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PROPOSED MEETING SUMMARY/MINUTES
FOR THE ACRS CLASS 9 ACCIDENTS SUBCOMMITTEE
AUGUST 1, 1985 - WASHINGTON, DC

Purpose

The ACRS Subcommittee on Class 9 Accidents met on August 1, 1985 at Washington, DC. The purpose of this meeting was to continue the discussion of the NRC Staff report, NUREG-0956, "Reassessment of the Technical Bases for Estimating Source Terms". This report is scheduled to be issued for comment on August 8, 1985 and ACRS comments are solicited. The Subcommittee heard presentations from RES Staff members. The meeting began at 8:30 a.m. and adjourned at 5:00 pm, and was held entirely in open session. The principal attendees were as follows:

Attendees:

ACRS

W. Kerr, Chairman
R. Axtmann, Member
C. Mark, Member
D. Moeller, Member
C. Siess, Member
P. Shewmon, Member
D. Ward, Member
M. Bender, Consultant
I. Catton, Consultant
M. Corradini, Consultant
P. Davis, Consultant
J. Lee, Consultant
R. Savio, Staff
D. Houston, Staff

RES

M. Silberberg
M. Ernst
G. Marino
C. Ryder
J. Murphy
R. Meyer
J. Mitchell

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Introduction

Opening comments by the Chairman and others requested that RES emphasize the following topics in their presentations:

1. How and for what purpose will the calculational techniques be used and how long will they be appropriate.
2. The basic differences between the methodology used in WASH-1400 and that used in NUREG-0956.
3. The confidence level associated with the new methodology in view of the stated uncertainties.

The Chairman requested that discussions on the need for further research in this area be deferred at this meeting and discussed later during the continuing review of all NRC research programs.

NUREG-0956

A number of RES members discussed various sections of the forthcoming report which were incomplete at the time of the previous Subcommittee meeting on May 2, 1985 or had been revised since then. Presentations were made in the following general areas: (1) Results for Selected Accident Sequences - Chapter 4; (2) Review of Source Term Work - Chapter 5; (3) Risk Perspective - Chapter 6 and Appendix D; and, (4) Conclusions and Recommendations - Chapter 8. RES concluded that the BMI-2104 suite of codes represented a major advance and should be applied to reevaluate regulatory practices.

The new procedures were recommended for the following applications:

1. Audit IDCOR studies being performed to identify outliers.

2. Assuring and revising regulatory practice based largely on WASH-1400, e.g., emergency planning regulations.
3. Evaluating revisions to criteria based on TID-14344.

Accident analysis results using these codes along with new containment performance concepts indicated a reduction in risk of about an order of magnitude when compared to previous WASH-1400 results. However, this general reduction was not indicated for all plants and the confidence level associated with the reduction was obscured by certain uncertainties. Subcommittee members and consultants expressed numerous concerns about the development, application and review of the codes as follows:

1. External events including seismic and fires are not addressed yet in some cases they represent major contributors to risks.
2. The uncertainty in containment performance can significantly alter the risk results. Along these same lines, the report seems inconsistent with the results by the Containment Load Working Group. The containment loadings they predicted were less severe.
3. Some major processes for accident progression are missing. EPRI studies concerning in-vessel buoyancy drive flows that result in recirculation within the vessel and predicted failures in small piping or steam generator tubes were identified.
4. Peer review for the codes should be performed by persons with the appropriate technical background, especially in the area of high temperature behavior.

5. The differences in the methodology between WASH-1400 and NUREG-0956 were not well identified and should be.
6. Quality assurance for the codes should be established, for example by having various groups perform and document calculations. Codes should be verified against the accident sequences experienced at TMI-2.
7. The schedule for application to regulatory processes may be too far in the future if NRR waits until the uncertainties are resolved. A decision should be made as to how good the codes should be in order that they be used for regulatory decisions.

Rebaselining

RES members presented the details and schedule for the Severe Accident Risk Rebaselining Program (SARRP). The risk perspectives and profiles of five reference plants (3-W, 2-GE), Surry, Peach Bottom 1, Sequoyah, Grand Gulf and Zion, will be analyzed using the source term and containment performance treatment given in NUREG-0956. The results from the plant studies will be documented in NUREG-1150, tentatively scheduled to be issued in draft form for public comment by midsummer 1986. The report will also address risk reduction potential, uncertainties and extrapolation insights. With the exception of Surry, these plants will also be studied by IDCOR, and risk results will be compared.

As with the NUREG-0956 studies, external initiators (seismic, fire, floods) will not be considered. The Committee expressed their previous concerns about external events as major contributors to risks. Committee members questioned the omission of any evaluation of the plant's operating staff on a plant specific basis. The study will only look at prescribed operator action as given in the plant's operating procedures. The Committee recommended that consideration be given to adding the

Oconee (B&W) plant to the program since no B&W plant is being evaluated and a PRA for the plant had been performed by EPRI.

NOTE: Additional meeting details can be obtained from a transcript of this meeting available in the NRC Public Document Room, 1717 H Street, N.W., Washington, D.C., or can be purchased from Ann Riley & Associates, Ltd., 1625 I Street, NW, Suite 921, Washington, DC 20006, (202) 293-3950.