

NI(GP)(60)5

(NEPC/P.14)

NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCEGENERAL PURPOSES COMMITTEENUCLEAR PHYSICS EQUIPMENTQuarterly Statement No. 2

1. This report is submitted in accordance with the decision taken at the 1st Meeting of the Nuclear Equipment Project Committee on 18th June, 1959, to present quarterly financial statements to the G.P. Committee of the National Institute.
2. Appendix I shows the latest Estimate for Hydrogen Bubble Chamber Services compared with the present approved Estimates.
3. Appendix II shows a Summary of Estimates for Nuclear Physics capital items for which provision has been made in the National Institute approved estimates.
4. Appendix III shows the predicted expenditure by years on the Hydrogen Bubble Chamber Services.
5. Appendix IV shows the commitments and expenditure up to 2nd January, 1960, on Hydrogen Bubble Chamber Services.
6. Appendix V shows the anticipated contract action to the 31st March, 1960.

G.H. VENN  
Estimates & Sanctions Group  
Rutherford Laboratory

Submitted to the G.P.C. by the  
Nuclear Equipment Project Committee

6th January 1960.

L. B. MULLETT  
Chairman  
20th January, 1960.

## IV. ROCKET BUBBLE CHAMBER SERVICES

COST ESTIMATES - 2nd JANUARY, 1960

| Item                              | Present<br>Treasury<br>Approval<br>£ | Latest<br>Estimate<br>£ |
|-----------------------------------|--------------------------------------|-------------------------|
| Magnet Supplies                   |                                      | 110,000                 |
| H <sub>2</sub> Liquifier Supplies |                                      | 70,000                  |
| Safety System & Sundries          |                                      | 20,000                  |
| PLANT TOTAL                       | 200,000                              | 200,000                 |
| <u>Building</u>                   |                                      |                         |
| Architects                        |                                      | 43,000                  |
| Engineers                         |                                      | 7,000                   |
| Fees                              |                                      | 5,000                   |
|                                   | 55,000                               | 55,000                  |
| TOTAL                             | £255,000*                            | £255,000                |

NOTE:- \*Original Treasury Approval of £250,000 increased by £5,000 to provide for fees on Building.

This estimate does not include the Bubble Chamber Annex to the Experimental Area which is charged to Linrod Estimates.

APPENDIX II

SUMMARY OF ESTIMATES FOR NUCLEAR PHYSICS

CAPITAL PLANT FOR USE WITH NIMROD

|    |                                                       | G.P.C.<br>Approved<br>Estimate<br>£ |
|----|-------------------------------------------------------|-------------------------------------|
| 1. | Hydrogen Bubble Chamber Services                      | 200,000                             |
| 2. | Plant for Research & Development                      |                                     |
|    | (a) Visual Techniques                                 | 450,000                             |
|    | (b) Electronic Techniques                             | 450,000                             |
|    | (c) Heavy Liquid Bubble Chamber                       | 420,000                             |
|    | (d) Beam Handling Plant                               | 1,000,000                           |
|    |                                                       | <hr/>                               |
|    |                                                       | 2,320,000                           |
| 3. | Minor items of expenditure within<br>delegated powers | 290,000                             |
|    |                                                       | <hr/>                               |
|    | TOTAL                                                 | £2,610,000                          |
|    |                                                       | <hr/>                               |

NUCLEAR EQUIPMENTHYDROGEN BUBBLE CHAMBER SERVICESPREDICTED RATE OF EXPENDITURE AS AT 2nd JANUARY, 1960

| Item     | Predicted<br>1959-60 | Predicted<br>1960-61 | Total<br>Predicted |
|----------|----------------------|----------------------|--------------------|
|          | £                    | £                    | £                  |
| Plant    | -                    | 200,000              | 200,000            |
| Building | 20,000               | 35,000               | 55,000             |
| Total    | £20,000              | £235,000             | £255,000           |

| Item     | Provision in<br>Original 1959-60<br>Estimates | Provision in<br>Original 1959-60<br>Estimates for<br>1960-61 | Total<br>Provision<br>in original<br>Estimates |
|----------|-----------------------------------------------|--------------------------------------------------------------|------------------------------------------------|
|          | £                                             | £                                                            | £                                              |
| Plant    | 40,000                                        | 160,000                                                      | 200,000                                        |
| Building | 30,000                                        | 20,000                                                       | 50,000                                         |
| Total    | £70,000                                       | £180,000                                                     | £250,000*                                      |

\*NOTE:- Treasury Approval has now been increased by £5,000 to provide for Fees on Building.

