

**MINUTES OF THE 109TH ACNW MEETING  
MAY 11-13, 1999**

**ACNW-0130**

**TABLE OF CONTENTS**

	<u>Page</u>
I. Chairman's Report (Open) .....	1
II. Yucca Mountain Review Plan (Open) .....	3
III. Risk Communication (Open) .....	4
A. Michael Johnson, Section Chief in the Division of Inspection Program, and Bruce Boger, Director of the Division of Inspection Program Management, Office of Nuclear Reactor Regulation, (NRR), "The NRC in Transition: A New Regulatory Framework" .....	4
B. Malcolm Knapp, Deputy Director for Regulatory Effectiveness, "Communications Activities" .....	6
C. Isabelle Schoenfeld, Regulatory Effectiveness and Human Factors Branch, NRR, Cooperative Agreement, "Risk Communication to the Public and to Decisionmakers" .....	6
D. Angelina Howard, Senior Vice President, Nuclear Energy Institute, "Public Outreach" .....	7
E. Katherine Dawes, Office of Reinvention, Environmental Protection Agency (EPA), "Stakeholder Involvement and Lessons Learned From Project XL" .....	8
IV. Meeting With NRC's Executive Director for Operations (Open) .....	10
V. Executive Session (Open) .....	11
A. Future Meeting Agenda (Open) .....	11
B. Future Committee Activities (Open) .....	12

**APPENDICES**

- I. *Federal Register* Notice
- II. Meeting Schedule and Outline
- III. Meeting Attendees
- IV. Future Agenda and Working Group Activities
- V. Documents Provided to the Committee

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# CERTIFIED

Issued: 6/22/99

by  
B. John Garrick - 7/14/99

## MINUTES OF THE 109TH MEETING OF THE ADVISORY COMMITTEE ON NUCLEAR WASTE MAY 11-13, 1999 ROCKVILLE, MARYLAND

The U.S. Nuclear Regulatory Commission's (NRC's) Advisory Committee on Nuclear Waste (ACNW) held its 109th meeting on May 11-13, 1999, at Two White Flint North, Room T-2 B3, 11545 Rockville Pike, Rockville, Maryland. Notice of this meeting was published in the *Federal Register* on April 22, 1999, Volume 64, No. 77, pages 19832-19833 (Appendix I). The purpose of this meeting was to provide a forum for attendees to discuss and take appropriate action on the items listed in the agenda (Appendix II). The entire meeting was open to the public.

A transcript of selected portions of the meeting is available in the NRC's Public Document Room at the Gelman Building, 2120 L Street, NW, Washington, DC 20003-1527. Copies of the transcript are available for purchase from Ann Riley & Associates, Ltd., 1025 Connecticut Avenue, NW, Suite 1014, Washington, DC 20036. Transcripts are also available for downloading from, or reviewing on, the Internet <<http://www.nrc.gov/ACRSACNW>>.

### ATTENDEES

ACNW members who attended this meeting include Dr. B. John Garrick, ACNW Chairman, Dr. Charles Fairhurst, Dr. Raymond G. Wymer, and Dr. George M. Hornberger. For a list of other attendees, see Appendix III.

#### **I. CHAIRMAN'S REPORT (Open)**

[Richard Major was the Designated Federal Official for this portion of the meeting.]

Dr. B. John Garrick, Committee Chairman, convened the meeting at 8:30 a.m. and briefly reviewed the schedule for the meeting. He stated that the meeting was being conducted in conformance with the Federal Advisory Committee Act. He asked that members of the public who were present and had something to contribute to the meeting inform the ACNW staff so that time could be allocated for them to make oral statements. He noted the following items he believed were of interest:

- Michele Kelton and Ethel Barnard of the ACNW/ACRS office received an Achievement Award for their contribution to the Y2K application renovations efforts at an Award's Ceremony on March 12, 1999.

