

November 3, 1994

MEMORANDUM TO: Robert Pierson, Chief
Licensing Branch, FCSS

FROM: John Austin, Chief
Low-Level Waste and Decommissioning
Projects Branch, DWM

SUBJECT: TECHNICAL ASSISTANCE REQUEST FOR REVIEW OF CONTRACTOR REPORT

Please find attached a request (Attachment 1) for your staff to review a contractor report submitted by Oak Ridge National Laboratory. The report (Attachment 2) was submitted to the Division of Waste Management to assist licensing staff in assessing criticality safety conditions at low-level waste (LLW) disposal facilities. Specifically, the report provides criteria for determining acceptable mass loading of trenches, containing special nuclear material bearing wastes, per unit area. This areal density approach is currently employed at one of the two operating LLW disposal facilities.

For this analysis, ORNL performed extensive calculations using a variety of site conditions and fissile material assumptions. In addition, various conservative conditions were investigated to demonstrate the impact of these assumptions. The report provides areal density limits for the conditions analyzed.

ORNL has expressed a desire to publish this report and DWM staff support this approach. However, prior to approval for publication we would like to have your staff review the ORNL work. Please provide your response to this request by November 25, 1994.

Contact: Robert C. Hogg, DWM/NMSS
415-6751

Attachments: As stated

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TECHNICAL ASSISTANCE REQUEST FORM

DATE: November 1, 1994

TO: Robert Pierson, Chief, Licensing Branch, FCSS

FROM: John H. Austin, Chief, LLW and Decommissioning Projects Branch, LLDP

Phone No: 415-7297

Licensee: N/A

Docket Lic Rev/RITS/TAC Nos.: RITS No. 9A1A L20002 Contract Administration

Ticket No.: N/A

Letter Dated: 10/27/94

Problem/Issue: ORNL has submitted a technical report analyzing NRC criticality safety criteria for placement of packages in burial trenches. The review looks at the surface density approach used in the Barnwell license safety evaluation report from a criticality safety perspective. This review provides additional discussion of applicable mass limits for SNM bearing wastes using various material assumptions. Additionally, the study discusses some of the conservative assumptions used in developing the analysis. DWM is requesting FCSS review the report and determine the appropriateness of publication of the report as a NUREG or NUREG/CR.

Action Required: Please review, comment, and provide FCSS recommendation for publication of the report.

DUE DATE: November 25, 1994

Remarks: None.

Recommended Action (with revisions):
 Request Additional Information
 Approve Reject

LLDP Lead: Robert Hogg

Phone No.: 415-6751

E-mail: RCH1