



**Nebraska Public Power District**

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10CFR50.90

NLS2004007  
January 30, 2004

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555-0001

**Subject:** License Amendment Request – One-Time Extension of Surveillance Requirements  
Cooper Nuclear Station, Docket 50-298, DPR-46

The purpose of this letter is for the Nebraska Public Power District (NPPD) to request an amendment to Facility Operating License DPR-46 in accordance with the provisions of 10 CFR 50.4 and 10 CFR 50.90 to revise the Cooper Nuclear Station (CNS) Technical Specifications (TS). The proposed amendment requests a one-time extension of a limited number of TS Surveillance Requirements (SRs). With the exception of one SR, the period of additional time requested occurs during the next planned refueling outage.

CNS is currently operating in Cycle No. 22. As a result of delays in completing the last refueling outage and achieving full power at the start of Cycle 22, as well as unplanned outages and reductions in power, the CNS core will not be fully utilized if CNS shuts down for the next refuel outage as originally scheduled in Fall 2004. To achieve full utilization of the core NPPD is currently planning to continue operation in Cycle 22 until January 15, 2005. Without this requested extension NPPD would be required to either shut down to begin the next refuel outage prior to full utilization of the core or to conduct a planned outage to perform the SRs. This is because the SRs identified in this submittal come due either during the extended Cycle 22 operation or before an opportunity to perform the SRs in the refueling outage starting January 15, 2005.

NPPD is currently considering conducting a planned maintenance outage the latter part of April 2004. The purpose of this outage would be to address hardware conditions needed to ensure reliable CNS operation for the remainder of Cycle 22. NPPD is not planning to perform these SRs during this planned maintenance outage.

NPPD requests NRC approval of the proposed TS changes and issue of the requested license amendment by April 1, 2004. A decision is needed by then to finalize our plans to not perform the SRs during the potential maintenance outage in April if this request is approved, or to develop plans to perform the SRs during a Spring 2004 outage if this request is not approved.

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While NPPD has determined that the risk of delaying the performance of these SRs is extremely low, their performance will be considered during any outage that might occur. However, whether the SRs are actually performed will depend on the plant conditions during the outage that are required to resolve the cause of the outage.

A description of the TS change, background information, a technical analysis of the request, the no significant hazards consideration evaluation required by 10 CFR 50.91(a)(1), and the environmental impact evaluation required by 10 CFR 51.22, are provided in Attachment 1. The current CNS TS, marked up to show the requested changes, are provided in Attachment 2. The final, clean typed versions of the requested TS pages are provided in Attachment 3.

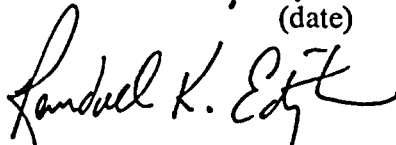
This proposed TS change has been reviewed by the necessary safety review committees (Station Operations Review Committee and Safety Review and Audit Board). Amendments to the CNS Facility Operating License through Amendment 202, issued December 5, 2003, have been incorporated into this request. NPPD has concluded that the proposed changes do not involve a significant hazards consideration and that they satisfy the categorical exclusion criteria of 10 CFR 51.22. There are no commitments in this submittal. The amendment will be implemented within 30 days of issue.

This request is submitted under oath pursuant to 10 CFR 50.30(b). By copy of this letter and its attachments, the appropriate State of Nebraska official is notified in accordance with 10 CFR 50.91(b)(1). Copies to the NRC Region IV office and the CNS Resident Inspector are also being provided in accordance with 10 CFR 50.4(b)(1).

If you have any questions concerning this matter, please contact Mr. Paul Fleming at (402) 825-2774.

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

Executed on 1/30/04  
(date)



Randall K. Edington  
Vice President – Nuclear and  
Chief Nuclear Officer

rer/

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Page 3 of 3

Attachments

cc: Regional Administrator w/ attachments  
USNRC - Region IV

Senior Project Manager w/ attachments  
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector w/ attachments  
USNRC

Nebraska Health and Human Services w/ attachments  
Department of Regulation and Licensure

NPG Distribution w/o attachments

Records w/ attachments

**Attachment 1**

**License Amendment Request  
One-Time Waiver of Surveillance Requirements**

**Cooper Nuclear Station  
NRC Docket 50-298, DPR-46**

- 1.0 Introduction
- 2.0 Description of Proposed Amendment
- 3.0 Background
- 4.0 Regulatory Requirements and Guidance
- 5.0 Technical Analysis
- 6.0 Regulatory Analysis
- 7.0 No Significant Hazards Consideration (NSHC)
- 8.0 Environmental Consideration
- 9.0 Precedents
- 10.0 References

## 1.0 Introduction

This letter is a request to amend Operating License (OL) DPR-46 for Cooper Nuclear Station (CNS).

The proposed change(s) would amend the OL by revising the Technical Specifications (TS) to allow a one-time extension of a limited number of Surveillance Requirements (SRs). The one-time extension is needed to allow CNS to continue operating to achieve full utilization of the current operating cycle core while avoiding a plant shutdown solely to perform surveillances.

## 2.0 Description of Proposed Amendment

A temporary note is being added to certain SRs in CNS TS. The temporary note states that the next required performance of the SR may be delayed until the current cycle refueling outage, but no later than February 2, 2005. Several of the SRs apply to more than one system or subsystem. However, because the extension is needed for only a portion of these systems or subsystems, the temporary note identifies only those for which the extension is needed. The temporary note also states that it expires upon startup from the refueling outage to emphasize its temporary nature.

A temporary note is being proposed for the following SRs:

1. SR 3.3.5.1.5, Logic System Functional Test, for Core Spray (CS) System initiation on low Reactor Vessel Water Level and high drywell pressure.
2. SR 3.3.8.1.2, Channel Calibration, for the following Loss of Power Instrumentation Functions:
  - 4.16 kV Emergency Bus Undervoltage (Loss of Voltage);
  - 4.16 kV Emergency Bus Normal Supply Undervoltage (Loss of Voltage);
  - 4.16 kV Emergency Bus Essential Station Service Transformer (ESST) Supply Undervoltage (Loss of Voltage);
  - 4.16 kV Emergency Bus Undervoltage (Degraded Voltage);
  - 4.16 kV Emergency Bus ESST Supply Undervoltage (Degraded Voltage);
3. SR 3.3.8.1.3, Logic System Functional Test, for the following Loss of Power Instrumentation Functions:
  - 4.16 kV Emergency Bus Undervoltage (Loss of Voltage);
  - 4.16 kV Emergency Bus Normal Supply Undervoltage (Loss of Voltage);
  - 4.16 kV Emergency Bus Essential Station Service Transformer (ESST) Supply Undervoltage (Loss of Voltage);
  - 4.16 kV Emergency Bus Undervoltage (Degraded Voltage);
  - 4.16 kV Emergency Bus ESST Supply Undervoltage (Degraded Voltage);

4. SR 3.3.8.2.1, Channel Calibration for overvoltage, undervoltage, and underfrequency on the Reactor Protection System (RPS) Electric Power Monitoring System.
5. SR 3.3.8.2.2, System Functional Test on the RPS Electric Power Monitoring System.
6. SR 3.5.1.9, Verify each Emergency Core Cooling System (ECCS) injection/spray subsystem actuates on an actual or simulated automatic initiation signal. (Applicable Modes: 1, 2, and 3)
7. SR 3.5.2.5, Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal (Applicable Modes: 4 and 5).
8. SR 3.6.1.1.2, Verify drywell to suppression chamber bypass leakage is equivalent to a hole less than 1.0 inch in diameter
9. SR 3.6.4.3.2, Perform required Standby Gas Treatment (SGT) filter testing in accordance with the Ventilation Filter Testing Program (VFTP).

The VFTP, discussed in TS Section 5.5.7, consists of the following five parts:

1. 5.5.7a. This part tests the high efficiency particulate air (HEPA) filter efficiency.
  2. 5.5.7b. This part tests charcoal adsorber in-place bypass and penetration.
  3. 5.5.7c. This part performs a laboratory test of charcoal samples.
  4. 5.5.7d. This part verifies that pressure drops across the filters is less than the maximum allowable.
  5. 5.5.7e. This part verifies that the SGT electric heaters dissipate the required amount of power.
10. SR 3.6.4.3.4, Verify the correct position of the SGT units cross tie damper, and that each SGT room air supply check valve and SGT dilution air shutoff valve can be opened.
  11. SR 3.8.4.7, Verify battery capacity is adequate to supply, and maintain in operable status, the required emergency loads for the design duty cycle when subjected to a battery service test.

### **3.0 Background**

1. SR 3.3.5.1.5, Logic System Functional Test, for CS System initiation on low reactor vessel water level and high drywell pressure.

The requested deferral applies only to performance of that part of the Logic System Functional Test for initiation of Core Spray System (both Subsystem 'A' and 'B') on low reactor vessel water level and high drywell pressure which demonstrates that the injection valves open, the test return valve closes, and the pump breaker closes.

The CS System is part of the CNS Emergency Core Cooling Systems (ECCS). The safety design bases of the ECCS includes providing adequate cooling of the reactor core under abnormal and accident conditions and removing heat to prevent fuel clad melting.

The CS System is composed of two independent subsystems. Each subsystem consists of a motor driven pump, a spray sparger above the core, and piping and valves to transfer water from the suppression pool to the sparger. The CS System is designed to provide cooling to the core when reactor pressure is low.

The CS System may be initiated by either automatic or manual means. Automatic initiation occurs for conditions of Reactor Vessel Water Level—Low Low Low (Level 1) or Drywell Pressure—High. Each of these diverse variables is monitored by four redundant switches, which are connected to relays which send signals to two logic systems, with each system arranged in a one-out-of-two taken twice logic. Each logic system initiates one of the two CS pumps.

Upon receipt of an initiation signal, if normal AC power is available, both CS pumps start after an approximate 10 second time delay. If a core spray initiation signal is received when normal AC power is not available, the CS pumps start approximately 10 seconds after the bus is energized by the Diesel Generators (DGs).

The Logic System Functional Test demonstrates the operability of the required initiation logic and simulated automatic actuation for a specific channel.

The last performance of this SR on CS Subsystem A was on March 18, 2003, during the last refueling outage (Cycle 21.) With the 25% extension of the specified Frequency allowed by SR 3.0.2, the next required performance of this SR is due no later than January 29, 2005. CNS plans to shutdown on January 15, 2005 to begin the Cycle 22 Refueling Outage (RFO22). Division 1 will be the protected division during approximately the first half of RFO22. CS Subsystem A is part of Division 1. No maintenance or surveillance can be performed on a protected division. The requested one-time deferral to no later than February 2, 2005 is needed to allow time to complete maintenance and surveillances on Division 2 and to make the changeover to Division 2 as the protected division, thereby allowing performance of that portion of this SR which demonstrates that the injection valves open, the test return valve closes, and the pump breaker closes on CS Subsystem A.

