 at a temperature of 30°C (86°F) and a relative humidity of 70%.

LA.S

5.5.10.c

d. At least once per 18 months by:

LA.S

5.5.10.d 1. Verifying that the pressure drop across the demister filter, HEPA filter and charcoal adsorber assembly is < 4 inches Water Gauge while operating the filter train at a flow rate of 1000 cfm ± 10%.

RAI 5.0-06 R4

NAPS- ITS Section 5.0

5.07 ITS 5.5.11, ITS 5.5.11.a, ITS 5.5.11.b, CTS 3.11.2.5, marked-up bubbles

NRC RAI: STS wording "Waste Gas Holdup System" is changed to "Waste Gas Decay Tanks". Licensee to provide justification for this change from STS wording. **Comment:** Licensee to explain reason for deletion of wording "and fed into the offgas treatment system" from STS 55.12.b and provide related JFD for these proposed changes.

Response: The Company will take the action proposed in the Comment, with modifications. The term "Gaseous Waste System" will be substituted for "Waste Gas Holdup System." There is no system similar to the "offgas system," which is generally associated with Boiling Water Reactors. JFD 21 is added to explain that the reference to the "offgas system" is not applicable to NAPS.

5.5 Programs and Manuals

5.5.10 Ventilation Filter Testing Program (VFTP)

c. (continued)

value specified below when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and relative humidity specified below.

ESF Ventilation System	Penetration	RH
MCR/ESGR EVS	2.5%	70%
ECCS PREACS	5%	70%

d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified below when tested in accordance with ANSI N510-1975 at the system flowrate specified below. RAI 5.0-06 R4 RAI 5.0-06 R4

ESF Ventilation System	Delta P	Flowrate
MCR/ESGR EVS	4 inches W.G.	1000 ± 10% cfm
ECCS PREACS	5 inches W.G.	≤ 39,200 cfm

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP test frequencies.

5.5.11 Explosive Gas and Storage Tank Radioactivity Monitoring Program

This program provides controls for potentially explosive gas mixtures contained in the Gaseous Waste System, the quantity of radioactivity contained in gas storage tanks, and the quantity of radioactivity contained in unprotected outdoor liquid storage tanks. The gaseous radioactivity quantities shall be determined following the methodology in Branch Technical Position (BTP) ETSB 11-5, "Postulated Radioactive Release due to Waste Gas System Leak or Failure". The liquid radwaste quantities shall be determined in accordance with Standard Review Plan, Section 15.7.3, "Postulated Radioactive Release due to Tank Failures". RAI 5.0-07 R4

The program shall include:

a. The limits for concentrations of hydrogen and oxygen in the Gaseous Waste System and a surveillance program to ensure the limits are maintained. Such limits shall be appropriate to the system's design criteria (i.e., whether or not the system is designed to withstand a hydrogen explosion); RAI 5.0-07 R4

CTS

5.5 Programs and Manuals

4.7.7.1.d

5.5.(11)(10) Ventilation Filter Testing Program (VFTP) (continued)

(7) (1) RAI 5.0-06 R4

(ANSI) Revision 2 and ASME N510-1989 at the system flowrate specified below (± 10%)

ESF Ventilation System	Delta P	Flowrate
MCR/ESGR EVS	4 inches W.G.	10 00 cfm ± 10%
ECCS PREACS	5 inches W.G.	≥ 39,200 cfm

(1)

e. Demonstrate that the heaters for each of the ESF systems dissipate the value specified below [± 10%] when tested in accordance with [ASME N510-1989].

(1)

ESF Ventilation System	Wattage

(12)

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP test frequencies.

5.5.(12)(11) Explosive Gas and Storage Tank Radioactivity Monitoring Program

(7) (1)

New

This program provides controls for potentially explosive gaseous waste mixtures contained in the [Waste Gas Holdup System], [the quantity of radioactivity contained in gas storage tanks or fed into the offgas treatment system, and the quantity of radioactivity contained in unprotected outdoor liquid storage tanks]. The gaseous radioactivity quantities shall be determined following the methodology in [Branch Technical Position (BTP) ETSB 11-5, "Postulated Radioactive Release due to Waste Gas System Leak or Failure"]. The liquid radwaste quantities shall be determined in accordance with [Standard Review Plan, Section 15.7.3, "Postulated Radioactive Release due to Tank Failures"].

(1) (1) (2) (1) RAI 5.0-7 R4

(1) (1)

The program shall include:

3.11.2.5

a. The limits for concentrations of gaseous waste hydrogen and oxygen in the [Waste Gas Holdup System] and a surveillance program to ensure the limits are maintained. Such limits shall be

(1) RAI 5.0-7 R4

(continued)

CTS

5.5 Programs and Manuals

5.5.12 (11) Explosive Gas and Storage Tank Radioactivity Monitoring Program (continued) (7)

appropriate to the system's design criteria (i.e., whether or not the system is designed to withstand a hydrogen explosion);

3.11.2.6 b. A surveillance program to ensure that the quantity of radioactivity contained in each gas storage tank and fed into the offgas treatment system is less than the amount that would result in a whole body exposure of ≥ 0.5 rem to any individual in an unrestricted area, in the event of an uncontrolled release of the tanks' contents; and (21) (1) RAI 5.0-7 R4

3.11.1.4 c. A surveillance program to ensure that the quantity of radioactivity contained in each of the following: (3)

- all outdoor liquid radwaste tanks that are not surrounded by liners, dikes, or walls, capable of holding the tanks' contents and that do not have tank overflows and surrounding area drains connected to the
- liquid radwaste ion exchanger system

[Liquid Radwaste Treatment System] is less than the amount that would result in concentrations less (1) than the limits of 10 CFR 20, Appendix B, Table 2, Column 2, at the nearest potable water supply and the nearest surface water supply in an unrestricted area, in the event of an uncontrolled release of the tanks' contents, excluding tritium, (3) greater (18)

INSERT

New The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Explosive Gas and Storage Tank Radioactivity Monitoring Program surveillance frequencies.

New 5.5.18 (12) Diesel Fuel Oil Testing Program (7)

A diesel fuel oil testing program to implement required testing of both new fuel oil and stored fuel oil shall be established. The program shall include sampling and testing requirements, and acceptance criteria, all in accordance with applicable ASTM Standards. The purpose of the program is to establish the following:

a. Acceptability of new fuel oil for use prior to addition to storage tanks by determining that the fuel oil has:

1. an API gravity or an absolute specific gravity within limits,

(continued)

amount that would result in concentrations greater than, rather than less than, the limits of 10 CFR 20, Appendix B, Table 2, Column 2 in case of the specified event. ISTS 5.5.12.c is also modified to clarify that the radioactivity limits exclude limits on tritium. These changes are consistent with the current licensing basis and guidance in NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants," section 4.4.

19. ISTS 5.5.7 is modified to state that the provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Reactor Coolant Pump Flywheel Inspection Program surveillance frequency. This allowance is consistent with the current licensing basis, and is consistent with the NUREG-1431 format of retaining these allowances for other current Technical Specification requirements that have been moved to Section 5.0.

20. The discussion in ISTS 5.3.1 regarding qualifications of staff not covered by Regulatory Guide 1.8 is replaced with a statement that the shift supervisor, assistant shift supervisor, Control Room Operator – Nuclear, and the individual providing advisory support to the unit operations shift crew are required to meet or exceed the minimum qualifications of 10 CFR 55.59(c) and 55.31(a)(4). These requirements are consistent with the CTS, and the CTS requirements do not include qualifications of staff not covered by Regulatory Guide 1.8. RAI 5.0-01 R4

21. References in ISTS 5.5.12 to the "offgas system" are not adopted. NAPS does not include an offgas system, which is usually associated with boiling water reactors. RAI 5.0-07 R4

22. This bracketed requirement is deleted because it is not applicable to North Anna. The following requirements are renumbered, where applicable, to reflect this deletion. RAI 5.0-08 R4

23. The requirement to include a preplanned alternate method of monitoring in case of Post Accident Monitoring (PAM) instrumentation inoperability is not adopted. The NAPS design does not have alternate methods of monitoring if the PAM instrumentation is inoperable. R4

NAPS- ITS Section 5.0

5.08 ITS 5.5.15.a, and b, CTS 4.6.1.2, CTS 4.6.1.3.a, no JFD

NRC RAI: Licensee to provide JFD to justify the differences in wording from that of TSTF-52, Rev 1. And that proposed for ITS 5.5.15.a, and the proposed wording "The Peak calculated..." for ITS 5.5.15.b. **Comment:** Licensee to provide JFD or adopt wording in TSTF-52.

Response: The Company will take the action proposed in the Comment.
ITS 5.5.15.a is exactly per TSTF-52 Rev. 3 (not Rev. 1). ITS 5.5.15.b is revised to read "calculated peak" instead of "Peak calculated." The numbers in ITS 5.5.15.b are plant specific values that have been inserted in the brackets. JFD 22 is added to justify deleting exceptions in ITS 5.5.15.a that are bracketed.

5.5 Programs and Manuals

5.5.14 Safety Function Determination Program (SFDP) (continued)

analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

a. A required system redundant to the system(s) supported by the inoperable support system is also inoperable; or

b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable; or

c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable.

The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered. When a loss of safety function is caused by the inoperability of a single Technical Specification support system, the appropriate Conditions and Required Actions to enter are those of the support system.

5.5.15 Containment Leakage Rate Testing Program

a. A program shall establish the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995.

b. The calculated peak containment internal pressure for the design basis loss of coolant accident, P_a, is 44.1 psig. The containment design pressure is 45 psig. | RAI 5.0-08 R4

c. The maximum allowable containment leakage rate, L_a, at P_a, shall be 0.1% of containment air weight per day.

INSERT 1

CTS

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

NEW

INSERT 2

5.5.15 Containment Leakage Rate Testing Program

4.6.1.2
4.6.1.3.a

a. A program shall establish the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995 [, as modified by the following exceptions:

1. .....]

(22) RAI 5.0-8 R4

b. The calculated peak containment internal pressure for the design basis loss of coolant accident, P_a, is [45 psig]. The containment design pressure is [50 psig].

4.6.1.2 NEW

(44.1) (45) (3)

c. The maximum allowable containment leakage rate, L_a, at P_a, shall be [0.1]% of containment air weight per day.

3.6.1.2.a

d. Leakage Rate acceptance criteria are:

1. Containment leakage rate acceptance criterion is ≤ 1.0 L_a. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are ≤ 0.60 L_a for the Type B and Type C tests and ≤ 0.75 L_a for Type A tests;

3.6.1.2.a

(17)

Prior to entering a MODE where containment OPERABILITY is required, the containment leakage rate acceptance criteria are:

≤ 0.60 L_a for the Type B and Type C tests on a Maximum Path Basis and ≤ 0.75 L_a for Type A tests.

During operation where containment OPERABILITY is required, the containment leakage rate acceptance criteria are:

≤ 1.0 L_a for overall containment leakage rate and ≤ 0.60 L_a for the Type B and Type C tests on a Minimum Path Basis.

CTS

INSERT 2 (continued)

3.6.1.3.b

2. Air lock testing acceptance criteria are: (criterion)

   a) Overall air lock leakage rate is ≤ [0.05 L_a] when tested at ≥ P_a.

   b) For each door, leakage rate is ≤ [0.01 L_a] when pressurized to [≥ 10 psig].

(14) (1) RAI 5.0-08 R4

NEW e. The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.

NEW f. Nothing in these Technical Specifications shall be construed to modify the testing Frequencies required by 10 CFR 50, Appendix J.

amount that would result in concentrations greater than, rather than less than, the limits of 10 CFR 20, Appendix B, Table 2, Column 2 in case of the specified event. ISTS 5.5.12.c is also modified to clarify that the radioactivity limits exclude limits on tritium. These changes are consistent with the current licensing basis and guidance in NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants," section 4.4.

19. ISTS 5.5.7 is modified to state that the provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Reactor Coolant Pump Flywheel Inspection Program surveillance frequency. This allowance is consistent with the current licensing basis, and is consistent with the NUREG-1431 format of retaining these allowances for other current Technical Specification requirements that have been moved to Section 5.0.

20. The discussion in ISTS 5.3.1 regarding qualifications of staff not covered by Regulatory Guide 1.8 is replaced with a statement that the shift supervisor, assistant shift supervisor, Control Room Operator – Nuclear, and the individual providing advisory support to the unit operations shift crew are required to meet or exceed the minimum qualifications of 10 CFR 55.59(c) and 55.31(a)(4). These requirements are consistent with the CTS, and the CTS requirements do not include qualifications of staff not covered by Regulatory Guide 1.8. RAI 5.0-01 R4

21. References in ISTS 5.5.12 to the "offgas system" are not adopted. NAPS does not include an offgas system, which is usually associated with boiling water reactors. RAI 5.0-07 R4

22. This bracketed requirement is deleted because it is not applicable to North Anna. The following requirements are renumbered, where applicable, to reflect this deletion. RAI 5.0-06 R4

23. The requirement to include a preplanned alternate method of monitoring in case of Post Accident Monitoring (PAM) instrumentation inoperability is not adopted. The NAPS design does not have alternate methods of monitoring if the PAM instrumentation is inoperable. R4

NAPS- ITS Section 5.0

5.09 ITS 5.5.15.d.2, CTS 3.6.1.3.b, JFD 14

NRC RAI: JFD 14 states that criterion ISTS 5.5.15.d.2.b is not adopted, because ".... ISTS 5.5.15.d.2.a provides an acceptable leakage rate criterion for the air lock doors.." **Comment:** The licensee to revise proposed ITS 5.5.15.d 1 to incorporate wording "for all airlock doors" at the end of the word "...acceptance criteria..are" in ITS 5.5.15.d.1 for clarification purpose.

Response: The Company will take the action proposed in the Comment, with modifications. JFD 14 is expanded to more fully address how the unit meets the air lock door criteria. The location referenced in ITS 5.5.15.d.1 is for containment leakage rate criteria, and does not seem an appropriate location for a reference to airlock doors. Regulatory Guide 1.163 endorses NEI 94-01, which specifies criteria which the airlock doors are required to meet, and seems an adequate reference for specifying airlock door criteria.

"fuel oil" to clarify that the test is to be performed on stored fuel oil rather than new fuel oil. The frequency of the test is changed from 31 days to 92 days based on plant operating practice of conducting the test every 92 days, test history indicating that the interval is appropriate, and there being no current Technical Specification requirement to perform the test.

12. The ISTS 5.5.11.e bracketed requirement to demonstrate ESF systems ventilation filter heater heat dissipation capability is not adopted. The ESF systems ventilation systems heaters at NAPS are not required for Operability of the ventilation systems, they are only required for performance of the surveillance test. A separate test in the Technical Specifications is not warranted and is consistent with the current licensing basis.

13. Face velocity is not adopted as one of the required parameters for testing charcoal adsorbers in ISTS 5.5.11.c. The system does not have a face velocity greater than 110 percent of 0.203 m/s (40 ft/min), and according to TSTF-362 is thus not required to be specified in the ITS.

14. ISTS 5.5.15 Containment Leakage Rate Testing Program air lock testing acceptance criterion d.2.b) is not adopted. ISTS 5.5.15.d.2.b) states, "For each door, leakage rate is ≤ 0.01 L_a when pressurized to ≥ 10 psig." North Anna uses criterion 5.5.15.d.2.a), which states, "Overall air lock leakage rate is ≤ 0.05 L_a when tested at ≥ P_a." Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995, endorses NEI 94-01, which specifies criteria which the airlock doors are required to meet. ISTS 5.5.15.d.2.a), in conjunction with the commitment that the program shall be in accordance with the guidelines contained in contained in Regulatory Guide 1.163, provides an acceptable leakage rate criterion for the air lock doors, and ISTS 5.5.15.d.2.b) is not required.

RAI 5.0-09 R4

15. An explanation is added to ISTS 5.5.11.a and ISTS 5.5.11.b for the phrase, "Nominal accident flow for a single train actuation," which is used for the ECCS PREACS flowrate designated. Use of nominal accident flow is a better measure than a specific flow value of whether the filters will perform their function, since this is the flow that will occur in case of a DBA. This explanation is consistent with current licensing basis and plant design.

16. Not used.

RAI 5.0-06 R4

17. STS 5.5.15.d.1 is modified to specifically address containment leakage rate requirements prior to entering a MODE where containment OPERABILITY is required, and during operation where containment OPERABILITY is required. The requirements adopted in ITS 5.5.15.d.1 are consistent with the CTS requirements, and encompass the requirements of ISTS 5.5.15.d.1.

18. ISTS 5.5.12.c is modified to clarify that the surveillance program described limits the radioactivity contained in the specified outdoor liquid radwaste tanks to less than the

NAPS- ITS Section 5.0

5.10 ITS 5.6.5, CTS 6.9.1.7.a, A37, INSERT 1

NRC RAI: Items 6 of CTS 6.9.1.7.a also requires Core Operating Report to have operating limit for Power Factor Multiplier, while this requirement has not been incorporated in ITS 5.6.5. **Comment:** Licensee to revise ITS 5.6.5 to include this reporting requirement.

