



ACNW-0011  
PDR 8/11/89

TABLE OF CONTENTS  
11TH ACNW MEETING  
JUNE 13, 1989

	<u>PAGE</u>
I. CHAIRMAN'S REPORT (Open).....	1
II. REVIEW OF THE SITE CHARACTERIZATION ANALYSIS (SCA) (Open)	2
A. SCA Module 1: Geophysics.....	2
B. SCA Module 2: Materials Engineering.....	3
C. SCA Module 3: Geotechnical Engineering.....	4
D. SCA Module 4: Hydrology/Geochemistry.....	5
E. SCA Module 5: Performance Assessment.....	6
F. SCA Module 6: Quality Assurance.....	7
G. Summary.....	7
III. EXECUTIVE SESSION (Open)	
A. Committee Conclusions.....	8
1. Center for Nuclear Waste Regulatory Analyses (CNWRA) Activities and Reports.....	8
2. Scoping PRA Study for the High-Level Waste Re- pository.....	8
3. ACRS Letter Report.....	8
4. INTRAVAL Report.....	8
5. Future Meeting Schedules.....	9
B. Future Activities.....	9
APPENDICES	
I. Meeting Attendees.....	I
II. Future Agenda.....	II
III. Other Documents Received.....	III

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Issued: 7/13/89

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MINUTES OF THE THE 11TH MEETING OF THE  
ADVISORY COMMITTEE ON NUCLEAR WASTE  
JUNE 13, 1989  
BETHESDA, MD

The 11th meeting of the Advisory Committee on Nuclear Waste was convened by Chairman Dade W. Moeller at 8:30 a.m., Tuesday, June 13, 1989, at 7920 Norfolk Avenue, Bethesda, Maryland.

[Note: For a list of attendees, see Appendix I. ACNW members, Drs. William J. Hinze, Dade W. Moeller, Clifford V. Smith, Jr., and Martin J. Steindler were present. ACNW consultants, Drs. Melvin W. Carter, Richard F. Foster, Judith B. Moody, Donald A. Orth, Paul W. Pomeroy, Paul G. Shewmon, and Mr. Eugene E. Voiland were also present.]

The Chairman said that the agenda for the meeting had been published. He also identified the items to be discussed. He stated that the meeting was being held in conformance with the Federal Advisory Committee Act and the Government in the Sunshine Act, Public Laws 92-463 and 94-409, respectively. He also noted that a transcript of some of the public portions of the meeting was being made, and would be available in the NRC Public Document Room at the Gelman Building, 2120 L Street, N.W., Washington, D.C.

[Note: Copies of the transcript taken at this meeting are also available for purchase from the Heritage Reporting Corporation, 1220 L Street, N.W., Washington, D.C. 20005.]

## I. CHAIRMAN'S REPORT (Open)

[Mr. R. F. Fraley was the Designated Federal Officer for this portion of the meeting.]

Dr. Moeller announced the appointment of Dr. William J. Hinze to the Advisory Committee on Nuclear Waste and presented him with a certificate signed by NRC Chairman Lando W. Zech, Jr., to mark the occasion.

Dr. Moeller identified the ACNW consultants who have studied specific portions of the Site Characterization Plan (SCP) and the Site Characterization Analysis (SCA). The consultants also had the opportunity to meet with knowledgeable NRC staff for in-depth discussions on the specific components of the SCA. Dr. Moeller reminded the members and consultants to concentrate their attention on the SCA prepared by the NRC staff and keep in mind the questions posed by Dr. Steindler at a previous meeting. Dr. Moeller reminded members and staff to keep in mind the context in which the NRC staff is developing their objections, e.g., NRC staff defines an objection as a matter of such immediate seriousness to a particular portion of the SCP that the NRC would recommend that the U.S. Department of Energy (DOE) not start work in that area until the objection is satisfactorily resolved.

Dr. Sidney J. S. Parry, ACNW staff, identified the documents, point papers, and contents of the briefing books, that had been made available to the members and consultants as references. Dr. Parry introduced the representatives from the NRC staff who would be available for questioning.