The last performance of this SR on CS Subsystem B was on March 4, 2003, during the last refueling outage (Cycle 21.) With the 25% extension of the specified Frequency allowed by SR 3.0.2, the next required performance of this SR is due no later than January 15, 2005. CNS plans to shutdown on January 15, 2005 to begin the Cycle 22 Refueling Outage (RFO22). Division 1 will be the protected division during approximately the first half of RFO22. This SR on CS Subsystem B will be performed

during the first half of the outage. The requested one-time deferral to no later than February 2, 2005 is needed to allow time to perform that portion of the logic of this SR which demonstrates that the injection valves open, the test return valve closes, and the pump breaker closes.

2. SR 3.3.8.1.2, Channel Calibration, and
3. SR 3.3.8.1.3, Logic System Functional Test

Both of these SRs are to be performed for the following Loss of Power (LOP) Instrumentation Functions:

- (1) 4.16 kV Emergency Bus Undervoltage (Loss of Voltage);
- (2) 4.16 kV Emergency Bus Normal Supply Undervoltage (Loss of Voltage);
- (3) 4.16 kV Emergency Bus Essential Station Service Transformer (ESST) Supply Undervoltage (Loss of Voltage);
- (4) 4.16 kV Emergency Bus Undervoltage (Degraded Voltage);
- (5) 4.16 kV Emergency Bus ESST Supply Undervoltage (Degraded Voltage);

This requested deferral is only for Division 1 of the LOP Instrumentation.

Successful operation of the required safety functions of the Emergency Core Cooling Systems (ECCS) is dependent upon the availability of adequate power sources for energizing the various components such as pump motors, motor operated valves, and the associated control components. The LOP instrumentation monitors the 4.16 kV emergency buses and the power to the buses. Offsite power is the preferred source of power for the 4.16 kV emergency buses. If the monitors determine that insufficient power is available, the buses are disconnected from the offsite power sources and connected to the onsite DG power sources.

Each 4.16 kV emergency bus has its own independent LOP instrumentation and associated logic. The voltage for each bus is monitored at two levels, which can be considered as two different types of undervoltage protection: Loss of Voltage and Degraded Voltage. There are three Loss of Voltage relays associated with each 4.16 kV Emergency Bus or power supply to that bus constituting three separate Functions. Function 1 is the 4.16 kV Emergency Bus Undervoltage (Loss of Voltage); Function 2 is the 4.16 kV Emergency Bus Normal Supply Undervoltage (Loss of Voltage); Function 3 is the 4.16 kV Emergency Bus ESST (Emergency Station Service Transformer) Supply Undervoltage (Loss of Voltage). These three Functions constitute the first level of undervoltage protection. The second level of undervoltage protection is a Degraded Voltage scheme.

The three Loss of Voltage relays are each arranged in a one-out-of-one logic configuration (Functions 1, 2, and 3), while the Degraded Voltage relays are arranged in a two-out-of-two logic configuration if the emergency bus is powered from its



normal source (Function 4), or in a one-out-of-one logic configuration if the emergency bus is powered from the ESST (Function 5).

SR 3.3.8.1.2, channel calibration, is a complete check of the relay circuitry and associated time delay relays. This test verifies the channel responds to the measured parameter within the necessary range and accuracy. Channel calibration leaves the channel adjusted to account for instrument drifts between successive calibrations consistent with the plant specific setpoint methodology.

SR 3.3.8.1.3, the Logic System Functional Test, demonstrates the operability of the required actuation logic for a specific channel.

SRs 3.3.8.1.2 and 3.3.8.1.3 were last performed for Division 1 of the LOP instrumentation during the Cycle 21 refueling outage. The SRs for Functions 4 and 5 were performed on March 19, 2003, and for Functions 1, 2, and 3 on March 21, 2003. With the 25% extension of the specified Frequency allowed by SR 3.0.2, the next required performance of this SR is due no later than January 30, 2005 for Functions 4 and 5 and February 1, 2005 for Functions 1, 2, and 3. CNS plans to shutdown on January 15, 2005 to begin the Cycle 22 Refueling Outage. Division 1 of the 4.16 kV AC Distribution System will be the protected division at the start of the outage. During the period that Division 1 is protected no surveillances can be performed on Division 1 systems/components. The changeover to Division 2 as the protected division is projected for February 2, 2005. The requested one-time deferral to February 2, 2005 is therefore needed to allow time to change to Division 2 as the protected division.

4. SR 3.3.8.2.1, Channel Calibration for overvoltage, undervoltage, and underfrequency on the Reactor Protection System (RPS) Electric Power Monitoring System.
5. SR 3.3.8.2.2, System Functional Test on the RPS Electric Power Monitoring System.

RPS Electric Power Monitoring System is provided to isolate the RPS bus from the motor generator (MG) set or an alternate power supply in the event of overvoltage, undervoltage, or underfrequency. This system protects the loads connected to the RPS bus against unacceptable voltage and frequency conditions and forms an important part of the primary success path of the essential safety circuits. Some of the essential equipment powered from the RPS buses includes the RPS logic and scram solenoids.

RPS electric power monitoring assembly will detect any abnormal high or low voltage or low frequency condition in the outputs of the two MG sets or the alternate power supply and will de-energize its respective RPS bus, thereby causing all safety functions normally powered by this bus to de-energize.

In the event of failure of an RPS Electric Power Monitoring System (e.g., both in-series electric power monitoring assemblies), the RPS loads may experience significant effects from the unregulated power supply. Deviation from the nominal conditions can potentially cause damage to the scram solenoids and other Class 1E devices.

In the event of a low voltage condition for an extended period of time, the scram solenoids can chatter and potentially lose their pneumatic control capability, resulting in a loss of primary scram action.

In the event of an overvoltage condition, the RPS logic relays and scram solenoids may experience a voltage higher than their design voltage. If the overvoltage condition persists for an extended time period, it may cause equipment degradation and the loss of plant safety function.

Two redundant Class 1E circuit breakers are connected in series between each RPS bus and its MG set, and between each RPS bus and its alternate power supply. Each of these circuit breakers has an associated independent set of Class 1E overvoltage, undervoltage, and underfrequency sensing logic. Together, a circuit breaker and its sensing logic constitute an electric power monitoring assembly. If the output of the MG set or the alternate power supply exceeds predetermined limits of overvoltage, undervoltage, or underfrequency, a trip coil driven by this logic circuitry opens the circuit breaker, which removes the associated power supply from service.

SR 3.3.8.2.1, Channel Calibration, is a complete check of the instrument loop and the sensor. This test verifies that the channel responds to the measured parameter within the necessary range and accuracy. This Channel Calibration leaves the channel adjusted to account for instrument drifts between successive calibrations consistent with the plant specific setpoint methodology.

SR 3.3.8.2.2, system functional test, demonstrates that, with a required system actuation (simulated or actual) signal, the logic of the system will automatically open the associated power monitoring assembly. The system functional test shall include actuation of the protective relays, logic, and output circuit breakers. Only one signal per power monitoring assembly is required to be tested. This Surveillance overlaps with the Channel Calibration to provide complete testing of the safety function.

SRs 3.3.8.2.1 and 3.3.8.2.2 were last performed on March 20, 2003. With the 25% extension allowed by SR 3.0.2 the next performance of these SRs is due February 1, 2005. The requested extension of one day for these SRs is needed based on the facts that these SRs should be performed during a plant shutdown, and that NPPD considers it prudent to perform these SRs on Division 1 after the change to Division 2 as the protected division, expected to occur on or before February 2, 2005.

6. SR 3.5.1.9, Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal. (Applicable Modes: 1, 2, and 3)

The requested deferral only applies to that portion of the surveillance on the CS System which demonstrates that the injection valves open, the test return valve closes, and the pump breaker closes. It applies to both Subsystems 'A' and 'B'.

Background information regarding the design function and configuration of the CS System is provided in item number 1 above.

The ECCS subsystems are required to actuate automatically to perform their design functions. SR 3.5.1.9 verifies that, with a required system initiation signal (actual or simulated), the automatic initiation logic of High Pressure Coolant Injection (HPCI), CS, and Low Pressure Coolant Injection will cause the systems or subsystems to operate as designed, including actuation of the system throughout its emergency operating sequence, automatic pump startup and actuation of all automatic valves to their required positions. The LOGIC SYSTEM FUNCTIONAL TEST performed in LCO 3.3.5.1 overlaps this Surveillance to provide complete testing of the assumed safety function.

The dates for the last performance of this SR on CS Subsystems 'A' and 'B' and the dates for the next required performance are the same as that for SR 3.3.5.1.5 discussed in item 1 above. The need for the requested deferral for this SR is the same as that for SR 3.3.5.1.5 discussed in item 1 above.

7. SR 3.5.2.5, Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal (Applicable Modes: 4 and 5).

The requested deferral only applies to the surveillance on the CS System. It applies to both Subsystems 'A' and 'B'.

Background information regarding the design function and configuration of the CS System is provided in item number 1 above.

The dates for the last performance of this SR on CS Subsystems 'A' and 'B' and the dates for the next required performance are the same as that for SR 3.3.5.1.5 discussed in item 1 above. The need for the requested deferral for this SR is the same as that for SR 3.3.5.1.5 discussed in item 1 above.

8. SR 3.6.1.1.2, Verify drywell to suppression chamber bypass leakage is equivalent to a hole less than 1.0 inch in diameter.

The function of the primary containment is to isolate and contain fission products released from the Reactor Primary System following a design basis Loss of Coolant Accident (LOCA) and to confine the postulated release of radioactive material. The primary containment consists of a steel pressure vessel in the shape of an inverted light bulb (the drywell) with a torus-shaped suppression chamber located below and encircling the drywell. The drywell surrounds the Reactor Primary System and provides an essentially leak tight barrier against an uncontrolled release of radioactive material to the environment.

Maintaining the pressure suppression function of primary containment requires limiting the leakage from the drywell to the suppression chamber. Thus, if an event were to occur that pressurized the drywell, the steam would be directed through the downcomers into the suppression pool.

SR 3.6.1.1.2 is a leak test that confirms that the bypass area between the drywell and the suppression chamber is less than a one-inch diameter hole. This ensures that the leakage paths that would bypass the suppression pool are within allowable limits.

