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December 15, 1961

Chairman Glenn T. Seaborg Commissioner John S. Graham Commissioner Loren K. Olson Commissioner Leland J. Haworth

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Report on Japanese Reactions To Paper On U.S.A.E.C. Policies Relative To Foreign Reactors

By Commissioner Robert E. Wilson

The Japanese reaction to my paper before the Joint Atomic Industrial Forum on AEC policy relative to foreign reactors was somewhat diverse and, at first sight, rather puzzling. Of course, the language barrier is greater than sometimes appreciated, and part of this reaction may have been due to a failure to completely understand one another.

The initial reactions of all who spoke to me after the presenta-180n of the paper, both the industrial representatives and members of the Japanese Atomic Energy Commission, were quite favorable. They indicated that we had given them every assurance that we could regarding the price, the terms, and the adequacy of the supply of enriched uranium for foreign reactors. Incidentally, the EURATOM representative present was also quite enthusiastic about the statement, indicating that it completely fulfilled their desires for assurance on these subjects. The same was true of the Australian representative.

The next day, however, reports in both the English language papers and in the Japanese language papers, of why h I later saw the translations, were to the general effect that while the paper was welcome Al-U in that it gave the desired assurance as to the adequacy of supply and the price of enriched uranium, my statement had been quite disappointing

because it did not include any assurance of plutonium buy-back, and it indicated that we would not be willing to lease the fuel for foreign reactors as we had agreed to do for not more than three reactors under the EURATOM arrangement.

The same articles referring to other papers at this meeting, also expressed disappointment in the lack of assurance of generous financing terms from the Export-Import Bank. There was also comment in one or two newspapers that Dr. Beck's paper on reactor siting did not indicate that there would be any substantial change in our revised criteria on this subject, though they would probably include a definite statement that these siting criteria had been set solely from the point of view of American conditions, and that it was recognized that, under other conditions, additional safety measures might well be used to offset smaller exclusion and low population zones.

These newspapers further indicated that the disappointment in the American presentations was so great as to seriously reduce the probability of Japan's proceeding with the construction of an American-type plar reactor at an early date.

During the remainder of the week I asked a number of representatives of the Japanese Atomic Energy Commission whether the reaction of these newspapers represented the official position of the Commission, and was assured that it did not, but that it simply represented the generally critical attitude of the newspapers toward things American. However, during the same period I was approached by different individuals, fairly well down in the Commission organization, who, in the guise of asking clarification of one point or another of my statement, undertook to spell out the problems that the Japanese had with the various points



of policy. My over-all conclusion was, therefore, that the comments of the newspapers represented the essential ideas of at least a substantial number of people in the Commission organization. Specifically, some of the points which they made were as follows:

1. On the Export-Import Bank Loan Policy

The Japanese had tried very hard to get our Export-Import Bank to send over a representative to discuss this matter at this conference, and were disappointed that all they got was a written statement of policy to the effect that nuclear plants would be regarded in the same category as conventional power plants, and would receive the same kind of sympathetic consideration that the Bank had given to these other power plants (on which they loan a rersonable portion, but by no means all, of the costs), subject to necessary over-all limitations as to the amount that could be advanced to any one country. The representative of the Japanese AEC who discussed this matter with me indicated that they had expected that, in view of the interest of the AEC and American suppliers in getting one of their power reactors installed in Japan, the Export-Import Bank would grant an American nuclear reactor <u>much more favorable</u> terms than they were prepared to grant to power plants in general.

2. Cn Lease, Rather Than Sale, of Fuel

They stated that they were very much puzzled that we would make available to three European reactors (under EURATON) a lease arrangement on enriched uranium, and yet were not willing to make similar arrangements for Japan, which they implied represented discrimination against them. I explained that the EURATOM arrangement had been made some time ago, when we were particularly interested in getting some Ame ican-type reactors installed abroad, and when the leasing of fuel was the only



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arrangement which we contemplated for domestic reactors. I pointed out that conditions at present were considerably changed because we were definitely hoping to go to private ownership instead of leasing even in this country, after a reasonable transition period, and we felt that special incentives to get some American-type power reactors installed abroad were no longer necessary. I stated that we were not permitted by law to grant leasing arrangements for other foreign reactors and that I thought in the future we would have a uniform policy of requiring all foreign operators to buy their fuel supply.

