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ESH96-042

November 21, 1996

Heather M. Astwood
Low Level Waste and Decommissioning Projects Branch
Division of Waste Management
U.S. Nuclear Regulatory Commission TWFN 7F-27
Washington, DC 20555

SNM-2001
Docket No. 70-3085

Subject: Parks Shallow Land Disposal Area (SLDA) Technical Meeting
December 4, 1996.

Dear Ms. Astwood:

The Parks SLDA Project Management Team (PMT) has general interest in the potential for transport, reconcentration, and criticality involving highly dilute fissile materials in waste management facilities. The PMT has examined this issue qualitatively in connection with the SLDA, and has concluded that the issue poses no real problem for the SLDA, either in its present state or in its proposed remediated state. However, the PMT is considering performing some limited quantitative analysis to better characterize the issue in the context of the SLDA.

The PMT understands that the NRC staff is exploring this issue from both the generic and site-specific standpoints. The PMT is interested in discussing work in this area to avoid duplication of effort, to help focus the PMT's effort, and to supplement the NRC staff effort to the extent practical and appropriate. The PMT is particularly interested in analyses that bear on the SLDA situation.

There are three particular areas of interest that the PMT would like to discuss:

1. Criticality Analysis

What kind of analysis that might bear on the SLDA has the staff performed? What geometries, material compositions and proportions were analyzed? Did the staff's analysis extend to anything beyond U-235/water/silicon dioxide mixtures? Has the staff analyzed the effect of U-235 enrichment, neutron absorbers commonly present in soils, etc?

2. Transport Analysis

What kind of analysis that might bear on the SLDA has the staff performed regarding uranium dissolution, transport, and reconcentration and migration of other materials that might affect the potential for criticality?

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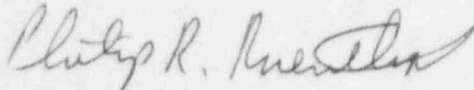
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3. Source Term Analysis

What kind of analysis that might bear on the SLDA has the staff performed regarding uranium source term or uranium source term uncertainty?

If you have any questions or need anything additional, please feel free to contact me at (804)948-4733.

Sincerely,



Philip R. Rosenthal
Senior Project Manager

cc: S.R. Helbig
A. Meijer
T.E. Potter
K.B. Schoen - ARCO