

Natural Resources Defense Council, Inc.

PR-61

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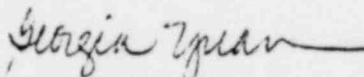
Dale Smith
Division of Waste Management
Nuclear Regulatory Commission
1717 H Street, N.W.
Washington, D.C. 20555

Dear Mr. Smith:

Thank you for the opportunity to review a pre-publication draft of 10 CFR Part 61: Disposal of Low-Level Radioactive Waste and Low-Activity Bulk Solid Waste. The general approach taken in these preliminary procedures and criteria is encouraging. We are particularly pleased with the requirements under Part 61.28, "Financial Information", and the strong emphasis on disposal methods which require only passive care following site decommissioning.

Attached are some specific comments and questions regarding statements in the "Draft Technical Basis. . ." I hope that these comments aid your revisions. NRDC looks forward to reviewing the published draft Part 61.

Sincerely,



Georgia Yuan
Project Geologist

GY/kj

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COMMENTS OF THE
NATURAL RESOURCES DEFENSE COUNCIL
ON THE DRAFT OF 10 CFR PART 61
December 18, 1979
DRAFT TECHNICAL BASIS

Introduction. In the first paragraph, 3 meters is cited as the minimum cover necessary for low-level radioactive waste disposal. The NRC needs to provide the empirical or experimental basis for this figure and the 15 meters which is cited for some radionuclides. The same type of justification is needed for the 3 meters cited in Section I(c) as a minimum distance between fractured areas and the disposal trench.

I(b) and (d). These sections discuss retention of radionuclides for "long residence time(s)" and "several hundred years" without a clear explanation of how these time frames were determined or their implications for the definition of low-level waste. Presumably the retention time is based on the time needed for natural decay of the radionuclides in the waste to render the waste "safe." These times need to be specified and correlated with the definition of low-level waste before a suitable waste disposal method can be chosen or evaluated.

II(b). In this section a specific permeability is given as the upper limit allowable for permeabilities. This specification (1×10^{-5} cm/sec) is followed by a suggestion that, if the permeability is higher, the "applicant should consider means to reduce the permeability." Two questions immediately suggest themselves. First, what is the technical basis for the

selected permeability? Specific criteria are useful, but an enumeration of supporting data is necessary for informed assessment. Second, assuming that adequate justification can be provided for the criterion, why not require mitigation measures where violations of the criterion are obvious, rather than merely suggesting that such measures be considered? A mandatory performance criterion for permeability may clear up confusion over issues of compliance which are inevitable with the existing criterion.

II(c). Since the detection of nuclide migration at West Valley, New York, and Maxey Flats, Kentucky, the problems of open trenches at low-level radioactive waste disposal sites in humid environments have been well known. Presumably in an attempt to address these problems, the NRC has gone to great lengths to suggest ways of removing water from the site and diverting that water from potable sources. Why doesn't the NRC also take a stronger position regarding siting in humid environments, which either bans such sites altogether or permits their use only in circumstances deemed "compelling"? In considering this question, increased transportation to arid sites in the West must be weighed against potential exposure from contact with water. These issues need greater discussion in the technical background paper.

III(a). The basis for these concentrations requires further elaboration, including specification of the total concentrations allowable at any one site at any specific time during operation.

In addition, as noted above, these concentrations should be correlated to the disposal techniques and required isolation times.

III(c)(8). A definition of "passive care" is needed to clarify the type of "management system" which is alluded to in this section. Depending on the required period of isolation (hundreds of years?) it may actually be impossible to implement a "passive management system" which minimizes erosion and drains rainwater and snow melt from a site. The definition must include the kinds of maintenance and monitoring techniques which can be considered passive. For example: are annual inspections within the limitations of passive care?; is regrading on a periodic basis considered passive? These definitions and questions will require resolution before compliance can be evaluated.

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