



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

December 10, 2007

MEMORANDUM TO: ACNW&M Members  
ACNW&M Staff

FROM: Jessie K Delgado, Secretary **/RA/**  
Advisory Committee on Nuclear Waste and Materials

SUBJECT: CERTIFICATION OF THE MINUTES OF THE 182<sup>nd</sup> ADVISORY  
COMMITTEE ON NUCLEAR WASTE AND MATERIALS (ACNW&M)  
SEPTEMBER 18-20, 2007

The proposed minutes of the subject meeting have been certified as the official record of the proceedings for that meeting.

Attachment:  
Certified Minutes of the 182<sup>nd</sup> Meeting  
September 18-20, 2007

cc: A. Bates, SECY (O-16C1)  
S. Jones, NMSS (T-8A23)  
D. Pelton, OEDO (O-16E15)



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

MEMORANDUM TO: Antonio Dias, Chief, NW&M Branch  
Advisory Committee on Nuclear Waste and Materials

FROM: Michael T. Ryan, Chairman  
Advisory Committee on Nuclear Waste and Materials

SUBJECT: PROPOSED MINUTES OF THE 182<sup>ND</sup> MEETING OF THE ADVISORY  
COMMITTEE ON NUCLEAR WASTE AND MATERIALS (ACNW&M)  
SEPTEMBER 18-20, 2007

I certify that, based on my review of these minutes and to the best of my knowledge and belief, I have observed no substantive errors or omissions in the record of this proceeding subject to the comments noted below.

Comments:

**/RA/**

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Michael T. Ryan, Chairman

11/30/2007

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Date



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

November 27, 2007

MEMORANDUM TO: Michael T. Ryan, Chairman  
Advisory Committee on Nuclear Waste and Materials

FROM: Jessie K Delgado, Secretary **/RA/**  
Advisory Committee on Nuclear Waste and Materials

SUBJECT: PROPOSED MINUTES OF THE 182<sup>nd</sup> ADVISORY COMMITTEE ON  
NUCLEAR WASTE AND MATERIALS (ACNW&M) SEPTEMBER 18-  
20, 2007

Enclosed are the proposed minutes of the 182<sup>nd</sup> meeting of the ACNW&M. This draft is being provided to give you an opportunity to review the record of this meeting and provide comments. Your comments will be incorporated into the final certified set of minutes as appropriate. Please provide your corrections and comments to me.

Please note that these minutes are being issued in two parts: (1) main body (working copy form) and (2) appendices. The appendices are being sent only to those members who have requested them.

A copy of the certified minutes with appendices will be forwarded to each member.

Attachment: As stated

cc w/o att. 2: ACNW&M Members  
ACNW&M Staff

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**CERTIFIED**  
11/30/2007  
By Michael T. Ryan

Issued: 11/27/2007

**CERTIFIED MINUTES OF THE 182nd MEETING OF THE  
ADVISORY COMMITTEE ON NUCLEAR WASTE AND MATERIAL  
SEPTEMBER 18-20, 2007**

The U.S. Nuclear Regulatory Commission's (NRC's) Advisory Committee on Nuclear Waste and Material (ACNW&M) held its 182nd meeting on September 18-20, 2007 at Two White Flint North, Room T-2B3, 11545 Rockville Pike, Rockville, Maryland. Notice of this meeting was published in the Federal Register on August 30, 2007 (72 FR 50129) (Appendix A). The meeting served as a forum for attendees to discuss and take appropriate action on the items listed in the agenda. The entire meeting was open to the public.

A Transcript of the meeting is available in the NRC's Public Document Room at One White Flint North, Room 1F19, 11555 Rockville Pike, Rockville, MD 20852. Copies of the transcript are available for purchase from Neal R. Gross and Company, Inc., 1323 Rhode Island Avenue, NW, Washington, DC 20005. Members of the public may download transcripts from, or review them on, the Internet at <http://www.nrc.gov/reading-rm/doc-collections/acnw/tr/> at no cost.

