

June 30, 2000

MEMORANDUM TO: Ron Bellamy, Chief  
Decommissioning and Laboratory Branch  
Division of Nuclear Materials Safety  
Region I

FROM: Larry W. Camper, Chief **/RA/**  
Decommissioning Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: TECHNICAL ASSISTANCE REQUEST 127599 - EVALUATION  
OF DERIVED CONCENTRATION GUIDELINE LEVELS FOR  
THE ABERDEEN PROVING GROUND FORMER TRANSONIC  
RANGE IN HARFORD AND BALTIMORE COUNTIES,  
MARYLAND

As requested in the Technical Assistance Request dated March 21, 2000, staff of the Office of Nuclear Material Safety and Safeguards (NMSS) has completed an acceptance review and a technical review of the Aberdeen Proving Ground's proposed Derived Concentration Guideline Level (DCGL) of 230 picocuries per gram (pCi/g) of depleted uranium for decommissioning.

In a December 15, 1999, request to the U.S. Nuclear Regulatory Commission (NRC), the licensee provided a dose analysis prepared by Argonne National Laboratory, "*Derived Uranium Guidelines for the Depleted Uranium Study Area of the Transonic Range Aberdeen Proving Ground, Maryland,*" dated April 1999. This report, which utilizes RESRAD computational methods to justify their proposed disposal limit, was forwarded to NMSS staff on March 21, 2000.

NMSS staff completed a successful acceptance review of the report on May 1, 2000, and subsequently performed a technical review. NRC staff determined that additional information is required before the technical review could be completed.

To support the review the licensee should provide additional information, as discussed in the attached Technical Evaluation Report (TER), and summarized as follows:

1. Discussion of the chemical form used in RESRAD computations.
2. Discussion of the RESRAD parameters.
3. Comparison of the site conceptual model and the RESRAD conceptual model.

CONTACT: Theodore Smith, DWM/NMSS  
(301) 415-6721

4. RESRAD input and output files.
5. Uncertainty analysis for dose pathways.

The NMSS staff's full evaluation is provided in the attached TER, which contains a detailed explanation of the additional information requirements. A draft copy of NUREG/CR-5512 Volume 3, mentioned in question 2 in the TER, is also attached.

It may be beneficial if we arrange for a meeting between our staffs and Argonne National Laboratories, if you desire, to further discuss these informational requirements. Please contact my staff to make arrangements or if you have any additional questions regarding this evaluation.

- Attachment 1: Technical Evaluation Report for  
Aberdeen Proving Ground,  
Attachment 2: NUREG/CR-5512, Vol 3, Residual  
Radioactive Contamination from  
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cc Donald Cool, INMS  
Chris McKenney, DWM

R. Bellamy

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