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

JAN 23 1990

MEMORANDUM FOR: Jessie L. Funches, Director  
Program Management, Policy Development  
and Analysis Staff, NMSS

FROM: Robert E. Browning, Director  
Division of High-Level Waste Management

SUBJECT: RESPONSE TO CONGRESSMAN UDALL'S QUESTIONS

In response to your memorandum dated January 19, 1990 enclosed you will find the Division of High-Level Waste Management's response to questions XII A-C and XVI. As requested, these responses have been electronically transmitted to Antoinette Walker. If you have any questions on these responses please contact Joe Holonich at extension 23403.

A handwritten signature in black ink, appearing to read "R. E. Browning".

Robert E. Browning, Director  
Division of High-Level Waste Management

Enclosure: As stated

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QUESTION XII A AND B

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NAME :JHolonich	:JLinehan	:BYoungblood	:RBrowning	:	:
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QUESTION XII A AND B

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QUESTION XII(A). What are the major regulatory issues pertaining to a permanent nuclear waste repository that were resolved in 1989?

ANSWER:

In its 1988 review of DOE's Consultation Draft Site Characterization Plan (CDSCP) for the Yucca Mountain site the NRC staff identified five objections, which are matters of such immediate seriousness to a particular portion of the site characterization program that NRC would recommend DOE not start work in that area until each is satisfactorily resolved. NRC reviewed DOE's statutory Site Characterization Plan (SCP) in 1989 and identified only two objections.

Originally, the staff had three objections related to the exploratory shaft facility (ESF) in its review of the CDSCP. Two of those, which concerned ESF location and construction, were resolved in the SCP. The third, which was an objection to the ESF design based upon possible test interferences, was partially resolved, and the unresolved aspects of the objection were incorporated into the SCP objection regarding the ESF design control process.

A fourth CDSCP objection, which pertained to the CDSCP's inadequate attention to articulating and differentiating between alternative conceptual models in planning the site characterization program, was partially resolved and was removed as an objection in the staff's review of the SCP. However, the staff

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continues to track this issue as one of its SCP concerns. The SCP provides considerable discussion of alternative conceptual models and site investigations to evaluate them, and the SCP's issue resolution strategy incorporates alternative conceptual models as an important consideration.

The fifth CDSCP objection was that DOE did not have in place a quality assurance (QA) program meeting NRC requirements. That was still the case at the time of the staff's review of the SCP, and hence the objection remains. However, substantive progress has been made toward resolution of this concern. NRC and DOE staffs have reached essential agreement on how NRC's QA requirements should be implemented into a framework of QA plans and procedures for use by contractors during site characterization. The NRC staff has issued ten safety evaluations documenting this agreement. DOE has also improved its contractor audits during the last year and received generally favorable evaluations from the NRC staff, which indicates that despite limited implementation of the QA program at this time, DOE appears capable of finding and correcting QA problems by means of its audit program. Finally, DOE and NRC reduced the number of outstanding QA open items from 22 at the start of FY 89 to 13 by the end of that year.

QUESTION XII(B). What are the current major regulatory issues that need to be resolved prior to the Commission's issuance of a Construction Permit for a permanent nuclear waste repository at a site now under consideration by the DOE?

ANSWER:

In order to be granted a construction permit for the Yucca Mountain Waste repository, the Department of Energy (DOE) will have to demonstrate compliance with the requirements of the Commission's repository licensing rule, 10 CFR Part 60, and the Environmental Protection Agency's (EPA's) applicable environmental standards for releases of radioactivity, and applicable requirements of the National Environmental Policy Act (NEPA). At the current stage of the NRC's ongoing pre-license application consultations with DOE, and the current early stage of DOE's site characterization program, the two major site-related regulatory issues that need to be resolved are: (1) the need for DOE to demonstrate the adequacy of both the exploratory shaft facility (ESF) design and the design control process; and (2) the need for DOE and DOE contractor quality assurance (QA) plans and procedures to comply fully with NRC QA criteria in order to produce data that will be usable in licensing.

NRC and DOE staffs are in essential agreement on how DOE needs to implement NRC's QA requirements into a framework of QA plans and procedures for use by DOE contractors during site characterization, and DOE's QA audits have improved to such an extent that DOE appears capable of finding and correcting QA

problems. With respect to the ESF, DOE has committed to reevaluating the current ESF design. However, it is likely that during the full course of reviews conducted prior to issuance of a construction permit many more regulatory concerns will be identified. Some may only be resolved after the completion of DOE's site characterization program and the analysis of the data produced from that program.

In addition, there appear to be a number of regulatory, institutional, and technical uncertainties in the Commission's regulations which may need to be resolved. These issues and the strategy and schedules for resolving the issues are being pursued by the staff.

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QUESTION XII (C). What would the Commission recommend that the Congress do in order to facilitate resolution of the problem of finding a nuclear waste repository site that meets regulatory requirements and which will not be opposed by State and Local political entities?

ANSWER:

At present, the Commission has no recommendation other than to continue to implement the provisions allowing for the use of a negotiator.

QUESTION XVI. What is the Commission's view on the implementability of the Environmental Protection Agency's high-level waste disposal standards (40 CFR 191 Subpart B), assuming EPA reissues these standards without significant change?

ANSWER.

Previously, the Commission had taken the position that the EPA standard was implementable. Although the Commission did not formally document this position, the lack of dissent indicated that the Commission believed the standard was implementable. However, recently the Commission has decided to revisit its earlier conclusion, and is receiving input from both the staff and its Advisory Committee on Nuclear Waste. Once the Commission has had an opportunity to review all of the information presented before it, it will make a determination on its existing position concerning the implementability of the EPA standard.