

SEP 14 1993

Mr. Christopher A. Kouts, Acting Director
 Strategic Planning and International Programs
 Office of Civilian Radioactive Waste Management
 U.S. Department of Energy
 1000 Independence Avenue, SW
 Mailstop RW-4
 Washington, D.C. 20585

Dear Mr. Kouts:

SUBJECT: COMMENTS ON THE REPORT OF THE TASK FORCE ON AN ALTERNATIVE PROGRAM STRATEGY

I am responding to the U.S. Department of Energy (DOE) letter dated July 15, 1993, inviting comments on the "Proposed Alternative Strategy for the Department of Energy's Civilian Radioactive Waste Management Program." DOE noted in that letter that the report represented the views of the Task Force on an Alternative Program Strategy, and not necessarily those of DOE or the Office of Civilian Radioactive Waste Management. As requested, the U.S. Nuclear Regulatory Commission staff has reviewed the report. Its review focused only on the policy issues raised by the report, not on the technical assumptions which appear to underlie the proposed alternative strategy.

Based on its understanding of the information presented in the report, the staff believes that many aspects of the task force proposals are being implemented, and that some others can be accommodated. However, in some cases, it does not appear that the task force recognized ongoing activities or existing documents. In addition, the meaning of some of the steps contained in the elements is unclear. For example, many of the steps identified in Element 1 are similar to the performance allocation process contained in the Site Characterization Plan (SCP). Because of the ambiguous nature of the steps in Element 1, the staff is unable to determine if there are any differences between them and the performance allocation process discussed in the SCP. A second example of this is that the staff is presently having interactions with DOE covering many activities, in Element 3, concerning early pre-licensing interactions. But, it is not clear what differences exist between Element 3 and the established issue resolution process. Without a clearer presentation of the information in the report, the staff is unable to determine how it relates to established program activities, and how the program would change if these recommendations were adopted.

In addition, the task force stated that in developing the alternatives, it attempted to develop a strategy that required little or no change in the law or regulations beyond any already underway. However, there are three areas where the staff believes the report recommendations may be inconsistent with 10 CFR Part 60 or the Nuclear Waste Policy Act. These are: 1) the issuance by the staff of a formal report similar to that done under 10 CFR Part 50, Appendix Q (Element 2); 2) the desire to obtain a construction authorization and license at the same time (Element 5); and 3) the issuance of a limited

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work authorization before a construction authorization (Element 6). The specific staff comments on these individual elements and the other elements are provided in the enclosure.

I trust that this reply responds to your request. Thank you for the opportunity to comment on the proposed alternative strategy. We would appreciate it if you would keep us informed of the progress of this and any similar reviews of DOE's high-level waste program.

Sincerely,

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

Enclosure:
NRC Detailed Comments on "A Proposed
Alternative Strategy for DOE's Civilian
Radioactive Waste Management Program"

- cc: D. Shelor, DOE/HQ
- R. Loux, State of Nevada
- T. J. Hickey, Nevada Legislative Committee
- C. Gertz, DOE/NV
- M. Murphy, Nye County, NV
- M. Baughman, Lincoln County, NV
- D. Bechtel, Clark County, NV
- D. Weigel, GAO
- P. Niedzielski-Eichner, Nye County, NV
- B. Mettam, Inyo County, CA
- V. Poe, Mineral County, NV
- F. Sperry, White Pine County, NV
- R. Williams, Lander County, NV
- L. Fiorenzi, Eureka County, NV
- J. Hoffman, Esmeralda County, NV
- C. Schank, Churchill County, NV
- L. Bradshaw, Nye County, NV

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**U.S. Nuclear Regulatory Commission Detailed Comments on
"A Proposed Alternative Strategy for the
Department of Energy's Civilian Radioactive
Waste Management Program"**

In its review of the above named document, the U.S. Nuclear Regulatory Commission staff has identified a number of comments on the eight elements contained in the proposed strategy. These comments are discussed below, and should be considered with the broad comments provided in the transmittal letter.

ELEMENT 1:

In Element 1 the task force recommends that the U.S. Department of Energy (DOE) develop and review a "Robust Repository Safety Concept" early in the implementation of its strategy. In this element, the report stated that there were three things the program has not done well. These included: 1) decide precisely the combination of natural and engineering barriers it will rely on to demonstrate safety; 2) clearly describe the combination of reliance on the individual barriers; and 3) subject that description to broad external review. The task force further goes on to identify the steps it believes DOE should take to frame a robust safety concept. The steps the task force outlined would: 1) use multiple barriers; 2) focus on those features most desirable; 3) define a conservative engineering system design; 4) select the best combination of natural and engineering features; and 5) rely on natural analogs. The report also suggested that DOE could reduce site testing needs, where appropriate.

Although the staff does not have a problem with this approach, it should be noted that DOE has described, in its Site Characterization Plan (SCP), a performance allocation process to deal with the question of sufficiency of data. This process resulted in a baseline program for site characterization that DOE documented in its SCP and that the NRC staff found generally adequate. For the staff to more fully understand how the proposal would affect this agreed upon SCP process, additional information is needed on how the steps in Element 1 relate to the performance allocation process described in the SCP and what, if any, changes it would propose. If any aspects of this element were adopted by DOE, the staff assumes it would advise NRC (as a minimum, in its required semiannual progress reports) of any changes in the scope of the performance allocation process or its planned site characterization activities. NRC would, in turn, comment in the light of its evaluation of the specific changes that are proposed.

Besides needing to better understand the relationship of Element 1 to the performance allocation process, the staff is concerned that the task force makes statements in Step (2) of Element 1 that the staff believes could be interpreted to limit site characterization to only those favorable conditions present at the site and that support DOE's conceptual model of the site. It needs to recognize that there are adverse as well as favorable conditions that must be investigated. In addition, it is important that any such proposals not be construed to preclude site characterization investigations addressing the validity of other conceptual models of the site.