**109<sup>th</sup> ACNW Meeting**  
**May 11-13, 1999**

- Mary Thomas' 6-month rotational assignment has ended, and Ms. Thomas has returned to the Office of Nuclear Regulatory Research (RES).
- Glenn Seaborg, a former Chairman of the Atomic Energy Commission and the chemist whose work leading to the discovery of plutonium won a Nobel Prize, died February 25, 1999, at the age of 86 at his home in Berkeley, California.
- In April 1999, the Nuclear Waste Technical Review Board issued its report on the viability assessment (VA) entitled "Moving Beyond the Yucca Mountain Viability Assessment." The Board notes that "so far, it has not identified any features or processes that would automatically disqualify the site, but that the Department of Energy (DOE) should give serious attention to alternatives to the VA reference design, including changing from a high-temperature design to a ventilated low-temperature design below the boiling point of water." The Board also notes that DOE's plans to determine the suitability of the proposed repository by 2001 is "very ambitious and much work remains to be done."
- The House Commerce Committee approved the nuclear waste bill HR 45 that will provide for interim storage of spent commercial power reactor fuel at Yucca Mountain (YM), Nevada. The bill passed on a 39-6 vote and now moves to the House floor.
- In an order dated April 16, 1999, a Federal judge sided with five utility low-level waste (LLW) generators and a site developer, U.S. Ecology, in their lawsuit claiming that political bias caused Nebraska regulators to deny a license for a disposal facility last year. The judge noted in the order that "there is good reason to think that a license denial was politically preordained." The utilities, U.S. Ecology, and the Central Interstate LLW Commission sued the State and its regulators last year, blaming politics for delays in the licensing process. The license denial will be appealed.
- County Commissioners in the Las Vegas area have made it clear that they plan to fight the transportation routes chosen for moving radioactive waste through the Las Vegas area from the DOE's Fernald site in Ohio.
- In a letter to the New Mexico Environment Department dated April 19, 1999, DOE's General Counsel indicated that DOE has determined that waste to be shipped from Idaho National Engineering and Environmental Laboratory to the Waste Isolation Pilot Plant site does not include "mixed" hazardous material requiring State regulation. DOE had a deadline of April 30, 1999, to begin shipping the waste. The New Mexico Environment Department, however, wants

DOE to wait to ship the waste until New Mexico has given DOE a hazardous waste permit; it also wants to see the test results of the waste.

## **II. YUCCA MOUNTAIN REVIEW PLAN (OPEN)**

[Howard Larson was the Designated Federal Official for this portion of the meeting.]

Keith McConnell, Office of Nuclear Material Safety and Safeguards (NMSS), introduced the principal presenter, Christiana Lui. Ms. Lui noted that it was her intention to update the Committee on the staff's plans to develop a review plan for DOE's license application for the proposed high-level waste (HLW) repository at YM. She explained that at this time, her discussion would be at the "concept" level.

Ms. Lui began her presentation by discussing the staff's four underlying principles, namely:

1. DOE is responsible for making an adequate safety case in the YM license application. The NRC staff is responsible for defending the conclusions of its review.
2. The performance-based, site-specific rule (as proposed in 10 CFR Part 63) should be accompanied by a site-specific review plan.
3. The staff will produce a review plan that will be streamlined, transparent, and performance-based, consistent with the YM licensing strategy paper.
4. Review should be performed in an integrated fashion, and the integration should take place at the technical staff level. The framework should be sufficiently flexible to accommodate changes in DOE's approaches.

She stated that although the DOE's 19 principal factors are not addressed individually, NRC's approach does encompass the related activities. Further, the staff believes that its approach could possibly eliminate over-prescriptive acceptance criteria. Beginning in Fiscal Year (FY) 2000, all acceptance criteria and review methods will be developed under the Yucca Mountain Review Plan (YMRP), but the status of issue resolution will continue to be documented in the Issue Resolution Status Reports (IRSRs).

Among the questions posed by Committee members were the following:

- How does the total system performance assessment (TSPA) code, as well as the ISA, fit into the review process?
- How is the "risk informed" perspective considered in the plan?
- Except for disruptive events, will DOE provide a scenario-driven approach for the staff to review?

**109<sup>th</sup> ACNW Meeting  
May 11-13, 1999**

- How will the stylized human intrusion be evaluated?

Dr. Hornberger expressed a concern about whether the NRC's corporate memory could be retained if the license application is delayed for another decade or so. To this question, the staff responded that the IRSRs will be used as a mechanism for documenting the thought process used in each evaluation.

After the presentation, the Committee thanked the staff for the update and indicated its interest in being briefed periodically as the staff proceeds toward the various scheduled completion dates. The ACNW also indicated its interest in the development of the preclosure sections of the YMRP, which at this time, have not evolved to the same level as the post-closure considerations.

