

MINUTES OF FORTY-SECOND MEETING OF THE BOARD OF DIRECTORS
OAK RIDGE INSTITUTE OF NUCLEAR STUDIES
Oak Ridge, Tennessee

726723

February 10, 1958

The 42nd meeting of the Board of Directors of the Oak Ridge Institute of Nuclear Studies was called to order by President Paul M. Gross at 9:00 a.m. on February 10, 1958, in the University Room of the Hotel Stafford at Tuscaloosa, Alabama. Notice of the meeting had been sent to all directors on November 5, 1957. Directors present: Ronald Bamford, Harry A. Curtis, J. M. DallaValle, Charles E. Dunlap, John R. Dunning, Paul M. Gross, George T. Harrell, Warren C. Johnson, Louis A. Pardue, M. D. Peterson, C. C. Pfeiffer, Marten ten Hoor. Directors absent: W. V. Houston, James E. Webb, Alvin M. Weinberg. Present from the staff during the entire meeting were: Marshall Brucer, Chairman of the Medical Division; Paul M. Elza, Manager of Administration; W. W. Grigorieff, Chairman of the University Relations Division; and William G. Pollard, Executive Director and Secretary and Treasurer of ORINS.

1. Approval of minutes of the 41st meeting

On motion by Mr. Pardue, seconded by Mr. DallaValle, the Board voted:

To approve the minutes of the 41st meeting as distributed by mail in advance of this meeting.

2. Treasurer's report

Mr. Pollard distributed the following statements as of December 31, 1957: balance sheet for general activities; statement of income and expense for general activities; statement of restricted funds for general activities; balance sheet for activities under AEC contract; consolidated statement of operating and capital costs for activities under AEC contract. In connection with study of these statements, the Board raised a question about the allocation of corporate costs to specific grants from the National Science Foundation. University members of the Board pointed out that the present allocation represents an almost negligible overhead percentage and expressed the hope that, when the Institute has its own facilities, the basis for this allocation might be changed to a standard overhead charge so as to be in line with university-type projects. It was recognized, however, that as long as the Institute occupies buildings provided by the Atomic Energy Commission, such a readjustment is not proper since all of the Institute's NSF programs are joint AEC-NSF projects.

During this discussion Drs. Dunlap and Pfeiffer arrived.

By general consent the treasurer's report was accepted and is attached to these minutes as Appendix A.

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ORAU/ORINS Minutes

3. Budgets for fiscal year 1958

a. Revised cost ceilings for fiscal year 1958

Mr. Pollard distributed a table, "Budget Review Fiscal Year 1958," and described the adjustments which were necessary in the current year's AEC contract budget as a result of the first six-months' experience. The table showed recommended changes in operating and equipment ceilings since the Board approved the initial request for funds for fiscal year 1958 (36th meeting, minute 12) and a revised request for funds (39th meeting, minute 7). Major changes were in the traveling teachers demonstration lecture program, the nuclear science and engineering fellowships, and in the expansion of facilities of the Special Training Division to accommodate more participants in the radioisotope techniques course; these program items, however, had been considered by the Board during the intervening period.

On motion by Mr. Bamford, seconded by Mr. Dunning, the Board voted:

To approve the changes in cost ceilings for the various programs for fiscal year 1958 as shown in Appendix B under the column "Current Estimate."

Dr. Harrell arrived as the voting took place on this motion.

b. Revised corporate budget for fiscal year 1958

The Board studied revisions in the corporate budget for fiscal year 1958 as set out in a table, "FY 1958-Revised Corporate Budget." Changes in the budget as approved for planning purposes were minor. On motion by Mr. Pardue, which was seconded by Mr. Dunning, the Board voted:

To approve the revised budget for corporate funds for fiscal year 1958 as shown in the last column of Exhibit I.

