



March 28, 2006

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
One White Flint North  
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Rockville, MD 20852-2738

Serial No. 05-710  
MPS Lic/MAE R0  
Docket No. 50-423  
License No. NPF-49

**DOMINION NUCLEAR CONNECTICUT, INC.**  
**MILLSTONE POWER STATION UNIT 3**  
**PROPOSED REVISION TO TECHNICAL SPECIFICATIONS (LBDCR 05-MP3-025)**  
**POST MAINTENANCE OR MODIFICATION SURVEILLANCE REQUIREMENTS**

Pursuant to 10 CFR 50.90, Dominion Nuclear Connecticut, Inc. (DNC) hereby requests to amend Operating License NPF-49 for Millstone Power Station Unit 3 (MPS3). The enclosed license amendment request proposes to delete redundant surveillance requirements (SR), pertaining to post maintenance/post modification testing. This license amendment affects SR 4.1.3.4, "Reactivity Control Systems, Rod Drop Time," SR 4.5.2.g.1, "ECCS Throttle Valve Testing," SR 4.5.2.h, "ECCS Flow Balance Testing," SR 4.6.6.1.b, "Secondary Containment, Supplementary Leak Collection and Release System," SR 4.7.7.c, "Plant Systems, Control Room Emergency Ventilation System," SR 4.7.9.b, "Plant Systems, Auxiliary Building Filter System," and SR 4.8.1.1.2.h, "Electrical Power Systems, A.C. Sources, Operating." These SRs are bounded by the generic requirement contained in SR 4.0.1 regarding performance of appropriate retest activities to assure operability following maintenance or modification. These changes are consistent with the improved standard technical specifications, NUREG 1431, Revision 3.

The proposed amendment does not involve a significant impact on public health and safety and does not involve a Significant Hazards Consideration pursuant to the provisions of 10 CFR 50.92.

The Site Operations Review Committee has reviewed and concurred with the determinations.

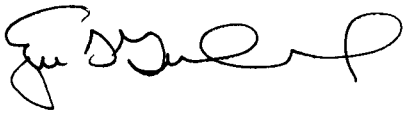
Attachment 1 contains a description of the proposed technical specification (TS) changes and the Significant Hazards Consideration. Attachment 2 contains the TS marked-up pages, and Attachment 3 contains the retyped pages. Attachment 4 contains the marked-up pages of the TS bases for information only. MPS3 TS bases are controlled in accordance with TS Section 6.23, "Technical Specification Bases Control Program."

Dominion requests issuance of this amendment no later than January 30, 2007, with the amendment to be implemented within 90 days of issuance.

In accordance with 10 CFR 50.91(b), a copy of this license amendment request is being provided to the State of Connecticut.

If you have any questions or require additional information, please contact Mr. Paul Willoughby at (804) 273-3572.

Very truly yours,

A handwritten signature in black ink, appearing to read "Eugene S. Grecheck". The signature is fluid and cursive, with a large initial "E" and a long, sweeping tail.

Eugene S. Grecheck  
Vice President – Nuclear Support Services

Attachments:

1. Evaluation of Proposed License Amendment
2. Marked-Up TS Pages
3. Re-typed TS Pages
4. Marked-Up Bases pages

Commitments made in this letter: None.

cc: U.S. Nuclear Regulatory Commission  
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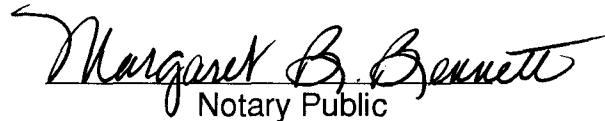
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COMMONWEALTH OF VIRGINIA    )  
  )  
COUNTY OF HENRICO            )

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Eugene S. Grecheck, who is Vice President - Nuclear Support Services, of Dominion Nuclear Connecticut, Inc. He has affirmed before me that he is duly authorized to execute and file the foregoing document in behalf of that Company, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 28<sup>th</sup> day of March, 2006.

My Commission Expires: August 31, 2008.

  
Notary Public

(SEAL)

**ATTACHMENT 1**

**PROPOSED REVISION TO TECHNICAL SPECIFICATIONS (LBDCR 05-MP3-025)**  
**POST MAINTENANCE OR MODIFICATION SURVEILLANCE REQUIREMENTS**

**EVALUATION OF PROPOSED LICENSE AMENDMENT**

**DOMINION NUCLEAR CONNECTICUT, INC.**  
**MILLSTONE POWER STATION UNIT 3**

**EVALUATION OF PROPOSED LICENSE AMENDMENT**

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## 1.0 DESCRIPTION

Pursuant to 10 CFR 50.90, Dominion Nuclear Connecticut, Inc. (DNC) hereby requests to amend Operating License NPF-49 for Millstone Power Station Unit 3 (MPS3). The enclosed license amendment request proposes to delete redundant surveillance requirements (SR), pertaining to post maintenance/post modification testing. This license amendment affects SR 4.1.3.4, "Reactivity Control Systems, Rod Drop Time," SR 4.5.2.g.1, "ECCS Throttle Valve Testing," SR 4.5.2.h, "ECCS Flow Balance Testing," SR 4.7.7.c, "Plant Systems, Control Room Emergency Ventilation System," SR 4.7.9.b, "Plant Systems, Auxiliary Building Filter System," and SR 4.8.1.1.2.h, "Electrical Power Systems, A.C. Sources, Operating." These SRs are bounded by the generic requirement contained in SR 4.0.1 regarding performance of appropriate retest activities to assure operability following maintenance or modification. These changes are consistent with the improved standard technical specifications, NUREG 1431, Revision 3.

## 2.0 PROPOSED CHANGES

The proposed amendment will:

1. Delete SR 4.1.3.4.b by replacing the wording:

"b. For specifically affected individual rods following any maintenance on or modification to the Control Rod Drive System which could affect the drop time of those specific rods, and"

With:

"b. Deleted"

2. Modify SR 4.5.2.g.1 by deleting the wording: "or maintenance on the valve."

3. Delete SR 4.5.2.h by replacing the wording:

"h. By performing a flow balance test following completion of modifications to the ECCS subsystems that alter the subsystem flow characteristics and verifying that:

- 1) For centrifugal charging pump lines, with a single pump running:
  - a) The sum of the injection line flow rates, excluding the highest flow rate, is greater than or equal to 310.5 gpm, and
  - b) The total pump flow rate is less than or equal to 560 gpm.

- 2) For Safety Injection pump lines, with a single pump running:
  - a) The sum of the injection line flow rates, excluding the highest flow rate, is greater than or equal to 423.4 gpm, and
  - b) The total pump flow rate is less than or equal to 675 gpm.
  
- 3) For RHS pump lines, with a single pump running, the sum of the injection line flow rates is greater than or equal to 3976 gpm.”

With:

“h. Deleted”

4. Modify SR 4.6.6.1.b, SR 4.7.7.c and SR 4.7.9.b by deleting the phrase: “(1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2)”.
  
5. Modify SR 4.8.1.1.2.h by deleting the phrase: “or after any modifications which could affect diesel generator interdependence”.

