REQUEST FOR ADDITIONAL INFORMATION

RELIEF REQUEST RR-04-12

TEMPROARY NON-CODE COMPLIANT CONDITION

EMERGENCY DIESEL GENERATOR SUPPLY PIPING IN THE SERVICE WATER SYSTEM

MILLSTONE POWER STATION, UNIT NO. 2

DOMINION NUCLEAR CONNECTICUT, INC

DOCKET NO. 50-336

By letter dated August 19, 2011, Dominion Nuclear Connecticut, Inc. (DNC or the licensee) requested relief from certain Section XI requirements of the *American Society of Mechanical Engineers* (ASME) Boiler and Pressure Vessel Code (ASME Code) for Millstone Power Station, Unit No. 2 (MPS2). Relief Request RR-04-12 is based on the hardship of performing required ASME Code repair/replacement activities to a degraded piping flange in the 'A' train 10-inch service water (SW) supply line to the emergency diesel generator heat exchangers. To complete its review, the U.S. Nuclear Regulatory Commission (NRC) staff requests the following additional information.

1. Provide the thickness of the flange (the face and hub), the wall thickness of the pipe, and operating temperature and pressure of the subject piping system.

2. Section 5.3. Provide the normal flow rate through the pipe at the flange location. Confirm that if the leak rate at the flange is 50 gpm, the service water supply to the associated diesel generator heat exchanger is still considered operable.

3. Section 5.5 discusses a flooding analysis based on a 2 gpm leak rate instead of 1 gpm leak rate. Discuss why 2 gpm is assumed instead of 1 gpm.

4. Section 5.6, Extent of Condition. (a) DNC states that "[n]o other SW system flange leaks are present in the MPS2 SW system." What inspections were done to ensure no other leaks are present? When were these inspections done? Was the entire SW system at MPS2 inspected? (b) Has the Millstone Power Station, Unit No. 3 (MPS 3) SW system been inspected for leaks? (c) DNC states that "the current condition is presumed to be damage to the coating system upon reinstallation into the system" after inspection of the pressure boundary during a refueling outage. DNC also states that one train of SW is inspected each refueling outage. Therefore it appears to the NRC staff that other areas of the SW system are susceptible to this sort of degradation. Discuss whether the entire MPS2 and MPS3 SW system piping has been inspected to identify the potential for the subject degradation occurring in other parts of the service water piping system. If not, provide justification.

5. Section 5.7 states that "…Operations will qualitatively monitor leakage once per shift…"

(A) Discuss in detail how the leakage will be monitored when the operator performs the walkdown every shift. Include the following information in your discussion:

(a) The degraded flange is located close to the ceiling in the room. How will the operator observe the leak rate from the floor of the room during the walkdown.

(b) Provide the required distance between the operator and the leaking flange location during the walkdown (i.e., the operator cannot exceed this required distance to observe the leakage).

(B) Confirm that 1 shift is 12 hours.

(C) Discuss if there will be a leakage catcher/container situated at the vicinity of the flange to catch the leaking fluid.

(D) Discuss whether the affected flange area will be without insulation until the flange is repaired.

(E) Section 5.3 of the relief request states that the current leak rate is approximately 10 drops/minute. Discuss whether the operator can observe 10 drops/min during his walkdown of the subject pipe.

(F) Discuss whether the leak rate will be recorded after each walkdown to observe any adverse trend. How will consistency in leak rate observations be ensured between shifts?

(G) Describe in detail how the 1 gpm leak rate will be determined at the degraded location, when and if the leak rate reaches 1 gpm.

(H) Discuss how many hours before a 1 gpm leak rate can be determined once the leak rate increases.

(I) How is DNC going to correlate the leak rate to the level of degradation of the flaw?

(J) Describe why the weekly trending, given the 72 hour action statement, and qualitative analysis is adequate.

(K) Are administrative controls in place at certain leakage rates below the 1 gpm? What are these controls and at what leak rates are they administered?

6. Section 5.7 states that if the flaw size reaches 33% of the original flange inside circumference, the 'A' Train SW system will be declared inoperable. (a) Provide the flange inside circumference measurement. (b) For this flaw, what is its depth limitation if the length is limited to 33% of the flange inside circumference? (c) The pipe at the flange location may be

susceptible to the same corrosion, therefore should a limit also be applied to the reduction of wall thickness of the pipe close to the flange.

7. Section 5.7 discusses two limits beyond which the 'A' train SW system will be declared inoperable: a leak rate of 1 gpm and flaw size of 33% of the flange inside circumference. (a) Discuss if there are any other limits being applied. The NRC staff has concerns regarding the flange thickness and believes that a limitation on the flange thickness beyond which the SW system should be declared inoperable would be prudent. Please provide such a limitation and how it will be monitored or discuss why it is not necessary (b) Confirm that when either the 1 gpm limit **or** the flaw size limit is reached the affected piping system is declared inoperable. (c) If the pipe at the flange location develops a leak rate of 1 gpm, will the 'A' train SW system will also be declared inoperable. If not, why not?

8. For the compensatory UT inspection, discuss exactly the areas of the flange and pipe that will be examined, the transducer that will be used, and what will be recorded.

9. If MPS2 enters MODE 5 prior to the next refueling outage, currently scheduled to start October 2012, will the flange be replaced at this earlier time?

10. Once in Mode 5, how long will it take to complete the work activities for the flange replacement? Can the affected flange be isolated from the SW system to perform these repairs? If isolation is possible, why not isolate and replace the flange?