Agenda

HG&G Panel Meeting
Ground-Water Travel Time (GWTT)
and
Fluid-Flow Pathways

Holiday Inn Crowne Plaza
4255 South Paradise Road
Las Vegas, Nevada 89109
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September 12-13, 1994

Monday, September 12, 1994

1:00 P.M.  Welcome and opening remarks
Donald Langmuir
Nuclear Waste Technical Review Board (NWTRB)

REGULATORY BACKGROUND

1:10 P.M.  Session introduction
Patrick Domenico, NWTRB

1:15 P.M.  Review of the history and intent of 10 CFR 60 GWTT
criterion
Michael Bell
Nuclear Regulatory Commission

1:45 P.M.  Review of the regulatory background of 10 CFR 960
Stephan Brocoum
Department of Energy (DOE)

2:15 P.M.  Review of the regulatory background and history:
Stakeholder viewpoint
Mal Murphy
Nye County, Nevada
Monday, September 12 — continued

2:45 P.M.  
BREAK (15 minutes)

PROPOSED PROGRAM APPROACH TO GWTT: CONCEPTUAL PROBLEMS

3:00 P.M.  Program overview of GWTT assessment
Erik Smistad, DOE

3:15 P.M.  Interpretation of regulations and calculational philosophy
• Purpose and objectives
• Regulations and their implications (Parts 60 and 960)
• Philosophical approach
Lester Berkowitz
Management and Operating Contractor (M&O) — TRW
Environmental Safety Systems, Inc. (TRW)

3:45 P.M.  Calculational approach
• Specific considerations (why a distribution)
• General approach (transport processes considered)
• Determination of the disturbed zone
• Calculation of unsaturated and saturated zone travel times
• Role of deterministic and stochastic models
• Determining the significance of groundwater travel times less than 1000 years
James Duguid
M&O — INTERA

4:45 P.M.  Implementation of approach - an illustration
• Conceptual implementation
• Use of process models
• Unsaturated zone example
• Discussion of site scale-model and data feeds
• Example of site scale-model results and their use
Ralston Barnard
Sandia National Laboratories (SNL)

5:25 P.M.  Discussion, questions, and comments
Board, presenters, and audience

5:55 P.M.  Recess until Tuesday
Tuesday, September 13, 1994

8:30 A.M.  Reconvene and session introduction
Patrick Domenico, NWTRB

8:35 A.M.  Alternative criteria to GWTT on the geologic subsystem
- Problems with current criterion
- Criteria for a new criterion
- Example of how a criterion could be set for Yucca mountain
  Paul Kaplan, SNL

9:05 A.M.  Comments from the state of Nevada
Carl Johnson
Nuclear Waste Projects Office

9:35 A.M.  BREAK (15 minutes)

- Would an alternative criterion be preferable? What could it be based on?
- Do complex mathematical models with uncertain parameters serve a useful function in assessing the geologic subsystem performance? When do they, and when do they not?
- What is the significance of travel times less than 1,000 years on repository performance?
- Is there agreement on the definition of the disturbed zone? On which processes should be included in the computation?
- Lessons learned from past attempts at struggling with the GWTT criterion
Board members, presenters, and audience

STATUS OF SITE-CHARACTERIZATION WORK SUPPORTING PERFORMANCE ASSESSMENT (PA) AND GWTT

11:10 A.M.  Site-characterization approach and ties to performance assessment (PA) and GWTT
- PA paradox and its resolution
- Key data needs
Tuesday, September 13 — continued

11:45 A.M.  LUNCH (1 hour and 15 minutes)

1:00 P.M.  Progress in unsaturated zone studies
- Summary of infiltration studies
- Simulation of Pagany Wash
- Isotopic evidence for shallow and deep fracture flow
- UZ16 Air-permeability testing
- Summary of gas isotope/gas circulation model
- Perched water studies
- Saturated-unsaturated zone interactions
Edward Kwickless, USGS

2:15 P.M.  Progress in saturated zone studies
- Recent progress on regional flow model
- Plans for site flow model
- New concepts on saturated zone flow system
- Plans for new saturated zone data collection
- Contributions to performance assessment and technical site suitability
Richard Luckey, USGS

3:00 P.M.  BREAK (15 minutes)

3:15 P.M.  Round-table discussion: Key gaps in hydrologic data for site characterization. What are they and will there be time to fill them?
- Key hydrologic tests/exploration in the ESF
- Characterizing the fast pathways: isotopic data, etc.
- Pneumatic pathways issue: where do we stand today?
- What do we need to know about the Calico Hills?
Board members, presenters, and audience

5:00 P.M.  General comments from the audience

5:15 P.M.  Closing remarks and adjournment
Donald Langmuir, NWTRB