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MEMORANDUM FOR: Michael J. Bell, Chief
High-Level Waste Licensing
Management Branch
Division of Waste Management

FROM: Hubert J. Miller, Chief
High-Level Waste Technical
Development Branch
Division of Waste Management

SUBJECT: REVIEW OF PROPOSED DOE REGULATION 10 CFR 960, "PROPOSED GENERAL GUIDELINES FOR THE RECOMMENDATION OF SITES FOR NUCLEAR WASTE REPOSITORIES"

WMHT has reviewed your February 14, 1983 memorandum which requested WMHT to provide comments on DOE's regulation 10 CFR 960 "Proposed General Guidelines for the Recommendation of Sites for Nuclear Waste Repositories." The comments are attached. If you have any questions contact me or Larry Pittiglio at x74526.

Hubert J. Miller, Chief
High-Level Waste Technical
Development Branch
Division of Waste Management

Attachment:
As stated
DesireeM 83/02/23

WM Ticket No: WM-83-128

OFC	WMHT	WMHT					
NAME	CPittiglio:dm	HJMiller					
DATE	02/4/83	02/ /83					

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GENERAL COMMENTS

ON

DOE's PROPOSED GUIDELINES (10 CFR 960)

Comment No.

1.0 In section §960.5.10 E entitled "Application of Guidelines", DOE provides their rationale for the proposed Guidelines. DOE states that the Guidelines encompass a period from the Site Screening Phase to the final recommendation to the President of a site to be used as a repository. DOE also states that adequate data may not exist to allow confident modeling of propective sites until well into the site characterization and it is not possible to rigorously apply many of the guidelines early in the site screening process. This approach is consistent with the "Nuclear Waste Policy Act of 1982" Section 112E(1).

We agree the Guidelines cannot be rigorously applied in the early stages of site investigation. However, while generally discussing this matter as summarized above, we do not consider that DOE has defined specifically in the Guidelines how they will be implemented overtime. We recommend that DOE more completely describe the planned implemention and do this in the Guidelines or regulations themselves, as opposed to only in background information so there is no doubt on this matter.

It is essential that the Guidelines not be written in a way that contributes to the notion that enough information is available at the early stage of the site screening and characterization to make assessments of compliance with recommended criteria (such as that specified for groundwater travel time with any confidence). This is effectively what our regulations require, gathering of complete information in site characterization before licensing assessments and determinations are attempted. To argue otherwise would be to argue that licensing should begin earlier than 1987. We recommend that a strong comment be made to DOE on this point. This is particularly important given recent experience (e.g., BWIP SCR Groundwater Modeling) where DOE conducts modeling with limited data and attempts to draw conclusions that cannot be fully supported during the screening stage.

Futhermore, we recommend that the Guidelines be revised to state how their application relates to the very similar process of applying 10 CFR 60 Performance Criteria in the extended

formal licensing process which follows. The concern here is that unless we are careful, the application of the Guidelines will amount to a "licensing" before formal NRC licensing starts. It must be clear that application of these Guidelines in no way pre-empts or supersedes the NRC's licensing determinations which follow.

2.0 The proposed regulation discusses many favorable and adverse factors which will qualify or disqualify a site. DOE also states that their proposed Guidelines are compatiable with proposed criteria and standards issued by NRC. For the most part, these guidelines appear to be compatiable with 10 CFR 60; however, no where in DOE's proposed Guidelines is the concept of retrievability discussed. DOE should include in the Guidelines the concept of retrievability. While we feel this is a very specific concern, it is consistent with the level of detail currently contained in the Guidelines. It would most appropriately be placed in the sections relating to rock characteristics such as Section 960.5-4 "Rock Characteristics".

SPECIFIC COMMENTS

ON

DOE'S PROPOSED GUIDELINES (10 CFR 960)

Comment No.

1.0 §960.5-2-1 Present and Future Hydrologic Conditions

> The site shall be disqualified if the average prewaste-emplacement groundwater travel time along the path of likely radionuclide travel from the disturbed zone to the accessible environment is less than 1,000 years.

The 1000 years average prewaste-emplacement groundwater travel time should include some flexibility to allow for compensation for hydrology (where the average prewaste-emplacement groundwater travel time to the accessible environment is less than 1,000 years) by other site features and design. This would make the Guidelines consistent with 10 CFR 60.

2.0 §960.5-2-2 Hydrologic Modeling

> Potentially adverse conditions. (1) Potential for foreseeable human activities to adversely affect the groundwater flow system, such as groundwater withdrawal, extensive irrigation, the subsurface injection of fluids, underground pumped storage, military activities, or the construction of large-scale surface-water impoundments (10 CFR 60.122(c)(2).

It is important that what constitutes "potentially adverse conditions" be defined in terms of the public health and safety (i.e., relationship to the EPA criteria, 40 CFR 190). Also, Guidelines should say whether or not "institutional controls" (i.e., maintenance of an exclusion area) should or can be considered in evaluating potential for groundwater withdrawal and irrigation. Without some Guidelines on this, it could be a trivial matter to invalidate virtually any site.