August 7, 2003

MEMORANDUM TO: James W. Clifford, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

FROM: Victor Nerses, Sr. Project Manager, Section 2 ***/RA/***
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: MILLSTONE POWER STATION, UNIT NO. 3, FACSIMILE TRANSMISSION, DRAFT REQUEST FOR ADDITIONAL INFORMATION (RAI) TO BE DISCUSSED IN AN UPCOMING CONFERENCE CALL (TAC NO. MB8731)

The attached draft RAI was transmitted by facsimile on August 7, 2003, to Mr. D. Dodson, Dominion Nuclear Connecticut, Inc. (licensee). This draft RAI was transmitted to facilitate the technical review being conducted by NRR and to support a conference call with the licensee to discuss the RAI. The RAI was related to the licensee's submittal dated April 17, 2003, concerning the cable spreading area fire suppression fire suppression system. Review of the RAI would allow the licensee to determine and agree upon a schedule to respond to the RAI. This memorandum and the attachment do not convey or represent an NRC staff position regarding the licensee's request.

Docket No. 50-423

Attachment: Draft RAI

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DATE	08/07/03	08/07/2003

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DRAFT

REQUEST FOR ADDITIONAL INFORMATION
BY THE OFFICE OF NUCLEAR REACTOR REGULATION
FACILITY OPERATING LICENSE NO. NPF-49
DOMINION NUCLEAR CONNECTICUT, INC
MILLSTONE POWER STATION, UNIT NO. 3
DOCKET NO. 50-423
(TAC NO. MB8731)

1. 10 CFR Part 50.48(a) requires each operating nuclear power plant to have a fire protection plan which meets Criterion (GDC) 3 of Appendix A to Part 50. In particular, GDC 3 states, “Fire-fighting systems shall be designed to assure that their rupture or inadvertent operation does not significantly impair the safety capability of these structures, systems, and components.” The NRC has provided specific criteria, information, recommendations, and guidance acceptable to the staff that may be used to meet the requirements of 10 CFR 50.48 and GDC 3. This information is provided in NUREG 0800, Standard Review Plan, Section 9.5.1, Fire Protection Program and in Regulatory Guide (RG) 1.78 as it relates to habitable areas such as the control room and to the use of specific fire extinguishing agents.

   Please describe how the planned configuration meets the regulatory requirements . The licensee may address this by describing how the proposed change conforms to RG 1.78 as it relates to habitable areas such as the control room and at the local control stations in the east and west switchgear rooms or describe specifically how any alternatives will meet the requirements.

2. Millstone Power Station, Unit No. 3 committed to install an incipient fire detection system.

   How would the incipient fire detection system, which is desgined to detect very minute quantities of combustion products, will assure adequate plant response (defense-in-depth) for fires which are more rapidly developing than a cable that slowly overheats due to ampacity problems? This should include a discussion of how the licensee assures other plant activities, such as welding or diesel generator operations, that may result in spurious alarms will not affect response to valid alarms.

3. The most recent test, which was to demonstrate in part that the licensing basis is still being met, of the CO2 fire suppression system resulted in failure of a closed door to the Cable Spreading Area (CSA) and the test had to be aborted before all the objectives were achieved. Lacking this demonstration via the test, the licensee provides an explanation of why it is not necessary to retest. However, the explanation does not make clear how the licensee will assure when the CO2 system is called upon to perform as designed it will function within the CSA to extinguish a fire.

4. Your approved fire protection program includes a smoke purge system to remove smoke from the cable spreading room. This system was provided to meet the guidelines of the Standard Review Plan, Section 9.5.1.

   Explain why prior approval is not required prior to disabling this system.

5. You state that the smoke will be removed hydraulically or with electrical fans.

   Please provide details of the planned smoke removal method. What is the power supply to the electrical fans, and how will you assure the reliability and availability of the power supply after the fire has started? Where will water drain if the smoke is removed hydraulically, and how you will assure safe shutdown capability especially in light of the concerns in Question 7 ?

6. You state that the fire brigade will be directed to minimize the use of water and to use fire extinguishers to suppress a fire in the cable spreading room. The primary in situ combustible material in this area is electrical cable insulation which burns with a deep seated fire. Several recent industry events have highlighted the fact that gaseous fire extinguishers will not suppress a deep seated cable fire.

   Please provide details of the types of extinguishers available for use by the fire brigade in this area, and how you will assure fires with these attributes will be effectively extinguished?

7. In your submittal you note that water on the cable spreading room floor could leak through the floor onto the alternative shutdown areas below. Since plant operation in these areas may be required for a cable spreading room fire, this scenario appears to lead to lack of capability to safely shutdown the plant.

   Has the risk associated with this event been analyzed? If so, what are the results? How will you assure safe plant shutdown? Include in your discussion the scenario of a fire in the CSA that leads to evacuation of the Main Control Room and fire fighting in the CSA leads to the loss of alternate shutdown.

8. You propose to remove water from the cable spreading room floor with a vacuum.

   Given the concern of water leaking though the cable spreading room floor, justify how this method will meet the objectives of your Fire Protection Plan.