## II. REVIEW OF THE SITE CHARACTERIZATION ANALYSIS (SCA) (OPEN)

[Note: Dr. S. J. S. Parry was the Designated Federal Officer for this portion of the meeting.]

NOTE: The Committee had previously determined that this review would focus on the Site Characterization Analysis (SCA), the NRC staff report on the SCP. The Committee decided to take this approach because of the size (approximately 6,000 pages) and complexity of the SCP. Therefore, the primary approach for the Committee was to examine the staff's methodology of review and conclusions reached. To that end, individual consultants and members were assigned review responsibility for specific technical or scientific disciplines. This meeting consisted of the individual reports by the members and consultants, with clarifying statements provided by the pertinent NRC staff personnel.

### A. SCA Module 1: Geophysics

Dr. William Hinze, ACNW member, initiated the presentations with a discussion on geophysics, seismology, volcanism, tectonics, and natural resources. Dr. Hinze thanked the NRC staff for their cooperation during his review of the staff's point papers. He stated that he believed that the staff had done an excellent job in reviewing the SCP and in formulating the SCA. He indicated, however, that he did have some questions.

The first question was on the staff's only objection in this area. It concerned the exploratory shaft facility (ESF), its purpose and location. He noted that the original plans for characterizing the site included extensive horizontal drilling at depth. Now the plans call for the substitution of lateral drifts for the drill holes. He questioned whether the ESF was also to be used to determine the vertical geologic variability or whether its principal purpose was to gain access to the repository horizon. He noted that the 1982 report of the technical integration group included several caveats concerning each of the locations then under consideration. Two of these caveats were: (1) that the locations be the subject of detailed geologic mapping, and (2) that geophysical studies be performed to study the locations at depth. It was noted that neither of these requirements had been carried out. It was Dr. Hinze's opinion that the absence of these studies supported the staff's concern with the location of the shafts. It was his view that the location of the ESFs was the most important item in the SCP. He supported reevaluation of the location of the shafts and detailed surface-based geophysical testing.

Ms. Charlotte Abrams, NMSS, noted that the geology objection had been incorporated into an objection by the geoengineering group. Dr. Moeller noted a critical statement by the staff on the shaft

siting decision process, in that key information was not included. Dr. Hinze indicated that the statement did not appear to be included in the recommendations and objections section of the SCA. Dr. Hinze stated that he did not find the wording of the engineering objection clear or pointed enough for his needs.

There was discussion among Drs. Hinze, Smith, and Steindler about the exploratory shaft location at the repository horizon. Concern was expressed with the acceptability of the host rock in terms of faulting and drift stability. Mr. John Linehan, NMSS, indicated that this would be considered in the Title II design of the shaft. The general concern with the shaft being located in an area that is representative of the horizon was again stressed.

Upon questioning by Dr. Steindler, a general concern about the follow-through statements from the point papers to the summary paper was voiced by Dr. Hinze. A specific example on volcanism was cited.

Dr. Moody supported Dr. Hinze's concerns and noted her own concerns that the Title II design has been initiated even though the Title I work was inadequate.

Dr. Hinze, in response to comments by Dr. Steindler, noted that the use of the term "exploratory" when referring to the ESF was a misnomer. He also stated that there should be more emphasis on the question of volcanism, and that regional geoscience investigations need to be undertaken. It was suggested that an area of up to 200 miles around the site should be studied depending on the particular phenomenon under consideration. Additionally, Dr. Hinze questioned whether sufficient interest was being shown in the Calico Hills strata.

Dr. Smith voiced a general concern that, if uncertainty about the suitability of the shaft's location exists, then it appears that the focus of the project is in question. In closing, Dr. Hinze touched on his questions relative to the possibility of natural resources existing in the area.

#### B. SCA Module 2: Materials Engineering

Dr. Shewmon presented his conclusions on the waste package portion of the SCA. He noted the lack of information on the specific design of the waste package and its mode of emplacement. He noted that little information was given on the expected ambient conditions in the repository after closure. He believed that this made it difficult to appraise the proposals in the SCP. The question of the possible release of gaseous carbon-14 was discussed by Drs. Steindler and Shewmon, and others. DOE is conducting further studies on the likelihood of carbon-14 release scenarios.

