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**From:** PAUL BLANCH  
**Sent:** Wednesday, January 08, 1997 9:45 AM  
**To:** GLEN MILLS  
**Subject:** MP-1 2.206 RESPONSE COMMENTS

January 8, 1997

Mr. Samuel J. Collins, Director  
Office of Nuclear Reactor Regulation  
United States Nuclear Regulatory Commission  
Washington, DC 20555-0001

**SUBJECT: COMMENT ON NRC RESPONSE TO 10 CFR 2.206 PETITION ON MILLSTONE  
UNIT 1 REFUELING PRACTICES**

Dear Mr. Collins:

By letter dated December 26, 1996, Mr. Frank Miraglia, Jr. transmitted the NRC's response to the petition dated August 21, 1995, submitted by Mr. Ernest C. Hadley on behalf of Mr. George Galatis and We the People, Inc. pursuant to Section 2.206 of Title 10 of the Code of Federal Regulations. The petitioners contended, among other things, that refueling practices at Northeast Utilities' Millstone Unit 1 facility were not being conducted in accordance within the plant's design and licensing bases.

I reviewed this response and disagree with the NRC staff's conclusion, as stated in Director's Decision 96-23 that "the design of the SFP and related systems at Millstone Unit 1 was adequate to protect public health and safety during full-core offloads." The conclusion is superficial because it relies on an incomplete justification by the NRC staff and cannot be reached using good engineering judgement.

As detailed by the petitioners in the public meeting on April 8, 1996, in Waterford, Connecticut, on this petition, the licensee was offloading irradiated fuel during refueling outages before the decay time required by the Millstone Unit 1 licensing bases. The licensee defended that practice during the public meeting on the basis of the spent fuel pool water never having exceeded Technical Specification limits. The NRC staff, in Director's Decision 96-23, discusses spent fuel pool heat removal capability in great detail and concludes that it was sufficient for Millstone Unit 1's refueling practices.

However, the design and licensing bases for decay time have nothing to do with decay heat removal. The decay time is based exclusively on the offsite dose consequences from a postulated fuel handling accident. The radiological analyses for the fuel handling accident assume radionuclide inventories in the dropped irradiated fuel assembly and the irradiated fuel assemblies it strikes based on the event occurring at the minimum decay time. By offloading irradiated fuel assemblies in less than the minimum decay time at Millstone Unit 1, Northeast Utilities invalidated the analytical bases for the fuel handling accident described in Chapter

Page 1

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15 of the Final Safety Analysis Report. The petitioners provided information to the NRC staff that irradiated fuel was offloaded on Millstone Unit 1 as early as half of the required decay time. Since radionuclide inventories decrease exponentially with time, halving the decay time could more than double the amount of radioactivity released during a fuel handling accident.

To the best of my knowledge, neither the licensee nor the NRC staff have determined that the 10 CFR 100 limits on radiation dose to the general public would not have been violated had a fuel handling accident occurred at Millstone Unit 1 during irradiated fuel movements before the required decay time. At best, it was an unanalyzed condition that violated the law. At worst, it was an undue risk to the public.

The NRC staff's reasoning is incomplete, and its conclusion potentially inaccurate, because it did not evaluate the consequences from the licensee violating the decay time requirement. The conclusion is accurate only if it can be shown that the offsite dose consequences from a fuel handling accident at Millstone Unit 1 under the actual decay times would have remained a fraction of the 10 CFR 100 limits. The NRC should require that Northeast Utilities evaluate the offsite dose consequences from fuel handling accidents during the most limiting case (i.e., the earliest that irradiated fuel was offloaded) at Millstone Unit 1 before reaching a final determination on whether its refueling practices adequately protected public health and safety.

The NRC staff should also determine why it reached a conclusion based on an incomplete evaluation. The petitioner provided the NRC staff with ample documentation on decay time violations. The design and licensing bases for decay time is clearly described in numerous sources, including the Millstone FSAR, the Standard Review Plan, and the Standard Technical Specifications. It is discomfoting that the NRC staff, after 16 months of examining the issues raised in the petition, failed to address the safety consequences from this licensee's repeated violations of the decay time requirement over a 20 year period.

Sincerely,

David A. Lochbaum  
Nuclear Safety Engineer

cc: Chairman Shirley Ann Jackson  
United States Nuclear Regulatory Commission  
Washington, DC 20555

Mr. George Mulley  
Assistant Inspector General  
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