SR 3.6.1.1.2 was last performed on February 25, 2003, during the Cycle 21 refueling outage. With the 25% extension allowed by SR 3.0.2 the next required performance of this SR is due by January 7, 2005. The requested deferral of performance of this SR is needed based on the fact that it is prudent that this SR be performed when the plant is in an outage. The deferral to February 2, 2005, is based on the need to perform this SR during the RE22 outage.

9. SR 3.6.4.3.2, Perform required SGT filter testing in accordance with the VFTP.

The function of the SGT System is to (a) filter particulates and iodines from the air being exhausted from the Reactor Building in order to reduce the level of airborne contamination released to the environs and (b) to reduce and hold the building at a minimum average sub atmospheric pressure of 0.25 inches of water (under neutral wind conditions: wind speeds 2 – 5 mph).

The SGT System consists of two fully redundant subsystems, each with its own set of ductwork, dampers, charcoal filter train, and controls. Both SGT subsystems share a common inlet plenum. This inlet plenum is connected to the reactor building exhaust plenum, the primary containment, and the HPCI turbine gland seal exhaust. Both SGT subsystems exhaust to the elevated release point tower through a common exhaust duct served by two 100% capacity system fans. Both fans automatically start on a secondary containment isolation signal.

Each SGT filter train consists of the following components (listed in order of air flow direction): (a) a demister or moisture separator, (b) a rough prefilter, (c) an electric heater, (d) a high efficiency particulate air (HEPA) filter, (e) a charcoal adsorber, (f) a second HEPA filter, and (g) a centrifugal fan.

The SGT System automatically starts and operates in response to actuation signals indicative of conditions or an accident that could require operation of the system. Following initiation, both SGT filter train fans start.

SR 3.6.4.3.2 verifies that the required SGT filter testing is performed in accordance with the VFTP. The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the VFTP, presented in TS Section 5.5.7.

Portions of SR 3.6.4.3.2 on SGT Train 'A' were last performed on March 7 and 8, 2003. With the 25% extension allowed by SR 3.0.2 the next required performance is due on January 18 and 19, 2005. Portions of this SR on SGT Train 'B' were last performed on March 6 and 7, 2003. With the 25% extension allowed by SR 3.0.2 the next required performance is due on January 17 and 18, 2005. The requested deferral of performance of this SR is needed based on the fact that the plant should not be in any of the conditions of applicability (i.e., Modes 1, 2, and 3; moving irradiated fuel; performing core alterations; or during operations that have the potential to drain the vessel) when performing this SR. The deferral to February 2, 2005, is based on the need to schedule this SR during the RE22 outage.

10. SR 3.6.4.3.4, Verify the correct position of the SGT units cross tie damper, and that each SGT room air supply check valve and SGT dilution air shutoff valve can be opened.

The SGT subsystem fan suction is cross connected by a single duct and a throttled and locked manual cross tie valve to accommodate decay heat removal from the shutdown SGT subsystem. SGT room air enters the train suction through a check valve and air operated damper, is drawn through the filter removing decay heat from the shutdown SGT subsystem, passes through the cross tie ductwork to the operating SGT subsystem fan, and is exhausted to the Elevated Release Point tower.

This SR verifies that the SGT units cross tie damper is in the correct position, and that each SGT room air supply check valve and each air operated SGT dilution air shutoff valve open when required. This ensures that the decay heat removal function of SGT System operation is available.

This SR was last performed on SGT 'A' on March 8, 2003. With the 25% extension allowed by SR 3.0.2 the next required performance is due on January 19, 2005. This SR was last performed on SGT 'B' on March 7, 2003. With the 25% extension allowed by SR 3.0.2 the next required performance is due on January 18, 2005. The requested deferral of performance of this SR is needed based on the fact that it is considered prudent to perform this SR when the plant is not in any of the conditions of applicability (i.e., Modes 1, 2, and 3; moving irradiated fuel; performing core alterations; or during operations that have the potential to drain the vessel). The deferral to February 2, 2005, is based on the need to schedule this SR during the RE22 outage.

11. SR 3.8.4.7, Verify battery capacity for the 125-Volt and 250-Volt batteries is adequate to supply, and maintain in operable status, the required emergency loads for the design duty cycle when subjected to a battery service test.

The DC electrical power system provides the AC emergency power system with control power. It also provides both motive and control power to selected safety related equipment. The DC electrical power system is designed to have sufficient independence, redundancy, and testability to perform its safety functions, assuming a single failure. The DC electrical power system also conforms to the recommendations of Regulatory Guide 1.6 and IEEE-308.

The 125-Volt and 250-Volt DC power sources provide both motive and control power to selected safety related and nonsafety related equipment. The Division 1 and Division 2 125-Volt DC subsystems each consist of a 125-Volt DC battery, a 125-Volt battery charger and associated 125-Volt DC distribution system. The Division 1 and Division 2 250-Volt DC subsystems each consist of a 250-Volt DC battery, a 250-Volt battery charger and associated 250-Volt DC distribution system. There is an additional 125-Volt battery charger and an additional 250-Volt battery charger that can be used as backups to supply either division if the normal battery charger is lost. The backup chargers can be supplied from either division to maintain proper divisional separation.

Each battery has adequate storage capacity to carry the required load continuously for approximately 4 hours.

A battery service test is a special test of the battery's capability, as found, to satisfy the design requirements (battery duty cycle) of the DC electrical power system. The discharge rate and test length corresponds to the design duty cycle requirements as specified in design calculations.

This extension is requested only for the 125-Volt and 250-Volt Division 1 batteries.

This SR was last performed on the 125-Volt Division 1 battery on March 21, 2003. With the 25% extension allowed by SR 3.0.2 the next required performance is due on February 1, 2005. This SR was last performed on the 250-Volt Division 1 battery on March 17, 2003. With the 25% extension allowed by SR 3.0.2 the next required performance is due on January 28, 2005. The requested deferral of performance of this SR is needed based on the fact that this SR should be performed when the plant is shutdown. The deferral to February 2, 2005, is based on the need to schedule this SR during the RE22 outage.

#### **4.0 Regulatory Requirements and Guidance**

1. 10 CFR 50.36 requires that an applicant for a license to operate a utilization facility include proposed technical specifications in its license application and specifies what information must be included in the technical specifications. 50.36(c) identifies the information that must be included in technical specifications.

50.36(c)(2) identifies Limiting Conditions for Operation (LCO) as a requirement for technical specifications. It defines LCO as the lowest functional capability or performance level of equipment required for safe operation of the facility.

50.36(c)(2)(ii) identifies four criteria for which a LCO is required if any one of the criteria are met.

50.36(c)(3) identifies surveillance requirements as one of the required parts of TS, and defines surveillance requirements as follows:

“Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions of operation will be met”

2. 10 CFR 50.46 specifies five acceptance criteria for the performance of ECCS in nuclear power reactors. The five specific criteria are specified in 50.46(b).
3. 10 CFR 100 specifies siting requirements for stationary power reactors. 10 CFR 100.11 specifies the limits for offsite doses following a postulated fission product release. These limits are a whole body dose of 25 Rem and a total radiation dose to the thyroid from iodine exposure of 300 Rem.
4. 10 CFR 50 Appendix A, General Design Criterion 19 requires, in part, that the control room for the nuclear power unit be provided with adequate radiation protection to permit access and occupancy under accident conditions without personnel receiving radiation exposures in excess of 5 Rem whole body, or its equivalent to any part of the body, for the duration of the accident.
5. The CNS Licensing Basis requires conformance to AEC Proposed General Design Criteria 10, as reflected in Appendix F in the CNS Updated Safety Analysis Report. Proposed GDC 10 states: "Containment shall be provided. The containment structure shall be designed to sustain the initial effects of gross equipment failures, such as a large coolant boundary break, without loss of required integrity and, together with other engineered safety features as may be necessary, to retain for as long as the situation requires the functional capability to protect the public."

## 5.0 Technical Analysis

The following table identifies the SRs for which the one-time deferral is requested, the current due date for the next required performance of each applicable SR, and the number of days that the performance will be delayed based on deferral to February 2, 2005. The dates identified as Current Due Date were determined by adding 18 months to the last performance date and applying the 25% interval extension allowed by SR 3.0.2.

SR	Current Due Date	Extension (no. of days)
3.3.5.1.5, Logic System Functional Test Core Spray Train A, Functions 1a and 1b Core Spray Train B, Functions 1a and 1b	1/29/05 1/15/05	4 18
3.3.8.1.2, Loss of Power Channel Calibration (Division 1 only) Functions 1a, 1b, 2a, 2b, 3a, 3b Functions 4a, 4b, 4c, 5a, 5b	2/1/05 1/30/05	1 3
3.3.8.1.3, Loss of Power Logic System Functional Test (Division 1 only) Functions 1a, 1b, 2a, 2b, 3a, 3b Functions 4a, 4b, 4c, 5a, 5b	2/1/05 1/30/05	1 3
3.3.8.2.1, Reactor Protection System Electric Power Monitoring Channel Calibration (Division 1 only)	2/1/05	1
3.3.8.2.2, Reactor Protection System Electric Power Monitoring Functional Test (Division 1 only)	2/1/05	1
3.5.1.9, Verify each ECCS subsystem actuates on actual or simulated automatic initiation signal Core Spray Train A Core Spray Train B	1/29/05 1/15/05	4 18
3.5.2.5, Verify each ECCS subsystem actuates on actual or simulated automatic initiation signal Core Spray Train A Core Spray Train B	1/29/05 1/15/05	4 18
3.6.1.1.2, Drywell to Suppression Chamber Bypass Leakage	1/7/05	26



SR	Current Due Date	Extension (no. of days)
3.6.4.3.2, Perform SGT testing in accordance with the Ventilation Filter Test Program		
SGT Train A Filter and Charcoal Adsorber		
TS Section 5.5.7 Parts a and b -----	1/19/05	14
TS Section 5.5.7 Parts c, d, and e -----	1/18/05	15
SGT Train B Filter and Charcoal Adsorber		
TS Section 5.5.7 Parts a and b -----	1/17/05	16
TS Section 5.5.7 Parts c, d, and e -----	1/18/05	15
3.6.4.3.4, Verify SGT crosstie damper in correct position, and air supply check valve and air shutoff valve can be opened.		
SGT Train A	1/19/05	14
SGT Train B	1/18/05	15
3.8.4.7, Battery capacity test		
125-Volt Division I Battery	2/1/05	1
250-Volt Division I Battery	1/28/05	5

1. SR 3.3.5.1.5, Logic System Functional Test, for Core Spray System initiation on low Reactor Vessel Water Level and high drywell pressure.

The 18-month Frequency is based on the need to perform the surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the surveillance was performed with the reactor at power.