Dr. Shewmon generally discussed the question of what is meant by "substantially complete containment," how package failure is measured, modes of radionuclide transfer, and quality assurance (QA) of waste packages.

Dr. Orth questioned how waste package concerns related to site characterization. There was a general discussion on the interrelationship between the necessity to determine the ambient conditions in the repository both prior and subsequent to emplacement of the waste packages. A major question was the desirability to perform testing of full-scale waste packages containing various waste forms.

There was also discussion on the various criteria that would disqualify a site, even if an impenetrable or fail-proof waste package were developed.

Dr. Moody observed that the waste package needs to be considered as a part of the engineered barrier system, not as a separate entity, and that more knowledge of the ambient conditions is necessary.

Dr. Steindler also commented on ambient conditions, specifically mentioning water accumulation in the package boreholes and the uncertainty as to the mode of water transport, by either fracture or matrix flow. He also addressed the question of corrosion of the package at the air-water interface, if water accumulates. He questioned DOE's apparent approach that they expect uniform corrosion, or wastage, rather than localized attack.

Mr. Jeffrey Pohle, NMSS, noted that the staff was not commenting on all details of the site, but was concerned with DOE's plans to understand the site and to determine its physical characteristics. Messrs. Weller and Chery, NMSS, emphasized that the staff expects the forthcoming DOE study plans to detail the test procedures and to clarify the models to be used in the performance assessment process.

C. SCA Module 3: Geotechnical Engineering

Mr. Voiland discussed geotechnical engineering. He noted that the ESF design has a dual function. First it provides a means to develop information and then it becomes a part of the repository itself. He wondered about the intent of the Title I and Title III designs. Dr. Dinesh Gupta, NMSS, discussed the following Title I, Title II, and Title III design definitions by DOE:

- ° Title I - Provide the necessary topographical and other field surveys, test borings, and other subsurface investigations; prepare preliminary studies, sketches, layout plans, and outline specifications; and prepare reports, including estimates of cost

of the proposed project and of all structures, utilities, and appurtenances thereto.

- ° Title II - Provide complete design of the work, including preparation of all required preliminary and final working drawings, specifications, estimates, and contract documents; assist in securing, analyzing, and evaluating bids or proposals for construction; and consult with the AEC on all questions arising in connection with the services performed by the architect-engineer.
- ° Title III - Provide complete architect-engineer supervision and inspection of construction under the direction of a responsible representative, check shop drawings, and furnish record drawings to show construction has actually accomplished.

He noted the staff's concern that DOE apparently considers the Title II design to be an extension of Title I. Dr. Moody stated her concerns with that approach. Dr. Smith also supported the staff's concerns.

Mr. Voiland concurred with the staff's general position that considerable rework of the Title I design is required, and that the ESF Title II design should be deferred until Title I design is completed. The requirement that all ESF designs must incorporate or take into account the criteria of 10 CFR 60 was discussed and concurred in by the Committee.

Mr. Voiland discussed the Design Acceptability Analysis (DAA), which is a post completion QA audit of the ESF Title I design. He noted that the Title I design was found suitable in the DAA. However, it was again noted that the staff still has concerns with the Title I design and does not want the Title II design to proceed. Mr. Joseph Bunting, NMSS, expanded on the staff's broad concerns with the ability of the testing facility to fulfill its requirement.

D. SCA Module 4: Hydrology/Geochemistry

Dr. Moody summarized her concerns with the hydrology and geochemical portions of the SCA. She noted that the surface-based testing programs were defined to a limited degree. She specifically questioned the number of drill holes and the extent of geophysical testing to be performed. She emphasized that intrusive testing should be minimized and that core testing outside the repository boundaries is of uncertain value. Dr. Smith questioned the necessity of investigating the regions below the repository horizon. It was pointed out that such information was necessary for performance assessment calculations.

