UNIVERSITIES RESEARCH ASSOCIATION, INC.

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REPORT BY THE PRESIDENT

INTRODUCTION

A year ago at the last Annual Meeting of the Board of Trustees, the site for the Accelerator had not yet been chosen so there was little to report other than general plans and hopes. In contrast, the past year has been one of intense activity with many significant accomplishments.

SELECTION OF SITE

On December 16, 1966, the Atomic Energy Commission announced that the site for the new Accelerator Laboratory would be at Weston, Illinois, approximately 30 miles southwest of the Chicago O'Hare Airport. At the same time, the Commission announced its intention to proceed at a somewhat reduced scope with potential expansion at a later date. Subsequently, the Commission indicated that the construction cost of the first phase should be about $240,000,000.

ORGANIZATION

On March 1, 1967, Robert Rathbun Wilson was appointed Director of the National Accelerator Laboratory. Dr. Wilson at the time was completing the construction of the 10 BeV Electron Synchrotron at Cornell University, where he had successfully constructed a series of successively higher energy electron accelerators during the past 20 years.

The initial planning activities for the Accelerator began at Cornell University shortly after Dr. Wilson's appointment. Soon thereafter a site for the Laboratory during the design period was selected at Oak Brook Executive Plaza, 1301 West 22nd Street, Oak Brook, Illinois 60521, with telephone 312-654-3460. The Laboratory's activities have been centered at Oak Brook since June 15, 1967.

Since his appointment, Dr. Wilson has built up a rapidly growing staff which is primarily concentrating on problems of Accelerator design. At present there are 52 members of the permanent Accelerator staff, and 6 more appointments have been made. Edwin L. Goldwasser has been appointed as Deputy Director of the Laboratory, M. Stanley Livingston as Associate Director, and Donald Getz as Assistant Director with particular concern for administrative matters. Donald Poillon is the Business Manager.

With the approval of the National Accelerator Laboratory, the AEC has extended its contract with the architect-engineering organization

DUSAF to December 31, 1967. On November 28, 1967, the AEC announced that DUSAF had been selected to provide architect-engineer/construction management services under a subcontract to Universities Research Association. The staff of DUSAF has been growing as required and now numbers approximately 26.

The Atomic Energy Commission has appointed Lawrence Mohr as Contracting Officer and Area Manager of the 200 BeV Accelerator Facility Office. Mr. Mohr was the AEC representative for the Stanford Linear Accelerator.

Universities Research Association sponsored a meeting of interested high energy physicists and accelerator designers on April 7 and 8 at the Argonne National Laboratory to discuss the new Accelerator and its relations with the community of high energy physicists. The large attendance at the meeting (407 scientists registered) indicated the depth of interest in the new Accelerator. During this meeting there was general agreement on the desirability of some form of Users Group. An Organizing Committee was elected at subsequent meetings of the Users Groups for the other major accelerators. This Organizing Committee has now proposed a form of organization and has called a meeting of the newly established Users Group on December 9, 1967.

While the Laboratory organization was growing, the Universities Research Association has been completing the organization of its Washington office which now consists of the President; the Vice President for Administration, Bradley Bennett; Secretary, Leonard Bacon; Treasurer-Controller, Robert Williams; and two secretaries. On October 1, URA moved from its temporary Washington headquarters at 2101 Constitution Avenue to its permanent office on the top floor (Room 828) of the new National Academy of Sciences building at 2100 Pennsylvania Avenue N. W., Washington, D. C. 20037.

DESIGN OF ACCELERATOR AND SUBMISSION OF PROPOSAL

Design activities of the Laboratory since the middle of June have been intense. In addition to the Laboratory staff itself, a large number of interested accelerator designers and physicists throughout the country participated extensively in the design studies at Oak Brook this past summer. The Laboratory concluded that for a cost of $243,600,000 an accelerator could be designed for 200 BeV with a design intensity of 1.5×10^{13} protons per second. A special feature of the design is that the energy of the Accelerator can be increased at a later date from 200 BeV to 400 BeV at a low incremental cost and with a minimal shut-down time.