<u>Cn the Failure To Set Firm Buy-back Prices</u> for Plutonium from Foreign Reactors

On this matter some representatives insisted they were very much disappointed, although I pointed out that several delegations from Japan had been told during the past year that we had no authority under law to guarantee buy-back prices for plutonium. They acknowledged this fact. but indicated that they had been hoping very much that we would find some way around this, especially in view of the special EURATOM arrangements. They said that, while our indication of promising research results on the fuel value of plutonium was quite encouraging, our failure to guarantee a buy-back, even for a few years, rather cast doubt on our degree of assurance as to its real value. They pointed out that they could not possibly use the plutonium in any type of reactor in less than seven or eight years, and that failure to buy back would add quite appreciably to their cost of power. I simply reiterated that we had no authority under law to give them any assurances of buy-back, and that what both they and we should do was to continue our research on increasing the value of plutonium for fuel use, which we all recognize is necessary for really economic power.



4. On the Reactor Siting Problem

They said that the real trouble with our reactor siting statement was that, if we made final the proposed criteria for American conditions, no amount of qualification in the statement would satisfy certain critics in the Diet and the newspapers who would maintain that Americans knew much more about the hazards of nuclear reactors than Japan did, and that if we insisted on such criteria, they should blindly follow them rather than take a chance. Incidentally, I was rather annoyed by the fact that almost everyone who discussed this subject said that Japan, as the only nation which had suffered from the atomic bomb, was very sensitive about radiological hazards and fallout. I (with some difficulty) restrained myself from remarking that, as the only nation which had suffered from a sneak attack, we were very sensitive about Japan's protestations of friendship:

As the upshot of all these discussions, and further discussion with the U.S. Ambassador and some of his staff, I reached the conclusion that the Japanese had been getting cold feet about the early building of another nuclear reactor, especially in view of their bad experience to date with the cost of the British reactor, and that they were trying to prepare an alibi or blame on us the fact that they might not go ahead for another year or two with such a reactor, though they had previously said that they expected to make up their minds on this soon after the first of the year.

Cn the other hand, I recognize that it is quite possible that their primary purpose is to put maximum pressure on us to get all the concessions they can before indicating that they are going ahead.



As to such further concessions, I would not be inclined to ask the Export-Import Bank to change their pulicy or to ask that the published statement regarding reactor siting be modified, except to the extent already indicated by Dr. Beck. I also think it would be very unsound for us to go to a policy of leasing enriched fuel for foreign reactors in the present uncertain state of the world.

I would, however, favor at least discussing with the Joint Committee the possibility of changing the law to permit our publishing a buy-back price for foreign plutonium for, say, a period of five years ahead. I do not think that this would represent our taking any substantial chances; first, because there will be very little foreign plutonium projuced within five years; and second, because I think we have reasonably good assurance that the fuel value we would set is less than the actual value of plutonium, as will be demonstrated over the next few years. Instead of a definite buy-back arrangement, we might well offer to have the plutonium accepted for credit against future purchases of enriched uranium, just as we now do for the partially depleted uranium in the returned fuel, as that they could not convert this into the equivalent of cach except by buying more enriched fuel from us.

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These newspapers further indicated that the disappointment in the American presentations was so great as to seriously reduce the probability of Japan's proceeding with the construction of an American-type power reactor at an early date.

During the remainder of the week I asked a number of representatives of the Japanese Atomic Energy Commission whether the reaction of these newspapers represented the official position of the Commission, and was assured that it did not, but that it simply represented the generally critical attitude of the newspapers toward things American. However, during the same period I was approached by different individuals, fairly well down in the Commission organization, who, in the guise of asking clarification of one point or another of my statement, undertook to spell out the problems that the Japanese had with the various points



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