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Millstone Power Station
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January 27, 2022

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Serial No. 22-021
MPS Lic/TFO R0
Docket No. 50-423
License No. NPF-49

DOMINION ENERGY NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION UNIT 3
REQUEST FOR ENFORCEMENT DISCRETION FROM TECHNICAL SPECIFICATION 3.5.2 "ECCS SUBSYSTEMS" AND TECHNICAL SPECIFICATION 3.7.3 "REACTOR PLANT COMPONENT COOLING WATER SYSTEM"

In a teleconference call on January 26, 2022, Dominion Energy Nuclear Connecticut, Inc. (DENC) informed the Nuclear Regulatory Commission (NRC) staff of the need for a notice of enforcement discretion (NOED) from the requirements of Millstone Power Station Unit 3 (MPS3) Technical Specification (TS) 3.5.2, "ECCS [Emergency Core Cooling Water System] Subsystems – T_{avg} Greater Than or Equal to 350 ºF", and TS 3.7.3, "Reactor Plant Component Cooling Water System." MPS3 TS 3.5.2 requires two independent ECCS subsystems to be OPERABLE, including one centrifugal charging pump (per sub-item a). MPS3 TS 3.7.3 requires at least two independent reactor plant component cooling water safety loops to be OPERABLE. ACTION 'a' for MPS3 TS 3.5.2 states "With one ECCS subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours." The ACTION for MPS3 TS 3.7.3 states "With only one reactor plant component cooling water safety loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours."

On January 23, 2022, at 11:18 hours, a charging pump and reactor plant component cooling water (RPCCW) pump area exhaust fan (3HVR*FN13B) tripped, and operator response to this trip indicated that the fan motor needed to be replaced. Since this fan provides a support function to a charging pump and a RPCCW pump, MPS3 entered the 72-hour TS Action Statement (TSAS) for these pumps being inoperable.

This NOED request is being made for an extension period of 72 hours to remain in POWER OPERATION (MODE 1) rather than progressing to HOT STANDBY (MODE 3) within 6 hours and in HOT SHUTDOWN (MODE 4) within the following 6 hours as required by ACTION 'a' for TS 3.5.2, and be in at least HOT STANDBY (MODE 3) within the next 6 hours and in COLD SHUTDOWN (MODE 5) within the following 30 hours as required by the ACTION for TS 3.7.3. The requested extension will allow time

to make the necessary repairs to 3HVR*FN13B, which will restore the associated charging pump and RPCCW pump to operable status.

The Facility Safety Review Committee has reviewed and concurs with this request.

This NOED request was verbally approved by the NRC on January 26, 2022 at approximately 10:34 hours. Per NRC Enforcement Manual, Appendix F, "Notices of Enforcement Discretion," DENC is required to submit a written request for the NOED within two working days of the verbal request for a NOED. This letter and its attachments provide the information documenting DENC's request.

There are no regulatory commitments contained in this letter.

If you should have any questions regarding this submittal, please contact Shayan Sinha at (804) 273-4687.

Sincerely,

J. R. Daugherty
Site Vice President – Millstone

Attachment:

Request for Enforcement Discretion from the Requirements of Technical Specification 3.5.2, "ECCS Subsystems," and 3.7.3, "Reactor Plant Component Cooling Water System"

Commitments made in this letter: None

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ATTACHMENT

REQUEST FOR ENFORCEMENT DISCRETION FROM THE REQUIREMENTS OF TECHNICAL SPECIFICATION 3.5.2, "ECCS SUBSYSTEMS," AND 3.7.3, "REACTOR PLANT COMPONENT COOLING WATER SYSTEM"

MILLSTONE POWER STATION UNIT 3
DOMINION ENERGY NUCLEAR CONNECTICUT, INC. (DENC)

Request for Enforcement Discretion from the Requirements of Technical Specification 3.5.2, "ECCS Subsystems," and 3.7.3, "Reactor Plant Component Cooling Water System"

Introduction

Dominion Energy Nuclear Connecticut, Inc. (DENC) hereby requests the Nuclear Regulatory Commission (NRC) staff to exercise discretion not to enforce compliance with the Millstone Power Station Unit 3 (MPS3) Technical Specification (TS) 3.5.2, "ECCS [Emergency Core Cooling System] Subsystems," and TS 3.7.3, "Reactor Plant Component Cooling Water System."

