

February 16, 1983

Mr. Sean Hawley
Pacific Northwest
(Battelle) Laboratory
P.O. Box 999
Richland, WA 99352

Re: Testimony for UCLA Proceeding

Dear Mr. Hawley:

I am enclosing several documents for background information to assist your understanding of the issues raised concerning NUREG/CR-2079 (Analysis of Credible Accidents for Argonaut Reactors). The Licensing Board has decided that the following questions, raised primarily by Dr. Kaku and B. Norton, but also by Dupont and Warf, should be answered regarding the "Battelle Report:"

1. The validity of using data from Spert and Borax tests given the differences in design between the test reactors and Argonaut UTRs.
2. The assertion by Norton that a destructive power excursion occurred at Spert at \$3.54 excess reactivity.
3. The assertions that the "Battelle Report" calculations are inaccurate for:
 - a. Wigner energy stored in graphite
 - b. Graphite combustibility
 - c. Fuel melt in Spert & Borax
 - d. Increase in reactivity from partial loss of coolant
 - e. Excursion period
 - f. Amount of possible energy release during excursion period (supercriticality)
 - g. Metal-water reactions
 - h. Extrapolation of Spert reactivity coefficient
 - i. Fission product release calculations for fuel handling accident (2.7%).

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Essentially, what is necessary is justification of the conclusions reached in the Battelle Report by explanation, and/or references, at an elementary level.

I am also sending you copies of the analyses done by Brookhaven and Los Alamos in 1981.

Thanks for your assistance.

Sincerely,

Colleen P. Woodhead
Counsel for NRC Staff

Enclosures: As stated

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