

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D. C. 20545

Docket File

memo
June 3, 1970

Roger S. Boyd, Assistant Director for Boiling Water Reactors, DRL
THRU: Robert L. Tedesco, Chief, BWR-2, DRL

DAVIS-BESSE SITE VISIT AND ACRS SUBCOMMITTEE MEETING, DOCKET NO. 50-346

On May 26, 1970 a visit to the Davis-Besse site was made by members of the DRL staff and ACRS Subcommittee. Following the visit the ACRS Subcommittee members met with the applicant (Toledo Edison Company) to discuss the status of site-related matters. A list of attendees is enclosed.

I. Site Visit

Initial excavation of the soil down to the bedrock surface is nearly completed. A grout curtain was made by grouting holes drilled to a depth of 25 feet into the bedrock on 10-foot centers completely around the site. The grout curtain was required to keep the excavation dry during construction and minimize ground water flow.

On May 25, 1970 Mr. H. Waldron (USGS) and Mr. J. Cardone inspected the cores of borings made during initial site bedrock explorations. They also discussed the applicant's proposed program for exploration and remedial treatment of solution cavities and fissures. The bedrock exposed for the site visit appeared to be competent and indicated no significant vertical fissures or solution cavity activity.

II. ACRS Subcommittee Meeting with Applicant

The following matters were discussed:

A. Geology-Foundation

We indicated to the Subcommittee that the applicant's program for exploration and remedial treatment of fissures and solution cavities did not provide sufficient details to make a finding regarding the adequacy of the bedrock foundation.

The applicant's consultant, Woodward & Clyde Associates, indicated that it would review the proposed program and include more detail regarding criteria, exploration, and

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remedial treatment which would be performed covering all possible conditions which might develop as the excavation of the bedrock progresses.

The applicant will document these additional details for our review.

B. Flood Protection

We indicated to the Subcommittee that the method used by the applicant to arrive at the maximum probable Lake Erie water level was not acceptable. We indicated that the applicant had agreed to perform additional analysis, recommended by D. Nunn, to establish the maximum probable lake water level.

The applicant indicated to the Subcommittee it was having the additional hydrology analysis performed by its consultant, Dr. Ayers, of the University of Michigan. Completion of this analysis may require several weeks. The applicant indicated to the Subcommittee the flood protection provided for the Davis-Besse facility would change to meet the requirement resulting from this analysis unless the level is unrealistic. The present flood protection of the facility provides a 3.5-foot margin above the extreme high lake water level originally determined by the applicant.

This matter may become a problem if the new method of analyzing the lake surge and wave runup exceed 9.6 feet.

C. Meteorology

We informed the Subcommittee that the applicant has agreed to install a second charcoal filter in series with the emergency ventilation filter system. This additional iodine filter capability will reduce the thyroid doses to maximum of about 200 Rem even using the staff's ground release model, 1 meter per second wind speed and Pasquill F conditions.

Although releases would be at the 240-foot elevation, we assumed a release elevation of 20 feet with Type F and 1 m/sec meteorology. Under these conditions we assure ourselves of a very conservative release model. This model in combination with requiring the applicant to include further design changes gives us a great deal of assurance that the calculated doses are low.

The applicant verified the addition of the second filter. Documentation will be in Amendment No. 6.

D. Seismic

The staff indicated to the Subcommittee the present concern of DRS and its consultant, John A. Blume & Associates, regarding the safety margin provided by the applicant's proposed seismic design spectra and time-history accelerogram. We indicated DRS and its consultant had informed the applicant at a meeting in Bethesda on May 19, 1970 that the use of a seismic spectra developed from the 1935 Helena, Montana earthquake high upper average data and a time-history accelerogram proposed by Dr. Idriss, the applicant's consultant, would be acceptable for use in design of Class I structures and components.

The applicant indicated to the Subcommittee it would use the Helena, Montana earthquake upper average data recommended by the staff for Class I structures and components. This will be documented in Amendment No.6.

E. Restricted Areas

The Subcommittee reviewed the type of activities being carried out in the restricted areas adjacent to the plant site. The indicated activity previously carried out by TRW in testing of 25 mm and 35 mm weapons had been discontinued and TRW was no longer doing any weapon testing. The area used by TRW has been taken over by Cadillac Gage, a subsidiary of Excello Corp., which will be testing mobile units with mortar type weaponry. The applicant indicated the range of these mortars is 2500 to 3000 meters which places the Davis-Besse plant out of range. TEC also indicated the testing of these mortar weapons should be completed in the next several months.

The applicant was requested to update the PSAR with the new information regarding the restricted areas.

Schedule

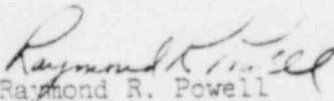
Following the Subcommittee meeting with the applicant, Dr. Seiss indicated to the staff that to meet the July 9 and 10 ACRS meeting, he will require all consultants' reports and the staff's ACRS report to be in the hands of the Subcommittee members no later than June 22, 1970.

Roger S. Boyd

- 4 -

June 3, 1970

The applicant has indicated Amendment 6 will be submitted by mid-June. This late submission of Amendment 6 will probably result in a postponement of the Davis-Besse ACRS meeting to August 1970. The applicant has indicated it will make every effort to get Amendment 6 in as early as possible.


Raymond R. Powell
Boiling Water Reactor Branch 2
Division of Reactor Licensing

Enclosure:
List of Attendees

Distribution:

Docket File ✓
DRL Reading
BWR-2 File
P. A. Morris
F. Schroeder
T. R. Wilson
S. Levine
R. DeYoung
D. Skovholt
P. Howe
E. G. Case, DRS
R. Maccary
Compliance (2)
Branch Chiefs, DRL, DRS
R. Powell
H. Steele
W. Haddican
A. Cardone
D. Nunn
C. Moon
J. Stolz

LIST OF ATTENDEES
DAVIS-BESSE SITE VISIT
MAY 26, 1970

AEC-DRL

R. Boyd
R. Tedesco
R. Powell
W. Haddican
A. Cardone
D. Nunn
C. W. Moon
J. Stolz

Bechtel

C. S. Hodges
H. E. Lefevre

Univ. of Michigan

J. C. Ayers

CO

L. Beratan

Woodward-Clyde Assoc.

R. A. Millet
D. Moorhouse

ACRS

C. Siess
H. Etherington
W. Stratton
J. Hard

USGS

H. Waldron

Toledo Edison Co.

L. Roe
G. J. Sampson
R. V. Bins
Y. Lacroix

W. C. Nodean

F. R. Miller

N. L. Wadsworth

J. E. Seward

Babcock & Wilcox

W. S. Little
R. C. Luken
J. McFarland