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MEMORANDUM FOR: Michael J. Bell, Chief
High-Level Waste Licensing
Management Branch
Division of Waste Management

Lawrence W. Rossbach
High-Level Waste Licensing
Management Branch
Division of Waste Management

FROM: Paul T. Prestholt
High-Level Waste Technical
Development Branch
Division of Waste Management

SUBJECT: REVIEW OF DRAFT REPORT, "REPOSITORY SITE DEFINITION IN BASALT"

In response to your memo dated August 17, 1981 requesting a review of the above document, the following review is presented.

The document, "Repository Site Definition in Basalt: Pasco Basin, Washington," by Guzowski, Nimick and Muller, Sandia National Laboratories, is a synthesis of the available geotechnical literature pertaining to the Pasco Basin. The document describes the geology (structure, stratigraphy, etc.), geohydrology, geochemistry, seismicity and tectonics of the Pasco Basin in a brief, almost outline form.

The document does not define the intended audience, however it seems well suited for management and forsstaff members in subjects outside the individuals area of technical expertise. It presents an excellent overview of the available literature.

The document contains 13 appendices. These appendices present semi-detailed discussions of 13 physical and chemical properties of Columbia Plateau Basalts with comparisons to basalts found in other parts of the world. I must assumed that the technical content of each appendix is correct (those small technical problems noted seem to stem from the necessity of abbreviating vast amounts of data to a half dozen pages or so.) I have only one major suggestion. Each appendix should define, in words (not mathematics), each physical or chemical property that is discussed. Appendix M, on geochemistry does this well. Appendix I on thermal diffusivity defines the term

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with an equation. Not everyone readily converts mathematics into prose. A definition at the beginning of the section and a statement as to how the values determined, using the methodology discussed, relate to other rocks would be helpful. An example might be: Pasco Basin basalts range in density from 2.9 to 3.2 gm/cm^3. How do these values relate to other rocks such as limestone or granite? Is basalt a high or low density rock?

One other criticism. The histograms are very poorly done. I hope that at least, all axis will be labeled in the final presentation.

ORIGINAL SIGNED BY

Paul T. Prestholt
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*See previous concurrence.

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