Response: The Company will take the action proposed in the Comment. The Power Factor Multiplier will be added to ITS 5.6.5.a. The change is addressed by JFD 1.

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (COLR) R4

a. (continued)

3. Moderator Temperature Coefficient,

4. Shutdown Bank Insertion Limits,

5. Control Bank Insertion Limits,

6. Axial Flux Difference limits,

7. Heat Flux Hot Channel Factor,

8. Nuclear Enthalpy Rise Hot Channel Factor,

9. Power Factor Multiplier, RAI 5.0-10 R4

10. Reactor Trip System Instrumentation - OTΔT and OPΔT Trip Parameters,

11. RCS Pressure, Temperature, and Flow DNB Limits, and RAI 5.0-10 R4

12. Boron Concentration.

b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:

1. VEP-FRD-42, "Reload Nuclear Design Methodology."

2. WCAP-9220-P-A, "WESTINGHOUSE ECCS EVALUATION MODEL–1981 VERSION."

3. WCAP-9561-P-A, "BART A-1: A COMPUTER CODE FOR THE BEST ESTIMATE ANALYSIS OF REFLOOD TRANSIENTS–SPECIAL REPORT: THIMBLE MODELING IN W ECCS EVALUATION MODEL."

4. WCAP-10266-P-A, "The 1981 Version of the Westinghouse ECCS Evaluation Model Using the BASH Code."

5. WCAP-10054-P-A, "Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code."

INSERT 1

1. Safety Limits,
2. Shutdown Margin,
3. Moderator Temperature Coefficient,
4. Shutdown Bank Insertion Limits,
5. Control Bank Insertion Limits,
6. Axial Flux Difference limits,
7. Heat Flux Hot Channel Factor,
8. Nuclear Enthalpy Rise Hot Channel Factor,
9. Power Factor Multiplier,
10. Reactor Trip System Instrumentation - OTΔT and OPΔT Trip Parameters,
11. RCS Pressure, Temperature, and Flow DNB Limits, and
12. Boron Concentration.

RAI 5.0-10 R4

INSERT 2

1. VEP-FRD-42, "Reload Nuclear Design Methodology."

2. WCAP-9220-P-A, "WESTINGHOUSE ECCS EVALUATION MODEL – 1981 VERSION."

3. WCAP-9561-P-A, "BART A-1: A COMPUTER CODE FOR THE BEST ESTIMATE ANALYSIS OF REFLOOD TRANSIENTS – SPECIAL REPORT: THIMBLE MODELING IN W ECCS EVALUATION MODEL."

4. WCAP-10266-P-A, "The 1981 Version of the Westinghouse ECCS Evaluation Model Using the BASH Code."

5. WCAP-10054-P-A, "Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code."

6. WCAP-10079-P-A, "NOTRUMP, A Nodal Transient Small Break and General Network Code."

7. WCAP-12610, "VANTAGE+ FUEL ASSEMBLY-REFERENCE CORE REPORT."

8. VEP-NE-2-A, "Statistical DNBR Evaluation Methodology."

9. VEP-NE-3-A, "Qualification of the WRB-1 CHF Correlation in the Virginia Power COBRA Code."

10. VEP-NE-1-A, "VEPCO Relaxed Power Distribution Control Methodology and Associated FQ Surveillance Technical Specifications."

NAPS- ITS Section 5.0

5.11 ITS 5.7.1.c, CTS 6.12, DOC L11 and DOC L 17, Footnote * on page 67 of 69 marked up pages.

NRC RAI: Wording in the proposed ITS 5.7.1.c, i.e.; "Individual qualified in radiation protection procedures and..." does not appear to match with marked-up wording on page 67 "radiation protection personnel or..." **Comment:** Licensee to revise either ITS or CTS marked up.

Response: The Company will take the action proposed in the Comment. DOC M.23 is added, DOC L.17 is modified, DOC L.34 is added, and the associated CTS mark up changes address adopting the ISTS description.

6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

6.12 HIGH RADIATION AREA

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.1601 of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit.* Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.

b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.

INSERT 1

INSERT 2

c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Health Physicist in the Radiation Work Permit.

INSERT 3

6.12.2 The requirements of 6.12.1, above, shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr, but less than 500 rads/hr at one meter from a radiation source or any surface through which radiation penetrates. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Shift Supervisor on duty and/or the Plant Health Physicist, radiation protection manager, or his or her designee, except for 6.12.1.a. Doors and gates shall remain locked except during periods of personnel or equipment entry or exit, or continuously guarded, and personnel continuously escorted by such individuals may at 30 centimeters from the Radiation Source or from any Surface Penetrated by the Radiation.

* Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry in high radiation areas.

INSERT proposed 5.7.1.d.3 and 5.7.2.d.2

INSERT proposed 5.7.2.d.4

INSERT proposed 5.7.2.f

at 30 centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

A.31

6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

A.8

or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures

L.16

M.4

6.12 HIGH RADIATION AREA

5.7.1.a 5.7.2.a 5.7.1.b 5.7.2.b 5.7.1.d

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.1601 of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit* Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

A.31

5.7.1.d.1

a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.

5.7.1.d.2 5.7.2.d.1 5.7.1.e 5.7.2.e

b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.

INSERT 1

M.16

5.7.1.d.4(i) 5.7.2.d.3(i)

c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Health Physicist in the Radiation Work Permit.

INSERT 2

M.19

5.7.1.d.4(ii) 5.7.2.d.3(ii)

INSERT 3

L.28

5.7.2

6.12.2 The requirements of 6.12.1, above, shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr but less than 500 rads/hr at one meter from a radiation source or any surface through which radiation penetrates. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Shift Supervisor on duty and/or the Plant Health Physicist.

except for 6.12.1.a

M.17

A.31

L.11

5.7.2.a.1

radiation protection

at 30 centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

radiation protection manager, or his or her designee

or continuously guarded

L.23

5.7.2.a.2

Doors and gates shall remain locked except during periods of personnel or equipment entry or exit

A.17

5.7.1.c 5.7.2.c

qualified in radiation protection procedures

Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry in high radiation areas.

and

L.11

M.23

L.34

RIA 5.0-11 5.0-13 R4

Only 5.7.1.c

M.13

Insert proposed 5.7.1.d.3 and 5.7.2.d.2

L.27

Insert proposed 5.7.2.d.4

L.29

Insert proposed 5.7.2.f

L.13

secondary water chemistry to inhibit low pressure turbine disc stress corrosion cracking in addition to SG tube degradation.

This change is acceptable because it clarifies that secondary water chemistry could contribute to low pressure turbine disc stress corrosion cracking, and this is another reason secondary water chemistry is monitored. This change is designated as more restrictive because an additional reason for the Secondary Water Chemistry Program is added.

RAI 5.0-05 R4

M.23 Unit 1 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." Unit 2 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." ITS 5.7.1.c states, "Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." ITS 5.7.2.c states, "Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." This changes the CTS by requiring that for personnel to be exempt from the RWP issuance requirement, they must be qualified in radiation protection procedures, or escorted by a qualified individual in high radiation areas. Changing the term "Health Physics" to "radiation protection" is addressed by DOC L.11.

RAI 5.0-11 5.0-13 R4

The purpose of CTS 6.12 footnote "*" is to provide an allowance for qualified personnel to not have to issue an RWP during the performance of their assigned radiation protection duties. This change is acceptable because it provides added assurance that the personnel performing radiation protection duties, or performing escort duties, will maintain personnel exposure to within established limits. These changes are designated as more restrictive because the criteria that personnel must meet in order to perform the duties specified are more specific.

M.24 CTS Table 6.2-1 requires that with both units in MODE 5 or 6 or defueled, two Auxiliary Operators (AOs) be part of the staff manning, one AO assigned to each unit. ITS 5.2.2.a states, "Two unit sites with both units shutdown or defueled require a total of three non-licensed operators for the two units." This changes the CTS by requiring three AOs with both units shutdown or defueled. Other changes to the AO requirements are addressed by DOC L.9.

R4

in a reasonable time frame. The change makes the due date consistent with the due dates for ITS 5.6.2 (Annual Radiological Environmental Operating Report) and ITS 5.6.3 (Radioactive Effluent Release Report). This change is designated as less restrictive because it allows more time to prepare and submit an annual report to the NRC.

L.16 CTS 6.12.1 states for high radiation areas, "...entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit." ITS 5.7.1.b and ITS 5.7.2.b state for high radiation areas, "Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures." This changes the CTS by allowing an equivalent document to be used for access control. The addition of details required in the RWP is addressed by DOC M.4.

The purpose of the specified phrase in CTS 6.12.1 is to designate the document through which access is controlled to the specified high radiation areas. This change is acceptable because a proper document is still required, but it may serve the same purpose as an RWP without having to be specifically called an RWP. This change is designated a less restrictive because an alternate document may be used for access control in lieu of an RWP.

L.17 Unit 1 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." ITS 5.7.1.c states, "Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." This changes the Unit 1 CTS by allowing personnel not qualified in radiation protection procedures, but escorted by such qualified individuals to use the exemption from the requirement for an RWP or equivalent while performing their assigned duties. Changing the term "Health Physics" to "radiation protection" is addressed by DOC L.11. Allowing personnel to use the exemption for reasons other than radiation protection duties is addressed by DOC L.34.

RAI 5.0-4 5.0-13 R4

The purpose of Unit 1 CTS 6.12 footnote "*" is to provide an allowance for qualified personnel to not have to issue an RWP during the performance of their assigned radiation protection duties. This change is acceptable because the escort of people by individuals qualified in radiation protection procedures, using approved radiation protection procedures, also provides assurance that the personnel exposure of the people being escorted will be within established limits. These changes are designated as less restrictive because a larger group of individuals will be eligible to be exempt from RWP issuance.

RAI 5.0-11 5.0-13 R4

The purpose of ITS 5.5.10.c is to verify the charcoal adsorbers can perform their function under the condition assumed in case of a DBA. This change is acceptable because it has been determined that the relaxed Surveillance Requirement acceptance criteria are not necessary for verification that the equipment used to meet the LCO can perform its required functions. Engineering testing and analysis has determined that the maximum relative humidity for the required charcoal adsorber inlet air at North Anna during accident conditions is 70%. This change is designated as less restrictive because less stringent Surveillance Requirements are being applied in the ITS than were applied in the CTS.

L.34 Unit 1 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." Unit 2 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." ITS 5.7.1.c states, "Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." This changes the CTS by allowing personnel to be exempt from the RWP issuance requirement for any duties, not just for radiation protection. Changing the term "Health Physics" to "radiation protection" is addressed by DOC L.11. For Unit 1, allowing personnel not qualified in radiation protection procedures, but escorted by such qualified individuals, to use the exemption from the requirement for an RWP or equivalent while performing their assigned duties is addressed by DOC L.17.

RAI 5.0-11 5.0-13 R4

The purpose of the CTS 6.12 footnote "*" is to provide an allowance for qualified personnel to not have to issue an RWP during the performance of their assigned radiation protection duties. This change is acceptable because the personnel are qualified in radiation protection procedures for work in these areas, regardless of the work to be performed, thus providing assurance that personnel exposure of the qualified personnel or people being escorted will be within established limits. These changes are designated as less restrictive because an exemption may be used for a larger variety of duties.

L.35 *(Category 7 – Relaxation Of Surveillance Frequency)* CTS 6.8.4.a states that the program addressing leakage from portions of systems outside containment shall include, "(ii) Integrated leak test requirements for each system at refueling cycle intervals or less." ITS 5.5.2, Primary Coolant Sources Outside Containment, states that the program shall include, "b. Integrated leak test requirements for each system at least once per 18 months. The provisions of SR 3.0.2 are applicable." This

R4

The change does not introduce a new mode of plant operation and does not involve physical modification to the plant. The change will not introduce new accident initiators. Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

This change allows the requirements for access to high radiation areas in which the intensity of radiation is greater than 1000 mrem/hr to also apply to areas with ≥ 500 rads/hr at one meter from a radiation source or any surface through which radiation penetrates. The ITS requirements are considered adequate for control of access to high radiation areas, and this provides new guidance for access to the additional areas specified. As a result, the change does not significantly reduce the margin of safety.

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES

SPECIFICATION 5.0, CHANGE L.17

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." The proposed change involves making the current Technical Specifications (CTS) less restrictive. Below is the description of this less restrictive change and the determination of No Significant Hazards Considerations for conversion to NUREG-1431.

L.17 Unit 1 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." ITS 5.7.1.c states, "Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." This changes the Unit 1 CTS by allowing personnel not qualified in radiation protection procedures, but escorted by such qualified individuals to use the exemption from the requirement for an RWP or equivalent while performing their assigned duties. Changing the term "Health Physics" to "radiation protection" is addressed by DOC L.11. Allowing personnel to use the exemption for reasons other than radiation protection duties is addressed by DOC L.34.

RAI 5.0-11 5.0-13 R4

The purpose of Unit 1 CTS 6.12 footnote "*" is to provide an allowance for qualified personnel to not have to issue an RWP during the performance of their assigned radiation protection duties. This change is acceptable because the escort of people by

RAI 5.0-11 5.0-13 R4

individuals qualified in radiation protection procedures, using approved radiation protection procedures, also provides assurance that the personnel exposure of the people being escorted will be within established limits. These changes are designated as less restrictive because a larger group of individuals will be eligible to be exempt from RWP issuance.

RAI 5.0-11 5.0-13 R4

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

This change allows personnel not qualified in radiation protection procedures, but escorted by such qualified individuals to use the exemption from the requirement for an RWP or equivalent while performing their assigned duties. Specification of which personnel are exempt from the RWP issuance requirement during the performance of their assigned duties in high radiation areas is not assumed to be an initiator of any previously analyzed accident. Therefore, the change does not increase the probability of such accidents. Requirements for access to high radiation areas do not affect the ability of the plant to mitigate the consequences of previously analyzed accidents. As a result, the change does not significantly increase the consequences of an accident previously analyzed.

RAI 5.0-11 5.0-13 R4

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

The change does not introduce a new mode of plant operation and does not involve physical modification to the plant. The change will not introduce new accident initiators. Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

This change allows personnel not qualified in radiation protection procedures, but escorted by such qualified individuals to use the exemption from the requirement for an RWP or equivalent while performing their assigned duties. The ITS requirements are considered adequate for high radiation area access control because stringent criteria are still being applied to all the personnel allowed access, similar to criteria applied previously. As a result, the change does not significantly reduce the margin of safety.

RAI 5.0-11 5.0-13 R4

10 CFR 50.92 EVALUATION
FOR

to comply with appropriate state regulations, burial ground requirements, and other requirements governing the disposal of radioactive waste. This change is designated as less restrictive because the specific manner in which regulations are being met is being removed from the Technical Specifications.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

This change removes the requirements associated with the contents and maintenance of the Process Control Program (PCP). The contents and maintenance of the PCP are not initiators of any previously analyzed accident. Therefore, the change does not increase the probability of such accidents. The contents and maintenance of the PCP do not affect the ability of the plant to mitigate the consequences of previously analyzed accidents. As a result, the change does not significantly increase the consequences of an accident previously analyzed.

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

The change does not introduce a new mode of plant operation and does not involve physical modification to the plant. The change will not introduce new accident initiators. Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

This change removes the requirements associated with the contents and maintenance of the Process Control Program (PCP). The ITS requirements are considered to provide adequate control of solid radioactive waste. As a result, the change does not significantly reduce the margin of safety.

RAI 5.0-11 5.0-13 R4

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES

SPECIFICATION 5.0, CHANGE L.34

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." The proposed change involves making the current Technical Specifications (CTS) less restrictive.

RAI 5.0-11 5.0-13 #4

Below is the description of this less restrictive change and the determination of No Significant Hazards Considerations for conversion to NUREG-1431.

L.34 Unit 1 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." Unit 2 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." ITS 5.7.1.c states, "Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." This changes the CTS by allowing personnel to be exempt from the RWP issuance requirement for any duties, not just for radiation protection. Changing the term "Health Physics" to "radiation protection" is addressed by DOC L.11. For Unit 1, allowing personnel not qualified in radiation protection procedures, but escorted by such qualified individuals, to use the exemption from the requirement for an RWP or equivalent while performing their assigned duties is addressed by DOC L.17.

The purpose of the CTS 6.12 footnote "*" is to provide an allowance for qualified personnel to not have to issue an RWP during the performance of their assigned radiation protection duties. This change is acceptable because the personnel are qualified in radiation protection procedures for work in these areas, regardless of the work to be performed, thus providing assurance that personnel exposure of the qualified personnel or people being escorted will be within established limits. These changes are designated as less restrictive because an exemption may be used for a larger variety of duties.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

This change allows personnel to be exempt from the RWP issuance requirement for any duties, not just for radiation protection. Specification of which personnel are exempt from the RWP issuance requirement during the performance of their assigned duties in high radiation areas is not assumed to be an initiator of any previously analyzed accident. Therefore, the change does not increase the probability of such accidents. Requirements for access to high radiation areas do not affect the ability of

the plant to mitigate the consequences of previously analyzed accidents. As a result, the change does not significantly increase the consequences of an accident previously analyzed.

