

SEP 4 1987

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Mr. James P. Knight, Director
Siting, Licensing and Quality
Assurance Division
Office of Civilian Radioactive
Waste Management
U.S. Department of Energy
RW-20
Washington, DC 20585

WM Record File

109

WM Project

Docket No.

PDR

LPDR

Distribution:

(Return to WM, 623-SS)

Dear Mr. Knight:

SUBJECT: PRODUCTIVE INTERACTIONS BETWEEN NRC AND DOE

This letter is in response to your July 15, 1987 letter discussing several areas which you believe are ripe for productive interactions between DOE and NRC. As you know, we have supported a program of pre-licensing interactions to identify issues early and provide appropriate and timely regulatory guidance regarding their resolution. Accordingly, I was pleased to receive your suggestions as to a variety of mechanisms for and areas of interaction with the DOE. The following are our comments on your suggestions.

Near-Term Rulemakings

Your letter identifies two subjects for near-term rulemaking: (1) establishing a design basis accident to cover disposal of high-level waste and (2) amending 10 CFR Part 51 to cover disposal of high-level waste. Actions are underway with regard to both subjects. Regarding the design basis accident, an NRC-DOE meeting to discuss the technical basis and rationale for establishing a design basis accident and dose limit was held on August 26, 1987. As a result of this meeting, it was agreed that a DOE petition for rulemaking under 10 CFR 2.802 would be the most efficient method for addressing this issue since it would permit public comments on the issue at an early stage. The NRC staff emphasized to DOE that any such petition would need to provide a rationale for the recommended revision of the regulations, including a statement of DOE's interest in seeking the rule change, the technical basis in support of the change, and any specific cases where the current rule is unduly burdensome or deficient.

Regarding amendment of 10 CFR Part 51, staff consultations with the Commission on amending 10 CFR Part 51 began in early 1986 concerning how NRC will go about adopting DOE's Environmental Impact Statement as directed by the Nuclear Waste Policy Act of 1982. Based on these consultations, the Commission approved preparation of a proposed rule to establish procedures for NEPA review of a geologic repository for high-level waste. By the end of FY87, the proposed rule is expected to be sent from the Office of General Counsel to the Commission for review prior to its issuance for public comment.

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Candidate Topics for Future Rulemaking

Your letter also proposed three topics for future rulemaking: (1) methodology for establishing groundwater travel time; (2) analytical methods for evaluating waste package performance; and (3) selection and characterization of disruptive scenarios. These topics may indeed have merit as candidates for future rulemaking. However, it is not yet clear to us whether rulemaking is appropriate on these topics. As you note in your letter, the issues associated with these topics are still being identified. We think it would be inappropriate to commit to a specific approach for resolution before the issues are more fully identified and examined. It is the NRC staff's view that technical positions should first be developed to determine the issues and approaches for their resolution. In this light, it would be useful for you to provide comments on the ground water travel time and the disturbed zone draft Generic Technical Positions. Such positions would be used to determine on a case-by-case basis whether rulemaking is appropriate. We have been active in developing such positions. A listing of technical topics that have been or are being addressed is enclosed (Enclosure 1). Topics categorized on this list as "Guidance Under Development" are considered to bear primarily on licensing. Accordingly, lack of completed guidance in the listed areas should not delay the start of site characterization.

Licensing Topical Reports

Your letter proposes that we put in place a procedure to review Licensing Topical Reports (LTRs) that would document regulatory and licensing positions developed by the DOE. Such LTRs would provide an opportunity for NRC review of specific subjects prior to licensing. This would be consistent with the NRC Licensing Topical Report Program which provides a procedure whereby organizations may, upon their own volition or at the request of NRC staff, submit reports on specific subjects to the NRC and have them reviewed independently of the license review. The broad purpose of the review of licensing topical reports in the high level waste program would be to resolve issues at the staff level prior to submittal of the license application, which would reference such resolution. However, as we stated in commenting on the Draft Mission Plan, there are some aspects of the nature and role of LTRs in the high level waste program that need to be clarified, such as how to involve States, Tribes, and interest groups and what type of licensing issue should be addressed by an LTR, as opposed to those types of issues that would be more appropriately addressed by an NRC Generic or Site-Specific Technical Position. We are currently evaluating the role of LTRs in the regulatory guidance program and the procedure to review them. We would be happy to discuss this with you at an early date, as well as any DOE position papers which might form the basis for an LTR.

Generic Technical Positions and Regulatory Guides

In your letter, it is suggested that a management review of the process for developing Generic Technical Positions and Site-Specific Technical Positions

would be timely and that the experience gained in developing and promulgating NRC Regulatory Guides should not be overlooked. A management review has been undertaken to evaluate the existing process for developing Generic Technical Positions (GTPs). The concerns that you have raised in management meetings about authoritativeness and extent of peer review of GTPs will be considered in this review. Because of other program priorities this review will not be completed until December 1987. However, I would like to share some of our preliminary views.

