

NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCE

GENERAL PURPOSES COMMITTEE

Minutes of the meeting held in the Board Room, Treasury Buildings,
Whitehall at 2.45 p.m. on Thursday, February 11th 1960

Present:-

Lord Bridges (in the chair)
Sir James Mountford
Professor R. E. Peierls
Sir Donald Perrott

Mr. P. Bowles
Mr. G. W. Dixon
Mr. D. W. Fry
Dr. T. G. Pickavance
Col N. Wilson (Development - Engineering Group AEA)
Mr. T. L. Viney (" " ")
Dr. J. A. V. Willis (Secretary)

An apology was received from Professor Wilkinson, who was abroad.

1. MINUTES OF THE LAST MEETING

The Committee approved the minutes of the meeting on October 22nd 1959.
The Chairman mentioned three points arising from these minutes:-

Control of expenditure (Minute 6)

The arrangement for approval of building items undertaken
by the AEA Southern Works Organisation has now been
concluded. The S.W.O. will approve commitments up to
£25,000 within approved grants.

Heavy Liquid Bubble Chamber (Minute 7)

This proposal is now with the Treasury at a total of
£420,000 including £67,000 contingency.

Staff Complement (Minute 14)

This is now being dealt with by the Personnel Committee.
They will be asked at their next meeting for an increase
in the 1960/61 complement.

2. MATTERS DEALT WITH BY CORRESPONDENCE

The Chairman said that he had approved the contract action on
foundations for the Nimrod power plant, and on the octant end bracket
assemblies, proposed in papers (59) 46 and (59) 48, after reference to
the Committee by correspondence.

3. GENERAL FINANCIAL STATEMENT

The Committee noted the position shown in paper (60)1.

4. REVISION OF NIMROD BUILDING ESTIMATE

At the Chairman's request, Mr. Viney explained the increase in the
building estimate detailed in paper (60)3, and in particular the large
sums (shown in paragraph 7 of the paper) for claims by the Contractor.

The first of these claims, which he had accepted, was for £83,000 for increased rates for concrete work, owing to complexity not indicated on the designs at the tender stage. This meant, for example, that wooden moulds had to be made separately for each section, not re-used repeatedly, and that steel reinforcement had to be bent on site, and installed in unusually intricate ways. In reply to questions, Mr. Viney said that the contractor had originally asked for substantially higher rates, and the present rates which he had accepted were reached after negotiation.

Mr. Viney was asked what direct evidence he had that the agreed rates were reasonable. He said that both the consultant quantity surveyors (Messrs. Faulkner & Partners) and his own Chief Quantity Surveyor had examined the claim in detail, and he was more than satisfied. He thought that other contractors would have stood out for still greater increases.

The second claim for £72,000 was an increase in the preliminary charges consequent upon the increased work done. Such an increase was provided for in the contract, and the claim had been agreed.

The third and fifth claims, amounting to £43,000 were being contested, while the fourth, of £4,500 would be admitted.

After discussion the committee accepted the section of the report dealing with the contractor's claims.

The Committee next considered the consultants' fees. The Chairman said that much of the present large increase in estimates should have been foreseen sooner by the consultants, and it seemed inappropriate therefore that the increase should result in a proportionate increase in their fees. Mr. Viney said that he would negotiate with the consultants on this point.

It was noted that the estimated fees for the Development and Engineering Group, AEA had shown a more than proportionate increase. It was explained that this work is charged for according to the actual cost.

Finally the Committee considered the contingency figures now inserted in the estimate for the first time. It was agreed that on the building side, the time had come to include a contingency figure when asking the Treasury for increased funds.

5. NIMROD QUARTERLY STATEMENT

The Committee took Statement No.9 as read and considered and approved statement No. 10 (Paper (60)4). Dr. Pickavance said that a review of the plant estimate, parallel to the review of the building estimate was in hand and that a considered report from the Project Committee could be expected in about six weeks time. There would be an increase in the estimate, and it also appeared unlikely that it would yet be possible to put forward a contingency figure of reasonable amount. The Committee considered that the revised plant estimate should be awaited before putting revised estimates to the Treasury.

