

ACRS-1742

MINUTES OF THE ACRS B&W WATER REACTORS SUBCOMMITTEE  
MEETING, APRIL 29, 1980  
Washington, D.C.

The Subcommittee met on April 29, 1980 at 1717 H St., N.W. Washington, D.C. The main purpose of the meeting was to review NUREG-0667, "Transient Response of Babcock and Wilcox-Designed Reactors." Notice of the meeting was published in the Federal Register on April 14, 1980. Copies of the notice, meeting attendees list, and meeting schedule are included as Attachments 1, 2, and 3, respectively. One written statement and one request for time to make oral comments were received from a member of the public.

Executive Session

Mr. H. Etherington, Subcommittee Chairman, convened the meeting at 1:00 P.M. and introduced the ACRS members and consultants (Attachment 2) who were present. The meeting was conducted in accordance with the Federal Advisory Committee Act and the Government in the Sunshine Act. Mr. Peter Tam was the Designated Federal Employee.

Members and consultants offered no comments at this point and the meeting proceeded as scheduled.

Discussions With The NRC Staff

Update on Status of NUREG-0667 - (R. Tedesco)

Mr. Tedesco reported that the task force has met with B&W reactor owners on April 23 to discuss risk reduction potentials of the 22 recommendations. Section 7 of the report (on risk reduction potentials) has been written and copies of it were distributed during the meeting.

**CERTIFIED**

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The draft of NUREG-0667 (provided to the Subcommittee in its last meeting), together with the newly completed Section 7, will be published in final form with but editorial changes. Mr. Tedesco said that Mr. H. Denton of NRR would like an ACRS letter on the NUREG report but would not insist on one.

Mr. Zudans noted that the 22 recommendations did not include quench tank level indications. Mr. Tedesco said that the task force has considered such but decided that since there are other indications available, quench tank level indication may not be necessary.

The task force has concluded that plant performance criteria for anticipated transients should be established. The purpose is to assure an acceptable degree of uniformity in plant transient response for all LWRs. These criteria should be developed in a joint NRC industry effort, and should be used as design criteria for all LWR's. Mr. Taylor of B&W indicated that he, in the last Subcommittee meeting, has suggested six such criteria. These six criteria are:

1. pressurizer level remain on scale
2. no HPI actuation
3. no safety valve actuation
4. reactor coolant system boundary remain intact
5. steam generator level remain on scale
6. temperature decrease rate remain within technical specification

Mr. Ebersole indicated that the report did not mention the following:

- . primary coolant level indication
- . quench tank instrumentation
- . need for diversified and redundant instrumentation

Risk Reduction Potential of the 22 Recommendations - (F. Rowsome)

The Probabilistic Analysis Staff was asked to evaluate the effectiveness of the Task Force recommendations using perspectives derived from probabilistic safety analysis and risk assessment.

It was not possible to obtain a quantitative measure of risk reduction effectiveness for the recommendations. To do so would have required a thorough knowledge of the likelihood and consequences of the many competing accident scenarios in the plants before the alterations and a thorough knowledge of the implementation and effects of the recommendations. On the other hand, many qualitative insights that shed some light on the potential value of the recommendations can be developed against the background of past attempts at realistic analyses of the likelihood and consequences of nuclear accidents using probabilistic risk assessment methods. These include relationships between B&W plant characteristics and the likelihood of accidents, and judgments of the range of benefits and disadvantages of the recommendations. The observations about B&W safety issues and about the recommendations reported in Section 7 originated in the professional judgment of experienced nuclear risk assessment engineers. They are not based on probabilistic safety analyses performed for this specific purpose.

The conclusion of the PAS qualitative study is summarized in Table 7.3 of the report (included as Attachment 5 to these minutes.) Based on such results, the Staff has assigned priorities to the 22 recommendations for implementation:

Priority 1:

1. Upgrade the AFWS fluid system to safety grade.
2. Upgrade control of actuation of AFWS to safety grade.
3. Provide diversely-powered AFW pumps.
4. Modify steam and MFW line break detection.

6. Install safety grade panel of vital instruments.
12. I&C technicians be assigned to all shifts.
13. Require training of operators on Crystal River 3 incident.
14. Develop plant-specific procedures on loss of ICS/NNI.
19. Performance criteria for anticipated transients.
20. Criteria for reactor coolant pump trip in small LOCAs.