HYDROGEN BUDDIE CHAMBER SERVICESRECORDED COMMITMENTS AND EXPENDITURE UP TO 2nd JANUARY, 1960

| Item                              | Commitment | Expenditure |
|-----------------------------------|------------|-------------|
|                                   | £          | £           |
| <u>PLANT</u>                      |            |             |
| Magnet Supplies                   | 49,207     | -           |
| H <sub>2</sub> Liquifier Supplies | 16,112     | -           |
| Safety System and Sundries        | 9,700      | -           |
| <u>PLANT TOTAL</u>                | 75,019     | -           |
| <u>BUILDINGS</u>                  |            |             |
| Architects                        | 15,500     | -           |
| Engineers                         | 1,709      | -           |
| <u>TOTAL</u>                      | 92,228     | -           |

COMMITMENTS ENTERED INTO VALUED AT £500 AND ABOVE

| Item                                  | Value  | Firm                       |
|---------------------------------------|--------|----------------------------|
|                                       | £      |                            |
| 250V, 1000K.W. D.C.<br>Generators (4) | 49,207 | General Electric Co., Ltd. |
| Hydrogen Compressor Units             | 16,112 | Peter Brotherhood, Ltd.    |
| Steelwork                             | 10,500 | Rubery Owen, Ltd.          |
| Hotal Decking                         | 3,500  | " " "                      |
| Patent Glazing                        | 1,500  | Williams & Williams        |

EXHIBIT C. SUMMARY

APPENDIX V

HYDROGEN BUBBLE CHARTER SERVICES

WORK AND ANTICIPATED CONTRACT ACTION DURING 2nd JANUARY, 1960 TO 31st MARCH, 1960

| Item                                                  | Estimated Value | Firm                                        | Remarks                                         |
|-------------------------------------------------------|-----------------|---------------------------------------------|-------------------------------------------------|
| H <sub>2</sub> Supply Gasholder                       | 2,000           | Competitive Tender                          | Tenders due in at end of February, 1960.        |
| H <sub>2</sub> Supply High Pressure Storage Cylinders | 3,750           | " "                                         | Tenders being examined by Project Team.         |
| H <sub>2</sub> Purification System Oil Filter         | 1,000           | " "                                         | Tenders due in mid-January, 1960.               |
| " " Silica Gel Drier                                  | 1,000           | " "                                         | " " " " "                                       |
| " " De-oxo Units                                      | 2,000           | Single action tender. Englehard Industries. | Tender being examined by Project Team.          |
| H <sub>2</sub> Supply Pipelines                       | 2,500           | Competitive Tender                          | Contract to be placed by end of February, 1960. |
| H <sub>2</sub> Supply low temperature lines           | 1,500           | " "                                         | " " " " mid " "                                 |
| Liquid H <sub>2</sub> Storage Vessels                 | 11,000          | " "                                         | Tenders being examined by Project Team.         |
| " " Low Temperature Pipelines                         | 2,500           | " "                                         | Contract to be placed by mid February, 1960.    |
| Safety System Vacuum Pump                             | 2,000           | " "                                         | " " " " end of " "                              |
| " " Pipelines                                         | 2,000           | " "                                         | " " " " " " "                                   |
| Magnet Cooling Booster Pumps                          | 2,500           | " "                                         | Tenders due in early February, 1960.            |
| " " Pipelines                                         | 1,500           | " "                                         | Contract to be placed by end of March, 1960.    |