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IN REPLY REFER TO

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14 October 1943

401.1 D-9

Subject: P-9 Program.

To: Brig. Gen. L. R. Groves, Washington Liaison Office, P. O. Box 2610, Washington, D. C.

1. Forwarded herewith is a copy of a letter from Dr. A. H. Compton to Dr. H. C. Urey concerning the limitations of the P-9 Program to be conducted by the Metallurgical Project.

A. V. PETERSON,
Major, Corps of Engineers,
Area Engineer.

1 Inclosure:
Copy ltr., 10/7/43

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Metallurgical Laboratory

October 7, 1943

Professor H. C. Urey
Department of Chemistry
Columbia University
New York, New York

Dear Harold:

A week ago I asked Wilberry to send on to you the provisional form of a directive with regard to work on the P-9 project which we have submitted to the army for approval. There were questions in the General's mind regarding the proposals for interchange of information with the Canadians, but otherwise it appears that the directive as sent to you is acceptable. Since I spoke to Wilberry, Wiskey will have returned to New York with news of our current situation. Perhaps, however, I can add something about how things are developing.

As you know, my impression gained at the S-1 meeting at Clinton was identical with yours, namely, that there was no serious intention on the part of the Policy Committee to authorize in the near future the construction of a P-9 plant for producing 49. Nevertheless, Groves has not been willing to make a statement even verbally affirming or denying this position. Approval by the army of the directive that I have written to Allison will, however, give us a basis for going ahead. This directive assumes that we shall prepare as satisfactory a design as we can, to be ready by July, 1944, to be used in case it is needed, and to initiate a longer distance program on a smaller scale aimed toward making the best 49 producing pile we can. Though there is no positive assurance, I believe there is some chance that the 1944 design will go into construction. In any case, looking toward the longer distance military needs of the nation, I am confident that the work done on this assignment will be very useful.

A week after the Clinton meeting, as you doubtless know, the General, Tolman, Smyth, Wigner, and I met with the British at Montreal to discuss problems of mutual interest connected with the 49 production program. They told us of the plans on which they were working, and of the experiments they have projected. We gave them our most recent data regarding the P-9 and graphite as far as it affected their studies. Three of the four types of production plants which they were considering involved use of P-9 and two of these were combined with enriched metal. It seemed evident that they were not expecting any results from their investigations that would be used in the present war, though they did not explicitly acknowledge this to be the case. We felt that the British

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are considering 49 production as an important factor in determining the balance of military power in the post-war world, and that they are getting ready for full-scale activity along this line as soon as the immediate demands of the present war permit. Our program, geared as it is to supplying decisively useful production in this war, can be helped by the British only by obtaining from them certain incidental scientific data which they may obtain. In particular, we could see no reason to suppose that the Canadians could construct a production plant using P-9 that would contribute significantly to the 49 supply before our own production will be well in hand. Accordingly, none of us felt that we should recommend supplying the British now with any larger quantities of our P-9, since this may yet become of importance in our war program.

All of this means that our P-9 work must now be organized around: (1) The possibility that we shall need the plans for a P-9 plant a year from now to pinch-hit in our 49 production program for this war, and (2) The certainty that the immediate post-war developments will call for use of plants requiring P-9.

I may add that in my own opinion the post-war situation will still be greatly confused and it will remain of prime importance to maintain our country in a supreme military position. Also it is sure that all the major powers will be extending themselves to develop the tube-alloy program as far as possible. Because of the inherent advantages of P-9, its development will certainly play an important part in this post-war effort. So you may understand my feeling that though I cannot put the P-9 work in first place in our present 49 production program, it must be developed as rapidly as is consistent with pushing through our other work at top speed.

Yours sincerely,

Arthur Compton

KT
cc: H. D. Smyth
A. V. Peterson (3)
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