Discussion of the Requirements for which Enforcement Discretion is Requested

Consistent with NRC Enforcement Manual, Appendix F, "Notices of Enforcement Discretion," DENC herein provides a supporting description and justification for issuance of the requested Notice of Enforcement Discretion (NOED).

1. **Explain why a licensing process is not appropriate to address the issue and why the need for a NOED could not reasonably been avoided. If applicable, this explanation shall address previous instances of the issue and decisions to pursue licensing solutions in the past.**

   On January 23, 2022, at 11:18 hours, a charging pump and RPCCW pump area exhaust fan (3HVR*FN13B) tripped breaker 32-1W(F4M), which caused fire alarms, main board alarms, and an auto start of the standby unit. MPS3 Maintenance inspected the fan and found that the motor shaft had bent, causing the fan blades to make contact with the housing. The most likely cause of this issue was a bearing failure. Due to the extent of the wear on fan blades, it was concluded that the motor and fan blade assembly needed to be replaced.

   Since this fan provides a support function to a charging pump and a RPCCW pump, MPS3 entered the 72-hour TS Action Statement (TSAS) for these pumps being inoperable. This NOED request is being made for an extension period of 72 hours to remain in POWER OPERATION (MODE 1) rather than progressing to HOT STANDBY (MODE 3) within 6 hours, and in HOT SHUTDOWN (MODE 4) within the following 6 hours as required by ACTION 'a' for TS 3.5.2, and be in at least HOT STANDBY (MODE 3) within the next 6 hours and in COLD SHUTDOWN (MODE 5) within the following 30 hours as required by the ACTION for TS 3.7.3. The requested extension will allow time to make the necessary repairs to 3HVR*FN13B and perform post-maintenance testing (PMT), which will restore the associated charging pump and RPCCW pump to operable status.

   Consequently, DENC reviewed NRC Enforcement Manual, Appendix F, "Notices of Enforcement Discretion" and determined that this request satisfies Section 1.3 – Applicability, as the time to process an Exigent or Emergency License Amendment Request (LAR) is not feasible due to the 72-hour Allowed Outage Time (AOT) of the

TSASs. After the failure was identified, work proceeded on a 24/7 basis with the goal of completing repairs and validating operation of the fan prior to expiration of the AOT. The Enforcement Manual Notice of Enforcement Discretion criterion applies to situations where compliance with the TS would result in a potentially unnecessary down-power or the shutdown of a reactor without a corresponding health and safety benefit. Initially, DENC did not believe enforcement discretion would be needed since the planned troubleshooting, corrective maintenance, and restoration of Operability was expected to be completed within the current AOT. However, as troubleshooting and corrective maintenance planning progressed, completion of corrective maintenance was forecasted to extend beyond the original 72-hour AOT thus, enforcement discretion is needed.

Prior to discovery of the fan trip on January 23, 2022, MPS3 had not experienced any alarms or other abnormal conditions which would indicate that a failure of 3HVR*FN13B was imminent. MPS3 has not experienced any previous occurrences where the 72-hour AOT for one inoperable charging pump and RPCCW pump was challenged as a result of a failure of an exhaust fan.

2. **Provide a description of the TSs or other license conditions that will be violated. This description shall include the time the condition was entered and when the completion time will expire.**

MPS3 TS 3.5.2 requires two independent ECCS subsystems to be OPERABLE, including one centrifugal charging pump (per sub-item a). MPS3 TS 3.7.3 requires at least two independent reactor plant component cooling water safety loops to be OPERABLE. ACTION ‘a’ for MPS3 TS 3.5.2 states “With one ECCS subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.” The ACTION for MPS3 TS 3.7.3 states “With only one reactor plant component cooling water safety loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.”