#### Bases Changes

The Bases Sections 3/4.1.3, 3/4.5.2, 3/4.6.6.1, 3/4.7.7, 3/4.7.9, and 3/4.8 are updated to reflect the deletion of the SRs. Additional clarifications are added to each section to state that any time the OPERABILITY of the system or subsystem have been affected by repair, maintenance, modification, or replacement activity, post maintenance testing in accordance with SR 4.0.1 is required to demonstrate OPERABILITY.

### 3.0 BACKGROUND

#### 3.1 Reactivity Control System Description

The OPERABILITY (i.e., trippability) of the shutdown and control rods is an initial assumption in all safety analyses that assume rod insertion upon reactor trip.

There are 61 rods (control rods) in the reactor core with 193 fuel assemblies. The 61 control rods are divided into five (5) Shutdown Banks and four (4) Control Banks. Shutdown Banks provide the necessary reserve negative reactivity, if fully inserted, to ensure that the reactor is shutdown ( $k_{\text{eff}} < 1.0$ ) in the event of a reactor trip. When the reactor is operating, the Control Banks are used to add or remove negative reactivity to control  $T_{\text{ave}}$  by partial insertion into the core or by partial withdrawal from the core.



Verification of rod drop times provide assurance that the maximum rod drop time permitted is consistent with the assumed rod drop time used in the safety analysis. Measuring rod drop times prior to reactor criticality, after reactor vessel head removal and installation, ensures that the reactor internals and rod drive mechanism will not interfere with rod motion or rod drop time, and that no degradation in these systems has occurred that would adversely affect rod motion or drop time.

### 3.2 ECCS Subsystems Description

The emergency core cooling system (ECCS) is designed to cool the reactor core and provide shutdown capability subsequent to various accident conditions. The ECCS consists of the centrifugal charging (CHS), safety injection (SI), and residual heat removal (RHR) pumps, containment recirculation pumps (CR), containment recirculation coolers, RHR heat exchangers, and the refueling water storage tank (RWST), along with the associated piping, valves, instrumentation, and other related equipment. The ECCS components are designed such that a minimum of three accumulators, one charging pump, one safety injection pump, one RHR pump, one containment recirculation pump, and one containment recirculation cooler - together with their associated valves and piping – assure adequate core cooling in the event of a design basis LOCA.

### 3.3 Supplementary Leak Collection and Release System Description

The supplementary leak collection and release system (SLCRS) includes exhaust fans and two filter banks. Each filter bank consists of a demister, electric heating coil, roughing filter, carbon adsorber, and high efficiency particulate air (HEPA) filters. The SLCRS is put into operation automatically by a safety injection signal or remote-manually operated. This system, during accident conditions, maintains a negative pressure within the containment enclosure building, auxiliary building, and portions of the engineered safety features building, hydrogen recombiner building, and the main steam valve building. During system operation the air is filtered and discharged to the atmosphere through the Millstone stack. Radioactivity released to the environment is thereby minimized.

The SLCRS collects a portion of the primary containment leakage from the buildings, contiguous to the containment, which house the various containment penetrations and the engineered safety features equipment circulating radioactive fluids. The SLCRS filters the leakage, and releases it to the atmosphere through the Millstone stack. All leakages from the primary containment following a design basis accident (DBA) flow into these areas. A portion of the auxiliary building atmosphere is exhausted via the auxiliary building ventilation system. In the main steam valve building, hydrogen recombiner

building, and engineering safety features building, interior walls serve as the SLCRS boundary, thus separating areas contiguous to the containment from the remainder of these buildings.

All SLCRS boundaries are established by use of low leakage doors (weather stripped), sealed building joints, sealed piping, conduit cable and ductwork penetrations, and boundary isolation dampers for ventilation systems.

#### 3.4 Control Room and Auxiliary Building Filter Systems

The control building ventilation system consists of air-conditioning, heating, filtration, and ventilation subsystems which provide a suitable environment for the comfort and safety of personnel within the control room area. It also facilitates removal of equipment-generated heat except for the chiller equipment room and cable spreading areas.

The auxiliary building ventilation system provides an environment suitable for personnel access and equipment operation. It also controls and minimizes the potential for spread of airborne radioactive material within the building.

#### 3.5 Electrical Power Systems Description

The MPS3 electrical distribution system consists of normal and emergency 4160V systems. During plant operation, power from the unit generator is supplied to the normal station service transformer (NSST) via the isolated phase bus duct, with the generator breaker closed. The NSST provides power to the non-safety 4160V buses 34A and 34B. The non-safety 4160V buses feed the emergency, or engineered safety features (ESF) buses, 34C and 34D.

In the event of a reactor, generator or turbine trip, power continues to be supplied to buses 34C (Train A) and 34D (Train B) from the normal offsite power source via the NSST. In the event of loss of the normal offsite power source, the alternate offsite power source supplies power through the reserve station service transformer (RSST) to emergency 4160V buses 34C and 34D.

During startup or shutdown, each of the preferred offsite power sources (via the NSST or RSST) has adequate capacity to supply all normal and emergency loads.

The standby power sources consist of two independent and redundant emergency diesel generators (EDGs). Each EDG is capable of supplying power to its respective emergency 4160V bus. The EDGs may be manually started, and will automatically start on a loss of power to the respective emergency bus, a safety injection signal, or a containment depressurization actuation signal. If the

normal and alternate offsite power sources are not available, the EDGs are then automatically connected to the respective emergency bus and sequentially loaded. The capacity of one EDG is sufficient to meet the ESF demand. The EDG loading sequence maintains voltage and frequency within limits consistent with established industry standards.

### 3.6 Reason for the Proposed Amendment

SR 4.1.3.4.b, SR 4.5.2.h and the deleted parts of SR 4.5.2.g.1, SR 4.6.6.1.b, SR 4.7.7.c, SR 4.7.9.b and SR 4.8.1.1.2.h describe testing activities which are performed following repair, maintenance, modification, or replacement of a component. These SRs represent a duplication of SR 4.0.1 testing requirements. Any time the operability of a system or component has been affected by repair, maintenance, modification or replacement, post maintenance testing is required to demonstrate the operability of the system or component in accordance with SR 4.0.1. The testing requirements specified in SR 4.0.1 provide an equivalent level of assurance that the affected subsystems will continue to be tested in a manner necessary to give confidence that the subsystems can perform their intended safety function. Therefore, these SRs can be deleted.

## 4.0 TECHNICAL ANALYSIS

### 4.1 Details of the Proposed Amendment

The SRs, which are proposed for deletion, perform the following activities:

- SR 4.1.3.4.b is intended to verify the required rod drop time of certain control rods through measurement prior to reactor criticality, following any maintenance on, or modification to, the control rod drive system which could affect the drop time of those specific rods.
- The part of SR 4.5.2.g.1 to be deleted describes the testing that must be performed following any maintenance on ECCS throttle valves.
- SR 4.5.2.h is intended to verify operability of ECCS subsystems following completion of modifications to the ECCS subsystems that alter subsystem flow characteristics.
- The parts of SR 4.6.6.1.b, SR 4.7.7.c and SR 4.7.9.b to be deleted describe the testing that must be performed following any structural maintenance on the HEPA filter or charcoal adsorber housings.

- The part of SR 4.8.1.1.2.h to be deleted describes the testing that must be performed following any modification that could affect EDG interdependence.

Deletion of these SRs from the technical specifications will neither affect the requirements to verify operability of affected subsystems following any maintenance on or modification to these subsystems, nor will it affect the assurance that the accident analysis assumptions are satisfied.