The requested delay period for the performance of this surveillance is 4 days for CS Train A and 18 days for CS Train B. The portion of this SR to which this request applies uses an ECCS test switch to simulate a high drywell pressure/low reactor water level signal to the CS initiation logics. Each logic is tested to demonstrate the logic will cause the injection valves to open, the test return valve to close, and the pump breaker to close.

The delay in the surveillance interval of 4 days for Core Spray Train A, Functions 1a and 1b and 18 days for Core Spray Train B, Functions 1a and 1b will not impact the performance of the Core Spray Initiation Logic. This surveillance is performed to verify the logic string for Core Spray initiation logic. Based on the reliability of this portion of the logic, a 4 day and 18 day extension of the Core Spray Initiation Logic Functional Test is justified and will not impact operability of the system.

The three most recent performances of the associated procedure were reviewed. No failures associated with this portion of the logic functional test were found. Therefore, based on the past performance, there is reasonable assurance the requested extension will have no impact on the ability to meet our license requirements.

The risk impact of extension of the SRs for the automatic initiation of the Core Spray subsystem is evaluated by increasing the failure probabilities of the CS A and B pumps to start. The resulting zero test and maintenance Core Damage Frequency (CDF) increase of  $1.6E-09/\text{yr}$  yields an incremental Core Damage Probability (CDP) of  $<1E-06$ , which is not risk significant. The resulting incremental change to Large Early Release Probability (LERP) is  $<1E-07$ , which is not risk significant.

2. SR 3.3.8.1.2, Channel Calibration, for the following Loss of Power Instrumentation Functions:
  - a) 4.16 kV Emergency Bus Undervoltage (Loss of Voltage);
  - b) 4.16 kV Emergency Bus Normal Supply Undervoltage (Loss of Voltage);
  - c) 4.16 kV Emergency Bus Essential Station Service Transformer (ESST) Supply Undervoltage (Loss of Voltage);
  - d) 4.16 kV Emergency Bus Undervoltage (Degraded Voltage);
  - e) 4.16 kV Emergency Bus ESST Supply Undervoltage (Degraded Voltage);

SR 3.3.8.1.2, channel calibration, is a complete check of the relay circuitry and associated time delay relays. This test verifies the channel responds to the measured parameter within the necessary range and accuracy. Channel calibration leaves the channel adjusted to account for instrument drifts between successive calibrations consistent with the plant specific setpoint methodology.

The 18-month Frequency is based upon the assumption of an 18-month calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

The requested extension is needed only for Division 1. The requested delay period for the performance of this surveillance is 1 day for Functions 1a, 1b, 2a, 2b, 3a, and 3b, and 3 days for Functions 4a, 4b, 4c, 5a, and 5b, from TS Table 3.3.8.1-1, "Loss of Power Instrumentation."

SR 3.3.8.1.2 provides the requirements for calibrating the under voltage relays associated with the 4160VAC critical busses. The delay in the surveillance interval of 1 day and 3 days for testing of the associated functions of these surveillances will not impact the settings for these relays. The three most recent performances of this surveillance have shown that the as-found values for these relays have been within the range specified in the procedures. For functions 4a, 4b, and 5a, the setpoint calculation assumes an 18-month calibration interval. Conservatively assuming a 24-month calibration interval for these functions results in a maximum expected drift that

remains well within the desired level of confidence for avoidance of either a spurious trip or exceeding the instrument Allowable Value. Also, SR 3.3.8.1.1 requires performance of a channel functional test on these circuits every 31 days to assure the operability of the specified channels. For Functions 4c and 5b, the channel functional check includes a calibration check of the respective instrument settings which contribute to the function. Based on the reliability of the installed relays in the three most recent performances of surveillance testing, lack of setpoint variance observed on the relays, the worst-case observed voltage variance, and the performance of channel functional tests, extending the interval 1 day and 3 days will have no impact on the operability of the 4160 VAC critical busses.

The requested extension for this SR is significantly less than the test interval. It was assumed that the failure probability of the loss of power instrumentation was doubled. The resulting zero test and maintenance CDF increase of  $2.77\text{E-}08/\text{yr}$  yields an incremental CDP of  $<1\text{E-}06$ , which is not risk significant. The resulting incremental change to LERP is  $<1\text{E-}07$ , which is not risk significant.

3. SR 3.3.8.1.3, Logic System Functional Test, for the following Loss of Power Instrumentation Functions:
  - a) 4.16 kV Emergency Bus Undervoltage (Loss of Voltage);
  - b) 4.16 kV Emergency Bus Normal Supply Undervoltage (Loss of Voltage);
  - c) 4.16 kV Emergency Bus Essential Station Service Transformer (ESST) Supply Undervoltage (Loss of Voltage);
  - d) 4.16 kV Emergency Bus Undervoltage (Degraded Voltage);
  - e) 4.16 kV Emergency Bus ESST Supply Undervoltage (Degraded Voltage);

SR 3.3.8.1.3, the Logic System Functional Test, demonstrates the operability of the required actuation logic for a specific channel.

The 18-month Frequency is based on the need to perform this surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the surveillance were performed with the reactor at power.

The requested extension is needed only for Division 1. The requested delay period for the performance of this surveillance is 1 day for Functions 1a, 1b, 2a, 2b, 3a, and 3b, and 3 days for Functions 4a, 4b, 4c, 5a, and 5b, from TS Table 3.3.8.1-1, "Loss of Power Instrumentation."

SR 3.3.8.1.3 provides the requirements for logic testing the under voltage relays associated with the 4160VAC critical busses. The delay in the surveillance interval of 1 day and 3 days for testing of the associated functions of these surveillances will not impact the settings for these relays. The three most recent performances of the channel calibration of SR 3.3.8.1.2 have shown that the as-found values for these relays were within the Technical Specification Limits. Also, SR 3.3.8.1.1 requires performance of

a channel functional test on these circuits every 31 days to assure the operability of the specified channels. Based on the reliability of the installed relays in past performances of surveillance testing, lack of drift observed on the relays and the performance of channel functional tests, extending the interval 1 day and 3 days will have no impact on the operability of the 4160 VAC critical busses.

The requested extension for this SR is significantly less than the test interval. It was assumed that the failure probability of the loss of power instrumentation was doubled. The resulting zero test and maintenance CDF increase of  $2.77E-08/\text{yr}$  yields an incremental CDP of  $<1E-06$ , which is not risk significant. The resulting incremental change to LERP is  $<1E-07$ , which is not risk significant.

4. SR 3.3.8.2.1, Channel Calibration for overvoltage, undervoltage, and underfrequency on the Reactor Protection System (RPS) Electric Power Monitoring System.

SR 3.3.8.2.1, Channel Calibration, is a complete check of the instrument loop and the sensor. This test verifies that the channel responds to the measured parameter within the necessary range and accuracy, and leaves the channel adjusted to account for instrument drifts between successive calibrations consistent with the plant specific setpoint methodology.

The Frequency is based on the assumption of an 18-month calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

The performance of this surveillance on Division 1 is requested to be delayed one day. This delay will not impact the settings for the electric power monitoring assemblies because the conservative rounding performed as part of the Allowable Value determination was a value equivalent to at least one (1) month worth of drift. Specifically, the worst case (smallest round up) occurred as part of determining the Allowable Value for the Underfrequency limit, with a rounding value of 0.02 Hz, and an estimated monthly drift of 0.017 Hz. In addition, the setpoint calculation for these functions assumed an instrument drift interval of 22.5 months. By engineering judgment, the addition of one additional day to this interval cannot credibly have a discernible effect on the accuracy of the instruments. Based on conservatisms in the setpoint calculations, as well as the calibration interval assumed in the calculations, extending the interval one day will have no impact on the ability of the RPS electric power monitoring assemblies to satisfy TS requirements.

The three most recent performances of this surveillance have shown that the as-found values for the assemblies have been within the range specified with the exception of two setpoints which were found out of tolerance and adjusted within tolerance during RE-19 and one other setpoint that was adjusted during RE20. It should be noted that since that time, the as-found values of the assemblies have had minimal variance from the as-left values from the previous performance. Based on the repeatability of the three most recent performances of surveillance testing and lack of setpoint variance

observed, there is reasonable assurance that the delay of one day will have no impact on the ability of the RPS electric power monitoring assemblies to satisfy TS requirements.

This surveillance tests the RPS electric power monitoring system which isolates the RPS bus from the motor generator set in the event of overvoltage, undervoltage or underfrequency to protect the loads connected to the RPS bus. Given that the extension of 1 day will occur over two weeks into the refueling outage, a qualitative assessment determined that the risk impact of the extension is negligible. Deferral of the RPS electric power monitoring system calibration SR for an additional day is not risk significant in terms of CDF or Large Early Release Frequency (LERF).

5. SR 3.3.8.2.2, System Functional Test on the RPS Electric Power Monitoring System.

Performance of SR 3.3.8.2.2, system functional test, demonstrates that, with a required system actuation (simulated or actual) signal, the logic of the system will automatically open the associated power monitoring assembly. The system functional test shall include actuation of the protective relays, logic, and output circuit breakers. The system functional test of the Class 1E circuit breakers is included as part of this test to provide complete testing of the safety function. If the breakers are incapable of operating, the associated electric power monitoring assembly would be inoperable.

The 18-month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power.

The physical arrangement of the RPS electric power monitoring assemblies is two (2) assemblies in series between the power source and the RPS distribution panel. Additionally, the assemblies are located in a climate-controlled area and not subject to extremes in temperature or humidity. The three most recent performances of this surveillance on Division 1 have demonstrated that the monitoring system functioned within technical specification limits. Therefore, the likelihood of simultaneous failure of both assemblies to protect the distribution panel is low. Based on this there is reasonable assurance that the requested delay of one day will have no impact on the ability of the RPS electric power monitoring assemblies to satisfy TS requirements, and that a one-day extension of the surveillance interval is justified.

This surveillance tests the RPS electric power monitoring system which isolates the RPS bus from the motor generator set in the event of overvoltage, undervoltage or underfrequency to protect the loads connected to the RPS bus. Given that the extension of 1 day will occur over two weeks into the refueling outage, a qualitative assessment determined that the risk impact of the extension is negligible. Deferral of the RPS electric power monitoring system SR test for an additional day is not risk significant in terms of CDF or LERF.

6. SR 3.5.1.9, Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal. (Applicable Modes: 1, 2, and 3)

The requested deferral applies to the surveillance on both CS Subsystems 'A' and 'B'.

This surveillance verifies that, with a required system initiation signal (actual or simulated), the automatic initiation logic will cause the systems or subsystems to operate as designed, including actuation of the system throughout its emergency operating sequence, automatic pump startup and actuation of all automatic valves to their required positions. This surveillance is required to demonstrate operability of the CS System in operating modes 1, 2, and 3.