On January 23, 2022, at 11:18 hours, MPS3 entered ACTION ‘a’ for TS 3.5.2 and the ACTION for TS 3.7.3. The AOTs for these actions will expire on January 26, 2022, at 11:18 hours.

The Charging Pump/Reactor Plant Component Cooling Water Pump Ventilation System is also required to be available to support the Auxiliary Building Filter System and the Supplementary Leak Collection and Release System (SLCRS). Operability requirements for Auxiliary Building Filter System and SLCRS are provided by TS 3.7.9, and 3.6.6.1, respectively. However, the ACTIONS for these TS are considered less limiting than TS 3.5.2 and 3.7.3, because they do not require the plant to be placed in HOT STANDBY until 7 days after entry.

3. Provide sufficient information to demonstrate that the cause of the situation is well understood including extent of condition on other related SSCs (e.g., common cause).

On January 23, 2022, at approximately 11:18 hours, the MPS3 'B' Train RPCCW/Charging Pump Area Exhaust Fan, 3HVR*FN13B tripped, resulting in Control Room alarms and an automatic start of the standby ('A' Train) fan. Due to receipt of fire alarms in the Auxiliary Building and reports of an acrid odor in the area of the RPCCW pumps, Operations entered EOP 3509, Fire Emergency. Investigation determined there was no fire, and the EOP was exited.

On January 24, 2022, the fan was removed from the system for inspection. Inspection identified rubbing damage to at least 3 blades with material rolled off the end of these blades. The motor shaft was found to be bent and seized. The most likely cause of the fan tripping is a failed bearing that resulted in misalignment of the fan and motor which caused the fan blades to contact the fan casing.

MPS3 3HVR*FN13B was last overhauled on April 29, 2007 during the 3R11 refueling outage (RFO). At the time, the preventative maintenance (PM) frequency was 8R (every 8 refueling outages). The PM was subsequently changed to a 10R frequency and was scheduled to be performed in the upcoming spring refueling outage. The A RPCCW/Charging Area Exhaust Fan, 3HVR*FN13A, was last overhauled on April 28, 2016 during the 3R17 RFO. The primary intent of this activity was to correct a high vibration issue by balancing the fan, but the motor bearings were replaced as part of this work. The bearings on the 3HVR*FN13A fan have been in service for approximately 6 years as opposed to approximately 15 year service life of the 3HVR*FN13B fan at the time of failure. Therefore, there is no concern at this time that the 3HVR*FN13A fan is at risk for failure from this mechanism.

4. Provide an evaluation of all safety and security concerns associated with operating outside of the TS or license conditions that demonstrates that the noncompliance will not create undue risk to the public health and safety or involve adverse consequences to the environment. This should include, as appropriate, a description of the condition and operational status of the plant, equipment that is out of service, inoperable, or degraded that may have risk significance, may increase the probability of a plant transient, may complicate the recovery from a transient, or may be used to mitigate the condition. This evaluation shall include potential challenges to offsite and onsite power sources and forecasted weather conditions.

System Design and Operation

MPS3 charging pump and RPCCW pump area exhaust fan 3HVR*FN13B is safety related but does not have any direct TS requirements. However, the fan does support the charging pump and RPCCW pump and heat exchanger, which are TS

equipment. Therefore, this fan affects the TS for ECCS, RPCCW, SLCRS, and Auxiliary Building Filter System.

Final Safety Analysis Report (FSAR) Chapter 9, Section 9.4.3 discusses the Auxiliary Building Ventilation System. Section 9.4.3.2, System Description, indicates that the charging pump, RPCCW pump, and heat exchanger areas ventilation are part of the Auxiliary Building Ventilation System (ABVS). Section 9.4.3 indicates that the fan 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.

The ABVS is actuated manually. The charging pump, RPCCW pump, and heat exchanger areas ventilation supply and exhaust dampers to and from each charging pump cubicle are actuated by the operation of the charging pumps. The auxiliary building ventilation isolation dampers are actuated by safeguards actuation signals.

