UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 16, 1994

Dr. Daniel E. Dreyfus, Director
Office of Civilian Radioactive Waste Management
U.S. Department of Energy
1000 Independence Avenue
Washington, DC 20585

Dear Dr. Dreyfus:

I am writing in acknowledgment of your letter to the Chairman, dated August 23, 1994, in which you provided supplementary information to permit the Nuclear Regulatory Commission to assess what resources are necessary to accommodate the Department of Energy's (DOE's) activities in the Office of Civilian Radioactive Waste Management's (OCRWM) multi-purpose canister (MPC) program. The Chairman raised this issue at your June 6, 1994, presentation to NRC regarding the status of your program. The information provided by your letter is helpful and responsive to the Chairman's concern. However, I would like to discuss some significant issues regarding the program you have outlined.

First, we recognize the importance of the proposed MPC program as DOE's primary system solution for spent fuel storage, transport, and disposal for the OCRWM program. In recognition of the priority DOE has placed on this program, we are taking steps to arrange our resources to accommodate an imminent review of several MPC packages for storage and transportation. We are increasing our technical contract support and reallocating staff effort to support the significant workload anticipated. We plan to give priority to the MPC storage and transportation reviews over other licensing activities to the greatest extent possible. Although any potential approval of the MPC as disposal canister would remain part of NRC's review of a license application for a geologic repository under 10 CFR Part 60, we also are willing, to the extent possible, to review concepts for disposal packages to determine if we have any objections based on the current state of knowledge of the natural and engineered systems. We will be addressing the mechanics of these disposal reviews in separate correspondence.

Our involvement in the program outlined in your letter has already begun. Staff received applications for the GA-9 and GA-4 spent fuel transportation casks on July 26, 1994, and September 8, 1994, respectively, and is working on these applications. In addition, over the past year staff has been actively engaged in several technical exchanges with DOE concerning the issue of the potential credit for burnup in the criticality safety design for spent fuel containers, and is awaiting submittal of a topical report on this issue. However, as noted in this letter, our ability to maintain the ever-increasing pace depends greatly on DOE's system management decisions.

Second, the program outlined in your letter represents a very ambitious undertaking. It calls for the development of multiple new cask designs over a relatively short time span. While this approach may be desirable from the

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Department's viewpoint because of the maximum flexibility it provides, you should realize that it could place significant burdens on NRC resources. New MPC designs that contain unique design features could require significantly more time and resources to review than that required for conventional cask designs. The program approach would also require that NRC undertake parallel review of multiple applications from competing vendors. Submitting applications in a staggered manner rather than in parallel would help ease the burden. In addition, as noted in Dr. Paperiello's letter to you of October 4, 1994, NRC staff has raised several issues regarding the use of burnup credit that, if unresolved, have the potential for prolonging the review and certification process for the MPC.

Third, it is unclear how the program outlined in your letter, achieves the early fabrication and use of the MPC system. As we understand it, the objective, if DOE ultimately decides to fabricate and deploy the MPC-based system, is to optimize the use of MPC's in OCRWM's program. Initially, two MPC systems would be required, one large and one small, both of which would be capable of holding a range of PWR and BWR fuel, and which could be certified for availability to reactor sites by 1998 or as soon as possible thereafter. To be usable at the reactor sites, these MPC systems should be certified by rulemaking under 10 CFR Part 72, Subpart K, for storage and transportation for use under a general license. In addition, the certification and rulemaking process for storage could also include certification for transport.

To help achieve this objective, I would suggest that the schedules and application submittals mentioned in your letter be realigned in separate groups for the large and small MPC systems. In the absence of unforeseen problems, the schedules and submittals in each group would be used to plan and support the rulemakings for the storage and transportation certification of the large and small MPC systems. In our opinion, this option represents the most effective use of our combined resources, and presents the earliest opportunity for certification, fabrication, and use of a certified MPC.

We believe, based on the information available to us, that we may be able to complete the required rulemakings to support the storage and transportation certification of the large and small MPC systems by the end of 1998. This prediction should be viewed as optimistic, but doable, providing unforeseen problems do not create significant delays. Our success in meeting this schedule depends on several important factors. These include the timeliness and adequacy of DOE submittals, the number of proposed designs submitted by competing vendors, and the resolution of outstanding and unforeseen technical problems.

In summary, the NRC will maximize its effort to accommodate the MPC program to the extent possible, but DOE must recognize that the comprehensive reviews needed to ensure public health and safety require significant staff time. Therefore, DOE should carefully consider the issues mentioned here and gauge its expectations for NRC's role in the MPC program accordingly.

Noting the significance of the MPC in DOE's solution to the nation's high-level radioactive waste disposal problems, we offer these comments in the spirit of identifying issues for early resolution in an attempt to help you optimize the program proposed in your August 23 letter. My staff and I stand ready to discuss these matters with you at any time.

Sincerely,

Robert M. Bernero, Director
Office of Nuclear Material Safety
and Safeguards

Noting the significance of the MPC in DOE's solution to the nation's high-level radioactive waste disposal problems, we offer these comments in the spirit of identifying issues for early resolution in an attempt to help you optimize the program proposed in your August 23 letter. My staff and I stand ready to discuss these matters with you at any time.

Sincerely,

Original /s/ by
Guy A. Arlotto

for Robert M. Bernero, Director
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and Safeguards

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