These changes are acceptable because the deleted SRs are redundant to the generically applicable requirements of SR 4.0.1. Any time the operability of a system or component has been affected by a repair, maintenance, modification or replacement activity, post maintenance testing is required to demonstrate the operability of the system or component. The requirement for post modification testing is delineated in SR 4.0.1 and its bases. This requirement is implemented through plant work management programs and procedures. The bases of SR 4.0.1 states that:

“Upon completion of maintenance, appropriate post maintenance testing is required to declare equipment OPERABLE. This includes ensuring applicable Surveillances are not failed and their most recent performance is in accordance with Specification 4.0.2. Post maintenance testing may not be possible in the current MODE or other specified conditions in the Applicability due to the necessary unit parameters not having been established. In these situations, the equipment may be considered OPERABLE provided testing has been satisfactorily completed to the extent possible and the equipment is not otherwise believed to be incapable of performing its function. This will allow operation to proceed to a MODE or other specified condition where other necessary post maintenance tests can be completed.”

The operability requirements for the affected subsystems are described in the bases of Technical Specifications 3.1.3.4, 3.5.2, 3.6.6.1, 3.7.7, 3.7.9 and 3.8.1.1. Technical Specification 6.8.1 requires that written procedures be established, implemented and maintained for surveillance and test activities of safety related equipment. These procedures govern the restoration of equipment to operable status after maintenance or modification.

Additionally 10 CFR 50, Appendix B, Criterion XI (Test Control) requires a test program be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable

design documents. Compliance with 10 CFR 50, Appendix B is required by the MPS3 operating license.

10 CFR 50.36(c) Considerations:

10 CFR 50.36(c) specifies the requirement for determining which items must be included in technical specifications. 10 CFR 50.36(c)(3) lists "Surveillance Requirements" as one of the required items and states that:

"Surveillance requirements are requirements relating to test, calibration, or inspection to ensure 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 proposed changes to SR 4.1.3.4.b, SR 4.5.2.g.1, SR 4.5.2.h, SR 4.6.6.1.b, SR 4.7.7.c, SR 4.7.9.b and SR 4.8.1.1.2.h will not impact requirements related to test, calibration, or inspection to ensure that the necessary quality of systems and components is maintained. Fulfilling the requirements of SR 4.0.1 and 10 CFR 50, Appendix B, Criterion XI as discussed above, ensures that necessary quality of systems and components following completion of modifications are maintained.

The proposed changes to SR 4.1.3.4.b, SR 4.5.2.g.1, SR 4.5.2.h, SR 4.6.6.1.b, SR 4.7.7.c, SR 4.7.9.b and SR 4.8.1.1.2.h will not impact operation of systems and components following completion of modifications and the facility will continue to operate within safety limits. Fulfilling the requirements of SR 4.0.1 and 10 CFR 50, Appendix B, Criterion XI as discussed above, provides the required degree of assurance that facility operation will be within safety limits.

The redundant requirements contained in SR 4.1.3.4.b, SR 4.5.2.g.1, SR 4.5.2.h, SR 4.6.6.1.b, SR 4.7.7.c, SR 4.7.9.b and SR 4.8.1.1.2.h are not necessary to ensure that Limiting Conditions of Operation (LCO) 3.1.3.4, LCO 3.5.2, LCO 3.6.6.1, LCO 3.7.7, LCO 3.7.9 and LCO 3.8.1.1 are met. These LCOs will continue to be met, following completion of modifications or maintenance, by meeting the requirements of SR 4.0.1, utilizing test methods and acceptance criteria which comply with 10 CFR 50, Appendix B Criterion XI.

For the reasons described above, eliminating the redundant requirements of SR 4.1.3.4.b for rod drop time testing, SR 4.5.2.g.1 for ECCS throttle valve testing, SR 4.5.2.h for ECCS flow balance testing and the deleted parts of SR 4.6.6.1.b, SR 4.7.7.c, SR 4.7.9.b and SR 4.8.1.1.2.h for filtration systems and EDG testing, does not affect adversely compliance with 10 CFR 50.36(c)(3) requirements related to SRs that must be included in TS. Therefore, these SRs can be deleted.

## 4.2 Safety Summary

The proposed changes will delete SR 4.1.3.4.b for rod drop time testing, part of SR 4.5.2.g.1 for ECCS throttle valve testing, SR 4.5.2.h for ECCS flow balance testing and the deleted parts of SR 4.6.6.1.b, SR 4.7.7.c, SR 4.7.9.b and SR 4.8.1.1.2.h for filtration systems and EDG testing following maintenance or modifications. The deletion of these SRs from the technical specifications does not affect the accident analysis assumptions. These changes do not eliminate the requirements to perform post modification or maintenance testing to prove operability. Since these changes do not alter the fact that the systems must still be shown to meet the accident analysis assumptions, the margins of safety are maintained. Therefore, the proposed changes have no adverse effect on plant safety.

## 5.0 REGULATORY ANALYSIS

### 5.1 No Significant Hazards Consideration

In accordance with 10 CFR 50.92, DNC has reviewed the proposed change and has concluded that it does not involve a significant hazards consideration (SHC). The basis for this conclusion is that the three criteria of 10CFR50.92(c) are not compromised as detailed below.

The enclosed license amendment request proposes to delete redundant surveillance requirements (SR) pertaining to post maintenance/post modification testing. This license amendment affects SR 4.1.3.4, "Reactivity Control Systems, Rod Drop Time," SR 4.5.2.g.1, "ECCS Throttle Valve Testing," SR 4.5.2.h, "ECCS Flow Balance Testing," SR 4.6.6.1.b, "Secondary Containment, Supplementary Leak Collection and Release System," SR 4.7.7.c, "Plant Systems, Control Room Emergency Ventilation System," SR 4.7.9.b, "Plant Systems, Auxiliary Building Filter System," and SR 4.8.1.1.2.h, "Electrical Power Systems, A.C. Sources, Operating." These SRs are bounded by the generic requirement contained in SR 4.0.1 regarding performance of appropriate retest activities to assure operability following maintenance or modification.

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

Response: No.

The proposed changes do not modify any plant equipment and do not impact any failure modes that could lead to an accident. Testing in accordance with the requirements of SR 4.0.1 will continue to provide the necessary

assurance that the associated systems will function consistent with the assumptions used in the accident analyses. On this basis, the proposed amendment does not increase the probability or consequences of an accident previously evaluated.

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

Response: No.

The proposed changes do not involve any physical changes to systems, structures, or components, or involve a change to the method of plant operation. The requirement to perform post maintenance/post modification testing will continue to be implemented consistent with SR 4.0.1, through existing plant programs and procedures. As such, the proposed amendment does not introduce any new failure modes, accident initiators or malfunctions that would cause a new or different kind of accident. Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The TS changes do not involve a significant reduction in a margin of safety because the requirements described in SR 4.0.1, as implemented through existing plant programs and procedures, will continue to ensure that post maintenance/post modification testing will be performed when necessary. The proposed change does not affect any of the assumptions used in the accident analyses, nor does it affect operability requirements for equipment important to plant safety. Therefore, the margin of safety is not impacted by the proposed amendment.

