CERTIFIED
ACNW-0069
PDR 8/6/93

MINUTES OF THE 52ND ACNW MEETING
MARCH 24-25, 1993

- TABLE OF CONTENTS -

DESIGNATED ORIGINAL
Certified By

9308120201 930427
PDR ADVCM NACNUCLE
0069 PDR

E. Executive Session on Organizational and Other Matters (Closed)

F. ACNW Future Activities (Open)

G. Future Meeting Agenda (Open)

- APPENDICES -

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

Issued: April 27, 1993

MINUTES OF THE 52ND MEETING OF THE
ADVISORY COMMITTEE ON NUCLEAR WASTE
MARCH 24-25, 1993
BETHESDA, MARYLAND

The 52nd meeting of the Advisory Committee on Nuclear Waste was held Wednesday and Thursday, March 24-25, 1993, in the Conference Room, 7920 Norfolk Avenue, Bethesda, Maryland. The purpose of this meeting was to discuss and take appropriate actions on the items listed in the attached agenda.

A transcript of selected portions of the meeting was kept and is available in the NRC Public Document Room at the Gelman Building, 2120 L Street, N.W., Washington, D.C. [Copies of the transcript taken at this meeting may be purchased from Ann Riley & Associates, Ltd., 1612 K Street, N.W., Washington, D.C. 20006.]

Dr. Dade W. Moeller, Committee Chairman, convened the meeting at 10:00 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 stated that the Committee had received neither written comments nor requests from members of the public for time to make oral statements. However, he invited members of the public, who were present and had something to contribute, to let the ACNW staff know so that time could be allocated for them to make oral statements.

ACNW members, Drs. Paul W. Pomeroy, and Martin J. Steindler, were also present. [For a list of attendees, see Appendix III.]

I. CHAIRMAN'S REPORT (Open)

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

Dr. Moeller identified a number of items that he believed to be of interest to the Committee, including:

- Dr. John T. Larkins has been selected as the new Executive Director of the Advisory Committee on Nuclear Waste and the Advisory Committee on Reactor Safeguards.

- Core samples from drilling along the exploratory studies facility (ESF) ramp-tunnel at the Yucca Mountain site indicate that subsurface rock approximately 500 feet beyond the ramp entry consists of poorly consolidated volcanic ash that may require structural supports in the ESF.

- Effective February 7, 1993, certain functions and organizational elements in the Office of Nuclear Material Safety and Safeguards (NMSS) were reorganized.

- The Nuclear Waste Technical Review Board (NWTRB) has issued a special report to Congress and the Secretary of Energy. The report lists three critical concerns regarding the high-level radioactive waste (HLW) program: DOE's program is being driven by unrealistic deadlines, DOE plans are not well integrated, and DOE management problems seem to be affecting some critical technical aspects of the program.

II. STATUS OF THE STATE OF ILLINOIS LOW-LEVEL RADIOACTIVE WASTE (LLW) DISPOSAL FACILITY (Open)

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

Dr. Thomas Ortciger, Director, Illinois Department of Nuclear Safety (IDNS), introduced members of his staff, Mr. Steven England, Chief General Counsel, Mr. Gordon Appel, Deputy Director, and Mr. Richard Allen, Manager of the Office of Environmental Safety. The Committee was briefed on the hearings before the Siting Commission and the reasons surrounding the Siting Commission's rejection of a proposed LLW disposal site near Martinsville in Clark County. The Committee was also briefed on the recently passed legislation that repeals the existing statutory siting criteria and creates a new LLW siting process.

Dr. Ortciger noted that, since passage of the Illinois Low-Level Radioactive Waste Management Act (Act) in December 1983, the State of Illinois has diligently pursued the siting of an LLW disposal facility in the state. In July 1988, the Act was changed to require local approval. The technical basis for this legislation was the Illinois law for siting landfills. Dr. Ortciger noted parenthetically that only two such sites have been sited thus far in the state, which would perhaps indicate some compliance difficulty.

Dr. Ortciger outlined the early history of the Illinois process. He noted that IDNS was originally established as an agency with both siting and licensing responsibility. By removing the responsibilities for site selection, the recently passed legislation is expected to avoid any perceived conflict-of-interest by IDNS.

Insofar as costs associated with the Siting Commission hearings on the proposed LLW disposal site near Martinsville, he stated that all contracts have been closed out with the total direct and

indirect costs adding up to $9.2 million. Originally, IDNS estimated that the hearings would cost $3 million. The cost for court reporters alone was $265,000. The magnitude of the costs of these hearings, he believed, resulted in the disestablishment of the Siting Commission process and the passage by the legislature in January of an amended Act (subsequently signed into law by the Governor in March 1993).

Mr. England discussed the history and principal considerations in the Act, such as the establishment of the IDNS and siting criteria. The siting criteria specified, in addition to the distance to the boundaries of a municipality, that the site must be located:

1. So that the public health, safety and welfare will be protected;

2. In a suitable geological and hydrological medium;

3. So as to minimize the possibility of radioactive releases into groundwaters used as public water supplies;

4. Outside the boundary of the hundred year flood plain as determined by the State Department of Transportation; and

5. To consider the distance necessary for the transportation of LLW such that the impact on existing traffic flows is minimized.

The Act was changed several times over the years. One significant change was that the proposed facility could not be located within 1.5 miles of the boundaries of a municipality unless approval is given by its governing body. In 1990, a three-person Siting Commission was established to evaluate the safety and suitability of any proposed site.

Dr. Pomeroy asked if there were any criteria for qualifying persons appointed to the Siting Commission? Mr. England stated that there were none, however, in the new legislation, there are criteria on the backgrounds of the Commissioners.

Mr. England described the Martinsville site hearings. He stated that the Siting Commission took an expansive role of its responsibility. The Commission was concerned how the Martinsville site was selected. They were also interested in the discovery and interpretation of bodies of sand found under the proposed site. The Commission considered whether the IDNS had coerced the investigating scientists, both during the site characterization stage and during the testimony stage, to possibly bias testimony in favor of the site. Mr. England noted that the Siting Commission not only took a very active role in the hearing proceedings, but

also granted considerable latitude to the site opponents and their attorneys.

Some perspective on the nature and scope of the hearings was provided. The Siting Commission submitted more than 200 formal written requests to IDNS for detailed information, which it is estimated, required in excess of 10,000 pages of responses. The hearing transcripts included more than 20,000 pages and there were approximately 500 exhibits submitted by IDNS. The Siting Commission allowed all "expert witnesses" to provide testimony. About 70 public witnesses were permitted to speak. They were not required to be sworn in nor was cross-examination permitted. The hearing took about 71 days with about 15-20 people in attendence each day.

Mr. England noted that, prior to the hearings, the IDNS staff took a "traditional approach." IDNS planned to present a proposed site that would be evaluated against the siting criteria as stated in the statute. If the site failed to meet the criteria, it should be rejected. If the proposed site meets the criteria, then it should be approved. As the hearings unfolded, the IDNS staff perceived that the Siting Commission went far beyond this preconceived concept. For example, the Siting Commission even questioned whether the technical witnesses could sit together. The prevailing attitude of the Siting Commission, from the very start of the hearings, seemed to intimidate the witnesses.

Dr. Pomeroy asked if the decision of the Siting Commission would be appealed? Mr. English stated that the Governor made it clear to the IDNS staff that there would be no appeal -- the Martinsville site was a "dead issue."

Some conclusions reached by Mr. England for rejection of the site by the Siting Commission were:

1. The Siting Commission viewed the case presented by IDNS as suspect (several hours at the beginning of the hearings were devoted to this topic as well as 64 pages in the final report).

2. The Siting Commission believed political acceptability was the cornerstone of the process and that the dominance of politics over the scientific studies called into question the credibility of the entire characterization project and the scientific conclusions used to support it.

The Siting Commission concluded that the following three criteria were not satisfied:

1. The site was not located to minimize the possibility of radioactive release into groundwaters utilized as public water supplies.

