

NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCE
GOVERNING BOARD

Minutes of the meeting held in the Treasury, Whitehall
at 2.45 p.m. on Thursday 10th March, 1960.

PRESENT:-

Lord Bridges (in the chair)
Dr. R. Aitken
Professor P. M. S. Blackett
Professor F. W. R. Brambell
Sir John Cockcroft
Sir Alan Hitchman
Sir Harry Melville
Professor R. E. Peierls
Dr. B. F. J. Schonland
Professor D. H. Wilkinson
Dr. T. G. Pickavance
Dr. J. A. V. Willis (Secretary)

Apologies for absence were received from Sir William Hodge,
Sir Harry Massey, Professor Mott, Sir James Mountford,
Sir Keith Murray and Sir William Penney.

1. MEMBERSHIP

The Chairman said that at the conclusion of the first three years of the Institute's existence some changes had been made in membership. Professor Diamond had indicated his wish not to be reappointed, though he would be pleased to continue to serve on the Research Reactor Committee. His place as a university member had been filled by Sir John Cockcroft. Sir William Penney had taken Sir John Cockcroft's place as an AEA member and Sir Alan Hitchman that of Sir Donald Perrott. Both UGC members had been changed, Sir Keith Murray and Professor Brambell coming in in place of Sir George Thomson and Mr. Gridley. The remaining members of the Board had been re-appointed.

The Chairman welcomed Professor Brambell and Sir Alan Hitchman to the meeting. He also expressed regret that the letters of appointment had been sent out only at the last minute.

2. MINUTES OF THE LAST MEETING

The Board approved the minutes of their fourth meeting of 1959.

3. PROGRESS AT THE RUTHERFORD LABORATORY

3.1 The Proton Linear Accelerator

Dr. Pickavance said that the provision of the two RF power valves in parallel, mentioned at the last meeting, was completed for tank II and was in hand for tank III. The amount of work involved was very considerable.

3.2 Nimrod

Dr. Pickavance said that over 300 of the 336 magnet blocks had now been delivered and the contract should be completed ahead of the original date. In view of the great early difficulties this was a very fine achievement by Messrs. Sankey. The construction of the power supply equipment was on schedule, but installation would be delayed through delay over the design of the 1000 ton sprung foundation block. Development of the vacuum vessel continued. Many difficulties had been overcome, but a good deal remained to do to achieve a satisfactory design. The production order could not yet be placed.

The cost estimates for Nimrod buildings had risen, as reported to the G.P.C., and the cost estimate for the plant, now being revised, was expected to show a rise also.

3.3 Buildings

Dr. Pickavance reported that there was a severe shortage of building labour on the site, and that the building delays were now such as to make necessary a revision of the estimated completion date for Nimrod from 31/12/61 to 30/6/62. Building priorities had been established in order to make the best use of the labour available. High priority had been given to the building for the National hydrogen bubble chamber.

In discussion, it was pointed out that experimental users were not expecting Nimrod to be available for effective use until the beginning of 1963. If the commissioning and the provision of beam handling plant could be speeded up, it might be possible to recover some of the time lost by the building delays.

4. COMMITTEES

The minutes of the Visiting Committee, (11/12/59), and the Personnel Committee (7.1.60) were noted by the Board.

Comment was made on Minute 1(b) of the Personnel Committee. Some members of the Board again emphasized their interest in the question of permanent research appointments. It was agreed that the proposed procedure for making such appointments should be set out in a paper for the Board, and that a requirement should be included that people appointed should be of academic standing not less than that of a university Reader.

5. RESEARCH REACTORS FOR UNIVERSITIES

5.1 The Chairman said that some difference of view over the respective functions of the Institute and the DSIR in connection with reactors for universities had arisen since the meeting at the Treasury reported at the last Board meeting (Minute 3). He had however arranged for a further discussion between Sir Thomas Padmore, Sir Harry Melville and himself, and had every hope that any remaining uncertainty would be resolved.

