

Dr. MACKENZIE: It would have to be in the case where you did not know much about anything.

Mr. BEST: Secondly, you mentioned failure of a tube, and that such a failure could not cause harm to the staff, to personnel.

This may be so, but again the economics of this situation may be very large, and surely may be larger than in a conventional boiler because you might be able to move in and clear up the damage in a conventional boiler. Surely here you might have a time period. I understand this time period is going on at Idaho Falls in the United States now. I believe they have as yet not moved into the seat of this accident; and if one adds up, over a six or a twelve months' period, the loss in time, the loss in revenue, and so forth, surely this could mean a factor in itself which would be larger in the case of an atomic reactor boiler than with a conventional boiler. While the man's life and health may be protected, perhaps we have here an additional impetus to guard as well the economic factors which may play a larger part in this type of boiler than in the conventional one.

Dr. MACKENZIE: I think that is a very good point. That, of course, is where they start, that is the people who are trying to make power plants economic. The engineers who are doing this type of thing are not necessarily our safety people. They are particularly interested in making an economic unit, and you will find that Ontario hydro people are very aware of this. They have probably put as much or more attention on this study as we who are only guarding the safety. If I were an engineer designing it, I would accept your view as an extremely important one. However, our board would have nothing to do with that. We are only charged with the safety. Actually, in some circumstances there is only conflict because for nuclear reasons as well as for economic reasons some of the staff may want to get thinner sections, and our safety people would say "Well, it is probably all right, but we have to be satisfied it is safe."

Mr. BEST: You hit on the crux of the problem. This is what concerns us really—the economics of this matter. If this factor had to be larger, perhaps the whole type of the reactor would be pushed over the edge economically in favour of some other type of reactor. This is really a very critical point, this sort of factor, the economics of this type of reactor.

Dr. MACKENZIE: I would agree. You have the same thing with aircraft. There is no doubt that you have hit on what is a very important factor. That interests me very much, although I am not a specialist in it. You have always got this conflict when you are in new fields. You have this conflict in aircraft when you have to reduce the factor of safety and get the weight down in order to make it economical. I think that this is what we are doing in experimental plants now. We are in the middle of great technological developments, as you all know so well. We, in Canada, have played a major part in this. Our standing abroad is extremely high. That is why I do not feel like referring anything to other countries. Our type of plant is acknowledged to be of increasing interest. At one time I did not think it was promising; now it is most promising. You have to get the cost down.

Mr. BEST: I do not suppose you have a copy of that speech of yours? I think it was called "scientific explosion".

Dr. MACKENZIE: I could get you a copy.

The CHAIRMAN: I think copies were distributed.

Mr. BEST: I think it could perhaps be attached as an appendix to the minutes.

The CHAIRMAN: At the time it was considered to be more on research than on atomic energy.