GTPs and Regulatory Guides provide NRC staff guidance on acceptable approaches for complying with the Commission's regulations. GTPs and Regulatory Guides are not regulations, and a licensee or license applicant may propose alternative methods and solutions from those in the guidance documents, if those alternatives provide an adequate basis for compliance with the regulations. The existing procedure for issuing Generic Technical Positions and Site-Specific Technical Positions includes review and concurrence by the Office of General Counsel (OGC), and review, as appropriate, by other offices such as the Office of Nuclear Regulatory Research (RES), or the ACRS. Furthermore, draft GTPs/STPs are noticed in the Federal Register and issued for public comment. The staff addresses these comments, normally through the preparation of a comment resolution document, in the preparation of the final GTP. In some cases a public meeting with the commenters may be held to better resolve points at issue. I believe that we have now established a systematic process for developing GTPs that documents the staff's positions on licensing matters, taking into consideration the views of NRC staff, the ACRS, the public and likely participants in the licensing proceeding. It is our view that GTPs and Regulatory Guides would have equal standing in an NRC adjudicatory hearing. However, as noted above, we are evaluating the GTP process to determine whether further refinements might be appropriate.

Review of Existing Regulatory Guides

In your letter, you suggest it would be useful to determine which existing NRC Regulatory Guides might be endorsed, in whole or in part, for the repository licensing process. You further indicate that you have prepared a preliminary review you would be happy to share with us. We would be interested in seeing the results of your review.

As mentioned at the outset, we strongly support a program of pre-licensing interactions for issue resolution. To facilitate and further focus discussions regarding such interactions, we have enclosed a list of generic topics that my staff considers to be desirable areas for regulatory guidance (Enclosure 2). We would like to discuss it with you. After agreement has been reached on the list we would like to come to agreement with you on an appropriate guidance

mechanism (i.e., GTPs, RGs, or LTRs) for each topic, the best timing for dealing with each topic and steps for determining if rulemaking is appropriate. We look forward to further discussions with you in the near future.

Sincerely,

Original Signed by
MICHAEL J. BELL



Robert E. Browning, Director
Division of High-Level Waste Management
Office of Nuclear Material Safety
and Safeguards

Enclosures:

1. NRC Guidance on Technical Topics
2. Suggested Topics for Regulatory Guidance

NRC GUIDANCE ON TECHNICAL TOPICSCompleted Guidance

- Documentation of Computer Codes, NUREG-0856 48FR31761, 7/11/83, Final GTP
- Determination of Radionuclide Solubility in Groundwater for Assessment of High-Level Radionuclide Waste Isolation, Final GTP
- Waste Package Reliability Analysis, Final GTP
- In-Situ Testing During Site Characterization, Final GTP
- Design Information Needs in Site Characterization Plans, Final GTP
- Borehole and Shaft Seals, Final GTP
- Determination of Radionuclide Sorption for HLW Repositories, Final GTP
- Qualification of Existing Data, Final GTP
- Peer Review, Final GTP

Guidance Under Development

- Methodology for Evaluating Waste Package Performance
- Evaluation of Groundwater Travel Time
- Assessing Compliance with the EPA Overall System Standard
- Scenario Methodology
- Scenario Probabilities
- Geochemical Conditions and Processes that Affect Radionuclide Transport
- Validation and Verification
- Definition and Methodology for Delineating the Disturbed Zone
- Preclosure Performance Assessment Methodology
- Methodology for Assessing Retrievability of Waste
- Seismo-Tectonic Design Bases and Criteria
- Items and Activities Subject to QA

SUGGESTED TOPICS FOR REGULATORY GUIDANCE

- Methodology for Evaluating Waste Package Performance
 - Acceptable Waste Package Testing Programs
 - Acceptable Waste Package Analytic Methods
 - Extrapolation of Short-Term Test Data
 - Substantially Complete Containment
- Methodology for Evaluating EBS Performance
 - Acceptable EBS Testing Programs
 - Acceptable EBS Analytic Methods
 - Extrapolation of Short-Term Test Data
- Evaluation of Groundwater Travel Time
- Assessing Compliance With the EPA Overall System Standard
- Identification of Anticipated and Unanticipated Events
- Scenario Methodology
- Scenario Probabilities
- Geochemical Conditions and Processes that Affect Radionuclide Transport
- Criteria for Acceptable Design of Seals for Shafts and Boreholes
- Validation and Verification
- Proper Use of Expert Judgment
- Acceptable Methodology for Uncertainty and Sensitivity Analysis
- Definition and Methodology for Delineating the Disturbed Zone
- Criteria for Assessing the Performance Confirmation Program
- Software QA Procedures
- Preclosure Performance Assessment Methodology
- Accident Dose Limit
- Methodology for Assessing Retrievability of Waste
- Seismo-Tectonic Design Bases and Criteria

OFFICIAL CONCURRENCE AND DISTRIBUTION RECORD

LETTER TO: Mr. James P. Knight, Director
 Siting, Licensing and Quality
 Assurance Division
 Office of Civilian Radioactive
 Waste Management
 U.S. Department of Energy
 RW-20
 Washington, DC 20585

FROM: R. E. Browning, Director
 DHLWM/NMSS

SUBJECT: PRODUCTIVE INTERACTIONS BETWEEN NRC AND DOE

DATE: SEP 4 1987

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PDR	RCook	Prestholt	PBrooks & r/f
FCamerson, OGC			

NOTE: This letter was concurred in by F. X. Cameron, OGC

CONCURRENCES

ORGANIZATION/CONCUREE	INITIALS	DATE CONCURRED
HLOB/PBrooks	<u>ppb</u>	87/9/1
HLOB/SCoplan	<u>SC</u>	87/9/1
HLTR/RBallard	<u>Raj</u>	87/9/1
HLOB/BJYoungblood	<u>BJY</u>	87/9/1
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