

JUL 07 1983

MEMORANDUM FOR: Malcolm R. Knapp
High-Level Waste Licensing
Management Branch
Division of Waste Management

FROM: Peter M. Ornstein
High-Level Waste Licensing
Management Branch
Division of Waste Management

SUBJECT: AGU MEETING REPORT

Attached please find the synopsis of the fracture flow seminar given at the Spring AGU Meeting, which was attended by M. Gordon, M. Weber, and P. Ornstein.

Original Signed By:

Peter M. Ornstein
High-Level Waste Licensing
Management Branch
Division of Waste Management

Enclosure:
As stated

cc: M. Gordon
M. Weber

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Trip Report for AGU Meeting

On Thursday, June 2, 1983, M. Gordon, M. Weber and P. Ornstein attended a seminar on flow through fractured rocks at the Spring Meeting of the American Geophysical Union (AGU) in Baltimore, MD. Several of the presented papers were directly related to NRC sponsored research (i.e., work being performed by the University of Arizona for the NRC).

Since two potential repository sites (i.e., the Nevada Test Site and the Hanford site) are located in fractured rock, the principles and parameters describing groundwater flow through fractured media as well as techniques with which to characterize those parameters are subjects relevant to NRC concerns. The papers presented described the recent work performed by the presenters in those areas. The fundamental principles which describe flow through fractures have not been settled on by the technical community. Also, each of the presentors shared a recognition of the difficulty in characterizing fractured aquifer parameters in the field. Prior to applying developed technology to a specific location, the location's field parameters must be thoroughly characterized. Techniques allowing for complete fractured media characterization are not yet available.

Most of the theoretical work has focused on two-dimensional fracture geometry and has largely ignored the third dimension. The additional complexity of accounting for the third dimension has discouraged theoretical inquiry in that direction, although it appears that much of the work performed for two dimensions can be readily transferred to three dimensions. The seminar participants generally recognized that studies involving the third dimension must be conducted to achieve a more realistic conceptualization of fracture flow and transport.

AGU SPRING MEETING

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During the course of the meeting, we met with Perry MacNeille to discuss the arrangements for his interview scheduled with the NRC for the next day.