4. Budgets for fiscal year 1959

Two tabulations were distributed for study: "Budget Comparison and Request for FY 1960" and "Corporate Funds Budget Comparison, FY 1956-59" together with supplementary notes on the comparison of fiscal year 1959 budget request with present estimates. These tabulations presented a more realistic picture of the needs of the Institute for the next fiscal year than had been possible when the initial request for FY 1959 was approved (39th meeting, minute 8).

a. Budget ceiling changes for fiscal year 1959

Although the budget for fiscal year 1959 had already been sent to Congress, changes in some ceilings within the budget were necessary because of recent program developments, Mr. Pollard said. One of the most important areas where additional funds are needed is in the ORINS traveling science

demonstration program. The reason for this is ORINS' unexpected success in obtaining commitments from various states to support traveling teachers during the school year. The state of Georgia alone plans to support 10 such teachers which will make it possible for them to visit every high school in that state during the 1958-59 year. We now expect a total class of 25 teachers this summer. The increased funds needed for the program in fiscal year 1959 consist in an increase in the AEC program ceiling to cover the construction of additional demonstration apparatus for the teachers' kits together with added equipment in biological science. An addition to the NSF grant is also needed to pay standard summer stipends to the state-supported teachers and to provide for instruction in biology.

Members of the Board noticed a reduction in the funds available for modernizing exhibits in the American Museum of Atomic Energy. Mr. Pollard explained that it was his understanding that the full amount requested was in the budget now before Congress, but that AEC planned to reduce the Museum ceiling in order to cover the expense of participation in the 1958 International Conference on Peaceful Uses of Atomic Energy at Geneva. While recognizing the importance of this conference, the Board deplored the circumstances that would, because of this shift of funds, prevent the Institute from carrying out its plans to redesign its exhibits for the American public. On motion by Mr. ten Hoor, and a second by Mr. Dunning, the Board adopted the following resolution unanimously:

While the Board recognizes and supports the importance of this country's quality presentation of scientific accomplishments at the 1958 Geneva conference, it is equally important to present to the American public a current and up-to-date version of our atomic energy program, and that the exhibits in the only government-sponsored public presentation of atomic energy should unquestionably reflect the accelerated pace of developments in this field.

Mr. Pardue made a motion, which was seconded by Mr. Bamford, and the Board voted:

To approve budget ceiling changes for fiscal year 1959 as shown in Exhibit II, "Budget Comparison and Request for FY 1960," under the column "Requested FY 1959," for both the National Science Foundation and the Atomic Energy Commission programs.

b. Corporate budget for fiscal year 1959

The Board studied "Corporate Funds Budget Comparison, FY 1956-59," a tabulation which was distributed by Mr. Pollard, together with "Data for Proposed AEC Allowance for FY 1959." In considering these matters the Board stressed the desirability of the Institute's acquiring some of its own facilities and broadening the base of its contract operations in order to widen its usefulness to the universities of the region. Mr. Dunning made a motion, which Mr. ten Hoor seconded, and the Board voted:

To approve for planning purposes the budget for corporate funds for fiscal year 1959 as shown in the column "Estimated 1959" in Exhibit III.

c. Percentages for AEC allowance for FY 1959

Mr. Dunning made a motion, which was seconded by Dr. Harrell, and the Board voted:

To approve the use of the same percentages as were employed in fiscal year 1958 to apply to the approved FY 1959 budget in negotiating the AEC allowance for FY 1959, as shown in the column "Percentage Applied" in Appendix C and resulting in an AEC overhead allowance of \$26,400 for the year.

5. Budget for fiscal year 1960

By reference to the "Budget Comparison and Request for FY 1960" the Board scrutinized the proposed budget request for that year. Mr. Pollard distributed a table, "Program Operating Costs by Fiscal Years," included here as Appendix D, which showed the basis on which the projected operating cost ceilings for fiscal year 1960 had been estimated. It was the feeling of the Board that by 1960 the need for updating the Institute's exhibits would be essential if the AEC's program of public education in atomic energy was to be carried forward by ORINS in this country in a creditable manner. While the program will suffer greatly during fiscal year 1959 if the requested restoration of exhibit remodeling funds is not made, the need for such a redesign of exhibits will be acute and urgent by fiscal year 1960. In order not to seriously hamper the effectiveness of the program, it was agreed that the traveling exhibits ceiling should be not less than \$598,000.

