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A-3168

Dr. Peter Soo, Associate Division Head  
Nuclear Waste Management Division  
Brookhaven National Laboratory  
Associated Universities, Inc.  
Upton, NY 11973

Dear Dr. Soo:

This letter is to transmit NRC's comments on the two rough drafts of sections of the DSTP on Post Emplacement Monitoring (FIN A-3168, Subtask 1.2), which were transmitted with S. V. Panno's letter of November 5, 1982. Although we recognize that these rough drafts have undergone revisions, our comments are presented below:

1. Section 4, "Waste Package/Near Field Repository Conditions" does not fit into the outline submitted by BNL in January 1982. Section 4 of the outline is entitled, "Monitoring Systems."

2. Section 4.1.2, Salt

The second paragraph, under groundwater, states that "the maximum inflow rate for bedded salt will be approximately eight liters per emplacement hole after the first 1000 years and that 75% of this water will come in the first hundred years. The report should be clarified to state that maximum inflow during (emphasis added) the first 1000 years after emplacement will be approximately eight liters per emplacement hole and that 75% of this water will come during the first 100 years.

3. Section 4.2.1, Basalt

The last sentence of the first paragraph states that "in 1000 years the dose rate will be only an additional 10% of the original figure due to radioactive decay." The word "rate" should be deleted because the dose will increase but not the rate.

4. The parameters that should be monitored should be given more prominence. They are now in the last paragraph of Section 4.5, "Summary." There should be a section entitled Parameters to be Monitored and the section should appear in the table of contents.

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- 5. Host rock mechanical properties should not be monitored. The lithostatic pressure of the host rock will affect the external pressure of the waste package but that parameter is listed under item 6, Waste Package Pressure.
- 6. Section 5 should address the quantity and selection of waste packages that should be monitored in order to demonstrate reliability of the waste package.
- 7. Corrective action to be taken by DOE as a result of detection of an out-of-design or hazardous condition should be given greater emphasis. For example, DOE's action plan should include notifying NRC of an out-of-design or hazardous condition.
- 8. Hazardous condition should be defined.

The actions resulting from this letter are considered to within the scope of FIN A-3164. Please advise me immediately if you feel that this letter would result in changes to costs or delivery of contracted products.

Sincerely,

ORIGINAL SIGNED BY

Everett A. Wick  
 High-Level Waste Licensing  
 Management Branch  
 Division of Waste Management

- cc: Dr. H. J. C. Kouts, Chairman  
 Nuclear Energy Department
- Dr. W. Y. Kato, Deputy Chairman  
 Nuclear Energy Department
- Dr. D. G. Schweitzer, Associate  
 Chairman and Head  
 Nuclear Waste Management Division
- Dr. M. S. Davis, Deputy Division Head  
 Nuclear Waste Management Division
- Dr. S. V. Panno  
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