

JUN 26 1986

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MEMORANDUM FOR: Robert L. Johnson  
WMRP

FROM: Walt R. Kelly  
WMGT

SUBJECT: TRIP REPORT FOR APPENDIX 7 VISIT TO DOE/SRP,  
COLUMBUS, OH, FOR GEOCHEMISTRY REVIEW PANEL MEETING

Attached is my trip report for the above meeting. I discussed its contents with our on-site representative, Teek Verma, and received his concurrence over the telephone. If you have any questions on the report, please do not hesitate to call.

**ORIGINAL SIGNED BY**

Walt R. Kelly  
WMGT

Attachment:  
As stated

WM Record File	WM Project
<u>106</u>	<u>16</u>
	Docket No. <u>✓</u>
	PDR <u>✓</u>
	LPDR <u>(S)</u>
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OFFICE :	WMGT	WRK :	:	:	:	:	:
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### TRIP REPORT

TO:  Robert Johnson, Project Manager	TRAVELER Walton R. Kelly
	FROM BRANCH WMGT

PLACES VISITED  DOE/SRP, Columbus, OH	DATE(S) OF TRIP  May 19-22, 1986
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PERSON(S) CONTACTED  
  
Participants: see attachment 1

PURPOSE OF TRIP  
  
Observe SRP Geochemistry Review Panel Meeting on draft geochemistry program plan (charter and agenda, attachment 2)

ACCOMPLISHMENTS

- Learned SRP plans and priorities concerning all aspects of geochemical studies, including field, laboratory, and modeling issues and plans.
- Learned Review Panel's recommendations and comments on the plan.
- Had informal discussions with various participants on particular geochemical aspects (see attachment 3).
- Examined draft in situ test plan and networks available in the OR office.

PROBLEMS ENCOUNTERED  
  
None.

PENDING ACTIONS

- Send solubility GTP to Sam Panno, Weston
- Request copy of viewgraphs, panel report, and revised draft of Geochemistry Program Plan with a letter from Linehan to Neff.

RECOMMENDATIONS

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- The NRC staff and NRC contractors should formally review the panel's report and revised geochemistry program plan when available.

SIGNATURE - TRAVELER Walton R. Kelly <i>Walton R. Kelly</i>	DATE 86/05/29
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## CHARTER

**Salt Repository Project (SRP) Geochemistry Review Panel**

This Review Panel shall consist of independent experts proficient in expertise in the general area of geochemistry, and with specialization in related fields. These experts shall be selected by the Salt Repository Project Office and charged to review the Salt Repository Project (SRP) issues of concern for future geochemical activities to be conducted in support of the SRP, and to assess the extent to which current planning covers these issues. Principal identification of program needs for geochemical information currently exists in the Draft Geochemistry Plan, which will serve as the basis for Review Panel discussion.

Program needs for geochemical information originate from regulatory requirements. The geochemistry program must address these regulatory requirements, as indicated by the development of an SRP strategy for resolution of geochemical issues, by its organization and implementation of data collection activities. Multi-disciplinary regulatory requirements also require integration of the geochemistry program with other subject areas. The Review Panel is constituted to assist the Salt Repository Project in review of current, and identification of potential new issues of concern in geochemistry; in prioritization of the issues; and in identification of proper program participants to address the issues.

The Geochemistry Plan is intended to identify the schedule and organization necessary to provide supporting geochemical data collection activities to the Salt Repository Project. In this context, this Review Panel is charged with the following activities:

- o The Panel will review pertinent information provided by SRPO, including the Geochemistry Plan, with regard to geochemical data collection, analysis, interpretation, and modeling activities; the primary objective of this review will be to ascertain the completeness and adequacy of activities in the proposed SRP Geochemistry Program.
- o The Panel will attend a meeting, in Columbus, Ohio, of not more than 4 days duration, during which they will be presented with a summary of the currently envisioned geochemistry program, schedule, and interactions with other program participants.
- o Subsequent to these presentations, the Panel will convene in executive session and write a recommendation to SRPO regarding how the Geochemistry Program may best implement strategy to address regulatory requirements. This recommendation shall include supportive documentation; available information and OCRWM's schedule for completion of the project will be considered, but will not constrain the recommendation.

