



Department of Energy
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DEC 22 1982

Dr. Robert J. Wright
Senior Technical Advisor
High Level Waste Technical
Development Branch
Division of Waste Management
U. S. Nuclear Regulatory Commission
Washington DC 20555

Dear Dr. Wright:

NRC QUESTIONS ON THE BWIP SCR (SCR-1)

As requested by your letter dated December 3, 1982, and discussed by telephone with you, P. Prestholt, K. Chang, M. Gordon, D. Fehringer and M. Webber, NRC; R. Baca and J. LaRue, Rockwell Basalt Project; and D. J. Squires of my staff on December 9, 1982, the following response is provided in answer to the questions presented.

Question No. 1:

What is the top and the bottom of the model used for performance assessment - depth below surface, elevation, geologic unit?
Ref: SCR 12.4-30 et seq.

Middle Sentinel Bluffs Analysis

- Top Boundary
 - a) Mabton Interbed
 - b) -426 m from land surface
- Bottom Boundary
 - a) -1450 m from land surface

Umtanum Analysis

- Top Boundary
 - a) Frenchman Springs-2,
Flow top
 - b) -641 m from land surface
- Bottom Boundary
 - a) - 1650 m

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Question No. 2:

What are the locations of the lateral boundaries of the model in (1)?

Left grid boundary: -3600 m

Right grid boundary: 3100 m

Origin of the grid is midway between two repository sections, see Figure 12-13 in the SCR.

Question No. 3:

What documents present the results of studies on canisters? Ref: RHO-BW-SA-225 P, p.4 "Canister Studies."

The NRC request for information on canister studies should have referenced RHO-BW-SA-255, "Testing of Candidate Waste Package Backfill and Canister Materials for Basalt" (September 1982). The data contained in this report on backfill is recent and is not contained in any other documents. Conclusions made in this report (RHO-BW-SA-255) on canister corrosion are taken from an internal study described in an unreleased working document. McNiel-NRC had reviewed this document at a recent workshop and had copied some tables from it.

Question No. 4:

Please explain the meaning of "...application of probabilistic transport models that estimate the partial model validation using distribution of mass flux values." Ref: SCR 13.3-72 and 16.4-8.

The paragraph cited contains a typographic error. Omit the phrase "partial model validation using." The paragraph was intended to convey the idea that we plan to model radionuclide transport using probabilistic models so that mass flux estimates can be presented in the form of probability distributions.

If you have questions covering the above material, please call.

Very truly yours,

D. J. Squires
for O. L. Olson, Project Manager

Basalt Waste Isolation Project Office

BWI:DJS

cc: R. Stein, DOE/HQ