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MINUTES OF THE ACRS JOINT MEETING OF THE SUBCOMMITTEE ON REACTOR
RADIOLOGICAL EFFECTS AND SITE EVALUATION
December 11, 1980, Washington, D. C.

The ACRS Subcommittees on Reactor Radiological Effects and Site Evaluation held a meeting on December 11, 1980 in Room 1046, 1717 H St., N.W. Washington, D. C. The purpose of the meeting was to discuss the reactor radiological effects and site evaluation portions of the NRC safety research budget for FY 1982. The information obtained during the meeting was used in preparation of draft chapters of the ACRS report to Congress. The entire meeting was open to the public. Notice of this meeting was published in the Federal Register on Tuesday, November 25, 1980. A copy of this notice is included as Attachment A. A list of attendees for this meeting is included as Attachment B, the schedule for the meeting is included as Attachment C, and a list of all reference material is included as Attachment D. A complete set of handouts has been included in the ACRS files. There were no written or oral statements from the public. The Designated Federal Employee for this meeting was Mr. John C. McKinley.

NRC Staff Presentation on Meteorology and Hydrology

Dr. R. Abbey of the NRC Staff reviewed the NRC research program on meteorology.

The program consists of three major areas:

- (1) evaluation of real-time dispersion models including those associated with the Atmospheric Release Advisory Capability (ARAC),
- (2) a program of field dispersion concentration measurements proposed to be conducted at Indian Point to use in comparisons with dispersion models, and
- (3) measurements of atmospheric dispersion in coastal (shoreline) regions where the meteorology can be quite complex because of day to night variations.

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Dr. Abbey noted that the NRC's current dispersion model over-predicts concentrations by a factor of 4 to 100. He also noted that the ARAC system has not been independently evaluated and has no backup computer. Dr. Abbey indicated that he believed a much smaller and less sophisticated on-site system might be as good as the ARAC system. Regarding the need for independent evaluation of ARAC, he pointed out that Livermore (the developer of ARAC) claims ARAC was useful at TMI, while NOAA people indicated that there were several problems with ARAC at TMI. Currently a study is being done to independently evaluate ARAC for the NRC. This study is scheduled to be finished in February, 1981.

On the subject of wet deposition, Dr. Abbey noted that a large uncertainty exists and that research in this area is being contemplated. Also, the advice of a steering committee is used in all meteorological research programs to help ensure that proper research is being done. He also noted that he uses the services of an independent expert, who is not a proponent of any particular model, to avoid the pitfall of researching only "fashionable" models.

In response to a question about an NRC meeting on control room intake of airborne radioactive materials, Dr. Abbey indicated that no one from his group was invited to participate. This is an area where better coordination and cooperation between NRC offices is required.

NRC Staff Presentation on Airborne Effluents, Aquatic Effluents, Occupational Exposures and Health Effects, Socioeconomic Impacts, Siting Alternatives, Emergency Preparedness, and Occupational Protection Research

Mr. F. Swanberg of the NRC Staff reviewed the SAFER programs covering airborne and aquatic effluents, occupational exposure and health effects, social and

economic impacts, siting, and emergency preparedness. The programs consist of a large number of tasks; about two-thirds of these are related to radiological effects and siting. A number of the tasks dealing with health effects research were assumed by NRC from other agencies after Congress required that they be dropped by DOE and/or EPA. This is a contributing factor to the program having a somewhat disjointed appearance.

Mr. H. Parker, consultant, criticized one of the research tasks which deals with radiation exposure of rats. His criticism was that effects of combined internal and external radiation on rats cannot be reliably extrapolated to man because of a troublesome animal size factor. In response to the question of review of the work by a peer group, Mr. Swanberg said this project and all other NRC research projects related to the biological effects of radiation have been reviewed by the Interagency Committee on Biological Effects of Ionizing Radiation, the Interagency Radiation Research Committee (IRRC) under NIH. Dr. Moeller asked if there was a steering committee to review the program and research projects for this type of work (i.e., health effects, etc.). Mr. Swanberg responded that there was no such committee but that copies of the research program briefs are sent to the IRRC. The NRC representative to the Radiation Policy Council is fully cognizant of the NRC research in this area; he is the Director of the Office of Research, Mr. R. Minogue. In response to Dr. Moeller's question, regarding comments on NRC research issued by the RPC, Mr. Swanberg said no comments have been received from the Council.