**AGENDA FOR GEOCHEMISTRY REVIEW PANEL**  
**Holiday Inn, Lane Avenue, Columbus, Ohio**  
**May 19-22, 1986**

The objective of this Review Panel Workshop is to ascertain the completeness and adequacy of activities in the proposed Salt Repository Project Geochemistry Program.

**Day 1 - May 19, 1986**

1. Opening Remarks - J. O. Neff/J. A. Sherwin/W. A. Carbiener 8:30
  - o Objective
  - o Scope
  - o Schedule
  - o Priorities
  - o Program Participants
2. Program Needs for Geochemistry
  - o Regulatory Requirements and Licensing - G. Appel 9:00
  - o Geotechnical Site Characterization - W. E. Newcomb 9:40
    - Relationship between geotechnical site characterization activities and the SRP Geochemistry Program.
3. Break 10:20
4. Program Needs for Geochemistry (Continued)
  - o Repository Design - J. Carr 10:40
    - Geochemical data needed to support repository design
    - Seals design
    - Repository performance assessment

- o Waste Package - J. Cunnane 11:10
  - Geochemical data needed to predict and evaluate package corrosion
  - Waste from leaching
  - Waste package design
  - Performance assessment
- o Environmental - T. Thomas 11:35
- 5. Lunch 12:00
- 6. Geochemistry Plan Overview - T. Steinborn 1:00
  - o Role and purpose of geochemistry plan
  - o Interfaces with other program elements
  - o General description of geochemistry program
  - o Justification for activities
- 7. Summary; GRP Directive - J. A. Sherwin 1:30
- 8. GRP Discussion 2:00
- 9. Break 3:00
- 10. GRP Discussion (Continued) 3:15

**Day 2 - May 20, 1986**

- 1. Basic Data and Sampling Requirements - T. Steinborn 8:00
  - o Types of samples to be collected
  - o Handling and storage requirements
  - o Field measurements
  - o Sampling opportunities and limitations
  - o Analyses to be performed
- 2. GRP Discussion; Basic Data and Sampling Requirements 8:30
- 3. Break 10:00
- 4. GRP Discussion (Continued) 10:15
- 5. Lunch 12:00
- 6. Special Laboratory Investigations - J. Means 1:00
  - o Analytical technique development
  - o Special mineralogy studies
  - o Radiolysis effects
  - o Fluid movement and brine composition

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| 7. GRP Discussion; Special Laboratory Investigations | 1:30 |
| 8. Break   | 3:00 |
| 9. GRP Discussion (Continued)                        | 3:15 |

**Day 3 - May 21, 1986**

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|---|-------|
| 1. Modeling Requirements and Capabilities - P. Cloke      | 8:00  |
| o Computer code overview                                  |       |
| o Basic thermodynamic data base                           |       |
| o Waste package environment calculations                  |       |
| o Other applications                                      |       |
| o Geologic analogs for validation                         |       |
| 2. GRP Discussion; Modeling Requirements and Capabilities | 8:30  |
| 3. Break  | 10:00 |
| 4. GRP Discussion (Continued)                             | 10:15 |
| 5. Lunch  | 12:00 |
| 6. Preparation of GRP Recommendations                     | 1:00  |
| 7. Break  | 3:00  |
| 8. Preparation of GRP Recommendations (Continued)         | 3:15  |

**Day 4 - May 22, 1986**

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|---|--------------|
| 1. Preparation of GRP Recommendations (Continued) | 8:00         |
| 2. Break  | 10:00        |
| 3. Preparation of GRP Recommendations (Continued) | 10:15        |
| 4. Summarize of " " "                             |              |
| <b>CONCLUSION</b>                                 | <b>12:00</b> |

### ATTACHMENT 3

#### Informal discussions included:

- ° Paul Cloke, ONWI - WIPP in situ brine migration study results; questions about modeling strategies
- ° Steve Fisher, TBEG - Present and future activities in geochemistry at TBEG
- ° Hermann Gies, West Germany - Asse Mine studies and possibility of visit
- ° Mark Feldman, ASU - Isotopic studies on fluid inclusions at ASU
- ° Sam Panno, Weston - Direction of SRP geochemistry program
- ° Jeff Means, ONWI - Questions on brine chemistry data at salt domes
- ° Gordon Appel, SRPO - Discussion of SRP organization