



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

February 1, 2007

**AGENDA**  
**176<sup>th</sup> ACNW MEETING**  
**FEBRUARY 13-15, 2007**

**TUESDAY, FEBRUARY 13, 2007, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND**

**ACNW WORKING GROUP ON THE IGNEOUS ACTIVITY WHITE PAPER (OPEN)**

**DAY 1: DISCUSSION OF THE NATURE AND PROBABILITY OF IGNEOUS ACTIVITY**

- 1) 8:30 - 8:45 A.M. **Opening Remarks and Introductions** (MTR/WJH/NMC)  
The ACNW Chairman will make opening remarks regarding the conduct of today's sessions. ACNW Member Dr. Bill Hinze will provide an overview of the first day of the Working Group Meeting, including the meeting purpose, scope, anticipated results, and introduce invited subject matter experts.
- 2) 8:45 - 9:15 A.M. Dr. Steve Sparks (University of Bristol, England) will discuss the state of Volcanology science and eruption analogs for Yucca Mountain.
- 3) 9:15 - 9:45 A.M. Dr. Bruce Crowe (Battelle Corporation) will discuss the volcanic history of the Yucca Mountain region and implications for the risk triplet.
- 4) 9:45 - 10:00 A.M. **Questions and Round Table Discussion** (All)  
Committee Member Hinze will lead a panel discussion with the invited subject matter experts on the two topics just presented.
- 10:00 - 10:15 A.M. \*\*\*BREAK\*\*\***
- 5) 10:15 - 10:45 A.M. Prof. Charles Connor (University of South Florida) will provide an overview of methodologies in probabilistic volcanic hazard assessment and application at Yucca Mountain.
- 6) 10:45 - 11:15 A.M. Prof. Eugene Smith (University of Nevada – Las Vegas; Clark County, Nevada contractor) will discuss the importance of understanding the process of magma generation for volcanic hazard studies about the proposed Yucca Mountain repository.
- 7) 11:15 - 11:30 A.M. **Questions and Round Table Discussion** (All)  
Committee Member Hinze will lead a panel discussion with the invited subject matter experts on the three topics just presented.

- 8) 11:30 -12:15 P.M. Dr. Kevin Coppersmith (DOE – YMPO; contractor, leader of PVHA & PVHA-U) will discuss the use of expert elicitation in predicting the probability of volcanic events at the proposed Yucca Mountain repository – objectives, methodology, implications of the PVHA and PVHA-U.
- 9) 12:15-12:30 P.M. **Questions and Round Table Discussion** (All)  
Committee Member Hinze will lead a panel discussion with the invited subject matter experts on the three topics just presented.
- 12:30 - 1:30 P.M. \*\*\*LUNCH\*\*\***
- 10) 1:30 - 2:15 P.M. NRC staff representatives (Jack Davis and Dr. John Trapp) will brief the Committee on the NRC Perspective on Igneous Activity Issues: Overview of the Licensing Process, Development of NRC Review Capabilities, and Probability of Igneous Activity.
- 11) 2:15 - 2:30 P.M. **Questions and Round Table Discussion** (All)  
Committee Member Hinze will lead a panel discussion with the invited subject matter experts on the topic just presented.
- 12) 2:30 - 3:15 P.M. A representative from the US Department of Energy (DOE/YMPO) will brief the Committee about DOE's views on the ACNW draft White Paper in relation to the nature and prediction of igneous activity.
- 13) 3:15 - 3:30 P.M. **Questions and Round Table Discussion** (All)  
Committee Member Hinze will lead a panel discussion with the invited subject matter experts on the topic just presented.
- 3:30 - 3:45 P.M. \*\*\*BREAK\*\*\***
- 14) 3:45 - 4:15 P.M. A representative from Clark County, Nevada will brief the Committee on the County's views on the ACNW draft White Paper in relation to the nature and prediction of igneous activity.
- 15) 4:15 - 4:30 P.M. **Questions and Round Table Discussion** (All)  
Committee Member Hinze will lead a panel discussion with the invited subject matter experts on the topic just presented.
- 16) 4:30 - 5:00 P.M. A representative for the Electric Power Research Institute (EPRI), Dr. Meghan Morrissey (Colorado School of Mines), will brief the Committee about EPRI's Response to ACNW's Paper on Igneous Event Characteristics and Probability.
- 17) 5:00 - 5:15 P.M. **Questions and Round Table Discussion** (All)  
Committee Member Hinze will lead a panel discussion with the invited subject matter experts on the topic just presented.