As described above, this license amendment request does not impact the probability of an accident previously evaluated, does not involve a significant increase in the consequences of an accident previously evaluated, does not create the possibility of a new or different kind of accident from any accident previously evaluated, and does not result in a significant reduction in a margin of safety. Therefore, DNC has concluded that the proposed changes do not involve an SHC.

## 5.2 Applicable Regulatory Requirements/Criteria

10 CFR 50, Appendix A, "General Design Criteria for Nuclear Power Plants," (GDC) contains the following GDCs, which are applicable to reactivity control systems:

- GDC 10, "Reactor design," which requires that the reactor core and associated coolant, control, and protection systems be designed with appropriate margin to assure that specified acceptable fuel design limits are not exceeded during any condition of normal operation, including the effects of anticipated operational occurrences.
- GDC 26, "Reactivity control system redundancy and capability," which requires that two independent reactivity control systems of different design principles be provided. GDC 26 also requires that: (1) one of the systems shall use control rods, preferably including a positive means for inserting the rods, and shall be capable of reliably controlling reactivity changes to assure that under conditions of normal operation, including anticipated operational occurrences, and with appropriate margin for malfunctions, such as stuck rods, specified acceptable fuel design limits are not exceeded; (2) the second reactivity control system shall be capable of reliably controlling the rate of reactivity changes resulting from planned, normal power changes (including xenon burnout) to assure acceptable fuel design limits are not exceeded; and (3) one of the systems shall be capable of holding the reactor core subcritical under cold conditions.
- GDC 27, "Combined reactivity control systems capability," which requires that the reactivity control systems be designed to have a combined capability, in conjunction with poison addition by the emergency core cooling system, of reliably controlling reactivity changes to assure that under postulated accident conditions, and with appropriate margin for stuck rods, the capability to cool the core is maintained.
- GDC 28, "Reactivity limits," which requires that the reactivity control systems be designed with appropriate limits on the potential amount and rate of reactivity increase to assure that the effects of postulated reactivity accidents can neither (1) result in damage to the reactor coolant pressure boundary greater than limited local yielding, nor (2) sufficiently disturb the core, its support structures or other reactor pressure vessel internals to impair significantly the capability to cool the core. GDC 28 also requires that these postulated reactivity accidents shall include consideration of rod ejection (unless prevented by positive means), rod dropout, steam line rupture, changes in reactor coolant temperature and pressure, and cold water addition.



10 CFR 50, Appendix B, Criterion XI, Test Control, states that:

“A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. The test program shall include, as appropriate, proof tests prior to installation, preoperational tests, and operational tests during nuclear power plant or fuel reprocessing plant operation, of structures, systems, and components. Test procedures shall include provisions for assuring that all prerequisites for the given test have been met, that adequate test instrumentation is available and used, and that the test is performed under suitable environmental conditions. Test results shall be documented and evaluated to assure that test requirements have been satisfied.”

Additionally, the technical specification surveillance requirements must satisfy the requirements of Section 10 CFR 50.36, which specifies the Commission's regulatory requirements related to the content of technical specifications. Specifically, 10 CFR 50.36(c)(3) sets forth the requirements to be used in determining whether a surveillance requirement is required to be included in technical specifications. These requirements are: (1) ensure that the necessary quality of systems and components is maintained; (2) ensure that facility operation will be within safety limits; (3) ensure that the limiting conditions of operation will be met.

The enclosed license amendment request proposes to delete redundant SRs pertaining to post maintenance/post modification testing. This license amendment affects SR 4.1.3.4, SR 4.5.2.g.1 and SR 4.5.2.h, SR 4.6.6.1.b, SR 4.7.7.c, SR 4.7.9.b and SR 4.8.1.1.2.h. These SRs or specific parts of them are deleted in favor of the generic requirement contained in SR 4.0.1 regarding performance of appropriate retest activities to assure operability following maintenance or modification. The proposed changes will neither affect the requirements to verify operability of affected subsystems following any maintenance on or modification to these subsystems, nor will it affect the assurance that the accident analysis assumptions are satisfied. As such, eliminating the redundant requirements of SR 4.1.3.4.b for rod drop time testing, SR 4.5.2.g.1 for ECCS throttle valve testing, SR 4.5.2.h for ECCS flow balance testing and the deleted parts of SR 4.6.6.1.b, SR 4.7.7.c, SR 4.7.9.b and SR 4.8.1.1.2.h for filtration systems and EDG testing, does not affect adversely compliance with any of the applicable regulatory requirements/criteria listed above.

## 6.0 ENVIRONMENTAL CONSIDERATION

DNC has evaluated the proposed change and has determined that the change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released off site, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

**ATTACHMENT 2**

**PROPOSED REVISION TO TECHNICAL SPECIFICATIONS (LBDCR 05-MP3-025)**  
**POST MAINTENANCE OR MODIFICATION SURVEILLANCE REQUIREMENTS**

**TECHNICAL SPECIFICATIONS MARKED-UP PAGES**

**DOMINION NUCLEAR CONNECTICUT, INC.**  
**MILLSTONE POWER STATION UNIT 3**

## REACTIVITY CONTROL SYSTEMS

July 24, 2002 *e*

### ROD DROP TIME

#### LIMITING CONDITION FOR OPERATION

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3.1.3.4 The individual full-length (shutdown and control) rod drop time from the fully withdrawn position shall be less than or equal to 2.7 seconds from beginning of decay of stationary gripper coil voltage to dashpot entry with:

- a.  $T_{avg}$  greater than or equal to 551°F, and
- b. All reactor coolant pumps operating.

APPLICABILITY: MODES 1 and 2.

#### ACTION:

- a. With the drop time of any full-length rod determined to exceed the above limit, restore the rod drop time to within the above limit prior to proceeding to MODE 1 or 2.
- b. With the rod drop times within limits but determined with three reactor coolant pumps operating, operation may proceed provided THERMAL POWER is restricted to less than or equal to 65% of RATED THERMAL POWER with the reactor coolant stop valves in the nonoperating loop closed.

#### SURVEILLANCE REQUIREMENTS

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4.1.3.4 The rod drop time of full-length rods shall be demonstrated through measurement prior to reactor criticality:

- a. For all rods following each removal of the reactor vessel head, *and*
- b. ~~For specifically affected individual rods following any maintenance on or modification to the Control Rod Drive System which could affect the drop time of those specific rods, and~~
- c. At least once per 24 months.

*g*  
Replace with "Deleted"

SURVEILLANCE REQUIREMENTS (Continued)

- 2) A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or abnormal corrosion.
- e. At least once per 24 months by:
  - 1) Verifying that each automatic valve in the flow path actuates to its correct position on a Safety Injection actuation test signal, and
  - 2) Verifying that each of the following pumps start automatically upon receipt of a Safety Injection actuation test signal:
    - a) Centrifugal charging pump,
    - b) Safety Injection pump, and
    - c) RHR pump.
  - 3) Verifying that the Residual Heat Removal pumps stop automatically upon receipt of a Low-Low RWST Level test signal.
- f. By verifying that each of the following pump's developed head at the test flow point is greater than or equal to the required developed head when tested pursuant to Specification 4.0.5:
  - 1) Centrifugal charging pump
  - 2) Safety Injection pump
  - 3) RHR pump
  - 4) Containment recirculation pump
- g. By verifying the correct position of each electrical and/or mechanical position stop for the following ECCS throttle valves:
  - 1) Within 4 hours following completion of each valve stroking operation ~~or maintenance on the valve~~ when the ECCS subsystems are required to be OPERABLE, and
  - 2) At least once per 24 months.