2. The site was not located in a suitable geological and hydrological medium.

3. The site was not located to protect the public health, safety and welfare.

Mr. England strongly recommended that future site characterization work needs to be of the highest quality because the results will be intensely scrutinized and any identified weaknesses or gaps will be magnified. It is essential that technical decisions are made by technically trained people and that the technical work is well integrated. A comment by the Siting Commission was that there did not seem to be a single person who could present an overall picture of the site technical effort. Also, Mr. England recommended that the siting criteria should not duplicate the licensing rules and that the siting criteria be reasonably objective. He noted the problem with determining a "suitable geologic medium," and suggested that the concept of a hearing should be well defined and announced well in advance.

Dr. Pomeroy asked why the Siting Commission seemed to have difficulty with some health physics-type criteria? Mr. Appel answered that it appeared as if the Siting Commission's philosophy was that the standard should be zero release.

Dr. Steindler asked if the final report by the Siting Commission was a surprise? Mr. Appel responded that, until the last day of the hearings, the IDNS staff did not realize that the Siting Commission's view was that there should never be any release of radioactive material to the environment from such a facility.

Dr. Pomeroy speculated that, perhaps, the Federal government could have assisted in some way. Mr. Appel stated that, since the Siting Commission had rejected the Federal standards, it was doubtful such participation would have helped.

Dr. Steindler observed that the quality assurance aspect of data collection was important and that the tone of the report appeared not to be "even-handed." Mr. Appel noted that while the latter may be perceived as true, unfortunately the report did reflect the tone of the hearings.

Mr. Appel discussed his philosophy on engineered facilities for LLW disposal and associated technical uncertainties. He questioned whether such facilities truly represented engineering improvement compared with shallow land burial. He described the proposed Martinsville site, the evolution of its boundary and some technical efforts associated with the site characterization. He noted that 175 bore holes were drilled on the site. The water table is approximately 4-5 feet below level, but during the rainy season, it could be at one foot. In addition to describing the principal design features of the facility, he stated that the proposed above-grade concrete bunker disposal vaults were to be 1400-1600 feet long and would contain approximately 40-50 disposal modules per unit.

Although the opponents stressed the geologic complexity of the site, Mr. Appel believed that the site is not complex because it has no folding, faulting or complicated stratigraphic structures.

Insofar as water drainage, there are no higher elevations in the area. The proposed site is located on a surface water divide. Mr. Appel noted that there were some errors in the geochemistry work, that, once revealed by the opponents, became a major issue. Dr. Steindler asked whether the IDNS staff had expertise in this area and was told that all of the work was contracted out. Although IDNS had a quality assessment (QA) program that was properly implemented, the failure to have the project completely integrated, as noted earlier, contributed to the errors remaining undetected until the hearing.

Dr. Ortciger described future plans and process. He noted that the new legislation no longer includes IDNS in the site selection process. He believed that the new process answered the Siting Commission's concern about political interference in the scientific selection of a site. The site selection task group would initially be comprised of three State of Illinois Department Directors. Technical qualifications are now required of the members in several areas. In addition, IDNS is proposing the addition of two more public members -- one with expertise in environmental matters and the other with at least five years experience in local government.

Dr. Steindler suggested that generalists with expertise in waste management should be added to the task group.

Dr. Ortciger noted that the facility would be owned in perpetuity by the State of Illinois. He also stated, in response to a comment by Dr. Pomeroy, that the task group must keep working until it has approved three sites.

Dr. Steindler asked whether the NRC staff interacted or helped with the Martinsville hearings and was told that IDNS neither asked for

nor received any assistance from the NRC. DOE personnel attended the hearing and watched the process but did not contribute at the time. However, they did ask the state to help them develop a "lessons learned" report.

Mr. Appel noted that the presenters had been provided instructions in risk communications before the hearing but, since they did not expect the hearings to be so adversarial, they were perhaps less attentive than should have been. IDNS wishes to emphasize to other states preparing for public hearings that such training is important.

Dr. Moeller expressed his appreciation to the Illinois group and adjourned this session.

This briefing was for information only. No action was taken by the Committee.

III. PROPOSED ENVIRONMENTAL PROTECTION AGENCY STANDARDS FOR DISPOSAL OF TRANSURANIC (TRU) AND HIGH-LEVEL RADIOACTIVE WASTE (HLW) AT SITES OTHER THAN YUCCA MOUNTAIN (Open)

[Note: Mr. Giorgio N. Gnugnoli was the Designated Federal Official for this portion of the meeting.]

The Office of Nuclear Material Safety and Safeguards (NMSS) staff briefed the Committee on the status of NRC comments to the U.S. Environmental Protection Agency (EPA) regarding standards for proposed high-level radioactive waste (HLW) repository sites other than Yucca Mountain. Dr. Margaret Federline, HLWM, characterized the reasons why the NRC should express an interest in these standards. They include:

- There is a possibility that NRC may be the licensing authority for facilities for the disposal of defense nuclear wastes.
- The Nuclear Waste Policy Act provides for NRC regulatory authority for greater-than-class-C (GTCC) low-level radioactive waste.
- Events related to the resolution of the proposed standards may influence future amendments of the standards for disposal of HLW at Yucca Mountain. This is a regulatory consistency consideration.

Dr. Daniel Fehringer, HLWM, noted that the U.S. Congress reinstated the most controversial portion of the standard (e.g., the containment requirement portion of 40 CFR Part 191). The contested issues

were the individual and groundwater protection requirements. He briefly recounted the background chronology leading up to the EPA request for comments on proposed standards issued in response to the Waste Isolation Pilot Plant (WIPP) Land Withdrawal Act (P. L. 102-579). The EPA's proposal consisted of increasing the individual and groundwater protection period of compliance to 10,000 years (original protection period was 1,000 years). An effective dose limit of 15 mrem/year is adopted, which would include all pathways (including the 4 mrem/year drinking water criterion). As proposed, EPA would limit the natural concentrations of all radionuclides from all sources (including background) in groundwater.

In general, the NRC comments to EPA's proposed standards are negative. The proposed changes are seen as being too stringent and undocumented. Many aspects of the proposed standards are confusing, inconsistent with other EPA regulations, and without scientific bases. Because of delays in the submission of the Background Information Document (BID), the NRC staff did not have time to review it in detail and to comment adequately. In spite of this limited review, the NRC staff noted inadequacies in the document, such as:

- An inexplicable designation of the dose calculation exposure point, in light of the configuration of the controlled area.

- A conceptual model that is too simple and cannot accommodate rapid flow of radionuclides through fractures and other inhomogeneities. (This could result in an unconservative conclusion.)

- Lack of definition of natural disruptions and evaluation of their effects on repository performance.

Dr. Moeller pointed out that there has been a reevaluation of the impact of neutron-caused doses from the Hiroshima bomb. He indicated that the relationship between dose and risk is being reconsidered, which may result in reducing the health effects risk coefficients for ionizing radiation by 10 to 20 percent. Dr. Moeller cited this ever-changing situation as a rationale for ignoring dose and using risk-based limits for generally applicable standards for compliance purposes.

This briefing was for information only. No action was taken by the Committee.

IV. STATE RADIATION CONTROL PROGRAM (Open)

[Note: Mr. Howard J. Larson was the Designated Federal Official for this portion of the meeting.]

Mr. Carlton Kammerer, Director, Office of State Programs (OSP), was the lead speaker. He introduced the following members of his staff who assisted in the presentation: Ms. Kathleen Schneider, Dr. Stephen Salomon, and Ms. Cardelia Maupin.

Mr. Kammerer noted that the OSP presentation would be in two parts: first, a general overview of the Agreement State Program followed by more specific discussions of the radiation protection programs in two selected states, Iowa and Rhode Island; and, secondly, discussions centered on the role of the OSP staff in assisting the Conference of Radiation Control Program Directors, Inc. (CRCPD) in reviewing the programs in states seeking licensing state status. The Alaska program review recently conducted under the auspices of the CRCPD would be specifically addressed.

Prior to the commencement of the formal presentations, Dr. Moeller noted that he was pleased with the background material provided, was looking forward to the presentation and was especially impressed with the professionalism, albeit of necessity confrontational, exhibited in the report of the Iowa review.