**III. RISK COMMUNICATION (OPEN)**

[Lynn G. Deering was the Designated Federal Official for this portion of the meeting.]

The following presentations were given during this part of the meeting:

**A. Michael Johnson, Section Chief in the Division of Inspection Program Management, and Bruce Boger, Director of the Division of Inspection Program Management, Office of Nuclear Reactor Regulation (NRR), "The NRC in Transition: A New Regulatory Framework"**

Mr. Boger explained that NRC is making changes to its inspection oversight process to keep pace with dramatic improvements over time in industry's performance. The changes present real communication challenges with stakeholders as well as with NRC employees and supervisors.

Mr. Johnson explained the fundamentals of the new oversight process, including what is being done to communicate the new process and to involve internal and external stakeholders. The process is defined using a top-down framework. The framework incorporates the mission and goals of the NRC strategic plan, as well as "cornerstones" that serve as measures of overall performance. The cornerstones are evaluated using information from inspections and from performance indicators. By focusing on a few key essential elements, NRC inspectors are able to glean much about licensee performance and the level of oversight warranted.

The staff held public workshops last year to solicit input from stakeholders on the framework.

In response to a question from Dr. Garrick on how defense in depth is evaluated and communicated to the public, Mr. Boger replied that much of the defense in

**109<sup>th</sup> ACNW Meeting  
May 11-13, 1999**

depth is built into the design, and inspectors evaluate the design control process, which, in turn, ensures defense in depth.

The information from the inspections and the performance indicators is entered into an action matrix, which is a tool for deciding what actions NRC should take in interacting with licensees, including how to communicate the status of specific plants and NRC actions to licensees.

Thresholds are assigned to performance indicators and inspections, such that if the licensee does not exceed the threshold, the licensee is in the "green band," that is, it is free to manage itself. In such cases, NRC performs a baseline risk-informed inspection. The threshold is set low enough, that is, able to pick up on license performance outside the normal deviation, so as to permit NRC to take corrective action if a decline in performance is evident. White, yellow, and red bands are used to indicate decreasing trends in licensee performance. Plants are not allowed to operate if they fall into the red zone. The staff is awaiting the Commission's final approval of the process.

The staff plans to have a report card available on the NRC Web site for each plant that includes graphical representation of trends, scrams, threshold values, and so on. The site will also allow the user to click on inspection findings in individual areas.

NRC has continued to hold weekly or biweekly meetings with the industry, the public, and the press. The staff shared the inspection procedures with industry, and this step is apparently unprecedented.

The staff also conducted internal workshops for other NRC staff members, and recently held a workshop on determining performance indicators with industry and NRC staff members. The staff will begin a pilot process during the June–December 1999 time frame. This pilot will include additional workshops to involve the public. The staff has also created a change coalition consisting of managers from regional offices that help others understand the process. The staff plans to hold evening meetings in the vicinity of reactor sites to discuss with local citizens the revised process and to listen to their concerns.

**B. Malcolm Knapp, Deputy Director for Regulatory Effectiveness,  
"Communications Activities"**

Dr. Knapp summarized some of the ongoing communications activities throughout the NRC, including those of the Communications Activities Group, and implementation of the Public Communications Initiative [Direction-Setting Issue (DSI) 14] and the Plain Language Action Plan. Dr. Knapp is responsible for internal and external NRC communications. Ongoing activities include NRR's communication plan for its new inspection program; RES's project on risk communication; ACNW's priority on risk communication; the EDO's implementation plan for public communications in initiative and plain language guidance; the Office of Public Affairs' development of communications tools, including an audiovisual library, a glossary, and standard presentations; the Publishing Services Branch's guidance on preparing agency documents and graphics support for the student corner Web page; and the Office of General Counsel's Public Involvement Handbook development.

An implementation plan for DSI-14 was developed and provided to the Commission in March 1999. The plan implements 14 of a total of 30 recommended initiatives. Elements addressed in this plan include clarity and timeliness of communications, the public involvement process, responsiveness to public inquiries, public access information, and public outreach.

Finally, the Plain Language Action Plan was developed in response to a memorandum from President Clinton dated June 1, 1998. As of January 1, 1999, the memorandum applies to all agencies. Dr. Knapp provided the Committee with copies of the "Securities and Exchange Commission Guide to Plain English," which the NRC has adopted.

