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MEMORANDUM FOR: Enrico Conti, Chief
 Waste management Branch
 Division of Health, Siting
 and Waste Management

FROM: Malcolm Knapp, Acting Chief
 Geotechnical Branch
 Division of Waste Management

SUBJECT: PARTICIPATION BY D. ALEXANDER IN RHO/BWIP
 GEOCHEMISTRY WORKSHOP

Don Alexander is invited to attend and participate in the RHO/BWIP geochemistry workshop. It will be held January 9-13, 1984 at Handford, Washington (Preliminary agenda attached). Don's participation in the August 1983 workshop contributed greatly to its success and we therefore, request that you authorize his attendance at the upcoming workshop.

"ORIGINAL SIGNED BY"

Malcolm Knapp, Acting Chief
 Geotechnical Branch
 Division of Waste Management

Enclosure:
 As Stated

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REVISED AGENDA
DOE/NRC MEETING ON GEOCHEMISTRY
BASALT WASTE ISOLATION PROJECT

DATE: January 9 - 13, 1984

PLACE: Richland, WA.

PURPOSE: 1) To discuss NRC concerns, as expressed in the BWIP Draft Site Characterization Analysis.
2) To review geochemical aspects of BWIP investigation to date.

OBJECTIVES: 1) To collect data and review information developed by geochemical investigations to date.
2) To examine methods of investigation, calculations and the uncertainties involved.
3) To review how geochemical data is (to be) used in performance assessments (e.g., radionuclide migration, waste package environment definition, etc.)
4) To work toward an agreed-upon approach to handle NRC concerns.

January 9, 1984

8:00	Introduction - Purpose and BWIP objectives	BWIP
8:15	Introduction - Purpose and NRC objectives	NRC
8:30	BWIP Geochemistry Program and Objectives	BWIP

Including:

- o Rational for list of key radionuclides
- o Estimates of solubility limits necessary to meet NRC/EPA criteria

- o Sorption requirements necessary to meet NRC/EPA criteria

- 9:30 Presentation of NRC ongoing review of DOE/BWIP program (summary of draft documents in preparation). NRC
- 11:45 LUNCH
- 1:00 Presentation of NRC generic solubility technical position. NRC
- 1:30 PERFORMANCE ASSESSMENT BWIP/NRC
- o What models are/will be used?
 - o How does (will) BWIP use geochemical data in performance assessment?
 - o What geochemical parameters are important? Why?
 - o How will natural analogues be used?
- 4:30 Adjourn
- 5:00 NRC Caucus

January 10, 1984

- 8:00 GEOCHEMICAL CONDITIONS DOE/NRC
- o Water Chemistry
 - o Eh/pH analysis and data
 - o Organics
 - o Temperature/Pressure
 - o Gas Composition
- 11:45 Lunch
- 1:00
- o Quantitative discussion of minerals in contact with groundwater
 - o Basalt-water Reaction
- Including:
- Secondary Minerals

Packing Materials Stability
Mesostasis

- o Colloid formation
- o Radiolysis

4:30 Adjourn

5:00 NRC Caucus

January 11, 1984

8:00 SOLUBILITY DOE/NRC

- o Radionuclide solubility test results in basalt systems
Speciation
- o Kinetics
- o Conditions
- o Thermodynamic solubility estimates

11:45 Lunch

1:00 SORPTION DOE/NRC

Including:

- o Radionuclide sorption test results- Rock
Secondary minerals and packing materials
Speciation
Sorption/Desorption
Kinetics
Rock/water ratio
Conditions

4:30 Adjourn

5:00 NRC Caucus

January 12, 1984

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1:00 NRC caucus/BWIP caucus

3:00 BWIP presents agreements, disagreements, concerns

3:30 NRC presents agreements, disagreements, concerns

4:00 BWIP/NRC develop common list

January 13, 1984

9:00 Technical Wrap-up

10:00 Management Wrap-up

11:00 Preparation of meeting notes