Dr. Pomeroy questioned various geophysical representation of water travel in the several unsaturated zones associated with and surrounding the repository horizon. It was indicated that these were hypotheses and that neither horizontal nor vertical flow had been demonstrated. Dr. Hinze questioned the proportion of fracture-to-matrix flow. Dr. Moody indicated that this ratio was unknown and would be a point of much detailed study.

Dr. Moody recommended that a list of minerals with their associated thermodynamic properties should be developed. She specifically stressed that the zeolites present should be investigated. Dr. Shewmon questioned if phase alteration could occur during the heat-up and cool-down phases of the repository's operations. Dr. Moody said that it was likely, and that the use of  $K_s$  in the normal sense is not possible because of nonequilibrium conditions. There was an extended discussion on the determination and utilization of  $K_s$ . It was concluded that  $K_s$  need to be used with an appropriate understanding of the ambient conditions prevailing.

Mr. Voiland questioned the values of groundwater travel time that were cited in the SCP. His general conclusion was that there was insufficient information to confirm or alter the tables.

Mr. Browning commented that the staff had deliberately avoided defining radionuclides of interest and thus influencing the research activities of the DOE.

#### E. SCA Module 5: Performance Assessment

Dr. Pomeroy noted that he had identified seven specific areas of concern regarding the performance assessment program that had been identified in a letter from him to Dr. Moeller, dated June 6, 1989. He noted the cooperation of the staff and also commented that he did not find the concerns noted in the staff's point papers being addressed in the same detail or with the same stress in the Director's letter. He asked that the staff explain performance assessment, issue resolution and to non-mathematically describe the complementary cumulative distribution functions (CCDFs). Messrs. Coplan and Eisenberg described the CCDF and noted the use of expected partial performance measures (EPPMs) in constructing the CCDFs. Mr. Eisenberg did not believe that DOE had properly developed the EPPMs, and Dr. Pomeroy agreed noting that the five classes proposed were not mutually exclusive. The conclusion was that the question of scenario analysis and the relationship of the performance assessment program to the site characterization program need to be redone.

Dr. Pomeroy had an extended colloquy with the staff on the performance allocation and assessment program. This included a detailed exposition on "expert judgment." It was the staff's position that one should use panels where hard data are not available, but that

such decisions are no substitutes for actual data. Mr. Eisenberg noted the staff's concern with DOE's lack of consideration of human intrusion and its limited inclusion in the CCDF. He noted that the staff has, in preparation, a rule that describes how to demonstrate compliance with the EPA Standard.

Dr. Pomeroy concurred with Dr. Smith that the timing of the development of performance assessments was very crucial. He noted that several assessments should be performed to catch disqualifying factors and to point out areas requiring additional study. He quoted from the staff's point papers that if the DOE should be unable to calculate a CCDF then that would constitute a fatal flaw. The NRC staff concurred.

In closing, Dr. Pomeroy noted the need for explicit programs for integrating the site characterization studies and their prioritization.

F. SCA Module 6: Quality Assurance

Mr. Voiland concluded the technical presentations with a discussion of the QA aspects of the SCP and SCA. He noted the critical function of QA in complex engineering projects. The active position of the NRC staff on QA was described and he noted that the draft of the Director's proposed comments reflected that concern. He detailed several of the staff's concerns. These included failure by DOE to staff their QA programs. Dr. Steindler disagreed and asked if this were a fully pertinent comment for the NRC staff to make.

Other comments by the NRC staff were noted and discussed by Mr. Voiland. No particular items were raised or required discussion other than the distinct difference of approach between NRC and DOE towards development of a "Q" list.

G. Summary

The NMSS staff agreed to consider the comments and concerns expressed during the meeting. The NMSS staff agreed to provide to the Committee an updated version of the SCA introduction, summary and director's comments, prior to the next meeting.

The NMSS staff noted that the first annual update of the SCP by DOE will be available by mid-July. The ongoing NRC/ACNW review will be based on the current plan, however.

Dr. Moeller recommended that any additional comments or concerns not addressed at this or previous meetings, should be brought to his attention as soon as possible, and he would pass them on to Mr. Browning, as appropriate.