The ABVS normally maintains the charging pump cubicle temperature above the solubility temperature limit of 59°F for a 4 percent boron concentration, except during an emergency bus single failure in the winter at which time the temperature is maintained above 32°F.

FSAR Table 9.4-4 indicates that there are two 40 horsepower supply fans for charging pump, RPCCW, and heat exchanger areas that are 27,000 cubic feet per minute each and two 60 horsepower exhaust fans that are 30,000 cubic feet per minute each.

FSAR Section 9.4.2.3 describes that the charging pump, RPCCW pump, and heat exchanger areas ventilation system has two modes of system operation with two-season dependent system manual damper positions. This includes a summer mode and a winter mode. At the time of this event, the system was in winter mode. The winter mode is established for the time period between November 1 and May 1. In the winter mode of operation, manual dampers are positioned such that outside air is mixed with return air at a fixed rate to maintain a minimum area temperature as defined in FSAR Section 9.4.2.1. Supplementary heat is provided by eight safety related electric heaters (four on each train) powered from emergency power buses. Air is supplied directly to the RPCCW pump and heat exchanger area, then drawn into the charging pump cubicles through the door openings. Air not returned is exhausted from both areas directly to the Auxiliary Building roof vent and then to the Turbine Building stack. In the filtration mode of operation, air is exhausted through the Auxiliary Building Filtration Units then directed to the Auxiliary Building roof vent, and ultimately released through the Turbine Building stack.

In the event of a safety injection system (SIS) signal, the electrical tunnel area ventilation is shut down and the building isolation dampers close. In the event of a SIS or a containment depressurization actuation (CDA) signal, the auxiliary building general area ventilation is shutdown; the building outlet isolation dampers close; the charging pump, RPCCW pump, and heat exchanger ventilation exhaust dampers close; the auxiliary building filter unit inlet and outlet dampers open; the filter exhaust

fans start automatically and the charging pump, RPCCW pump, and heat exchanger supply and exhaust fans continue to operate venting through the turbine building stack after filtration. This ABVS line-up augments SLCRS in drawing the required negative pressure in the secondary containment.

Section 9.4.3.3, Safety Evaluation, notes that radiation monitors are provided at various points in the exhaust air duct stream of the auxiliary building ventilating system. Upon receipt of a high radiation signal, exhaust air can be manually diverted through one or both auxiliary building filtration units prior to its discharge to the ventilation vent. This reduces the potential for radioactively contaminated air being released to the atmosphere.

The charging pump, RPCCW pump, and heat exchanger ventilation system; and the motor control center (MCC), rod control, and cable vault ventilation system are nuclear safety related and are provided with redundant 100 percent capacity supply and exhaust fans.

All ductwork in the auxiliary building is seismically supported, thus mitigating the possibility of the safety related equipment being damaged by ductwork. The charging pump, RPCCW pump, and heat exchanger ventilation system; the MCC, rod control, and cable vault ventilation system; the filtration units including their fans, and building isolation dampers are QA and Seismic Category I.

Section 9.4.3.5, Instrumentation requirements, identifies that the auxiliary building ventilation supply units and exhaust fans have control switches and indicator lights on the main heating and ventilation panel in the control room. The exhaust fans are interlocked with the associated auxiliary building ventilation inlet dampers, filter inlet dampers and normal outlet dampers. The auxiliary building ventilation inlet dampers, and either the filter inlet or the normal outlet dampers, must be open for the exhaust fan to run. A temperature switch is used to monitor the supply unit preheating coil outlet temperature and stop the exhaust fan when temperature drops to 35°F or less. An annunciator is alarmed on the auxiliary building ventilation panel and an auxiliary building ventilation trouble annunciator is alarmed on the main heating and ventilation panel in the control room when inlet air temperature is 35°F or less.

The auxiliary building air supply units are interlocked with the associated exhaust fans. The exhaust fan must be running to operate the associated air supply units.

Exhaust air from the charging pumps, RPCCW and heat exchanger areas is monitored by temperature elements which alarm in the control room on low and high building temperature.

Exhaust air is monitored by radiation monitors and high radiation is alarmed locally and in the control room. Air flow is monitored by the RMS computer system; indication is available through the RMS computer system workstations.

