

Attachment 2

AGENDA

WORKSHOP 2 ALTERNATIVE MODELS PROBABILISTIC VOLCANIC HAZARD ANALYSIS UPDATE (PVHA-U) YUCCA MOUNTAIN PROJECT

15-18 February 2005
Alexis Resort and Villas
375 E. Harmon
Las Vegas, Nevada

GOALS OF THE WORKSHOP: The goals of Workshop 2 are the following:

- To review the PVHA Update (PVHA-U) project goals, expectations, and schedule
- To review the project ground rules, expert roles, and expert elicitation processes
- To review the technical issues that must be addressed by the expert panel
- To discuss alternative interpretations of the tectonics of the Yucca Mountain region from the standpoint of possible implications to
- To discuss alternative models related to the spatial distribution and temporal distribution of future volcanic events
- To discuss interpretations of characteristics defining volcanic events (e.g., intrusive and extrusive event geometries, eruptive type)
- To discuss alternative approaches to probabilistic volcanic hazard analysis, including international studies

APPROACH: The goals of the workshop will be accomplished by a series of topical sessions designed to provide a forum for presentation and discussion of alternatives. Following the introductory session, each session will include several presentations related to the following topics: tectonic framework, models related to spatial distribution, models related to temporal distribution or recurrence, and event definition characteristics. In some cases, presenters will be proponents for particular models; in other cases, presenters have been asked to summarize a series of models or interpretations. The presentations will provide a focus for discussion among the expert panel of the applicability and viability of the alternative models to assessments of PVHA at Yucca Mountain.

TUESDAY, 15 FEBRUARY

Overview of PVHA-U; Goals and Approach for Workshop 2

- 8:30 – 8:45 Welcome and overview, drilling status (Smistad; Cline)
- 8:45 – 9:00 Workshop 2 Goals and Approach (Coppersmith)
- 9:00 – 9:30 Status of Modeling of Aeromagnetic Data and Sample Analysis Program (Cogbill/Perry)

Tectonics of the Yucca Mountain Region *This session is intended to provide presentations of interpretations of the tectonic framework of the Yucca Mountain region from the standpoint of their importance to volcanic hazard analysis.*

9:30 – 10:15 *Basaltic Intrusion Near Yucca Mountain and Relationship to Tectonic Models* (D. O'Leary, USGS/Denver)

10:15 – 10:30 Break

10:30 – 11:15 *Volcanic and Tectonic Evolution of the Crater Flat Basin, and of the Death Valley Region as a Whole* (C. Fridrich (USGS/Denver)

11:15 – 12:00 *Quaternary Evolution of Crater Flat Basin* (C. Connor, USF)

12:00 – 1:30 Lunch

1:30 – 2:15 *Interpretation of Tomographic Imaging of the Crust and Upper Mantle in the Southern Great Basin* (G. Biasi (UNR)

2:15 – 3:00 *Tectonic Implications of a Dense Continuous GPS Velocity Field at Yucca Mountain, Nevada* (B. Wernicke, Caltech)

3:00 – 3:15 Break

3:15 – 3:45 *3-D P-wave velocity structure of the Yucca Mountain region* (L. Preston, UNR)

3:45 – 4:15 Discussion of implications of tectonic models to PVHA-U

4:15 – 5:00 Comments from Observers

WEDNESDAY, 16 FEBRUARY

Models for Characterizing the Spatial Distribution of Future Volcanism *This session will include proponent presentations of alternative models for the spatial distribution of volcanic events in the Yucca Mountain region, as well as alternative approaches to modeling spatial distributions for PVHA.*

8:30 – 9:15 *Bayesian Approach to Forecasts of Volcano Spatial Density* (C. Connor, USF)

9:15 – 10:00 *Mega-rings Surrounding Timber Mountain Nested Calderas, Geophysical Anomalies: Alternate Conceptual Model of Structure and Volcanism near Yucca Mountain* (M. Tynan, DOE)

10:00 – 10:15 Break

10:15 – 11:00 *Rationale for Using a Bivariate Normal Distribution to Assess the Spatial Probability of Magmatic Intrusion for Small Basaltic Fields* (M. Sheridan, Univ at Buffalo)

11:00 – 11:45 *Magma Storage and Transport in Active Volcanic Systems* (C. Jaupart, l'Institut de physique du globe de Paris)

11:45 – 1:00 Lunch

1:00 – 1:45 *Topographic Factors that Influence Dike Propagation at Yucca Mountain* (E. Gaffney, Itasca)

1:45 – 3:00 Discussion of models for spatial distribution of future volcanism

3:00 – 3:15 Break

Models for Characterizing the Temporal Distribution of Future Volcanism *This session will include proponent presentations of alternative models for the temporal distribution of volcanic events in the Yucca Mountain region, including alternative approaches to modeling recurrence for PVHA.*

3:15 – 4:00 *General Methods for Estimating Temporal Recurrence Rate* (C. Connor, USF)

4:00 – 4:45 *An Alternative to Counting Volcanoes for Estimating Eruption Frequency* (R. Carlson, Carnegie Inst)

4:45 – 5:30 Comments from Observers

THURSDAY, 17 FEBRUARY

Characteristics of Possible Future Volcanic Events in the Yucca Mountain Area [Event Definition] *This session will include proponent presentations of alternative models for the characteristics of future volcanic events, including both intrusive and eruptive events (e.g., conduit diameters, dike widths, parallel dikes)*

8:30 – 9:00 *Magma Properties and Likely Eruptive Style in the Yucca Mountain Region* (F. Spera, UCSB)

9:00 – 9:30 *Potential Natural Analog for Mafic Dike Intrusion: Black Canyon (Hoover Dam), Arizona* (M. Sheridan, Univ of Buffalo)

9:30 – 10:15 *Field Evidence for Dike Lengths in the Snake River Plain, Idaho and Implications for Event Definition* (M. Kuntz, USGS/retired)

10:15 – 10:30 Break

10:30 – 11:15 *Event Definitions Used by CNWRA* (C. Connor, USF)

11:15 – 12:00 *Expected Conduit Diameters and Other Eruptive Event Characteristics in the YM Region* (G. Valentine, LANL)

12:00 – 1:15 Lunch

1:15 – 3:00 Discussion of characteristics of future volcanic events

3:00 – 3:15 Break

Approaches to Volcanic Hazard Analysis *This session will entail presentations related to alternative hazard approaches and general hazard models. Experience from hazard analyses conducted for other regions will also be presented and discussed from the standpoint of their implications to the PVHA-U.*

3:15 – 4:00 *Testing Claims about Volcanic Disruption of a Potential Geologic Repository at Yucca Mountain, Nevada* (N. Coleman, ACNW)

4:00 – 5:00 Comments from Observers

FRIDAY, 18 FEBRUARY

Approaches to Volcanic Hazard Analysis (continued)

8:30 – 9:15 *Estimation of volcanic hazards using geostatistical models with applications from Germany and Japan* (O. Jaquet, COLENCO, Switzerland)

9:15 – 10:00 *Volcanic Hazard Assessment for High Level Waste Facilities in Japan* (A. Martin, Quintessa)

10:00 – 10:15 Break

10:15 – 11:15 Discussion of alternative approaches to volcanic hazard analysis

11:15 – 11:30 Path Forward and Schedule (Coppersmith)

11:30 – 12:00 Comments from Observers

12:00 noon Adjourn