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NUCLEAR REGULATORY COMMISSION  
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MEMORANDUM FOR: Everett A. Wick  
Engineering Branch  
Division of Waste Management, NMSS

THRU: *Wick* F. A. Costanzi, Section Leader  
Waste Technology Section  
Waste Management Branch  
Division of Health, Siting, and Waste Management, RES

FROM: Michael B. McNeil  
Waste Technology Section  
Waste Management Branch  
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SUBJECT: REVIEW OF BROOKHAVEN PROGRESS LETTER ON FIN A3164  
AND FIN A3167 FOR OCTOBER 1983

Mr. Conti has forwarded a copy of the subject Progress Letter and of your memorandum requesting comments on it, to me for reply.

The Letter contains copies of several papers by Jantzen and others addressing the issue of transformations in the waste glass. I am very pleased to see that the DOE groups are now using TTT diagrams to analyze their problems. I am not an expert on glass, but it seems to me that the successes of these diagrams in helping us understand metallurgical transformations bodes well for their use in understanding the issues in our present problems.

The review of BWIP corrosion issues contained in this letter is neither particularly interesting nor particularly relevant. I think that anoxic experiments are of very limited relevance to the present DOE reference designs except possibly for very long times, since oxidizing species will be present at closure and will be generated by radiolysis.

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Dr. Schweitzer's comments on the basalt/water/hydrogen situation seem to be fairly (if superficially) reviewed. Considering the importance of the uncertainties in basalt water chemistry to corrosion issues I suggest a careful review of the purely thermodynamic (as opposed to kinetic) issue from the standpoint of uncertainties in the data base be performed. The USGS or NBS's Division of Chemical Thermodynamics could perform this review.

*M B McNeil*

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