**C. Isabelle Schoenfeld, Regulatory Effectiveness and Human Factors Branch,  
NRR, Cooperative Agreement, "Risk Communication to the Public and to  
Decisionmakers"**

Ms. Schoenfeld described the five major tasks of the cooperative agreement with the University of Wisconsin on risk communication. The tasks completed include (1) release of a literature review on risk communication to the public and to decisionmakers; (2) a 1-day workshop on risk communication; (3) an annotated bibliography on risk communication; and (4) a summary of the state of the art on risk communication to the public (draft) and a summary of state of the art on risk communication to decisionmakers (draft). The fifth task is to develop a needs assessment protocol to determine the risk communication needs of the NRC staff (the draft is due in June 1999). The results of all of these tasks will be used to provide the basis for the development of Risk Communication Guidelines for the

NRC staff to communicate risk-informed regulation to the public and risk analysis results to decisionmakers.

Ms. Schoenfeld highlighted the major areas addressed in the state-of-the-art reports on communication to the public and communication to decisionmakers, and some key findings. Major areas addressed in the report on communication with the public include the format of risk communication messages; use of risk comparisons and the differences in risk perception among different audiences; mental models and risk communication; credibility and trust in communication; and stakeholder participation processes. Major areas addressed in the report on communicating risk to decision-makers include aims and objectives of risk communication to decisionmakers; the format of risk communication messages; and the treatment of uncertainty, variability, and correlation. The findings conclude that there is no one correct format for communication ( i.e., qualitative versus quantitative); caution should be exercised in using risk comparisons because they are often not well received by individuals from organizations trying to justify an unpopular decision; men and woman react differently to the same information; it is important to listen before trying to convey information; situations can be made worse by attempting to involve stakeholders without having a true commitment; when communicating to decisionmakers, identify uncertainties, avoid decisionmaking on single point values; always confer with management to assess management's needs before beginning a project; and use pilot testing whenever possible.

**D. Angelina Howard, Senior Vice President, Nuclear Energy Institute, "Public Outreach"**

Ms. Howard shared her insights and experiences in communicating with the public on nuclear issues. She explained that often well-meaning technical people make the mistake of responding to the public in terms of facts and figures but do not address the real concerns of the people. She also emphasized that credibility can be lost if the communicators do not listen early on.

Some of Ms. Howard's recommendations include the following:

- Recognize the wide range of public audiences that NRC must reach. It is easy to cater to a small subset of people with their own agenda and neglect others that really care and want information.
- Require risk communication training for employees involved in dealing with the public and emphasize developing listening skills. It is easy to lose credibility by not listening early on.
- Solicit routine feedback because effectiveness of communications can be measured.



**109<sup>th</sup> ACNW Meeting**  
**May 11-13, 1999**

Other insights shared include the following:

- People must feel that they have a choice.
- Know your constituency.
- Work with the local officials, fire departments, police departments, and so on, early on.
- Invite members of the public to participate early on and at the preliminary stages of a project.
- Involve the public in analyzing the problems and help them understand technical information.
- Try to obtain support from key opinion leaders or labor leaders who will serve as advocates for your project in the community.
- Identify public participation opportunities.
- Avoid technical terms and jargon.
- Use visual imagery and figures in communicating.

**E. Katherine Dawes, Office of Reinvention, Environmental Protection Agency (EPA), "Stakeholder Involvement and Lessons Learned From Project XL"**

Ms. Dawes explained that EPA's XL project stands for "excellence and leadership." It is a national program that is designed to test innovative ways of achieving better and more cost-effective public health and environmental protection than the current approaches. Under this program, EPA invites industries and other regulated parties to propose alternative regulatory approaches. EPA offers flexibility in exchange for superior environmental performance. The project has a goal of implementing 50 projects. Eleven projects are now under way, and 27 are being developed.

**Insights and Lessons Learned**

- Stakeholder involvement is the cornerstone of the project and is by far the most challenging element.
- There is no single, superior model for involving stakeholders, thus EPA has established principles and processes. One principle is that the sponsors are the managers of stakeholder involvement rather than EPA.
- The most successful projects include those that allowed the stakeholders to co-create the process. It is important to let the stakeholders have a say in developing the process.
- The clarity of the process is very important, that is, too much complexity affects how the project is perceived.
- Building and maintaining trust is critical.
- EPA learned that it needed to better define the parameters for stakeholder involvement.
- The public's views strongly influenced EPA's decisions.
- It is important to use a third, neutral party to facilitate involvement.
- Stakeholder input needs to be obtained early on in the process before decisions are made.
- EPA learned that it needed to seek out means of providing third-party technical assistance.
- All those involved agree that stakeholder involvement is beneficial to everyone's goals in the long run.
- EPA is also performing outreach outside the XL program, including a second annual stakeholder conference in May 1999. Ms. Dawes also cited the Superfund Program as having a long history in stakeholder and community involvement and suggested that ACNW invite a Superfund representative to speak to the Committee.

