



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

September 14, 2006 (**REVISED**)

AGENDA
173rd ACNW MEETING
SEPTEMBER 18-21, 2006

**MONDAY, SEPTEMBER 18, 2006, CONFERENCE ROOM T-2B3, TWO WHITE FLINT
NORTH, ROCKVILLE, MARYLAND**

- 1) 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.

- 2) 10:05 - 11:30 A.M. **Observations from ACNW Members and Staff on recent Activities** (Open) (All)
ACNW members and staff will present a summary of their :
 - 2.1) Visit to Crow Butte In Situ Leach Facility in Nebraska (RFW/LSH)
 - 2.2) Attendance to the U.S. Department of Energy (DOE) Workshop on Low Dose Radiation Research Program (MTR/NMC)
 - 2.3) Attendance to the International Commission on Radiological Protection (ICRP) Workshop (MTR/NMC)

11:30 - 12:30 P.M. *LUNCH*****

- 3) 12:30 - 5:00 P.M. **Discussion of Draft ACNW Letter Reports** (Open) (All)
Discussion of proposed ACNW reports on the following:
 - 3.1) Draft Standard Review Plan for Waste Determinations (AGC/LSH)
 - 3.2) Predicting the Performance of Cementitious Barriers (AGC/LSH)
 - 3.3) Draft Rule/Guidance on Preventing Legacy Sites (JHC/DAW)
 - 3.4) Dry Cask Storage Probabilistic Risk Assessment (PRA) (RFW/AFD)
 - 3.5) DOE Low Dose Radiation Research Workshop (VI) (MTR/NMC)

5:00 P.M. Adjourn

TUESDAY, SEPTEMBER 19, 2006, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

ACNW WORKING GROUP MEETING ON USING MONITORING TO BUILD MODEL CONFIDENCE - DAY 1 (OPEN)

- 4) 8:30 - 8:40 A.M. **Opening Remarks and Introductions** (MTR/JHC/LSH)
The ACNW Chairman will make opening remarks regarding the conduct of today's sessions. ACNW Member Dr. James Clarke will provide an overview of the Working Group Meeting (WGM), including the meeting purpose and scope, and introduce invited subject matter experts.

SESSION I: ROLE OF MODELS AND MONITORING PROGRAMS IN LICENSING

- 5) 8:40 - 9:20 A.M. Vernon Ichimura (Energy Solutions-Duratek-Chem Nuclear) and David Scott (Radiation Safety Control, Inc.) will discuss the licensee's perspective on the role of models and monitoring in demonstrating compliance with licensing criteria.
- 6) 9:20 - 10:00 A.M. James Shepherd and Mark Thaggard from NRC headquarters will discuss the staff's perspectives on the use of ground water monitoring and modeling for regulatory decision making.

10:00 - 10:15 A.M. *BREAK*****

- 7) 10:15 - 11:00 A.M. Matt Kozak from Monitor Scientific LLC and David Esh from NRC headquarter staff will address the role of monitoring in model support and performance assessment evaluations.
- 8) 11:00 - 12:00 P.M. **Session I Panel Discussion** (All)
Committee Member Clarke will moderate and Dr. George Hornberger from the University of Virginia will lead a panel discussion by Committee members and invited subject matter experts on the role of models and monitoring programs in licensing activities.

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

SESSION II: EVALUATING RADIONUCLIDE RELEASES AND GROUND WATER CONTAMINATION (CASE STUDIES)

- 9) 1:00 - 1:30 P.M. Michael Fayer from the Pacific Northwest National Laboratory (PNNL) will discuss lessons learned from remedial actions at the Hanford site with emphasis on contaminant fate and transport.
- 10) 1:30 - 2:00 P.M. Brian Looney from the Savannah River National Laboratory will discuss how detection, characterization and delineation of contaminant plumes can be used to support environmental management and environmental protection objectives.

11) 2:00 - 2:45 P.M. Tom Burke and Mike Hauptman from the Brookhaven National Laboratory will discuss characterization, and modeling and monitoring basis for tritium plume management strategies at Brookhaven National Laboratory.

12) 2:45 - 3:15 P.M. Steve Yabusaki from PNNL Hanford will discuss the use of subsurface simulation to build, test, and couple conceptual process models to better understand controls on the observed uranium plume behavior at the Hanford site.

3:15 - 3:30 P.M. *BREAK*****

13) 3:30 - 4:00 P.M. Vernon Ichimura from Energy Solutions-Duratek-Chem Nuclear will discuss groundwater contaminant migration modeling projections at the Barnwell low-level waste site.

14) 4:00 - 5:00 P.M. **Session II Panel Discussion** (All)
ACNW Committee Member Clarke will moderate and Dr. Hornberger will lead a panel discussion by invited experts on radionuclide release and ground water contamination.

5:00 P.M. Adjourn

WEDNESDAY, SEPTEMBER 20, 2006, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

ACNW WORKING GROUP MEETING ON USING MONITORING TO BUILD MODEL CONFIDENCE - DAY 2 (OPEN)

15) 8:30 - 8:45 A.M. **Opening Remarks and Introductions** (MTR/JHC/LSH)
The ACNW Chairman will make opening remarks regarding the conduct of today's sessions. ACNW Member Clarke will provide an overview of the WGM, including the meeting purpose and scope, and introduce invited subject matter experts.