RAI 50-11 50-13 Q4

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

The change does not introduce a new mode of plant operation and does not involve physical modification to the plant. The change will not introduce new accident initiators. Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

This change allows personnel to be exempt from the RWP issuance requirement for any duties, not just for radiation protection. The ITS requirements are considered adequate for high radiation area access control because stringent criteria are still being applied to all the personnel allowed access, similar to criteria applied previously. As a result, the change does not significantly reduce the margin of safety.

NAPS- ITS Section 5.0

5.12 ITS 5.7.1.d.3 and 5.7.2.d.3, CTS 6.12.1, CTS 6.12.2, DOC L127

NRC RAI: Comment: Licensee to correct the DOC and correct the reference in the proposed ITS [there is no ITS 5.7.1.4.d3, or ITS 5.7.2.4.d.2]

Response: The Company will take the action proposed in the Comment. DOC L.27 will be corrected to read 5.7.1.d.3 and 5.7.2.d.2. The reference in the proposed ITS is correct.

report of projected dose contributions from radioactive effluents and is acceptable because the change will have no effect on the outcome of the calculations, and the reports will still be provided in a timely basis. This change is designated as less restrictive because more time is provided to submit the report under the ITS than under the CTS.

L.26 *(Category 8 – Deletion of Reporting Requirements)* CTS 6.9.1.6 states, "Routine reports of operating statistics and shutdown experience, including documentation of all challenges to the Reactor Coolant System PORVs or safety valves, shall be submitted on a monthly basis..." ITS 5.6.4 states, "Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis..." This changes the CTS by deleting the requirement to include documentation of all challenges to the Reactor Coolant System PORVs or safety valves in the monthly report.

The purpose of CTS 6.9.1.6 is to ensure the NRC receives appropriate routine reports of operating statistics and shutdown experience on a monthly basis. This change is acceptable because the regulations provide adequate reporting requirements, or the reports do not affect continued plant operation. The change deletes the requirement to include documentation of all challenges to the Reactor Coolant System PORVs or safety valves in the monthly report, though they are still required in the annual report. The guidance of NUREG 0694, "TMI-Related Requirements for New Operating Licenses," states, "Assure that any failure of a PORV or safety valve to close will be reported to the NRC promptly. All challenges to the PORVs or safety valves should be documented in the annual report." This change is designated as less restrictive because reports that would be submitted under the CTS will not be required under the ITS.

L.27 ITS 5.7.1.d.3 states that one of the options for devices an individual or group shall possess for radiation monitoring when entering a high radiation area with a dose rate not exceeding 1.0 rem/hour at 30 centimeters from the radiation source or from any surface penetrated by the radiation is, "A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area." ITS 5.7.2.d.2 states that one of the options for devices an individual or group shall possess when entering a high radiation area with a dose rate exceeding 1.0 rem/hour at 30 Centimeters from the radiation source or from any surface penetrated by the radiation, but less than 500 rads/hour at 1 meter from the radiation source or any surface penetrated by the radiation is, "A radiation monitoring device that continuously transmits dose rate and cumulative dose information to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate with and control every individual in the area." CTS 6.12.1 and 6.12.2 do not contain these options for an individual or group. This changes the

RAI 5.0-12 R4

RAI 5.0-12 R4

CTS by providing an additional device an individual entering these high radiation areas must possess for radiation monitoring.

The purpose of ITS 5.7.1.d.3 and ITS 5.7.2.d.2 is to provide appropriate alternate means for monitoring the exposure of personnel in the respective high radiation areas. This change is acceptable because the means specified provide reliable means of monitoring personnel exposure. This change is designated as less restrictive because a new alternative for measuring personnel dose of personnel in high radiation areas has been provided.

RAI 5.0-12 R4

L.28 CTS 6.12.1.b states that one of the optional criteria that allow entry into a high radiation area is, "An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Health Physicist in the Radiation Work Permit." ITS 5.7.1.d.4 states, "A self reading dosimeter (e.g., pocket ionization chamber or electronic dosimeter) and, (i) be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring device that continuously displays radiation dose rates in the area; who is responsible for controlling personnel exposure within the area, or (ii) be under the surveillance as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with individuals in the area who are covered by such surveillance." ITS 5.7.2.d.3 reads the same as ITS 5.7.1.d.4, except the last phrase, "communicate with individuals in the area who are covered by such surveillance," is replaced with the phrase, "communicate with and control every individual in the area." This changes the CTS by deleting the discussion of positive controls over activities and performing radiation surveillances with a requirement for the monitoring device to have continuous dose rate displays and the responsibility to control dose rates in the area, and an option to perform the monitoring of personnel remotely using the specified equipment and processes.

The purpose of 6.12.1.c is to provide the option of monitoring the exposure of individuals in high radiation areas by a separate individual qualified in radiation procedures. This change is acceptable because it provides adequate means of monitoring the personnel in the high radiation areas, but provides added flexibility for how to do it. This change is designated as less restrictive because additional methods for monitoring personnel exposure are provided.

L.29 ITS 5.7.2.4.d.4 states that one of the options for devices that an individual or group shall possess when entering a high radiation area with a dose rate exceeding 1.0 rem/hour at 30 Centimeters from the radiation source or from any surface penetrated by the radiation, but less than 500 rads/hour at 1 meter from the radiation source or

NAPS- ITS Section 5.0

5.13 ITS 5.7.2.c, CTS 6.12, DOC L11 and DOC L 17, Footnote * on page 67 of 69 marked up pages.

NRC RAI: Wording in the proposed ITS 5.7.1.c, i.e.; "Individual qualified in radiation protection procedures and..." does not appear to match with marked-up wording on page 67 "radiation protection personnel or..." **Comment:** Licensee to revise either ITS or CTS marked up.

Response: The Company will take the action proposed in the Comment. DOC M.23 is added, DOC L.17 is modified, DOC L.34 is added, and the associated CTS mark up changes address adopting the ISTS description.

ITS

A.1

at 30 centimeters from the Radiation Source or from any Surface Penetrated by the Radiation 2-17-94 A.31

6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure. A.8

or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures L.16 M.4

6.12 HIGH RADIATION AREA

5.7.1.a 5.7.2.a

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.1601 of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit.* Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following: A.31

5.7.1.b 5.7.2.b 5.7.1.d 5.7.1.d.1 5.7.1.d.2 5.7.2.d.1 5.7.1.e 5.7.2.e 5.7.1.d.4(i) 5.7.2.d.3(i) 5.7.1.d.4(ii) 5.7.2.d.3(ii)

a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.

b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them. M.16

INSERT 1

c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Health Physicist in the Radiation Work Permit. M.19 L.28

INSERT 2

INSERT 3

5.7.2 6.12.2 The requirements of 6.12.1, above, shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr, but less than 500 rads/hr at one meter from a radiation source or any surface through which radiation penetrates. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Shift Supervisor on duty and/or the Plant Health Physicist, L.11

5.7.2.a.1 5.7.2.a.2

radiation protection except for 6.12.1.a

Doors and gates shall remain locked except during periods of personnel or equipment entry or exit, A.17 M.17

radiation protection Manager, or his or her designee or continuously guarded L.23

at 30 centimeters from the Radiation Source or from any Surface Penetrated by the Radiation A.31

only 5.7.1.c 5.7.1.c 5.7.2.c

and personnel continuously escorted by such individuals may L.17

* Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry in high radiation areas. L.11 M.23 L.34

qualified in radiation protection procedures

RAI 5.0-11 5.0-13 R4

INSERT proposed 5.7.1.d.3 and 5.7.2.d.2 → L.27

INSERT proposed 5.7.2.d.4 → L.29

INSERT proposed 5.7.2.f → L.13

at 30 centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

A.31

6.11 RADIATION PROTECTION PROGRAM

Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure.

A.8

or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures

L.16 M.4

6.12 HIGH RADIATION AREA

5.7.1.a 5.7.2.a 5.7.1.b 5.7.2.b 5.7.1.d

6.12.1 In lieu of the "control device" or "alarm signal" required by paragraph 20.1601 of 10 CFR 20, each high radiation area in which the intensity of radiation is greater than 100 mrem/hr but less than 1000 mrem/hr shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit* Any individual or group of individuals permitted to enter such areas shall be provided with or accompanied by one or more of the following:

A.31

5.7.1.d.1

a. A radiation monitoring device which continuously indicates the radiation dose rate in the area.

5.7.1.d.2 5.7.2.d.1 5.7.1.e 5.7.2.e 5.7.1.d.4(i) 5.7.2.d.3(i)

b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.

INSERT 1 INSERT 2

M.16 M.19

5.7.1.d.4(ii) 5.7.2.d.3(ii)

c. An individual qualified in radiation protection procedures who is equipped with a radiation dose rate monitoring device. This individual shall be responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Health Physicist in the Radiation Work Permit.

INSERT 3

L.28

5.7.2

6.12.2 The requirements of 6.12.1, above, except for 6.12.1.a shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr but less than 500 rads/hr at one meter from a radiation source or any surface through which radiation penetrates. In addition, locked doors shall be provided to prevent unauthorized entry into such areas and the keys shall be maintained under the administrative control of the Shift Supervisor on duty and/or the Plant Health Physicist

M.17 A.31

5.7.2.a.1

L.11

radiation protection

at 30 centimeters from the Radiation Source or from any Surface Penetrated by the Radiation

radiation protection manager, or his or her designee

or continuously guarded

L.23

Doors and gates shall remain locked except during periods of personnel or equipment entry or exit

5.7.2.a.2

A.17

5.7.1.c 5.7.2.c

qualified in radiation protection procedures*

Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry in high radiation areas.

AND

L.11 M.23 L.34 M.13

RIA 5.0-11 5.0-13 R4

Only 5.7.1.c

Insert proposed 5.7.1.d.3 and 5.7.2.d.2

L.27

Insert proposed 5.7.2.d.4 → page 66 of 69 Rev 4

L.29

Insert proposed 5.7.2.f →

L.13

secondary water chemistry to inhibit low pressure turbine disc stress corrosion cracking in addition to SG tube degradation.

This change is acceptable because it clarifies that secondary water chemistry could contribute to low pressure turbine disc stress corrosion cracking, and this is another reason secondary water chemistry is monitored. This change is designated as more restrictive because an additional reason for the Secondary Water Chemistry Program is added.

RAI 5.0-05 R4

M.23 Unit 1 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." Unit 2 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." ITS 5.7.1.c states, "Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." ITS 5.7.2.c states, "Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." This changes the CTS by requiring that for personnel to be exempt from the RWP issuance requirement, they must be qualified in radiation protection procedures, or escorted by a qualified individual in high radiation areas. Changing the term "Health Physics" to "radiation protection" is addressed by DOC L.11.

RAI 5.0-11 5.0-13 R4

The purpose of CTS 6.12 footnote "*" is to provide an allowance for qualified personnel to not have to issue an RWP during the performance of their assigned radiation protection duties. This change is acceptable because it provides added assurance that the personnel performing radiation protection duties, or performing escort duties, will maintain personnel exposure to within established limits. These changes are designated as more restrictive because the criteria that personnel must meet in order to perform the duties specified are more specific.

M.24 CTS Table 6.2-1 requires that with both units in MODE 5 or 6 or defueled, two Auxiliary Operators (AOs) be part of the staff manning, one AO assigned to each unit. ITS 5.2.2.a states, "Two unit sites with both units shutdown or defueled require a total of three non-licensed operators for the two units." This changes the CTS by requiring three AOs with both units shutdown or defueled. Other changes to the AO requirements are addressed by DOC L.9.

R4

in a reasonable time frame. The change makes the due date consistent with the due dates for ITS 5.6.2 (Annual Radiological Environmental Operating Report) and ITS 5.6.3 (Radioactive Effluent Release Report). This change is designated as less restrictive because it allows more time to prepare and submit an annual report to the NRC.

L.16 CTS 6.12.1 states for high radiation areas, "...entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit." ITS 5.7.1.b and ITS 5.7.2.b state for high radiation areas, "Access to, and activities in, each such area shall be controlled by means of Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures." This changes the CTS by allowing an equivalent document to be used for access control. The addition of details required in the RWP is addressed by DOC M.4.

The purpose of the specified phrase in CTS 6.12.1 is to designate the document through which access is controlled to the specified high radiation areas. This change is acceptable because a proper document is still required, but it may serve the same purpose as an RWP without having to be specifically called an RWP. This change is designated a less restrictive because an alternate document may be used for access control in lieu of an RWP.

L.17 Unit 1 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." ITS 5.7.1.c states, "Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." This changes the Unit 1 CTS by allowing personnel not qualified in radiation protection procedures, but escorted by such qualified individuals to use the exemption from the requirement for an RWP or equivalent while performing their assigned duties. Changing the term "Health Physics" to "radiation protection" is addressed by DOC L.11. Allowing personnel to use the exemption for reasons other than radiation protection duties is addressed by DOC L.34.

RAI 5.0-11 5.0-13 R4

The purpose of Unit 1 CTS 6.12 footnote "*" is to provide an allowance for qualified personnel to not have to issue an RWP during the performance of their assigned radiation protection duties. This change is acceptable because the escort of people by individuals qualified in radiation protection procedures, using approved radiation protection procedures, also provides assurance that the personnel exposure of the people being escorted will be within established limits. These changes are designated as less restrictive because a larger group of individuals will be eligible to be exempt from RWP issuance.

RAI 5.0-11 5.0-13 R4

The purpose of ITS 5.5.10.c is to verify the charcoal adsorbers can perform their function under the condition assumed in case of a DBA. This change is acceptable because it has been determined that the relaxed Surveillance Requirement acceptance criteria are not necessary for verification that the equipment used to meet the LCO can perform its required functions. Engineering testing and analysis has determined that the maximum relative humidity for the required charcoal adsorber inlet air at North Anna during accident conditions is 70%. This change is designated as less restrictive because less stringent Surveillance Requirements are being applied in the ITS than were applied in the CTS.

L.34 Unit 1 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." Unit 2 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." ITS 5.7.1.c states, "Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." This changes the CTS by allowing personnel to be exempt from the RWP issuance requirement for any duties, not just for radiation protection. Changing the term "Health Physics" to "radiation protection" is addressed by DOC L.11. For Unit 1, allowing personnel not qualified in radiation protection procedures, but escorted by such qualified individuals, to use the exemption from the requirement for an RWP or equivalent while performing their assigned duties is addressed by DOC L.17.

RAI 5.0-11 5.0-13 R4

The purpose of the CTS 6.12 footnote "*" is to provide an allowance for qualified personnel to not have to issue an RWP during the performance of their assigned radiation protection duties. This change is acceptable because the personnel are qualified in radiation protection procedures for work in these areas, regardless of the work to be performed, thus providing assurance that personnel exposure of the qualified personnel or people being escorted will be within established limits. These changes are designated as less restrictive because an exemption may be used for a larger variety of duties.

L.35 *(Category 7 – Relaxation Of Surveillance Frequency)* CTS 6.8.4.a states that the program addressing leakage from portions of systems outside containment shall include, "(ii) Integrated leak test requirements for each system at refueling cycle intervals or less." ITS 5.5.2, Primary Coolant Sources Outside Containment, states that the program shall include, "b. Integrated leak test requirements for each system at least once per 18 months. The provisions of SR 3.0.2 are applicable." This

R4

The change does not introduce a new mode of plant operation and does not involve physical modification to the plant. The change will not introduce new accident initiators. Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

This change allows the requirements for access to high radiation areas in which the intensity of radiation is greater than 1000 mrem/hr to also apply to areas with ≥ 500 rads/hr at one meter from a radiation source or any surface through which radiation penetrates. The ITS requirements are considered adequate for control of access to high radiation areas, and this provides new guidance for access to the additional areas specified. As a result, the change does not significantly reduce the margin of safety.

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES

SPECIFICATION 5.0, CHANGE L.17

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." The proposed change involves making the current Technical Specifications (CTS) less restrictive. Below is the description of this less restrictive change and the determination of No Significant Hazards Considerations for conversion to NUREG-1431.

L.17 Unit 1 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." ITS 5.7.1.c states, "Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." This changes the Unit 1 CTS by allowing personnel not qualified in radiation protection procedures, but escorted by such qualified individuals to use the exemption from the requirement for an RWP or equivalent while performing their assigned duties. Changing the term "Health Physics" to "radiation protection" is addressed by DOC L.11. Allowing personnel to use the exemption for reasons other than radiation protection duties is addressed by DOC L.34.

RAI 5.0-11 5.0-13 R4

The purpose of Unit 1 CTS 6.12 footnote "*" is to provide an allowance for qualified personnel to not have to issue an RWP during the performance of their assigned radiation protection duties. This change is acceptable because the escort of people by

RAI 5.0-11 5.0-13 R4

to comply with appropriate state regulations, burial ground requirements, and other requirements governing the disposal of radioactive waste. This change is designated as less restrictive because the specific manner in which regulations are being met is being removed from the Technical Specifications.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. **Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?**

   This change removes the requirements associated with the contents and maintenance of the Process Control Program (PCP). The contents and maintenance of the PCP are not initiators of any previously analyzed accident. Therefore, the change does not increase the probability of such accidents. The contents and maintenance of the PCP do not affect the ability of the plant to mitigate the consequences of previously analyzed accidents. As a result, the change does not significantly increase the consequences of an accident previously analyzed.