ACNW&M members Dr. Michael T. Ryan (ACNW&M Chairman), Alan G. Croff, (ACNW&M Vice Chairman) Dr. James H. Clarke, William J. Hinze, and Dr. Ruth Wiener attended this meeting. Appendix C includes a list of other attendees.

**I. CHAIRMAN'S REPORT (OPEN)**

[Dr. Antonio Dias was the Designated Federal Official for this portion of the meeting.]

Dr. Michael T. Ryan, ACNW&M Chairman, convened the meeting at 10:00 a.m. and briefly reviewed the agenda. He stated that the meeting was being conducted in conformance with the Federal Advisory Committee Act. He asked members of the public who were present and had something to contribute to the meeting to inform the ACNW&M staff so that time could be allocated for them to speak.

**II. Corrosion of Waste Package and Drip Shield Materials in a Repository Environment**

[Mr. Christopher Brown was the Designated Federal Official for this part of the meeting.]

Dr. Tae Ahn, Senior Materials Engineer, from the Division of High-Level Waste and Repository Safety (DHLWRS) briefed the Committee on key processes affecting corrosion in the waste package (WP) and the drip shield (DS) to be used at the proposed Yucca Mountain (YM) repository. In addition, he summarized the staff's current understanding of potentially significant uncertainties in corrosion processes for Alloy 22 and titanium alloys. This information will be used by the staff to support review of the license application.

In the geologic repository for high-level nuclear waste disposal Alloy 22 is the candidate material for the WP outer container, and titanium alloy grades 7 and 29 are the candidate materials for the DS. Performance and integrity issues related to the WP outer container primarily include: (a) long-term persistence of protective passive film in general corrosion; (b) corrosion at temperature above 100°C from dust deliquescence during the early repository period; (c) localized corrosion from seepage water, such as crevice corrosion; and (d) microbially influenced corrosion. Performance and integrity issues related to the DS include hydrogen-assisted failure.

Dr. Ahn reported that long-term chemical or structural changes in passive film stability strongly affect uncertainties in Alloy 22 general corrosion rates. He also reported that current data indicates that crevice corrosion by dust deliquescence does not affect WP performance significantly. The staff believes that crevice corrosion from seepage water would require tight crevices and aggressive brines. Additionally, Dr. Ahn informed the Committee that microbially influenced corrosion appears unlikely because of short induction. Data also shows that there appears to be no evidence that hydrogen could affect the long-term integrity of titanium alloy in the YM environment. He concluded his presentation by informing the Committee that uncertainties in persistence of passive film appear more significant than uncertainties in other corrosion processes.

The Committee plans to write a letter addressing the staff's presentation on corrosion of the WP and DS.

### **III. Mechanisms for Estimating Juvenile Waste Package Failures**

[Mr. Christopher Brown was the Designated Federal Official for this part of the meeting.]

Mr. Darrell Dunn, Manager of the Materials Performance and Characterization Group, Center for Nuclear Waste Regulatory Analyses (the Center), updated the Committee on key processes and associated uncertainties that may contribute to juvenile/early failure of WPs under potential repository conditions. This information will be used by the staff to support review of the license application.

In the YM geologic repository Alloy 22 will be used for the WP outer container, and two grades of titanium alloys will be used for the DS. During the fabrication of the WP and DS, various types of discontinuities may be introduced due to welding flaws, improper materials, improper heat treatment, or contamination. Discontinuities could lead to early failure of WP and DS. Consequently, the Center reviewed and evaluated literature related to industrial failures and failure mechanisms of the relevant analog industrial components such as pressure vessels and aircraft engine components. Also, the Center reviewed factors involved in initial failures such as human error probabilities, equipment failure rates, and reliability of ultrasonic examination. The Center's review and evaluation concluded that industrial failure rates are not directly applicable to waste packages and drip shields, however, a correlation can be made to general industrial fabrication technologies and inspection methods/criteria that will be utilized in WP construction.

The Committee plans to write a letter addressing the Center's presentation on mechanisms for estimating early WP and DS failures.

