



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

August 25, 1994

MEMORANDUM FOR: The Chairman  
Commissioner Rogers  
Commissioner de Planque

FROM: James M. Taylor  
Executive Director for Operations

SUBJECT: U.S. DEPARTMENT OF ENERGY PROPOSED PROGRAM APPROACH AND  
ACTIVITIES ASSOCIATED WITH MULTI-PURPOSE CANISTER  
DEVELOPMENT

The purpose of this memorandum is to provide the Commission with the more detailed analysis requested in the June 15, 1994, Staff Requirements Memorandum. Discussed below is a summary of staff and U.S. Department of Energy (DOE) activities associated with DOE's proposed program approach (PPA) for the high-level waste repository program and an overview of DOE's plans for development of multi-purpose canisters (MPCs) for transportation, storage, and disposal of high-level waste.

Although the staff has had several interactions with DOE on the PPA, both before and after DOE briefed the Commission, the staff has not learned much more about the plan since the time of the briefing.

DOE has made the high-level findings (HLFs) on site suitability contained in 10 CFR Part 960, (Part 960) the cornerstone of the PPA. However, statements from DOE indicate that schedules for completing the HLFs are still under revision. DOE and its contractors are working on the details to support the plan. These are expected to be provided in September 1994.

In addition, DOE's August 4, 1994, Federal Register notice on the process to be used to evaluate the suitability of Yucca Mountain has raised a new set of questions that the staff is currently attempting to resolve. Of particular concern is DOE's statement that it will no longer make specific evaluations of the favorable and potentially adverse conditions in implementing Part 960. Because these conditions provide a strong tie with the favorable and potentially adverse conditions in 10 CFR Part 60, (Part 60) the staff is not sure how DOE will ensure that the PPA also focuses on licensing as well as site suitability needs. The staff plans to discuss with DOE the meaning of this statement in the Federal Register notice, to determine if there is a concern.

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If progress has been made by DOE in further solidifying its PPA, this has not been visible to the staff. However, DOE has indicated that it did not plan to complete its planning for fiscal year 1995 (FY95) until the end of September 1994. Therefore, at that time, the staff should have a better understanding of the PPA and any concerns there may be with it. Furthermore, DOE plans to complete its post-FY95 planning by March of 1995.

Although it is concerned about the continued lack of details in the DOE planning effort, the staff is engaged in its own planning process, to make its high-level waste repository program consistent, to the extent practicable, with DOE's schedule for completion of the HLFs. To date, the staff has completed its initial determination of how the HLFs from Part 960 relate to Part 60 and the License Application Review Plan (LARP). The staff believes that it can modify its program to meet the currently-proposed schedule of completion for DOE's HLFs. This will allow the staff to review the technical aspects of DOE's HLFs as they relate to Part 60. The staff's analyses, to date, indicate that only modest changes to the LARP schedule are necessary to ensure that the staff will complete the activities it needs to review the specific HLFs DOE plans to make. The staff is also working with the Center for Nuclear Waste Regulatory Analyses to evaluate the need to re-order work in the Geologic Setting area, where reasonable, in light of DOE's timetable. The next 30 days will be an extremely important time since DOE is preparing more detailed information on the full scope of the implementation of the PPA.

Besides the PPA effort, development of MPCs appears to be another top DOE priority in the high-level waste area. There is a great deal of pressure on DOE to have a suitable process in place by 1998. Several law suits have already been filed, in this regard, by State attorneys general and nuclear utilities seeking, among other things, a court order directing DOE to develop a program to begin accepting spent fuel by 1998. The pressure on DOE appears to have caused it to propose an aggressive schedule for submittal of topical reports and applications for cask certifications to NRC.

One of the major concerns that DOE has expressed with regard to MPC development is the resolution of the burn-up credit issue. To that end, DOE is planning to submit two topical reports. The first topical report will deal with burnup credit for pressurized water reactor (PWR) fuel storage and transport, in the September/October 1994 time-frame. A separate topical report on burnup credit for PWR and boiling water reactor fuel disposal is planned to be submitted to NRC in late 1995 or early 1996. Both topical reports will require extensive review by staff from the Divisions of Waste Management and Industrial and Medical Nuclear Safety, because of the overlapping regulatory requirements of 10 CFR Parts 60, 71, and 72. The staff anticipates that these reviews will be technically challenging.

DOE is also planning to submit a series of applications for certification of casks, some with burnup credit and some without. Currently, DOE's schedule calls for up to 14 applications between 1994 and early 1996 (2 shortly and 6 to 12 by early 1996). If this schedule is met, it means a substantial resource burden for the staff since each of these submittals will be a major safety review package.

There is also, on the horizon, the possibility that a privately developed away-from-reactor independent spent fuel storage installation could be created. Such a facility is under consideration by the Mescalero Apache Indian Tribe of New Mexico. If this should occur, the staff would have pre-licensing (and licensing) review responsibilities for it, as well.

At this time, the MPC development component of DOE's waste storage and disposal program is still under development. The staff will pay careful attention to resource requirements associated with these activities, as they become better defined, and will inform the Commission of any foreseeable changes.

The Office of the General Counsel has reviewed this paper and has no legal objection. As significant issues arise in either the PPA or MPC programs, the staff will update the Commission on any impacts to the NRC's activities in these areas.

**Original signed by  
James M. Taylor**

James M. Taylor  
Executive Director  
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