Mr. Kammerer stated that it was important to understand at the outset that Section 274 of the Atomic Energy Act forms the basis for the Agreement State Program. Although Section 274 requires the NRC to relinquish regulatory control to the state, it commits the Commission to conduct periodic reviews of the programs as implemented by each state.

In response to a question, Ms. Schneider explained the history and purpose of the deConcini amendment that permits the NRC to exert its authority over a state licensee, if for some reason, the state is unable to exert its authority.

The NRC criteria for states entering into Agreement State status were discussed. It was noted that the Commonwealth of Pennsylvania recently applied for a limited agreement. Limited agreements can be entered into in five areas: by-product, 11 e(1), 11 e(2), and special nuclear material, plus LLW (disposal of commercial wastes only).

Four states are actively considering becoming Agreement States. They are Pennsylvania, Ohio, Massachusetts, and Oklahoma. Should these states proceed, this would bring the total number of Agreement States to 33.

In response to a question, it was noted that insofar as the reporting of unusual events and abnormal occurrences, states are not performing as well as it is believed they could. The OSP staff indicated that it is directing specific attention to this matter. Until recently such reporting was only an item of policy, but now it is a rule. It is therefore expected that, over time, the quantity and quality of reports will improve. For example, last year only 16 states reported on time, with 3 more reporting later; whereas this year to-date, 28 states have reported with the remaining one indicating it would report shortly. However, the desired quality of these reports is still lacking and is a problem requiring follow-up.

Dr. Moeller queried about the magnitude of license changes sent to the NRC by the Agreement States and was told the number totals approximately 1000/month. However, all changes are not reviewed in detail by the NRC but are selectively audited by the staff according to a prescribed sampling technique.

Dr. Steindler asked if anyone from the NRC staff attended the Martinsville, Illinois, hearings and was told that, to the best of staff's knowledge, there was no one present at any session.

Oversight programs, such as routine technical assistance (by phone, correspondence or on-site visits) were discussed as were the requirements for periodic reviews as specified in Sec. 274j. The scope of these reviews and the typical level of NRC office participation were described, as were the reporting guidelines.

It was found that, overall, the states were conducting effective radiation control programs. (Approximately 83% of the audits resulted in a finding of adequacy; in only 17% of the audits had a finding of adequacy and compatibility been withheld.)

In the event that a state has a problem, the NRC finding of adequacy is withheld. It was noted that there were both financial and legal reasons for taking that action as opposed to an assertive one. If the state program is found inadequate, then the NRC must take over the entire program. The Idaho program was taken over by NRC, but fortunately it was small program (approximately 130 licensees which have since been reduced in number to approximately 80). The program was assumed by the NRC at the request of the state since funding deficiencies limited the state from maintaining a program adequate to protect the health and safety of the public.

The members and presenters also discussed medical misadministrations and the possibility of developing precursor performance indicators that might minimize their likelihood. Mr. Kammerer noted that there were several studies underway within the agency addressing this topic.

Dr. Pomeroy questioned how long it typically took a state to come into compliance and was told that, if it is a personnel staffing problem, probably 6 months to a year. If legislation is required, and is in process, however, then it may only be a matter of weeks.

Information exchanges with the states were discussed. The annual All Agreement States Meeting and annual Low-Level Waste Regulators Workshop were noted to be particularly good vehicles for providing early and substantive involvement with state regulators.

Ms. Maupin noted that the individual state LLW regulations are generally compatible with Part 61. For those states with LLW disposal authority, a staffing level of 3-4 person-years was considered necessary to provide adequate oversight.

Dr. Moeller indicated that he had just heard a presentation from the State of Texas regarding their ability to dispose of extremely low-level waste in municipal sanitary landfills. He asked whether such a "below regulatory concern" program was compatible with the NRC regulations. Dr. Salomon noted that while the answer to the query is "yes," the Texas legislation identifies special procedures and invites all interested parties to participate in the public hearing process.

Mr. Kammerer discussed the state reviews by the CRCPD, noting that the OSP staff were asked by the State of Alaska to participate with the objective of identifying possible areas of improvement for the protection of its citizens. In the past 10 years, there have been about 10 such reviews. The NRC and other Federal agencies (such as the Federal Emergency Management Agency and EPA) were always invited to participate and did so within budgetary constraints. Mr. Kammerer presented the findings of the Alaska review, noting that there were 10 areas where improvements in that program were needed. Among these findings, in addition to outdated regulations and overdue X-ray machine inspections, the program was found to be inadequately funded and fragmented with no agency designated to handle nonionizing radiation. Surprisingly, there was only a limited environmental monitoring program and no citizen information on radon.

This briefing was for information only. No action was taken by the Committee.

V. PROPOSED AMENDMENTS TO 10 CFR PART 60 CLARIFYING THE REQUIREMENTS FOR ASSESSMENT OF SITING CRITERIA (Open)

[Note: Ms. Lynn Deering was the Designated Federal Official for this portion of the meeting.]

Mr. Robert Johnson, NMSS, introduced the topic and introduced Mr. Mark Delligatti, NMSS, as the lead staff person on the proposed amendments. Mr. Johnson also introduced personnel from the Office of the General Counsel (OGC) and the Center for Nuclear Waste Regulatory Analyses (CNWRA). He indicated that the NRC staff was working in an accelerated manner to provide the proposed amendments to 10 CFR Part 60 to the Commission in early June. He requested a letter from the Committee within two weeks.

After presenting a brief introduction and background on 10 CFR Part 60 and the Systematic Regulatory Analysis (SRA), Mr. Mark Delligatti discussed the details of the proposed rulemaking.

Highlights of Mr. Delligatti's presentation include:

- The SRA process is being used to identify regulatory, institutional, and technical uncertainties. Fifty four institutional and regulatory uncertainties have been identified. Uncertainties are addressed by either rulemaking or regulatory guidance. The subject rulemaking reduces three regulatory uncertainties.

  In response to a question from Dr. Pomeroy, Mr. Joseph Holonich, NMSS, noted that 27 of the uncertainties would be addressed through guidance and 3 through minor rulemakings; 7 will require further analysis.

- The purpose of the proposed rulemaking is to clarify the requirements for investigation and evaluation of the favorable and potentially adverse conditions in the siting criteria section 60.122, and to clarify the relationship between the siting criteria and the performance objectives specified in 60.112 and 60.113. The three regulatory uncertainties addressed in the rulemaking include the meaning of the terms, "adequately investigated" and "adequately evaluated" found in 60.122, and the relationship between the siting criteria and the performance objectives.

  The uncertainty with the first two terms is that there is no standard against which to measure whether a site feature has been adequately evaluated or investigated. The third uncertainty is whether the investigation and evaluation of the site conditions in 60.122 is a regula-

tory requirement separate from the performance objectives, and hence needs to be analyzed individually.

- Mr. Delligatti explained that the CNWRA identified the three cited uncertainties during the SRA. The NRC staff and the CNWRA convened an uncertainty reduction task force to address these and other uncertainties. Originally, they disagreed on whether to address the uncertainties through rulemaking or guidance. The NRC staff's view was that the intent of the rule was clear, i.e., that the synergistic effects of favorable and adverse conditions were to be considered and conditions were not to be regarded as individual requirements. The CNWRA, however, considered that the rule was not clear and could be misinterpreted to require that each potentially adverse condition be evaluated separately as to its effect on waste isolation.

  A rulemaking was determined to be the best approach to address the uncertainty of how exhaustively the applicant is required to analyze the individual favorable and adverse conditions, independent of total system performance. This decision was made because regulatory guidance would not address the potential for other parties to challenge the staff's interpretation.

  Dr. Pomeroy asked about the criteria used by the staff to decide between a rulemaking and guidance to reduce uncertainties. Mr. Holonich responded that the task force has prepared such criteria and they are included in the report. [This report was provided to the members later that day.]

- Major changes to the proposed rule are as follows:

  - move all the procedural requirements that pertain to methodology for demonstration of compliance to 10 CFR 60.21(c)(1)(ii) (this reflects standard Commission policy).

  - revise the methodology requirements to remove the terms "adequately evaluated" and "adequately investigated," to state simply that the presence of potentially adverse conditions must not compromise the ability of the repository to meet performance objectives. This revision negates the need for three existing clauses that set out alternative ways through which the applicant can deal with the presence of potentially adverse conditions.