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

   The change does not introduce a new mode of plant operation and does not involve physical modification to the plant. The change will not introduce new accident initiators. Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

   This change removes the requirements associated with the contents and maintenance of the Process Control Program (PCP). The ITS requirements are considered to provide adequate control of solid radioactive waste. As a result, the change does not significantly reduce the margin of safety.

RAI 5.0-11 5.0-13 R4

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES

SPECIFICATION 5.0, CHANGE L.34

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." The proposed change involves making the current Technical Specifications (CTS) less restrictive.

RAI 5.0-11 5.0-13 R4

Below is the description of this less restrictive change and the determination of No Significant Hazards Considerations for conversion to NUREG-1431.

L.34 Unit 1 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." Unit 2 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." ITS 5.7.1.c states, "Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." This changes the CTS by allowing personnel to be exempt from the RWP issuance requirement for any duties, not just for radiation protection. Changing the term "Health Physics" to "radiation protection" is addressed by DOC L.11. For Unit 1, allowing personnel not qualified in radiation protection procedures, but escorted by such qualified individuals, to use the exemption from the requirement for an RWP or equivalent while performing their assigned duties is addressed by DOC L.17.

The purpose of the CTS 6.12 footnote "*" is to provide an allowance for qualified personnel to not have to issue an RWP during the performance of their assigned radiation protection duties. This change is acceptable because the personnel are qualified in radiation protection procedures for work in these areas, regardless of the work to be performed, thus providing assurance that personnel exposure of the qualified personnel or people being escorted will be within established limits. These changes are designated as less restrictive because an exemption may be used for a larger variety of duties.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

This change allows personnel to be exempt from the RWP issuance requirement for any duties, not just for radiation protection. Specification of which personnel are exempt from the RWP issuance requirement during the performance of their assigned duties in high radiation areas is not assumed to be an initiator of any previously analyzed accident. Therefore, the change does not increase the probability of such accidents. Requirements for access to high radiation areas do not affect the ability of

RAI 5.0-11 5.0-13 R4

the plant to mitigate the consequences of previously analyzed accidents. As a result, the change does not significantly increase the consequences of an accident previously analyzed.

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

The change does not introduce a new mode of plant operation and does not involve physical modification to the plant. The change will not introduce new accident initiators. Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

This change allows personnel to be exempt from the RWP issuance requirement for any duties, not just for radiation protection. The ITS requirements are considered adequate for high radiation area access control because stringent criteria are still being applied to all the personnel allowed access, similar to criteria applied previously. As a result, the change does not significantly reduce the margin of safety.

NAPS- ITS Section 5.0

5.14 ITS 5.5.8.3, CTS4.4.5.3.c.1, A20

NRC RAI: Marked up reference on CTS was labeled as "ITS 3.4.13", while proposed ITS indicates a reference label as "ITS 3.4.14." **Comment:** Licensee to revise ITS and correct referencing as shown in the marked-up page [page 34 of 69 on page 3/4 4-11]

Response: The Company will take the action proposed in the Comment. The reference in ITS 5.5.8.3.c.1 in the Insert to ISTS page 5.0-11 will be changed to "3.4.13."

INSERT (CONTINUED)

5.5.8.3 Inspection Frequencies

The above required inservice inspections of steam generator tubes shall be performed at the following frequencies:

a. The first inservice inspection shall be performed after 6 Effective Full Power Months but within 24 calendar months of initial criticality. Subsequent inservice inspections shall be performed at intervals of not less than 12 nor more than 24 calendar months after the previous inspection. If two consecutive inspections following service under AVT conditions, not including the preservice inspection, result in all inspection results falling into the C-1 category or if two consecutive inspections demonstrate that previously observed degradation has not continued and no additional degradation has occurred, the inspection interval may be extended to a maximum of once per 40 months.

b. If the results of the inservice inspection of a steam generator conducted in accordance with Table 5.5.8-2 at 40 month intervals fall into category C-3, the inspection frequency shall be increased to at least once per 20 months. The increase in inspection frequency shall apply until the subsequent inspections satisfy the criteria of Specification 5.5.8.3.a; the interval may then be extended to a maximum of once per 40 months.

c. Additional, unscheduled inservice inspections shall be performed on each steam generator in accordance with the first sample inspection specified in Table 5.5.8-2 during the shutdown subsequent to any of the following conditions:

1. Primary-to-secondary tubes leak (not including leaks originating from tube-to-tube sheet welds) in excess of the limits of Specification 3.4.13.

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2. A seismic occurrence greater than the Operating Basis Earthquake.

3. A loss-of-coolant accident requiring actuation of the engineered safeguards.

4. A major steam line or feedwater line break.

NAPS- ITS Section 5.0

5.15 ITS Table 5.5.8.2, CTS Table 4.4-2 [page 38 0f 69, old 3/4 4-15], L-22

NRC RAI: ITS Table does not show reporting requirement as indicated in the marked up note on CTS Table, under column "Action Not Required". **Comment:** Licensee to revise ITS Table to reflect this marked-up wording.

Response: The Company will take the action proposed in the Comment, with modifications. The CTS page will be marked and DOC A.15 will explain that the reporting requirement is addressed by ITS 5.6.7.c.

STEAM GENERATOR (SG) TUBE SURVEILLANCE PROGRAM

Table 5.5.8-2

TABLE 4.4-2

STEAM GENERATOR TUBE INSPECTION

1ST SAMPLE INSPECTION			2ND SAMPLE INSPECTION		3RD SAMPLE INSPECTION	
Sample Size	Result	Action Required	Result	Action Required	Result	Action Required
A minimum of S Tubes per S. G.	C–1	None	N/A	N/A	N/A	N/A
	C–2	Plug defective tubes and inspect additional 2S tubes in this S. G.	C–1	None	N/A	N/A
			C–2	Plug defective tubes and inspect additional 4S tubes in this S. G.	C–1	None
					C–2	Plug defective tubes
					C–3	Perform action for C–3 result of first sample
			C–3	Perform action for C–3 result of first sample	N/A	N/A
	C–3	Inspect all tubes in this S. G., plug defective tubes and inspect 2S tubes in each other S. G.	All other S. G.s are C–1	None	N/A	N/A
			Some S. G.s C–2 but no additional S. G. are C–3	Perform action for C–2 result of second sample	N/A	N/A
			Additional S. G. is C–3	Inspect all tubes in each S. G. and plug defective tubes. Report to NRC & obtain approval prior to operation	N/A	N/A

$S = 3\frac{N}{n}\%$ Where N is the number of steam generators in the unit, and n is the number of steam generators inspected during an inspection

A.15 L.22 RAI 5.0-15 R4

A.1

TS 5.0

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This change is acceptable because referenced requirement CTS 6.10.2.r was removed from the CTS by North Anna amendment 208 (Unit 1) / 189 (Unit 2). This change is designated administrative because it does not result in technical changes to the CTS.

A.12 CTS Table 6.2-1 lists acronym definitions for shift manning. These acronyms are defined as appropriate in parts of ITS 5.0, and the ITS does not include a consolidated list. This changes the CTS by deleting the consolidated acronym list and defining them as needed in ITS 5.0.

This change is acceptable because the acronyms are adequately defined where appropriate in ITS 5.0, and it is not necessary to have a consolidated list. This change is designated administrative because it does not result in technical changes to the CTS.

A.13 CTS 4.0.5.b does not specify a biennial or every 2 years frequency of "at least once per 731 days." ITS 5.5.7 includes a biennial or every 2 years frequency of "at least once per 731 days." This changes the CTS 4.0.5 by incorporating the ASME Boiler and Pressure Vessel Code biennial or every 2 years frequency of "at least once per 731 days."

The purpose of CTS 4.0.5.b is to specify the required frequencies for performing inservice testing activities associated with ASME Boiler and Pressure Vessel Code. This change is acceptable because it adds the ASME Boiler and Pressure Vessel Code biennial or every 2 years frequency of "biennially or every 2 years" without adding any new requirements. This change is designated administrative because it does not result in technical changes to the CTS.

A.14 CTS 6.9.1.7.d requires the COLR to be provided to the, "NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector." CTS 6.9.1.6 requires the Monthly Operating Report be submitted to, "the Director of Management and Program Analysis, U.S. Nuclear Regulatory Commission, Washington, D. C. 20555, with a copy to the Regional Office of Inspection and Enforcement." ITS 5.6.5.d requires the COLR be provided to the NRC. ITS 5.6.4 requires the Monthly Operating Report be submitted. This changes the CTS by removing the specifics regarding distribution of the reports to the NRC, which is addressed by 10 CFR 50.4.

This change is acceptable because the distribution of written communications to the NRC is governed by 10 CFR 50.4, and duplication in the Technical Specifications is unnecessary. This change is designated administrative because it does not result in technical changes to the CTS.

A.15 Unit 1 CTS Table 4.4-2, Steam Generator Tube Inspection, 2nd Sample Inspection, Additional SG is C-3, Action Required includes, "Report to NRC..." Unit 2 CTS Table 4.19-2, Steam Generator Tube Inspection, 1st Sample Inspection, C-3 result, and 2nd Sample Inspection, Additional SG is C-3, Action Required includes, "Special

RAI 5.0-15 R4

Report." ITS Table 5.5.8-2 does not include a statement requiring prompt NRC notification. ITS 5.6.7.c states, "Results of steam generator tube inspections that fall into Category C-3 require prompt notification of the Commission pursuant to Section 50.72 to 10 CFR Part 50. A Licensee Event Report shall be submitted pursuant to Section 50.73 to 10 CFR Part 50 and shall provide a description of investigations conducted to determine cause of the tube degradation and corrective measures taken to prevent recurrence." This changes the CTS by removing a reporting reference that is required by other sections of the Technical Specifications.

This change is acceptable because a duplicate reporting requirement is deleted that is addressed by other Technical Specifications. This change is designated administrative because it does not result in technical changes to the CTS.

NO CHANGE FYI RAI 5.0-15 R4

A.16 CTS 4.6.1.2 and CTS 4.6.1.3 regarding the containment and containment penetrations, and each containment air lock, respectively, state they shall, "...be tested by performing leakage rate testing as required by 10 CFR 50, Appendix J, Option B, as modified by approved exemptions, and in accordance with the guidelines contained in Regulatory Guide 1.163, dated September 1995. The provisions of Specification 4.0.2 are not applicable." ITS 5.5.15, Containment Leakage Rate Testing Program, does not include the statement that the provisions of Specification 4.0.2 are not applicable, but states, "Nothing in these Technical Specifications shall be construed to modify the testing Frequencies required by 10 CFR 50, Appendix J." This changes the CTS by removing a statement that part of Section 3.0 does not apply to this testing requirement which is being moved to Section 5.0 because Section 3.0 is understood to not apply to Section 5.0.

The purpose of the CTS 4.6.1.2 and CTS 4.6.1.3 statements that the provisions of Specification 4.0.2 are not applicable is to require the testing frequencies for containment and containment penetrations to remain as required by 10 CFR 50, Appendix J, Option B, as modified by approved exemptions, and in accordance with the guidelines contained in Regulatory Guide 1.163, dated September 1995. The NRC and industry position is that Section 3.0 does not apply to Section 5.0. The statement, "Nothing in these Technical Specifications shall be construed to modify the testing Frequencies required by 10 CFR 50, Appendix J," was added to avoid any possible confusion. Therefore, the requirements of CTS 4.0.2 continue to not be applicable to the containment and containment penetration leakage testing requirements, but the format is changed to accommodate moving the testing requirements to Section 5.0. This change is designated administrative because it does not result in technical changes to the CTS.

A.17 ITS 5.7.2.a.2 states, in reference to entryways to high radiation areas with dose rates greater than 1.0 rem/hour at 30 centimeters from the radiation source or from any Surface Penetrated by the Radiation, "Doors and gates shall remain locked except during periods of personnel or equipment entry or exit." The CTS does not include

North Anna Power Station
Summary of Changes Not Associated with RAIs

Chapter 5.0

This letter includes changes to North Anna Power Station's Improved Technical Specifications (ITS) submittal that are not associated with responses to the NRC's requests for additional information. The following table summarizes these changes and identifies the affected pages of Chapter 5.0.

Source of Change	Summary of Change	Affected Pages
Internal comment	Spelled out the names of the ventilation systems in ITS 5.5.10.	Typed ITS Page: 5.0-20 ISTS Mark-up Page: 5.0-12
Internal comment	Added first paragraph of ITS 5.5.8 as an insert to the CTS mark-up. Added DOC A.38 to address the change.	CTS Mark-up Pages: 32 of 69 (Units 1 and 2) Discussion of Changes (DOC) Pages: 11 12
Internal comment	Capitalized the title of the COLR in ITS 5.6.5.	Typed ITS Pages: 5.0-28 5.0-30
Internal comment	Deleted the reference to an alternate method of monitoring from ITS 5.6.6 (PAM). Added JFD 23 and modified DOC M.9 to address the change.	Typed ITS Pages: 5.0-30 ISTS Mark-up Page: 5.0-22 JFD Page: 3 DOC Page: 14
Internal comment	In ITS Table 5.5.8-2, changed a "}" symbol to a "]" symbol in the typed ITS.	Typed ITS Page: 5.0-18
Internal comment	Revised the format of the last paragraph of ITS 5.5.4 so that it is not indented.	Typed ITS Page: 5.0-10
Internal comment	Added flashpoint testing to ITS 5.5.12, and deleted JFD 9.	Typed ITS Page: 5.0-23 ISTS Mark-up Page: 5.0-16 JFD Page: 1
WOG-ED-23	Modified the words of ITS 5.5.14.	Typed ITS Page: 5.0-24 ISTS Mark-up Page: 5.0-17
Internal comment	Revised the titles of positions in ITS 5.2.2.e and 5.3.1 to be more generic. Revised DOC L.6 to address the changes.	Typed ITS Pages: 5.0-3 5.0-5 ISTS Mark-up Page: 5.0-5 CTS Mark-up Pages: 9 of 69 (Units 1 and 2) DOC Page: 29
Internal comment	Added the word "testing" to ITS 5.5.15.d.2 to read "air lock leakage rate testing acceptance criterion..."	Typed ITS Page: 5.0-26

North Anna Power Station
Summary of Changes Not Associated with RAIs

Chapter 5.0 (continued)

Source of Change	Summary of Change	Affected Pages
TSTF-299	Modified frequency for integrated leak test requirements in ITS 5.5.2. Revised DOC to address the change.	Typed ITS Page: 5.0-8 ISTS Mark-up Page: 5.0-8 CTS Mark-up Pages: 21 of 69 (Units 1 and 2) DOC Pages: 41 42
Internal comment	Revised staffing requirements for auxiliary operators to be consistent with the ISTS. Modified DOC L.9, added DOC M.24, and deleted JFD 6 to address changes.	Typed ITS Page: 5.0-3 ISTS Mark-up Page: 5.0-2 5.0-3 JFD Page: 1 CTS Mark-up Pages: 7 of 69 (Units 1 and 2) DOC Pages: 21 22 30

5.5 Programs and Manuals

5.5.10 Ventilation Filter Testing Program (VFTP)

a. (continued)

with Regulatory Positions C.5.a and C.5.c of Regulatory Guide 1.52, Revision 2, March 1978, and ANSI N510-1975 at the system flowrate specified below.

ESF Ventilation System	Flowrate
Main Control Room/Emergency Switchgear Room (MCR/ESGR) Emergency Ventilation System (EVS)	1000 ± 10% cfm
Emergency Core Cooling System (ECCS) Pump Room Exhaust Air Cleanup System (PREACS)	Nominal accident flow for a single train actuation

R4

Nominal accident flow for a single train actuation is greater than the minimum required cooling flow for ECCS equipment operation, and ≤ 39,200 cfm, which is the maximum flow rate providing an adequate residence time within the charcoal adsorber.

b. Demonstrate for each of the ESF systems that an inplace test of the charcoal adsorber shows a penetration and system bypass < 1.0% when tested in accordance with Regulatory Positions C.5.a and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and ANSI N510-1975 at the system flowrate specified below.

ESF Ventilation System	Flowrate
MCR/ESGR EVS	1000 ± 10% cfm
• ECCS PREACS	Nominal accident flow for a single train actuation

Nominal accident flow for a single train actuation is greater than the minimum required cooling flow for ECCS equipment operation, and ≤ 39,200 cfm, which is the maximum flow rate providing an adequate residence time within the charcoal adsorber.

c. Demonstrate for each of the ESF systems that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows the methyl iodide penetration less than the

(continued)

CTS

5.5 Programs and Manuals (continued)

6.8.4.c 5.5.10 (9) Secondary Water Chemistry Program (7)

This program provides controls for monitoring secondary water chemistry to inhibit SG tube degradation and low pressure turbine disc stress corrosion cracking. The program shall include: RAI 5.0-05 R4

a. Identification of a sampling schedule for the critical variables and control points for these variables;

b. Identification of the procedures used to measure the values of the critical variables;

c. Identification of process sampling points, which shall include monitoring the discharge of the condensate pumps for evidence of condenser in leakage;

d. Procedures for the recording and management of data;

e. Procedures defining corrective actions for all off control point chemistry conditions; and

f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events, which is required to initiate corrective action.

