



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON NUCLEAR WASTE  
WASHINGTON, D.C. 20555

August 3, 1990

The Honorable Kenneth M. Carr  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Chairman Carr:

SUBJECT: DECOMMISSIONING OF THE PATHFINDER ATOMIC POWER PLANT

During our 22nd meeting, July 30-31, 1990, the Advisory Committee on Nuclear Waste met with the NRC staff to review plans for the decommissioning of the Pathfinder plant. The Committee had previously commented on this subject in our letter to you on October 18, 1989. Documents utilized in our latest review included the Safety Evaluation Report (SER) and the Environmental Assessment prepared by the NRC staff.

This was the first application for decommissioning of a nuclear power plant that was handled by the Division of Low-Level Waste Management and Decommissioning. This being the case, this is an excellent opportunity for the staff to reevaluate their generic technical guidance for the review and approval of similar applications in the future, as well as procedures for inspection of the decommissioned facilities. This guidance would be particularly helpful in ensuring uniformity in handling such applications.

Because of the low power and limited operating lifetime of this Plant, the associated decommissioning operations cannot be considered comparable to those anticipated for a major nuclear power plant. The same is true for the recent decommissioning of the Shippingport Atomic Power Station. Nonetheless, both of these operations, and the cleanup activities at Three Mile Island, Unit 2, are providing information, guidance and data that will be useful for the future. To this end, we encourage the NRC staff to keep abreast of such activities and to collect and digest the lessons learned.

The stated exposure rate to be attained in decontaminating the buildings and equipment surfaces at the Pathfinder plant is less than 5  $\mu$ R/hr, which is comparable to less than 45 mR/yr (assuming continuous exposure). Because this dose rate will be confined to

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a secured area (with only plant workers having access), we believe it is acceptable. Nonetheless, care should be taken, using realistic exposure scenarios, to ensure that this approach is compatible with the recently issued Policy Statement on Below Regulatory Concern. Included in such an assessment should be a consideration of the half-lives of the principal radionuclides involved.

We believe that the SER provides inadequate attention to the generation, retention, and analysis of liquid wastes. The SER does not appear to accurately reflect the attention directed to this problem by the licensee.

One item that needs to be given greater consideration relative to the potential environmental impacts of the decommissioning operations is groundwater contamination. Specific steps that should be taken include documenting existing groundwater contamination levels and establishing sufficient wells to monitor the possible migration of radionuclides down the hydrologic gradient to other areas. A careful assessment also needs to be made of the potential for transport of radionuclides by groundwater.

Airborne radionuclide releases to the environment which are anticipated during the decommissioning operations are expected to be well within NRC regulatory limits. The licensee, however, had not established a means to provide a written record of such releases. We concur with the NRC staff that the licensee should be required to measure, evaluate and report such releases.

In our letter to you on October 18, 1989, we offered recommendations on five topics that we believed should be given specific attention by the NRC staff in its review of plans for decommissioning the Pathfinder Atomic Plant. Each of these topics has been addressed.

Because of the low radionuclide levels and radiation dose rates involved, there could be a tendency for the licensee (and/or its contractor) to become "relaxed" in their approach to this project. For this reason, we urge that the NRC staff closely monitor the decommissioning to assure that standard operating procedures, including good health physics practices, are observed throughout the operation.

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Based on our review, and with due consideration to the advice given above, we concur with the NRC staff that this phase of the decommissioning of the Pathfinder Atomic Power Plant can be conducted without undue risk to the public health and safety.

Sincerely,



Dade W. Moeller  
Chairman

References:

1. Safety Evaluation Report on Proposed Final Decommissioning of the Fuel Handling Building and Reactor Building at the Pathfinder Generating Plant," License No. 22-08799-02, Docket No. 30-05004, June 1990
2. Environmental Assessment of Proposed Final Decommissioning of the Fuel Handling Building and Reactor Building at the Pathfinder Generating Plant," License No. 22-08799-02, Docket No. 30-05004, June 1990