- clarify 10 CFR 60.21 to indicate that the effect of a particular potentially adverse condition would be studied in the context of other characteristics of the site and design.

Dr. Moeller noted that language in the siting criteria indicates that the geologic setting must be considered in combination with the engineered barrier system to demonstrate compliance with the performance objectives. He questioned whether this was new language, because the NRC staff had previously informed the Committee that engineered barriers cannot be used to compensate for adverse site conditions.

In addition, Dr. Moeller asked about the relationship between the total system requirements in 60.112 and the subsystem requirements in 60.113, whether each subsystem requirement had to be met. He noted that the NRC staff in the past has implied that the subsystem requirements do not necessarily have to be met, but rather, the total system has to comply with the EPA standards, although Commissioner Curtiss has pointed out the need to meet the three subsystem requirements, in addition to meeting the total system requirements in 60.112.

Dr. Margaret Federline, NMSS, explained that, for both Sections 60.112 and 60.113, the staff does not consider there to be a direct nexus between the total system and subsystem requirements. They are independent, both must be met, and this is really what the staff was referring to in the past, that engineered barriers cannot be used to compensate for geologic characteristics. Mr. James Wolf, OGC, pointed out that consideration of engineered barriers would not make sense in demonstrating compliance wit the pre-emplacement groundwater travel time requirement in 60.113, however, in the engineered barrier containment and release rate requirements in 60.113, geology would have to be considered. Dr. Moeller concluded that it was his understanding that, for the final repository, it is a combination of natural and engineered barriers in a total system that must meet the EPA standards. Dr. Moeller highlighted the need to have a separate meeting to discuss the relationship between total system and subsystem requirements.

The Committee endorsed issuance of the proposed amendments for public comment. A report was prepared and issued by the Committee.

VI. LOW-LEVEL RADIOACTIVE WASTE DISPOSAL FACILITY SOURCE TERM (Open)

[Note: Mr. Howard J. Larson was the Designated Federal Official for this part of the meeting.]

On March 23-24, 1993, a working group met with the three LLW disposal facility operators, representatives from four states, the NRC, and other organizations, including INEL, EPRI, and the LLW Forum, to obtain information on the sources, quantities and characteristics of LLW being generated. The working group discussed methods for waste volume reduction and the relevance of current source term data for site performance assessments. As a result of this working group meeting and further discussions during the full Committee meeting, the Committee prepared and issued a report on source term and other LLW considerations.

VII. EXECUTIVE SESSION (Open/Closed)

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

A. Reports

- Proposed Rulemaking on Amendments to 10 CFR Part 60 Clarifying the Requirements for Assessment of Siting Criteria (Report to James M. Taylor, Executive Director for Operations, from Dade W. Moeller, Chairman, ACNW, dated March 31, 1993)

- Source Term and Other Low-Level Waste Considerations (Report to James M. Taylor, Executive Director for Operations, from Dade W. Moeller, Chairman, ACNW, dated March 31, 1993)

B. Summary of the EPA/NRC Site Cleanup Criteria Workshop (Open)

Dr. Moeller attended and provided comments on the EPA/NRC Site Cleanup Criteria Workshop held on March 12, 1993, in Cambridge, Massachusetts. This was one of a series of regional workshops being held as part of the enhanced participatory rulemaking to establish radiological criteria for decommissioning.

During the discussion, Dr. Moeller noted that a representative from EPA stated that EPA is revising its standards for radiation dose limits to members of the public. These dose limit standards are scheduled to be completed and published this summer (1993). The ACNW staff was asked to provide more

detailed information on this subject. No other action was taken by the Committee.

C. Plans Regarding Acceptable Methods for the Formal Elicitation and Use of Expert Judgment in the HLW Repository Licensing Process (Open)

In preparation for his meeting with Commissioner Curtiss, Dr. Paul Pomeroy briefly discussed the focus of his approach for the Committee's considerations. One of the purposes of this discussion was to help the members decide on the nature of further ACNW investigations in the use of expert judgment in the context of licensing and judicial processes. Dr. Pomeroy noted that Phase 2.5 of the NRC staff's Iterative Performance Assessment (IPA) is going forward. This phase of the IPA is to conduct an explicit elicitation in a specific discipline -- climatology -- that is expected to be a factor in the IPA. The Phase 2.5 effort is expected to be completed by late fall, 1993.

Dr. Pomeroy pointed out that there is a Supreme Court decision expected shortly on what constitutes "good science." He expects this decision to have a significant influence on the Yucca Mountain licensing process, as well as on other scientifically-charged legal disputes. Dr. Pomeroy counseled the Committee to wait for the Supreme Court decision and the completion of the NRC staff's Phase 2.5 effort, prior to pursuing any activity involving the subject of expert elicitation and its role in the licensing process. The Committee concurred.

Dr. Pomeroy noted that the Nuclear Waste Technical Review Board (NWTRB) is interested in the same subject, specifically in DOE's strategy for using and defending expert testimony and opinion. The Committee agreed to encourage the NWTRB's efforts. This approach was considered more appropriate for the Committee. Dr. Pomeroy stressed that it appeared necessary to resolve and close the issue of methodology of expert judgement in licensing decisions well before the time of licensing (e.g., negotiated rulemaking to establish consensus expert judgement utilization).

Two specific goals for the discussion with Commissioner Curtiss were to:

- Review with the Commissioner and obtain the benefit of his thoughts on the role of the Federal Rules of Evidence in qualifying expert testimony.

- Request more proactive involvement from the Office of the General Counsel (OGC) in tracking legal developments in the use of expert judgment, decisions on consensus or junk science, admissibility of scientific opinions, etc. This should be accompanied by more efficient reporting techniques by the OGC to the affected NRC entities.

D. ACNW Priorities and Improvements to the Four-Month Program Plan (Open)

The Committee discussed short- and long-term program planning in light of the recent memorandum on this topic from Commissioner Rogers. Although, the members suggested several changes and additions to a proposed strawman for ACNW program plan reprioritization, the Committee did not come to a consensus on a planning strategy. Mr. Richard Major, ACNW staff, recommended that time be scheduled during the next meeting to continue this discussion.

The Committee discussed the merits of continuing the ACNW Four-Month Plan for communicating its priorities to the Commission. The Committee requested that Dr. John Larkins solicit individual comments on this issue during his upcoming meetings with each Commissioner and report back to the Committee.

E. Executive Session on Organizational and Other Matters (Closed)

The Committee discussed internal organizational and personnel matters with the ACNW staff.

The Committee considered the merits of having Unix based workstations with operational waste management codes available for use by ACNW members and staff. Although the Committee supported the view expressed by Dr. Larkins that the ACNW staff should be provided an opportunity to maintain and enhance their technical competence in computer modeling, the members did not foresee a comparable need for themselves. The Committee urged that care be taken to assess the importance of having the staff develop such competence especially if this means (in light of impending personnel reductions) that other more critical staff supporting activities would have to be curtailed.

F. ACNW Future Activities (Open)

- The Committee and staff continued planning for their site visit on June 23-24, 1993, to the Whiteshell Nuclear Research Laboratories and the Underground Research

Laboratory, located in Pinawa, Manitoba, Canada. This site visit will be in lieu of a June Committee meeting. The members expressed interest in learning more during the visit on expert judgment, model verification and validation, uranium mill tailings, and groundwater protection criteria. Dr. Steindler requested that the ACNW staff provide the members with a list of Whiteshell reports issued during the last five years.

- The Committee requested that the ACNW staff delay until the 54th ACNW meeting the proposed briefing on decommissioning plans for the Fort St. Vrain Nuclear Power Plant.

- Several members reconfirmed their request for a tutorial conducted by the NRC staff (NMSS and RES) to examine the methodologies involved in calculating a complementary cumulative distribution function (CCDF). The ACNW staff will schedule the training session with the NRC staff.

- The Committee reconfirmed its request to invite representatives from Johns Hopkins University and the Oak Ridge National Laboratory to brief the Committee on the use of geochemical and glass natural analogs for estimating the performance of an HLW repository.