ECCS Throttle Valves

<u>Valve Number</u>	<u>Valve Number</u>
3SIH*V6	3SIH*V25
3SIH*V7	3SIH*V27

EMERGENCY CORE COOLING SYSTEMS

December 24, 1997

SURVEILLANCE REQUIREMENTS (Continued)

ECCS Throttle Valves

Valve Number

Valve Number

3SIH\*V8

3SIH\*V107

3SIH\*V9

3SIH\*V108

3SIH\*V21

3SIH\*V109

3SIH\*V23

3SIH\*V111

"REPLACE WITH  
"DELETED"

h. By performing a flow balance test following completion of modifications to the ECCS subsystems that alter the subsystem flow characteristics and verifying that:

- 1) For centrifugal charging pump lines, with a single pump running:
  - a) The sum of the injection line flow rates, excluding the highest flow rate, is greater than or equal to 310.5 gpm, and
  - b) The total pump flow rate is less than or equal to 560 gpm.
- 2) For Safety Injection pump lines, with a single pump running:
  - a) The sum of the injection line flow rates, excluding the highest flow rate, is greater than or equal to 423.4 gpm, and
  - b) The total pump flow rate is less than or equal to 675 gpm.
- 3) For RHR pump lines, with a single pump running, the sum of the injection line flow rates is greater than or equal to 3976 gpm.

## CONTAINMENT SYSTEMS

### 3/4.6.6 SECONDARY CONTAINMENT

July 24, 2002<sup>e</sup>

#### SUPPLEMENTARY LEAK COLLECTION AND RELEASE SYSTEM

##### LIMITING CONDITION FOR OPERATION

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3.6.6.1 Two independent Supplementary Leak Collection and Release Systems shall be OPERABLE with each system comprised of:

- a. one OPERABLE filter and fan, and
- b. one OPERABLE Auxiliary Building Filter System as defined in Specification 3.7.9.

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

##### ACTION:

With one Supplementary Leak Collection and Release System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

##### SURVEILLANCE REQUIREMENTS

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4.6.6.1 Each Supplementary Leak Collection and Release System shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying a system flow rate of 7600 cfm to 9800 cfm and that the system operates for at least 10 continuous hours with the heaters operating.
- b. At least once per 24 months or ~~(1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:~~
  - 1) Verifying that the system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978,\* and the system flow rate is 7600 cfm to 9800 cfm;

SURVEILLANCE REQUIREMENTS

4.7.7 Each Control Room Emergency Air Filtration System shall be demonstrated OPERABLE:

- a. At least once per 12 hours by verifying that the control room air temperature is less than or equal to 95°F;
- b. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying a system flow rate of 1,120 cfm  $\pm$ 20% and that the system operates for at least 10 continuous hours with the heaters operating;
- c. At least once per 24 months or ~~(1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:~~ ①
  - 1) Verifying that the system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Position C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revisions 2, March 1978,\* and the system flow rate is 1,120 cfm  $\pm$  20%;
  - 2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,\* shows the methyl iodide penetration less than or equal to 2.5% when tested in accordance with ASTM D3803-89 at a temperature of 30°C (86°F), a relative humidity of 70%, and a face velocity of 54 ft/min; and
  - 3) Verifying a system flow rate of 1,120 cfm  $\pm$  20% during system operation when tested in accordance with ANSI N510-1980.
- d. After every 720 hours of charcoal adsorber operation, by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,\* shows the methyl iodide penetration less than or equal to 2.5% when tested in accordance with ASTM D3803-89 at a temperature of 30°C (86°F), and a relative humidity of 70%, and a face velocity of 54 ft/min.
- e. At least once per 24 months by: ②
  - 1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6.75 inches Water Gauge while operating the system at a flow rate of 1,120 cfm  $\pm$  20%;



PLANT SYSTEMS

July 24, 2002<sup>2</sup>

3/4.7.9 AUXILIARY BUILDING FILTER SYSTEM

LIMITING CONDITION FOR OPERATION

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3.7.9 Two independent Auxiliary Building Filter Systems shall be OPERABLE.

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

ACTION:

With one Auxiliary Building Filter System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. In addition, comply with the ACTION requirements of Specification 3.6.6.1.

SURVEILLANCE REQUIREMENTS

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4.7.9 Each Auxiliary Building Filter System shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying a system flow rate of 30,000 cfm  $\pm 10\%$  and that the system operates for at least 10 continuous hours with the heaters operating;
- b. At least once per 24 months or ~~(1) after any structural maintenance on the HEPA filter or charcoal adsorber housings,~~ or ~~(2)~~ following painting, fire, or chemical release in any ventilation zone communicating with the system by:
  - 1) Verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978,\* and the system flow rate is 30,000 cfm  $\pm 10\%$ ;
  - 2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,\* shows the methyl

*g*

SURVEILLANCE REQUIREMENTS (Continued)

- 8) Verifying that the auto-connected loads to each diesel generator do not exceed the 2000-hour rating of 5335 kW;
- 9) Verifying the diesel generator's capability to:
  - a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,
  - b) Transfer its loads to the offsite power source, and
  - c) Be restored to its standby status.
- 10) Verifying that with the diesel generator operating in a test mode, connected to its bus, a simulated Safety Injection signal overrides the test mode by: (1) returning the diesel generator to standby operation, and (2) automatically energizing the emergency loads with offsite power;
- 11) DELETED ①
- 12) Verifying that the automatic load sequence timer is OPERABLE with the interval between each load block within  $\pm 10\%$  of its design interval; and
- 13) DELETED ①
- h. At least once per 10 years ~~for after any modifications which could affect diesel generator interdependence~~ by starting both diesel generators simultaneously from standby conditions, during shutdown, and verifying that both diesel generators achieve generator voltage and frequency at  $4160 \pm 420$  volts and  $60 \pm 0.8$  Hz in less than or equal to 11 seconds; and ①
- i. At least once per 10 years by draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank using a sodium hypochlorite solution.

**ATTACHMENT 4**

**PROPOSED REVISION TO TECHNICAL SPECIFICATIONS (LBDCR 05-MP3-025)**  
**POST MAINTENANCE OR MODIFICATION SURVEILLANCE REQUIREMENTS**

**BASES MARKED-UP PAGES**

**DOMINION NUCLEAR CONNECTICUT, INC.**  
**MILLSTONE POWER STATION UNIT 3**

**ATTACHMENT 3**

**PROPOSED REVISION TO TECHNICAL SPECIFICATIONS (LBDCR 05-MP3-025)**  
**POST MAINTENANCE OR MODIFICATION SURVEILLANCE REQUIREMENTS**

**TECHNICAL SPECIFICATIONS RE-TYPED PAGES**

**DOMINION NUCLEAR CONNECTICUT, INC.**  
**MILLSTONE POWER STATION UNIT 3**

## REACTIVITY CONTROL SYSTEMS

### ROD DROP TIME

#### LIMITING CONDITION FOR OPERATION

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3.1.3.4 The individual full-length (shutdown and control) rod drop time from the fully withdrawn position shall be less than or equal to 2.7 seconds from beginning of decay of stationary gripper coil voltage to dashpot entry with:

- a.  $T_{avg}$  greater than or equal to 551°F, and
- b. All reactor coolant pumps operating.