**IV. MEETING WITH NRC'S EXECUTIVE DIRECTOR FOR OPERATIONS (OPEN)**

[Richard K. Major was the Designated Federal Official for this part of the meeting.]

The Committee met with William Travers, Executive Director for Operations (EDO), accompanied by Carl Paperiello, Director of NMSS, to discuss items of mutual interest. The session began with an overview by Lynn Deering, ACNW staff, of ACNW's planning activities and accomplishments for the previous year. She described the development of ACNW's Action Plan and the Committee's self-assessment process and conclusions. She noted a number of Committee contributions to the Commission, including its letter on the DOE VA, the letter on the proposed HLW regulation (10 CFR Part 63), and ACNW comments on the Commission's white paper on "Risk-Informed, Performance-Based Regulation." Dr. Travers, Dr. Paperiello, and the Committee members and staff discussed the ACNW list of priorities. Dr. Paperiello noted that the NMSS operating plan provides a list of upcoming issues that the Committee can use to help in focusing its review topics.

The Committee discussed coordination of activities with the EDO and the NMSS Director and a number of specific review issues. In response to a question about possible review of West Valley issues, Dr. Paperiello said that West Valley activities involved fewer resources than other areas. He said that an issue of particular interest to him is the need for revising 10 CFR Part 40, "Domestic Licensing of Source Material." He noted that most of the exemptions and general licenses for 10 CFR Part 40 were issued to control strategic material rather than from a public health and safety perspective. He said that changes to 10 CFR Part 40 could lead to regulation of TENORM (technologically enhanced naturally occurring material), which they do not want to do. Drs. Travers and Paperiello said that all aspects of the HLW Licensing Program for YM are NMSS's highest priority issues for the coming year. These issues include the environmental impact statement, 10 CFR Part 63, and the EPA standard.

Dr. Travers asked about the Committee's interest in risk communication and its plans for reviewing this topic. Dr. Garrick discussed why the Committee is taking up this topic. He said that one area needing a specific focus will be the transportation of spent fuel. Dr. Paperiello discussed some of the background issues with respect to transportation regulations and the different Government agencies and regulations involved. He also noted the role of international guidelines on regulating transportation of nuclear materials. Dr. Travers noted that he had been involved with the transport of the damaged reactor core from the Three Mile Island reactor to Idaho and said that transportation is an area of great concern to the public. In response to a statement from Dr. Garrick on the need for risk information in the transportation area, Dr. Paperiello said that there is a large amount of actuarial data on transportation of hazardous material. He added that NMSS wishes to update the modal study, "Shipping Container Response to Severe Highway and Railway Accident Conditions," NUREG/CR-4829. He said that the staff could brief the Committee on this issue. He noted that the transport of hazardous material presents much larger risks than the transport of nuclear waste. He said that the issue is based on an emotional response and the perceptions that people have about shipment risks. Another area of discussion raised by ACNW was the public perception about ground water

**109<sup>th</sup> ACNW Meeting  
May 11-13, 1999**

protection and the need to communicate better in this area. The Committee and Drs. Paperiello and Travers discussed the need to continue interactions so that review topics are coordinated between the Committee and the licensing offices.

The next topics discussed were preclosure and post-closure licensing issues for the HLW repository at YM. Dr. Fairhurst discussed a number of design issues for the repository with Drs. Travers and Paperiello. In terms of preclosure issues, Dr. Paperiello noted that the NRC has significant experience with the transportation of spent fuel and the licensing of operational facilities. He said that NRC would use personnel from the Spent Fuel Project Office to examine transportation issues in the license application. Dr. Garrick suggested that, given all the attendant uncertainties, the most important time frame for the YM repository may be the first few hundred years rather than 10,000 years. Dr. Paperiello noted that there may be specific issues that arise during licensing that would require conditions on the license and that there is precedent for that contingency when NRC licensed reactors. Dr. Paperiello argued that the NRC has experience with licensing for perpetuity in the uranium mill tailings licenses that have been issued to DOE, which require perpetual institutional control and care. Drs. Fairhurst and Paperiello discussed the basis for licensing the repository and how various types of information developed after licensing might be factored into NRC's oversight of the development of the repository. Dr. Wymer asked if the Committee's communications could be improved. There was also discussion of other review topics and approaches to reviewing them (e.g., the Draft Environmental Impact Statement for Yucca Mountain).