#### **IV. Dissolution Processes for Commercial Spent Nuclear Fuels in a Repository Environment**

[Mr. Christopher Brown was the Designated Federal Official for this part of the meeting.]

In a second briefing Dr. Ahn, described key processes and uncertainties associated with the dissolution of commercial spent nuclear fuels (CSNF) under potential repository conditions. Models for CSNF dissolution kinetics in the performance assessment were presented. Risk insights and uncertainties along with some results of system-level performance assessment studies, based on independent process-level modeling and analysis were also presented to the Committee. This information will be used by the staff to support review of the license application.

In any YM geologic repository, radionuclides are expected to be released by waste dissolution in groundwater following WP failure. When evaluating dissolution, the environmental in-package chemistry needs to be considered. The in-package chemistry should consider the following: the amount and types of dissolved ions (e.g., carbonate, calcium, and silica), pH effects, temperature, and the condition of the CSNF. Condition of the CSNF is an important factor and consideration is given to the amount of oxidation on the cladding and pellets and the grain boundary inventory of radionuclides. Hydrides are also considered.

Dr. Ahn informed the Committee that while CSNF dissolution rates are most sensitive to variations in temperatures, the silicon ions could decrease spent fuel dissolution rates by more than an order of magnitude. Furthermore, release of radionuclides from the grain boundary/gap is a substantial component in affecting release rates (by a factor of 2-10 of the long-term matrix dissolution rates). Dr. Ahn explained that, for low drip-rates, cladding containing a small opening in the presence of iron compounds has an effect of decreasing dissolution or release rates. However, low pH and pre-oxidation and hydration of spent fuel before water contact could potentially increase dissolution rates. The data was mostly collected from uranium dioxide and CSNF samples; however, some of the results were based on data obtained from simulated fuel (SIMFUEL). Dr. Ahn concluded his briefing by stating that there is a range of information in analog, primarily from laboratory experiments, to support staff review of CNSF dissolution models.

The Committee plans to write a letter addressing the staff's presentation on dissolution processes for CSNF in a repository environment.

#### **V. Discussion of the NRC Role in the International Commission on Radiological Protection (ICRP)**

[Mr. Neil Coleman was the Designated Federal Official for this part of the meeting.]

Drs. Donald Cool and Vincent Holahan (both with the NRC staff) briefed the Committee about NRC staff participation in recent activities of the International Commission on Radiological Protection (ICRP). The presenters outlined the major areas of NRC activity in international radiation protection and the staff's strategy and involvement.

International standards and guidance are developed by the International Atomic Energy Agency (IAEA) and individual countries. The NRC staff engages in development of IAEA standards by participating in Consultant and Technical Meetings, Safety Committees, the Commission on Safety Standards, and Member State Comments. IAEA is now revising the Basic Safety Standards based on the anticipated publication of the new recommendations, ICRP 103, later in 2007. NRC staff is participating in the drafting and review of these standards. ICRP, as an independent international commission organized under the International Congresses of Radiology, provides recommendations for radiation protection internationally. Reports expected to be available for comment include: Task Group on Emergencies, Task Group on Existing Exposure Situations, and Task Group on Reference Plants and Animals. The NRC staff's strategy includes active engagement at each opportunity to influence draft documents for scientific consistency and implementation issues. The staff pursues both direct and indirect opportunities to provide NRC views, and provide the Commission with approved comments on general recommendations.

The NRC staff actively engage in ICRP activities through: membership on Committee 4 of ICRP, direct review and comment on ICRP documents, participation in the Nuclear Energy Agency's (NEA) Committee on Radiation Protection and Public Health and its expert groups, Federal Interagency coordination of views through International Steering Committee on Radiation Standards (ISCORS), and financial support via grants.

The Committee issued a letter to the NRC Chairman, Dr. Klein on this matter dated September 25, 2007, recommending that the Commission invite representatives of organizations such as the ICRP, NEA, IAEA, and the National Council on Radiation Protection & Measurements to meet with the Commission, staff, and key U.S. stakeholders. This exchange should provide the Commission with important insights about radiation protection issues and initiatives, and the programs that address them. This engagement and follow-up actions will offer opportunities for the Commission to take a leadership role and set a course for radiation protection practice. Also, the staff should consider instituting a more formal process to assess the potential impacts of emerging issues on current NRC regulations, and develop strategies for reacting to changes in national and ICRP recommendations.

