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HEADQUARTERS, ARMY AIR FORCES
WASHINGTON

7 July 1947

Dr. Vannevar Bush, Chairman
Joint Research and Development Board
1712 G Street N.W.
Washington 25, D. C.

Dear Dr. Bush:

I have received your letter of June 25, 1947, enclosing a copy of a letter from Dr. Berkner to you concerning the approach of the Armed Forces, and particularly the Air Forces, to our future research and development program.

I very much appreciate both yours and Dr. Berkner's comments in these respective letters. I agree that the problems before all of us are of extreme importance to the future of our research and development programs and, in turn, to the welfare of the nation, and that between us we must use all of our ingenuity to arrive at a satisfactory and workable solution to the problems raised by Dr. Berkner. However, he has raised the question as to the advisability of the Air Engineering Development Center and as to whether or not this is an effective method of assisting in carrying out the Air Forces' research and development program. It would appear to me in reading Dr. Berkner's letter that he may not fully understand the purpose and use of the facilities now in existence at Wright Field and those proposed for the A.R.B.C. I would like to say that our installations at Wright Field are not, and never have been, considered to be fundamental research laboratories. The funds received by the Air Forces for research and development purposes are expended totally with industry, commercial research laboratories and educational institutions, except for personnel, small amounts of materials for the repair of experimental airplanes and equipment and for maintenance of our facilities, to carry out research and development projects.

At Wright Field, we do not nor have we ever tried to carry on fundamental research. We cannot do this for many reasons, among which are that we cannot compete with industry as a whole due to lack of funds and qualified personnel, and because we also believe it is good policy to encourage industry and the educational institutions to do this work for us. In carrying out our research and development programs, we try to set up requirements and specifications to meet our needs and present these requirements to industry to produce the equipment we require. Upon receipt of the equipment, we use the facilities at Wright Field to test this equipment to determine whether or not it meets our requirements, and to assist in the development of the equipment mutually with the initial contractor. For instance, in our wind tunnel, we test full scale engine nacelles to

CONFIDENTIAL

ADDRESS REPLY TO: COMMANDING GENERAL, ARMY AIR FORCES, WASHINGTON 25, D. C.

CONFIDENTIAL

Letter to Dr. Bush

determine proper air flow characteristics, cooling requirements, etc. In our Engine Laboratories, we test full scale engines to determine whether or not they meet our power and mechanical endurance requirements. This is true throughout our laboratories to a very great extent. Wright Field was started in the middle '20's and in building the facilities, we tried to look forward into the future as far as we could to determine the size and capacity of the various testing equipments which would be needed by the Air Forces. In many cases, these facilities are no longer of a sufficient capacity to meet the present requirements or those foreseen within the near future.

This really is the basis behind the requirement to develop the Air Engineering Development Center, not only to meet our needs but also those of industry. We cannot afford to build large test facilities at contractors' plants. The A.E.D.C. has never been considered as a fundamental research center. It is to be a development and evaluation test facility. It is not a duplication of Wright Field, although most of the facilities contemplated in A.E.D.C. will be similar in purpose but will be built to enlarge the out-grown capacity of many of the Wright Field installations. The usefulness of the Wright Field installations will in no way be decreased by the new A.E.D.C. facility and are being continually modified to keep pace with AAF test requirements; however, space, power and water requirements have reached the limits of the area.

The A.E.D.C. program has been carefully considered over the last two years and has met the approval of the Aeronautical Board and the Committee of Aeronautics of the J.R.D.B. The wind tunnel portion of A.E.D.C. has also met the approval of N.A.C.A. and two sub-committees of N.A.C.A. which included members of industry. The wind tunnel projects fall within the National Program of Transonic and Super-sonic Wind Tunnels. I feel that the project has been completely coordinated by all interested agencies, and although perhaps not perfect in every detail, it appears to me to be reasonable and practical. The Joint Research and Development Board approval of the program would enable the project definitely to get started. It must be assumed that an intelligent review of the entire construction program will be continuously carried out by the AAF and that corrections, when required, will be made.

The problems raised by Dr. Berkner with respect to research and development organizations of the Services are very far-reaching and are subject to many opinions as to methods of implementation. To await a complete agreement on them before the initiation of the A.E.D.C. facilities or any other thoroughly coordinated research and development program, would probably delay all of our development programs for such a long time as to have very serious consequences to our national security.

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Letter to Dr. Bush

It is my hope that the Joint Research and Development Board will see fit to pass favorably upon the Air Engineering Development Center program, as revised finally by the Board, within the very near future.

Sincerely,

Henry Vandenberg

for CARL SPAATZ
General, U. S. Army
Commanding General, Army Air Forces

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