Dr. Moeller agreed to prepare a draft report on the Committee's review of the SCA and the Site Characterization Plan. The draft report will be distributed to the members and consultants prior to the next meeting.

### III. EXECUTIVE SESSION (OPEN)

#### A. Committee Conclusions

##### 1. Center for Nuclear Waste Regulatory Analyses (CNWRA) Activities and Reports

The Committee Chairman agreed to reconsider a visit to CNWRA in San Antonio, Texas, sometime this fall or winter.

Dr. Moeller requested that the Committee members and consultants be placed on the distribution list for future CNWRA reports, and that copies of recent CNWRA reports, including those on uncertainties in the regulatory process, be sent to the members and consultants.

##### 2. Scoping PRA Study for the High-Level Waste Repository

The Committee expressed interest in receiving copies of a DOE (PNL) report on the development of a PRA for Yucca Mountain. The Committee also expressed interest in receiving copies of any similar reports that may have been prepared for the WIPP facility.

##### 3. ACRS Letter Report

Other comments by the NRC staff were noted and discussed by Mr. Voiland. No particular items were raised or required discussion

Mr. Voiland, ACNW consultant, recommended that the ACRS Report on the Management of High Level Radioactive Wastes, dated December 20, 1976, be brought to the attention of the Committee and consultants. The report discusses the differences in the magnitude of the risks associated with the various components of the nuclear fuel cycle.

##### 4. INTRAVAL Report

Dr. Moeller noted that the INTRAVAL progress report 3, November 1988-February 1989, with case studies, was worth reading, and requested that copies be distributed to interested members and consultants.

### 5. Future Meeting Schedules

Dr. Moeller noted that the American Society for Testing Materials (ASTM) is involved in the development of standards applicable to radioactive waste activities. He requested that, if deemed appropriate, a representative of ASTM be invited to brief the Committee on these activities, preferably near the end of the year.

Dr. Moeller noted that SECY-89-167 [Resubmittal of SECY-88-311, Concerning SECY-88-64, on Naturally Occurring and Accelerator-Produced Radioactive Materials (NARM)], may be of interest to the Committee. He suggested that the members should consider whether to become more involved in this important area. (Note that a memorandum from the EDO to Dr. Moeller, dated June 13, 1989, states that the NRC has no regulatory authority over NARM, and does not have the resources to undertake comprehensive inspection programs.)

Dr. Moeller announced that he will meet on July 6, 1989, with the Technical Assistants to the Commissioners, to discuss matters of mutual interest.

Dr. Moeller suggested that the Committee might want to look into the subject of LLW mill tailing sites.

Dr. Hinze noted that he will not be available for the 13th ACNW meeting on July 26-27, 1989, and requested that the meeting with the U.S. Geological Survey be deferred until the 14th meeting in September.

### B. Future Activities

Appendix II is the tentative agenda that was proposed to the Committee.

The 11th ACNW meeting was concluded at 4:45 p.m. on June 13, 1989.

APPENDICES

- I. MEETING ATTENDEES
- II. FUTURE AGENDA
- III. OTHER DOCUMENTS RECEIVED

APPENDIX I - ATTENDEES

11TH ACNW MEETING  
JUNE 13, 1989

ACNW MEMBERS:

Dr. William J. Hinze  
Dr. Dade W. Moeller  
Dr. Clifford V. Smith, Jr.  
Dr. Martin J. Steindler

ACNW CONSULTANTS:

Dr. Melvin W. Carter  
Dr. Judith B. Moody  
Dr. Donald A. Orth  
Dr. Paul W. Pomeroy  
Dr. Paul G. Shewmon  
Mr. Eugene E. Voiland

APPENDIX I - 11TH ACNW MINUTES

APPENDIX I - ATTENDEES (CONT'D)

NRC AND CONTRACTORS

J. Kennedy  
J. Conway  
S. Bilhorn  
J. Bradbury  
K. Chang  
P. Brooks  
J. Wolf  
P. Reed  
M. Nataraja  
J. Bunting  
A. Ibrahim  
H. Lefevre  
K. McConnell  
R. Ballard  
G. Lear  
J. Trapp  
S. Coplan  
D. Chery, Jr.  
P. Justus  
C. Abrams  
N. Eisenberg  
R. Virgilio  
J. Pohle  
S. Gagner  
B. Youngblood  
R. Browning  
D. Trimble  
P. LaPlanta - CNWRA