The 18-month Frequency is based on the need to perform the surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the surveillance were performed with the reactor at power.

The requested delay period for the performance of this surveillance is 4 days for CS Train A and 18 days for CS Train B. The portion of this SR to which this request applies uses an ECCS test switch to simulate a high drywell pressure/low reactor water level signal to the CS initiation logics. Each logic is tested to demonstrate the logic will cause the injection valves to open, the test return valve to close, and the pump breaker to close.

The delay in the surveillance interval of 4 days for Core Spray Train A, Functions 1a and 1b and 18 days for Core Spray Train B, Functions 1a and 1b will not impact the performance of the Core Spray Initiation Logic. This surveillance is performed to verify the logic string for Core Spray initiation logic. Proper operation of this portion of the Core Spray Initiation Logic was demonstrated during the three most recent performances of the applicable surveillance procedure for this SR for Train A and Train B. Based on the reliability of this portion of the logic a 4 day and 18 day extension of the Core Spray Initiation Logic Functional Test is justified and will not impact operability of the system.

The records of the three most recent performances of the associated procedure were reviewed. No failures associated with this portion of the logic functional test were found. Therefore, based on the past performance, there is reasonable assurance the requested extension will have no impact on the ability to meet our license requirements.

The risk impact of extension of the SRs for the automatic initiation of the Core Spray subsystem is evaluated by increasing the failure probabilities of the CS A and B pumps to start. The resulting zero test and maintenance CDF increase of  $1.6E-09/\text{yr}$  yields an CDP of  $<1E-06$ , which is not risk significant. The resulting incremental change to LERP is  $<1E-07$ , which is not risk significant.

7. SR 3.5.2.5, Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal (Applicable Modes: 4 and 5).

This surveillance performs the same testing as is done by SR 3.5.1.9 discussed in item number 6 above. This surveillance is required to demonstrate operability of the CS System in shutdown modes 4 and 5.

The basis for why the extension of SR 3.5.2.5 does not impact assurance that the CS system remains capable of performing its safety function is the same as that presented in item 6 above for SR 3.5.1.9.

The requested delay period for the performance of this surveillance is 4 days for CS Train A and 18 days for CS Train B.

The delay in the surveillance interval of 4 days for Core Spray Train A, Functions 1a and 1b and 18 days for Core Spray Train B, Functions 1a and 1b will not impact the performance of the Core Spray Initiation Logic. This surveillance is performed to verify the logic string for Core Spray initiation logic. Proper operation of this portion of the Core Spray Initiation Logic was demonstrated during the three most recent performances of the applicable surveillance procedures for this SR for Train A and Train B. Based on the reliability of this portion of the logic, a 4 day and 18 day extension of the Core Spray Initiation Logic Functional Test is justified and will not impact operability of the system.

Because this surveillance is the same as that discussed in item 6 above, the information regarding the historical performance of this surveillance presented in item 6 above is applicable to this item.

The risk impact of extension of the SRs for the automatic initiation of the Core Spray subsystem is evaluated by increasing the failure probabilities of the CS A and B pumps to start. The resulting zero test and maintenance CDF increase of  $1.6E-09/\text{yr}$  yields an incremental CDF of  $<1E-06$ , which is not risk significant. The resulting incremental change to LERP is  $<1E-07$  which is not risk significant.

8. SR 3.6.1.1.2, Verify drywell to suppression chamber bypass leakage is equivalent to a hole less than 1.0 inch in diameter.

This SR is a leak test that confirms that the bypass area between the drywell and the suppression chamber is less than a one-inch diameter hole. Maintaining the pressure suppression function of primary containment requires limiting the leakage from the drywell to the suppression chamber. Thus, if an event were to occur that pressurized the drywell, the steam would be directed through the downcomers from the drywell into the suppression pool. This SR ensures that the leakage paths that would bypass the suppression pool are within allowable limits.

The purpose of this SR is to ensure that most of the steam from an event that pressurized the drywell was directed through the downcomers to below the surface of the suppression pool, and that any steam that did bypass the downcomers was limited to the flow through a hole of less than 1.0 inch diameter.

The 18 month Frequency was developed considering it is prudent that this surveillance be performed during a unit outage and also in view of the fact that component failures that might have affected this test are identified by other primary containment SRs.

An excess leak rate from the torus to drywell vacuum breakers was experienced during a drywell to torus leak test on May 17, 1997. Corrective action was taken at the time and leak testing was successfully completed on May 18, 1997 at the end of the Cycle 17 refueling outage (RE17). Leak testing was again completed satisfactory on September 28, 1998 and December 14, 1998 during the Cycle 18 refueling outage. In March 2000 another failure was experienced during the leak test conducted during the Cycle 19 refueling outage (RE19). In that outage more extensive corrective actions were taken to improve overall vacuum breaker performance including the leak tightness of the vacuum breakers. Improved maintenance training and new procedural guidance for testing and maintenance have resulted in significantly improved leak test performance. Since implementation of the corrective actions in RE 19, successful leak testing has been performed on April 16, 2000, November 4, 2001, December 27, 2001, and February 25, 2003, with no failures experienced. The total leak rate has consistently been a small fraction of allowable limits.

The requested delay period for the performance of this surveillance is 26 days. Based on the low leakage rates observed, especially since the Cycle 19 refueling outage as discussed above, it is expected that this delay will have no impact on meeting the SR requirements during the next performance in the Cycle 22 refueling outage.

This surveillance ensures that the bypass area between the drywell and the suppression chamber is less than a one-inch diameter hole to maintain the pressure suppression function of primary containment. Given that there is position indication on each vacuum breaker and closed indication on all vacuum breakers ensures that the bypass area is less than one full open vacuum breaker, the risk impact of the extension for this SR is negligible. The torus-to-drywell vacuum breaker function has negligible affect on CDF and extending the SR has a negligible affect on LERF. Therefore the extension for this SR is not risk significant.

9. SR 3.6.4.3.2, Perform required SGT filter testing in accordance with the VFTP.

This SR verifies that the required SGT filter testing is performed in accordance with the VFTP. The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the VFTP (TS Section 5.5.7.)



The requested delay period for any part of the VFTP for either SGT Train A or Train B is a maximum of 16 days.

The following are the specific parts of the VFTP and the basis for the requested extension for each.

- a) TS 5.5.7a. This part tests the HEPA filter efficiency. SGT HEPA filter efficiency is trending well and has ample margin to the minimum. Filter efficiency decreases very slowly over time.
- b) TS 5.5.7b. This part tests charcoal adsorber in-place bypass and penetration. This is trending well, with ample margin, and is not subject to abrupt decreases in efficiency.
- c) TS 5.5.7c. This part performs a laboratory test of charcoal samples. SGT charcoal efficiency has ample margin to the required minimum and decreases very slowly over time.
- d) TS 5.5.7d. This part verifies that pressure drops across the filters is less than the maximum allowable. SGT filter pressure drops are well below the allowable maximum. Pressure drop increases very slowly as dust loading increases.
- e) TS 5.5.7e. This part verifies that the SGT electric heaters dissipate the required amount of power. The SGT heater power has ample margin to the required minimum and shows a stable trend.

The three most recent performances of surveillances for SGT filter testing in accordance with the VFTP were reviewed. This review identified that no failures had been experienced.

This surveillance demonstrates SGT filter performance. The SGT system has negligible affect on CDF and a very small affect on LERF. Therefore, given the small affect SGT has on LERF, the risk impact is negligible.

10. SR 3.6.4.3.4, Verify the correct position of the SGT units cross tie damper, and that each SGT room air supply check valve and SGT dilution air shutoff valve can be opened.

This SR verifies that the SGT units cross tie damper is in the correct position, and that each SGT room air supply check valve and each air operated SGT dilution air shutoff valve open when required. This ensures that the decay heat removal function of SGT System operation is available. Operating experience has shown that these components will pass the Surveillance when performed at the 18 month Frequency, which is based on the refueling cycle. Therefore, the Frequency was found to be acceptable from a reliability standpoint.

The requested delay period for the performance of SR 3.6.4.3.4 is 14 days for SGT Train A and 15 days for Train B.

The three most recent performances of this surveillance on the SGT System were reviewed. CNS has not experienced failures of the room air dilution valves or the check valves to open when required. A surveillance is performed every 18 months that measures cooling air flow through the cross tie damper to ensure sufficient cooling flow for the decay heat removal function. Cross tie flow has historically varied only slightly, with ample margin to the minimum and maximum required flow. However, the review of the surveillances identified that one failure of the cooling flow being below the minimum acceptance criteria had occurred. The crosstie damper was adjusted and the surveillance was successful on the repeat performance. The crosstie damper is a manual valve locked in the throttled position, and would not be expected to cause abrupt, significant changes in the crosstie flow.

This surveillance verifies correct position of the SGT units cross tie damper and that each SGT room air supply check valve and dilution air shutoff valve open when required. The SGT system has negligible affect on CDF and a very small affect on LERF. Therefore, given the small affect SGT has on LERF, the risk impact is negligible.

11. SR 3.8.4.7, Verify battery capacity is adequate to supply, and maintain in operable status, the required emergency loads for the design duty cycle when subjected to a battery service test.

The Frequency of 18 months is consistent with the recommendations of Regulatory Guide 1.32 and Regulatory Guide 1.129, which state that the battery service test should be performed during refueling operations or at some other outage, with intervals between tests not to exceed 18 months.

#### Service Test for the 125VDC Division I Battery

The service test simply verifies the ability of the battery to meet the load demand. If it is found the battery is not capable of meeting this requirement, the condition is entered into the Corrective Action Program (CAP) and actions taken to correct the condition.

It is proposed that the Service Test for the 125VDC Division I Battery be delayed one day beyond its required due date, including the 25% extension allowed by SR 3.0.2. This minimal delay will have no effect on the amount of loading on the battery or the ability of the battery to perform as required.

The latest load profile for this battery (including a 15% design margin, a 90% aging factor, and a temperature correction factor to the minimum allowable of 70 degrees Fahrenheit) shows that it meets the design requirement by approximately 127%. This is based on using IEEE 485 battery sizing technique. The 125VDC Division I battery was

replaced in November of 2001 and was subjected to a modified performance test which showed a capacity of approximately 97% of factory rating (from C&D Technologies).

No new loads have been added to the distribution system. Therefore it is expected that the same load profile that was used during Cycle 21 refueling outage will be used during the Cycle 22 refueling outage.

Based on the above it is expected that the battery will be able to meet its design requirement during the requested extension and until it can be verified through the successful completion of a service test.