Mr. Pollard called attention to the crowded conditions in the Administration Building which resulted from the expansion in programs which ORINS is carrying out for the Atomic Energy Commission. Staff study indicated that an addition of approximately 2,000 square feet to this building would alleviate the present overcrowding which ultimately leads to decreased efficiency and would certainly be essential by FY 1960 with the present anticipated expansion of ORINS activities. It was the feeling of the Board that \$36,000, based on an estimate of \$18 per square foot, might provide a sufficient sum for planning purposes. On motion by Mr. Dunning, seconded by Mr. DallaValle, the Board voted:

To approve the budget estimates given in the last column "Estimated FY 1960" in Exhibit II, which reflects the items mentioned above, for submission to the Atomic Energy Commission as the Institute's initial request for funds for fiscal year 1960.

6. Personnel actions taken under delegation of authority

The Executive Director distributed a list of personnel actions taken between October 1, 1957, and January 31, 1958, under his delegation of authority involving merit increases, reclassifications, promotions, employment, and terminations. This routine report raised no question. By general consent the report was accepted and ordered filed with the minutes as Appendix E.

7. Personnel actions

Mr. Pollard distributed a list of personnel actions which he asked the Board to consider. These were acted upon as recorded in Appendix F.

In this connection Dr. Brucer explained the present arrangement between Oak Ridge Hospital and ORINS whereby certain personnel were shared on a half-time basis. In the case of two of the joint personnel this complicated arrangement was not as feasible or advantageous as it was originally (Pathologist with Oak Ridge Hospital-Principal Scientist with ORINS shared half-time and Assistant Pathologist with Oak Ridge Hospital-Senior Scientist with ORINS shared half-time). Furthermore, because of the professional or research interests of the incumbents and the anticipated opening of the new hospital in another year, a transfer of the Pathologist to full-time with Oak Ridge Hospital and of the Assistant Pathologist to full time with ORINS seemed a desirable step from the standpoints of the Institute and of the employees involved. Dr. Brucer said that such a transfer would not affect the present close working relationship between the Institute and the hospital.

8. ORINS personnel policies - Appendix A to prime contract with AEC

These policies are embodied in Appendix A to the Institute's prime contract with the Atomic Energy Commission, which had been mailed to Board members for review since the last meeting of the Board. Approval of this portion of the prime contract had not been obtained when the main body of the contract was adopted (40th meeting, minute 5c). Since that time Appendix A had been further modified to include TIAA disability insurance recommended by the Board (40th meeting, minute 9) and minor changes which were applicable to AEC contractors. For the further information of the Board Mr. Pollard distributed the new employee's handbook which described all the personnel policies which are set out in Appendix A to the contract. Mr. Dunning made a motion, which Dr. Harrell seconded, and the Board voted:

To approve Appendix A to the Institute's prime contract with the Atomic Energy Commission (AT-40-1-gen-33) in the form in which it had been circulated to the Board prior to the meeting.

9. Changes in personal service contracts E, M, R, and S

Mr. Pollard distributed for Board review copies of contract forms E (consultant with travel only, no fee), M (consultant with fee plus travel plus free while in travel status), R (consultant with fee plus travel), and

S (participation with travel only). Expenditures under these contracts are reimbursable by the Atomic Energy Commission and AEC requested certain standard revisions in order to bring the Institute's contracts in line with similar contracts of other AEC contractors. Mr. Pardue made a motion, which was seconded by Mr. DallaValle, and the Board voted:

To approve contract forms E, M, R, and S, as shown in Appendix G, which incorporate the changes requested by the Atomic Energy Commission.