APPLICABILITY: MODES 1 and 2.

#### ACTION:

- a. With the drop time of any full-length rod determined to exceed the above limit, restore the rod drop time to within the above limit prior to proceeding to MODE 1 or 2.
- b. With the rod drop times within limits but determined with three reactor coolant pumps operating, operation may proceed provided THERMAL POWER is restricted to less than or equal to 65% of RATED THERMAL POWER with the reactor coolant stop valves in the nonoperating loop closed.

#### SURVEILLANCE REQUIREMENTS

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4.1.3.4 The rod drop time of full-length rods shall be demonstrated through measurement prior to reactor criticality:

- a. For all rods following each removal of the reactor vessel head, and
- b. Deleted
- c. At least once per 24 months.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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- 2) A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or abnormal corrosion.
  
- e. At least once per 24 months by:
  - 1) Verifying that each automatic valve in the flow path actuates to its correct position on a Safety Injection actuation test signal, and
  - 2) Verifying that each of the following pumps start automatically upon receipt of a Safety Injection actuation test signal:
    - a) Centrifugal charging pump,
    - b) Safety Injection pump, and
    - c) RHR pump.
  - 3) Verifying that the Residual Heat Removal pumps stop automatically upon receipt of a Low-Low RWST Level test signal.
  
- f. By verifying that each of the following pump's developed head at the test flow point is greater than or equal to the required developed head when tested pursuant to Specification 4.0.5:
  - 1) Centrifugal charging pump
  - 2) Safety Injection pump
  - 3) RHR pump
  - 4) Containment recirculation pump
  
- g. By verifying the correct position of each electrical and/or mechanical position stop for the following ECCS throttle valves:
  - 1) Within 4 hours following completion of each valve stroking operation when the ECCS subsystems are required to be OPERABLE, and
  - 2) At least once per 24 months.

ECCS Throttle Valves

<u>Valve Number</u>	<u>Valve Number</u>
3SIH*V6	3SIH*V25
3SIH*V7	3SIH*V27

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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ECCS Throttle Valves

Valve Number

Valve Number

3SIH\*V8

3SIH\*V107

3SIH\*V9

3SIH\*V108

3SIH\*V21

3SIH\*V109

3SIH\*V23

3SIH\*V111

h. Deleted

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## CONTAINMENT SYSTEMS

### 3/4.6.6 SECONDARY CONTAINMENT

#### SUPPLEMENTARY LEAK COLLECTION AND RELEASE SYSTEM

##### LIMITING CONDITION FOR OPERATION

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3.6.6.1 Two independent Supplementary Leak Collection and Release Systems shall be OPERABLE with each system comprised of:

- a. one OPERABLE filter and fan, and
- b. one OPERABLE Auxiliary Building Filter System as defined in Specification 3.7.9.

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

##### ACTION:

With one Supplementary Leak Collection and Release System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

##### SURVEILLANCE REQUIREMENTS

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4.6.6.1 Each Supplementary Leak Collection and Release System shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying a system flow rate of 7600 cfm to 9800 cfm and that the system operates for at least 10 continuous hours with the heaters operating.
- b. At least once per 24 months or following painting, fire, or chemical release in any ventilation zone communicating with the system by:
  - 1) Verifying that the system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978,\* and the system flow rate is 7600 cfm to 9800 cfm;



## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS

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4.7.7 Each Control Room Emergency Air Filtration System shall be demonstrated OPERABLE:

- a. At least once per 12 hours by verifying that the control room air temperature is less than or equal to 95°F;
- b. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying a system flow rate of 1,120 cfm  $\pm$ 20% and that the system operates for at least 10 continuous hours with the heaters operating;
- c. At least once per 24 months or following painting, fire, or chemical release in any ventilation zone communicating with the system by:
  - 1) Verifying that the system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Position C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revisions 2, March 1978,\* and the system flow rate is 1,120 cfm  $\pm$  20%;
  - 2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,\* shows the methyl iodide penetration less than or equal to 2.5% when tested in accordance with ASTM D3803-89 at a temperature of 30°C (86°F), a relative humidity of 70%, and a face velocity of 54 ft/min; and
  - 3) Verifying a system flow rate of 1,120 cfm  $\pm$  20% during system operation when tested in accordance with ANSI N510-1980.
- d. After every 720 hours of charcoal adsorber operation, by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,\* shows the methyl iodide penetration less than or equal to 2.5% when tested in accordance with ASTM D3803-89 at a temperature of 30°C (86°F), and a relative humidity of 70%, and a face velocity of 54 ft/min.
- e. At least once per 24 months by:
  - 1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6.75 inches Water Gauge while operating the system at a flow rate of 1,120 cfm  $\pm$  20%;

## PLANT SYSTEMS

### 3/4.7.9 AUXILIARY BUILDING FILTER SYSTEM

#### LIMITING CONDITION FOR OPERATION

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3.7.9 Two independent Auxiliary Building Filter Systems shall be OPERABLE.

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

ACTION:

With one Auxiliary Building Filter System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. In addition, comply with the ACTION requirements of Specification 3.6.6.1.

#### SURVEILLANCE REQUIREMENTS

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4.7.9 Each Auxiliary Building Filter System shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying a system flow rate of 30,000 cfm  $\pm$ 10% and that the system operates for at least 10 continuous hours with the heaters operating;
- b. At least once per 24 months or following painting, fire, or chemical release in any ventilation zone communicating with the system by:
  - 1) Verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978,\* and the system flow rate is 30,000 cfm  $\pm$ 10%;
  - 2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,\* shows the methyl

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- 8) Verifying that the auto-connected loads to each diesel generator do not exceed the 2000-hour rating of 5335 kW;
- 9) Verifying the diesel generator's capability to:
  - a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,
  - b) Transfer its loads to the offsite power source, and
  - c) Be restored to its standby status.
- 10) Verifying that with the diesel generator operating in a test mode, connected to its bus, a simulated Safety Injection signal overrides the test mode by: (1) returning the diesel generator to standby operation, and (2) automatically energizing the emergency loads with offsite power;
- 11) DELETED
- 12) Verifying that the automatic load sequence timer is OPERABLE with the interval between each load block within  $\pm 10\%$  of its design interval; and
- 13) DELETED
- h. At least once per 10 years by starting both diesel generators simultaneously from standby conditions, during shutdown, and verifying that both diesel generators achieve generator voltage and frequency at  $4160 \pm 420$  volts and  $60 \pm 0.8$  Hz in less than or equal to 11 seconds; and
- i. At least once per 10 years by draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank using a sodium hypochlorite solution.

REACTIVITY CONTROL SYSTEMS

BASES

MOVABLE CONTROL ASSEMBLIES (Continued)

rod alignment and insertion limits. Verification that the Digital Rod Position Indicator agrees with the demanded position within  $\pm 12$  steps at 24, 48, 120, and fully withdrawn position for the Control Banks and 18, 210, and fully withdrawn position for the Shutdown Banks provides assurances that the Digital Rod Position Indicator is operating correctly over the full range of indication. Since the Digital Rod Position Indication System does not indicate the actual shutdown rod position between 18 steps and 210 steps, only points in the indicated ranges are picked for verification of agreement with demanded position.