The final area discussed was a concern of Dr. Paperiello's about "excruciating conservatism" in decommissioning screening codes. He noted that the conservatism built into computer models used in screening decommissioning and decontamination sites leads to doses that are a factor of 10 above background when one plugs in natural background levels of uranium and thorium in soils. He noted that he wanted to obtain some specific technical comments, and he challenged the Committee to "tell [him] how to fix it."

In closing, Dr. Paperiello said that he believed that there is a need to increase communication with the ACNW in the future and that he would like to have more interactions on issues of current interest.

**V. EXECUTIVE SESSION (OPEN)**

[Mr. Richard Major was the Designated Federal Official for this part of the meeting.]

**A. Future Meeting Agenda (Open)**

Appendix IV summarizes the proposed items endorsed by the Committee for the 110th ACNW meeting on June 28-30, 1999, at the Center for Nuclear Waste Regulatory Analyses in San Antonio, Texas.

**B. Future Committee Activities (Open)**

**109<sup>th</sup> ACNW Meeting**  
**May 11-13, 1999**

The 111th ACNW meeting is scheduled for July 19–21, 1999.

### **APPENDIX III: MEETING ATTENDEES**

#### **109TH ACNW MEETING MAY 11-13, 1999**

##### **ACNW STAFF**

Dr. Andrew Campbell  
Ms. Michele Kelton,  
Dr. John Larkins  
Mr. Howard Larson  
Dr. Richard Savio

##### **ATTENDEES FROM THE NUCLEAR REGULATORY COMMISSION**

###### **MAY 11, 1999**

C. Paperiello	NMSS
A. Mohseni	NMSS
C. Bartlett	RES
C. Hanlon	DOE
P. Justus	NMSS
J. Firth	NMSS
P. Rathbun	NMSS
C. Lui	NMSS
A. Ibrahim	NMSS
R. Zelac	NMSS
N. Eisenberg	NMSS
J. Kotra	NMSS
M. Drouin	RES
S. Coplan	NMSS

###### **MAY 12, 1999**

L. Hamdan	NMSS
M. Johnson	NRR
B. Boger	NRR
P. Reed	RES
A. Mohseni	NMSS
J. Kotra	NMSS
I. Schoenfeld	RES
J. Firth	NMSS
C. Bartlett	RES

##### **ATTENDEES FROM THE NUCLEAR REGULATORY COMMISSION (CONT'D)**

**Appendix III**  
**109th ACNW Meeting**  
**May 11-13, 1999**

**MAY 12, 1999** (Cont'd)

J. Persensky	RES
S. Lewis	NMSS
J. Mitchell	EDO
T. Nicholson	RES
C. Lui	NMSS
M. Landau	OPA
L. Lund	EDO
R. Johnson	NMSS
C. Paperiello	NMSS
W. Travers	EDO
D. Martin	EDO

**ATTENDEES FROM OTHER AGENCIES AND GENERAL PUBLIC**

**MAY 11, 1999**

J. Weldy	CNWRA
B. Ullrich	RI
K. Green	SCIENTECH
L. Bissell	DOE
P. LaPlante	CNWRA
K. Sutton	Winston & Strawn
M. David	SCIENTECH
W. Patrick	CNWRA

**MAY 12, 1999**

R. Wallace	USGS/HQ
F. Hennion	French Embassy
M. Scott	DOE
E. Von Tiesenhausen	CCCP
A. Howard	NEI
W. Hill	NEI
G. Griffith	DOE
L. Bissell	DOE
R. Andersen	NEI
C. Hanlon	DOE
G. Roseboom	USGS/ Retired
J. Russell	CNWRA
W. Patrick	CNWRA