10. Flashing reactor

Mr. Pollard reported that the AEC's Division of Biology and Medicine was exploring with contractors of AEC their interest in building and operating a reactor that would produce bursts of radiation up to a high power level and which would be available primarily for the Division of Biology and Medicine's radiobiological research. The Institute had been approached informally about its interest in and use for such a research tool. AEC regarded Oak Ridge favorably as a location for such a facility because of its program interests in the UT-AEC agricultural research project, the ORNL Biology and Health Physics Divisions, and the ORINS Medical Division; however, such a reactor would be available on a national basis.

A lengthy discussion by the Board brought out advantages, disadvantages, and questions. Such a reactor would not serve the present programs of the ORINS Medical Division. Though a unique research tool, such a reactor has no flexibility; yet fundamental research might reveal an unexpected potential. Would it engender sustained research interest and justify the investment, or would its scientific usefulness be short lived? To the extent that the facility might contribute scientifically to the radiation protection problem, it would be significant because there does not now exist any place where such research can be carried on apart from the weapons testing ground. Would such a facility in Oak Ridge open up new research opportunities for ORINS universities? Would ORINS be willing to undertake such an operation as a service to AEC, if asked to do so?

Mr. ten Hoor made a motion, duly seconded, and the Board voted:

To authorize the Executive Director to explore further with the Atomic Energy Commission their interest in locating a flashing reactor in Oak Ridge.

11. Mobile radioisotope training laboratory

Mr. Paul Elza, Manager of Administration, showed drawings of a proposed mobile radioisotope training laboratory which ORINS had designed. The Division of International Affairs of AEC requested the Institute to suggest a practical teaching-use laboratory, housed in a large trailer unit, which could be shown at the International Conference on Peaceful Uses of Atomic Energy in Geneva in 1958 and then turned over to the International Agency for Atomic Energy in Vienna for use among foreign universities to introduce foreign scientists to techniques for the utilization of radioisotopes. The design had been submitted to AEC.

The Board was pleased that the combined competence and experience of the Special Training and Museum Divisions placed the Institute in a position to make this contribution toward wider international understanding of radioisotope techniques. On motion by Mr. Pardue, seconded by Dr. Harrell, the Board voted:

To authorize the Executive Director to execute a contract for the construction of a mobile radioisotope training laboratory for the Atomic Energy Commission, if requested to do so by AEC.

12. International Atoms for Peace Conference for secondary school students

Mr. W. W. Grigorieff told the Board about a program idea which had come from the Institute's staff and had been suggested to the Atomic Energy Commission; he distributed material outlining a plan for bringing to Oak Ridge in the summer of 1959 six or eight students from each of the 81 UN nations, selected by the nations themselves, for a "junior Geneva" type conference. The idea was favorably received by the Oak Ridge office of AEC and was under consideration for possibly 1960, with official announcement at the 1958 Geneva conference.

The Board felt this was an appropriate, timely, and worth-while international relations activity. While cognizant that most of the cost would be borne directly or indirectly by the United States, the Board expressed a definite opinion that transportation expenses of students should be borne by the UN countries from which they were selected and that 1959 would be a much more effective date for such a conference than 1960. By general consent the Board agreed that ORINS should carry out such a program if asked to do so by the Atomic Energy Commission.

At 12:30 p.m. the Board recessed and went to the University of Alabama where they were luncheon guests of President Frank A. Rose and Dean Marten ten Hoor. The Board reconvened at 2:40 p.m.

13. Southern Governors' Conference

Pursuant to the Council's suggestion (13th meeting, minute 5) and previous Board discussion (38th meeting, minute 27), Mr. Pollard and President Gross reported that they had explored the possibility of a joint ORINS-AEC invitation to the Southern Governors' Conference to meet in Oak Ridge. At this time the Atomic Energy Commission is not receptive to the idea. Because of the political flavor and highly controversial aspect of some matters which came before the 1957 Southern Governors' Conference and because they may be expected to be raised again in forthcoming conferences, AEC does not wish to risk having Oak Ridge associated with such issues. A secondary reason is lack of adequate accommodations in Oak Ridge.