- The Committee reconfirmed its request to invite members of the NRC staff to brief the Committee on its review of a DOE topical report entitled "Erosion Rates at the Yucca Mountain Geologic Setting: Methodology and Results." The briefing should focus on cation ratio methods of dating desert varnish on relict hillside boulders.

- As a result of the presentation on the proposed Martinsville, Illinois, LLW disposal site experience, the Committee agreed to consider the scheduling of a working group meeting to examine lessons learned from both HLW (for example, the Waste Isolation Pilot Plant) and LLW facility siting and operational experiences. The working group will focus on technical and regulatory deficiencies.

G. Future Meeting Agenda

Appendix IV summarizes the proposed items endorsed by the Committee for the 53rd ACNW Meeting, May 19-20, 1993, and future Working Group meetings.

The meeting was adjourned at 4:35 p.m., Thursday, March 25, 1993.

and when ACRS Subcommittee and ACNW Working Group meetings will start will be published prior to each meeting. Information as to whether a meeting has been firmly scheduled, cancelled, or rescheduled, or whether changes have been made in the agenda for the March 1993 ACRS and ACNW full Committee meetings can be obtained by a prepaid telephone call to the Office of the Executive Director of the Committees (telephone: 301/492–4600 (recording) or 301/492–7288, Attn: Barbara Jo White) between 7:30 a.m. and 4:15 p.m., Eastern Time.

ACRS Subcommittee Meetings

Thermal Hydraulic Phenomena, March 4 and 5, Idaho Falls, ID. The Subcommittee will review the status of the PWR version of the RELAP5/MOD–3 code with emphasis on analytical and experimental programs in support of the AP600 design certification effort.

Joint Materials and Metallurgy/ Structural Engineering, March 10, 1993, Bethesda, MD. The Subcommittees will discuss: (1) The status of the NRC staff's concerns regarding steam generator tube degradation, and (2) the industry proposal on piping design improvements to reflect current technical knowledge for ALWR plants.

Planning and Procedures, March 10, 1993, Bethesda, MD (3 p.m.–5:30 p.m.). The Subcommittee will discuss proposed ACRS activities and related matters. Qualifications of candidates nominated for appointment to the ACRS will also be discussed. Portions of this meeting will be closed to discuss information the release of which would represent a clearly unwarranted invasion of personal privacy.

Joint Severe Accidents and Probabilistic Risk Assessment, March 18, 1993, Bethesda, MD. The Subcommittees will discuss Chapter 19 of the ABWR Standard Safety Analysis Report dealing with severe accident issues and the associated NRC staff's evaluation.

Regional Programs, March 23, 1993, Region II Office, Atlanta, GA. The Subcommittee will discuss the activities of the NRC Region II Office.

Planning and Procedures, April 14, 1993, Bethesda, MD (3 p.m.–5:30 p.m.). The Subcommittee will discuss proposed ACRS activities and related matters. Qualifications of candidates nominated for appointment to the ACRS will also be discussed. Portions of this meeting will be closed to discuss information the release of which would represent a clearly unwarranted invasion of personal privacy.

ACRS Full Committee Meetings

395th ACRS Meeting, March 11–13, 1993, Bethesda, MD. Items are tentatively scheduled.

A. *Reactor Operating Experience*—Briefing and discussion regarding the reactor trip and stuck open pressurizer safety value event of July 3, 1992 that occurred at the Fort Calhoun Nuclear Power Plant. Representatives of the licensee and of the NRC staff will participate, as appropriate.

B. *ACRS Subcommittee Activities*—Reports on and discussion of the status of ACRS subcommittee assignments, including alternate plugging criteria for degraded steam generator tubes, piping design improvements for advanced plant designs, and proposed priority ranking of Generic Issue 152, "Design Basis for Values that Might be Subjected to Significant Blowdown Loads," PWR version of the RELAP5/MOD–3 code and the analytical and experimental programs in support of the AP600 design certification effort, and procedures for the conduct of ACRS business. Representatives of the NRC staff will participate, as appropriate.

C. *Current License Renewal Issues*—Briefing by and discussion with representatives of the NRC staff on the status of current license renewal issues, including the establishment of a senior management review group to review the harmonization of the Maintenance and License Renewal Rules.

D. *Effects of Hurricane Andrew on the Turkey Point Plant (Tentative)*—Briefing and discussion with representatives of the NRC staff regarding the effects of hurricane Andrew on the Turkey Point Nuclear Plant. Representatives of the industry will participate, as appropriate.

E. *Future ACRS Activities*—Discuss topics proposed for consideration by the full Committee.

F. *Resolution of ACRS Recommendations*—Discuss replies from the NRC Executive Director for Operations regarding the NRC staff reaction to recent ACRS comments and recommendations.

G. *ISO Quality Standards*—Briefing by and discussion with representatives of the NRC staff regarding the ISO 9000 quality management standard used by the European community, and how it differs from the quality standards being used in the U.S. nuclear industry.

H. *Proposed ACRS Reports*—Discuss proposed ACRS reports on computer related issues, Organizational Factors Research Program, and on AEOD study of human performance in operating events. Representatives of the NRC staff and industry will participate, as appropriate.

I. *Appointment of ACRS Members*—Discuss qualifications of candidates proposed for appointment as ACRS members. Portions of this session will be closed to discuss information the release of which would represent a clearly unwarranted invasion of personal privacy.

J. *Miscellaneous*—Discuss miscellaneous matters related to the conduct of Committee activities and complete discussion of topics that were not completed during previous meetings as time and availability of information permit.

396th ACRS Meeting, April 14–17, 1993, Bethesda, MD. Agenda to be announced

397th ACRS Meeting, May 13–15, 1993, Bethesda, MD. Agenda to be announced.

ACNW Full Committee and Working Group Meetings

ACNW Working Group on Low-Level Waste Repository Performance Indicators, March 23, 1993, Bethesda, MD. The Working Group will consider the development of a performance indicator system to be used in monitoring various aspects of low-level radioactive waste handling and disposal.

52nd ACNW Meeting, March 24–25, 1993, Bethesda, MD. Items are tentatively scheduled.

A. The Committee will meet with representatives of the Electric Power Research Institute (EPRI) and possibly other interested parties to discuss studies EPRI has conducted on the volumes of LLW that may require interim storage, the applicable regulatory requirements, and the associated guidelines for waste generators.

B. The Committee will explore with invited State representatives and others the creation of a nationwide system for summarizing current trends and indicators of performance in LLW management and disposal. Included will be the possible development of a system to report significant events (mishaps) that occur during such operations.

C. The Committee will be briefed on proposed LLW disposal sites rejected by LLW host States. Representatives from host States, NMSS, and the Office of State Programs will participate.

D. The Committee will meet with the NRC staff to hear an updated report on the status of the Licensing Support System program.

E. The Committee will be briefed by the NRC staff on the relationship of the review of the State of Alaska radiation control program by the Conference of

Radiation Control Program Directors to similar reviews by the NRC staff.

F. The Committee will review a rulemaking-clarification of assessment requirements for the Siting criteria and performance objectives of a high-level radioactive waste geologic repository [10CFR60.122/112–113, Siting criteria for a geologic repository (122), Overall system performance objective for the geologic repository after permanent closure (112), Performance of particular barriers after permanent closure (113)].

G. Discuss anticipated and proposed Committee activities, future meeting agenda, administrative, and organizational matters, as appropriate. Also, discuss matters and specific issues that were not completed during previous meetings as time and availability of information permit.

Joint Meeting of the ACNW Working Group/ACRS Subcommittee on Occupational and Environmental Protection Systems, March 28, 1993, Bethesda, MD. The Working Group/ Subcommittee will review the following proposed final regulatory guides related to the implementation of the revised 10 CFR Part 20: (1) DG–8006, "Control of Access to High and Very High Radiation Areas in Nuclear Power Plants," (2) DG–8009, "Interpretation of Bioassay Measurements," and (3) DG–8013, "ALARA Radiation Protection Program for Effluents from Materials Facilities."

53rd ACNW Meeting, April 28–29, 1993, Bethesda, MD. Agenda to be announced.

