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October 7, 1955 / Per - Union

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MEMORANDUM FOR FILE

Subject: Control of Peacetime Uses of Atomic Energy

During a discussion of disarmament policy at the forthcoming Geneva talks, on October 5 the Secretary volunteered views on the importance of control of peacetime uses of atomic energy. He said that Bernard Baruch had spoken to him about this and had expressed concern that this problem seemed to have dropped out of active consideration.

I said that the problem was very much in our minds in drafting the statute of the Atomic Energy Agency. I reminded him that we had held a brief technical meeting with the Russians and others in Geneva on this very subject, and that as a result of this meeting we still believed that it would be possible in the right circumstances to control nuclear power reactor operations. I pointed out that we and the Russians had a common interest in seeing that other countries did not obtain nuclear weapons and add to the threats to world peace and security, and that there were some indications that the Russians recognized this. The Secretary's only reaction to this was to stress in subsequent discussion the importance of continued attention to the control problem in any studies that are undertaken.

After the meeting Bob Bowie called me to say that he had just read your paper on control and thought it was excellent and should be given dissemination and formal consideration.

On the afternoon of October 5, Dr. Harold Knapp of the AEC Operations Analysis Staff called, at his request, accompanied by John Trevithick and Max Isenbergh. Knapp is a member of the task group set up in AEC to study the controls necessary in letting U.S. fissionable material go abroad for power reactors, and he was interested in knowing what thought we had given to this subject. I told him that I was delighed to learn that AEC was studying this question. The Smith paper on control was, at that time, being reproduced with changes made as a result of Patterson's comments. I told him that I would be glad to let him read a copy when it was ready but I could not give him one until we had let Lewis Strauss have an opportunity to examine the paper. Accordingly, on October 6, Knapp called again and read the

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Smith paper. He let me read a first draft of his paper which made the following principal points:

- 1. The amount of U-235 that will be required for nuclear power reactors around the world would probably range from 1,000 kg a year in the late 1950's to perhaps 14 or 15,000 kg by 1975. This was not a substantial portion of the presumed United States annual output in any of these years.
- 2. The principal threat to security which will come from the Atoms for Peace program will result from the expanded market of nuclear power reactors and plutonium separation, rather than from the material itself which the United States may secure abroad.
- 3. Any country reasonably advanced industrially can now learn from the open literature how to build a plutonium separation plant capable of separating around 20 kg of plutonium a year for about a half-million dollars. Also, a natural uranium reactor producing perhaps 20 to 25 kg plutonium a year could be built for 10 to 15 million dollars by any such country. Accordingly, the threat of weapons capability in other countries like the Netherlands, Israel, Argentina and many others is not remote.
- 4. Knapp is going to talk to Los Alamos in the next few days concerning the amount of effort that would go into building bombs once one has plutonium and the amount of help a knowledgeable scientist would get in solving the problem of bomb design as the result of learning about relatively advanced reactor design.

There are a number of other points in Knapp's paper with which we are familiar. I think you would want to read it and I know he would be glad to bring it over and discuss it with you.

Map I sentuch should me on Oct. ? a paper he has present proposing that U.S. UK USSR and I reme is some a joint declaration that they will give peaceful user aid only to countries which forego bomb development and aprel to comprehensive inspections.

S/AE: PJFarley: mew

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