## **VI. Nuclear Energy Institute (NEI) Briefing on Low-Level Radioactive Waste (LLW) Minimization Strategies**

[Mr. Christopher Brown was the Designated Federal Official for this part of the meeting.]

On the behalf of EPRI, Dr. Ralph Andersen of NEI briefed the Committee on a study concerning minimization strategies to reduce the volume of Class B/C commercial LLW that is currently being generated. Dr. Andersen discussed some of the plans to safely and securely store Class B/C LLW at nuclear power plant sites. Additionally, he discussed the operational changes needed to reduce Class B/C LLW generation.

Dr. Andersen started by focusing on operational strategies to reduce Class B/C waste and on-site storage guidelines. A media management strategy plan for waste storage was also discussed. Dr. Andersen told the Committee that Cesium-137 is the classification controlling radionuclide in resins and filter waste. Furthermore, he believes that nuclear power plant resins and filter waste could potentially be classified as Class A waste on the basis of averaging. This



action could possibly provide a safe disposition pathway for LLW volumes currently being sent to Barnwell and that implementation could occur within current regulatory framework. He also reported that NEI/EPRI are looking at the original technical bases (waste volumes and characteristics) underlying Title 10 of the Code of Federal Regulations, Part 61 (10 CFR Part 61), "Licensing Requirements for Land Disposal of Radioactive Waste," regulation and are evaluating these bases. Dr. Andersen indicated that publication of the NEI/EPRI study will be released in December 2007. It was also noted that a Class B/C technical transfer workshop will be held in the middle of 2008. The primary objective of the workshop will be to assist industry with implementation of Class B/C waste reduction strategies and implementation of on-site storage operating guidelines.

Dr. Andersen's final point to the Committee was that EPRI will continue to support dialogue with NRC via NEI on this issue.

The Committee plans to write a letter addressing the NEI/EPRI's presentation on LLW minimization strategies.

## **VII. NEI Executive Committee Views on Commercial LLW Management Issues**

[Mr. Mike Lee was the Designated Federal Official for this part of the meeting.]

In a second presentation Dr. Anderson, briefed the Committee on recent activities related to the NEI Executive Level task force (hereafter the Task Force) for the management of commercial LLW. He reported that the NEI Task Force was in the process of developing a position paper that will focus on the following issues related to the management of commercial LLW:

(a) feasibility of central processing, packaging, and storage of LLW; (b) access to Federal disposal as an option; (c) creation of a Federal title for some classes of LLW; (d) encouragement by the industry and government to develop other LLW commercial disposal sites; (e) petitioning by the industry for rulemaking to Title 10 of the Code of Federal Regulations, Part 61 (10 CFR Part 61), "Licensing Requirements for Land Disposal of Radioactive Waste"; (f) improved U.S. alignment with the IAEA framework for waste classification; and (g) need for changes to the LLW Policy Act and its amendments.

Dr. Anderson noted that the NEI Task Force intends to issue a report in early 2008 with its views on the aforementioned issues.

This briefing was intended for information purposes only. The Committee intends to track developments related to the forthcoming NEI Task Force findings and compare those with the staff's 2006 LLW strategic planning recommendations.

## **VIII. Observations from ACNW&M Members and Staff on Recent Activities**

[Dr. Antonio Dias was the Designated Federal Official for this part of the meeting.]

