

PDR-1 A4171
LI 2- Wm-10 (2)
WM-11 (2)
WM-16 (2)

6/16/87

426.1/A4171-7/87264/EW/6/11/87

- 1 -

Dr. Charles G. Interrante, Program Manager
Metallurgy Division - Corrosion Group
Center for Materials Science
National Bureau of Standards
U.S. Department of Commerce
Gaithersburg, MD. 20899

WM-RES
WM Record File
A4171
NBS

WM Project 10, 11, 16
Docket No. _____

PDR ✓
LPDR ✓ (B, N, S)

Distribution: _____

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Dear Dr. Interrante:

We have reviewed NBS' Monthly Letter Report for April 1987 for FIN A-4171-7, "Evaluation and Compilation of DOE Waste Package Test Data," and our comments are presented below.

- 1. Page 1. The title of Task 1 reads, "Review of Waste Package Database and High Level Waste Data Center."

The correct title of Task 1 is, "Review of Waste Package Data Base."

We would like to see here a technical overview/executive summary-type discussion of the various repository project reports under review by NBS. This would be in addition to the list of reports under review and the draft reviews that now appear in the Monthly Letter Report. Any discussion of the system for automatic storage and retrieval of the data base should be appended to the report and should not appear in the discussions of technical work performed under the four tasks.

- 2. Page 3. Item 7 (UCRL-53631, "Reaction of Topopah Spring Tuff with J-13 Water: A Geochemical Modeling Approach Using the EQ 3/6 Reaction Path Code," Nov. 1985) should not be reviewed. Geochemistry is covered by another group at NRC and the DOE's work in that area is reviewed by another contractor.

- 3. Page 4. Glass-Item 3, "Leach Mechanisms of Borosilicate Glass Defense Waste Forms - Effects of Composition," A. Barkatt, et. al. No date.

Please provide an abstract of this report. The date and where the report was published should be provided. If that information is not available review of this report should be terminated.

- 4. Page 4. Item 4. The same comment applies here.

- 5. Page 5. Item 8, PNL-4382, "Workshop on the Leaching Mechanisms of Nuclear Waste Forms," Summary Report, May 19-20, 1982.

This report is superceded by the final report on leaching mechanisms, which was published in August 1984. This report, therefore, should not be reviewed formally.

- 6. Page 5. Item 10- PNL-5157, "Final Report of the Defense High-Level Waste Leaching Mechanisms Program."

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This is an important document. Please provide for each chapter the status and scheduled completion of the draft review.

7. Page 6. Draft Review of HEDL-7546, "C-Ring Stress Corrosion Cracking Scoping Experiment for Zircaloy Spent Fuel Cladding," H. D. Smith, March 1986.

Under TEST CONDITIONS, the review states that "the environment is 120 psi, 170°C water in an autoclave; 90°C tuff equilibrated in J-13 well water." Does this mean that prior to the test the water used in the test was equilibrated with tuff and that equilibration was carried out at 90°C?

8. In future reports, the status of the experimental tests under Task 3 should be reported.

Please call me if you have any questions or if you wish to discuss this.

Actions resulting from this letter are considered to be within the scope of FIN A-4171. No changes in costs or delivery of contracted products are authorized. Please notify me immediately if you feel this letter will result in additional costs or delay in delivery of contracted products.

Sincerely,

ORIGINAL SIGNED BY

Everett A. Wick
Technical Review Branch
Division of High-Level Waste Management
Office of Nuclear Material Safety
and Safeguards

cc: Dr. Neville Pugh, Director
Metallurgy Division

Dr. William Ruff, Group Leader
Corrosion Group - Metallurgy Division

JUN 16 1987

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OFFICIAL CONCURRENCE AND DISTRIBUTION RECORD

LETTER TO: Dr. Charles G. Interrante, Program Manager
 Metallurgy Division - Corrosion Group
 Center for Materials Science
 National Bureau of Standards
 U.S. Department of Commerce
 Gaithersburg, MD. 20899

FROM: Everett A. Wick
 Technical Review Branch
 Division of High-Level Waste Management
 Office of Nuclear Material Safety
 and Safeguards

SUBJECT: REVIEW OF NBS' APRIL 1987 LETTER REPORT FOR FIN A-4171-7,
 "EVALUATION AND COMPILATION OF DOE WASTE PACKAGE TEST
 DATA"

DATE:

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CONCURRENCES

ORGANIZATION/CONCUREE	INITIALS	DATE CONCURRED
HLTR/EAWick	<u>EAW</u>	87/06/16
HLTR/RTWeller	<u>Raw</u>	87/06/16

(Mailed by the WMDCC)
 6/19/87 2:20
 Date / Time