



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON NUCLEAR WASTE
WASHINGTON, DC 20555 - 0001

September 2, 2004

AGENDA¹
153RD ACNW MEETING
SEPTEMBER 22-23, 2004

**WEDNESDAY, SEPTEMBER 22, 2004, SUNCOAST HOTEL (BALLROOM A), 9090 ALTA DRIVE,
LAS VEGAS, NEVADA**

- (1) 8:00 - 8:10 am **Opening Statement** (MTR/JTL)
The Chairman will open the meeting with brief opening remarks and indicate items of interest.

**WORKING GROUP ON THE EVALUATION OF IGNEOUS ACTIVITY AND ITS CONSEQUENCES AT
A GEOLOGIC REPOSITORY AT YUCCA MOUNTAIN, NEVADA (OPEN)**

- (2) 8:10 - 8:20 a.m. **Greeting and Introductions** (MTR/MPL)
The Chairman will state the objectives for this Working Group Meeting and provide an overview of the planned technical sessions. Invited experts will also be introduced at this time.

WGS Purposes

The purposes of this Working Group Meeting are to: (1) increase ACNW's technical knowledge of staff plans to evaluate the consequences of disruptive igneous events at the proposed Yucca Mountain repository; (2) better understand NRC staff expectations regarding DOE's consequence analyses; (3) identify aspects of those analyses that may warrant further study; and (4) complement previous Working Group Meetings.

**WORKING GROUP
SESSION 1**

**GEOLOGIC CONSIDERATIONS IN THE ESTIMATION OF
PROBABILITY OF IGNEOUS ACTIVITY AT YUCCA MOUNTAIN**

Areas of specific ACNW interest in Session 1 Include understanding:

- The types and kinds of geologic information needed for generating probability estimates.
- What are the uncertainties?
- What types of approaches yield defensible estimates?
- What is a realistic range of igneous event probabilities based on the geologic record.

¹ACNW meeting schedules are subject to change. All scheduled agenda items at this meeting are open to the public. Listed presentations may be canceled, or rescheduled to another day. If such a change would result in significant inconvenience or hardship, be sure to verify the schedule with Mr. Howard Larson at 301-415-6805 between 8:00 a.m. and 4:00 p.m. (EST) prior to the meeting.

(3)	8:20 - 8:50 a.m. ²	<p>NRC Perspective on Volcanism Modeling Issues</p> <p>3.1 Presentation by a representative(s) of NRC's Office of Nuclear Material Safety and Safeguards' Division of Waste Management (DWM).</p> <p>3.2 Discussion</p>
(4)	8:50 - 9:50 a.m.	<p>NRC Overview of Igneous Activity in the Yucca Mountain Region</p> <p>4.1 Presentation by a representative(s) of NRC's DWM and/or the Center for Nuclear Waste Regulatory Analyses (CNWRA), NRC's technical assistance contractor.</p> <p>4.2 Discussion</p>
	9:50 - 10:10 a.m.	*** BREAK ***
(5)	10:10 - 10:55 a.m.	<p>1996 Probabilistic Volcanic Hazards Analysis: One Subject Matter Experts' Perspective</p> <p>5.1 Scheduled presenter: Dr. Bruce Crowe (Los Alamos National Laboratory).</p> <p>5.2 Discussion</p>
(6)	10:55 - 11:40 a.m.	<p>Alternative Views on the Likelihood of an Igneous Event in the Yucca Mountain Region</p> <p>6.1 Scheduled presenter: Mr. Neil Coleman (ACNW staff).</p> <p>6.2 Discussion</p>
	11:40 - 1:00 p.m.	*** LUNCH ***

²Presentation time should not exceed 50 percent of the total time allocated for a specific agenda item. The remaining 50 percent of the time is reserved for discussion.

(7) 1:00 - 2:00 p.m. **Session 1 Working Group Roundtable Discussion**
 Comments and observations from the panel of invited experts. The invited experts include:
 Dr. Robert Budnitz – Lawrence Livermore National Laboratory³
 Dr. David Johnson – ABS Consulting (Irvine, CA)
 Dr. William Hinze – Purdue University (retired)⁴
 Dr. Bruce Marsh – Johns Hopkins University⁴
 Dr. William Melson – Smithsonian Institution (retired)⁵

(8) 2:00 - 2:30 p.m. **Public Comments**

2:30 - 2:45 p.m. ***** BREAK *****

**WORKING GROUP
SESSION 2**

CHARACTERIZATION OF MAGMA/REPOSITORY INTERACTIONS

Areas of specific ACNW interest in Session 2 include understanding:

- What is likely to happen to a underground repository at Yucca Mountain, based on an interpretation of the geologic record?
- What are the prevailing conceptual models?
- How realistic are those models (also, what level of realism is achievable)?
- How pervasive are the uncertainties?
- How many waste packages are likely to be effected by a disruptive igneous event?