Dr. Lawroski suggested that as a result of the AEC reorganization into the NRC and DOE, as well as the problems cited above, the research programs have become disjointed. Based on a previous recommendation by the ACRS, Dr. Lawroski asked if there were any research programs dealing with restoration of contaminated land. Mr. Swanberg indicated there were none in the decision unit being reviewed but that there was some work in that area in waste management research - particularly related to mill tailings stabilization, and that he was not aware of any standards being set by EPA or other agencies for restoring contaminated land.

NRC Staff Presentation on Research Related to Iodine Release and Transport Under Accident Conditions

Mr. R. Sherry of the NRC Staff gave a presentation on the current thinking on iodine behavior following an accident and the research programs being funded by NRC to address this subject area. He stated that the NRC Staff has been asked to prepare a paper for the Commissioners on the current status of thinking concerning iodine releases and other accident source terms. This paper is scheduled to be completed in March 1981. He indicated that if the WASH-1400 iodine release quantity were reduced to zero, the early fatalities would be reduced to half of the present WASH-1400 estimates. He noted that releases of other radionuclides assumed in WASH-1400 may also be high. Dr. Castleman, consultant, pointed out that the extremely high iodine release assumptions were shown to be in error some years ago, but the information was ignored at that time. Mr. Sherry stated that the overall NRC research on accident source terms will be reevaluated following completion of the March 1981 paper.

NRC Staff Presentation on Consequence Analysis Research

Mr. R. Blond of the NRC Staff described the consequence analysis research program. The program consists of three areas: site specific consequence modeling, improved health effects modeling, and liquid pathways modeling. Mr. Blond indicated that plant specific meteorological data are no longer considered relevant in site selection comparisons since the population density parameter is much more important. However, the meteorological data would be of use for emergency planning purposes. Mr. Blond also indicated that the health effects modeling will be based on BEIR-III. However, BEIR-III does not give guidance on health effects at doses below 10 rads.

Subcommittee Discussion

The remainder of the meeting was an open but unrecorded executive session to discuss the writing of the ACRS report to Congress on the FY 1982 NRC research budget. Dr. Moeller outlined the areas to be covered in the report and assigned sections of the report to the members of the Subcommittee. Also discussed was the writing of comments on:

- (1) the NRC Long Range Plan for research (NUREG-0740), and
- (2) the NRC letter commenting on NUREG-0699, "Comments on the NRC Safety Research Program Budget for Fiscal Year 1982."

The meeting was adjourned at 5:10 p.m.

For additional details, a complete transcript of the meeting is available in the NRC Public Document Room, 1717 H St., N.W., Washington, D.C. 20555 or from Alderson Reporters, 300 7th St., S.W., Washington, D.C. (202) 554-2345.

- D. *Proposed NRC Guidelines Regarding Utility Management Structure and Technical Support*—Discuss proposed NRC guidelines.
- E. *BWR Hydraulic Scram Systems*—Discuss proposed ACRS report regarding design and performance of these systems.
- F. *Indian Point Nuclear Power Station, Unit 2*—Discuss incident of Oct. 17, 1980 in which a large quantity of service water was released into the containment from piping system leaks.
- G. *Meeting with NRC Chairman and Commissioners*—Discuss items related to the NRC regulatory process and nuclear plant safety.
- H. *Reports of ACRS Subcommittees Regarding Various Safety Related Matters*—Waste management and disposal, improved engineered safety features, consideration of Class-9 Accidents in nuclear power plant design, and evaluation of nuclear power plant operating experience.
- I. The Committee will also consider and discuss:
 - (1) *The conceptual design for a Passive Containment System* proposed for licensing.
 - (2) *Clarification of its report of April 16, 1980 to NRC regarding Anticipated Transients Without Scram.*
 - (3) *The schedule for ACRS consideration of items at future meetings.*