#### Service Test for the 250VDC Division I Battery

The service test simply verifies the ability of the battery to meet the load demand. If it is found the battery is not capable of meeting this requirement, the condition is entered into the CAP and actions taken to correct the condition.

It is proposed that the Service Test for the 250VDC Division I Battery be delayed five days beyond its required due date, including the 25% extension allowed by SR 3.0.2. This short delay will have no effect on the amount of loading on the battery or the ability of the battery to perform as required.

The latest load profile for this battery (including a 15% design margin, a 90% aging factor, and a temperature correction factor to the minimum allowable of 70 degrees Fahrenheit) shows that it meets the design requirement by approximately 192%, based on using IEEE 485 battery sizing technique. The last time (December 2001) this battery was subjected to a modified performance test, it was shown to have a capacity of approximately 92.5% of factory rating (from C&D Technologies).

The current 250VDC batteries were installed in 1995. Because these batteries have an expected life of 20 years, they will have reached approximately 50% of expected life in 2005.

No new loads have been added to the distribution system. Therefore it is expected that the same load profile that was used during Cycle 21 Refuel Outage will be used during Cycle 22 Refuel Outage.

10 CFR Part 21 Notice from C&D Technologies dated August 25, 1999 (event number 36073) initially notified NPPD of a condition in the 125VDC and 250 VDC batteries at CNS in which high levels of calcium within the positive plate grids of a battery would result in acceleration of the normal age related phenomenon of positive plate growth. The issue is now limited to the 250VDC batteries since the 125VDC batteries have been replaced as resolution of this Part 21 Notice. In order to detect early plate growth in cells of the 250 VDC batteries, CNS has a visual inspection procedure that is being implemented on a semi-annual basis until all cells subject to the Part 21 event number

36073 are removed from the plant. The results of the latest visual inspection were satisfactory. NPPD is tracking resolution through the CNS Corrective Action Program.

Based on the above it is expected that the battery will be able to meet its design requirement during the requested extension and until it can be verified through the successful completion of a service test.

This surveillance verifies battery capacity is adequate to supply, and maintain in operable status, the required emergency loads for the design duty cycle when subjected to a battery service test. A qualitative assessment of the impact of an extension of this SR for both 125 VDC and 250VDC batteries shows negligible risk impact on both CDF and LERF.

Aggregate Risk Impact for all SR Extensions:

The cumulative increase in zero test and maintenance CDF using the assumptions for CS automatic initiation SR extension, Division I loss of power instrumentation SR extension and the Division I batteries capacity SR extension is  $1.22E-07/\text{yr}$ . The contributions from the remaining SR extensions are considered negligible based on individual risk contributions that are essentially zero and considering the fact that requested extensions are less than 1 month. The cumulative Incremental Core Damage Probability (ICDP) is less than  $1E-08$ . Since this ICDP is less than  $1E-06$ , the impact of all SR extensions is considered not risk significant. Since the ICDP is also less than  $1E-07$ , the impact of all SR extensions on incremental Large Early Release Probability (ILERP) is considered not risk significant as well.

## 6.0 Regulatory Analysis

Based on the information presented above in Section 5, Technical Analysis, NPPD concludes that this requested one-time deferral of the surveillance requirements does not adversely impact the ability of the SRs, as required by 10 CFR 50.36(c)(3), to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions of operation will be met.

The ECCS is initiated to preserve the integrity of the fuel cladding by limiting the post LOCA peak cladding temperature to less than the 10 CFR 50.46 limits. The Core Spray System is a low pressure ECCS subsystem that satisfies, in part, the criteria of 10 CFR 50.46. The proposed extension of SRs on the CS System will not impact the assurance that the ECCS is able to maintain peak cladding temperatures less than the 50.46 limits.

The requested delay in performance of SR 3.3.5.1.5, the Logic System Functional Test for the Core Spray System, SR 3.5.1.9, verification of Core Spray actuation (Modes 1, 2, and 3), and SR 3.5.2.5, verification of Core Spray actuation (Modes 4 and 5), will not adversely impact the ability of the Core Spray System to continue to satisfy the acceptance criteria of 10 CFR 50.46.

SR 3.6.1.1.2, drywell-to-suppression chamber leak test, ensures that the pressure suppression function of primary containment is maintained and that the primary containment requirements of AEC Proposed GDC 10 are met. SR 3.6.1.1.2 also ensures that the fission product scrubbing function of the pressure suppression pool, assumed in the design basis accident radiological dose consequence evaluations used to demonstrate compliance with 10CFR100.11 and GDC 19, is maintained. With the requested extension of SR 3.6.1.1.2 CNS continues to satisfy both the AEC Proposed GDC 10 and the assumed fission product scrubbing function.

The LOP instrumentation is required for Engineered Safety Features to function in any accident with a loss of offsite power. The required channels of LOP instrumentation ensure that the ECCS and other assumed systems powered from the DGs, provide plant protection in the event of any of the accidents analyzed in the plant safety analyses in which a loss of offsite power is assumed. The initiation of the DGs on loss of offsite power, and subsequent initiation of the ECCS, ensure that the fuel peak cladding temperature remains below the limits of 10 CFR 50.46. The requested SR extensions will not adversely impact operation of the LOP instrumentation such that the limits of 50.46 would be exceeded.

The purpose of the 125VDC and 250VDC batteries is to provide a reliable source of DC power to the Engineered Safety Feature systems, thereby assuring mitigation of accidents. The insignificant delay in the performance of the battery capacity test of one day for the 125VDC battery and five days for the 250VDC battery does not impact their ability to provide reliable power. Therefore, 10 CFR 50.46 will continue to be met during the period of delayed SR performance.

The proposed extension of SR 3.6.4.3.2 and SR 3.6.4.3.4 will not adversely impact the ability of the SGT System to filter particulates and iodines from the Reactor Building atmosphere such that the offsite doses from a postulated LOCA or fuel handling accident will not exceed the dose limits specified in 10 CFR 100.11 or the control room dose specified in GDC 19.

## **7.0 No Significant Hazards Consideration**

10 CFR 50.91(a)(1) requires that licensee requests for operating license amendments be accompanied by an evaluation of significant hazard posed by issuance of an amendment. NPPD has evaluated this proposed amendment with respect to the criteria given in 10 CFR 50.92 (c).

Nebraska Public Power District (NPPD) is requesting a one-time, temporary deferral of performance of a limited number of technical specification (TS) surveillance requirements (SRs) for the Cooper Nuclear Station (CNS.) This request for deferral is needed to avoid an unnecessary shutdown of CNS solely to perform the SRs while still being able to operate long enough to obtain full utilization (burnup) of the reactor fuel before shutting down to refuel.

The SRs that this request for deferral pertains to are as follows:

1. SR 3.3.5.1.5, Logic System Functional Test, for Core Spray System initiation on low Reactor Vessel Water Level and high drywell pressure.
2. SR 3.3.8.1.2, Channel Calibration, for Loss of Power (LOP) Instrumentation Functions, and
3. SR 3.3.8.1.3, Logic System Functional Test, for the LOP Instrumentation Functions:
  - i. 4.16 kV Emergency Bus Undervoltage (Loss of Voltage);
  - ii. 4.16 kV Emergency Bus Normal Supply Undervoltage (Loss of Voltage);
  - iii. 4.16 kV Emergency Bus Essential Station Service Transformer (ESST) Supply Undervoltage (Loss of Voltage);
  - iv. 4.16 kV Emergency Bus Undervoltage (Degraded Voltage); and
  - v. 4.16 kV Emergency Bus ESST Supply Undervoltage (Degraded Voltage);
4. SR 3.3.8.2.1, Channel Calibration for overvoltage, undervoltage, and underfrequency on the Reactor Protection System (RPS) Electric Power Monitoring System.
5. SR 3.3.8.2.2, System Functional Test on the RPS Electric Power Monitoring System.
6. SR 3.5.1.9, Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal. (Applicable Modes: 1, 2, and 3)
7. SR 3.5.2.5, Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal (Applicable Modes: 4 and 5).
8. SR 3.6.1.1.2, Verify drywell to suppression chamber bypass leakage is equivalent to a hole less than 1.0 inch in diameter
9. SR 3.6.4.3.2, Perform required Standby Gas Treatment (SGT) filter testing in accordance with the Ventilation Filter Testing Program (VFTP). The testing is to perform the following:
  - i. Demonstrate that an in-place test of the HEPA filters shows a penetration and system bypass less than 1% when tested in accordance with Regulatory Guide 1.52, Revision 2, Section C.5.c, and ASME N510-1989 at system conditions specified in the VFTP,
  - ii. Demonstrate that an in-place test of the charcoal adsorber shows a penetration and system bypass less than 1% when tested in accordance with Regulatory Guide 1.52, Revision 2, Section C.5.d, and ASME N510-1989 at system conditions specified in the VFTP,
  - iii. Demonstrate that a laboratory test of a sample of the charcoal adsorber shows the methyl iodide penetration to be less than or equal to values of penetration for specific values of relative humidity as specified in the VFTP,
  - iv. Demonstrate that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than values of differential pressure at specific flow rates as specified in the VFTP, and
  - v. Demonstrate that the heaters for the SGT System dissipate 7.8 kilowatts when tested in accordance with ASME N510-1989, Section 14.5.1.
10. SR 3.6.4.3.4, Verify the correct position of the SGT units cross tie damper, and that each SGT room air supply check valve and SGT dilution air shutoff valve can be opened.

11. SR 3.8.4.7, Verify battery capacity is adequate to supply, and maintain in operable status, the required emergency loads for the design duty cycle when subjected to a battery service test.

The following evaluation supports a finding of “no significant hazards” for the proposed amendment.

1. **Do the proposed changes involve a significant increase in the probability or consequences of an accident previously evaluated?**

The requested action is a one-time extension of the performance of a limited number of TS SRs. The performance of these surveillances, or the failure to perform these surveillances, is not a precursor to an accident. Performing these surveillances or failing to perform these surveillances does not affect the probability of an accident. Therefore, the proposed delay in performance of the SRs in this amendment request does not increase the probability of an accident previously evaluated.

In general a delay in performing these surveillances does not result in a system being unable to perform its required function. In the case of this one-time extension request the relatively short period of additional time that the systems and components will be in service prior to the next performance of the SRs associated with this amendment request will not impact the ability of those systems to operate. Therefore, the systems required to mitigate accidents will remain capable of performing their required function. Additionally, the more frequent TS channel functional tests and surveillances performed on the systems associated with the requested surveillance extensions provide assurance that these systems are capable of performing their functions. No new failures are introduced as a result of this action and the consequences remain consistent with previously evaluated accidents. Therefore, the proposed delay in performance of the SRs in this amendment request does not involve a significant increase in the consequences of an accident.