Engineered safety feature status lights on the main control board indicate the status of the outlet and inlet dampers of the auxiliary building ventilation system. The outlet

dampers close automatically on receipt of a SIS, CDA, or loss of power (LOP) signal. The inlet dampers close automatically on receipt of a SIS signal.

FSAR Chapter 15, Section 15.6.5.4, Radiological Consequences, and FSAR Chapter 6, Section 6.2.3.3 for Secondary Containment Functional Design Safety Evaluation, describe that a LOCA would increase the pressure in the primary containment building resulting in containment isolation and initiation of the ECCS and the containment spray systems. An SIS signal automatically starts operation of SLCRS and the charging pump, RPCCW pump and heat exchanger area, MCC, rod control, cable vault, and auxiliary building filtration portions of the ABVS. During accident conditions, these systems operate together to bring the secondary containment enclosure, auxiliary building, engineered safety features (ESF) building, hydrogen re-combiner building, and the main steam valve building to negative pressure within 120 seconds.

Weather Considerations

Weather conditions will be seasonable for January over the period of enforcement discretion requested. The National Weather Service indicates that temperatures on January 26, 2022 and January 27, 2022 will be between 5°F and 15°F, increasing slightly over the night of January 27. Winds will be between 5 and 16 miles per hour and no snow is expected. There is increasing potential for a low-pressure storm system to bring heavy snowfall and high winds to portions of the area on the night of January 28 into the following night. Uncertainties remain with the track, intensity of the storm system, and its resulting potential impacts. Currently, January 28, 2022 is forecasted for a 20 percent chance of snow in the morning, which will increase to between 60 and 90 percent in the evening, with 2 to 4 inches of possible accumulation. Temperatures will be between 20°F and 36°F. Winds will remain calm, at about 5 miles per hour. For January 29, 2022, snow will continue at 90 percent and temperatures will be between 13°F and 27°F. Winds will be blustery on night of January 29.

This weather is not expected to challenge the Millstone Power Station (including the intake structure) or the New England bulk electric system.

Safety Margins

Operability of the charging pump and RPCCW pump area exhaust fan 3HVR*FN13B is required by MPS3 procedures in recognition of the potential for higher (more adverse) ambient temperatures in the area of the charging and RPCCW pumps if the exhaust fan is lost and as the suction air source for the Auxiliary Building Filtration System. However, the fan is not included as a TS or Technical Requirements Manual (TRM) required component.

In terms of the operability of ECCS pumps with potentially more adverse ambient conditions, adequate heat removal has been demonstrated with an Ultimate Heat Sink temperature up to 80 °F (TS 3/4.7.5). Currently, the service water temperature is 41.8 °F (CVSWP-T47A/B) and outside air temperatures (winter air temperatures)

ensure delivered air is on the lower side of the allowed range. These service water and outside air temperatures provide substantial margin for ensuring pump cooling capacity.

The potential for the operating auxiliary building filter and associated filter exhaust fan to trip off on low suction pressure due to the loss of 3HVR*FN13B is recognized however, all forced flow releases remain filtered by the SLCRS. Margin in the current FSAR dose consequence analyses to the 10 CFR 50.67 Total Effective Dose Equivalent (TEDE) Limits is shown in the table below. This margin is available to offset the potential for a reduction in the SLCRS drawdown capability following a loss of the auxiliary building filtration system.

Dose Location	50.67 TEDE Limits (rem)	FSAR Table 15.0-8 Results (rem)
EAB	25	5.4
LPZ	25	1.1
Control Room	5	3.4

As stated in MPS3 FSAR 9.4.3.3, the charging pump, RPCCW pump, and heat exchanger ventilation system are provided with redundant 100 percent capacity supply and exhaust fans. Since the other charging pump and RPCCW pump area exhaust fan (3HVR*FN13A) is still operable, the ECCS and RPCCW support function will be maintained during the proposed period of enforcement discretion. No changes are being proposed that affect any other assumptions or inputs to applicable safety analyses. Therefore, safety margins will be maintained.

