

**U.S. DEPARTMENT OF ENERGY  
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT**

**PRESENTATION TO  
THE NUCLEAR WASTE TECHNICAL REVIEW BOARD**

**SUBJECT: INTRODUCTION AND  
OPENING REMARKS**

**PRESENTER: MAXWELL B. BLANCHARD**

**PRESENTER'S TITLE  
AND ORGANIZATION: DIRECTOR, REGULATORY AND SITE EVALUATION DIVISION  
YUCCA MOUNTAIN PROJECT OFFICE  
U.S. DEPARTMENT OF ENERGY**

**PRESENTER'S  
TELEPHONE NUMBER: (702) 794-7939**

**DECEMBER 11-12, 1989**

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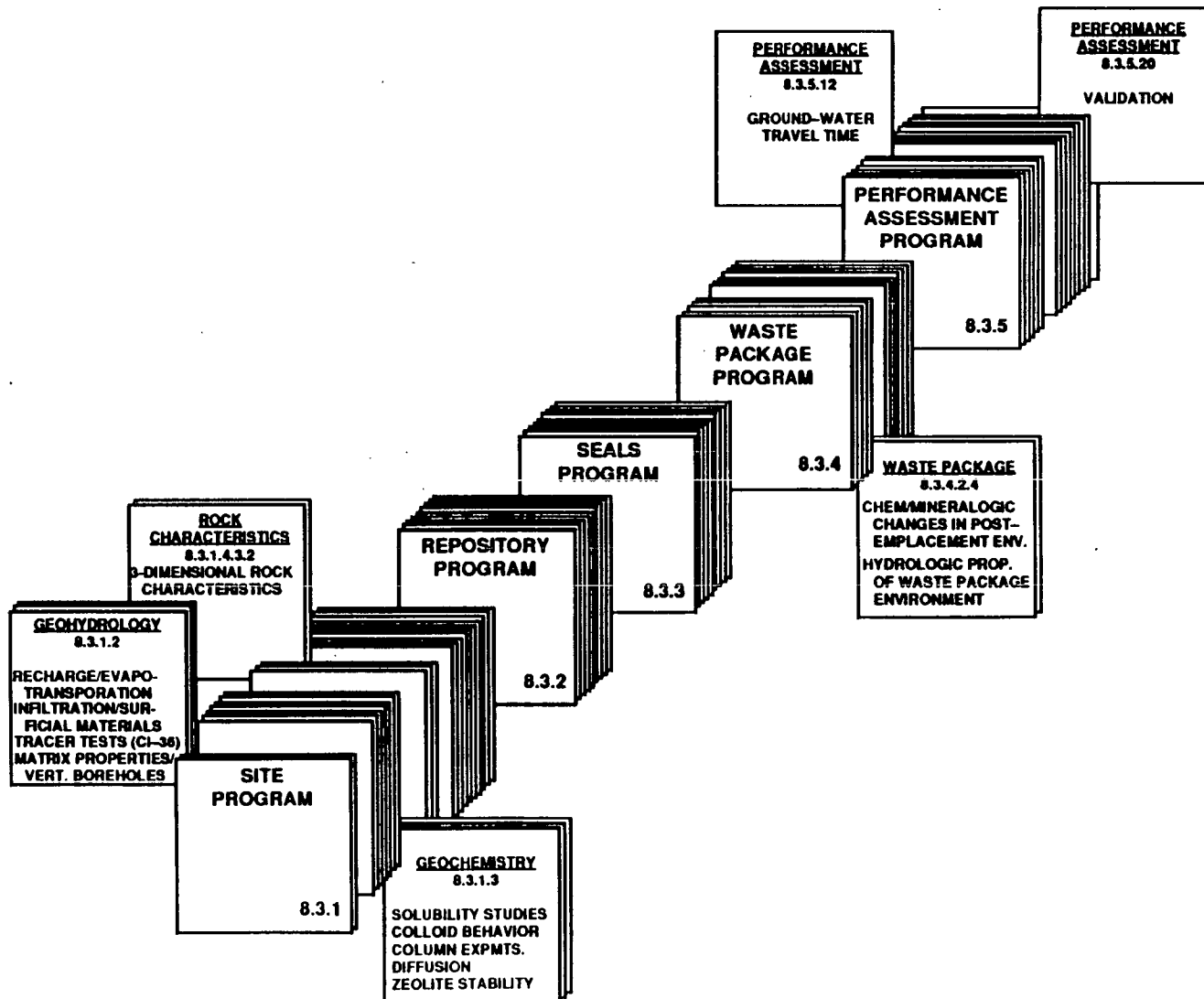
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# **CAVEATS ABOUT HYDROGEOLOGY/ GEOCHEMISTRY PRESENTATIONS**