Priority 2:

5. Improve ICS/NNI.
7. Improve use and display of incore thermocouple indication.
8. Upgrade containment purge isolation to safety grade.
9. Systems modification to prevent pressurizer level loss and ECCS actuation.
10. Improve OTSG response.
11. Eliminate post-trip operator actions.
15. Increase simulator training.
16. Criteria for RCP restart.
17. Solution to PORV unreliability and safety system challenge rate.
18. Completion of IREP.
21. Reevaluate AFWS injection point.
22. Study operator errors in B&W plants.

Mr. Etherington asked why improvement of ICS/NNI is priority 2 in light of the fact that these have caused serious transients. Mr. Capra said that to improve the ICS/NNI requires much effort but the benefit is not large for serious accidents.

The Staff has not defined what "priority 1" and "priority 2" mean in terms of exact dates of implementation.

Discussion With Toledo Edison - (Mr. E. Novak)

Mr. Novak said that he spoke for an informal organization representing all B&W 177-plant owners. He said that the recommendations are too rigid, and that the Staff keeps setting up unattainable goals for the industry. The recommendations are in general prescriptive and too detailed.

Mr. Capra said that the Staff will meet with individual licensees before finalizing an implementation schedule. As to the accusation of being over prescriptive, Mr. Capra said that the Staff has pondered the problem. Recommendations that are general would be subject to ambiguity and too many questions. So in order to get the meaning across to the reader, the Staff has chosen to write the report in the present way.

(Whereupon, the formal and transcribed part of the meeting was adjourned at 4:00 P.M.)

Executive Session

The Subcommittee decided to invite the Staff to the full ACRS meeting on May 2 to make the same presentations.

The chairman has requested members and consultants to provide input to a draft letter on NUREG-0667. (Subsequent to the meeting, written comments were provided by Messers. Lawroski, Ray, Ebersole and Zudans.)

(Executive session adjourned at 5:15 P.M.)

A complete transcript of the meeting is on file at the NRC Public Document Room at 1717 H St., N.W., Washington, D.C. or can be obtained from the International Verbatim Reporters, Inc., Suite 107, 449 S. Capitol St. S.W., Washington, D.C. 20002, 202-484-3550.

Office, 615 Peachtree Street, N.E. 9th  
Floor, Atlanta, Ga. 30308.

Clinton Lyons,  
Director, Office of Field Services.

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BILLING CODE 8320-36-8

## NUCLEAR REGULATORY COMMISSION

### Advisory Committee on Reactor Safeguards, Subcommittee on Reactor Fuel, Meeting

The ACRS Subcommittee on Reactor Fuel will hold a meeting on April 29, 1980 in Room 1046, 1717 H St., NW., Washington, DC 20555 to discuss the NRC research program on reactor fuels for the ACRS annual reports to NRC and Congress. Notice of this meeting was published March 19, 1980.

In accordance with the procedures outlined in the Federal Register on October 1, 1979, (44 FR 56408), 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 agenda for subject meeting shall be as follows: *Tuesday, April 29, 1980—8:30 a.m. until the conclusion of business*

The Subcommittee may meet in Executive Session, with any of its consultants who may be present, to explore and exchange their preliminary opinions regarding matters which should be considered during the meeting.

At the conclusion of the Executive Session, the Subcommittee will hear presentations by and hold discussions with representatives of the NRC Staff, their consultants, and other interested persons.

In addition, it may be necessary for the Subcommittee to hold one or more closed sessions for the purpose of exploring matters involving proprietary information. I have determined, in accordance with Subsection 10(d) of the Federal Advisory Committee Act (Pub. L. 92-463), that, should such sessions be required, it is necessary to close these sessions to protect proprietary information. See 5 U.S.C. 552b(c)(4).

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. Paul A. E. Shnerl (telephone 202/634-3267) between 8:15 a.m. and 5:00 p.m., EST.

Dated: April 9, 1980.

John C. Hoyle,

Advisory Committee Management Officer.

(FR Doc. 80-11137 Filed 4-11-80 848 AM)  
BILLING CODE 7890-01-8

### Advisory Committee on Reactor Safeguards, Subcommittee on Babcock and Wilcox Water Reactors, Meeting

The ACRS Subcommittee on Babcock and Wilcox Water Reactors will hold a meeting on April 29, 1980 in Room 1167, 1717 H St., NW., Washington, DC 20555 to review NUREG-0667, "Transient Response of Babcock and Wilcox-Designed Reactors," published April 2, 1980.