Other Defense-in-Depth Considerations

Operation with charging pump and RPCCW pump area exhaust fan 3HVR*FN13B out of service does not result in a plant transient. Charging pump and RPCCW pump area exhaust fan 3HVR*FN13A is in service providing the necessary ventilation for normal operation and as the initial condition for accident scenarios. For charging pump and RPCCW pump area exhaust fan 3HVR*FN13B being out of service to have an adverse effect on an analyzed transient, an event initiator would need to be combined with a failure specifically in the ‘A’ train (either 3HVR*FN13A, ‘A’ train Emergency Diesel Generator or 4160 Volt Power Supply).

SLCRS also takes suction from the Auxiliary Building, which partially mitigates the absence of suction from the ABVS, with the directed failure of 3HVR*FN13A while 3HVR*FN13B is being repaired. Therefore, if a design basis accident is postulated under this scenario, all forced flow releases would be filtered by SLCRS.

The System Operating Procedure for Auxiliary Building Emergency Ventilation and Exhaust (OP 3314J) provides instruction for the installation and operation of 3HVR-FN18, “Portable emergency ventilation fan” and a portable generator. Performance of this procedure satisfies requirements of TRM 7.4.1, “Fire Related Safe Shutdown Components.” This procedure is the contingency plan in the event of failure of the

charging and RPCCW pump area ventilation system. Providing emergency ventilation to the Auxiliary Building in accordance with OP 3314J is modeled as a recovery action given failure of the Charging/RPCCW area ventilation system in the quantitative risk assessment (see responses to items 6 and 7).

The ECCS and RPCCW systems are expected to maintain their ability to perform their safety functions during the period of enforcement discretion. No other structures, systems or components (SSCs) will be affected by the proposed period of enforcement discretion and no limits will be imposed on any SSC that will hinder their ability to perform their specified function. Elevated risk awareness and the protection of critical equipment will be executed (as shown in response to item 6) during the proposed period of enforcement discretion in accordance with existing plant procedures. Additionally, these programmatic controls will be augmented by pre-job and periodic (i.e., shiftly) briefings, and Plant Equipment Operator (PEO) rounds. As such, there will be no over-reliance on programmatic activities as compensatory measures during the period of enforcement discretion. The independence of the physical barriers to radiological releases will not be degraded as a result of the proposed period of enforcement discretion. The planned activities on the affected charging pump and RPCCW pump area exhaust fan (3HVR*FN13B) will not impact fuel cladding, RCS or Containment integrity. No other SSCs will be affected by the proposed period of enforcement discretion, and therefore no limits will be imposed on any SSC in performing its specified safety function.

Plant configurations that could potentially challenge the availability of Train ‘A’ components will not be allowed. Overall plant risk will be managed in accordance with 10 CFR 50.65(a)(4).

Current Plant Status

There is no other equipment out of service, inoperable, or degraded with notable risk significance that could potentially challenge the operability of the ABVS. No other operational challenges are currently being experienced at MPS3. Maintenance activities on off-site power lines do not pose a challenge to the availability of off-site power sources.

Conclusion

Based on the justification above, the requested extension will not create undue risk to the public health and safety or involve adverse consequences to the environment.

5. **Provide a description and timeline of the proposed course of action to resolve the situation (e.g., likely success of the repairs) and explain how the resolution will not result in a different or unnecessary transient. This shall include the time period for the requested discretion and demonstrate a high likelihood of completion within the requested period of enforcement discretion. If the proposed course of action necessitates enforcement discretion greater than 5 days, the licensee shall justify why a longer-term solution (e.g., emergency amendment) should not be processed within the duration of a 5 day NOED.**

The 3HVR*FN13B motor is being replaced with a spare from Millstone's warehouse. Installation of the new motor is taking longer than expected due to the need to address fit-up issues. The motor is currently in the final stages of being installed. Replacement of the motor is expected to correct the cause of fan failure.