ACNW&M Members and staff presented summaries of their:

- A. Visit to decommissioning sites in Pennsylvania (TMI plant) and Missouri (Hematite site)

Dr. James Clarke reported on the visits in August 2007 to the Three Mile Island (TMI) Plant in Pennsylvania and the Westinghouse Hematite Site in Missouri. The purpose of the trip was to observe decommissioning activities and the results of these activities to contribute to the Committee's White Paper on lessons learned in decommissioning. Dr. Clarke reported that the lessons learned at TMI were somewhat exclusive because the decommissioning activities conducted to date involved the cleanup of a relatively severe accident and included considerations not found at a typical nuclear power plant. He reported that the actions taken by AmerGen in response to the Tritium Task Force actions were interesting and valuable. Dr. Clarke reported that the lessons learned at Hematite were also somewhat exclusive since many of their issues have to do with the possibility of excavating significant quantities of special nuclear material. Dr. Clarke said that the trip report would be completed soon and distributed to each of the Members.

- B. Visit to the U.S. Department of Energy (DOE) Grand Junction site in Colorado, Committee Member Dr. Ruth Weiner informed the Committee that on August 14-16, 2007, she along with Committee Member Dr. Bill Hinze and ACNW&M staff member Dr. Latif Hamdan visited the U.S. DOE's Office of Legacy Management in Grand Junction Colorado, as well as a number of legacy uranium mill tailings sites that have been subject to remedial action by DOE. She indicated that the visit was undertaken to collect information that can support the Committee's planned review of the technical basis for a draft rule on groundwater protection at in situ leach (ISL) uranium mining sites, currently under development by the NRC staff. She said that the ACNW&M team held a 1-day meeting at DOE's Office of Legacy Management to discuss issues and concerns about groundwater protection at uranium mining sites, and that participants included representatives from DOE and its contractors, the States of Colorado and Wyoming, and Native American Indians. She also said that the site visits included an old tailings site and a reclaimed tailings impoundment near Rifle, Colorado, as well as the Atlas tailings site in Moab, Utah. Dr. Weiner indicated that a trip report was under preparation.
- C. Attendance to the First Annual Radwaste Summit Committee Chairman Dr. Michael Ryan and ACNW&M staff member Dr. Latif Hamdan informed the meeting about the First Annual Radwaste Summit on LLW that they attended in Las Vegas, Nevada on September 4-7, 2007. They said the meeting was well attended and covered a broad spectrum of LLW topics and stakeholder concerns. Dr. Ryan gave a presentation at the meeting on ACNW&M responsibilities and ongoing ACNW&M activities. Dr. Hamdan will be preparing a trip report soon.

## **IX. Regulatory Guide Revisions**

[Mr. Derek Widmayer was the Designated Federal Official for this part of the meeting.]

Dr. Sher Bahadur, Ms. Andrea Valentin, and Mr. John Ridgely presented a discussion on the revision process the Office of Research (RES) is utilizing to revise regulatory guides in Phases 2 through 4 of the phased approach implemented by RES in revising the guidance documents. Mr. Ridgely described the process as a two-step evaluation, with the first step assessing the individual guides in a vertical direction where references to rules and other references needed to be modernized, and the second step assessing regulatory guides together in a cross-cutting fashion to identify similarities where a change in one guide would necessitate a change in another, or where redundant information could be redacted. Chairman Ryan briefly discussed the review of the current regulatory guides conducted by the Committee after its 181<sup>st</sup> Meeting and explained that the Committee particularly evaluated the technologies and methodologies that form the technical basis for the guides and looked to see if they required updating or revision. He also discussed the potential use of consensus industry standards for reference in a regulatory guide to provide updated methodologies rather than NRC trying to improve on its own work.

The Committee agreed to write a letter report on the regulatory guide revision process described in the RES presentation. The Committee agreed to include a table as part of the letter report showing the results of the Committee's evaluation, undertaken since its 181<sup>st</sup> Meeting, of selected regulatory guides in Divisions 1, and 3 through 8.

## **X. Semi-Annual Briefing by the Office of Federal and State Materials Safety and Environmental Protection Programs (FSME)**

[Dr. Latif Hamdan was the Designated Federal Official for this part of the meeting.]

The Committee received a semiannual briefing by the NRC Office of Federal and State Materials Safety and Environmental Management Programs (FSME). Participating FSME managers included FSME Office Director Mr. Charlie Miller and other FSME Senior Executive Service managers from the Divisions of Materials Safety and State programs (DMSSA), Intergovernmental Liaison and Rulemaking (DILR), and Waste Management and Environmental Protection (DWMEP).