54th ACNW Meeting, May 19–20, 1993, Bethesda, MD. Agenda to be announced.

Dated: February 18, 1993.

John C. Hoyle,

Advisory Committee Management Officer.

[FR Doc. 93–4297 Filed 2–23–93; 8:45 am]

BILLING CODE 7590–01–M

[Docket Nos. 50–413 and 50–414]

Duke Power Co.; Consideration of Issuance of Amendments To Facility Operating Licenses, Proposed No Significant Hazards Consideration Determination, and Opportunity for Hearing

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of amendments to Facility Operating License Nos. NPF–35 and NPF–52 issued to the Duke Power Company (the licensee) for operation of the Catawba Nuclear Station, Units 1 and 2, located in York County, South Carolina.

The proposed amendments would revised the Technical Specifications (TS) as required for the operation of Catawba Unit 2 Cycle 6 after the partial reload of the reactor core with 76 fresh fuel assemblies supplied by the Babcock & Wilcox (B&W) Fuel Company. The remaining 117 assemblies are Westinghouse supplied Optimized Fuel Assemblies (OFA). The proposed TS changes reflect the application of core analysis methodology developed by the licensee and previously approved for the similar reloads of Catawba Unit 1. Changes were proposed to the Safety Limits (TS 2.1 and 2.2) and the Power Distribution Limits (TS 3/4.2.1; 3/4.2.2, 3/4.2.3, 3/4.2.4, and 3/4.2.5) based on using the new licensee analysis methods, a different critical heat flux (CHF), and a new thermal design DNBR (departure from nucleate boiling ratio) limit of 1.55.

The specifications on Catawba Units 1 and 2 TS pages are applicable to both units, with a few exceptions, since the two units are identical in many respects. One of these exceptions involves the transition from fuel manufactured by Westinghouse to fuel manufactured by the B&W Fuel Company (BWFC) combined with a transition in analysis methodology to B&W and Duke Power Company (DPC) methodology. As these changes were first introduced into the Catawba Unit 1 plant, separate TS pages were generated for Units 1 and 2. The changes for Unit 1 in Cycles 6 and 7 reflected the methodology change and a mixed core of BWFC and Westinghouse manufactured fuel while separate pages for Unit 2 continued to reflect the Unit's reliance on Westinghouse methodology and fuel. A similar transition for Unit 2, beginning in its Cycle 6, necessitates similar changes to its TS pages. This is accomplished by deleting the previous pages dedicated in Unit 2 and making the previous pages dedicated to Unit 1 again applicable to both units. Thus, the changes to Unit 1 TS related to the fuel and methodology changes are administrative only, to reflect page renumbering and applicability to both units.

The licensee also proposed TS changes to remove the power range neutron flux negative rate reactor trip (TS 3/4.3.1, Tables 3.3–1, 3.3–2, and 4.3–1); to increase the low steam line pressure setpoint (Table 3.3–4); to increase feedwater isolation and steam line isolation response times (Table 3.3–5); to increase pressurizer safety valve life setpoint tolerance (TS 3.4.4.2.1); to remove steam line pressure dynamic compensation (TS 3/4.3.2); and to increase main stream line isolation valve stroke time (TS 3/4.7.1.4).

In addition, the licensee proposed TS changes to reduce the flowrate limit for the reactor makeup water pump for Mode 5 (TS 3.3.3.11 and TS 3.3.3 12); to revise the stroke times of valves related to containment isolation (Tables 3.6–2a and 3.6–2b); and to add NRC-approved topical report DPC–NE–1004A to the list of analytical methods used to determine core operating limits (TS 6.9.1.9).

Before issuance of the proposed license amendment, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations.

The Commission has made a proposed determination that the amendment request involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

Power Distribution and Safety Limits

Catawba Unit 1 Cycle 6 was the first [Catawba] Nuclear Station [reload] for which B&W Fuel Company (BWFC) supplied the reload fuel. The Catawba Unit 1, Cycle 6 Reload Report presented an evaluation that concluded the core reload using Mark-BW fuel would not adversely impact the safety of the plant. The Catawba Unit 1, Cycle 7 report was similar, but reflected that Duke Power performed the analyses in support of the operation of Cycle 7 rather than BWFC. This reload for Catawba Unit 2, Cycle 6 is a compilation of the changes made for Unit 1 during Cycles 6 and 7 in that it justifies the use of Mark-BW fuel using Duke Power analysis.

The Catawba Unit 2, Cycle 6 Reload Safety Evaluation Report presents an evaluation which demonstrates that the core reload using Mark-BW fuel will not adversely impact the safety of the plant. During Cycle 6, the core will contain 76 fresh fuel assemblies supplied by B&W and 117 Westinghouse supplied Optimized Fuel Assemblies (OFA).

The changes to the Safety Limit and Power Distribution Technical Specifications presented in section 8 of the Reload Report represent the application of previously approved methodology to Catawba Unit 2. The changes to remove the power range neutron flux negative rate reactor trip, increase the low steam line pressure setpoint, increase feedwater isolation response time, increase steam line isolation response time, increase pressurizer safety valve lift setpoint tolerance, remove steam line pressure

UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON NUCLEAR WASTE
WASHINGTON, D.C. 20555

March 15, 1993

SCHEDULE AND OUTLINE FOR DISCUSSION
52ND ACNW MEETING
MARCH 24-25, 1993

Wednesday, March 24, 1993, Room P-110, 7920 Norfolk Ave., Bethesda, Md.

1) 10:00 - 10:15 a.m. — Opening Remarks by ACNW Chairman (Open)
1.1) Opening Statement (DWM/RKM)
1.2) Items of Current Interest (DWM/RKM)

2) 10:~~15~~ 20 - 12:~~00~~ 50 ~~Noon~~ p.m. — Rejection of an LLW Disposal Site (Open) (DWM/HJL)
The Committee will be briefed on a proposed LLW disposal site rejected by the LLW Host State
2.1) Discussion by Representatives of the Illinois Department of Nuclear Safety
2.2) Discussion by NRC's NMSS and State Programs, as appropriate
2.3) General Discussion

12:~~00~~ 50 - 1:~~15~~ 35 p.m. — * * * L U N C H * * *

3) 1:~~15~~ 35 - 2:~~00~~ 10 p.m. — NRC Comments on Proposed EPA Standards for TRU and HLW Disposal at Sites Other than Yucca Mountain (DWM/GNG) (Open)
3.1) NRC Staff Presentation (M. Federline)
3.2) General Discussion

4) 2:~~00~~ 10 - 4:00 p.m. — Briefing by NRC Staff on Recent Reviews of Several States' Radiation Control Programs. Included will be relationship to reviews conducted by others such as the Conference of Radiation Control Program Directors (Open) (DWM/HJL)

4:00 - 4:14 p.m. — * * * B R E A K * * *

5) 4:15 - ~~5~~ 6:15 p.m. — Committee Activities/Future Agenda (Open)
Discuss anticipated and proposed Committee activities, future meeting agenda, administrative and organizational matters, as appropriate (DWM/RKM)
5.1) Finalize Plans to attend 4th International HLWM Conference & Exposition (Las Vegas,NV)
5.2) Review Activities through July
5.3) Review Working Group Schedule
5.4) Other Future Topics
5.5) Report on Enhanced Participatory Rulemaking (Boston meeting - DWM)

[= Transcribed portions

6
~~8~~:15 p.m. * * * R E C E S S * * *

Thursday, March 25, 1993, Room P-110, 7920 Norfolk Ave., Bethesda, Md.