The ACTION statements which permit limited variations from the basic requirements are accompanied by additional restrictions which ensure that the original design criteria are met. Misalignment of a rod requires measurement of peaking factors and a restriction in THERMAL POWER. These restrictions provide assurance of fuel rod integrity during continued operation. In addition, those safety analyses affected by a misaligned rod are reevaluated to confirm that the results remain valid during future operation.

The maximum rod drop time restriction is consistent with the assumed rod drop time used in the safety analyses. Measurement with  $T_{avg}$  greater than or equal to  $551^{\circ}F$  and with all reactor coolant pumps operating ensures that the measured drop times will be representative of insertion times experienced during a Reactor trip at operating conditions.

The required rod drop time of  $\leq 2.7$  seconds specified in Technical Specification 3.1.3.4 is used in the FSAR accident analysis. A rod drop time was calculated to validate the Technical Specification limit. This calculation accounted for all uncertainties, including a plant specific seismic allowance of 0.51 seconds. Since the seismic allowance should be removed when verifying the actual rod drop time, the acceptance criteria for surveillance testing is 2.19 seconds (References 4 and 5).

Control rod positions and OPERABILITY of the rod position indicators are required to be verified on a nominal basis of once per 12 hours with more frequent verifications required if an automatic monitoring channel is inoperable. These verification frequencies are adequate for assuring that the applicable LCOs are satisfied.



The Digital Rod Position Indication (DRPI) System is defined as follows:

- Rod position indication as displayed on DRPI display panel (MB4), or
- Rod position indication as displayed by the Plant Process Computer System

With the above definition, LCO, 3.1.3.2, "ACTION a." is not applicable with either DRPI display panel or the plant process computer points OPERABLE.

The plant process computer may be utilized to satisfy DRPI System requirements which meets LCO 3.1.3.2, in requiring diversity for determining digital rod position indication.

Technical Specification SR 4.1.3.2.1 determines each digital rod position indicator to be OPERABLE by verifying the Demand Position Indication System and the DRPI System agree within 12 steps at least once each 12 hours, except during the time when the rod position deviation monitor is inoperable,



Insert A, Bases Page B 3/4 1-4

Measuring rod drop times prior to reactor criticality, after reactor vessel head removal and installation, ensures that the reactor internals and rod drive mechanism will not interfere with rod motion or rod drop time, and that no degradation in these systems has occurred that would adversely affect rod motion or drop time. Any time the OPERABILITY of the control rods has been affected by a repair, maintenance, modification, or replacement activity, post maintenance testing in accordance with SR 4.0.1 is required to demonstrate OPERABILITY.

April 21, 2005

EMERGENCY CORE COOLING SYSTEMSBASESECCS SUBSYSTEMS (Continued)

The Charging Pump/Reactor Plant Component Cooling Water Pump Ventilation System is required to be available to support charging pump operation. The Charging Pump/Reactor Plant Component Cooling Water Pump Ventilation System consists of two redundant trains, each capable of providing 100% of the required flow. Each train has a two position, "Off" and "Auto," remote control switch. With the remote control switches for each train in the "Auto" position, the system is capable of automatically transferring operation to the redundant train in the event of a low flow condition in the operating train. The associated fans do not receive any safety related automatic start signals (e.g., Safety Injection Signal).

Placing the remote control switch for a Charging Pump/Reactor Plant Component Cooling Water Pump Ventilation Train in the "Off" position to start the redundant train or to perform post maintenance testing to verify availability of the redundant train will not affect the availability of that train, provided appropriate administrative controls have been established to ensure the remote control switch is immediately returned to the "Auto" position after the completion of the specified activities or in response to plant conditions. These administrative controls include the use of an approved procedure and a designated individual at the control switch for the respective Charging Pump/Reactor Plant Component Cooling Water Pump Ventilation Train who can rapidly respond to instructions from procedures, or control room personnel, based on plant conditions.

The Surveillance Requirements provided to ensure OPERABILITY of each component ensures that at a minimum, the assumptions used in the safety analyses are met and that subsystem OPERABILITY is maintained. Surveillance Requirements for throttle valve position stops ~~and flow balance testing~~ provide assurance that proper ECCS flows will be maintained in the event of a LOCA. Maintenance of proper flow resistance and pressure drop in the piping system to each injection point is necessary to: (1) prevent total pump flow from exceeding runout conditions when the system is in its minimum resistance configuration, (2) provide the proper flow split between injection points in accordance with the assumptions used in the ECCS-LOCA analyses, and (3) provide an acceptable level of total ECCS flow to all injection points equal to or above that assumed in the ECCS-LOCA analyses.

Insert B

Surveillance Requirement 4.5.2.b.1 requires verifying that the ECCS piping is full of water. The ECCS pumps are normally in a standby, nonoperating mode, with the exception of the operating centrifugal charging pump(s). As such, the ECCS flow path piping has the potential to develop voids and pockets of entrained gases. Maintaining the piping from the ECCS pumps to the RCS full of water ensures that the system will perform properly when required to inject into the RCS. This will also prevent water hammer, degraded performance, cavitation, and gas binding of ECCS pumps, and reduce to the greatest extent practical the pumping of non-condensable gases (e.g., air, nitrogen, or hydrogen) into the reactor vessel following an SI signal or during shutdown cooling.

This Surveillance Requirement is met by:

- VENTING the ECCS pump casings and VENTING or Ultrasonic Test (UT) of the accessible suction and discharge piping high points including the ECCS pump suction crossover piping (i.e., downstream of valves 3RSS\*MV8837A/B and 3RSS\*MV8838A/B to safety injection and charging pump suction). VENTING of the

Insert B, Bases Page B 3/4 5-2

Any time the OPERABILITY of an ECCS throttle valve or an ECCS subsystem has been affected by repair, maintenance, modification, or replacement activity that alter flow characteristics, post maintenance testing in accordance with SR 4.0.1 is required to demonstrate OPERABILITY.

July 24, 2002

## BASES

3/4.6.6.1 SUPPLEMENTARY LEAK COLLECTION AND RELEASE SYSTEM (Continued)Surveillance Requirements

a

Cumulative operation of the SLCRS with heaters operating for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The 31-day frequency was developed in consideration of the known reliability of fan motors and controls. This test is performed on a STAGGERED TEST BASIS once per 31-days.

b, c, e, and f

These surveillances verify that the required SLCRS filter testing is performed in accordance with Regulatory Guide 1.52, Revision 2. ANSI N510-1980 shall be used in place of ANSI N510-1975 referenced in Regulatory Guide 1.52, Revision 2. Laboratory testing of methyl iodide penetration shall be performed in accordance with ASTM D3803-89 and Millstone Unit 3 specific parameters. The surveillances include testing HEPA filter performance, charcoal adsorber efficiency, system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). The heater kW measured must be corrected to its nameplate rating. Variations in system voltage can lead to measurements of kW which cannot be compared to the nameplate rating because the output kW is proportional to the square of the voltage.

← Insert C.

The 720 hours of operation requirement originates from Regulatory Guide 1.52, Revision 2, March 1978, Table 2, Note "c", which states that "Testing should be performed (1) initially, (2) at least once per 18 months thereafter for systems maintained in a standby status or after 720 hours of system operations, and (3) following painting, fire, or chemical release in any ventilation zone communicating with the system."

