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ISSUED: APR. 1, 1982

MINUTES OF THE JOINT MEETING OF THE ACRS
METAL COMPONENTS AND WASTE MANAGEMENT SUBCOMMITTEES
FEBRUARY 12, 1982
WASHINGTON, D. C.

The combined ACRS Metal Components and Waste Management Subcommittees met on February 12, 1982, Room 1036, 1717 H Street NW, Washington, D. C.

The ACRS Members present were P. Shewmon, Chairman, Metal Components Subcommittee; D. Moeller, Chairman, Waste Management Subcommittee; Robert Axtmann; and Jeremiah Ray. The ACRS consultants present were T. Kassner, M. Steindler, D. Orth, and D. Ready. The principal NRC Staff present were F. Arsenault, J. Davis, K. Kim, and M. Knapp.

Attachment 1 is the agenda, Attachment 2 is the Federal Register Notice dated January 28, 1982, and Attachment 3 is the Attendee List. Meeting handouts are attached to the office copy of the Minutes. A portion of the meeting was held in closed session to discuss the recommended contractor's technical capabilities.

Mr. Shewmon convened the meeting at 8:30 a.m. He announced that the purpose of the meeting was to review the objectives of the request for proposal on long-term performance of materials used in high-level waste packaging, and the technical capabilities of the proposed contractor. He noted that the meeting was being conducted in accordance with the provisions of the Federal Advisory Committee Act and the Government in the Sunshine Act, and that Elpidio Igne was the designated Federal Employee and Herman Alderman is the staff engineer for the review. He noted that no requests for oral or written statements had been received from members of the public.

F. Arsenault-NRC

Mr. Arsenault related the chronologies of this project. He stated that about two years ago, the staff perceived that any evaluation of the long-term performance of their repository system would require an evaluation of the performance of the waste package. The technical staff developed a general description of such a project and its objectives, which was agreed upon by the Division of Waste Management and Nuclear Regulatory Research. the ACRS review of the research program in the summer of 1980, the project was identified and described.

The scope of work was provided to the Senior Contract Review Board for review and approval in about November 1980, and this was approved by the Senior Contract Review Board in January 1981.

The scope of work was revised and improved, and the project was submitted to the Commission in the summer of 1981. The Commission approved the project, with a request to the ACRS to review the contractor selection by the staff when that had been accomplished. Subsequently, the Commission requested the ACRS to review the capability of the contractor selected by the staff, and noted that the Commission would also be interested in the reviews of the ACRS regarding the scope of the contract.

In conclusion, Mr. Arsenault remarked that review of the capabilities of the contractor or review of the proposal would be best accomplished in light of the contents of the RFP.

There was a discussion regarding the criteria to define the materials and scoping of the project. Mr. Arsenault said that NRC is reviewing what DOE is doing and trying to make judicious evaluations of the materials that will be looked at closely within the project. He noted that the NRC's role consists of ensuring that the engineered system, its geologic emplacement, and the repository system as a whole meets EPA-developed standards.

An ACRS consultant raised a question regarding the uncertainties in the leach rate, as influenced by the range of possible temperatures and ground water environments.

Mr. Arsenault replied that the amount of money committed will not provide all the answers. Mr. Arsenault pointed out that flexibility in the contract will permit the emphasis to be redirected as the uncertainties become more apparent.

Mr. Kim - NRC

Mr. Kim noted that the RFP was announced on June 27, 1981. The proposal submission date was closed on August 10. The four-member source selection panel made a comparative range recommendation on September 25. A best and final negotiation was made on December 8 and 9. The best and final proposal was received just before Christmas. The best and final evaluation was made on January 5 and the final report was issued on January 28, 1982.

In response to a question from an ACRS Member regarding what kind of organizations responded to the RFP, Mr. Kim responded that his understanding was

that the RFP was directed primarily to non-DOE Laboratories. Mr. Arsenault amplified the response noting that there has to be a strong technical advantage before the NRC Staff could consider awarding the contract to a DOE Lab.

Mr. Kim mentioned the waste package as defined in 10 CFR Part 60 must contain the radionuclides for 1,000 years, and the waste package must contribute to careful control of releases of radionuclides from the package thereafter, and must promote the safe handling of the radioactive wastes during their transport, placement and retrieval. He noted the RFP addresses the first two criteria and will have some valuable information for the third issue.

An ACRS consultant raised the question regarding statistical testing to verify the 10^{-5} release rate. M. Kim responded that they expect an empirical basis from the contractor based on statistical methodology.

Mr. Kim noted the leading contenders for the waste form matrix are borosilicate glass, high silicate glass and SYNROC. Iron alloy, nickel and titanium are the leading contenders for container materials.

Mr. Kim described the work to be done as being divided into three tasks. Task I covers the development work to be done. Task II requires the contractor to perform development work on models. Task III requires the contractor to test the models combining different host matrix and canister materials.

One of the consultants suggested that, due to the difficulty in validating the methodology of the development work, peer review would be very valuable and progress reports should be submitted for review at least quarterly.