(10) (7)

4.7.7.1 5.5.11 Ventilation Filter Testing Program (VFTP)

4.7.8.1 in general conformance with

4.9.12 A program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems at the frequencies specified in [Regulatory Guide]. and (3) (1)

requirements of Regulatory Positions C.5.a, C.5.c, C.5.d, and C.6.b of ANSI

in accordance with [Regulatory Guide 1.52, Revision 2, March 1978 (1) (3)

ASME N510-[1989] [and AG-1]. 1975

4.7.7.1.b.1 a. Demonstrate for each of the ESF systems that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < [0.05]% when tested in accordance with [Regulatory Guide 1.52, Revision 2, and ASME N510-[1989]] at the system flowrate specified below [± 10%]. (1.0) (1) (3) (1)

4.7.7.1.e Regulatory Positions C.5.a and C.5.c of 1975 ANSI

ESF Ventilation System	Flowrate
Main Control Room/Emergency Switchgear Room (MCR/ESGR) Emergency Ventilation System (EVS) Emergency Core Cooling System (ECCS) Pump Room Exhaust Air Cleanup System (PREACS) INSERT	[ ] 1000 cfm Nominal accident flow for a single train activation

(1) R4

(15)

(continued)

(A.1)

ITS 5.0

5.5.9 Steam Generator (SG) Tube Surveillance Program

11-26-77

ITS

REACTOR COOLANT SYSTEM

STEAM GENERATORS

This program provides the controls for the inservice inspection of steam generator tubes to ensure that the structural integrity of this portion of the RCS is maintained. The program for inservice inspection of steam generators is based on a modification of Regulatory Guide 1.83, Revision 1. This program shall include:

(A.38) R4

LIMITING CONDITION FOR OPERATION

3.4.5 Each steam generator in a non-isolated reactor coolant loop shall be OPERABLE.

See ITS 3.4.13

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more steam generators in non-isolated reactor coolant loops inoperable, restore the inoperable generator(s) to OPERABLE status prior to increasing T_{avg} above 200°F.

SURVEILLANCE REQUIREMENTS

(A.7)

4.4.5.0 Each steam generator shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the required Specification 4.0.5.

The provisions of SR 3.0.2 are applicable to the SG Tube Surveillance Program Test Frequencies

5.5.8.1

4.4.5.1 Steam Generator Sample Selection and Inspection - Each steam generator shall be determined OPERABLE during shutdown by selecting and inspecting at least the minimum number of steam generators specified in Table 4.4-1. (5.5.8-1)

5.5.8.2

4.4.5.2 Steam Generator Tube Sample Selection and Inspection - The steam generator tube minimum sample size, inspection result classification, (5.5.8-2) and the corresponding action required shall be as specified in Table 4.4-2. The inservice inspection of steam generator tubes shall be performed at the frequencies specified in Specification 4.4.5.3 (5.5.8.3) and the inspected tubes shall be verified acceptable per the acceptance criteria of Specification 4.4.5.4. The tubes selected for each inservice inspection shall include at least 3% of the total number of tubes in all steam generators; the tubes selected for these inspections shall be selected on a random basis except:

(A.20)

5.5.8.4

5.5.8.2.a

a. Where experience in similar plants with similar water chemistry indicates critical areas to be inspected, then at least 50% of the tubes inspected shall be from these critical areas.

5.5.8.2.b

b. The first sample of tubes selected for each inservice inspection (subsequent to the preservice inspection) of each steam generator shall include:

A.1

ITS 5.0

5.5.9 Steam Generator (SG) Tube Surveillance Program 8-21-80

ITS

REACTOR COOLANT SYSTEM

STEAM GENERATORS

This program provides the controls for the inservice inspection of steam generator tubes to ensure that the structural integrity of this portion of the RCS is maintained. The program for inservice inspection of steam generators is based on a modification of Regulatory Guide 1.83, Revision 1. This program shall include:

A.38 | R4

LIMITING CONDITION FOR OPERATION

3.4.5 Each steam generator in a non-isolated reactor coolant loop shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more steam generators in non-isolated reactor coolant loops inoperable, restore the inoperable generator(s) to OPERABLE status prior to increasing T_{avg} above 200°F.

See ITS 3.4.13

The provisions of SR 3.0.2 are applicable to the SG Tube Surveillance program test frequencies.

SURVEILLANCE REQUIREMENTS

A.7

4.4.5.0 Each steam generator shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the required Specification 4.0.5.

5.5.8.1 4.4.5.1 Steam Generator Sample Selection and Inspection - Each steam generator shall be determined OPERABLE during shutdown by selecting and inspecting at least the minimum number of steam generators specified in Table 4.4-1. 5.5.8-1

5.5.8.2 4.4.5.2 Steam Generator Tube Sample Selection and Inspection - The steam generator tube minimum sample size, inspection result classification, and the corresponding action required shall be as specified in Table 4.4-2. 5.5.8-2 The inservice inspection of steam generator tubes shall be performed at the frequencies specified in Specification 4.4.5.3 and the inspected tubes shall be verified acceptable per the acceptance criteria of Specification 4.4.5.4. 5.5.8.3 The tubes selected for each inservice inspection shall include at least 3% of the total number of tubes in all steam generators; the tubes selected for these inspections shall be selected on a random basis except: 5.5.8.4

A.20

5.5.8.2.a a. Where experience in similar plants with similar water chemistry indicates critical areas to be inspected, then at least 50% of the tubes inspected shall be from these critical areas.

5.5.8.2.b b. The first sample of tubes selected for each inservice inspection (subsequent to the preservice inspection) of each steam generator shall include:

conditions." ITS 5.5.9.e states that the secondary water chemistry monitoring program shall include, "Procedures defining corrective actions for all off control point chemistry conditions." This changes the CTS by adding the word "off" to the term control point.

This change is acceptable because the intent of CTS 6.8.4(v) is to provide procedures for what to do when the control point chemistry conditions are not within limits, which is more accurately stated using the term "off control point." This change clarifies an existing requirement. This change is designated administrative because it does not result in technical changes to the CTS.

A.36 ITS 5.5.15.e states, "The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program." The CTS do not contain such a statement. This changes the CTS by stating that SR 3.0.3 applies because in the CTS the allowance in CTS 4.0.2, which is the same as ITS SR 3.0.3, already applies.

This change is acceptable because it retains the allowance in CTS 4.0.2, which must be explicitly stated for it to apply to a requirement in ITS Section 5.0. This change is designated administrative because it does not result in technical changes to the CTS.

A.37 CTS 6.9.1.7.a contains a list of the core operating limits established and documented in the Core Operating Limits Report (COLR). ITS 5.6.5.a includes additional core operating limits established and documented in the COLR. These are: Safety Limits, Shutdown Margin, Reactor Trip System Instrumentation – OTΔT and OPΔT Trip Parameters, RCS Pressure, Temperature, and Flow DNB Limits, and Boron Concentration. These limits had previously been addressed in other parts of the CTS, but are being moved to the COLR, and because of this are listed in ITS 5.6.5.a. The change also deletes references associating the core operating limits listed with other sections in the CTS. This changes CTS by adding core operating limits established and documented in the COLR because they are being moved there as part of changes to other parts of the CTS. Technical aspects of the changes are addressed by Discussions of Change for the respective individual specifications.

This change is acceptable because it administratively documents changes made to other parts of the CTS and the COLR. This change is designated administrative because it does not result in technical changes to the CTS.

A.38 ITS 5.5.8 includes an introductory paragraph that states, "This program provides the controls for the inservice inspection of steam generator tubes to ensure that the structural integrity of this portion of the RCS is maintained. The program for inservice inspection of steam generators is based on a modification of Regulatory Guide 1.83, Revision 1. This program shall include." CTS does not include such an introduction. This changes CTS by adding an introductory paragraph for requirements that had not in the past been addressed as a separate program in the Technical Specifications. R4

This change is acceptable because it clarifies the intent of the new program, which incorporates existing requirements into a separate program without changing the requirements. This change is designated administrative because it does not result in technical changes to the CTS. R4

MORE RESTRICTIVE CHANGES

M.1 ITS 5.1.1 states, "The plant manager or his designee shall approve, prior to implementation, each proposed test, experiment or modification to systems or equipment that affect nuclear safety." The CTS does not include such a statement. This changes the CTS by adding a required action for the plant manager or his designee.

The purpose of the ITS 5.1.1 statement is to provide additional assurance that the plant manager has direct responsibility for overall unit operation. This change is acceptable because having the plant manager or his designee approve actions affecting nuclear safety is consistent with the ITS 5.2.1.b requirement, "The plant manager shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant." This change is designated more restrictive because an additional requirement is added to the Technical Specifications.

M.2 ITS 5.4.1 states, "Written procedures shall be established, implemented, and maintained covering the following activities:...b. The emergency operating procedures required to implement the requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33." The CTS does not include this requirement. This changes the CTS by adopting a new requirement for emergency operating procedures.

The purpose of ITS 5.4.1.b is to ensure that written procedures are established, implemented, and maintained covering the emergency operating procedures to implement the requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33. This change is acceptable because it is consistent with an existing requirement to comply with NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33. This change is designated more restrictive because it imposes a new requirement for procedures within the Technical Specifications.

M.3 ITS 5.4.1 states, "Written procedures shall be established, implemented, and maintained covering the following activities:...e. All programs specified in Specification 5.5." The CTS does not include this requirement. This changes the CTS by adopting a new requirement for procedures to address programs described in ITS 5.5.

5.6 Reporting Requirements

5.6.2 Annual Radiological Environmental Operating Report (continued)

The Annual Radiological Environmental Operating Report shall include the results of analyses of all radiological environmental samples and of all environmental radiation measurements taken during the period pursuant to the locations specified in the table and figures in the ODCM, as well as summarized and tabulated results of these analyses and measurements commensurate with the format in the ODCM. In the event that some individual results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted in a supplementary report as soon as possible.

5.6.3 Annual Radioactive Effluent Release Report

----------NOTE----------
A single submittal may be made for a multiple unit station. The submittal shall combine sections common to all units at the station; however, for units with separate radwaste systems, the submittal shall specify the releases of radioactive material from each unit.

The Annual Radioactive Effluent Release Report covering the operation of the unit in the previous year shall be submitted prior to May 1 of each year in accordance with 10 CFR 50.36a. The report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the unit. The material provided shall be consistent with the objectives outlined in the ODCM and Process Control Program and in conformance with 10 CFR 50.36a and 10 CFR Part 50, Appendix I, Section IV.B.1.

5.6.4 Monthly Operating Reports

Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis no later than the 15th of each month following the calendar month covered by the report.

5.6.5 CORE OPERATING LIMITS REPORT (COLR) |R4

a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:

1. Safety Limits,

2. Shutdown Margin,

5.6 Reporting Requirements

5.6.5 CORE OPERATING LIMITS REPORT (COLR) [R4]

b. (continued)

6. WCAP-10079-P-A, "NOTRUMP, A Nodal Transient Small Break and General Network Code."

7. WCAP-12610, "VANTAGE+ FUEL ASSEMBLY–REFERENCE CORE REPORT."

8. VEP-NE-2-A, "Statistical DNBR Evaluation Methodology."

9. VEP-NE-3-A, "Qualification of the WRB-1 CHF Correlation in the Virginia Power COBRA Code."

10. VEP-NE-1-A, "VEPCO Relaxed Power Distribution Control Methodology and Associated FQ Surveillance Technical Specifications."

c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems (ECCS) limits, nuclear limits such as SDM, transient analysis limits, and accident analysis limits) of the safety analysis are met.

d. The COLR, including any midcycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC.

5.6.6 PAM Report

When a report is required by Condition B of LCO 3.3.3, "Post Accident Monitoring (PAM) Instrumentation," a report shall be submitted within the following 14 days. The report shall outline the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status. [R4]

5.6.7 Steam Generator Tube Inspection Report

a. Following each inservice inspection of steam generator tubes, the number of tubes plugged in each steam generator shall be reported to the Nuclear Regulatory Commission within 15 days.

CTS

5.6 Reporting Requirements (5)

with NUREG-0800 Standard Review Plan 5.3.2, Pressure-Temperature Limits.

5.6.6 Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR) (continued)

6. The minimum temperature requirements of Appendix G to 10 CFR Part 50 shall be incorporated into the pressure and temperature limit curves.

7. Licensees who have removed two or more capsules should compare for each surveillance material the measured increase in reference temperature (RT_{NDT}) to the predicted increase in RT_{NDT}; where the predicted increase in RT_{NDT} is based on the mean shift in RT_{NDT} plus the two standard deviation value ($2\sigma_{\Delta}$) specified in Regulatory Guide 1.99, Revision 2. If the measured value exceeds the predicted value (increase RT_{NDT} + $2\sigma_{\Delta}$), the licensee should provide a supplement to the PTLR to demonstrate how the results affect the approved methodology.

5.6.7 EDG Failure Report

If an individual emergency diesel generator (EDG) experiences four or more valid failures in the last 25 demands, these failures and any nonvalid failures experienced by that EDG in that time period shall be reported within 30 days. Reports on EDG failures shall include the information recommended in Regulatory Guide 1.9, Revision 3, Regulatory Position C.5, or existing Regulatory Guide 1.108 reporting requirement. TSTF-37

New 5.6.~~8~~6 PAM Report TSTF-37 (1) (3)

When a report is required by Condition B or G of LCO 3.3.[3], "Post Accident Monitoring (PAM) Instrumentation," a report shall be submitted within the following 14 days. The report shall outline the ~~preplanned~~ alternate method of ~~monitoring~~, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status. (23) R4

(continued)

amount that would result in concentrations greater than, rather than less than, the limits of 10 CFR 20, Appendix B, Table 2, Column 2 in case of the specified event. ISTS 5.5.12.c is also modified to clarify that the radioactivity limits exclude limits on tritium. These changes are consistent with the current licensing basis and guidance in NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants," section 4.4.

19. ISTS 5.5.7 is modified to state that the provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Reactor Coolant Pump Flywheel Inspection Program surveillance frequency. This allowance is consistent with the current licensing basis, and is consistent with the NUREG-1431 format of retaining these allowances for other current Technical Specification requirements that have been moved to Section 5.0.

20. The discussion in ISTS 5.3.1 regarding qualifications of staff not covered by Regulatory Guide 1.8 is replaced with a statement that the shift supervisor, assistant shift supervisor, Control Room Operator – Nuclear, and the individual providing advisory support to the unit operations shift crew are required to meet or exceed the minimum qualifications of 10 CFR 55.59(c) and 55.31(a)(4). These requirements are consistent with the CTS, and the CTS requirements do not include qualifications of staff not covered by Regulatory Guide 1.8. RAI 5.0-01 R4

21. References in ISTS 5.5.12 to the "offgas system" are not adopted. NAPS does not include an offgas system, which is usually associated with boiling water reactors. RAI 5.0-07 R4

22. This bracketed requirement is deleted because it is not applicable to North Anna. The following requirements are renumbered, where applicable, to reflect this deletion. RAI 5.0-08 R4

23. The requirement to include a preplanned alternate method of monitoring in case of Post Accident Monitoring (PAM) instrumentation inoperability is not adopted. The NAPS design does not have alternate methods of monitoring if the PAM instrumentation is inoperable. R4

the CTS by adding the requirements for the Technical Specification Bases Control Program.

The purpose of ITS 5.5.13 is to establish a means for processing changes to the Bases of the ITS without NRC approval prior to implementation. This change is acceptable because it establishes criteria that allow changes to the Bases without prior NRC approval as long as the change does not require NRC approval pursuant to 10 CFR 50.59. In addition, the program assures consistency with the Technical Specifications and the UFSAR. This change is designated more restrictive because of new requirements, in the form of a program, are being added to the Technical Specifications.

M.7 Regarding lines of authority, CTS 6.2.1.a states, "These requirements shall be documented in the UFSAR." ITS 5.2.1.a states, "These requirements, including the plant-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications, shall be documented in the UFSAR/QA Plan." This changes the CTS by specifying that the plant-specific titles are specified in the QA Plan, as well as the UFSAR.

This change is acceptable because the relationship of the plant-specific titles to the titles used in the Technical Specifications and industry standards is already described in the UFSAR and QA Plan. This change adds this requirement to the Technical Specifications. This change is designated more restrictive because it requires that information be maintained in additional documents.

M.8 The second paragraph of ITS 5.6.2 includes detail to be included in the Annual Radiological Environmental Operating Report. CTS 6.9.1.8 does not contain this level of detail. This changes the CTS by requiring additional detail be included in the Annual Radiological Environmental Operating Report.

The purpose of the second paragraph of ITS 5.6.2 is to specify detail to be included in the Annual Radiological Environmental Operating Report. This change is acceptable because the content requirements are consistent with the objectives outlined in the Offsite Dose Calculation Manual. This change is designated more restrictive because it adds new reporting requirements to the Technical Specifications.