- **PRESENTATIONS WERE DEVELOPED TO FOCUS ON THE SEVEN TOPICS REQUESTED BY NWTRB MEMBERS**
- **PRESENTATIONS DESCRIBE OUR CURRENT UNDERSTANDING ABOUT THE TOPIC AND PROVIDE THE BASIS FOR THAT PERCEPTION; THE LEVEL OF DETAIL FOR TOPICS DIFFERS BECAUSE OF THE TIME AVAILABLE**
- **OBSERVATIONS AND PRELIMINARY INTERPRETATIONS ARE BEING PRESENTED; SOME HAVE NOT BEEN REVIEWED OR APPROVED FOR PUBLICATION BY EITHER THE SPEAKER'S ORGANIZATION OR THE DEPARTMENT OF ENERGY**
- **REGULATORY IMPLICATIONS OF NEW INFORMATION CONTAINED IN PRESENTATIONS HAVE NOT YET BEEN EVALUATED, NOR HAS THE INFORMATION BEEN REVIEWED FOR CONSISTENCY WITH LICENSING STRATEGIES DESCRIBED IN THE SCP**

# TOPICS COVERED IN HYDROGEOLOGY- GEOCHEMISTRY BRIEFING



**NWTRB PRESENTATION  
DETAILED AGENDA  
DECEMBER 11-12, 1989**

**MONDAY, DECEMBER 11, 1989**

- 8:30 INTRODUCTION AND OPENING REMARKS** **MAXWELL B. BLANCHARD, DOE**
- 9:00 CHARACTERIZATION OF INFILTRATION** **ALAN FLINT, USGS**
- **CONCEPTUAL MODEL OF INFILTRATION**
  - **CURRENT UNDERSTANDING**
  - **FUTURE PLANS**
- 10:30 BREAK**
- 10:45 MEASUREMENT OF UNSATURATED ZONE HYDROLOGIC PROPERTIES**
- **OVERVIEW OF MATRIX PROPERTIES** **ALAN FLINT, USGS**
  - **AIR PERMEABILITY TESTING – ROLE OF FRACTURES** **ROBERT C. TRAUTZ, USGS**
  - **IN SITU MONITORING — MEASURING FLUID-FLOW POTENTIAL FIELD** **JOSEPH P. ROUSSEAU, USGS**
- 11:45 LUNCH**

**NWTRB PRESENTATION  
DETAILED AGENDA  
DECEMBER 11-12, 1989**

**MONDAY, DECEMBER 11, 1989 (CONTINUED)**

**12:45 IMPORTANCE OF FRACTURE VS. MATRIX FLOW**

- **CONCEPTUAL MODELS FOR FRACTURE/  
MATRIX FLOW**

**PAUL G. KAPLAN, SNL**

- **RESULTS AND IMPLICATIONS OF  
EXPERIMENTAL STUDIES AND FIELD  
OBSERVATIONS**

- **CHLORINE ISOTOPIC MEASUREMENTS**

**A. EDWARD NORRIS, LANL**

- **OBSERVATIONS CONCERNING AIR FLOW  
AND WATER FLOW IN FRACTURES**

**EDWIN P. WEEKS, USGS**

**2:30 RADIONUCLIDE GAS RELEASES**

- **REVIEW OF GASEOUS ISOTOPES**

**RICHARD A. VAN KONYNENBURG,  
LLNL**

- **PRELIMINARY STATUS OF CARBON-14  
MODELING**

- **CARBON-14 MIGRATION**
- **CHEMISTRY MODELING**
- **GAS-FLOW MODELING**

**BENJAMIN ROSS,  
DISPOSAL SAFETY, INC.**

**NWTRB PRESENTATION  
DETAILED AGENDA  
DECEMBER 11-12, 1989**

**MONDAY, DECEMBER 11, 1989 (CONTINUED)**

**3:30 BREAK**

**3:45 OVERVIEW OF MODEL VALIDATION STRATEGY --  
BUILDING "REASONABLE ASSURANCE"**

**DWIGHT HOXIE,  
USGS**

- **RECORD OF MODEL DEVELOPMENT**
- **LAB/FIELD INVESTIGATIONS**
- **SENSITIVITY AND UNCERTAINTY ANALYSES**
- **FORMAL TECHNICAL REVIEWS**
- **EXAMPLES OF VALIDATION**

**5:00 WRAP-UP & ADJOURN**

# NWTRB PRESENTATION

DETAILED AGENDA  
DECEMBER 11-12, 1989

TUESDAY, DECEMBER 12, 1989

**8:30 APPLICABILITY OF LABORATORY EXPERIMENTS**

**AREND MEIJER, LANL  
ROBERT S. RUNDBERG, LANL**

- **PHYSICAL AND CHEMICAL PROCESSES  
DETERMINING MOBILITY**
- **FACTORS CONTROLLING SORPTIVE BEHAVIOR**
- **EXPERIMENTAL  $K_d$  DETERMINATION – CRUSHED  
ROCK AND ROCK COLUMN EXPERIMENTS**

**10:30 BREAK**

**10:45 OVERVIEW OF EFFECTS OF REPOSITORY  
DEVELOPMENT**

**WILLIAM E. GLASSLEY, LLNL**

- **LABORATORY AND FIELD EVIDENCE: THERMO-  
HYDROLOGICAL, MECHANICAL, AND GEOCHEMICAL  
EFFECTS OF REPOSITORY DEVELOPMENT  
(NEAR- AND FAR-FIELD)**

- **RADIONUCLIDE BEHAVIOR AT ELEVATED  
TEMPERATURES; COLLOID BEHAVIOR**

**DAVID E. HOBART, LANL**

**11:45 ADJOURN**