In response to a question, K. Kim stated that some of the primary parameters affecting material performance include pressure, temperature, radiation, solution chemistry, cycling and rate effects. In addition, the RES Staff stated that the containment accident scenarios will be defined as the program is developed.

A consultant suggested that a work plan be developed by the NRC Staff to adequately monitor the contractor's progress. The subcommittee concurred and recommended that a plan for accomplishing this task be in place before implementation of the contract.

K. Kim stated that the content of the RFP was purposely written to be flexible so that work under the contract could be revised without re-negotiation. This feature of the RFP was questioned by the subcommittee.

The subcommittee determined that sufficient information has been presented to bring this matter before the full committee for discussion. The subcommittee concluded that the contract review panel selection is adequate subject to the following conditions:

- 1) close monitoring of project,
- 2) frequent progress reports and
- 3) provision for periodic peer review of the contractors proposed program and results.

The meeting was adjourned at 12:10 p.m.

TENTATIVE AGENDA
MEETING OF THE ACRS METAL COMPONENTS/
WASTE MANAGEMENT SUBCOMMITTEE
FEBRUARY 12, 1982

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| I. Chairman's Opening Statement (open)
Shewmon/Moeller | 8:30 a.m. |
| II. NRC Staff Presentation (open except for item 3.) | |
| 1. Introduction - Arsenault/Davis | 8:45 a.m. |
| 2. Request for Proposal (RFP) background and
contents - K. Kim | 9:00 a.m. |
| **** Break **** | 10:00 - 10:15 a.m. |
| 3. Selected contractor's proposal contents and
and contractor's capability - K. Kim | 10:15 a.m. |
| III. Executive Session (closed) | 11:15 a.m. |
| 1. Discuss response to Palladino's letter | |
| IV. Adjournment | 12:00 Noon |

ATTACHMENT - 1

For the Nuclear Regulatory Commission,
William H. Regan, Jr.,
Siting Analysis Branch, Division of
Siting

FR Doc. 82-2228 Filed 1-27-82; 8:48 am
BILLING CODE 7590-01-88

Advisory Committee on Reactor Safeguards, Subcommittees on Metal Components and Waste Management; Meeting

The ACRS Subcommittees on Metal Components and Waste Management will hold a meeting on February 12, 1982, Room 1046, 1717 H Street, NW., Washington, DC. The Subcommittees will discuss the technical aspects of proposed research efforts to predict high-level radioactive waste container long term (1000 yr.) integrity by accelerated methods as well as the technical capability of various potential contractors.

In accordance with the procedures outlined in the Federal Register on September 30, 1981 (46 FR 47903), 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 Subcommittee, its consultants, and Staff. Persons desiring to make oral statements should notify the Designated Federal Employee as far

advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements.

The entire meeting will be open to public attendance except for those sessions during which the Subcommittee finds it necessary to discuss proprietary information and industrial security. One or more closed sessions may be necessary to discuss such information. (Sunshine Act Exemption 4.) To the extent practicable, these closed sessions will be held so as to minimize inconvenience to members of the public in attendance.

The agenda for subject meeting shall be as follows:

Friday, February 12, 1982—8:30 a.m. Until the Conclusion of Business

During the initial portion of the meeting, the Subcommittee, along with any of its consultants who may be present, may exchange preliminary views regarding the technical aspects of various proposals submitted to the NRC and the capabilities of the various organizations that submitted proposals.

The Subcommittee will then hear presentations by and hold discussions with representatives of the NRC Staff,

their consultants, and other interested persons regarding this review.

Further information regarding topics to be discussed, whether the meeting has been cancelled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted therefor can be obtained by a prepaid telephone call to the cognizant Designated Federal Employee, Mr. Elpidio Igne (telephone 202/834-1414) between 8:15 a.m. and 5:00 p.m., EST.

I have determined, in accordance with Subsection 10(d) of the Federal Advisory Committee Act, that it may be necessary to close some portions of this meeting to protect proprietary information and industrial security. The authority for such closure is Exemption (4) to the Sunshine Act, 5 U.S.C. 552b(c)(4).

Dated: January 27, 1982.
John C. Hoyle,
Advisory Committee Management Officer.
FR Doc. 82-2228 Filed 1-27-82; 8:48 am
BILLING CODE 7590-01-88

Advisory Committee on Reactor Safeguards, Nuclear Regulatory Commission; Meeting

In accordance with the purposes of Sections 29 and 182b. of the Atomic Energy Act (42 U.S.C. 2039, 2702 b.), the Advisory Committee on Reactor Safeguards will hold a meeting on February 4-6, 1982, in Room 1046, 1717 H Street, NW., Washington, DC. Notice of this meeting was published in the Federal Register on January 20, 1982.

The agenda for the subject meeting will be as follows:

Thursday, February 4, 1982

8:30 a.m.—8:45 a.m.: Opening Session (Open)—The Committee will hear and discuss the report of the ACRS Chairman regarding miscellaneous matters relating to ACRS activities.