Mr. Charlie Miller noted that FSME was established nearly a year ago and gave an overview of office activities including office accomplishments to date, budget trends, knowledge management, and areas where the Committee's help will be needed. He highlighted FSME's work activities in the Integrated Materials Performance Evaluation Program (IMPEP), working with the States, interfacing and interacting with the IAEA, and other ongoing work on rulemaking activities, irradiated gemstones, waste incidental to reprocessing, and radioactive sources. He discussed budget trends and noted that there are indications that there is now recognition of the importance of the waste and materials areas. He also discussed knowledge management activities, and said that the regulatory guides are important knowledge management tools. He indicated that FSME wants ACNW&M collaboration on the updating of

existing guides and creation of new guides, as well as other FSME knowledge management activities and initiatives currently underway.

DMSSA Director Janet Schlueter discussed the recent General Accountability Office (GAO) sting operation and other work areas and activities in the Division. She stated that the Commission has approved the staff action plan regarding the GAO sting operation and that the staff is proceeding to implement the plan. She discussed the DMSSA organization and highlighted a number of ongoing activities including supporting the NARM rulemaking, new Agreement State application reviews, IMPEP and other Agreement State program reviews, support for the Organization of Agreement States and Conference of Radiation Control Program Directors, direct interactions with States, and other work on irradiated gemstones and knowledge management. Ms. Schlueter highlighted a new initiative that involved development of an internal web page that provides information and a forum for information exchange in the materials area.

DILR Deputy Director Patrice Bubar discussed the DILR organization and rulemaking priorities and process. She emphasized the importance of the technical basis documents, and cited an example of a rulemaking development activity. She indicated that DILR is currently working on a rulemaking activity on the groundwater protection at ISL sites, that the Committee's input has been received and will be considered in the development of this rule, and that other Committee input on the rulemaking as well as the guidance documents is welcomed. Ms. Bubar noted that most of the rulemaking effort in the next 2 years will be in the materials area. She also indicated that DILR is working on revitalizing the Interagency Jurisdictional Working Group to handle low activities of uranium.

DWMEP Deputy Director Scott Flanders discussed ongoing activities in DWMEP and planned activities that are subject of future interaction and collaboration with the Committee. He discussed work related to the U.S. DOE's waste incidental to reprocessing, and noted previous interactions that had taken place between the DWMEP and the Committee in this area. He discussed the LLW strategic assessment, and indicated that a paper on this subject has been completed and will soon be submitted to the Commission. He mentioned that a rulemaking activity for decommissioning of legacy sites was underway. Mr. Flanders discussed the following activities that he said will be the subject of future interactions and collaboration with the Committee: onsite storage guidance, dose modeling evaluation, ISL rulemaking, monitoring at the Savannah River site, West Valley Project erosion issues, and LLW strategic assessment implementation.

The Committee will work with the ACNW&M staff to plan briefings and reviews of future work activities identified by FSME management in this meeting.

**APPENDIX C:  
MEETING ATTENDEES  
182nd ACNW&M MEETING  
SEPTEMBER 18-20, 2007**

**ACNW&M MEMBERS**

Michael T. Ryan, Chairman  
Allen Croff, Vice Chairman  
James Clarke  
William Hinze  
Ruth Weiner

**ACNW&M STAFF**

Christopher Brown  
Neil Coleman  
Jessie Delgado  
Antonio Dias  
Yoira Diaz-Sanabria  
John Flack  
Frank Gillespie  
Latif Hamdan  
Mike Lee  
Derek Widmayer

**ATTENDEES FROM THE NUCLEAR REGULATORY COMMISSION**

**SEPTEMBER 18, 2007**

Tae Ahn	
Greg Oberson	NMSS
Brittain Hill	NMSS
Bret Leslie	NMSS
Boby Abu-Erid	FSME
Tina Ghosh	NMSS
Donald Cool	FSME
Robert Meck	RES
Doris Lewis	RES
Gene Peters	NMSS
Phil Reed	RES
Steven Baggett	OCM
Tom Cox	NMSS
Steve Salomon	FSME
Elaine Keegan	NRR
Steve Sakai	NRR
Jim McGaughey	OIG
Charles Interrante	NMSS
Yong Kim	NMSS