6)	8:30 - ~~10:00~~ 9:25 a.m.	Rulemaking Proposed Amendments to 10 CFR Part 60 Clarifying the Requirements for Assessment of the Siting Criteria (PWP/LGD) 6.1) NRC staff discussion of proposed rulemaking related to 1) Siting criteria for a geologic repository, 2) Overall system performance requirements, 3) Performance of a particular barrier (Robert Johnson) 6.2) General discussion 6.3) Discuss possible ACNW report
	~~10:00~~ 9:25 - ~~10:15~~ 9:50 a.m.	* * * B R E A K * * *
7)	10:~~15~~ 50 - ~~10:45~~ 11:10 a.m.	Discuss Plans for Canadian Whiteshell Laboratories visit (MJS/GNG)
8)	10:45 - 11:45 a.m.	Working Group Chairman's Report on 3/23/93 LLW Source Term Working Group Meeting (Open) (DWM/HJL)
	~~11:45~~ 12:00 noon - ~~12:45~~ 1:30 p.m.	* * * L U N C H * * *
9)	~~12:45~~ 3:00 - ~~1:30~~ 3:30 p.m.	Discuss Future Plans Regarding Acceptable Methods for the Formal Elicitation and Use of Expert Judgment in the Repository Licensing Process (PWP/GNG) (Open)
10)	~~1:30~~ 2:15 - 2:~~15~~ 50 p.m.	Discuss ACNW Future Priorities and Improvements to the 4-Month Program Plan (MJS/RKM) (Open)
11)	~~2:15~~ 1:30 - ~~5:15~~ 2:15 p.m.	Preparation of ACNW Reports (Open) Discuss proposed ACNW reports regarding items considered during this meeting and previous meetings, including: 11.1) LLW Source Term (DWM/HJL)
	~~3:30~~ 2:50 - ~~3:45~~ 3:00 p.m.	* * * B R E A K * * *
	9:50 - 10:50 a.m.	11.2) Part 60 Rulemaking - Clarification (PWP/LGD) 11.3) Scope of ACNW Activities (DWM/RKM)
	~~5:15~~ 4:35 p.m.	ADJOURN

APPENDIX III: MEETING ATTENDEES

52ND ACNW MEETING
MARCH 24-25, 1993

ACNW MEMBERS	1st Day	2nd Day
Dr. William J. Hinze		
Dr. Dade W. Moeller	X	X
Dr. Paul W. Pomeroy	X	X
Dr. Martin J. Steindler	X	X

ACNW STAFF	1st Day	2nd Day
Ms. Lynn F. Deering	X	X
Mr. Giorgio N. Gnugnoli	X	X
Dr. John T. Larkins	X	X
Mr. Howard J. Larson	X	X
Mr. Richard K. Major	X	X
Mr. H. Stanley Schofer	X	X

NRC STAFF

Mark Delligatti	NMSS		X
Norman Eisenberg	NMSS	X	X
Abe Eiss	NMSS	X	X
Margaret Federline	NMSS	X	X
Daniel Fehringer	NMSS	X	
Meg Harvey	NMSS	X	
Joe Holonich	NMSS		X
Abou-B. Ibrahim	NMSS		X
Robert Johnson	NMSS		X
Carlton Kammerer	OSP	X	
Janet Kotra	OCM	X	X
Cardelia Maupin	OSP	X	
Tim McCartin	RES	X	
Bill Reamer	OGC	X	
Steven Salomon	OSP	X	
Kathleen Schneider	OSP	X	
James Wolf	OGC		X
B. Joe Youngblood	NMSS	X	X

ATTENDEES FROM OTHER AGENCIES AND GENERAL PUBLIC

M. S. Alissi	EEI
Richard Allen	Illinois Dept. of Nuclear Safety
Gordon Appel	Illinois Dept. of Nuclear Safety
Joe Bannon	ERM
M. A. Bauser	N&H
David Brown	State of Connecticut
Tara Cameron	EPA
Ray Clark	EPA
Maureen Conley	Radioactive Exchange
John Cooper	Nat. Radiological Protection Board
Terry Crump	Weston
Dan Dresser	Weston
Phil Dunn	TRW
Steven England	Illinois Dept. of Nuclear Safety
M. Golshani	Weston
Patrick Harris	SERCH Licensing/Bechtel
Sue Langhorst	C/RRPC
Homi Minwalla	Weston/Jacobs
Thomas Ortciger	Illinois Dept. of Nuclear Safety
Ellen Ott	DOE
Janice Owens	NARUC Nuclear Waste Office
Martin Pfflitt	EPA
Edward Regner	DOE
Leon Reiter	NWTRB
John Russell	CNWRA
Stephen Spector	CNWRA
E. Tiesenhausen	CCCP
Lori Tripoli	Afton Associates
Ivan White	State of Connecticut (consultant)
Jim York	Weston
L. Zerr	STS

APPENDIX IV: FUTURE AGENDA

April 26-30, 1993 - Several members and staff will attend the 4th Annual International High-Level Radioactive Waste Management Conference and Exposition, Las Vegas, Nevada.

53rd ACNW Committee Meeting May 19-20, 1993 (Tentative Schedule)

Revised Draft HLW Research Program Plan (Open) - The Committee will review and comment on the revised Draft HLW Research Program Plan, NUREG-1406, and associated technical assistance.

DOE Site Characterization Progress Reports (Open) - The Committee will be briefed by the NRC staff on NRC's responses and follow-up to the DOE Site Characterization Progress Reports for the proposed Yucca Mountain repository. Also, the Committee will discuss the revised procedures for evaluating the DOE study plans.

Systematic Regulatory Analysis (Open) - The Committee will be briefed on the current status of the Systematic Regulatory Analysis, conducted by the Center for Nuclear Waste Regulatory Analyses, and products resulting from this initiative, including technical assistance efforts and the development of the License Application Review Plan.

Standard Review Plan (Open) - The Committee will discuss an NRC staff Standard Review Plan for DOE Study Plans.

Standard Review Plan for the Review of Remedial Action of Inactive Mill Tailings Sites (Open) - The Committee will be briefed by the NRC staff on a Standard Review Plan for the Review of Remedial Action of Inactive Mill Tailings Sites Under Title I of the Uranium Mill Tailings Radiation Control Act, Revision 1.

Committee Activities (Open/Closed) - The Committee will discuss anticipated and proposed Committee activities, future meeting agenda, and organizational matters, as appropriate. Also, the members will discuss matters and specific issues that were not completed during previous meetings.

June 23-24, 1993 - Several members and staff will visit the Canadian Research Laboratories (Whiteshell and Underground Research Laboratories), Pinawa, Manitoba Province, Canada.

Working Group Meetings

Lessons Learned in HLW and LLW Disposal Programs, (July 20, 1993, tentative), 7920 Norfolk Avenue, Bethesda, MD (Howard Larson) - The Working Group will examine lessons learned from both HLW and LLW facility siting and operational experiences. The Working Group will focus on technical and regulatory deficiencies.

Characterization of the Unsaturated Zone Flow and Transport Properties, (Date to be determined), 7920 Norfolk Avenue, Bethesda, MD, (Lynn Deering) - The Working Group will examine the current understanding of processes controlling matrix and fracture-flow in the unsaturated zone at Yucca Mountain, existing approaches to model or bound fracture flow in the unsaturated zone, insights gained from performance assessment activities regarding the sensitivity of infiltration and other parameters and assumptions, on-going site characterization studies, the relationship between performance assessment and site characterization activities, and significant data gaps.

Engineered Barrier Systems, (Date to be determined), 7920 Norfolk Avenue, Bethesda, MD (Giorgio Gnugnoli/Lynn Deering) - The Working Group will review the role of, and the degree of reliance that should be placed on, engineered versus natural barriers within an HLW geologic repository.

Use of Fractals for Fluid Flow at Yucca Mountain, (Date to be determined), Bethesda, MD (Lynn Deering) - The Working Group will examine the use of fractals in the development of conceptual and numerical models of fluid flow in unsaturated, fractured rock. Studies show that the roughness characteristics of fracture surfaces can be simulated by the use of fractals. DOE is considering the use of this approach in its study plan on fluid flow in unsaturated fractured rock systems.

