



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

FEB 19 1985

MEMORANDUM FOR: Ronald L. Ballard, NRR Environmental Coordinator
and Chief, Environmental and Hydrologic Engineering
Branch, DE

FROM: Frank J. Congel, Chief
Radiological Assessment Branch, DSI

SUBJECT: REVIEW OF DRAFT ASSEMBLED COMMENTS ON ENVIRONMENTAL
ASSESSMENTS OF HIGH LEVEL WASTE REPOSITORY SITES

As requested, we have reviewed NMSS's draft of the assembled comments on nine environmental assessments for high level waste repository sites (dated February 1, 1985). The assembled comments contain a "Major Comments" section apparently written by NMSS and its contractors, and a "Detailed Comment" section. Our original comments on each environmental assessment have been appropriately incorporated into the "Detailed Comments" section for each of the nine repository sites. In regard to the "Major Comments" section, the subsection entitled "Preclosure Performance Assessment - Radiological Assessment" is the only subsection in our area of expertise. Our comments on this subsection, which is generic to the 9 reviews, are enclosed.

This review was performed by E. Branagan, T. Mo, J. Swift, and M. Wangler.

Frank J. Congel
Frank J. Congel, Chief
Radiological Assessment Branch
Division of Systems Integration

Enclosure:
As stated

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COMMENTS ON MAJOR COMMENTS ENTITLED
"PRECLOSURE PERFORMANCE ASSESSMENT - RADIOLOGICAL ASSESSMENT"

General Comment

This draft comment should be reconsidered in light of the guidance provided in NRC's "Standard Review Plan for Draft Environmental Assessment", June 22, 1984. The phrasing and direction of the comment should be reviewed taking into consideration that these Environmental Assessments represent only an early stage in the Federal site selection and review program. Even though the NRC and DOE have chosen to process the EAs as if they were Environmental Impact Statements, the real Environmental Impact Statements which NRC will adopt are some years in the future, following Site Characterization. In licensing nuclear power plants we distinguish between a Safety Review and an Environmental Review; it is not practical to treat in an environmental review all detailed safety questions.

In an environmental review, as distinguished from a safety review, environmental impacts are to be evaluated on a realistic basis. Thus, it is not appropriate to call for analysis of the most improbable "worst case" accident in the EA; such a case can be addressed in a probabilistic risk assessment. If such a case is to be included in the environmental review, e.g. in the EIS, it would be in context, arrayed next to a more likely case with an indication of their relative likelihoods.

In our opinion, it is impractical to call for a probabilistic risk assessment of preclosure repository operations at this stage in the facility design. The design of waste receiving, storage and packaging facilities does not appear to be sufficiently advanced to provide an adequate basis for selection of accident sequences and assignment of event probabilities. At best, a judgment of the relative likelihood of certain types of accidents can be made on the basis of experience at facilities where similar operations have been performed. Thus accounting for human factors and common cause failure initiation can only be done in a general sense at this time; a comment on these aspects can more appropriately call for their investigation in the safety analysis of the facilities at a later stage.

Specific Comments

1. On p. 1, line 15, it is stated that "In addition, radiological consequences to repository workers was not analyzed in spite of the fact it is required by 10 CFR 20." Since 10 CFR 20 does not require an environmental assessment to analyze radiological consequences to workers, the phrase "in spite of the fact it is required by 10 CFR 20" should be deleted. The references to 10 CFR 20 on p. 1, line 8 and the phrase "as required by 10 CFR 20" on p.4, line 17 should also be deleted.

2. The major comments in this section are not cross-referenced to the specific comments, which presumably support them. The major comments should be cross-referenced to the "Detailed Comments" section where appropriate.