(9) 2:45 - 3:30 p.m. **NRC Staff Perspective on the Modeling of Magma/Repository Interactions**

9.1 Presentation by a representative(s) of NRC’s DWM and/or the CNWRA.

9.2 Discussion

(10) 3:30 - 4:15 p.m. **2002 Recommendations of the DOE-Sponsored Igneous Consequences Peer Review Panel: One Panelists’ Perspective**

10.1 Scheduled presenter:⁶ Dr. Emmanuel Detournay (University of Minnesota).

10.2 Discussion

³On detail to DOE’s Office of Civilian Radioactive Waste Management.

⁴Consultant to the ACNW.

⁵Consultant to the U.S. Nuclear Waste Technical Review Board.

⁶Tentative speaker.

- (11) 4:15 - 5:00 p.m. **Alternative Views on the Modeling of Magma/Repository Interactions at Yucca Mountain**
- 11.1 Discussion of the 2004 independent technical analysis sponsored by the Electric Power Research Institute (EPRI). Scheduled presenter representing EPRI: Dr. Matthew Kozak (Monitor Scientific)
- 11.2 Discussion
- (12) 5:00 - 6:00 p.m. **Session 2 Working Group Roundtable Discussion**
Comments and observations from the panel of invited experts.
- (13) 6:00 - 6:30 p.m. **Public Comments**
Adjourn Day 1

THURSDAY, SEPTEMBER 23, 2004, SUNCOAST HOTEL (BALLROOM A), 9090 ALTA DRIVE, LAS VEGAS, NEVADA

- (14) 8:00 - 8:10 a.m. **Opening Statement (MTR/MPL)**
The Chairman will open the meeting with brief opening remarks and indicate items of interest.

WORKING GROUP ON THE EVALUATION OF IGNEOUS ACTIVITY AND ITS CONSEQUENCES AT THE GEOLOGIC REPOSITORY AT YUCCA MOUNTAIN, NEVADA – CONTINUED

- WORKING GROUP SESSION 3** **BIOSPHERE DOSES DUE TO DISRUPTIVE IGNEOUS EVENTS**
This session is intended as a continuation of the February 2004 ACNW Working Group Meeting on biosphere dose assessments. The focus of this session is to examine key dose modeling parameters that may effect the magnitude of calculated doses due to disruptive igneous events.
- (15) 8:10 - 9:40 a.m. **NRC Staff Perspective on Challenges to Modeling Doses due to Disruptive Igneous Events**
- 15.1 Presentations by representatives of NRC's DWM and the CNWRA.
- 15.2 Discussion
- (16) 9:40 a.m. - 12:00 p.m. **ACNW Invited Speakers on Biosphere Dose Modeling Issues**
Three key dose modeling areas will be examined. A break will be included in this session.

	9:40 - 10:25 a.m.	16.1	Perspectives on Aerosol Modeling Issues Scheduled presenter: Dr. Fred Harper (Sandia National Laboratories)
	10:25 - 11:10 a.m.	16.2	Perspectives on Resuspension Modeling Issues Scheduled presenter: Dr. Lynn Anspaugh (University of Utah)
	11:10 - 12:00 p.m.	16.3	Perspectives on Dose Modeling Issues Scheduled presenter: Dr. Keith Eckerman (Oak Ridge National Laboratory)
*** LUNCH ***			
(17)	1:00 - 2:00 p.m.		Session 3 Working Group Roundtable Discussion Comments and observations from the panel of invited experts (Drs. Harper, Anspaugh, and Eckerman).
(18)	2:00 - 3:00 p.m.		Presentations by Stakeholder Organizations Upon request, representatives from stakeholder organizations and the public may make a 10 minute presentation concerning the technical material presented during this Working Group meeting. Scheduled time: 10 minutes/stakeholder organization. Each presentation would be followed by a 10 minute discussion.
*** BREAK ***			
(19)	3:15 - 4:15 p.m.		Panel and Committee Summary Discussion Includes closing comments and observations from the respective Working Group panelists, invited experts, and ACNW Members.
(20)	4:15 - 4:45 p.m.		Epilogue Remarks Dr. David Johnson will provide his observations regarding the application of the Garrick/Kaplan "risk triplet" to the evaluation of disruptive igneous events in the Yucca Mountain Region.
(21)	4:45 - 5:00 p.m.		Closing Comments by the Working Group Chairman (MTR/MPL)
(22)	5:00 - 5:30 p.m.		Discussion of ACNW Letter Report (MTR/MPL) Discussion of principal points in any future Letter Report to the Commission on results and observations from this ACNW Working Group.

5:30 - 6:00 p.m.

***** BREAK *****

(23) 6:00 - 7:00 p.m.

Future ACNW Activities/Report of the Planning and Procedures Subcommittee (MTR/HJL)

The Committee will discuss matters related to the conduct of Committee activities and matters and specific issues that were not completed during previous meetings, as time and availability of information permit.

23.1 Discussion of recommendations of the Planning and Procedures Subcommittee regarding the items proposed for full consideration by the full Committee during future ACNW meetings.

23.2 Report of the Planning and Procedures Subcommittee on matters related to the conduct of ACNW business, including the anticipated workload and Member assignments.

Adjourn 153rd ACNW Meeting