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DOW PROPOSAL TO USE NUCLEAR POWER PLANT STEAM

I talked by telephone with Dr. W. H. Beamer on Friday, August 9, 1968, regarding the Dow proposal to use steam from the Consumers Power Company nuclear plant. This had been discussed in Bethesda on July 31, 1968, and Dow at that time had submitted a detailed report setting forth the bases for evaluating the proposed use. We had indicated that we would contact Dr. Beamer, should additional information be required after we had digested the contents of the report which Dow had left.

As a result of discussions between EML and DEFS following the meeting with Dow, it had been concluded that no additional information need be requested of Dow until we have had an opportunity to consider in detail the legal mechanisms for handling the Dow request. I communicated this to Dr. Beamer, and indicated that it would be about three weeks before we would be touch with him again for further discussions. I told him I was reasonably sure that the two technical questions on which we would wish to have more information were:

1. The derivation of the figures in Column 3 of Tables 6, 7, and 8. These are the figures for the ratio: pounds of residual steam/pounds of product.
2. The question of the behavior of iodine in the steam, with respect to the question of whether the iodine is in a volatile form in the various processes in which steam would be used directly in the chemical processes.

With respect to the latter question, Dr. Beamer stated that they had found, in checking with operators of the Big Rock Point reactor, that 90.5% of the iodine 131 appearing in primary steam is picked up by the water cleanup resin and no iodine activity has been found in the off-gas. Dr. Beamer interprets this as indicating that the iodine is in a nonvolatile form, and if this is the case, it would be expected that the iodine would follow the nonvolatile fission products through the Dow process unless it were converted by an oxidation-reduction reaction to elemental iodine. Dow is looking further into this question.

J. A. McBride, Director
Division of Materials Licensing

cc: B. H. L.

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