14. Review of medical program

At the request of the Executive Director, Drs. Dunlap, Pfeiffer, and Harrell spent October 14, 1957, in the ORINS Medical Division touring facilities and reviewing the program. After reading their report, Dr. Pfeiffer

turned it over to the secretary, and it is attached to these minutes as Exhibit IV. Following the reading of the report, a long and lively discussion followed in which this committee pointed primarily to the need for more fundamental research. Dr. Brucer replied to many detailed questions.

While acknowledging the contributions of the Medical Division, its numerous publications, and the usefulness of many of the projects which had been developed and adopted in other laboratories, the committee indicated a lack of sufficient fundamental research of a biochemical nature to give the program stature. The committee agreed that there are limitations in the treatment of patients with radioisotopes and that the point had been reached when the Medical Division should embark on a new and imaginative program in the area of intermediary metabolism of enzymes and free radicals, inasmuch as the two most recent major efforts (teletherapy and thyroid uptake) were about completed and the rare earths work was well under way. Although no expansion in animal quarters is contemplated, the committee cautioned against any expansion as such work is not in line with the main purpose of the ORINS Medical Division.

This committee also called attention to how much the Medical Division's research program suffers from competing activities, such as teaching and training and reception of official visitors. While the training work is valuable and effective, it absorbs much staff time and money which, in the opinion of the three medical members of the Board, needs to be applied toward research. Furthermore, since the ORINS Medical Division is isolated with respect to medical schools, the regular use of a few consultants might be helpful in overcoming this.

Mr. Pollard pointed out that funds for the program are provided through the Biology and Medicine Division of the Atomic Energy Commission and that the program had been undertaken at the request of AEC. What AEC asked for and wants from the ORINS Medical Division is a direct clinical attack on the diagnosis and therapy of neoplasms and the treatment of patients with radiation. It has been the policy of AEC to support fundamental research problems of a biochemical or biophysical nature at universities, whereas the ORINS work under AEC contract is clinical and related to patient treatment, both investigative and research. Moreover a redirection of the Medical Division program, such as that suggested in the report, would tend to make it duplicate the radiobiological program which AEC is already supporting extensively at the ORNL Biology Division and thus might represent a departure which neither AEC nor ORNL would regard favorably. Mr. Pardue commented that we had a general obligation to comply with the wishes of AEC in this program.

Mr. Gross raised the question with Dr. Brucer of the possibility of appointments for outstanding scientists from abroad for periods of a year or more who would bring new insights and techniques to the program and serve as a stimulation to our permanent staff. Dr. Brucer said that many aliens who came to the Medical Division are able, highly qualified, and excellently trained physicians. But only in a few cases had they been able to remain long enough to make significant research contributions to the program. He agreed, however, to explore the possibility of this type of arrangement

for longer periods, and Mr. Gross assured him of the vigorous support of the Board in making such arrangements.

Mr. Johnson expressed the view that in any well-balanced research program something approaching half the effort should be on fundamental research in order to insure a continuing supply of fresh ideas and approaches for application.

After considerable discussion along these lines, Mr. ten Hoor made a motion, which was seconded by Mr. Pardue, and the Board voted:

To receive the report of Drs. Dunlap, Harrell, and Pfeiffer on their review of the medical program and, in the light of the discussion, to continue to encourage the staff's individual research efforts.