M.9 ITS 5.6.6 requires a report be submitted within 14 days after entering Condition B of ITS 3.3.3, PAM Instrumentation. ITS 5.6.6 also states, "The report shall outline the cause of the inoperability and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status." The CTS do not include these requirements. This changes the CTS by requiring a report to be submitted within 14 days after entering Condition B of ITS 3.3.3 and specifying the contents of the report. R4

The purpose of ITS 5.6.6 is to ensure that a report is submitted within the following 14 days after entering Condition B of ITS 3.3.3, and that it includes the required

Table 5.5.8-2
Steam Generator Tube Inspection

1st Sample Inspection			2nd Sample Inspection		3rd Sample Inspection	
Sample Size	Result	Action Required	Result	Action Required	Result	Action Required
A minimum of S Tubes per SG	C-1	None	N/A	N/A	N/A	N/A
	C-2	Plug defective tubes and inspect additional 2S tubes in SG	C-1	None	N/A	N/A
			C-2	Plug defective tubes and inspect additional 4S tubes in SG	C-1	None
					C-2	Plug defective tubes
					C-3	Perform action for C-3 result of first sample
			C-3	Perform action for C-3 result of first sample	N/A	N/A
	C-3	Inspect all tubes in this SG, plug defective tubes and inspect 2S tubes in each other SG	All other SGs are C-1	None	N/A	N/A
			Some SGs C-2 but no additional SG are C-3	Perform action for C-2 result of second sample	N/A	N/A
			Additional SG is C-3	Inspect all tubes in each SG and plug defective tubes	N/A	N/A

$S = 3[N/n]\%$ Where N is the number of steam generators in the unit, and n is the number of steam generators inspected during an inspection. |R4

5.5 Programs and Manuals

5.5.4 Radioactive Effluent Controls Program (continued)

i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives > 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and

j. Limitations on the annual dose or dose commitment to any member of the public, beyond the site boundary, due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Radioactive Effluent Controls Program surveillance frequency. R4

5.5.5 Component Cyclic or Transient Limit

This program provides controls to track the UFSAR, Section 5.2, cyclic and transient occurrences to ensure that components are maintained within the design limits.

5.5.6 Reactor Coolant Pump Flywheel Inspection Program

This program shall provide for the inspection of each reactor coolant pump flywheel once every 10 years by a qualified inplace UT examination over the volume from the inner bore of the flywheel to the circle of one-half the outer radius or a surface examination (MT and/or PT) of exposed surfaces defined by the volume of disassembled flywheels.

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Reactor Coolant Pump Flywheel Inspection Program surveillance frequency.

5.5 Programs and Manuals (continued)

5.5.12 Diesel Fuel Oil Testing Program

A diesel fuel oil testing program to implement required testing of both new fuel oil and stored fuel oil shall be established. The program shall include sampling and testing requirements, and acceptance criteria, all in accordance with applicable ASTM Standards. The purpose of the program is to establish the following:

a. Acceptability of new fuel oil for use prior to addition to storage tanks by determining that the fuel oil has:

1. an API gravity or an absolute specific gravity within limits,

2. a flash point and kinematic viscosity within limits for ASTM 2D fuel oil, and [R4]

3. water and sediment $\leq$ 0.05%.

b. Within 31 days following addition of the new fuel oil to storage tanks verify that the properties of the new fuel oil, other than those addressed in a. above, are within limits for ASTM 2D fuel oil;

c. Total particulate concentration of the stored fuel oil is $\leq$ 10 mg/l when tested every 92 days in accordance with ASTM D-2276, Method A-2 or A-3; and

d. The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Diesel Fuel Oil Testing Program testing Frequencies.

5.5.13 Technical Specifications (TS) Bases Control Program

This program provides a means for processing changes to the Bases of these Technical Specifications.

a. Changes to the Bases of the TS shall be made under appropriate administrative controls and reviews.

b. Licensees may make changes to Bases without prior NRC approval provided the changes do not require either of the following:

1. a change in the TS incorporated in the license; or

CTS

5.5 Programs and Manuals

New

5.5.~~13~~ (12) Diesel Fuel Oil Testing Program (continued) (7)

2. a flash point and kinematic viscosity within limits for ASTM 2D fuel oil, and (water and sediment ≤ 0.05%) (10) R4

3. ~~a clear and bright appearance with proper color~~;

verify that the properties of the new fuel oil, other than those addressed in a., above, are within limits for ASTM 2D fuel oil.

b. ~~Other properties for ASTM 2D fuel oil are within limits~~ within 31 days following ~~sampling and addition~~ to storage tanks; ~~and~~ TSTF-106

(of the new fuel oil)

c. Total particulate (92) concentration of the (stored) fuel oil is ≤ 10 mg/l when tested every (31) days in accordance with ASTM D-2276, Method A-2 or A-3 (and) (11)

d. The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the Diesel Fuel Oil Testing Program testing Frequencies. → TSTF-118

New

5.5.~~14~~ (13) Technical Specifications (TS) Bases Control Program (7)

This program provides a means for processing changes to the Bases of these Technical Specifications.

a. Changes to the Bases of the TS shall be made under appropriate administrative controls and reviews.

b. Licensees may make changes to Bases without prior NRC approval provided the changes do not (involve) (require) either of the following: (3)

1. a change in the TS incorporated in the license; or

2. ~~a change to the updated FSAR or Bases that involves an unreviewed safety question as defined in 10 CFR 50.59.~~ TSTF 364

a change to the updated FSAR or Bases that requires NRC approval pursuant to 10 CFR 50.59,

c. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the FSAR. (U) (3)

d. Proposed changes that meet the criteria of Specification 5.5.~~14~~ b above shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10 CFR 50.71(e). (3) (7)

(continued)

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

2. The statement in ISTS 5.2.2.f is modified to state, "The Superintendent Operations shall hold (or have previously held) a Senior Reactor Operator License for North Anna or a similar design Pressurized Water Reactor plant. The Supervisor Shift Operations shall hold an active Senior Reactor Operator License for North Anna Power Station." This is consistent with the current licensing basis.

3. Changes are made (additions, deletions, and/or changes) to the ISTS which reflect the plant specific nomenclature, number, reference, system description, analysis, or licensing basis description.

4. Not used. RAI 5.0-05 R4

5. ISTS 5.6.6, "Reactor Coolant System (RCS) Pressure and Temperature Limits Report (PTLR)," is not adopted in the ITS. CTS Figures 3.4-2 and 3.4-3, which provide Reactor Coolant System heatup and cooldown limitations, respectively, were adopted in ITS Specification 3.4.3, "RCS Pressure and Temperature (P/T) Limits." Subsequent Specifications are renumbered accordingly.

6. Not used. R4

7. The ISTS 5.5.6 requirement, "Pre-Stressed Concrete Containment Tendon Surveillance Program," is not adopted because it is not applicable to the North Anna design. The ISTS 5.6.9 requirement, "Tendon Surveillance Report," is also not adopted. The containment at North Anna is a steel-lined, heavily reinforced concrete structure with vertical cylindrical wall and hemispherical dome, supported on a flat base mat. Subsequent Specifications are renumbered accordingly.

8. The information contained in the reviewer's note is not retained.

9. Not used. R4

10. The ISTS 5.5.13.a.3 requirement to determine a clear and bright appearance with proper color as part of determining acceptability of new fuel oil prior to addition to the storage tanks is not adopted, and a test for water and sediment being ≤ 0.05 percent is adopted instead. The water and sediment test is adopted because the diesel fuel oil is dyed.

11. The ISTS 5.5.13.c requirement to determine, "Total particulate concentration of the fuel oil" every 31 days is modified. ITS 5.5.12.c adds the word "stored" in front of the term "fuel oil" to clarify that the test is to be performed on stored fuel oil rather than new fuel oil. The frequency of the test is changed from 31 days to 92 days based on plant operating practice of conducting the test every 92 days, test history indicating that the

5.5 Programs and Manuals

5.5.13 Technical Specifications (TS) Bases Control Program (continued)

b. (continued)

2. a change to the UFSAR or Bases that requires NRC approval pursuant to 10 CFR 50.59.

c. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the UFSAR.

d. Proposed changes that meet the criteria of Specification 5.5.13b above shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10 CFR 50.71(e).

5.5.14 Safety Function Determination Program (SFDP)

This program ensures loss of safety function is detected and appropriate actions taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other appropriate actions may be taken as a result of the support system inoperability and corresponding exception to entering supported system Condition and Required Actions. This program implements the requirements of LCO 3.0.6. The SFDP shall contain the following:

a. Provisions for cross train checks to ensure a loss of the capability to perform the safety function assumed in the accident analysis does not go undetected;

b. Provisions for ensuring the plant is maintained in a safe condition if a loss of function condition exists;

c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and

d. Other appropriate limitations and remedial or compensatory actions.

A loss of safety function exists when, assuming no concurrent single failure, no concurrent loss of offsite power or loss of onsite diesel generator(s), a safety function assumed in the accident

|R4

(continued)

CTS

5.5 Programs and Manuals (continued)

New

5.5.(15)(14) Safety Function Determination Program (SFDP) (7)

This program ensures loss of safety function is detected and appropriate actions taken. Upon entry into LCO 3.0.6, an evaluation shall be made to determine if loss of safety function exists. Additionally, other appropriate actions may be taken as a result of the support system inoperability and corresponding exception to entering supported system Condition and Required Actions. This program implements the requirements of LCO 3.0.6. The SFDP shall contain the following:

a. Provisions for cross train checks to ensure a loss of the capability to perform the safety function assumed in the accident analysis does not go undetected;

b. Provisions for ensuring the plant is maintained in a safe condition if a loss of function condition exists;

c. Provisions to ensure that an inoperable supported system's Completion Time is not inappropriately extended as a result of multiple support system inoperabilities; and

d. Other appropriate limitations and remedial or compensatory actions. WOG-ED-23|R4 TSTF-273

(6) (and assuming no concurrent loss of offsite power or loss of onsite diesel generator(s),)

A loss of safety function exists when, assuming no concurrent single failure, a safety function assumed in the accident analysis cannot be performed. For the purpose of this program, a loss of safety function may exist when a support system is inoperable, and:

a. A required system redundant to the system(s) supported by the inoperable support system is also inoperable; or

b. A required system redundant to the system(s) in turn supported by the inoperable supported system is also inoperable; or

c. A required system redundant to the support system(s) for the supported systems (a) and (b) above is also inoperable.

INSERT 1

The SFDP identifies where a loss of safety function exists. If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered. TSTF-273

INSERT 2 TSTF-52

5.2 Organization

a. (continued)

One auxiliary operator assigned to the shift crew shall be assigned to each unit containing fuel. [R4]

b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.f for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.

c. A radiation protection technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.

d. Administrative procedures shall be developed and implemented to limit the working hours of personnel who perform safety related functions (e.g., licensed Senior Reactor Operators (SROs), licensed Reactor Operators (ROs), health physicists, auxiliary operators, and key maintenance personnel).

The controls shall include guidelines on working hours that ensure adequate shift coverage shall be maintained without routine heavy use of overtime.

Any deviation from the above guidelines shall be authorized in advance by the plant manager or the plant manager's designee, in accordance with approved administrative procedures, and with documentation of the basis for granting the deviation. Routine deviation from the working hour guidelines shall not be authorized.

Controls shall be included in the procedures to require a periodic independent review be conducted to ensure that excessive hours have not been assigned.

e. The operations manager shall hold (or have previously held) a Senior Reactor Operator License for North Anna or a similar design Pressurized Water Reactor plant. The Supervisor Shift Operations shall hold an active Senior Reactor Operator License for North Anna Power Station. [R4]

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI 3.1 (12/79 Draft) for comparable positions. Exceptions to this requirement are specified in VEPCO's QA Topical Report, VEP-1, "Quality Assurance Program, Operational Phase." The radiation protection manager shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975. The SS, Assistant SS, Control Room Operator-Nuclear, and the individual providing advisory technical support to the unit operations shift crew, shall meet or exceed the minimum qualifications of 10 CFR 55.59(c) and 55.31(a)(4). |R4

5.3.2 For the purpose of 10 CFR 55.4, a licensed SRO and a licensed RO are those individuals who, in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).

CTS

5.0 ADMINISTRATIVE CONTROLS

6.3

5.3 Unit Staff Qualifications

Reviewer's Note: Minimum qualifications for members of the unit staff shall be specified by use of an overall qualification statement referencing an ANSI Standard acceptable to the NRC staff or by specifying individual position qualifications. Generally, the first method is preferable; however, the second method is adaptable to those unit staffs requiring special qualification statements because of unique organizational structures.

(8)

6.3.1 "*"

5.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of [Regulatory Guide 1.8, Revision 2, 1987, or more recent revisions, or ANSI Standard acceptable to the NRC staff]. The [staff not covered by] [Regulatory Guide 1.8] shall meet or exceed the minimum qualifications of [Regulations, Regulatory Guides, or ANSI Standards acceptable to NRC staff].

(1) (1)

TSTF-258

INSERT →

10 CFR 55.59(c) and 55.31(a)(4)

ANSI 3.1 (12/79 Draft) for comparable positions. Exceptions to this requirement are specified in VEPCO's QA Topical Report, VEP-1, "Quality Assurance Program, Operational Phase." The radiation protection manager shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.

SS, Assistant SS, Control Room Operator - Nuclear, and the individual providing advisory technical support to the unit operations shift crew,

(20)

RAI 5.0-01 R4

R4

(A.1) ITS 5.0

ITS

06-23-98

ADMINISTRATIVE CONTROLS

6.3 FACILITY STAFF QUALIFICATIONS

5.3.1 6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANS 3.1 (12/79 Draft)* for comparable positions, except for: (L.6) R4

5.3.1 1. The Superintendent - Radiological Protection (radiation manager) shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975. (the individual providing advisory technical support to the unit operations sh. ft crew) (A.28)

5.3.1 2. Incumbents in the positions of Shift Supervisor, Assistant Shift Supervisor (SRO), Control Room Operator - Nuclear (RO), and Shift Technical Advisor, shall meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4). ← INSERT (A.29) (L.6) R4

5.2.2.e 3. The Superintendent Operations (Manager) shall hold (or have previously held) a Senior Reactor Operator License for North Anna Power Station or a similar design Pressurized Water Reactor plant.

5.2.2.e 4. The Supervisor Shift Operations shall hold an active Senior Reactor Operator License for North Anna Power Station.

6.4 TRAINING

6.4.1 The Manager - Nuclear Training is responsible for ensuring that retraining and replacement training programs for the licensed facility staff meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4). Also, a retraining and replacement training program for non-licensed facility staff shall meet or exceed the recommendations of Section 5 of ANS 3.1 (12/79 Draft)*. (L.19)

6.5 REVIEW AND AUDIT (LA.6)

6.5.1 STATION NUCLEAR SAFETY AND OPERATING COMMITTEE (SNSOC) FUNCTION

6.5.1.1 The SNSOC shall function to advise the Site Vice President on all matters related to nuclear safety.

* Exceptions to this requirement are specified in VEPCO's QA Topical Report, VEP-1, "Quality Assurance Program, Operational Phase." (L.19)

ITS 5.0

A.1

ITS

the individual providing advisory technical support to the unit operations shift crew

06-23-98 A.28

5.3.1

6.3 FACILITY STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANS 3.1 (12/79 Draft)* for comparable positions, except for: L.6

5.3.1

1. The ~~Superintendent - Radiological~~ radiation manager Protection shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.

5.3.1

2. Incumbents in the positions of Shift Supervisor, Assistant Shift Supervisor (SRO), Control Room Operator - Nuclear (RO), and ~~Shift Technical Advisor~~, shall meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4). ← INSERT A.29

5.2.2.e

3. The ~~Superintendent~~ Manager Operations shall hold (or have previously held) a Senior Reactor Operator License for North Anna Power Station or a similar design Pressurized Water Reactor plant. L.6 R4

5.2.2.e

4. The Supervisor Shift Operations shall hold an active Senior Reactor Operator License for North Anna Power Station.

6.4 TRAINING

6.4.1 The Manager - Nuclear Training is responsible for ensuring that retraining and replacement training programs for the licensed facility staff meet or exceed the requirements of 10 CFR 55.59(c) and 55.31(a)(4). Also, a retraining and replacement training program for non-licensed facility staff shall meet or exceed the recommendations of Section 5 of ANS 3.1 (12/79 Draft)*. L.19

6.5 REVIEW AND AUDIT

6.5.1 STATION NUCLEAR SAFETY AND OPERATING COMMITTEE (SNSOC) FUNCTION

LA.6

6.5.1.1 The SNSOC shall function to advise the Site Vice President on all matters related to nuclear safety.

* Exceptions to this requirement are specified in VEPCO's QA Topical Report, VEP-1, "Quality Assurance Program, Operational Phase." L.19

The purpose of CTS 6.1.2 is to specify the plant specific means of implementing the NUREG-0737 requirement to notify employees of shift supervisor responsibilities. This change is acceptable because the NUREG-0737 requirement is not changed and the plant specific implementation of the requirement is not appropriate for the Technical Specifications. This change is designated as a less restrictive change because a required action is removed from the Technical Specifications.