**SEPTEMBER 19, 2007**

Andrea Valentin	RES
Robert Meck	RES
Vince Holahan	RES
Harriet Karagiannis	RES
Kimyata Butler	RES
Stephanie Bush-Goddard	RES
Alex Murray	NMSS

**SEPTEMBER 20, 2007**

Boby Abu-Erid	FSME
Vince Holahan	RES
Robert Johnson	FSME
Robert Lewis	FSME
Andy Imboden	FSME

**APPENDIX C:  
MEETING ATTENDEES  
182nd ACNW&M MEETING  
SEPTEMBER 18-20, 2007**

**ATTENDEES FROM OTHER AGENCIES AND GENERAL PUBLIC**

**SEPTEMBER 18, 2007**

Keith Axler	CNWRA
Todd Mintz	CNWRA
Darrell Dunn	SWRI
E. Von Tiesenhausen	Clark County
Albert Applebaum	Studsuk
Norm Henderson	BSC
Syed Bakhari	DOE
Crystal Williams	DOE
Linda Desell	DOE
Barry Neuman	Lincoln County
Neil Brown	DOE
Jeff Williams	DOE
Ralph Andersen	NEI
George Oliver	NEI
Martin Walsch	EF&M
Rich Janati	BRP
Jim Barnhart	BRP
Dirk Berthett	ES
James Ross	GE-Hitachi
Jim Lieberman	Talisman

**Via Teleconference with CNWRA**

Yiming Pan  
Lus Ibarra  
Robert Brient  
Darius Daruwalla  
Oleg Povetu  
Hundal Jung  
Ken Chiang  
David Pickett  
Wes Patrick

**SEPTEMBER 19, 2007**

Linda Desell	DOE
Bob Applebaum	Studsuk
Judith Johnston	Sierra Club NPRI
E. Von Tiesenhausen	Clark County
James Ross	GE- Hitachi

**SEPTEMBER 20, 2007**

Patrick La Planta	CNWRA
E. Von Tiesenhausen	Clark County

## **APPENDIX D: FUTURE AGENDA**

The Committee agreed to consider the following topics during the 183<sup>rd</sup> ACNW&M Meeting, October 16-18, 2007:

- Working Group Meeting on Preclosure Seismic Analysis Evaluation at the Proposed Yucca Mountain, Nevada, Repository
- GE - Hitachi Nuclear Energy Spent Nuclear Fuel Recycling Processes
- NRC's Total-System Performance Assessment Code (TPA) for Review of Performance Assessment of the Yucca Mountain Site
- Draft Proposed Rule/Guidance on Preventing Legacy Sites
- Mallinckrodt Site Decommissioning Plan
- Vendor's Views on the Transportation-Aging-Disposal (TAD) Performance Specifications
- Revision of NUREG-1854, "NRC Staff Guidance for Activities Related to U.S. Department of Energy Waste Determinations - Draft Final Report for Interim Use"