A fan assembly consisting of the fan hub and blades identical to the fan assembly in 3HVR*FN13B is being removed from the 'B' Fuel Building Filter Fan, 3HVR*FN10B, and installed in 3HVR*FN13B. Since the blade pitch of the replacement fan assembly is slightly different than the existing fan, the blade pitch will need to be adjusted. This is expected to necessitate some adjustments during PMT to ensure flow is within design limits. Since implementation of the Alternate Source Term Amendment, credit is no longer taken for Fuel Building Filters. Therefore, there is no risk associated with utilizing components from the 'B' Fuel Building Filter to repair 3HVR*FN13B.

Use of a new replacement motor and "like-for-like" fan provide high confidence the repair will be successful, and the repaired component will meet design requirements. Therefore, the repair restores the plant to its design configuration and does not result in a different or unnecessary transient.

Remaining activities to complete restoration of 3HVR*FN13B include completing installation of the motor and fan assembly, rotational checks, balancing (if required), flow measurements and vane adjustments (as required), final PMT, and restoration. These activities are expected to be completed by 0600 hours on Saturday, January 29, 2022. This extends repairs 66 hours beyond the end of the TSAS. The requested 72-hour enforcement discretion duration considers this 66-hour timeline, as well as 6 additional hours for contingency.

An Emergency LAR is not required because the affected exhaust fan will be restored to operable status within 72 hours after the NOED is granted, thus the period of enforcement discretion is less than 5 days.

6. Detail and explain compensatory actions that the plant has both taken and will take to reduce risk(s), focusing on both event mitigation and initiating event likelihood. Describe how each compensatory measure achieves one or more of the following:

a. Reduces the likelihood of initiating events;
b. Reduces the likelihood of the unavailability of redundant trains, during the period of enforcement discretion; and,
c. Increases the likelihood of successful operator actions in response to initiating events.

The following compensatory measures will be taken to reduce the risk during the period of enforcement discretion:

- Charging pumps and RPCCW pumps will only be swapped if needed due to an emergent equipment deficiency.
- All elective maintenance associated with the charging pumps, RPCCW pumps, and 3HVR*FN13A & FN14A (charging pump and RPCCW pump area supply fan) will be deferred until after the period of enforcement discretion.
- MPS3 will maintain 'A' train's protected during the period of enforcement discretion per Millstone's Protected Equipment Procedure (OP-MP-601), which includes 3EGS*EGA ('A' Emergency Diesel Generator) and power to 3HVR*FN13A and 3HVR*FN14A (the fans themselves are in the overhead and not considered accessible).
- The compensatory measure of providing emergency ventilation to the Auxiliary Building in accordance with OP 3314J is modeled as a recovery action given failure of the Charging/RPCCW area ventilation system. The model credits aligning/operating the equipment following receipt of an area high temperature alarm. The equipment is stored in a dedicated, locked area, which requires Operations permission to enter. The inventory of this equipment was checked prior to entering the period of enforcement discretion. To support this recovery action, at the beginning of each shift, Millstone Operations will perform a task preview for aligning and operating emergency ventilation equipment per OP 3314J.
- No switchyard work will be allowed, except for work being performed to restore Millstone Power Station Unit 2 to service or to address adverse weather conditions.
- The fire areas associated with protecting 3HVR*FN13A will be monitored hourly by a roving fire watch.
- A fire watch will be posted continuously for any hot work per the Dominion Energy Nuclear Fleet Fire Protection/Appendix R (Fire Safe Shutdown) Program (CM-AA-FPA-100).

7. Demonstrate that the NOED condition, including compensatory measures will not result in more than a minimal increase in radiological risk, either in quantitative assessment that the risk will be within the normal work control levels (ICCDP less than or equal to 5E-7 and/or ICLERP less than or equal to 5E-8) or in a defensible qualitative manner. Further guidance is provided in Section 2.6.

The analysis is performed using an enforcement discretion time period of 5 days and which encompasses the requested enforcement discretion duration of 72 hours.

