



# ENGINEERS INTERNATIONAL, INC.

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07 July 1983  
Ref. No. 1085-003-35

High Level Waste Technical Development Branch  
Division of Waste Management  
U. S. Nuclear Regulatory Commission  
7915 Eastern Avenue  
Mail Stop 623-SS  
Silver Spring, MD 20910

Attention: Mr. Trueman Seamans

Subject: Problems Associated With Predicting And Controlling Water  
Flows Into A Repository

Dear Mr. Seamans:

Pursuant to our discussions of July 1, 1983, enclosed is the proposed scope of the investigation that Engineers International, Inc. (EI) will undertake to analyze the above mentioned problems. This work can be completed under Task Order 003 without any change to the definitized cost estimate. However, the schedule for completion of Task Order 003 should be extended to October 31, 1983.

If you have any questions, please call me.

Sincerely,

ENGINEERS INTERNATIONAL, INC.

  
V. Rajaram

VR/ja

Enclosure

cc Ms. Cindy Fleenor

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PDR WMRES EECEN01  
B-7328 PDR

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WM Record File  
B-7328

WM Project 10, 11, 12  
Docket No.

Distribution:  
T. SEAMANS

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**Problems Associated With Predicting And Controlling  
Water Flows Into A Repository**

The scope of this investigation would include the following aspects:

- Potential impacts to repository operation from a sudden inrush of water
- Radionuclide doses that may be released during a sudden inrush of water
- Potential pathways for the water to the repository
- Information to be collected during in situ testing to identify the potential inflow into the repository
- Determining upper bounds of unexpected water flow rates that can be handled in a repository
- Available technology for detecting water bearing zones.

This investigation could be completed with about three manmonths of effort, and draft and final letter reports submitted for NRC review.