APPENDIX V
LIST OF DOCUMENTS PROVIDED TO THE COMMITTEE

MEETING HANDOUTS

AGENDA ITEM NO.	DOCUMENTS
1	Chairman's Report
	1. Items of Possible Interest to ACNW Members and Staff, dated March 19, 1993, by Dade W. Moeller
2	Rejection of a Low-Level Radioactive Waste Disposal Site
	2. Illinois Low-Level Radioactive Waste Management Act as amended by P.A. 87-891, P.A. 87-1166, 87-1244, and 87-1267 (Revised March 1993)
	3. Illinois Low-Level Radioactive Waste Disposal Facility Siting Process, undated
	4. Various State Maps and Charts, undated
	5. Viewgraphs of Martinsville Facility Site
	6. Illinois LLRW Siting Process, undated
3	Proposed Environmental Protection Agency Standards for TRU and High-Level Radioactive Waste Disposal at Sites Other than Yucca Mountain
	7. Draft NRC Comments: Proposed EPA Standards for Sites Other Than Yucca Mountain, dated March 24, 1993, by Margaret Federline and Daniel Fehringer
	8. Draft Secy Paper to the Commissioners from James Taylor, undated, regarding comments on Proposed EPA Standards for TRU and HLW Disposal at Sites Other Than Yucca Mountain (Official Use Only)
4	Recent Reviews of Several States' Radiation Control Programs
	9. The Nuclear Regulatory Commission's State Agreement Program, undated, by Carlton Kammerer and Cardelia Maupin.
5	Committee Activities/Future Agenda
	10. Summary Comments on NRC Site Cleanup Criteria Workshop, March 12-13, 1993, Prepared by Dade Moeller, dated March 19, 1993
6	Rulemaking Proposed Amendments to 10 CFR Part 60 Clarifying the Requirements for Assessment of the Siting Criteria
	11. Presentation to the ACNW on Proposed Rulemaking on Clarification of Assessment Requirements in 10 CFR Part 60, dated March 25, 1993, by Robert Johnson and Mark Delligatti, HLWM

MEETING NOTEBOOK CONTENTS

2 Rejection of a Low-Level Radioactive Waste Disposal Site
1. Status Report
2. Enclosures:
- "Compact Update," presented at EPRI International LLW Conference, November 1992
- LLW Notes, February 1993
- Memorandum for ACNW Members from Howard Larson, dated January 12, 1993, regarding Illinois Department of Nuclear Safety, 1991 Annual Survey Report, November 1992, with attachment
- LLW Notes, February 1993
- "Nebraska's Intent to Deny LLW Facility Stuns US Ecology", Nuclear Waste News, February 18, 1993

3 Proposed Environmental Protection Agency Standards for TRU and High-Level Radioactive Waste Disposal at Sites Other than Yucca Mountain
3. Status Report
4. Dr. Moeller's March 5, 1993 review of draft NRC staff comments on proposed EPA standards for TRU and HLW disposal at sites other than Yucca Mountain
5. Draft SECY Paper on comments on proposed EPA standards for TRU and HLW disposal at sites other than Yucca Mountain [This paper is Predecisional]
6. Draft EPA Economic Impact Analysis for Amendments to EPA's Radioactive Waste Standards (40 CFR Part 191), dated December 1992

4 Recent Reviews of Several States' Radiation Control Programs
7. Status Report
8. Enclosures:
- "Low-Level Radioactive Waste Disposal Compact Membership", LLW Forum Report, February 1993
- The Agreement State Summary Package containing the 1992 Guidelines for Review of Agreement State Programs Excerpt from Federal Register Notices, Volume 57, No. 103, dated May 28, 1992
- Report on Review of the Alaska Radiation Protection Program, dated December 15, 1992
- SECY-92-360, "Results of the 1992 Follow-up Review of the Iowa Agreement Program", dated October 22, 1992, with enclosures
- Memorandum for James Taylor from Carlton Kammerer, dated February 25, 1993, regarding Iowa Agreement Program Progress Report
- Letter for Barbara DeBuono from Carlton Kammerer, dated February 6, 1992, regarding review of the Rhode Island State's Radiation Control Program

- Summary of Assessments and Comments for the Rhode Island Radiation Control Program October 27, 1989 to November 22, 1991
- State Agreements Program Division 1 Internal Procedure, with attachments

5 Committee Activities/Future Agenda

9. 4th Annual HLW Conference, April 26-30, 1993
10. Topics through July 1993
11. Other Topics to be Scheduled
12. Working Group Meetings
13. Blaha list of proposed ACNW agenda items

6 Rulemaking Proposed Amendments to 10 CFR Part 60 Clarifying the Requirements for Assessment of the Siting Criteria

14. Status Report
15. Memorandum for John Larkins through Abraham Eiss from, B. J. Youngblood, dated March 11, 1993, regarding Proposed Amendments to 10 CFR Part 60 Clarifying the Requirements for Assessment of Siting Criteria
16. Memorandum for Chairman and Commissioners from James Taylor, dated June 11, 1992, regarding Resolution of the Regulatory Uncertainties related to the Relationship of the HLW Repository Regulations Siting Criteria and the Performance Objectives, with enclosures
17. Memorandum for Paul Pomeroy from Giorgio Gnugnoli, dated July 6, 1992, regarding Joint EDO and OGC Response to SRM 9200219

7 Plans for a Site Visit to Whiteshell Research Laboratories (Canada)

18. Status Report
19. Letter for Colin Allan from Giorgio Gnugnoli, dated February 17, 1993, regarding ACNW Visit to Whiteshell Nuclear Laboratory and the Underground Research Laboratory
20. Letter to Giorgio Gnugnoli from Barbara Gray AECL, dated February 8, 1993, regarding Enclosed information for your use: "Radioactive Waste Management in Canada" by R.W. Morrison and P.A. Brown, dated September 4-6, 1991
"Developments in the Canadian Concept for Disposing of Nuclear Fuel Waste" by K. Nutall and D. F. Togerson
"Nuclear Waste Disposal: Canada's Environmental Review Begins" by Robert Greyell
Photocopies of AECL Brochures
21. Memorandum for ACNW Members from Howard Larson, dated January 12, 1993, regarding Trip Report of November 3 and 4, 1992, Staff Visit to Canada's Whiteshell Nuclear Research Laboratories and Underground Research Laboratory, with enclosures

8 Working Group Chairman's Report on the LLW Source Term Meeting on March 23, 1993
22. Status Report
23. Enclosures:
- Working Group presenter Invitation Letter
- Items to be Addressed by WG presenter

9 Plans Regarding Acceptable Methods for the Formal Elicitation and Use of Expert Judgment in the Repository Licensing Process
24. Status Report
25. Memorandum for Richard Major from Paul Pomeroy, dated March 4, 1993. regarding Additional Materials for March 26, 1993 Meeting with Commissioner Curtiss [with enclosures]
26. Letter for Prof. Warner North from Paul Pomeroy, dated November 11, 1992, regarding Comments on Expert Judgment in Albuquerque
27. Letter for Paul Pomeroy from D. Warner North, dated December 3, 1992, regarding U.S. District Court Opinion by Judge Michael Mihm of July 23, 1992
28. Memorandum for B. J. Youngblood from Stuart Treby, dated January 29, 1993, regarding U.S. District Court Ruling on Expert Judgment, with enclosures
28. Status Report for Information and Background Purposes

10 ACNW Priorities and Improvements to the Four-Month Program Plan
30. Status Report
31. Strawman ACNW Reprioritization
32. Letter for Chairman Selin from Dade Moeller, dated February 9, 1993, regarding Program Plan for the ACNW
33. Memorandum for ACNW Chairman from Commissioner Kenneth Rogers, dated February 22, 1993, regarding Thoughts about ACNW's Program Plan
34. Memorandum for Paul Pomeroy from Giorgio Gnugnoli, dated March 17, 1993, regarding ACNW Plans for Sun Sparc Station Utility [Official Use Only]
35. ACNW Charters

11 Preparation of ACNW Reports
36. Status Report
37. ACNW Draft Letter #1 to R. Bernero, regarding Scope of ACNW Activities [Official Use Only]
38. Memorandum for Dade Moeller from Raymond Fraley, dated May 16, 1990, regarding Revised ACNW Charter
39. Memorandum for Dade Moeller from Kenneth Carr, dated May 11, 1990, regarding Approval of a Revised Charter for the ACNW
40. Memorandum of Understanding, dated October 1, 1990
41. Letter for Chairman Kenneth Carr from ACRS/ACNW Chairman,

dated July 11, 1990, regarding Division of Responsibilities Between ACRS/ACNW