ADV	UNITED STATES NUCLEAR REGULATORY COMMI /ISORY COMMITTEE ON REACTOR SAF WASHINGTON, D. C. 20555 May 31, 1985	WM Record File 109.1 SSION FEGUARDS Distribution: TDKAR (Return to WM, 623-SS)	Z 3 WM Project Docket No PDR LPDR
85 JUN -5 A9:33			
MEMORANDUM FOR:	Dr. Thomas G. McCreless, Ass for Technical Activities	istant Executive Dire	ector

At the request of the Waste Management Division staff I met with them on May 24th at "H" Street. Cognizant members of the ACRS staff, ACRS fellows and

FROM:

SUBJECT:

8506110458 850531 PDR WASTE

PDR

OPE were invited to attend. A list of attendees is attached. While the conversation ranged over a number of topics related to the development of a high-level waste repository, the principal topic was the waste package development program, and I shall limit my report to that item.

Dr. S.J.S. Parry, ACRS Senior Fellow

Meeting with Division of Waste Management Staff to Discuss Waste Package Corrosion Data - May 24, 1985

I explained that because of my recent employment by Battelle I had access to as yet unreleased data that I could not make available. However, because much of the data has been used to support the presentations made in the DOE Draft Environmental Assessments (EAs), I did feel that the testing procedures were suitable areas for internal discussions. Similarly, since any conclusions that I had drawn as to the competency and adequacy of the tests and testing program had been made known to my previous management, I felt that I could discuss my conclusions on those matters.

The basic approach used in the EAs by the three projects, Basalt Waste Isolation Project (BWIP - basalt flows), Nevada Research and Development Area (NRDA-tuff), and Office of Nuclear Waste Isolation (ONWI-salt media) in their discussions of waste package lifetime naturally stressed the undisturbed or expected ambient conditions. However, for at least ONWI, the conditions under which corrosion testing of the overpack materials has been conducted has little or no relationship to the expected or probable ambient repository conditions. For example, the use of flowing, unsaturated brine as the corroding media in the testing program does not simulate any of the expected intrusion or repository failure scenarios. Additionally, the testing procedures used were not developed or utilized in a manner approved by the Materials Review Board (MRB). It was further noted that PNL did not have in place or apply an adequate QA program to the corrosion testing for either the BWIP or ONWI project studies. I indicated that these facts had convinced me and other ONWI staff and a consultant to ONWI that none of the data currently extant supports the claim of a 1 mil/year penetration or uniform corrosion rate.

The Waste Management staff asked what suggestions I might have as how to proceed in confirming this conclusion. I suggested that a series of workshops be held with each of the repository projects. The topics to be discussed should be strictly limited to items such as, the procedure used to choose the candidate overpack material, the testing procedures used in testing the overpack and other materials, the experimental data resulting from these tests, the expected repository conditions, and the past and current status of the QA program supporting the corrosion testing studies. In this manner, attention would be focused on demonstrable scientific facts and procedures, rather than being diverted by consideration of performance assessment analyses which tend to be highly subjective in nature.

Since this meeting, Michael McNeil of the Research Waste Management Branch has contacted me and suggested that a similar meeting be held with Research Waste Management staff. I shall keep you informed of any further plans.

Attachments: List of Attendees

. .

cc: ACRS Members ACRS Technical Staff ACRS Fellows C. Jupiter, OPE P. Goldberg, OPE R. Browning, WM M. Bell, WM H. Miller, WM T. Johnson, WM C. Peterson, WM M. Tokar, WM J. Vogelwede, WM M. McNeil, RES F. Costanzi, RES

ATTENDEES - MAY 25 MEETING ON WASTE PACKAGE PROGRAMS

Tim Johnson, Section Leader, WMEG Charles Peterson, Project Manager, WMEG Michael Tokar, Materials Engineer, WMEG John Vogelwede, Staff Engineer, WMEG Clyde Jupiter, OPE Paul Goldberg, OPE John McKinley, ACRS Owen Merill, ACRS S.J.S. Parry, ACRS