**ATTENDEES FROM OTHER AGENCIES AND GENERAL PUBLIC (CONT'D)**

**MAY 12, 1999** (Cont'd)

P. LaPlante	CNWRA
R. McCullen	NEI
J. Weldy	CNWRA
K. Dawes	EPA
K. Green	SCIENTECH
T. Rockwell	Radiation Science & Health, Inc
S. Echols	Winston & Strawn



#### APPENDIX IV: FUTURE AGENDA

The Committee agreed to consider the following during the 110th ACNW Meeting, June 28–30, 1999, San Antonio, Texas:

- **ACNW Planning and Procedures** — The ACNW staff will brief its Committee on issues to be covered during this meeting. The Committee will consider topics proposed for future consideration by the full Committee and working groups. The Committee will discuss ACNW-related activities of individual members.
- **Review Activities Under Way at the Center for Nuclear Waste Regulatory Analyses** — The Committee will review activities under way at the Center for Nuclear Waste Regulatory Analyses (CNWRA or the Center). Discussions will include an overview of the Center, including its historical evolution. Each of the 10 HLW key technical issues (KTIs) will be reviewed and special emphasis will be placed on 4 KTIs: Igneous Activity, Evolution of the Near-Field, Repository Design and Thermal Mechanical Effects, and Container Life and Source Term.
- **Laboratory Tours** —The Committee will view a number of experiments being conducted at the Center involving hydrology and thermal-hydrology, geochemistry and radionuclide transport, structural geology modeling, and materials.
- **Yucca Mountain Environmental Impact Statement** —The Committee will review the staff's plans for reviewing the DOE's Draft Environmental Impact Statement for the Yucca Mountain project.
- **Total-System Performance Assessment Code 3.2 Sensitivity Study** —The Committee will review the results of the system-level sensitivity and uncertainty analyses to determine which parameters have the most influence on repository performance.
- **Defense In Depth** —The NRC staff and the CNWRA will discuss the current concept of defense in depth as it applies to an HLW repository.
- **Environmental Protection Agency Yucca Mountain Site-Specific Standard** (tentative) — The Committee may offer comments to the NRC on EPA's Yucca Mountain site-specific standard, 40 CFR Part 191, if the proposed standard is made publicly available. The timing for release of the standard remains uncertain.
- **Preparation of ACNW Reports** —The Committee will discuss planned reports, including reports on a white paper on "Engineered Barriers at Yucca Mountain," and other topics discussed during this and previous meetings.

**APPENDIX V**  
**LIST OF DOCUMENTS PROVIDED TO THE COMMITTEE**

[Note: Some documents listed below may have been provided or prepared for Committee use only. These documents must be reviewed prior to release to the public.]

**MEETING HANDOUTS**

**AGENDA**  
**ITEM NO.**

**DOCUMENTS**

- |          |   |
|----------|---|
| <b>1</b> | <b><u>Joint ACRS/ACNW Working Group on Risk-Informed Regulation</u></b> <ol style="list-style-type: none"><li>1. Status of Risk-Informed Regulation in the Office of Nuclear Material Safety and Safeguards, presented by Carl J. Paperiello, Director, NMSS, dated May 11, 1999 <b>[Viewgraphs]</b></li><li>• "Framework for Risk-Informed Regulation in NMSS," presented by Seth M. Coplan, DWM, NMSS, dated May 11, 1999 <b>[Viewgraphs]</b></li></ol>   |
| <b>3</b> | <b><u>Yucca Mountain Review Plan</u></b> <ol style="list-style-type: none"><li>3. "Framework for the Yucca Mountain Review Plan," presented by Christiana H. Lui, HLW and Performance Assessment Branch, DWM, NMSS, dated May 11, 1999 <b>[Viewgraphs]</b></li></ol>  |
| <b>4</b> | <b><u>Risk Communication</u></b> <ol style="list-style-type: none"><li>4. "NRC in Transition: A New Regulatory Framework," presented by Michael Johnson, NRR, NRC <b>[Viewgraphs]</b></li><li>5. "Risk Communication to the Public and to Decisionmakers," by Professor Vicki Bier, University of Wisconsin, Center for Human Performance in Complex Systems, presented by Isabelle Schoenfeld, Human Factors Analyst, Regulatory Effectiveness and Human Factors Branch, Division of Systems Analysis and Regulatory Effectiveness, RES <b>[Viewgraphs]</b></li><li>6. "Communication Activities," presented by Malcolm, Deputy Executive Director for Regulatory Effectiveness, RES <b>[Viewgraphs]</b></li><li>7. <b>Viewgraphs</b> presented by Angelina S. Howard, Senior Vice President, Nuclear Energy Institute</li><li>8. <i>Perspective on <b>Public Opinion</b></i>, Prepared by the Nuclear Energy Institute, March 1999 edition</li><li>9. "Evaluation of Project XL Stakeholder Processes, Executive Summary," EPA100-R-98-009, September 1998, presented by Katherine Dawes, Office of Reinvention, EPA</li><li>10. "Town Hall Meeting, Yucca Mountain: What Are the Rules?" University of Nevada Las Vegas, Division of Continuing Education <b>[Handout]</b></li></ol> |