January 8-10, 1981: Agenda to be announced.
 February 5-7, 1981: Agenda to be announced.
 Dated November 20, 1980.
 John C. Hoyle,
 Advisory Committee Management Officer.
 (FR Doc. 80-30741 Filed 11-24-80; 8:48 am)
 BILLING CODE 7890-01-01

Advisory Committee on Reactor Safeguards, Subcommittees on Reactor Radiological Effects and Site Evaluation; Meeting

The ACRS Subcommittees on Reactor Radiological Effects and Site Evaluation will meet at 8:30 a.m., December 11, 1980, in room 1046, 1717 H Street, NW, Washington, DC to discuss preparation of appropriate chapters of the ACRS Annual Report to Congress regarding the NRC Reactor Safety Research Program Budget.

In accordance with the procedures outlined in the Federal Register on October 7, 1980, (45 FR 66535), 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 in 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 specific NRC FY 1982 budget proposals. One or more closed sessions may be necessary to discuss such information. (Sunshine Act Exemption (9)(B)). 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:

Thursday, December 11, 1980

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, will exchange preliminary views regarding matters to be considered during the balance of the meeting.

The Subcommittee will then hear presentations by and hold discussions with representatives of the NRC Staff, their consultants, and other interested persons.

Further information about 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 Mr. Garry G. Young, ACRS Staff (telephone 202/634-1414) between 8:15 a.m. and 5:00 p.m., EST. The cognizant Designated Federal Employee for this meeting is Mr. John C. McKinley.

The ACRS is required by Section 5 of the 1978 NRC Authorization Act to review the NRC Reactor Safety Research Program and Budget and to report the results of the review to Congress. In order to perform this review, the ACRS must be able to engage in frank discussions with members of the NRC Staff and such discussions would not be possible if held in public sessions. I have determined, therefore, in accordance with Subsection 10(d) of the Federal Advisory Committee Act (Public Law 92-463), that, should such sessions be required, it is necessary to close portions of this meeting to prevent frustration of the above stated aspect of the ACRS' statutory responsibilities. The

authority for such closure is 5 U.S.C. 552b(c)(9)(B).

Dated: November 23, 1980.

John C. Hoyle,
 Advisory Committee Management Officer.
 (FR Doc. 80-30741 Filed 11-24-80; 8:48 am)
 BILLING CODE 7890-01-01

Draft Regulatory Guide; Issuance and Availability

The Nuclear Regulatory Commission has issued for public comment a draft of a new guide planned for its Regulatory Guide Series together with a draft of the associated value/impact statement. This series has been developed to describe and make available to the public methods acceptable to the NRC staff of implementing specific parts of the Commission's regulations and, in some cases, to delineate techniques used by the staff in evaluating specific problems or postulated accidents and to provide guidance to applicants concerning certain of the information needed by the staff in its review of applications for permits and licenses.

The draft guide, temporarily identified by its task number, TR 102-5 (which should be mentioned in all correspondence concerning this draft guide), is entitled "Safety Features of Gauges Containing Radioactive Material" and is intended for Division 8, "Products." It is being developed to provide terminology acceptable to the NRC staff for use by applicants and licensees in describing radiation safety features of gauges containing radioactive material possessed and used under portions of the Commission's regulations. The guide will endorse the terminology provided in ANSI N538-1979, "Classification of Industrial Ionizing Radiation Gauging Devices."

This draft guide and the associated value/impact statement are being issued to involve the public in the early stages of the development of a regulatory position in this area. They have not received complete staff review and do not represent an official NRC staff position.

Public comments are being solicited on both drafts, the guide (including any implementation schedule) and the draft value/impact statement. Comments on the draft value/impact statement should be accompanied by supporting data. Comments on both drafts should be sent to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch, by January 23, 1981.

Although a time limit is given for comments on these drafts, comments

MEETING DATE: THURSDAY, DECEMBER 11, 1980

COMMITTEE MEETING: REACTOR RADIOLOGICAL EFFECTS & SITE EVALUATION

LOCATION: 1717 H St. N.W., Room 1046, Washington, D.C.

