

A4171

PDR-1
LPDR-WM-10 (2)
WM-11 (2)
WM-16 (2)

OCT 07 1987

426.1/EAW/10/5/87 WM-87408

- 1 -

Dr. Charles Interrante, Program Manager
Metallurgy Division - Corrosion Group
Center for Materials Science and Engineering
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 ✓
XLPDR ✓ (B, A, S)

Distribution: _____

(Return to WM, 623-SS)

Dear Dr. Interrante:

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

1. Page 2. Task 1, Review of Waste Package Data Base - BWIP

The first paragraph mentions initiation of review of SD-BWI-TI-309, 1985, "Determining the Reversibility of Oxidation - Reduction Reactions in Groundwater," by Runnels, Lindberg and Kempton. This report "presents preliminary data from cyclic scanning voltammetry, chronocoulometry, and potentiometry to indicate the degree of reversibility of the redox reactions likely to occur in basalt groundwater containing iron, uranium, and selenium at 298K."

We note that the ambient temperature in basalt at repository depth has been estimated to be 55 to 60°C. This temperature will be higher after the waste is emplaced. The applicability of the data in this report (in basalt groundwater at 25°C) to basalt groundwater at repository temperature(s), therefore, should be addressed in the review.

2. Page 7. Laboratory Testing

Evaluation of Methods for Detection of Stress Corrosion Crack Propagation in Fracture Mechanics Samples

In addition to discussing the technical effort, please report (in future progress letters) the status of this study in terms of the milestones listed in the proposal transmitted with your letter of February 10, 1987.

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

87295204
WM Project: WM-10, 11, 16
PDR yes
(Return to WM, 623-SS)

H
WM Record File: A4171
LPDR yes

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PDR WMRES EUSNBS
A-4171 PDR

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. Dale Hall, Group Leader
Corrosion Group - Metallurgy Division

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LETTER TO: Dr. Charles Interrante, Program Manager
 Metallurgy Division - Corrosion Group
 Center for Materials Science and Engineering
 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: NRC COMMENTS ON NBS AUGUST 1987 MONTHLY PROGRESS LETTER FOR
 FIN A-4171

DATE:

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