ACTION 1

The Committee adopted the increased estimate of £8.899 M for Nimrod, but invited the AEA to await the next revision before asking the Treasury for an increased grant.

6. NUCLEAR EQUIPMENT QUARTERLY STATEMENT

The Committee noted the position shown in paper (60)5.

7. VISUAL TECHNIQUES

Dr. Pickavance said that paper (60)6 detailed a request for authorisation to spend £50,000 on one set of track measuring equipment, which was one item of initial equipment on visual techniques. He said that more than one set might well be needed at the Laboratory, but it was not

necessary to order more just yet, and better designs could be expected to be developed after experience with the first type.

The Secretary said that he proposed to submit a paper for the Treasury, stating that the £50,000 was an item out of an estimated initial requirement of £450,000 for visual techniques. Sir Donald Perrott advised that some system of periodic reporting to the Treasury should be proposed, to avoid the necessity of submitting each item to them for approval.

ACTION 2 The Committee approved the proposed purchase of track measuring and scanning machines as specified in paper (60)6 at a cost not exceeding £50,000.

8. ELECTRONIC TECHNIQUES

Dr. Pickavance said that the proposal detailed in paper (60)7 was closely parallel to that dealt with in the previous minute. The Committee welcomed the start being made on both of them.

ACTION 3 The Committee authorised the purchase and installation of cables as detailed in paper (60)7 at a cost not exceeding £50,000.

9. BEAM HANDLING PLANT

Dr. Pickavance said that the proposal detailed in paper (60)8 differed from the previous two in that the expenditure which would be needed in the next few months did not form a definable section of the scheme. A request was therefore being made for authorisation of the whole initial provision of beam handling equipment, at a provisionally estimated sum of £1M, on the understanding that a more detailed estimate would be submitted within 12 months. Professor Peierls said that the beam handling equipment was one of the most important things to press forward at once. He welcomed the suggested method of dealing with the finance. Sir Donald Perrott said that he thought the proposed method would work, though the Treasury would of course require the submission of more detailed proposals for approval as the work proceeded.

ACTION 4 The Committee approved the outline scheme for initial beam handling equipment at a provisionally estimated cost of £1M.

10. EXTENSIONS OF THE P.L.A. BUILDINGS

Dr. Pickavance described the proposed extension detailed in paper (60)9, pointing out that the radiochemical laboratory, which accounted for nearly half the estimated cost, was only partly concerned with the P.L.A. the greater part of it being accommodation for University chemists for whom the Institute had undertaken to provide some laboratory space for work on materials irradiated in AERE reactors.

The Chairman said that the need for increased accommodation for physicists was due to the great interest shown by universities in using the P.L.A., and was most encouraging.

The Committee noted that more detailed estimates were promised by the Southern Works Organisation, and asked Dr. Pickavance to report on them to the Chairman before submitting the proposal for Treasury approval.

ACTION 5 The Committee approved the proposed extension to the P.L.A. buildings at a cost not exceeding £200,000 subject to confirmation by the Chairman when more detailed estimates have been reported to him.

11. EXTENSION TO NIMROD CONTROL ROOM BUILDINGS

Dr. Pickavance said that paper (60)10 contained an error by implication: the provision in estimates for an extension to the Nimrod control room building referred to a scheme which would still be needed, but the one now put forward was a different scheme which had arisen later and was more urgent. This was for additional counting rooms for nuclear physics experiments.

ACTION 6 The Committee approved the extension to the Nimrod control room building, at an estimated cost of £25,000.

12. FLATS AT COSENNERS HOUSE

The Committee discussed the proposal in paper (60)11 to build a block of 8 versatile flats at a cost (furnished) of £38,000. Mr. Dixon said that further investigation of the sub-soil suggested that there might be some additional cost for foundations. The Committee while recognising the need to build flats and the advantages of the site at Cosenners House, were not ready to approve the scheme at the estimates given. They asked for a further report from the Architects showing why the price was so high, and what could be done to reduce it, and also suggested that the building market should be tested by calling for quotations.