DOE AND CONTRACTORS

E. Regnier  
J. Kimball  
S. Echols  
H. Bermanis- Weston  
A. S. Dam - Weston  
C. Noronha - Weston  
P. Sobel - Weston

U.S. GEOLOGICAL SURVEY

G. Roseboom

PUBLIC

A. Muir - ICF  
M. Bauser - N&H  
P. Austin - SAIC  
K. Rischart - Energetics  
E. Holstein - Nye County  
C. Henkel - EEI/UWASTE  
M. Conover - Bechtel  
M. Kehnemuyf - Battelle  
J. Murphy - BPI  
M. Hamkins - ICF

ENVIRONMENTAL PROTECTION AGENCY

M. Cottony

APPENDIX II  
FUTURE AGENDA

12th ACNW Meeting on June 28-30, 1989

Site Characterization Analysis (Open) - The Committee will complete the review of the Site Characterization Analysis and prepare a report on the SCA/SCP.

Waste Management Research Program and Strategy Plan (Open) - The Committee will be briefed on:

- Structural organization of waste management research activities
- High-level waste management research program and strategy plan
- LLW research program plans
- Center for Nuclear Waste Regulatory Analyses activities.

Status of Cementitious Waste Forms (Open) - The Committee will be briefed on the status of cementitious LLW forms and the recent workshop on cement solidification

Mishap Reporting in the Management of LLW (Open) - The Committee will be briefed on methods and procedures for reporting incidents involving LLW forms prepared for disposal (SECY-89-116).

Performance Assessment (Open) - The Committee will be briefed on the NRC approach to performance assessment for LLW disposal and the status of internal activities (NMSS/RES Memorandum of Understanding), if time permits.

Committee Activities (Open) - The Committee will discuss anticipated and proposed Committee activities, future meeting agenda, and organizational matters, as appropriate.

13th ACNW Meeting on July 26-27, 1989 (tentative agenda)

Meeting with the Commission (Open) - The Committee and the Commission will discuss the ACNW Letter Report on SCP/SCA as well as other items of interest.

Scoping Study PRA for Yucca Mountain (Open) - The Committee will be briefed by NRC staff, RES, and representatives from Sandia National Laboratory, on the development of a scoping study PRA for Yucca Mountain

EPA Low Level Waste Standards (Open) - The Committee will be briefed on radionuclide release standards for LLW disposal sites.

Status of NRC/DOE Interactions on DOE Quality Assurance (Open)

Committee Activities (Open) - The Committee will discuss anticipated and proposed Committee activities, future meeting agenda, and organizational matters, as appropriate.

14th ACNW Meeting on September 13-15, 1989 (tentative agenda)

Retrievability Demonstration (Open) - The Committee will be briefed on the Technical Position on demonstration of retrievability during site characterization.

Tectonic Models (Open) - The Committee will be briefed on the technical position on tectonic models.

Data Availability (Open) - The committee will invite representatives of DOE and USGS to discuss problems related to delays in making data available and coming to closure.

Meeting with Director of Office of Nuclear Reactor Regulation (NRR) (Open) - The Committee will be briefed by NRR on the licensing program for LLW handling systems, fuel compaction, decontamination and decommissioning. The Committee will discuss any crossover issues with representatives of NMSS and the EDO.

Selection of Nominating Committee - The Chairman will appoint the nominating committee for selection of the 1989 ACNW officers.

Committee Activities (Open) - The Committee will discuss anticipated and proposed Committee activities, future meeting agenda, and organizational matters, as appropriate.

15th ACNW Meeting on October 11-13, 1989 (tentative agenda)

Nomination of ACNW Officers (Open/Closed) - The Nominating Committee will present its suggested slate of officers for 1989.

Committee Activities (Open) - The Committee will discuss anticipated and proposed Committee activities, future meeting agenda, and organizational matters, as appropriate.