SESSION III: FIELD EXPERIENCE AND INSIGHTS

16) 8:45 - 9:05 A.M. Brian Andraski from the U.S. Geological Survey (USGS) will discuss how environmental monitoring and modeling are being integrated to refine unsaturated-zone models to capture the essential features and processes of contaminant migration at the USGS Amargosa Desert Research Site, Nevada.

17) 9:05 - 9:25 A.M. Van Price from Advanced Environmental solutions, LLC, will discuss model value with a focus on conceptual model development and the dynamic modeling process.

18) 9:25 - 9:45 A.M. Robert Ford from the U.S. Environmental Protection Agency (Robert S. Kerr Laboratory) will discuss site characterization to support development of conceptual transport models.

- 19) 9:45 - 10:05 A.M. Craig Benson from the University of Wisconsin-Madison will discuss modeling of hydrology covers for waste containment including the role of monitoring in improving model results.
- 10:05 - 10:20 A.M. ***BREAK*****
- 20) 10:20 - 10:40 A.M. Glendon Gee from PNNL will discuss waste isolation using evapotranspiration (ET) type covers and reliability of current models in predicting ET cover performance.
- 21) 10:40 - 11:00 A.M. Jody Waugh from the U.S. Department of Energy (Grand Junction) will discuss monitoring and testing of engineered covers for uranium mill tailings, and the use of natural analog with monitoring and modeling to project long-term performance of covers.
- 22) 11:00 - 12:00 P.M. **Session III Panel Discussion** (All)
Committee Member Clarke will moderate and Dr. Hornberger will lead a panel discussion by Committee members and invited subject matter experts on field experiences and insights.
- 12:00 - 1:00 P.M. ***LUNCH*****

SESSION IV: OPPORTUNITIES FOR INTEGRATING MODELING AND MONITORING

- 23) 1:00 - 1:30 P.M. ACNW Committee Member Clarke and Tom Nicholson from NRC's Office of Research will discuss modeling and monitoring integration issues.
- 24) 1:30 - 2:00 P.M. Thomas Fogwell from Fluor Hanford will discuss integrating modeling and monitoring activities to support long-term interactions and control of contaminants.
- 2:00 - 2:15 P.M. ***BREAK*****
- 25) 2:15 - 3:15 P.M. **Session IV Panel Discussion** (All)
Committee Member Clarke will moderate and Dr. Hornberger will lead a panel discussion by invited experts on the integration of modeling and monitoring programs.
- 26) 3:15 - 4:15 P.M. **Roundtable Wrap Up Discussion** (All)
Committee Member Clarke will moderate a roundtable discussion by invited experts on the use of monitoring programs to enhance confidence in models and model results.
- 27) 4:15 - 4:30 P.M. ACNW Chairman Ryan and the other Committee members will discuss their impressions of the WGM and a possible letter report to the Commission.
- 4:30 P.M. Adjourn**

THURSDAY, SEPTEMBER 21, 2006, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

28) 8:30 - 8:35 A.M. **Opening Remarks by the ACNW Chairman** (Open) (MTR/JHF)
The Chairman will make opening remarks regarding the conduct of today's sessions.

29) 8:35 - 10:00 A.M. **Disposition of Public Comments on Spent Nuclear Fuel Transportation Package Responses to Tunnel Fire Scenarios (NUREG/CR-6886 for the Baltimore Tunnel and NUREG/CR-6894 for the Caldecott Tunnel)** (Open) (RFW/MPL)
NMSS/SFPO representatives will brief the Committee on the public comments received for the two tunnel fire studies and how these comments were addressed in the final versions of the two NUREGs, expected to be released shortly for publication.

10:15 - 10:30 A.M. *BREAK*****

30) 10:30 - 11:00 A.M. **Discussion of Potential ACNW Letter Reports** (Open) (All)
Discussion of possible ACNW reports on:
30.1) ACNW Working Group Meeting on Using Monitoring to Build Model Confidence (JHC/LSH)
30.2) Disposition of Public Comments on Transportation Package Responses to Tunnel Fire Scenarios (RFW/MPL)

31) 11:00 - 12:00 P.M. **Discussion of Draft ACNW Letter Reports** (Open) (All)
Continued discussion of proposed ACNW reports listed under Item 3.

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

32) 1:00 - 4:30 P.M. **Discussion of Draft ACNW Letter Reports** (Open) (All)
Continued discussion of proposed ACNW reports listed under Item 3.

33) 4:30 - 5:00 P.M. **Miscellaneous** (Open)
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 future Committee Meetings.

5:00 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.
- **Fifty (50) hard copies and one (1) electronic copy of the presentation materials should be provided to the ACNW in advance of the briefing.**
- ACNW meeting schedules are subject to change. 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. Antonio F. Dias at 301-415-6805 between 8:00 a.m. and 5:00 p.m. prior to the meeting.