8:45 a.m.—12:00 Noon: Quantitative Safety Goals for Nuclear Power Plants (Open/Closed)—The Committee will hear and discuss the report of its Subcommittee and consultants who may be present and a presentation by representatives of the NRC Staff regarding a proposed NRC policy statement on quantitative safety goals to be used in the regulation of nuclear power plants. Representatives of the nuclear industry will present comments regarding this subject as appropriate.

1:00 p.m.—4:00 p.m.: Severe Accident Rulemaking and Related Matters (Open/Closed)—The Committee will hear and discuss the report of its Subcommittee and consultants who may

be present and a report by members of the NRC staff regarding the proposed substitution of specific standard plant rulemaking proceedings for the NRC generic severe accident rulemaking. Representatives of the nuclear industry may present comments as appropriate.

4:00 p.m.—6:30 p.m.: NRC Safety Research Program (Open/Closed)—The ACRS members will discuss the proposed Committee report to the United States Congress regarding the proposed NRC safety research program budget for Fiscal Year 1983. Representatives of the NRC Staff will participate as appropriate.

Friday, February 5, 1982

8:30 a.m.—9:30 a.m.: NRC Regulatory Reform (Closed)—The ACRS will hear and discuss a report regarding activities of the NRC Regulatory Reform Task Force from the Chairman of the Task Force.

9:30 a.m.—10:30 a.m.: General Discussion (Open/Closed)—The members of the Committee will discuss interim comments of the members and/or areas needing clarification with regard to the following items scheduled for discussion with the NRC Commissioners:

- Quantitative safety goals for nuclear power plants.
- Proposed NRC policy regarding the severe accident rulemaking.
- NRC regulatory reform.

10:30 a.m.—12:00 Noon: ACRS Meeting with NRC Commissioners (Open/Closed)—The Committee will meet with the NRC Commissioners to discuss the topics noted above.

1:00 p.m.—2:15 p.m.: NRC Policy and Program Guide (Open)—The Committee will hear and discuss a presentation by NRC officials regarding the recent Policy and Program Guidance promulgated by the NRC Commissioners.

2:15 p.m.—2:30 p.m.: Future ACRS Activities (Open)—The Committee will discuss proposed and anticipated subcommittee and full Committee activity.

2:30 p.m.—5:30 p.m.: NRC Safety Research (Open/Closed)—The ACRS members will discuss the proposed Committee report to the United States Congress regarding the proposed NRC safety research program budget for Fiscal Year 1983. Representatives of the NRC Staff will participate as appropriate.

5:30 p.m.—8:15 p.m.: Reports of ACRS Subcommittees (Open)—The Committee will hear and discuss the reports of ACRS Subcommittee chairmen with respect to activities related to quality assurance deficiencies at the Zimmer

ATTACHMENT 2

MEETING DATE: FEBRUARY 12, 1982

SUBCOMMITTEE MEETING: WASTE MANAGEMENT AND METAL COMPONENTS

LOCATION: ROOM 1046, 1717 H St. NW, Washington, D.C.

ATTENDANCE LIST

PLEASE
PRINT

NAME	AFFILIATION
1. Sherman	
2. [unclear]	
3. Gntmann	
4. [unclear]	
5. (Kasson)	
6. Heindler	
7. Orth	
8. [unclear]	
9. Ann [unclear] - [unclear]	
10. [unclear] PFE	
11. [unclear] staff	
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MEETING DATE: FEBRUARY 12, 1982

SUBCOMMITTEE MEETING: WASTE MANAGEMENT AND METAL COMPONENTS

LOCATION: ROOM 1046, 1717 H St. NW, Washington, D.C.

ATTENDANCE LIST

PLEASE
PRINT

NAME	AFFILIATION
1. James P. Grogan	General Atomic Co.
2. Sanford Cohen	SC&A
3. Ro. Chappell	FCTC - NRC
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MEETING DATE: FEBRUARY 12, 1982

SUBCOMMITTEE MEETING: WASTE MANAGEMENT AND METAL COMPONENTS

LOCATION: ROOM 1046, 1717 H St. NW, Washington, D.C.

ATTENDANCE LIST

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PRINT

NAME	AFFILIATION
1. <i>[Handwritten Name]</i>	<i>[Handwritten Affiliation]</i>
2. <i>[Handwritten Name]</i>	<i>[Handwritten Affiliation]</i>
3. <i>MR K...</i>	NMSS
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SUBCOMMITTEE MEETING: WASTE MANAGEMENT AND METAL COMPONENTS

LOCATION: ROOM 1046, 1717 H St. NW, Washington, D.C.

ATTENDANCE LIST

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NAME	AFFILIATION
1. Don Schweltzer	BROOKHAVEN NAT. LAB.
2. M. S. Davis	Brookhaven Nat'l Lab
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SUBCOMMITTEE MEETING: WASTE MANAGEMENT AND METAL COMPONENTS

LOCATION: ROOM 1046, 1717 H St. NW, Washington, D.C.

ATTENDANCE LIST

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NAME	AFFILIATION
1. FRANK J ARSENAULT	NRC
2. Jared J. Davis	NRC
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