- 18) 5:15 - 5:45 P.M. **Wrap Up**  
Committee Member Hinze will lead a panel discussion, including a summary of the Working Group Meeting.

**5:45 P.M. Adjourn**

**WEDNESDAY, FEBRUARY 14, 2007, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND**

**ACNW WORKING GROUP ON THE IGNEOUS ACTIVITY WHITE PAPER (OPEN)**

**DAY 2: DISCUSSION OF CONSEQUENCES OF IGNEOUS ACTIVITY**

- 19) 8:30 - 8:45 A.M. **Opening Remarks and Introductions** (MTR/WJH/NMC)  
The ACNW Chairman will make opening remarks regarding the conduct of today's sessions. ACNW Member Hinze will provide an overview of the second day of the Working Group Meeting, including the meeting purpose, scope, anticipated results, and introduce invited subject matter experts.
- 20) 8:45 - 9:30 A.M. Prof. Bruce Marsh (Johns Hopkins University; ACNW consultant) will discuss the magma/repository/canister processes in both eruptive and intrusive scenarios and implication for risk from igneous activity at the proposed Yucca Mountain repository.
- 21) 9:30 - 10:00 A.M. Prof. Art Montana (University of California – Los Angeles) will discuss the thermal and mechanical magma/canister interactions associated with the intrusion scenario at the proposed Yucca Mountain Repository.
- 22) 10:00 - 10:15 A.M. **Questions and Round Table Discussion** (All)  
Committee Member Hinze will lead a panel discussion with the invited subject matter experts on the topics just presented.
- 10:15 - 10:30 A.M. \*\*\*BREAK\*\*\***
- 23) 10:30 - 10:45 A.M. Tim McCartin (NRC staff) will brief the Committee about NRC's Perspective on Igneous Activity Issues: Consideration of Alternative Conceptual Models.
- 24) 10:45 - 11:15 A.M. Neil Coleman (ACNW staff) will brief the Committee about the flooding history and geomorphology of Fortymile Wash near Yucca Mountain and its importance to volcanism issues.
- 25) 11:15 - 11:45 A.M. Dr. Sara Rathburn (Colorado State University) will brief the Committee on processes of importance in fluvial and eolian transport of sediments.

- 26) 11:45 - 12:00 A.M. **Questions and Round Table Discussion** (All)  
Committee Member Hinze will lead a panel discussion with the invited subject matter experts on the four topics just presented.
- 12:00 - 1:00 P.M. \*\*\*LUNCH\*\*\***
- 27) 1:00 - 1:30 P.M. Member Ruth Weiner will give a presentation about views on the resuspension of volcanic ash and implications to risk from igneous activity.
- 28) 1:30 - 2:15 P.M. Dr. Brittain Hill (NRC staff) will brief the Committee about NRC's Perspective on Igneous Activity Issues: Risk Significance of Potential Consequences of Igneous Activity.
- 29) 2:15 - 2:30 P.M. **Questions and Round Table Discussion** (All)  
Committee Member Hinze will lead a panel discussion with the invited subject matter experts on the topic just presented.
- 30) 2:30 - 3:15 P.M. A representative from the US Department of Energy (DOE/YMPO) will brief the Committee on DOE's views on the ACNW draft White Paper in relation to the consequences of igneous activity.
- 31) 3:15 - 3:30 P.M. **Questions and Round Table Discussion** (All)  
Committee Member Hinze will lead a panel discussion with the invited subject matter experts on the topic just presented.
- 32) 3:30 - 4:00 P.M. A representative from Clark County, Nevada, will brief the Committee on the County's views on the ACNW draft White Paper in relation to the consequences of igneous activity.
- 4:00 - 4:15 P.M. \*\*\*BREAK\*\*\***
- 33) 4:15 - 4:45 P.M. A representative from the Electric Power Research Institute (EPRI), Dr. Mick Apted (Monitor Scientific), will brief the Committee about EPRI's Response to ACNW's Paper on Igneous Event Consequences.
- 34) 4:45 - 5:00 P.M. **Questions and Round Table Discussion** (All)  
Committee Member Hinze will lead a panel discussion with the invited subject matter experts on the topic just presented.
- 35) 5:00 - 5:30 P.M. **Wrap Up** (All)  
Committee Member Hinze will lead a panel discussion including a summary of the Working Group Meeting. Some of the issues to be addressed include:
- Has an effective and accurate understanding of the various views on volcanism been identified and documented in the ACNW draft White Paper?
  - Have the risk-significant topics regarding igneous activity been identified?