The National Accelerator Laboratory is seeking authorization in the budget for FY 1969 for the construction of an Accelerator with the above characteristics. The plans of the National Accelerator Laboratory were reviewed by the Scientific Committee of the URA Board of Trustees. With any proposal of this nature, there is always concern as to whether the hopes can be fully realized within the estimated budget. The contemplated time scale is a rapid one, calling for completion of physical construction during the fourth quarter of FY 1973. Obligations are incurred at a particularly rapid rate in FY 1969 and 1970. Nevertheless, both the Laboratory staff and DUSAF are confident that they can meet this rapid schedule. The conclusion of the Scientific Committee was to recommend to the Board of Trustees

that the Board authorize Dr. Wilson to submit the proposal as outlined in the Construction Project Data Sheets to the Atomic Energy Commission. At a meeting especially called for this purpose, the URA Board of Trustees on October 12, 1967, authorized the Laboratory Director to submit the proposal to the AEC for authorization of construction in the FY 1969 budget, and he submitted it the following day.

FINANCIAL SUPPORT

On January 5, 1967, a letter contract was signed with the Atomic Energy Commission providing $200,000 to Universities Research Association, for conceptual planning and other preliminary activities relating to the proposed new proton Accelerator. Subsequently, this letter contract has been extended and supplemented. Funds are being provided as required, within the current obligation limit of $850,000. These funds were the dominant source of support for the design work during the past summer and fall.

A definitive contract between the Atomic Energy Commission and Universities Research Association is currently being negotiated and should soon be signed. The few remaining points for negotiation pertain to specific details on personnel policies.

The expenditure of an initial $7,333,000 for this project has been authorized by both Houses of Congress in a Bill which has been signed by the President. The principal controversy pertaining to the passage of the authorization arose from the absence of open housing legislation in the State of Illinois. The appropriation of the same sum of money is included in the regular AEC FY 1968 Appropriation Bill which has passed both the House and the Senate and was signed by the President November 21, 1967.

UNIVERSITIES RESEARCH ASSOCIATION FUNDS

The potential availability of the funds committed by the Universities to URA has been of great value in obtaining the desired fast start for the design program. In part, this has arisen from the actual expenditure of some of the funds already obtained from the Universities, and in part, from the possibility of making commitments and guarantees where such guarantees were necessary but where it was anticipated that there would probably be little or no net expenditure of URA funds. Although each of the 46 member Universities has committed up to $100,000 to URA, so far $10,000 per University has been requested by the Trustees.

The URA funds spent have primarily been for important objectives for which AEC funds were not available, or for items where unusual speed was required. For example, the operating costs of URA until the letter contract with the AEC was signed on January 5, 1967, were charged to the URA funds, the potential availability of these funds enabled URA to sign a lease for the present Laboratory headquarters, and a temporary building will be constructed with URA funds at the Weston site to house components undergoing experimental tests to affect the accelerator design.

THE COMING YEAR

Next year should be a critical but interesting one for URA. Financially, the principal problems will probably pertain to the construction authorization and the appropriations in the FY 1969 budget. Although there seems to be general agreement as to the desirability of the project, this coming year will be a particularly difficult one in which to obtain government financial support. A large number of successive stages of approval must be survived; failure on any one can delay and even jeopardize the project. The past year has been characterized by a series of crises. Although each was successfully passed, the probability of surviving all of the successive critical steps is necessarily diminished by their multiplicity.

The rapid design and construction schedules will present a major challenge to the National Accelerator Laboratory. It must continue to expand rapidly in size and at the same time must be vigorously and intensively engaged in the design and engineering of the new high energy facility so greatly needed by high energy physicists throughout the nation.

Norman F. Ramsey
President

December 5, 1967