April 17, 1963

Dear Roa,

I refer to your letter of March 6, 1963, in which you advised of your intention to request development of a very high-yield FUF0 bomb (50-100 MT) for carriage by B-52 aircraft, and in which you agreed that we should present the matter of high-yield weapons to the President. I have addressed the latter point in my letter to you of April 4, 1963.

In regard to the specific information you requested on the matter of developing a high-yield bomb for B-52 carriage, I submit the following:

a. Without the benefit of any additional atmospheric testing, the design of a maximum yield laydown bomb compatible with the B-52 aircraft would be closely related to a scaled version of the device.

DELETED

A yield of about 50 MT would be expected, with a possible maximum of 60-65 MT.

b. It is estimated that this weapon will weigh 35,000 pounds, with a 70-inch diameter, and a length of 305 inches. This weapon will fit in the B-52 bomb bay, but guide rails will be required to assure clean separation from the aircraft. A retardation system is being considered that will permit a 1500-foot release altitude at 400 knots indicated air speed.

c. Assuming that a Phase 3 development request is received by the Atomic Energy Commission before July 1963, a First Production Unit (FPU) is predicted by the end of CY 1966; i.e., between three and four years after authorization to proceed. The actual development time
will be largely dependent upon the relative priority assigned to this program. Additionally, the above estimate for FPU is based on the assumption that the Air Force will have the necessary authority and funding for aircraft modification and parachute development. A more refined date of FPU will be provided a few months after receipt of your Phase 3 development request and the approved military characteristics for the bomb.

![Image]

The preliminary estimate of AEC developmental costs is 20 million dollars. This estimate of weapons research and development costs is based on an over-all mission concept and not on a specific, well-defined project; therefore, this estimated cost may be changed at a later date.

d. Preliminary estimates of unit production costs are:

(1) Nuclear fuel costs -

(2) Non-nuclear costs - 200 thousand dollars.

Regarding your qualification that requires development without benefit of future nuclear tests, I would add that, if the opportunity presents itself to perform atmospheric nuclear tests during the early stages of this development program, a considerable improvement in the weapon design will be possible. For this reason, it would be necessary to advise the laboratories to gear their development plans to both a test and no-test situation.

The whole matter is, of course, subject to a decision by the President to go ahead on the development of a large multi-megaton weapon. One approach to such a decision is that proposed in your letter of March 6, 1963; however, the Commission continues to believe that a decision on the policy itself, as outlined in my letter of December 18 should precede any particular course of development.

We have your letter of April 10 on this subject and will respond to it as promptly as possible.
If you desire further information, please do not hesitate to call on me or my staff.

Sincerely yours,

(Signed) Glenn T. Seaborg

Glenn T. Seaborg

Honorable Roswell L. Gilpatric
Deputy Secretary of Defense