Based on the above NPPD concludes that the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. **Do the proposed changes create the possibility of a new or different kind of accident from any accident previously evaluated?**

The requested action is a one-time extension of the performance of a limited number of TS SRs. This action does not involve the addition of any new plant structure, system, or component (SSC), a modification in any existing SSC, nor a change in how any existing SSC is operated.

Based on the above NPPD concludes that the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

**3. Do the proposed changes involve a significant reduction in a margin of safety?**

The proposed change is a one-time extension of the performance of a limited number of TS SRs. Extending these SRs does not involve a modification of any TS Limiting Conditions for Operation. Extending these SRs does not involve a change to any limit on accident consequences specified in the license or regulations. Extending these SRs does not involve a change to how accidents are mitigated or a significant increase in the consequences of an accident. Extending these SRs does not involve a change in a methodology used to evaluate consequences of an accident. Extending these SRs does not involve a change in any operating procedure or process.

The instrumentation and components exhibit reliable operation based on the three most recent performances of the 18-month SRs being successful, and the successful performance of related SRs with a shorter surveillance interval.

Based on the minimal additional period of time that the systems and components will be in service before the surveillances are next performed, as well as the fact that surveillances are typically successful when performed, it is reasonable to conclude that the margins of safety associated with these SRs are not affected by the requested extension.

Based on the above NPPD concludes that the proposed changes do not involve a significant reduction in a margin of safety.

From the above discussions, NPPD concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of “no significant hazards consideration” is justified.

**8.0 Environmental Consideration**

10 CFR 51.22(b) allows that an environmental assessment (EA) or an environmental impact statement (EIS) is not required for any action included in the list of categorical exclusions in 10 CFR 51.22(c). 10 CFR 51.22(c)(9) identifies an amendment to an operating license which changes a requirement with respect to installation or use of a facility component located within the restricted area, or which changes an inspection or a surveillance requirement, as a categorical exclusion if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant hazards consideration, (2) result in a significant change in the types or significant increase in the amount of any effluents that may be released off-site, or (3) result in an increase in individual or cumulative occupational radiation exposure.

NPPD has reviewed the proposed license amendment and concludes that it meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10



CFR 51.22(c), no EIS or EA needs to be prepared in connection with issuance of the proposed license changes. The basis for this determination is as follows:

1. The No Significant Hazards Consideration Evaluation concluded that the requested one-time, extension of a limited number of surveillances does not involve a significant hazards consideration.
2. The requested one-time, extension of a limited number of surveillances does not result in a significant change in the types or significant increase in the amounts of any effluents that may be released off-site. The proposed license amendment does not introduce any new equipment, nor does it require any existing equipment or systems to perform a different type of function than they are presently designed to perform. NPPD has concluded that there will not be a significant increase in the types or amounts of any effluents that may be released off-site.
3. The requested one-time, extension of a limited number of surveillances does not adversely affect plant systems or operation and therefore, do not significantly increase individual or cumulative occupational radiation exposure beyond that already associated with normal operation.

## 9.0 Precedents

1. La Salle County Station Unit 1  
Amendment No. 24 dated September 20, 1985

This amendment involved extending, on a one-time only basis, a limited number of surveillance requirements in technical specifications which must be performed every 18 months and which can only be done when the plant is shutdown. The reason for this extension was that La Salle had been shutdown during the operating cycle and the core has not been fully utilized, resulting in the deferral of the refueling outage. LaSalle's operating cycle was 18 months. The amendment extended the surveillances 36 days beyond the maximum 25% extension allowed by their technical specifications.

The original submittal was dated July 15, 1985. This was supplemented by a licensee-initiated submittal dated August 9, 1985, in which several SRs included in the original submittal were removed because they had been performed. Another letter (not identified as a response to a Request for Additional Information [RAI]), dated August 12, 1985, submitted reasons why a leak test of two valves could not be performed during normal operation, as well as consequences of leakage through the valves.

2. Indian Point Unit 2  
Amendment No. 204, dated October 29, 1999

This amendment consists of changes to the Technical Specifications to allow for a one-time extension of the surveillance intervals for a limited number of system functional

tests. The increase in surveillance intervals is due to an outage that extended the operating cycle of the core. Surveillance tests were extended to coincide with the next scheduled refueling outage. Indian Point Unit 2's operating cycle was 24 months. The amendment extended the surveillances seven months beyond the maximum 25% extension allowed by their technical specifications. Thus, the total surveillance period was 37 months.

The original submittal was dated March 26, 1999. This was supplemented by a letter dated October 15, 1999, in which the licensee requested that the amendment request be issued on an exigent basis. There were no RAIs.

## 10.0 References

None

**ATTACHMENT 2**

**PROPOSED TECHNICAL SPECIFICATIONS  
AND ASSOCIATED BASES REVISIONS  
MARKUP FORMAT**

**COOPER NUCLEAR STATION  
NRC DOCKET 50-298, LICENSE DPR-46**

Revised Technical Specifications Pages

3.3-36

3.3-65

3.3-68

3.5-6

3.5-10

3.6-2

3.6-40

3.8-18

**Insert A**

----- TEMPORARY NOTE -----

The next required performance of this SR may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.

**Insert B**

----- TEMPORARY NOTE -----

The next required performance of this SR for Functions 1.a and 1.b may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.

**Insert C**

----- TEMPORARY NOTE -----

The next required performance of this SR for the Core Spray Subsystems A and B may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.

**Insert D**

----- TEMPORARY NOTE -----

The next required performance of this SR for the Division 1 batteries may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.

**Insert E**

----- TEMPORARY NOTE -----

The next required performance of this SR for Division 1 may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.

SURVEILLANCE REQUIREMENTS

-----NOTES-----

1. Refer to Table 3.3.5.1-1 to determine which SRs apply for each ECCS Function.
  2. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed as follows: (a) for up to 6 hours for Functions 3.c and 3.f; and (b) for up to 6 hours for Functions other than 3.c and 3.f provided the associated Function or the redundant Function maintains ECCS initiation capability.
- 

SURVEILLANCE	FREQUENCY
SR 3.3.5.1.1 Perform CHANNEL CHECK.	12 hours
SR 3.3.5.1.2 Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.5.1.3 Perform CHANNEL CALIBRATION.	92 days
SR 3.3.5.1.4 Perform CHANNEL CALIBRATION.	18 months
SR 3.3.5.1.5 <i>Insert B</i> Perform LOGIC SYSTEM FUNCTIONAL TEST.	18 months

SURVEILLANCE REQUIREMENTS

-----NOTES-----

1. Refer to Table 3.3.8.1-1 to determine which SRs apply for each LOP Function.
  2. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 2 hours provided the associated Function maintains DG initiation capability.
- 

SURVEILLANCE		FREQUENCY
SR 3.3.8.1.1	Perform CHANNEL FUNCTIONAL TEST.	31 days
SR 3.3.8.1.2	<i>Insert E</i> Perform CHANNEL CALIBRATION.	18 months
SR 3.3.8.1.3	<i>Insert E</i> Perform LOGIC SYSTEM FUNCTIONAL TEST.	18 months

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition A or B not met in MODE 5 with any control rod withdrawn from a core cell containing one or more fuel assemblies.	D.1 Initiate action to fully insert all insertable control rods in core cells containing one or more fuel assemblies.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.3.8.2.1 Perform <u>Insert E</u> CHANNEL CALIBRATION. The Allowable Values shall be:</p> <ul style="list-style-type: none"> <li>a. Overvoltage <math>\leq 131</math> V with time delay set to <math>\leq 3.8</math> seconds.</li> <li>b. Undervoltage <math>\geq 109</math> V, with time delay set to <math>\leq 3.8</math> seconds.</li> <li>c. Underfrequency <math>\geq 57.2</math> Hz, with time delay set to <math>\leq 3.8</math> seconds.</li> </ul>	18 months
<p>SR 3.3.8.2.2 Perform a <u>Insert E</u> system functional test.</p>	18 months

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.5.1.9</p> <p style="text-align: center;">Insert C</p> <p style="text-align: center;">-----NOTE-----</p> <p>1. For HPCI only, not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test.</p> <p>2. Vessel injection/spray may be excluded.</p> <p>-----</p> <p>Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal.</p>	<p>18 months</p>
<p>SR 3.5.1.10</p> <p style="text-align: center;">-----NOTE-----</p> <p>Valve actuation may be excluded.</p> <p>-----</p> <p>Verify the ADS actuates on an actual or simulated automatic initiation signal.</p>	<p>18 months</p>
<p>SR 3.5.1.11</p> <p style="text-align: center;">-----NOTE-----</p> <p>Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test.</p> <p>-----</p> <p>Verify each ADS valve opens when manually actuated.</p>	<p>18 months</p>



SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY												
SR 3.5.2.4	<p>Verify each required ECCS pump develops the specified flow rate against a system head corresponding to the specified reactor pressure.</p> <table border="1"> <thead> <tr> <th>SYSTEM</th> <th>FLOW RATE</th> <th>NO. OF PUMPS</th> <th>SYSTEM HEAD CORRESPONDING TO A REACTOR PRESSURE OF</th> </tr> </thead> <tbody> <tr> <td>CS</td> <td>≥ 4720 gpm</td> <td>1</td> <td>≥ 113 psig</td> </tr> <tr> <td>LPCI</td> <td>≥ 7700 gpm</td> <td>1</td> <td>≥ 20 psig</td> </tr> </tbody> </table>	SYSTEM	FLOW RATE	NO. OF PUMPS	SYSTEM HEAD CORRESPONDING TO A REACTOR PRESSURE OF	CS	≥ 4720 gpm	1	≥ 113 psig	LPCI	≥ 7700 gpm	1	≥ 20 psig	In accordance with the Inservice Testing Program
SYSTEM	FLOW RATE	NO. OF PUMPS	SYSTEM HEAD CORRESPONDING TO A REACTOR PRESSURE OF											
CS	≥ 4720 gpm	1	≥ 113 psig											
LPCI	≥ 7700 gpm	1	≥ 20 psig											
SR 3.5.2.5	<p style="text-align: center;"><i>Insert C</i></p> <p style="text-align: center;">----- NOTE -----</p> <p>Vessel injection/spray may be excluded.</p> <p>-----</p> <p>Verify each required ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal.</p>	18 months												

**SURVEILLANCE REQUIREMENTS**

SURVEILLANCE		FREQUENCY
SR 3.6.1.1.1	Perform required visual examinations and leakage rate testing except for primary containment air lock testing, in accordance with the Primary Containment Leakage Rate Testing Program.	In accordance with the Primary Containment Leakage Rate Testing Program
SR 3.6.1.1.2	<p style="text-align: center;"><i>Insert A</i></p> Verify drywell to suppression chamber bypass leakage is equivalent to a hole < 1.0 inch in diameter.	18 months <u>AND</u> -----NOTE----- Only required after two consecutive tests fail and continues until two consecutive tests pass ----- 9 months