Risk Insights

The Incremental Conditional Core Damage Probability (ICCDP) and Incremental Conditional Large Early Release Probability (ICLERP) are calculated as follows:

ICCDP = [(zero maintenance conditional CDF, taking into account the equipment that is out of service for the NOED request) - (zero maintenance baseline CDF)] x (NOED completion time under consideration)

ICLERP = [(zero maintenance conditional LERF, taking into account equipment that is out of service for the NOED request) - (zero maintenance baseline LERF)] x (NOED completion time under consideration)

Based on discussion with Millstone Outage and Planning, the following configuration is projected for the 5 day period of enforcement discretion assumed in risk assessment.

- 3HVR*FN13B tagged
- “A” Power-Operated Relief Valve (PORV) blocked (i.e., 3RCS*MV8000A closed)
- Charging pump, RPCCW pump, and heat exchanger areas ventilation system dampers (HVR) in winter alignment
- Service Building switchgear ventilation outage
- “B” Safety Injection (SIH) pump tagged 1/26/2022 1300 – 1/26/2022 1700 (This outage was originally planned and modeled in the risk assessment, but will no longer occur)
- The increase in ventilation fan common cause failure probability has been accounted for in the risk calculations performed.

This configuration was assessed using the zero maintenance MPS3 Phoenix risk monitor model yielding the following results. The baseline MPS3 risk values are also listed below.

Baseline Core Damage Frequency (CDF) = 2.25E-06/yr
Baseline Large Early Release Frequency (LERF) = 4.35E-08/yr

Projected alignment including SIH02 (‘B’ SIH pump) outage (based on planned PM):

Conditional CDF = 4.39E-06/yr
Conditional LERF = 9.22E-08/yr
Time in configuration = 4 hours

Projected alignment with SIH02 restored:

Conditional CDF = 4.20E-06/yr
Conditional LERF = 9.21E-08/yr
Time in configuration = 4.83 days

The estimated risk increase associated with the 5 day period of enforcement discretion assumed in risk assessment is calculated to be:

ICCDP = ((4.39E-06/yr – 2.25E-06/yr) * 4/8766 yr) + ((4.20E-06/yr – 2.25E-06/yr) * 4.83/365 yr)
ICCDP = 9.77E-10 + 2.58E-08
ICCDP = 2.68E-08

ICLERP = ((9.22E-08/yr – 4.35E-08/yr) * 4/8766 yr) + ((9.21E-08/yr – 4.35E-08/yr) * 4.83/365 yr)
ICLERP = 2.22E-11 + 6.43E-10
ICLERP = 6.65E-10

These risk values are below the guidance threshold values of 5E-07 and 5E-08 for ICCDP and ICLERP, respectively.

Discussion of Dominant Risk Contributors

With 3HVR*FN13B tagged out of service, the Charging/RPCCW area ventilation system is capable of supplying room cooling to both trains of Charging and RPCCW via the opposite train exhaust fan, 3HVR*FN13A, in conjunction with supply fan 3HVR*FN14A. The dominant risk contributor involves loss of either 'A' train fan, resulting in loss of the entire ventilation system. However, establishing alternate ventilation is credited in accordance with OP 3314J.

Discussion of External Events

The equipment of concern for the NOED configuration is the operating train of Charging/RPCCW area ventilation which includes supply fan 3HVR*FN14A and exhaust fan 3HVR*FN13A. Per the MPS3 FSAR Section 9.4.3, both ventilation fans are seismically qualified and are located on the 66'6" elevation of the Auxiliary Building. Therefore, the risk of damaging this equipment due to seismic, high winds, external flooding, and external fire is considered negligible.

However, fans 3HVR*FN13A and 3HVR*FN14A are susceptible to failure due to internal fire damage either affecting the fans themselves or associated power supplies. Similar to the internal events risk assessment discussion, the compensatory measure of providing Auxiliary Building emergency ventilation in accordance with OP 3314J minimizes the fire risk impact.

8. **Confirm that the facility organization that normally reviews safety issues has reviewed and approved this request and that a written NOED request will be submitted within 2 days of the NRC staff's decision regarding the NOED.).**

The Facility Safety Review Committee reviewed this NOED on January 26, 2022 and concurs with this request.