L.6 CTS 6.2.1.b states, "The Site Vice President shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant." CTS 6.2.1.c states, "The Vice President – Nuclear Operations shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety." CTS 6.15 states, "Changes to the ODCM:... b. Shall become effective after...the approval of the Site Vice President." CTS 6.3.1.3 states, "The Superintendent Operations shall hold..." CTS 6.3.1.1 states, "The Superintendent – Radiological Protection shall meet..." ITS 5.2.1.b substitutes "plant manager" for "Site Vice President," ITS 5.2.1.c substitutes "A specified corporate officer" for "The Vice President – Nuclear Operations," ITS 5.5.1.b substitutes "plant manager" for "Site Vice President," ITS 5.2.2.e substitutes "operations manager" for "Superintendent Operations," and ITS 5.3.1 substitutes "radiation protection manager" for "Superintendent – Radiological Protection." This changes the CTS by using less specific designations for the positions with the respective responsibilities. R4 R4

These changes are acceptable because the responsibilities remain the same, but allow other documents to identify the plant-specific titles associated with the generic titles. This change is designated less restrictive because specific titles associated responsibilities are deleted from the Technical Specifications.

L.7 *(Category 8 – Deletion of Reporting Requirements)* CTS 6.9.1.1, CTS 6.9.1.2 and CTS 6.9.1.3, "Startup Reports," contains requirements for submitting a report following receipt of an operating license; installation of fuel that has a different design or has been manufactured by a different fuel supplier; modifications that may have altered the nuclear, thermal, or hydraulic performance of the unit; and amendments to the license involving planned increase in power operation. The ITS does not contain such reporting requirements. This changes the CTS by deleting the requirements of CTS 6.9.1.1, CTS 6.9.1.2 and CTS 6.9.1.3.

The purpose of CTS 6.9.1.1, CTS 6.9.1.2 and CTS 6.9.1.3, is to provide a summary of plant startup and power escalation testing following the four specified conditions as verification that the unit operated as expected. This change is acceptable because the regulations provide adequate reporting requirements. If there were any unit conditions outside the expected parameters during unit startup, they would be reported to the NRC if they met the reporting requirements in the regulations.

This change deletes the requirement for a management directive, signed by the Senior Vice President-Nuclear, to be issued to all station personnel on an annual basis regarding delegation of the control room command function. The requirement for such a management directive is not assumed to be an initiator of any previously analyzed accident. Therefore, the change does not increase the probability of such accidents. Issuance of a management directive does not affect the ability of the plant to mitigate the consequences of previously analyzed accidents. As a result, the change does not significantly increase the consequences of an accident previously analyzed.

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

The change does not introduce a new mode of plant operation and does not involve physical modification to the plant. The change will not introduce new accident initiators. Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

This change deletes the requirement for a management directive, signed by the Senior Vice President-Nuclear, to be issued to all station personnel on an annual basis regarding delegation of the control room command function. The ITS requirements are considered adequate for the control room command function because shift manning requirements continue to provide adequate shift coverage, and the process by which the control room command function is delegated can be addressed adequately outside of the Technical Specifications. As a result, the change does not significantly reduce the margin of safety.

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES

SPECIFICATION 5.0, CHANGE L.6

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." The proposed change involves making the current Technical Specifications (CTS) less restrictive. Below is the description of this less restrictive change and the determination of No Significant Hazards Considerations for conversion to NUREG-1431.

L.6 CTS 6.2.1.b states, "The Site Vice President shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe

operation and maintenance of the plant." CTS 6.2.1.c states, "The Vice President – Nuclear Operations shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety." CTS 6.15 states, "Changes to the ODCM:... b. Shall become effective after...the approval of the Site Vice President." CTS 6.3.1.3 states, "The Superintendent Operations shall hold..." CTS 6.3.1.1 states, "The Superintendent – Radiological Protection shall meet..." ITS 5.2.1.b substitutes "plant manager" for "Site Vice President," ITS 5.2.1.c substitutes "A specified corporate officer" for "The Vice President – Nuclear Operations," ITS 5.5.1.b substitutes "plant manager" for "Site Vice President," ITS 5.2.2.e substitutes "operations manager" for "Superintendent Operations," and ITS 5.3.1 substitutes "radiation protection manager" for "Superintendent – Radiological Protection." This changes the CTS by using less specific designations for the positions with the respective responsibilities. R4 R4

These changes are acceptable because the responsibilities remain the same, but allow other documents to identify the plant-specific titles associated with the generic titles. This change is designated less restrictive because specific titles associated responsibilities are deleted from the Technical Specifications.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

This change replaces specific company titles for specified responsibilities with less specific designations for these positions. Titles for positions of responsibility are not assumed to be initiators of any previously analyzed accident. Therefore, the change does not increase the probability of such accidents. The company titles for specific plant responsibilities do not affect the ability of the plant to mitigate the consequences of previously analyzed accidents. As a result, the change does not significantly increase the consequences of an accident previously analyzed.

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

The change does not introduce a new mode of plant operation and does not involve physical modification to the plant. The change will not introduce new accident initiators. Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

This change replaces specific company titles for specified responsibilities with less specific designations for these positions. The ITS requirements are considered adequate because the responsibilities still have to be met by specific individuals, but the company titles of the individuals are not specified in the Technical Specifications. As a result, the change does not significantly reduce the margin of safety.

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES

SPECIFICATION 5.0, CHANGE L.7

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." The proposed change involves making the current Technical Specifications (CTS) less restrictive. Below is the description of this less restrictive change and the determination of No Significant Hazards Considerations for conversion to NUREG-1431.

L.7 CTS 6.2.1.d states, "The management position responsible for training of the operating staff and the management position responsible for the quality assurance functions..." CTS 6.2.1.e states, "The management position responsible for health physics..." ITS 5.2.1.d states, "The individuals who train the operating staff, carry out health physics, or perform quality assurance functions..." This changes the CTS by using less specific designations for the positions with the respective responsibilities for the same functions.

These changes are acceptable because the responsibilities remain the same, but allow other documents to identify the specific company titles associated with the generic titles. This change is designated less restrictive because specific company titles associated responsibilities are deleted from the Technical Specifications.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

This change replaces specific company titles for specified responsibilities with less specific designations for these positions. Titles for positions of responsibility are not assumed to be initiators of any previously analyzed accident. Therefore, the change does not increase the probability of such accidents. The company titles for specific plant responsibilities do not affect the ability of the plant to mitigate the consequences

5.5 Programs and Manuals

5.5.15 Containment Leakage Rate Testing Program (continued)

d. Leakage Rate acceptance criteria are:

1. Prior to entering a MODE where containment OPERABILITY is required, the containment leakage rate acceptance criteria are:

$\leq 0.60\ L_a$ for the Type B and Type C tests on a Maximum Path Basis and $\leq 0.75\ L_a$ for Type A tests.

During operation where containment OPERABILITY is required, the containment leakage rate acceptance criteria are:

$\leq 1.0\ L_a$ for overall containment leakage rate and $\leq 0.60\ L_a$ for the Type B and Type C tests on a Minimum Path Basis.

2. Overall air lock leakage rate testing acceptance criterion is $\leq 0.05\ L_a$ when tested at $\geq P_a$. |R4

e. The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.

f. Nothing in these Technical Specifications shall be construed to modify the testing Frequencies required by 10 CFR 50, Appendix J.

5.5 Programs and Manuals

5.5.2 Primary Coolant Sources Outside Containment

This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include Recirculation Spray, Safety Injection, Chemical and Volume Control, gas stripper, and Hydrogen Recombiner. The program shall include the following:

a. Preventive maintenance and periodic visual inspection requirements; and

b. Integrated leak test requirements for each system at least once per 18 months. R4

The provisions of SR 3.0.2 are applicable.

5.5.3 Post Accident Sampling

This program provides controls that ensure the capability to obtain and analyze reactor coolant, radioactive gases, and particulates in plant gaseous effluents and containment atmosphere samples under accident conditions. The program shall include the following:

a. Training of personnel;

b. Procedures for sampling and analysis; and

c. Provisions for maintenance of sampling and analysis equipment.

5.5.4 Radioactive Effluent Controls Program

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by procedures, and shall include remedial actions to be taken whenever the program limits are exceeded. The program shall include the following elements:

a. Limitations on the functional capability of radioactive liquid and gaseous monitoring instrumentation including surveillance tests and setpoint determination in accordance with the methodology in the ODCM;

CTS

5.5 Programs and Manuals

6.15.c

5.5.1 Offsite Dose Calculation Manual (ODCM) (continued)

page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

6.8.4.a

5.5.2 Primary Coolant Sources Outside Containment

This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include [Recirculation Spray, Safety Injection, Chemical and Volume Control, gas stripper, and Hydrogen Recombiner]. The program shall include the following: (1)

a. Preventive maintenance and periodic visual inspection requirements; and

b. Integrated leak test requirements for each system at refueling cycle intervals or less. TSTF-299 (1) R4

least once per [18] months, The provisions of SR 3.0.2 are applicable.

6.8.4.d

5.5.3 Post Accident Sampling

This program provides controls that ensure the capability to obtain and analyze reactor coolant, radioactive gases, and particulates in plant gaseous effluents and containment atmosphere samples under accident conditions. The program shall include the following:

a. Training of personnel;

b. Procedures for sampling and analysis; and

c. Provisions for maintenance of sampling and analysis equipment.

6.8.4.e

5.5.4 Radioactive Effluent Controls Program

This program conforms to 10 CFR 50.36a for the control of radioactive effluents and for maintaining the doses to members of the public from radioactive effluents as low as reasonably achievable. The program shall be contained in the ODCM, shall be implemented by procedures, and shall include remedial actions to

(continued)

c. Surveillance and test activities of safety related equipment. A.3

d. Security Plan implementation. A.4

e. Emergency Plan implementation.

5.4.1.d f. Fire Protection Program implementation.

5.5.1 g. PROCESS CONTROL PROGRAM implementation. L.32

h. OFFSITE DOSE CALCULATION MANUAL implementation.

5.4.1.c i. Quality Assurance Program for effluent and environmental monitoring, using the guidance in Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975. LA.1 L.30

6.8.2 Each new procedure of 6.8.1 above, except 6.8.1.d, 6.8.1.e, and 6.8.1.f shall be reviewed and approved by the SNSOC prior to implementation as set forth in administrative procedures. Procedures of 6.8.1.d, 6.8.1.e, and 6.8.1.f shall be reviewed and approved as set forth in the facility's Security Plan, Emergency Plan, and section 6.5.1.6.m of the Technical Specifications, respectively. LA.6 L.30

6.8.3 Procedure changes that require a safety evaluation shall also be reviewed and approved by SNSOC. All other changes shall be independently reviewed and approved as programmatically discussed in the Updated Final Safety Analysis Report. LA.6 L.30

6.8.4 The following programs shall be established, implemented. and maintained:

5.5.2 a. Primary Coolant Sources Outside Containment

A program to reduce leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. The systems include the recirculation spray, safety injection, chemical and volume control, gas stripper, and hydrogen recombiners. The program shall include the following: L.12

provides controls to minimize

(i) Preventive maintenance and periodic visual inspection requirements, and

(ii) Integrated leak test requirements for each system at refueling cycle intervals or less. at least once per 18 months. The provisions of SR 3.0.2 are applicable. L.35 R4

c. Surveillance and test activities of safety related equipment. (A.3)

d. Security Plan implementation. (A.4)

e. Emergency Plan implementation.

5.4.1.d f. Fire Protection Program implementation.

g. PROCESS CONTROL PROGRAM implementation. (L.32)

5.5.1 ~~h.~~ OFFSITE DOSE CALCULATION MANUAL implementation.

5.4.1.c i. Quality Assurance Program for effluent and environmental monitoring using the guidance in Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975. (LA.1) (L.30)

6.8.2 Each new procedure of 6.8.1 above, except 6.8.1.d, 6.8.1.e, and 6.8.1.f shall be reviewed and approved by the SNSOC prior to implementation as set forth in administrative procedures. (LA.6) Procedures of 6.8.1.d, 6.8.1.e, and 6.8.1.f shall be reviewed and approved as set forth in the facility's Security Plan, Emergency Plan, and section 6.5.1.6.m of the Technical Specifications, respectively. (L.30)

6.8.3 Procedure changes that require a safety evaluation shall also be reviewed and approved by SNSOC. (LA.6) All other changes shall be independently reviewed and approved as programmatically discussed in the Updated Final Safety Analysis Report. (L.30)

6.8.4 The following programs shall be established, implemented, and maintained:

5.5.2 a. Primary Coolant Sources Outside Containment

provides controls to minimize

A program to reduce leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. The systems include the recirculation spray, safety injection, chemical and volume control, gas stripper, and hydrogen recombiners. The program shall include the following: (L.12)

(i) Preventive maintenance and periodic visual inspection requirements, and

(ii) Integrated leak test requirements for each system at refueling cycle intervals or less. (L.35) R4

least once per 18 months. The provisions of SR 3.0.2 are applicable.

The purpose of ITS 5.5.10.c is to verify the charcoal adsorbers can perform their function under the condition assumed in case of a DBA. This change is acceptable because it has been determined that the relaxed Surveillance Requirement acceptance criteria are not necessary for verification that the equipment used to meet the LCO can perform its required functions. Engineering testing and analysis has determined that the maximum relative humidity for the required charcoal adsorber inlet air at North Anna during accident conditions is 70%. This change is designated as less restrictive because less stringent Surveillance Requirements are being applied in the ITS than were applied in the CTS.

L.34 Unit 1 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." Unit 2 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." ITS 5.7.1.c states, "Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." This changes the CTS by allowing personnel to be exempt from the RWP issuance requirement for any duties, not just for radiation protection. Changing the term "Health Physics" to "radiation protection" is addressed by DOC L.11. For Unit 1, allowing personnel not qualified in radiation protection procedures, but escorted by such qualified individuals, to use the exemption from the requirement for an RWP or equivalent while performing their assigned duties is addressed by DOC L.17.

RAI 5.0-11 5.0-13 R4

The purpose of the CTS 6.12 footnote "*" is to provide an allowance for qualified personnel to not have to issue an RWP during the performance of their assigned radiation protection duties. This change is acceptable because the personnel are qualified in radiation protection procedures for work in these areas, regardless of the work to be performed, thus providing assurance that personnel exposure of the qualified personnel or people being escorted will be within established limits. These changes are designated as less restrictive because an exemption may be used for a larger variety of duties.

L.35 *(Category 7 – Relaxation Of Surveillance Frequency)* CTS 6.8.4.a states that the program addressing leakage from portions of systems outside containment shall include, "(ii) Integrated leak test requirements for each system at refueling cycle intervals or less." ITS 5.5.2, Primary Coolant Sources Outside Containment, states that the program shall include, "b. Integrated leak test requirements for each system at least once per 18 months. The provisions of SR 3.0.2 are applicable." This

R4

changes the CTS by changing the description of the frequency for the integrated leak test requirements to 18 months, and allowing the test to be performed within 1.25 times the 18 month interval. This interval could be longer or shorter than the "refueling interval" frequency.

R4

The purpose of CTS 6.8.4.a(ii) is to assure that the integrated leak test requirements are met at least every refueling interval. This change is acceptable because the new Surveillance Frequency has been evaluated to ensure that it provides an acceptable level of equipment reliability. The change still assures the integrated leak test requirements are met at least every refueling interval, but the description of the frequency is changed to be consistent with similar requirements in the ISTS. This change is designated as less restrictive because Surveillance could be performed less frequently under the ITS than under the CTS.

5.2 Organization

5.2.2 Unit Staff

The unit staff organization shall include the following:

a. An auxiliary operator shall be assigned to each reactor containing fuel and an additional auxiliary operator shall be assigned for each control room from which a reactor is operating in MODES 1, 2, 3, or 4. R4

   Two unit sites with both units shutdown or defueled require a total of three auxiliary operators for the two units.

b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.f for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.

c. A radiation protection technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.

d. Administrative procedures shall be developed and implemented to limit the working hours of personnel who perform safety related functions (e.g., licensed Senior Reactor Operators (SROs), licensed Reactor Operators (ROs), health physicists, auxiliary operators, and key maintenance personnel).

   The controls shall include guidelines on working hours that ensure adequate shift coverage shall be maintained without routine heavy use of overtime.

   Any deviation from the above guidelines shall be authorized in advance by the plant manager or the plant manager's designee, in accordance with approved administrative procedures, and with documentation of the basis for granting the deviation. Routine deviation from the working hour guidelines shall not be authorized.

   Controls shall be included in the procedures to require a periodic independent review be conducted to ensure that excessive hours have not been assigned.

CTS

5.0 ADMINISTRATIVE CONTROLS

5.2 Organization

6.2.1 **5.2.1 Onsite and Offsite Organizations**

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting safety of the nuclear power plant.

6.2.1.a

a. Lines of authority, responsibility, and communication shall be defined and established throughout highest management levels, intermediate levels, and all operating organization positions. These relationships shall be documented and updated, as appropriate, in organization charts, functional descriptions of departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the [FSAR]; TSTF-65

including the plant-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications

(1) (U) IQA Plan TSTF-65 TSTF-65

manager

6.2.1.b

b. The [Plant Superintendent] shall be responsible for overall safe operation of the plant and shall have control over those onsite activities necessary for safe operation and maintenance of the plant; officer TSTF-65

6.2.1.c

c. The [a specified corporate executive position] shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety; and

6.2.1.d
6.2.1.e

d. The individuals who train the operating staff, carry out health physics, or perform quality assurance functions may report to the appropriate onsite manager; however, these individuals shall have sufficient organizational freedom to ensure their independence from operating pressures.

