

UNITED STATES GOVERNMENT

Memorandum

245

TO : Files
 THRU : Clifford K. Beck, Chief *ckb*
 Hazards Evaluation Branch
 FROM : Wayne J. Costley *WJC*
 Hazards Evaluation Branch

DATE: February 25, 1960

SUBJECT: PHILADELPHIA ELECTRIC GAS COOLED REACTOR ACRS SUBCOMMITTEE MEETING

Those present:

R. L. Doan, ACRS Subcommittee Chairman	E. Simpson, AEC, DRD
D. Rogers, ACRS	J. Newell, AEC, DL&R
F. Gifford, ACRS	M. B. Biles, AEC, DL&R
R. Fraley, ACRS, Technical Assistant	W. J. Costley, AEC, DL&R
J. Lieberman, AEC, DRD	

W. Dickenson, Bechtel	V. P. McDevitt, P.E.
G. H. Bosworth, Bechtel	L. R. Gaty, P.E.
P. P. Schmitz, Bechtel	E. J. Bradley, P.E.
R. B. Duffield, GD	J. C. Geyer, J.H.
D. Rose, GD	C. S. Benton, J.H.
B. Smythe, G.A.	L. S. Zartman, HTRA
H. B. Stuart, G. A.	F. E. Drake, HTRDA
J. L. Allen, P.E.	D. H. Groelsema, AEC
J. L. Buerett, P.E.	W. Larson, AEC

In a preliminary conference with the ACRS Subcommittee the issues to be discussed with the applicant were outlined as indicated below:

1. The Staff indicated that in their opinion the contamination of the Conowingo Pond was the major issue to be discussed. The Staff felt that a very thorough and competent job had been done, by the applicant, in presenting the characteristics of the site and developing an analytical approach for evaluating the degree of contamination of the Pond and surrounding countryside under both normal operating and accident conditions. However, the degree of contamination under these conditions, in terms of isotopic concentration in the Pond, was not analyzed. It was pointed out that the applicant had been advised of our desire to receive this data, and that they were prepared to discuss this during the Subcommittee meeting.
2. Dr. Doan suggested that the applicant discuss the reasons why this site was chosen and if there was a possibility of moving the reactor to an alternate site further removed from the Pond shoreline.

A-6

February 25, 1960

In the subsequent meeting with the applicant the following points were discussed:

1. The Philadelphia Electric representatives explained that this site was chosen for it afforded maximum exclusion as compared to any other site on their network and had certain attractive economic features associated with the availability of cooling water.
2. The applicant first presented a brief summary of the site and the reactor and specifically brought the status of the Philadelphia reactor up to date by noting recent changes that involve the installation of two-parallel heat exchangers instead of one, and the deemphasis of investigations on the internal metal clad fuel element. Included in this discussion was a description of the fission product trapping system and the features of the containment building which emphasized the containment of the fuel storage pit.

With respect to the question of Pond contamination the applicant enumerated the potential sources of contamination and gave best estimates of the concentration of the various isotopes at the point of the Baltimore water intake. According to these estimates it appears that even under pessimistic meteorological conditions following the maximum credible accident, isotopic concentrations at the Baltimore intake would be below the mpc.

It was understood at the time of the meeting that the applicant would document these concentrations and forward them to the HEB around March 1 for consideration by the ACRS at their March meeting.

Dr. Biles questioned the applicant about the peak pressure in the containment following an accident and questioned whether their analysis based on the release of He alone resulted in the highest pressure. They indicated that they are investigating this and would present their data at the time a construction permit is requested. Their preliminary calculations have shown that the release of the above represents the worst case.

Dr. Lieberman asked that they prepare an analysis of the possible liquid contaminants and isotopic concentrations in the Pond following such liquid effluent releases.

At the conclusion of the meeting it was agreed that the applicant would prepare the additional information that was discussed at this meeting for the consideration of the Staff and the ACRS.