This testing ensures that the charcoal adsorbency capacity has not degraded below acceptable limits, as well as providing trend data. The 720 hour figure is an arbitrary number which is equivalent to a 30 day period. This criteria is directed to filter systems that are normally in operation and also provide emergency air cleaning functions in the event of a Design Basis Accident. The applicable filter units are not normally in operation and the sample canisters are typically removed due to the 18 month criteria.

d

The automatic startup ensures that each SLCRS train responds properly. The once per 24 months 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 was performed with the reactor at power. The surveillance verifies that the SLCRS starts on a SIS test signal. It also includes the automatic functions to isolate the other ventilation systems that are not part of the safety-related postaccident operating configuration and to start up and to align the ventilation systems



Insert C, Bases Pages B 3/4 6-6, 7-14, 7-23A

Any time the OPERABILITY of a HEPA filter or charcoal adsorber housing has been affected by repair, maintenance, modification, or replacement activity, post maintenance testing in accordance with SR 4.0.1 is required to demonstrate OPERABILITY.

## BASES

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM (Continued)SURVEILLANCE REQUIREMENTS (Continued)4.7.7.c

The performance of the control room emergency filtration systems should be checked periodically by verifying the HEPA filter efficiency, charcoal adsorber efficiency, minimum flow rate, and the physical properties of the activated charcoal. The frequency is at least once per 24 months ~~or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system.~~ *Q*

ANSI N510-1980 will be used as a procedural guide for surveillance testing.

4.7.7.c.1

← Insert C.

This surveillance verifies that the system satisfies the in-place penetration and bypass leakage testing acceptance criterion of less than 0.05% in accordance with Regulatory Position C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, while operating the system at a flow rate of 1,120 cfm  $\pm$  20%. ANSI N510-1980 is used in lieu of ANSI N510-1975 referenced in the regulatory guide.

4.7.7.c.2

This surveillance requires that a representative carbon sample be obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978 and that a laboratory analysis verify that the representative carbon sample meets the laboratory testing criteria of ASTM D3803-89 and Millstone Unit 3 specific parameters. The laboratory analysis is required to be performed within 31 days after removal of the sample. ANSI N510-1980 is used in lieu of ANSI N510-1975 referenced in Revision 2 of Regulatory Guide 1.52.

4.7.7.c.3

This surveillance verifies that a system flow rate of 1,120 cfm  $\pm$  20%, during system operation when testing in accordance with ANSI N510-1980.

4.7.7.d

After 720 hours of charcoal adsorber operation, a representative carbon sample must be obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, and a laboratory analysis must verify that the representative carbon sample meets the laboratory testing criteria of ASTM D3803-89 and Millstone Unit 3 specific parameters.

PLANT SYSTEMSBASESLCO 3.7.9 ACTION statement:

With one Auxiliary Building Filter System inoperable, restoration to OPERABLE status within 7 days is required.

The 7 days restoration time requirement is based on the following: The risk contribution is less for an inoperable Auxiliary Building Filter System, than for the charging pump or reactor plant component cooling water (RPCCW) systems, which have a 72 hour restoration time requirement. The Auxiliary Building Filter System is not a direct support system for the charging pumps or RPCCW pumps. Because the pump area is a common area, and as long as the other train of the Auxiliary Building Filter System remains OPERABLE, the 7 day restoration time limit is acceptable based on the low probability of a DBA occurring during the time period and the ability of the remaining train to provide the required capability. A concurrent failure of both trains would require entry into LCO 3.0.3 due to the loss of functional capability. The Auxiliary Building Filter System does support the Supplementary Leak Collection and Release System (SLCRS) and the LCO ACTION statement time of 7 days is consistent with that specified for SLCRS (See LCO 3.6.6.1).

← Surveillance Requirement 4.7.9.c

Surveillance requirement 4.7.9.c requires that after 720 hours of operation a charcoal sample must be taken and the sample must be analyzed within 31 days after removal.

The 720 hours of operation requirement originates from Regulatory Guide 1.52, Revision 2, March 1978, Table 2, Note "c", which states that "Testing should be performed (1) initially, (2) at least once per 18 months thereafter for systems maintained in a standby status or after 720 hours of system operations, and (3) following painting, fire, or chemical release in any ventilation zone communicating with the system." This testing ensures that the charcoal adsorbency capacity has not degraded below acceptable limits as well as providing trending data. The 720 hour figure is an arbitrary number which is equivalent to a 30 day period. This criteria is directed to filter systems that are normally in operation and also provide emergency air cleaning functions in the event of a Design Basis Accident. The applicable filter units are not normally in operation and sample canisters are typically removed due to the 18 month criteria.

3/4.7.10 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the Reactor Coolant System and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads. For the purpose of declaring the affected system OPERABLE with the inoperable snubber(s), an engineering evaluation may be performed, in accordance with Section 50.59 of 10 CFR Part 50.

Snubbers are classified and grouped by design and manufacturer but not by size. Snubbers of the same manufacturer but having different internal mechanisms are classified as different types. For example, mechanical snubbers utilizing the same design features of the 2-kip, 10-kip and 100-kip capacity

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### 3/4.8 ELECTRICAL POWER SYSTEMS

#### BASES

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minimizing the time that the diesel generator is connected to the offsite source. Surveillance Requirement 4.8.1.1.2.j requires demonstration once per 18 months that the diesel generator can start and run continuously at full load capability for an interval of not less than 24 hours,  $\geq 2$  hours of which are at a load equivalent to 110% of the continuous duty rating and the remainder of the time at a load equivalent to the continuous duty rating of the diesel generator. The load band is provided to avoid routine overloading of the diesel generator. Routine overloading may result in more frequent teardown inspections in accordance with vendor recommendations in order to maintain diesel generator OPERABILITY. The load band specified accounts for instrumentation inaccuracies using plant computer and for the operational control capabilities and human factor characteristics. The note (\*) acknowledges that momentary transient outside the load range shall not invalidate the test.



Surveillance Requirements 4.8.1.1.2.a.5 (Monthly), 4.8.1.1.2.b.1 (Once per 184 Days), 4.8.1.1.2.g.4.b (18 Month Test), 4.8.1.1.2.g.5 (18 Month Test) and 4.8.1.1.2.g.6.b (18 Month Test)

Several diesel generator surveillance requirements specify that the emergency diesel generators are started from a standby condition. Standby conditions for a diesel generator means the diesel engine coolant and lubricating oil are being circulated and temperatures are maintained within design ranges. Design ranges for standby temperatures are greater than or equal to the low temperature alarm setpoints and less than or equal to the standby "keep-warm" heater shutoff temperatures for each respective sub-system.

Surveillance Requirement 4.8.1.1.2.j (18 Month Test)

The existing "standby condition" stipulation contained in specification 4.8.1.1.2.a.5 is superseded when performing the hot restart demonstration required by 4.8.1.1.2.j.



Insert D, Bases Page B 3/4 8-1d

Any time the OPERABILITY of a diesel generator has been affected by repair, maintenance, or replacement activity, or by modification that could affect its interdependency, post maintenance testing in accordance with SR 4.0.1 is required to demonstrate OPERABILITY.