



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

JAN 29 1993

Docket No. WM-102

U.S. Ecology, Incorporated  
Mr. Mark Cade  
9200 Shelbyville Road  
Louisville, KY 40257

Dear Mr. Cade:

SUBJECT: FINAL TECHNICAL EVALUATION REPORT FOR TOPICAL REPORT OF  
U.S. ECOLOGY, INC. (USE) "HIGH STRENGTH ASPHALT  
SOLIDIFICATION PROCESS" (USE-61-002-P, REVISION 0,  
JUNE 19, 1989), DOCKET NO. WM-102

The Nuclear Regulatory Commission has completed its review of the subject topical report (TR). The technical review included information contained in the TR and additional information that was submitted as a result of the review process. A portion of that information was developed during the period of time since August 2, 1991, as additional testing was completed to confirm the formulations. During that period the Interim Technical Evaluation Report (ITER) resulting from the review was in effect with specific limitations for waste processing for boric acid concentrates.

We have concluded that the topical report, supplemented by additional information that was in response to staff comments and questions, and the additional test results adequately describe the U.S. Ecology, Inc. (USE) High Strength Asphalt Solidification Process and the waste form produced for boric acid concentrates. As documented in the enclosed Final Technical Evaluation Report, dated January 1993, the NRC staff has concluded that there is reasonable assurance that the waste form for boric acid concentrates, produced according to the process and the related conditions described, will satisfy the structural stability requirements of 10 CFR Part 61 and the guidance contained in the Branch Technical Position on Waste Form, Rev. 1, dated January 1991.

In accordance with procedures established in NUREG-0390, we request that USE publish accepted versions, proprietary and non-proprietary, of the TR including the additional material submitted during the review process within 3 months of receipt of this letter. The accepted versions shall incorporate this letter and the enclosed Technical Evaluation Report (TER) between the title page and the abstract. These should be identified as report numbers USE-61-002-P(A) and USE-61-002-NP(A) where the "(A)" designates an accepted or approved TR. Please provide thirteen (13) copies of the non-proprietary version and eleven (11) copies of the proprietary version of the report.

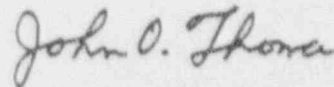
Should our criteria or regulations change, so that our conclusions concerning the acceptability of the report and USE's bituminization process are invalidated, USE and/or the users referencing the TR will be expected to revise and submit their respective documentation, (including the submittal of additional data or analysis), or submit justification for the continued

applicability and acceptability of the topical report and waste forms without revising their respective documentation. As you are aware, we currently require controlled backfilling around bitumen waste forms. In addition, the resulting waste forms must be compatible with the final disposal restrictions and requirements specified by the waste disposal facility operators and the governing state agencies.

U.S. Ecology must also notify users of the USE High Strength Asphalt Solidification Process that they shall certify that all restrictions and required procedures have been adhered to and that waste forms do not contain prohibited chemicals or waste materials.

Copies of the enclosed TER and this letter will be forwarded to the States of Nevada, South Carolina, and Washington by the NRC Office of State Programs for their information and use.

Sincerely,



John O. Thoma, Section Leader  
Technical and Special Issues Branch  
Division of Low-Level Waste Management  
and Decommissioning  
Office of Nuclear Material Safety  
and Safeguards

Enclosures: As stated