**Appendix V**  
**109th ACNW Meeting**  
**May 11-13, 1999**

**MEETING NOTEBOOK CONTENTS**

**TAB**

**NUMBER**

**DOCUMENTS**

1. Schedule and Outline for Discussion, 109<sup>th</sup> ACNW Meeting, May 11–13, 1999, dated April 27, 1999
2. Introductory Statement by the ACNW Chairman, undated
3. Items of Interest, undated
4. Introductory Statement by the ACNW Chairman, Second Day, undated
5. Introductory Statement by the ACNW Chairman, Third Day, undated

**2      ACNW Planning and Procedures**

6. Set Agenda for the 109th ACNW Meeting, Planning and Procedures, May 11–13, 1999
7. Set Agenda for the 110th ACNW Meeting, June 28–30, 1999
8. Set Agenda for the 111th ACNW Meeting, July 19–21, 1999
9. Set Agenda for the 112th ACNW Meeting, September 14–17, 1999
10. Set Agenda for the 113th ACNW Meeting, October 12–14, 1999
11. EDO's List of Future Meeting Topics, dated April 20, 1999
12. ACNW 1999 Calendar and NWTRB/OCRWM/M&O Meeting List
13. DWM and SFPO List of Proposed Commission Briefings and Papers
14. Reconciliation of EDO Responses to ACNW Reports

**3      Yucca Mountain Review Plan**

15. Status Report
16. Draft **Preliminary Outline for Yucca Mountain License Application Review Plan, dated March 2, 1999** [*For Internal Committee Use Only*]
17. Disposal of High-Level Radioactive Wastes in a Proposed Geologic Repository at Yucca Mountain, Nevada, 10 CFR Parts 2, 19, 20, 21, 30, 40, 52, 60, 61, and 63, RIN 3150-AG04: *Federal Register*, Vol. 64, No. 34, February 22, 1999

**4      Risk Communication**

18. Status Report
  - Enclosures:
    - Task Action Plan
    - *Communicating the Transition*, A Communication Plan
    - Risk Communication for Risk-Informed Regulation, by Vici Bier, Principal Investigator

**•      4 (cont'd)      Risk Communication**

**Appendix V**  
**109th ACNW Meeting**  
**May 11-13, 1999**

18. Status Report (cont'd)

– Enclosures (cont'd):

- Risk Communication for Government Practitioners: An Annotated Bibliography, by Vicki M. Bier, Center for Human Performance in Complex Systems, University of Wisconsin-Madison, February 1999
- Workshop Summary, Risk Communication in Support of Risk-Informed Regulation, Conducted by The Center for Human Performance in Complex Systems, The University of Wisconsin
- Memorandum undated from William Beecher, Director, Office of Public Affairs, NRC, to NRC Regions, Subject: Best Practices/Public Communications
- Background Information on Angelina S. Howard, Senior Vice President, Industry Communications, NEI
- Article, "Reinventing Environmental Protection—EPA's Approach, 'A Message From EPA'S Reinvention Action Council,'" Press Release dated March 17 , 1999, Title: Savings Exceed \$2.4 Billion Annually From Reinvention Initiatives
- "Reinvention at EPA," Testimony Before Senate Appropriation Committee, Fred Hansen, Deputy Administrator, U.S. Environmental Protection Agency, February 29, 1996
- Article from *Environmental Forum*, "A Real Public Role"
- Article, "What is Project XL? Excellence and Leadership in Environmental Protection," EPA, Office of the Administrator

5 **Meeting With NRC's Executive Director for Operations, EDO, Dr. William D. Travers, and NRC's Deputy Executive Director for Regulatory Programs**

19. Status Report