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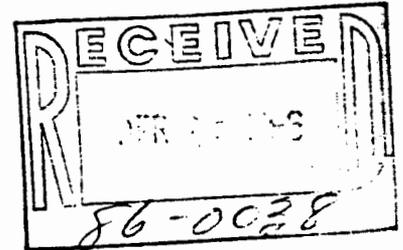
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April 18, 1986

Mr. W. M. Cooper, Project Manager
 10000 E. 1st Ave
 U.S. Department of Energy
 P.O. Box 1080
 Carlsbad, NM 88220

Dear Mr. Cooper:

We have reviewed your draft report, "Transuranic Waste Retrieval Criteria" and find that the report, in its present form, has very little substance.

The title of the report suggests that it would provide the reasons, the mechanism and the schedule (why, how and when) of the decision to retrieve, as well as a discussion of the retrieval process and anticipated difficulties in its implementation. Instead of providing specific criteria and decision milestones, the report consists largely of vague and redundant statements. We offer the following suggestions for improvement.

The Decision to Retrieve: The main reason for retrieval will be a flaw in the long-term isolation capability of the site and this will be best determined through checking the characteristics of the site to satisfy the EPA (40 CFR 191) criteria. These criteria are specific and quantitative and therefore the statement on page 4 that "the retrieval criteria are generally qualitative" is wrong. Since the DOE has already initiated a Performance Assessment program to check the site's compliance with the EPA standards, the retrieval decision should be primarily tied to these standards. Gratuitous comments such as, "...the potential for retrieval of the waste for public health and safety considerations is considered extremely remote" (p. 4) are unnecessary and prejudice the outcome of the Performance Assessment.

The geotechnical studies currently under progress will provide important input to the EPA compliance determination. These include the studies to better characterize the Rustler Formation hydrology, the Castile brines and the Salado fluids. Determination of long-term suitability of the site will depend upon the results of these studies rather than "the continuity, thickness, lithology, stratigraphy, and structure of the facility horizon strata" as stated on p. 6 of the



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subject report. Further, it is not sufficient that geo-hydrologic characteristics be "reasonably consistent" with the previously established data base (sec. 5.1). What is required is the compliance with the EPA standards, using most up-to-date information.

The discussion of other factors in the decision to retrieve is a little vague and misleading. There is no doubt that a proper sealing of the shafts, drains and deep screenings will be required to assure long-term safety from breach of the repository. The wording of this section (sec. 5.2), however, implies that the level of confidence should simply not "decrease" during a five-year retrieval period, regardless of what the initial level of confidence is. In the storage rooms, the main phenomenon to watch is the creep of the salt and the resulting pressures on the waste containers. In addition, a quantitative limit should be specified for acceptable/unacceptable explosive gas mixtures and pressures.

Retrieval Plans: The plans described in sec. 8.10 of the WIPP Final Environmental Impact Statement are very sketchy. Detailed plans should include an assessment of room conditions, type and number of vehicles and equipment, detection and handling of damaged containers, ventilation systems, underground and surface operations, interim storage and final disposition of the retrieved waste. The report should include these detailed plans.

Schedule: We do not see the 5-year period as an absolute time frame after which the retrieval will not be considered regardless of conditions or factors which may then prevail. The retrieval option should certainly be maintained until the necessary data and analyses on 40 CFR 191 performance assessment have been completed and a fool-proof plugging and sealing capability has been demonstrated.

The document makes the following statement on p. 2: "In accordance with consultation and cooperation procedures set forth in the C & C Agreement, the State of New Mexico will conduct an independent review of the public health and safety aspects of the retrieval criteria, as well as several other future documents related to the retrievability decision." Only one date seems to have been set: a decision on retrievability will be made in 1993. If the State is to perform a meaningful independent review, then the document describing the waste retrieval criteria should also be accompanied by some kind of PERT chart which allows the planning of an independent review.

The following statement is made on page 4: "In the unlikely event that retrieval of the waste becomes necessary, detailed retrieval plans will be developed." This statement suggests that detailed

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retrieval plans will not be made before 1993, if at all. We doubt that retrieval is feasible if plans are not drawn up before 1993.

It is stated on page 3 that retrieval of the TRU waste from the underground is expected to take up to five to ten years if a decision is made to retrieve at the end of the five year period. The decision to retrieve was based on the FEIS which was issued in 1980. At that time the room closure data is three times as fast as estimated at the time of writing of the FEIS. Therefore, the waste will have to be retrieved over a shorter time span or it may not be possible to retrieve all the waste containers. We recommend that this statement be updated using current room closure data.

The statement is made on p. 8 (under 5.3) "Sampling devices and procedures will be developed to permit sampling of gases within a filled storage room". When will this be done?

Criterion 4 on page 8 calls for compliance with 40 CFR 191. What is the DOE schedule for demonstrating this compliance?

Careless Statements: There are several statements in this brief report which are best described as careless. Following are some examples.

P. 1, "The decision is currently scheduled to be made by DOE not later than October, 1993".

The decision on retrieval is to be made 5 years after the first waste of each kind is emplaced. Since the RH-TRU and HLW is scheduled to start arriving in 1989, the retrieval decision can be made by 1994 for these. If the dates of arrival of waste slip, the retrieval decision will also slip. At any rate, there does not appear to be any need to close the possibility of retrieval beyond 5 years at this time.

P. 2, "In doing so, DOE has established a conservative approach...."

NRC requires 50 year retrieval for HLW. Five years is therefore not "conservative".

P. 7, "Surface based studies will include seismic monitoring in the region and hydrologic monitoring (water quality and water level surveys) associated with the Environmental Monitoring Program".

This statement reveals an ignorance of current plans for geotechnical work for determining long-term suitability of the WIPP site. There are neither any plans for nor a need of "seismic monitoring". The

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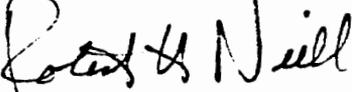
water quality monitoring is not for determining retrievability. However, other studies related to the Rustler, Salado and the Castile Formations are. These are not mentioned in the subject report.

P. 4. "...retrieval will be undertaken only after full consideration of the impact to the public health and safety of the environment in light of any new or unusual process".

What is a "new or unusual process"?

In summary, the report needs extensive revision before publication. We hope that the final version will clearly answer the questions of the basis for retrieval, who makes the decision, how and when the decision(s) will be made, the detailed plans for retrieval and a schedule for all these events. Please call Dr. Lokesh Chaturvedi if any clarifications to these comments are needed.

Sincerely,



Robert H. Neill

LC:mlk

WPCV 20-2