5.2 The Chairman said that he had sent forward the interim report of the Research Reactor Committee quickly, in order to avoid unnecessary delay on the Imperial College reactor proposal, on which there was general agreement. The other recommendations of the interim report probably needed further review. Sir Harry Melville, who had not been present at the Committee's

last meeting, had expressed disagreement with the recommendation of a second reactor in London. A protest had also been received from the University of Birmingham, that the Committee had not invited applications and had therefore not been told of the full case for a reactor at Birmingham.

The Chairman therefore thought that the Committee should continue their work and should prepare a revised version of their report, after inviting universities to make their needs known. In order to make the review quickly and most effectively, the Committee might need some strengthening, particularly for the work between meetings.

In discussion, it was suggested that in the invitation to Universities an indication should be given that the total number of reactors would be small, and also an indication of some of the assurances which the Committee would look for. It was suggested that there should be either a professor of nuclear engineering who would regard the reactor as a major part of his job, or a professor of one of the pure sciences who would make use of the reactor to a major extent; or as a final alternative a realistically worked out interdepartmental scheme. In the last case the scheme would need carefully looking into.

The strengthening of the Committee by addition of medical and radiochemical members was suggested, but the Board preferred that the Committee should co-opt expert advisers, or appoint assessors as required, rather than add to their number.

The protest from Birmingham was discussed, and it was agreed that the revised report would not necessarily place the projects mentioned in the present interim report before Birmingham.

It was mentioned that two applications had been received by the committee for approval of proposed sub-critical assemblies (which are much simpler and cheaper things than reactors). The Board did not think that the Institute should be concerned with these.

ACTION 1 The Board invited the Research Reactor Committee to prepare and submit to the Board a draft revised report, first sending enquiries to the universities about their needs. They invited Dr. Pickavance and the Secretary to seek further support from AEA staff in the work of collecting and preparing information for the Committee.

6. PROPOSED LECTURE HALL FOR THE RUTHERFORD LABORATORY

The Board discussed the proposal described in paper (60)3. There was general agreement on the need of a hall large enough for meetings concerned with work at the Rutherford Laboratory. It was suggested that it should seat between 150 and 200 people. For international conferences it was thought that a hall seating more than 350 would be needed, and that the conference should be held somewhere where such a hall already existed.

ACTION 2 The Committee approved in principle the provision of a lecture hall at the Rutherford Laboratory large enough for meetings concerned with the work there.

7. POSSIBLE SITE FOR AN INSTITUTE ACCELERATOR AT RISLEY

The Chairman said that while the Board would not wish to make a hurried decision about the type or siting of any future accelerator, the site described in paper (60)4 appeared to be a very promising one. It was agreed that the Institute should attempt to obtain an option on a suitable part of the site, and that when the details had been prepared this might best be done by discussion with the Admiralty at a high level. The Board made it clear that in expressing this interest they were not taking a decision on the siting of any future Institute accelerator.

ACTION 3 The Secretary was instructed to work out a scheme for siting a possible Institute accelerator at Risley, in co-operation with the AEA and the Manchester/Liverpool reactor group, to investigate the suitability of the site further and to discuss further with the AEA the best method of keeping it available.

8. SUPERANNUATION UNDER FSSU

ACTION 4 The Board took note of paper (60)5 and established a body to be known in the Research Committee of the National Institute for Research in Nuclear Science, to become the participating institution under FSSU in place of the Institute. The holders for the time being of the following offices were appointed as the Committee

The Chairman of the NIRNS
The Director of the Rutherford Laboratory
The Secretary of the Research Committee of the AEA
The Secretary of the NIRNS

9. NIRNS HELP IN THE DESIGN AND CONSTRUCTION OF AN ACCELERATOR FOR OXFORD UNIVERSITY

The Board noted that the help specifically requested in paper (60)6 was of the kind previously agreed in principle at the Board meeting on April 20th 1959. It consisted of design work, construction of some special items, contract-placing (through the AEA Contracts Department), installation and commissioning. A rough estimate of the total cost of these services (including overheads) was £200,000.

ACTION 5 The Board agreed to provide the assistance requested in paper (60)6, if the main project received approval.

10. NEXT MEETING

It was agreed that the next meeting would be held at the Rutherford Laboratory, at 11.30 a.m. on Monday June 20th, 1960.

J. A. V. Willis
Secretary,
10th March, 1960
Rutherford High Energy Laboratory