

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)

PUBLIC SERVICE ELECTRIC AND GAS)
COMPANY)

and)

ATLANTIC CITY ELECTRIC COMPANY)

(Hope Creek Generating Station,)
Units 1 and 2))

Docket Nos. 50-354
50-355

SEPARATE VIEWS OF COMMISSIONER BRADFORD

The Commission should have reviewed the Appeal Board's refusal to order a cost-benefit analysis of protecting the Hope Creek generating station against an accidental LNG fire.

In this case, the Appeal Board analyzed the probability of an accidental LNG fire. It determined that if such a fire were calculated to occur more often than 1 in 1 billion per year on a realistic basis or more than 1 in one million per year on a conservative basis, the plant would have to be designed to withstand the LNG fire, regardless of the costs to the applicant. If, however, the fire were calculated to occur less often than these threshold values, no design consideration need be given to the fire. Additionally, so long as the fire were calculated to occur less often than the threshold values, the Appeal Board found that no

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analysis need be made of the costs and benefits of protecting the plant against the fire. In this case, the probability of an LNG fire affecting the plant was calculated by the Appeal Board on a conservative basis to be 3 in 10,000,000, thereby exceeding the conservative threshold, but not the realistic threshold.

I agree that if an LNG fire were calculated to occur more often than the guideline values set by the Appeal Board, the plant should be designed to withstand the fire regardless of cost. However, it is possible that the fact that the fire is calculated to occur less often than the threshold values should not by itself prevent the NRC as a matter of discretion from performing a cost-benefit analysis of design protection. Here, the calculated probability is between the realistic and conservative thresholds. It is based upon projections of traffic for the next few years at best and certainly not for the life of the plant. The Appeal Board admits that there is no adequate body of experience on which to calculate an ignition rate. In addition, the probability calculation is based upon assumptions about rammable objects, the effectiveness of LNG safety measures, and the effect of grounding a tanker upon the river bottom. Finally, the Appeal Board fully realized that these probabilities were subject to change such that a sudden increase in river traffic could by itself force a design change in the plant without which the plant could not operate.

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Of course, we must make a decision on the basis of data before us. We should not, however, lose sight of the underlying uncertainties regarding the methodology, the data itself, and future events over which we have little control. It is possible that such an analysis would show that cost of protection would be relatively low. Under these circumstances, the Commission should consider whether a cost-benefit analysis would be prudent.

Dated at Washington, D.C.

this 5th day of October, 1979

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