16th ACNW Meeting on December 27-29, 1989 (tentative agenda)

American Society for Testing Materials (Open) - The Committee will be briefed on the radioactive waste activities of ASTM.

Election of ACNW Officers (Open) - The Committee will vote to select its officers for 1989.

Committee Activities (Open) - The Committee will discuss anticipated and proposed Committee activities, future meeting agenda, and organizational matters, as appropriate.

## APPENDIX III - OTHER DOCUMENTS RECEIVED

### A. Meeting Handouts from ACNW Staff and Presenters

1. Site Characterization Point Papers, dated June 1, 1989 (includes sections on exploratory shaft facility testing operations, waste package/EBS, hydrology and geochemistry, performance assessment, geology/geophysics, geotechnical engineering, and Appendix A0)
2. Draft Review of the ESF Title 1 Design Acceptability Analysis (DAA) by E. Voiland, June 13, 1989
3. Draft Quality Assurance - Objection by E. Voiland, June 13, 1989
4. Draft Quality Assurance Classification by E. Voiland, June 13, 1989
5. Moody's Comments on NRC's Review (Site Characterization Analysis, SCA) of DOE's Yucca Mountain (YM) Site Characterization Plan (SCP), undated
6. Handouts (2) from Dr. Gupta, undated, re Definitions of Title I, Title II, and Title III

APPENDIX III (CONT'D)

B. Meeting Notebook Contents Listed by Tab Number

TAB

- 1        1. Status Report on Staff Review of DOE's Site Characterization Plan (SCP)
- 2        2. Portion of the SCA
  - a. Introduction and Director's Comments and Recommendations
  - b. Summary of SCA Comments
- 3        3. Memorandum for Moeller from Shewmon, dated May 19, 1989, re Review of Waste Package Materials Program
4. Letter for Moeller from Pomeroy, Rondout Associates, Inc., dated June 6, 1989, re Performance Assessment
- 4        5. Letter for Gerts from Loux, Agency for Nuclear Projects Nuclear Waste Project Office, dated May 30, 1989, re State of Nevada Preliminary Comments on the Site Characterization Plan, with attachments

**Type of Meeting: Open.****Agenda:**

Tuesday, June 6

8:30 a.m.—Introduction and Review of Charge of Subcommittee.

9 a.m.—Discussion of Critical Issues to be Studied by the Subcommittee including review of procedures for judging grant proposals and continuing grants, role of working groups, balance of funding of hardware versus research grants, balance of science versus applications in the Microgravity Science and Applications Division, support of long term large scale projects, methods for stimulating interest in submitting high quality proposals in the microgravity area, coupling to international efforts in microgravity science and applications.

4:30 p.m.—Mode of operation of the subcommittee and scheduling of future meetings.

5 p.m.—Adjourn.

May 19, 1989.

John W. Gaff,

Advisory Committee Management Officer,  
National Aeronautics and Space  
Administration.

[FR Doc. 89-12517 Filed 5-24-89; 8:45 am]

BILLING CODE 7510-01-M

**NATIONAL FOUNDATION ON THE ARTS AND HUMANITIES****Agency Information Collection Activities Under OMB Review**

AGENCY: National Endowment for the Arts.

ACTION: Notice.

**SUMMARY:** The National Endowment for the Arts (NEA) has sent to the Office of Management and Budget (OMB) the following proposal for the collection of information under the provisions of the Paperwork Reduction Act (44 U.S.C. Chapter 35).

**DATES:** Comments on this information collection must be submitted by June 28, 1989.

**ADDRESSES:** Send comments to Mr. Jim Houser, Office of Management and Budget, New Executive Office Building, 726 Jackson Place NW., Room 3002, Washington, DC 20503; (202-395-7316). In addition, copies of such comments may be sent to Mrs. Anne C. Doyle, National Endowment for the Arts, Administrative Services Division, Room 203, 1100 Pennsylvania Avenue NW., Washington, DC 20506; (202-682-5401).