Amendment 180

3.6-2

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Cooper

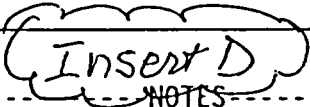
ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. (continued)	E.2 Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u> E.3 Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.4.3.1 Operate each SGT subsystem for $\geq 10$ continuous hours with heaters operating.	31 days
<i>Insert A</i> SR 3.6.4.3.2 Perform required SGT filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.6.4.3.3 Verify each SGT subsystem actuates on an actual or simulated initiation signal.	18 months
<i>Insert A</i> SR 3.6.4.3.4 Verify the SGT units cross tie damper is in the correct position, and each SGT room air supply check valve and SGT dilution air shutoff valve can be opened.	18 months

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.4.6    Verify:</p> <ul style="list-style-type: none"> <li>a.    Each required 125 V battery charger supplies <math>\geq 200</math> amps at <math>\geq 125</math> V for <math>\geq 4</math> hours; and</li> <li>b.    Each required 250 V battery charger supplies <math>\geq 200</math> amps at <math>\geq 250</math> V for <math>\geq 4</math> hours.</li> </ul>	<p>18 months</p>
<p style="text-align: center;">             -----NOTES-----         </p> <p>SR 3.8.4.7</p> <ul style="list-style-type: none"> <li>1.    The modified performance discharge test in SR 3.8.4.8 may be performed in lieu of the service test in SR 3.8.4.7 once per 60 months.</li> <li>2.    This Surveillance shall not be performed in MODE 1, 2, or 3. However, credit may be taken for unplanned events that satisfy this SR.</li> </ul> <p>-----</p> <p>Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.</p>	<p>18 months</p>

(continued)

**ATTACHMENT 3**

**PROPOSED TECHNICAL SPECIFICATIONS**  
**FINAL TYPED FORMAT**

**COOPER NUCLEAR STATION**  
**NRC DOCKET 50-298, LICENSE DPR-46**

Revised Technical Specifications Pages

3.3-36  
3.3-65  
3.3-68  
3.5-6  
3.5-10  
3.6-2  
3.6-40  
3.8-18

SURVEILLANCE REQUIREMENTS

-----NOTES-----

1. Refer to Table 3.3.5.1-1 to determine which SRs apply for each ECCS Function.
  2. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed as follows: (a) for up to 6 hours for Functions 3.c and 3.f; and (b) for up to 6 hours for Functions other than 3.c and 3.f provided the associated Function or the redundant Function maintains ECCS initiation capability.
- 

SURVEILLANCE		FREQUENCY
SR 3.3.5.1.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.5.1.2	Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 3.3.5.1.3	Perform CHANNEL CALIBRATION.	92 days
SR 3.3.5.1.4	Perform CHANNEL CALIBRATION.	18 months
<p>----- TEMPORARY NOTE -----                      The next required performance of this SR for Functions 1.a and 1.b may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.</p>		18 months
SR 3.3.5.1.5	Perform LOGIC SYSTEM FUNCTIONAL TEST.	

SURVEILLANCE REQUIREMENTS

-----NOTES-----

1. Refer to Table 3.3.8.1-1 to determine which SRs apply for each LOP Function.
  2. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 2 hours provided the associated Function maintains DG initiation capability.
- 

SURVEILLANCE	FREQUENCY
SR 3.3.8.1.1      Perform CHANNEL FUNCTIONAL TEST.	31 days
<p>----- TEMPORARY NOTE -----                      The next required performance of this SR for Division 1 may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.</p>	18 months
SR 3.3.8.1.2      Perform CHANNEL CALIBRATION.	
<p>----- TEMPORARY NOTE -----                      The next required performance of this SR for Division 1 may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.</p>	18 months
SR 3.3.8.1.3      Perform LOGIC SYSTEM FUNCTIONAL TEST.	

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition A or B not met in MODE 5 with any control rod withdrawn from a core cell containing one or more fuel assemblies.	D.1 Initiate action to fully insert all insertable control rods in core cells containing one or more fuel assemblies.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>----- TEMPORARY NOTE ----- The next required performance of this SR for Division 1 may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.</p> <p>SR 3.3.8.2.1 Perform CHANNEL CALIBRATION. The Allowable Values shall be:</p> <ul style="list-style-type: none"> <li>a. Overvoltage <math>\leq 131</math> V with time delay set to <math>\leq 3.8</math> seconds.</li> <li>b. Undervoltage <math>\geq 109</math> V, with time delay set to <math>\leq 3.8</math> seconds.</li> <li>c. Underfrequency <math>\geq 57.2</math> Hz, with time delay set to <math>\leq 3.8</math> seconds.</li> </ul>	18 months
<p>----- TEMPORARY NOTE ----- The next required performance of this SR for Division 1 may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.</p> <p>SR 3.3.8.2.2 Perform a system functional test.</p>	18 months



SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.5.1.9</p> <p>----- TEMPORARY NOTE -----            The next required performance of this SR for the Core Spray Subsystems A and B may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.</p> <p>-----NOTES-----</p> <ol style="list-style-type: none"> <li>1. For HPCI only, not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test.</li> <li>2. Vessel injection/spray may be excluded.</li> </ol> <p>-----</p> <p>Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal.</p>	<p>18 months</p>
<p>SR 3.5.1.10</p> <p>-----NOTE-----            Valve actuation may be excluded.</p> <p>-----</p> <p>Verify the ADS actuates on an actual or simulated automatic initiation signal.</p>	<p>18 months</p>
<p>SR 3.5.1.11</p> <p>-----NOTE-----            Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test.</p> <p>-----</p> <p>Verify each ADS valve opens when manually actuated.</p>	<p>18 months</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY									
<p>SR 3.5.2.4</p>	<p>Verify each required ECCS pump develops the specified flow rate against a system head corresponding to the specified reactor pressure.</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;"><u>SYSTEM FLOW RATE</u></th> <th style="text-align: center;"><u>NO. OF PUMPS</u></th> <th style="text-align: center;"><u>SYSTEM HEAD CORRESPONDING TO A REACTOR PRESSURE OF</u></th> </tr> </thead> <tbody> <tr> <td>CS <math>\geq 4720</math> gpm</td> <td style="text-align: center;">1</td> <td><math>\geq 113</math> psig</td> </tr> <tr> <td>LPCI <math>\geq 7700</math> gpm</td> <td style="text-align: center;">1</td> <td><math>\geq 20</math> psig</td> </tr> </tbody> </table>	<u>SYSTEM FLOW RATE</u>	<u>NO. OF PUMPS</u>	<u>SYSTEM HEAD CORRESPONDING TO A REACTOR PRESSURE OF</u>	CS $\geq 4720$ gpm	1	$\geq 113$ psig	LPCI $\geq 7700$ gpm	1	$\geq 20$ psig	<p>In accordance with the Inservice Testing Program</p>
<u>SYSTEM FLOW RATE</u>	<u>NO. OF PUMPS</u>	<u>SYSTEM HEAD CORRESPONDING TO A REACTOR PRESSURE OF</u>									
CS $\geq 4720$ gpm	1	$\geq 113$ psig									
LPCI $\geq 7700$ gpm	1	$\geq 20$ psig									
<p>SR 3.5.2.5</p>	<p>-----NOTE----- Vessel injection/spray may be excluded. -----</p> <p>----- TEMPORARY NOTE ----- The next required performance of this SR for the Core Spray Subsystems A and B may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.</p> <p>Verify each required ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal.</p>	<p>18 months</p>									

**SURVEILLANCE REQUIREMENTS**

SURVEILLANCE		FREQUENCY
SR 3.6.1.1.1	Perform required visual examinations and leakage rate testing except for primary containment air lock testing, in accordance with the Primary Containment Leakage Rate Testing Program.	In accordance with the Primary Containment Leakage Rate Testing Program
<p>----- TEMPORARY NOTE -----                      The next required performance of this SR may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.</p>		
SR 3.6.1.1.2	Verify drywell to suppression chamber bypass leakage is equivalent to a hole < 1.0 inch in diameter.	18 months  <u>AND</u>  -----NOTE----- Only required after two consecutive tests fail and continues until two consecutive tests pass  -----  9 months

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. (continued)	E.2 Suspend CORE ALTERATIONS.	Immediately
	<u>AND</u> E.3 Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.3.1	Operate each SGT subsystem for $\geq 10$ continuous hours with heaters operating.	31 days
<p>----- TEMPORARY NOTE -----                      The next required performance of this SR may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.</p>		
SR 3.6.4.3.2	Perform required SGT filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.6.4.3.3	Verify each SGT subsystem actuates on an actual or simulated initiation signal.	18 months
<p>----- TEMPORARY NOTE -----                      The next required performance of this SR may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.</p>		
SR 3.6.4.3.4	Verify the SGT units cross tie damper is in the correct position, and each SGT room air supply check valve and SGT dilution air shutoff valve can be opened.	18 months

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.4.6    Verify:</p> <ul style="list-style-type: none"> <li>a.    Each required 125 V battery charger supplies <math>\geq 200</math> amps at <math>\geq 125</math> V for <math>\geq 4</math> hours; and</li> <li>b.    Each required 250 V battery charger supplies <math>\geq 200</math> amps at <math>\geq 250</math> V for <math>\geq 4</math> hours.</li> </ul>	<p>18 months</p>
<p>----- TEMPORARY NOTE -----</p>	
<p>The next required performance of this SR for the Division 1 batteries may be delayed until the current cycle refueling outage, but no later than February 2, 2005. This temporary note expires upon startup from that refueling outage.</p>	
<p>SR 3.8.4.7    -----NOTES-----</p> <ul style="list-style-type: none"> <li>1.    The modified performance discharge test in SR 3.8.4.8 may be performed in lieu of the service test in SR 3.8.4.7 once per 60 months.</li> <li>2.    This Surveillance shall not be performed in MODE 1, 2, or 3. However, credit may be taken for unplanned events that satisfy this SR.</li> </ul> <p>-----</p> <p>Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.</p>	<p>18 months</p>

(continued)

**ATTACHMENT 3 LIST OF REGULATORY COMMITMENTS©**

Correspondence Number: NLS2004007

The following table identifies those actions committed to by Nebraska Public Power District (NPPD) in this document. Any other actions discussed in the submittal represent intended or planned actions by NPPD. They are described for information only and are not regulatory commitments. Please notify the Licensing & Regulatory Affairs Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	COMMITTED DATE OR OUTAGE
None	