15. Construction projects

a. Building 2714-F

Mr. Elza and Mr. Pollard brought the Board up to date on current construction work. Of particular significance was the remodeling in Building 2714-F in order to accommodate an increase of 50% in the number of participants in the basic radioisotope techniques courses. The lag between time of application and acceptance, as well as university interest in offering such courses, had been considered by the Board previously (36th meeting, minute 9; 41st meeting, minute 13). Request for funds for remodeling the building had been approved in the budget, but funds had just been released by AEC to the Institute for the work.

b. Animal quarters addition

Mr. Elza reported on the status of the original animal facility addition which had been approved by the Board (38th meeting, minute 23). Due to budgetary difficulties during the intervening period, AEC had just released money for this project; construction was expected to start in March and be completed in September.

c. Total body irradiation facility

Dr. Brucer described the small room which ORINS has designed as an addition to the Medical Division in order to permit total body irradiation. Informal discussion with AEC's Division of Biology and Medicine led that agency to request the Institute to submit such a preliminary proposal but at the present time no formal word had been received from the Commission with respect to it. Mr. Elza displayed drawings of the proposed facility.

The continuing study of problems related to therapy of acute leukemia involving whole body radiation and the transplantation of human bone marrow indicated the need for intensive investigation of total body irradiation at large dose levels. Present facilities are inadequate. Although this type of treatment had been used in a number of institutions to treat stages of leukemia, it appeared that true whole-body exposure at uniform dosage may not

have been accomplished. The design of the facility as proposed by ORINS would achieve essentially 100% total exposure of a high degree of uniformity and would be the first of its kind. The investment in the addition would not be large - \$24,120 which includes sources.

The Board agreed that research with total body irradiation represented a worth-while experiment in a field which is now fraught with uncertainty, controversy, and public pressure, and that any experiment which might contribute toward a better understanding of the effects of total body irradiation would be helpful. After some discussion Mr. Bamford made a motion, Dr. Pfeiffer seconded it, and the Board voted:

To confirm the action of the Executive Director in submitting to AEC a preliminary proposal for a total body irradiation facility to be built at the ORINS Medical Division, subject to approval of AEC.

16. Science career counseling at secondary school level

Mr. Grigorieff distributed a copy of a letter which had been sent recently to the National Science Foundation to explore the extent of NSF interest in supporting a short refresher course for high school guidance counselors to assist them in evaluating recent changes in science programs and opportunities for science careers and also a short conference for science teachers to assist them in counseling programs. These suggestions for specific summer courses had come from the Institute staff, although the need for updating career counseling in sciences had been recognized by the Council's Science Education and Museum Committee last year (13th Council meeting, Exhibit IV). There was considerable reservation by members of the Board as to ORINS' entering an area of activity in which ORINS or Oak Ridge had no special subject matter competences. No action was taken on the proposal, but it was the feeling of Board members that it would not be appropriate for ORINS to pursue this matter further at this time. (Note: since the meeting it has been learned that NSF is not interested in supporting such an activity.)

17. Conference of selected representatives of small southern colleges

For the information of the Board Mr. Grigorieff told of the meeting of representatives from some of the small southern colleges which is being planned for March 7-8, 1958, by the ORINS University Relations Division and the Biology Division of Oak Ridge National Laboratory. The existing cooperative programs of ORINS and ORNL have been of significant assistance in the continued development of research and teaching at colleges and universities in the South, particularly in those larger institutions carrying on graduate programs. The proposed conference represents an effort to explore the possibilities of undertaking new activities or suitably modifying present ones so as to broaden the opportunities for faculty and students in the smaller southern institutions and thus contribute more effectively to higher education in the South.

18. Solicitation of funds for buildings on ORINS land

Mr. Pollard told the Board that, at his invitation, a representative of the Kellogg Foundation had visited the Institute early in December 1957 while in East Tennessee. As a result of this visit Mr. Pollard was invited to submit a description of the Institute's programs and its preliminary plans for a nuclear science seminar center. The matter is still under consideration by the Kellogg Foundation.

The Board adjourned at 5:10 p.m.

William G. Pollard, Secretary

MINUTES APPROVED AS RECORDED

By _____

Date _____