ATTACHMENT B

ATTENDANCE LIST

PLEASE
PRINT

NAME	AFFILIATION
1. JAMES HAWKINS	SAFER/RES NRC
2. D.W. MOELLER	ACRS
3. S. LAWROSKI	ACRS
4. S. BEAL	"
5. T. MCKINLEY	"
6. G. YOUNG	"
7. K. FOSTER	CONSULTANT
8. A. CASTLEMAN	"
9. H. PARKER	"
10. E. FREY	NRC/RES
11. J. HARBOUR	NRC/RES
12. C. PRICHARD	NRC/RES
13. E. BACH	ACRS
14. F. SWANBERG	NRC/RES
15. J. FOULKE	NRC/RES
16. R. LAPP	LAPP, INC.
17. ALEX MARTIN	HHS- AHS- FDA- Bur Rad. Health
18. ROGER BLOND	DSRS - RES
19. RICK SHERRY	RES
20. MEL SILBERBERG	RES
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DECEMBER 11, 1980

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS MEETING
ON
JOINT REACTOR RADIOLOGICAL EFFECTS & SITE EVALUATION

1717 H St., N.W., Washington, D. C.

ATTENDEES PLEASE SIGN BELOW

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NAME	BADGE NO.	AFFILIATION
1. <i>R. F. Foster</i>	<i>F-0128</i>	<i>Consultant</i>
2. <i>Barbara Whitlock</i>	<i>E-0161</i>	<i>Alderson</i>
3. <i>H. Marker</i>	<i>E-0151</i>	<i>Consultant</i>
4. <i>A.W. Castleman</i>	<i>E-0162</i>	<i>Consultant</i>
5. <i>R.E. Lott</i>	<i>E 0152</i>	<i>Energy</i>
6. <i>D.L. Vioth</i>	<i>01346</i> <i>E-1040</i>	<i>DOE</i>
7. <i>D.E. Munson</i>	<i>0 2294</i>	<i>DOE</i>
8. <i>Alex Martin</i>	<i>E-0103</i>	<i>HHS-FDA-BRH</i>
9. <i>M. Brown</i>		<i>SPPT</i>
10. <i>P.M. Haas</i>	<i>E-0153</i>	<i>ORNL</i>
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POOR ORIGINAL

TENTATIVE SCHEDULE

ACRS JOINT SUBCOMMITTEE MEETING ON REACTOR RADIOLOGICAL EFFECTS AND
SITE EVALUATION

DECEMBER 11, 1980 WASHINGTON, D. C.

Thursday, December 11

8:30 a.m. Opening Statement by Subcommittee Chairman - D. Moeller

8:45 a.m. NRC Staff Presentation on Meteorology and Hydrology
Research - B. Abbey

9:15 a.m. NRC Staff Presentation on Airborne Effluents, Aquatic
Effluents, Occupational Exposures and Health Effects,
Socioeconomic Impacts, Siting Alternatives, Emergency
Preparedness, and Occupational Protection Research -
~~E. Arsenault~~, et.al. (SAFER)
F. SWANBERG

10:15 a.m. BREAK *****

10:30 a.m. NRC Staff Presentation (SAFER) Continued and Subcommittee
Discussion

12:00 p.m. NRC Staff Presentation on Research Related to Iodine Release
and Transport Under Accident Conditions - R. Sherry (RES)

12:30 p.m. LUNCH *****

1:30 p.m. NRC Staff Presentation on Consequence Analysis Research -
~~R. Benero~~, et.al. R. BLOND

2:00 p.m. Subcommittee Discussion

3:30 p.m. ADJOURN

ATTACHMENT C

ATTACHMENT D

Reference Documents for Dec. 11, 1980 ACRS Subcommittee Meeting:

1. NUREG-0699, "Comments on the NRC Safety Research Program Budget for Fiscal Year 1982", dated July 1980.
2. NUREG-0740, "Draft Long Range Research Plan", dated November 1980.
3. Young to Moeller Memo, "Status Report for the December 11, 12 & 13, 1980 ACRS Subcommittee Meetings on Reactor Radiological Effects and Site Evaluation," dated November 25, 1980.