**FOR FURTHER INFORMATION CONTACT:** Mrs. Anne C. Doyle, National Endowment for the Arts, Administrative Services Division, Room 203, 1100

Pennsylvania Avenue NW., Washington, DC 20506; (202-682-5401) from whom copies of the documents are available.

**SUPPLEMENTARY INFORMATION:** The Endowment requests a review of a new collection of information. This entry is issued by the Endowment and contains the following information: (1) The title of the form; (2) how often the required information must be reported; (3) who will be required or asked to report; (4) what the form will be used for; (5) an estimate of the number of responses; (6) the average burden hours per response; (7) an estimate of the total number of hours needed to prepare the form. This entry is not subject to 44 U.S.C. 3504(h).

**Title:** Expansion Arts/Inter-Arts Organizational Development Pilot Application Guidelines.

**Frequency of Collection:** One-time.

**Respondents:** Non-profit institutions.

**Use:** Guideline instructions and applications elicit relevant information from non-profit organizations that apply for funding under specific program categories. This information is necessary for the accurate, fair, and thorough consideration of competing proposals in the peer review process.

**Estimated Number of Respondents:** 30.

**Average Burden Hours per Response:** 40.

**Total Estimated Burden:** 1,200.

Anne C. Doyle,

Administrative Services Division, National  
Endowment for the Arts.

[FR Doc. 89-12535 Filed 5-24-89; 8:45 am]

BILLING CODE 7537-01-M

**NUCLEAR REGULATORY COMMISSION****Advisory Committee on Nuclear Waste**

The Advisory Committee on Nuclear Waste (ACNW) will hold a meeting on June 13, 1989, Room P-110, 7920 Norfolk Avenue, Bethesda, MD. Notice of this meeting was published in the Federal Register on May 17, 1989 (54 FR 21295). The following topics will be discussed:

**Tuesday, June 13, 1989—8:30 a.m.—5:00 p.m. (Open)**

- NRC staff's draft of the Site Characterization Analysis (SCA).

- Committee Activities: Future meeting agenda, and organizational matters, as appropriate.

Procedures for the conduct of and participation in ACNW meetings were published in the Federal Register on June 6, 1988 (53 FR 20699). In accordance with these procedures, oral or written statements may be presented by

members of the public, recordings will be permitted only during those portions of the meeting when a transcript is being kept, and questions may be asked only by members of the Committee, its consultants, and Staff. The Office of the ACRS is providing Staff support for the ACNW. Persons desiring to make oral statements should notify the Executive Director of the Office of the ACRS as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements. Use of still, motion picture and television cameras during this meeting may be limited to selected portions of the meeting as determined by the ACNW Chairman. Information regarding the time to be set aside for this purpose may be obtained by a prepaid telephone call to the Executive Director of the Office of the ACRS, Mr. Raymond F. Fraley (telephone 801/492-4518), prior to the meeting. In view of the possibility that the schedule for ACNW meetings may be adjusted by the Chairman as necessary to facilitate the conduct of the meeting, persons planning to attend should check with the ACRS Executive Director if such rescheduling would result in major inconvenience.

Dated: May 18, 1989.

Samuel J. Chik,

Acting Advisory Committee Management  
Officer.

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**Advisory Committee on Reactor Safeguards; Meeting Agenda**

In accordance with the purposes of sections 29 and 182b. of the Atomic Energy Act (42 U.S.C. 2039, 2232b), the Advisory Committee on Reactor Safeguards will hold a meeting on June 8-10, 1989 in Room P-110, 7920 Norfolk Avenue, Bethesda, Md. Notice of this meeting was published in the Federal Register on May 17, 1989.

Thursday, June 8, 1989, Room P-110,  
7920 Norfolk Avenue, Bethesda, Md.

**8:30 a.m.—8:45 a.m.:** Comments by ACRS Chairman (Open). The ACRS Chairman will report on items of current interest.

**8:45 a.m.—11:00 a.m.:** NRC Performance Indicator Program (Open). Briefing by representatives of NRC staff regarding development and use of performance indicators to evaluate the operation of licensed nuclear power plants.

**11:15 a.m.—12:00 Noon:** Preparation of ACRS Reports (Open). Discuss ACRS