- Are the technical bases for positions taken for determining risk from igneous activity at Yucca Mountain scientifically sound?
- Are there risk-significant topics regarding igneous activity that have not been adequately addressed considering the current state of the science? If so, how can they be addressed?

36) 5:30 - 6:00 P.M. **Public Comments**

**6:00 P.M. Adjourn**

**THURSDAY, FEBRUARY 15, 2007, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND**

37) 10:00 - 10:05 A.M. **Opening Remarks by the ACNW Chairman** (Open) (MTR/AFD)  
The ACNW Chairman, Dr. Michael Ryan, will make opening remarks regarding the conduct of today's sessions.

38) 10:05 - 11:00 A.M. **Savannah River National Laboratory (SRNL) Workshop on Cementitious Materials Used in Waste Determination Activities** (Open) (AGC/LSH)  
Barry Scheetz from Penn State University will report on the SRNL workshop on cementitious materials for waste treatment, disposal, remediation, and decommissioning, which was held in Aiken, SC, on December 12-14, 2006.

39) 11:00 - 12:00 P.M. **Semiannual Briefing by the Office of Federal and State Materials and Environmental Management Programs (FSME)** (Open) (MTR/AFD)  
FSME Office and Division Directors will brief the Committee on recent and future activities of interest within their respective programs.

**12:00 - 1:00 P.M. \*\*\*LUNCH\*\*\***

40) 1:00 - 2:30 P.M. **Briefing on International Conferences on Decommissioning and Low Level Waste Subjects** (Open/Closed) (JHC/DAW)  
FSME representatives will brief the Committee on their participation in (1) The International Conference on Lessons Learned from the Decommissioning of Nuclear Facilities and the Safe Termination of Nuclear Activities, December 2006, Athens, Greece and (2) a Technical Meeting on a Safety Guide on Classification of Radioactive Waste at the International Atomic Energy Agency (IAEA), in November and December 2006, Vienna, Austria.

**[NOTE: A portion of the briefing may be closed pursuant to 5 U.S.C. 552b(c)(4) to discuss information obtained from IAEA to be treated as confidential.]**

**2:30 - 2:45 P.M. \*\*\*BREAK\*\*\***

- 41) 2:45 - 3:45 P.M. **Possible use of Moderator Exclusion for Transportation Packages** (Open) (RFW/CLB)  
Representatives from the NRC Office of Nuclear Materials Safety and Safeguards (NMSS), Division of Spent Fuel Storage and Transportation (SFST), will brief the Committee on preliminary views surrounding the development of a Commission Paper addressing both technical and regulatory issues for allowing moderator exclusion for transportation packages.
- 3:45 - 4:00 P.M. \*\*\*BREAK\*\*\***
- 42) 4:00 - 5:30 P.M. **Miscellaneous** (Open) (All)  
The Committee will discuss matters related to the conduct of ACNW activities and specific issues that were not completed during previous meetings, as time and availability of information permit. Discussions may include the ACNW Action Plan as well as future Committee Meetings.
- 5:30 P.M. Adjourn**

**NOTES:**

- Presentation time should not exceed 50 percent of the total time allocated item. The remaining 50 percent of the time is reserved for discussion.
- **Thirty five (35) hard copies and one (1) electronic copy of the presentation materials should be provided to the ACNW in advance of the briefing.**