6.2.2 **5.2.2 Unit Staff** R4

The unit staff organization shall include the following:

Table 6.2-1

a. A non-licensed operator shall be assigned to each reactor containing fuel and an additional non-licensed operator (n) auxiliary auxiliary (3)

(continued)

CTS

5.2 Organization

R4

5.2.2 Unit Staff (continued)

shall be assigned for each control room from which a reactor is operating in MODES 1, 2, 3, or 4.

Two unit sites with both units shutdown or defueled require a total of three non-licensed auxiliary operators for the two units. (1) (3)

b. At least one licensed Reactor Operator (RO) shall be present in the control room when fuel is in the reactor. In addition, while the unit is in MODE 1, 2, 3, or 4, at least one licensed Senior Reactor Operator (SRO) shall be present in the control room. TSTF-258

Table 6.2-1 Notes (a) (b) Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.(f) for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements. (f) TSTF-258

radiation protection

6.2.2.c — (c) A [Health Physics Technician] shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position. TSTF-65 TSTF-258

Table 6.2-1 (continued) NEW (d) (e) Administrative procedures shall be developed and implemented to limit the working hours of personnel unit staff who perform safety related functions (e.g., licensed SROs, licensed ROs, health physicists, auxiliary operators, and key maintenance personnel). Senior Reactor Operators (SROs) Reactor Operators (ROs) TSTF-258

Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work an [8 or 12] hour day, nominal 40 hour week while the unit is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for refueling, major maintenance, or major plant modification, on a temporary basis the following guidelines shall be followed: TSTF-258

1. An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time;

(continued)

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

2. The statement in ISTS 5.2.2.f is modified to state, "The Superintendent Operations shall hold (or have previously held) a Senior Reactor Operator License for North Anna or a similar design Pressurized Water Reactor plant. The Supervisor Shift Operations shall hold an active Senior Reactor Operator License for North Anna Power Station." This is consistent with the current licensing basis.

3. Changes are made (additions, deletions, and/or changes) to the ISTS which reflect the plant specific nomenclature, number, reference, system description, analysis, or licensing basis description. RAI 5.0-05 R4

4. Not used.

5. ISTS 5.6.6, "Reactor Coolant System (RCS) Pressure and Temperature Limits Report (PTLR)," is not adopted in the ITS. CTS Figures 3.4-2 and 3.4-3, which provide Reactor Coolant System heatup and cooldown limitations, respectively, were adopted in ITS Specification 3.4.3, "RCS Pressure and Temperature (P/T) Limits." Subsequent Specifications are renumbered accordingly.

6. Not used. R4

7. The ISTS 5.5.6 requirement, "Pre-Stressed Concrete Containment Tendon Surveillance Program," is not adopted because it is not applicable to the North Anna design. The ISTS 5.6.9 requirement, "Tendon Surveillance Report," is also not adopted. The containment at North Anna is a steel-lined, heavily reinforced concrete structure with vertical cylindrical wall and hemispherical dome, supported on a flat base mat. Subsequent Specifications are renumbered accordingly.

8. The information contained in the reviewer's note is not retained.

9. Not used. R4

10. The ISTS 5.5.13.a.3 requirement to determine a clear and bright appearance with proper color as part of determining acceptability of new fuel oil prior to addition to the storage tanks is not adopted, and a test for water and sediment being ≤ 0.05 percent is adopted instead. The water and sediment test is adopted because the diesel fuel oil is dyed.

11. The ISTS 5.5.13.c requirement to determine, "Total particulate concentration of the fuel oil" every 31 days is modified. ITS 5.5.12.c adds the word "stored" in front of the term "fuel oil" to clarify that the test is to be performed on stored fuel oil rather than new fuel oil. The frequency of the test is changed from 31 days to 92 days based on plant operating practice of conducting the test every 92 days, test history indicating that the

ITS

TABLE 6.2-1[a]

MINIMUM SHIFT CREW COMPOSITION

Total Staffing Requirements for Station Operation

With Either or Both Units in Mode 1, 2, 3 or 4

POSITION	-	NUMBER	CONDITIONS
SS	-	ONE	(Shift Supervisor may fulfill duties for both units).
SRO	-	ONE	(If ONE unit is in MODE 5, 6 OR DEFUELED, Senior Reactor Operator is assigned to the Unit in MODE 1, 2, 3 or 4).
RO	-	THREE	(ONE Reactor Operator is assigned to each unit PLUS one is shared by both units).
AO	-	~~FOUR~~ One	(~~TWO~~ Auxiliary Operators ~~are~~ is assigned to each unit containing fuel).
STA	-	ONE	(Shift Technical Advisor may fulfill duties for both units).

and an additional auxiliary operator shall be assigned for each control room from which a reactor is operating in MODES 1, 2, 3, or 4.

5.2.2.a

With Both Units in Mode 5 or 6 (or DEFUELED)

POSITION	-	NUMBER	CONDITIONS
SS	-	ONE	(Shift Supervisor may fulfill duties for both units).
SRO	-	NONE	
RO	-	TWO	(ONE Reactor Operator is assigned to each unit).
AO	-	~~TWO~~ Three	(ONE Auxiliary Operator is assigned to each unit containing fuel).
STA	-	ONE	(Shift Technical Advisor may fulfill duties for both units).

5.2.2.a

[a] - This Table and Table 6.2.1 of Unit 2 Technical Specifications represent Total Station Staffing and ARE NOT ADDITIVE.

ITS

TABLE 6.2-1[a]

MINIMUM SHIFT CREW COMPOSITION

Total Staffing Requirements for Station Operation

and an additional auxiliary operator shall be assigned for each control room from which a reactor is operating in MODES 1, 2, 3, or 4.

5.2.2.a

With Either or Both Units in Mode 1, 2, 3 or 4

POSITION	NUMBER	CONDITIONS
SS	ONE	(Shift Supervisor may fulfill duties for both units).
SRO	ONE	(If ONE unit is in MODE 5, 6 OR DEFUELED, Senior Reactor Operator is assigned to the Unit in MODE 1, 2, 3 or 4). (L.8)
RO	THREE	(ONE Reactor Operator is assigned to each unit PLUS one is shared by both units). (L.9) R4
AO	FOUR (One)	(TWO Auxiliary Operators are assigned to each unit containing fuel).
STA	ONE	(Shift Technical Advisor may fulfill duties for both units).

(A.2) R4

With Both Units in Mode 5 or 6 (or DEFUELED)

POSITION	NUMBER	CONDITIONS
SS	ONE	(Shift Supervisor may fulfill duties for both units). (M.24) R4
SRO	NONE	
RO	TWO (three)	(ONE Reactor Operator is assigned to each unit). (L.8)
AO	TWO	(ONE Auxiliary Operator is assigned to each unit). (L.9)
STA	ONE	(Shift Technical Advisor may fulfill duties for both units). (containing fuel) R4

5.2.2.a

(A.2)

[a] - This Table and Table 6.2.1 of Unit 1 Technical Specifications represent Total Station Staffing and ARE NOT ADDITIVE. (A.2)

secondary water chemistry to inhibit low pressure turbine disc stress corrosion cracking in addition to SG tube degradation.

This change is acceptable because it clarifies that secondary water chemistry could contribute to low pressure turbine disc stress corrosion cracking, and this is another reason secondary water chemistry is monitored. This change is designated as more restrictive because an additional reason for the Secondary Water Chemistry Program is added.

RAI 5.0-05 R4

M.23 Unit 1 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." Unit 2 CTS 6.12, High Radiation Area, footnote "*," states, "Health Physics personnel or personnel escorted by Health Physics personnel shall be exempt from the RWP issuance requirement during the performance of their assigned radiation protection duties, provided they comply with approved radiation protection procedures for entry into high radiation areas." ITS 5.7.1.c states, "Individuals qualified in radiation protection procedures and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." ITS 5.7.2.c states, "Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are otherwise following plant radiation protection procedures for entry to, exit from, and work in such areas." This changes the CTS by requiring that for personnel to be exempt from the RWP issuance requirement, they must be qualified in radiation protection procedures, or escorted by a qualified individual in high radiation areas. Changing the term "Health Physics" to "radiation protection" is addressed by DOC L.11.

RAI 5.0-11 5.0-13 R4

The purpose of CTS 6.12 footnote "*" is to provide an allowance for qualified personnel to not have to issue an RWP during the performance of their assigned radiation protection duties. This change is acceptable because it provides added assurance that the personnel performing radiation protection duties, or performing escort duties, will maintain personnel exposure to within established limits. These changes are designated as more restrictive because the criteria that personnel must meet in order to perform the duties specified are more specific.

M.24 CTS Table 6.2-1 requires that with both units in MODE 5 or 6 or defueled, two Auxiliary Operators (AOs) be part of the staff manning, one AO assigned to each unit. ITS 5.2.2.a states, "Two unit sites with both units shutdown or defueled require a total of three non-licensed operators for the two units." This changes the CTS by requiring three AOs with both units shutdown or defueled. Other changes to the AO requirements are addressed by DOC L.9.

R4

The purpose of the AO requirements in CTS Table 6.2-1 is to provide assurance that sufficient AOs are on the shift crew. This change is acceptable because it still provides at least three AOs with both units shutdown or defueled. This change is designated more restrictive because an additional AO is required. R4

RELOCATED SPECIFICATIONS

None

REMOVED DETAIL CHANGES

LA.1 *(Type 3 – Removing Procedural Details for Meeting TS Requirements and Related Reporting Problems)* CTS 6.8.1.i requires written procedures be established, implemented and maintained covering, "Quality Assurance Program for effluent and environmental monitoring, using the guidance in Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975." ITS 5.4.1.c does not include the Regulatory Guide references. This changes the CTS by moving the references to the Regulatory Guides to the UFSAR.

The removal of these details for performing actions from the Technical Specifications is acceptable because this type of information is not necessary to be included in the Technical Specifications to provide adequate protection of public health and safety. The ITS still retains the requirement for procedures covering quality assurance for effluent and environmental monitoring. Also, this change is acceptable because these types of procedural details will be adequately controlled in the UFSAR. The UFSAR is controlled under 10 CFR 50.59 which ensures changes are properly evaluated. This change is designated as a less restrictive removal of detail change because references for meeting Technical Specification requirements are being removed from the Technical Specifications.

LA.2 *(Type 1 – Removing Details of System Design and System Description, Including Design Limits)* CTS 5.7.1 states, "The components identified in Table 5.7-1 are designed and shall be maintained within the cyclic or transient limits of Table 5.7-1." CTS Table 5.7-1 contains the limits for component cyclic or transient limits and designs cycle or transient limits. ITS 5.5.5 states, "The components identified in the UFSAR, Section 5.2, are designed and shall be maintained within the cyclic or transient design limits." This changes the CTS by moving the limits specified in Table 5.7-1 to the UFSAR and calling them the cyclic or transient design limits.

The removal of these details, which are related to system design, from the Technical Specifications is acceptable because this type of information is not necessary to be included in the Technical Specifications to provide adequate protection of public health and safety. The ITS still retains the requirement to maintain the specified

Otherwise, the reports would document that the unit operated as expected and already approved by the NRC, as required by regulations. This change is designated as less restrictive because reports that would be submitted under the CTS will not be required under the ITS.

L.8 CTS Table 6.2-1 includes requirements on SS, SRO, RO, AO, and STA position manning for each unit that are beyond what is required by 10 CFR 50.54(m)(2)(i). The ITS does not include these conditions. This changes the CTS by deleting certain criteria regarding how manning is distributed.

The intent of the conditions placed on unit staff manning is to state management policies regarding how the required positions are distributed between the two units at the site. This change is acceptable because this distribution can still be retained in accordance with management policy, but does not need to be retained in the ITS. The 10 CFR 50.54(m)(2)(i) requirements for staff manning are still required to be met. This change is designated less restrictive because conditions regarding the required staff manning are being deleted.

L.9 CTS Table 6.2-1 requires that, with either or both units in MODE 1, 2, 3, or 4, four Auxiliary Operators (AOs) be part of the staff manning, two AOs assigned to each unit. CTS Table 6.2-1 requires that, with both units in MODE 5 or 6 or Defueled, two AOs be part of staff manning, one AO assigned to each unit. ITS 5.2.2.a states, "An auxiliary operator shall be assigned to each reactor containing fuel and an additional auxiliary operator shall be assigned for each control room from which a reactor is operating in MODES 1, 2, 3, or 4." When one or two units are in MODES 1, 2, 3, or 4, this changes the CTS by only requiring one AO be assigned for each reactor containing fuel rather than two, and only requiring one additional AO be assigned for each control room from which a reactor is operating. With both units shutdown or defueled, this changes the CTS by only requiring one AO be assigned to each unit containing fuel, rather than one AO be assigned for each unit regardless of whether or not it contains fuel. Other changes to the AO requirements are addressed by DOC M.24. R4

The purpose of the AO requirements in CTS Table 6.2-1 is to provide assurance that sufficient AOs are on the shift crew. This change is acceptable because it still provides sufficient AOs for the units. This change is designated less restrictive because unit AO manning is reduced with fewer restrictions on assignment of the AOs. R4

L.10 CTS Table 6.2-1, with regard to work hour procedures, states, "In addition, procedures will provide for documentation of authorized deviations from these guidelines and that the documentation is available for NRC review." ITS 5.0 does not include such a requirement. This changes the CTS by deleting a requirement to have a procedure for documentation of authorized deviations from the work hour guidelines and to have the documentation available for NRC review.

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. **Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?**

   This change deletes certain criteria for how shift crew composition is distributed. Shift crew composition distribution is not assumed to be an initiator of any previously analyzed accident. Therefore, the change does not increase the probability of such accidents. Shift manning requirements beyond the minimum required does not affect the ability of the plant to mitigate the consequences of previously analyzed accidents. As a result, the change does not significantly increase the consequences of an accident previously analyzed.

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

   The change does not introduce a new mode of plant operation and does not involve physical modification to the plant. The change will not introduce new accident initiators. Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

   This change deletes certain criteria for how shift crew composition is distributed. The ITS requirements are considered adequate for shift manning, and requirements for the exact distribution of the shift crew is not required to assure adequate manning. As a result, the change does not significantly reduce the margin of safety.

10 CFR 50.92 EVALUATION
FOR
LESS RESTRICTIVE CHANGES

SPECIFICATION 5.0, CHANGE L.9

The North Anna Power Station is converting to the Improved Technical Specifications (ITS) as outlined in NUREG-1431, "Standard Technical Specifications, Westinghouse Plants." The proposed change involves making the current Technical Specifications (CTS) less restrictive. Below is the description of this less restrictive change and the determination of No Significant Hazards Considerations for conversion to NUREG-1431.

L.9 CTS Table 6.2-1 requires that, with either or both units in MODE 1, 2, 3, or 4, four Auxiliary Operators (AOs) be part of the staff manning, two AOs assigned to each | R4

unit. CTS Table 6.2-1 requires that, with both units in MODE 5 or 6 or Defueled, two AOs be part of staff manning, one AO assigned to each unit. ITS 5.2.2.a states, "An auxiliary operator shall be assigned to each reactor containing fuel and an additional auxiliary operator shall be assigned for each control room from which a reactor is operating in MODES 1, 2, 3, or 4." When one or two units are in MODES 1, 2, 3, or 4, this changes the CTS by only requiring one AO be assigned for each reactor containing fuel rather than two, and only requiring one additional AO be assigned for each control room from which a reactor is operating. With both units shutdown or defueled, this changes the CTS by only requiring one AO be assigned to each unit containing fuel, rather than one AO be assigned for each unit regardless of whether or not it contains fuel. Other changes to the AO requirements are addressed by DOC M.24. R4

The purpose of the AO requirements in CTS Table 6.2-1 is to provide assurance that sufficient AOs are on the shift crew. This change is acceptable because it still provides sufficient AOs for the units. This change is designated less restrictive because unit AO manning is reduced with fewer restrictions on assignment of the AOs. R4

In accordance with the criteria set forth in 10 CFR 50.92, the Company has evaluated these proposed Technical Specification changes and determined they do not represent a significant hazards consideration. The following is provided in support of this conclusion.

1. **Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?**

   With both units shutdown or defueled, this changes the CTS by only requiring one AO be assigned to each unit containing fuel, rather than one AO be assigned for each unit regardless of whether or not it contains fuel. Shift crew composition is not assumed to be an initiator of any previously analyzed accident. Therefore, the change does not increase the probability of such accidents. The ITS requirements are considered adequate for shift manning, and do not affect the ability of the plant to mitigate the consequences of previously analyzed accidents. As a result, the change does not significantly increase the consequences of an accident previously analyzed.

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

   The change does not introduce a new mode of plant operation and does not involve physical modification to the plant. The change will not introduce new accident initiators. Therefore, it does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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