In accordance with the procedures outlined in the Federal Register on October 1, 1979, (44 FR 56408), 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 agenda for subject meeting shall be as follows:

*Tuesday, April 29, 1980, 1:00 p.m. until the conclusion of business.*

The Subcommittee may meet in Executive Session, with any of its consultants who may be present, to explore and exchange their preliminary opinions regarding matters which should be considered during the meeting.

At the conclusion of the Executive Session, the Subcommittee will hear presentations by and hold discussions with representatives of the NRC Staff, Babcock and Wilcox, their consultants, and other interested persons.

In addition, it may be necessary for the Subcommittee to hold one or more closed sessions for the purpose of exploring matters involving proprietary information. I have determined, 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

these sessions to protect proprietary information. See 5 U.S.C. 552b(c)(4).

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. Peter Tam (telephone 202/634-1413) between 8:15 a.m. and 5:00 p.m., EST.

Dated: April 9, 1980.

John C. Hoyle,

Advisory Committee Management Officer.

(FR Doc. 80-11137 Filed 4-11-80 848 AM)  
BILLING CODE 7890-01-8

[Docket No. 50-155]

### Consumers Power Co.; Issuance of Amendment to Facility Operating License

The U.S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 32 to Facility Operating License No. DPR-6, issued to Consumers Power Company (the licensee), which revised the Technical Specifications for operation of the Big Rock Point Nuclear Power Plant (the facility) located in Charlevoix County, Michigan. The amendment is to become effective within 90 days of its date of issuance.

The amendment authorizes a change in the requirements for the fire brigade to increase the minimum size shift fire brigade from 3 to 5.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR § 51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated February 1, 1980, (2) Amendment No. 32 to License No. DPR-6, and (3) the Commission's related

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ACRS B&W WATER REACTORS SUBCOMMITTEE  
MEETING, APRIL 29, 1980, Washington, D.C.

ATTENDEES:

ACRS

H. Etherington, Chairman  
J. Ray  
J. Ebersole  
S. Lawroski  
Z. Zudans, ACRS Consultant  
P. Tam, Designated Federal Employee  
E. Abbott, ACRS Fellow

BABCOCK & WILCOX

J. Taylor

TOLEDO EDISON COMPANY

E. Novak

NRC STAFF

V. Panciera  
R. Capra  
R. Tedesco  
F. Rowsome  
D. Thatcher

SHAW, PITTMAN, POTTS & TROWBRIDGE

E. Solomon  
N. Knowles

McGRAW-HILL

J. Dann

TOKYO ELECTRIC POWER COMPANY

H. Hamada

ACRS B&W WATER REACTORS SUBCOMMITTEE MEETING  
APRIL 29, 1980

Attachment 3

SCHEDULE (revised 4-26-80)

PURPOSE OF MEETING: To review NUREG-0667, "Transient Response of Babcock and Wilcox-Designed Reactors."

EXECUTIVE SESSION:

1:00 p.m. - 1:15 p.m.

- Chairman's Opening Statement (H. Etherington)
- Schedule Changes, if any
- Comments by Members and Consultants

DISCUSSION WITH THE NRC STAFF:

1:15 p.m. - 2:00 p.m.

- Update on Status of NUREG-0667 (R. Tedesco)  
\*(15 minutes)

\*\*\*\*\* BREAK \*\*\*\*\*

2:15 p.m. - 4:00 p.m.

- Section 7, "Risk Reduction Potential" (F. Rowsome)  
\*(60 minutes)

\*\*\*\*\* BREAK \*\*\*\*\*

COMMENTS BY B&W, TOLEDO EDISON, AND B&W OWNERS' GROUP:

4:15 p.m. - 4:45 p.m.

EXECUTIVE SESSION:

4:45 p.m. - 5:15 p.m.

- Subcommittee's Comments
- Items to be Presented to Full ACRS on May 2, 1980
- Future Meeting Date?

\* Time within parentheses are suggested by speakers as needed for uninterrupted presentations.



LIST OF DOCUMENTS RECEIVED BEFORE AND DURING THE MEETING

(Since these were all freely available except No. 3, they are thus not included with these minutes but a copy of each has been filed in the ACRS office.)

1. F. Rowsome, viewgraphs for his presentation.
2. Section 7 of NUREG-0667, "Transient Response of Babcock and Wilcox-Designed Reactors", April 29 version.
3. Memo, P. Tam to Subcommittee, "Status Report."