ENCLOSURE

Finally, the Advisory Committee for Nuclear Waste (ACNW) is suggested by the task force, as an external reviewing body, along with other organizations, to which DOE could subject its concept for review. The sole function of the ACNW is to advise the Commission on nuclear waste disposal matters, and should not be the direct point of contact for the NRC review of any DOE repository activities.

ELEMENT 2:

Element 2 recommends reissuing the siting guidelines, and beginning a process to allow for periodic site suitability findings during site characterization. This would include external peer review and would lead to the submission of a report, to NRC, for formal review and a preliminary finding along the lines of the "pre-application site suitability review of site suitability issues," under 10 CFR Part 50, Appendix Q.

The NRC staff believes that the present NRC/DOE interfaces are accomplishing this to a great extent through the agreed on issue resolution process. This process, which has been well documented by NRC and discussed at length with all the repository program participants, states that issue resolution means the staff has completed its review of site characterization documents, and where appropriate, agrees that it has no more questions or comments. Except for very specific cases in which an issue is resolved through rulemaking, no issue can be finally resolved during the prelicensing consultation period. The staff will still need to conduct a review of the subject, in the license application evaluation, to ensure that DOE has acceptably demonstrated, in the staff's opinion, compliance with 10 CFR Part 60. This position has its regulatory basis in 10 CFR 60.18(1).

With respect to the task force proposal that DOE submit a report to NRC for formal review and findings similar to those contained in 10 CFR Part 50, Appendix Q, it is unclear exactly what type of process is envisioned. As noted above, there is in-place an issue resolution process that the staff believes is sufficient for the pre-licensing phase of the program. For all of the significant issues, DOE will need to evaluate their combined effect on meeting the performance objectives. Therefore, the staff believes that, even if consideration were given to promulgating a similar process to 10 CFR Part 50, Appendix Q for 10 CFR Part 60, the performance based requirements of 10 CFR Part 60 would preclude making any findings on significant issues. In fact, even if the 10 CFR Part 50, Appendix Q procedures were in place, early review in this instance might well be found not to be "in the public interest" when the degree of likelihood that findings would retain their validity in license reviews, as well as potential objections of cognizant state or local government agencies, were considered.

ELEMENT 3:

In Element 3 the task force suggests that there is a need for early formal pre-licensing interactions with, and preliminary findings by, the NRC staff. As discussed above, in relation to Element 2, the staff's current interactions with DOE are consistent with the agreed on issue resolution process, which the staff believes responds to this element. Without a better definition of what is meant by "formal" and "preliminary findings," the staff could not comment further on what is described in the element.

ELEMENT 4:

Element 4 describes the concept of a waste package research and development facility constructed early in the site characterization program. This facility would conduct nonradioactive or "cold" tests on initial versions of a multiple purpose container. Later, after receiving a construction authorization, tests would be conducted using spent fuel or high-level waste. The staff has two concerns with the proposal in this element. First, the report is unclear whether the facility would be on or off site. In addition, the report appears to suggest emplacing waste in the repository after receipt of a construction authorization, but before a license has been issued. The only waste emplacement permitted prior to the issuance of a license to receive and possess is for site characterization purposes as provided in 10 CFR 60.18(e).

ELEMENT 5:

Element 5 describes the plan for the phased development of a full-scale repository. This plan recommends that development occur only after the construction permit and license to receive and possess has been issued. It further suggests that DOE seek the construction authorization for a full-scale repository, not for a small or partial repository. However, it would undertake small-scale disposal with a conservative design. Later, the plan would have DOE file for one or more license amendments, to allow emplacement of larger amounts of waste.

The staff believes that the concept of phased emplacement is permitted under 10 CFR Part 60. However, the task force envisions that DOE would be able to obtain a construction authorization and license to receive and possess at the same time. Before NRC could issue a license to possess, DOE would need to obtain a construction authorization, as required by 10 CFR 60.3, and the construction of the repository would need to be substantially complete, as required by 10 CFR 60.41(a). Substantially complete as defined in 10 CFR 60.41(a) is as follows:

Construction may be deemed to be substantially complete for the purposes of this paragraph if the construction of (1) surface and interconnecting structures, systems, and components, and (2) any underground storage space required for initial operation are substantially complete.

In addition, to implement the approach outlined in the proposal, DOE would still have to present the analysis in its license application for the full capacity of the repository.

ELEMENT 6:

In Element 6 the task force separates the acceptance of waste by the DOE from the emplacement of the waste in a repository. Under this element, waste would be accepted and stored at the site and on the surface. This available storage could be used to complement storage at other Federal facilities. Such an action might be construed as establishing a Monitored Retrievable Storage (MRS) facility. The location of the MRS and repository at the same site is not permitted under the Nuclear Waste Policy Act (NWPA). Therefore,

clarification is needed on how DOE would achieve the proposal outlined in this element.

The staff also interprets some of the actions proposed in this element as allowing DOE to begin construction under a limited work authorization, before a construction authorization was issued. Such actions are not permitted in 10 CFR Part 60. Specifically, 10 CFR 60.3 requires that a construction authorization be issued before construction of the repository starts.

ELEMENTS 7 and 8:

Element 7 provides for the management and institutional initiatives needed to ensure that the new strategy is carried out efficiently and inclusively. Element 8 provides for the extensive public review that will be needed to develop the broadest possible consensus. The only NRC organization named to participate in the review is the ACNW. As stated in Element 1, the ACNW advises the Commission, and should not be the direct point of contact for the NRC review of any DOE repository activities.