13. HOUSES FOR STAFF

The Committee accepted the estimated initial requirement of 65 houses given in paper (60)12 and considered the first four sites listed in the paper:-

RUSH COMMON Mr. Dixon tables a site plan showing 34 houses on this site, (compared with the previous cautious estimate of 24). It is proposed to build 3-bedroomed houses of the latest AERE design, similar to those just being completed on the immediately adjacent site. The estimated cost is £2,750 each. The Committee approved this proposal.

GAINSBOROUGH GREEN The Secretary reported that the Borough Council would require a 20-year guarantee from us to find tenants, for the proposed 12 houses, but that in later years these could be tenants of better council houses. On this understanding the Committee approved the proposal.

VINEYARD The Committee approved the proposal to buy 2 acres of this excellent site at the District Valuer's valuation, and build about 14 houses of the AEA "A" type.

PEACH CROFT In view of the additional 10 houses proposed at Rush Common, the Committee did not propose any immediate action on this site, but regarded it as a likely place for the next stage of building. After considering the Borough Council's building policy as reported in paper (60)12 they provisionally took the view that it would be better for the Institute to build houses over 1,000 sq.ft., and ask the Council to build houses below that size.

ACTION 7 The Committee approved in principle the proposals to build 34 houses at Rush Common and 14 at the Vineyard, and to guarantee to find tenants for 20 years for 12 council houses initially at Gainsborough Green.

14. CANTEEN The Secretary reported that a scheme for a canteen at the Rutherford Laboratory, associated with a lecture hall and conference room was being developed, and would be submitted for approval shortly.

15. PROPOSED COMPUTER FOR THE RUTHERFORD LABORATORY

Dr. Pickavance introduced paper (60)14, pointing out that the proposal had been unanimously approved by the Physics Committee. He said that he had not heard anyone question the need for a computer at the Laboratory. Some had urged us to install a larger machine, but after full discussion it had been agreed that the Orion was the most appropriate.

Sir Donald Perrott recommended that a formal endorsement of the proposal should be sought from Sir William Penney, in view of the proposals to install large computers in some AEA establishments. Dr. Pickavance said that he had consulted Sir William, and would ask him for a formal comment.

Professor Peierls strongly supported the need for a computer of moderate size at the laboratory. Many experiments required a computer on the premises, so that their results could be fed directly into it. Also, an enormously powerful computer particularly at a distance was not useful fully in proportion to its speed, owing to the time taken to feed each problem into it.

Sir Donald Perrott also asked if the relative advantage of hiring and buying had been considered. Dr. Pickavance said that he did not know whether Ferranti's machines could be hired. The possibility of hiring an IBM machine had been considered, but the charge was very high, and he was sure that for our purposes the purchase of an Orion was more economical.

ACTION 8 The Committee approved the proposed purchase of an Orion computer at a cost not exceeding £400,000, subject to the Chairman's direction after Sir William Penney's comments had been obtained.

16. FEASIBILITY STUDY ON SCINTILLATION COUNTER MATRICES

Dr. Pickavance said that paper (60)15 described proposed work on counter techniques, which would go a little way towards balancing the large effort already deployed on bubble chamber techniques. The Chairman welcomed the fact that this study would be done for the Institute by a University.

ACTION 9 The Committee approved the proposed agreement with Oxford University for a 3 year investigation on counter techniques at an estimated cost (including equipment and stores for only one year) of £12,800.

17. ENTERTAINMENT ALLOWANCE

ACTION 10 The Committee approved the increase of the entertainment allowance allocated by the Director, Rutherford Laboratory to £200 for 1959/60 and £500 for 1960/61.

J. A. V. Willis
Secretary

Rutherford High Energy Laboratory,
Harwell, Didcot.
24th February, 1960.