

104/RJW/82/08/23/0

WM- 10
PDR
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AUG 24 1982

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101.2
WMHT: 3104

Mr. David Squires
U.S. Department of Energy
Richland Operations Office
P.O. Box 550
Richland, WA 99352

Dear Mr. Squires:

Enclosed, for the attention of Dr. Ernest Moore of Rockwell, are copies of several reports done by Brookhaven National Laboratory. The reports represent part of an ongoing study, sponsored by the NRC, on corrosion of possible waste container materials. Arrangements are being made for Rockwell to receive copies of future reports under this contract.

This activity is a result of the August workshop on the waste package.

Sincerely,

ORIGINAL SIGNED BY

Robert J. Wright, Senior
Technical Advisor
High-Level Waste Technical
Development Branch
Division of Waste Management

Enclosures:
BNL Reports

cc: M. B. McNeil, RES

Ends: NUREG/CR-2317
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 24 1982

Dr. Ernest Moore
BWIP
Rockwell Hanford
P.O. Box 800
Hanford, Washington 99352

Dear Dr. Moore:

Thank you for taking the time to explain your program to my NRC colleagues and me. I know that I-and I believe that the others-found our visit to BWIP very instructive.

I understand that weld problems, combined with the perception that localized rather than general corrosion is the crucial issue, has led to the decision to consider other steels (and, in particular, what I might term more normal low-carbon steels) rather than the Cr-Mo steels on which I have heat analyses. I should be grateful if you could keep me informed as to what particular grades you use, and if you could let me have xerox copies of future heat analyses. U.S. Steel (USS) has some new "weathering" steels (trade name Corten), but Dr. Wilde of USS (412-372-1212, 2563), who has done much testing on them, feels they are not the best choices for the waste package applications.

Miss Hall has not yet completed her review of corrosion in candidate ferrous alloys. When it is complete, I shall send you a copy. In the mean time, with regard to hydrogen effects in low-carbon steels, I suggest that you consult Dr. Thomas Yolken of the National Bureau of Standards (301-921-1000), who did some work on this subject years ago. Battelle report PNL 4157 (April 1982) also contains a useful review of hydrogen effects in steels.

I shall ask Dr. Peter Soo of Brookhaven to arrange for you to receive copies of the reports on the Brookhaven/NRC Ti corrosion work. Copies of three older reports are enclosed. These are the only ones of which I still have spare copies. No reports have yet been issued on our Battelle Columbus work, but if you have any questions, please consult Dr. John Beavers at BCL (614-424-4459).

Dr. Ernest Moore

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Dr. Pitman showed me around the PNL corrosion laboratories and explained his future program. I was very favorably impressed, especially by his plans for slow-strain-rate testing in a radiolytic environment. I am also placing him on the mailing list for the BNL reports, and have suggested that he and Dr. Beavers (who both, after all, work for Battelle) keep in close touch.

If I can provide any further help please do not hesitate to call me. My FTS number is 427-4638.

Sincerely,

Michael McNeil

Michael B. McNeil
Waste Management Branch
Division of Health, Siting,
and Waste Management, RES

Enclosures:
As Stated

cc: F. R. Cook, NMSS