**APPENDIX E**  
**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**

<b><u>AGENDA ITEM NO.</u></b>	<b><u>DOCUMENTS</u></b>
2	Corrosion of Waste Package and Drip Shield Materials in a Repository Environment <ol style="list-style-type: none"><li>1. Introduction to Engineered Barrier System Discussions, presented by Dr. Brittain Hill, NMSS/DHLWRS (Viewgraphs)</li><li>2. Corrosion of Waste Package and Drip Shield Materials in Potential Repository Conditions, presented by T. Ahn, NMSS (Viewgraphs)</li></ol>
3	Mechanisms for Estimating Juvenile Waste Package Failures <ol style="list-style-type: none"><li>3. Evaluation of Waste Package and Drip Shield Juvenile Failure Rates, presented by Darrell Dunn (Viewgraphs)</li></ol>
4	Dissolution Processes for Commercial Spent Nuclear Fuels in a Repository Environment <ol style="list-style-type: none"><li>4. Dissolution Processes for Commercial Spent Nuclear Fuels in Repository Conditions, presented by T. Ahn, NMSS (Viewgraphs)</li></ol>
5	Discussion of the NRC Role in the International Committee on Radiological Protection (ICRP) <ol style="list-style-type: none"><li>5. NRC Activities in International Radiation Protection, presented by Dr. Donald Cool and Dr. E. Vincent Holahan, NMSS (Viewgraphs)</li></ol>
6	Nuclear Energy Institute (NEI) Briefing on Low-Level Radioactive Waste (LLW) Minimization Strategies <ol style="list-style-type: none"><li>6. Addressing LLW Disposal/BC Reduction Initiatives, presented by Sean Bushart, Phung Tran, EPRI (Viewgraphs)</li><li>7. Remarks submitted by Joseph DiCamillo, General Counsel, Studsvik, Inc., Ervin, TN</li></ol>



**APPENDIX E:  
182<sup>nd</sup> ACNW&M MEETING  
SEPTEMBER 18-20, 2007**

**MEETING HANDOUTS (CONT'D)**

<b><u>AGENDA</u></b>	<b><u>DOCUMENTS</u></b>
<b><u>ITEM NO.</u></b>	

- |     |                                                                                                               |
|-----|---------------------------------------------------------------------------------------------------------------|
| 7   | NEI Executive Committee Views on Commercial Low Level Radioactive Waste (LLW) Management Issues               |
| 8.  | Near-Term Issues and Opportunities in LLW Management, presented by Ralph Andersen, CHP (Viewgraphs)           |
| 11  | Regulatory Guide Revisions                                                                                    |
| 9.  | Regulatory Guide Update Program, Andrea Valentin, John Ridgley, RES (Viewgraphs)                              |
| 12  | Preparation for Meeting with NRC Commissioners                                                                |
| 10. | ACNW Meeting with the U.S. Nuclear Regulatory Commission, November 15, 2007 (Viewgraphs)                      |
| 16  | Semiannual Briefing by the Office of Federal and State Materials and Environmental Management Programs (FSME) |
| 11. | Viewgraphs - Charles Miller, FSME                                                                             |

**APPENDIX E:  
182<sup>nd</sup> ACNW&M MEETING  
SEPTEMBER 18-20, 2007**

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**Agenda 182<sup>nd</sup> ACNW&M Meeting, September 18-20, 2007,  
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**Color Code 182<sup>nd</sup> ACNW&M Meeting, dated August 30,  
2007**

**2**

**Corrosion of Waste Package and Drip Shield Materials in a  
Repository Environment**

1. Status Report
2. Att. 1 - Corrosion Performance of Waste Package and  
Drip Shield Materials in the Potential Yucca Mountain  
Repository Environment (Viewgraphs)
3. Att. 2 - Understanding Long-Term Corrosion of Alloy 22  
Container in the Potential Yucca Mountain Repository  
for High-Level Nuclear Waste Disposal
4. Att. 3 - Corrosion Behavior of Alloy 22 in Concentrated  
Nitrate and Chloride Salt Environments at Elevated  
Temperatures
5. Att. 4 - Part 1. Comments on the NWTRB Letter  
Regarding Seepage-Induced Localized Corrosion

**3**

**Mechanisms for Estimating Juvenile Waste Package  
Failures**

1. Status Report

**4**

**Dissolution Processes for Commercial Spent Nuclear Fuel  
in a Repository Environment**

1. Status Report

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| <b>6</b>  | <b>Nuclear Energy Institute (NEI) Briefing on Low-Level<br/>Radioactive Waste (LLW) Minimization Strategies</b>          |
|           | 1. Status Report                                                                                                         |
| <b>16</b> | <b>Semiannual Briefing by the Office of Federal State<br/>Materials and Environmental Management Programs<br/>(FSME)</b> |
|           | 1. Status Report                                                                                                         |