

**EXTRA EXPENDITURE DUE TO
DELAY IN DEVELOPMENT OF
AN EQUIPMENT**

MINISTRY OF DEFENCE

**(DEPARTMENT OF DEFENCE RESEARCH
AND DEVELOPMENT)**

**PUBLIC ACCOUNTS
COMMITTEE**

1989-90

**HUNDRED AND EIGHTY
REPORT**



**LOGI SUBIA SECRETARIAT
NEW DELHI**

HUNDRED AND EIGHTIETH REPORT
PUBLIC ACCOUNTS COMMITTEE
(1989-90)

(EIGHTH LOK SABHA)

**EXTRA EXPENDITURE DUE TO DELAY IN
DEVELOPMENT OF AN EQUIPMENT**

MINISTRY OF DEFENCE
**(DEPARTMENT OF DEFENCE RESEARCH
AND DEVELOPMENT)**

[Action Taken on 114th Report (8th Lok Sabha)]



Presented to Lok Sabha on 11-8-1989
Laid in Rajya Sabha on 11-8-1989

LOK SABHA SECRETARIAT
NEW DELHI

August, 1989/Sravana, 1911 (Saka)

P.A.C. No. 1278

Price : Rs. 10.00

© 1989 BY LOK SABHA SECRETARIAT

PUBLISHED UNDER RULE 382 OF THE RULES OF PROCEDURE AND CONDUCT
OF BUSINESS IN LOK SABHA (SIXTH EDITION) AND PRINTED BY THE
MANAGER, LETTERPRESS UNIT, GOVERNMENT OF INDIA PRESS, MINTO
ROAD, NEW DELHI.

CORRIGENDA TO 180TH REPORT OF THE
PUBLIC ACCOUNTS COMMITTEE (8th LOK SABHA)

<u>PAGE</u>	<u>PARA</u>	<u>LINE</u>	<u>FOR</u>	<u>READ</u>
2	1.7	8	28	23
4	1.9	23	urgently	urgent
24	3	5	(8th L.	(8th L.S.)

CONTENTS

	PAGE
COMPOSITION OF THE PUBLIC ACCOUNTS COMMITTEE	(iii)
INTRODUCTION	(v)
CHAPTER I Report	1
CHAPTER II Recommendations and observations which have been accepted by Government	5
CHAPTER III Recommendations and observations which the Committee do not desire to pursue in the light of the replies received from Government	9
CHAPTER IV Recommendations and observations replies to which have not been accepted by the Committee and which require reiteration.	14
CHAPTER V Recommendations and observations in respect of which Government have furnished interim replies	18
APPENDIX I Statement showing classification of action taken notes received from Government	20
APPENDIX II Conclusions and Recommendations	21
PART II	
Minutes of the sitting of Public Accounts Committee held on 8-8-1989	23

COMMITTEE ON PUBLIC ACCOUNTS

(1989-90)

CHAIRMAN

Shri P. Kolandaivelu

MEMBERS

Lok Sabha

2. Shri Abdul Hannan Ansari
3. Shri Chhitubhai Gamit
4. Shri M. Y. Ghorpade
5. Shri Mohd. Ayub Khan
6. Shri Y. S. Mahajan
7. Shri Pratap Bhanu Sharma
8. Maj. Gen. R. S. Sparrow
9. Smt. Usha Rani Tomar
10. Dr. Chandra Shekhar Tripathi
11. Shri Vir Sen
12. Shri Yogeshwar Prasad Yogesh
- *13. Shri M. Mahalingam
- *14. Shri Vijay N. Patil
15. Dr. G. S. Rajhans

Rajya Sabha

16. Shri Rameshwar Thakur
17. Shri Jagesh Desai
18. Shri Surender Singh
19. Shri P. N. Sukul
20. Vacant**

*Elected w.e.f. 3-8-1989 *vice* Sarvashri Bh. Vijaykumar Raju, S. Jajal Reddy and Jafaruddin Chowdhary resigned from the Committee w.e.f. 10-5-1989, 12-5-1989 and 5-6-89 respectively.

**Due to resignation by Shri Parvathaneni Upendra from membership of the Committee w.e.f. 12-5-1989.

(iv)

21. Vacant. £

22. Vacant. £

SECRETARIAT

1. Shri G. L. Batra—*Joint Secretary*
2. Shri K. K. Sharma—*Director*
3. Shri A. Subramanian—*Sr. Financial Committee Officer*

£Due to resignation by Sarvashri Jaswant Singh and Virendra Verma from membership of the Committee w.e.f. 15-5-1989.

INTRODUCTION

I, the Chairman of the Public Accounts Committee as authorised by the Committee, do present on their behalf this Hundred and Eightieth Report on action taken by Government on the recommendations of the Public Accounts Committee contained in their 114th Report (Eighth Lok Sabha) relating to Extra expenditure due to delay in development of an equipment.

2. The Committee have been deeply concerned to note that though 17 years have already elapsed since sanction of the project in August, 1972 for development of equipment 'B', this equipment of great importance has not yet been made available for use with the Army and that the non-availability of the equipment has affected operational preparedness of the Army. Further the inordinate delay in the development of this equipment led to huge escalation in development cost from Rs. 53 lakhs sanctioned in 1972 to Rs. 265.92 lakhs to February, 1987. According to the Committee what is still more distressing is the fact that the limitations detected in the hybrid version of equipment 'B' during the trials of 1987 have not been removed so far. The Committee have emphasized the need that concerted efforts should be made by all concerned to ensure that the limitations detected in the hybrid version of the equipment are urgently removed to the satisfaction of the users. Effective and urgent steps should also be taken to ensure that the revised production schedule worked out by the Laboratory in conjunction with the production agency is strictly adhered to.

3. The Report was considered and adopted by the Public Accounts Committee at their sitting held on 8 August, 1989. Minutes of the sitting form Part II of the Report.

4. For facility of reference and convenience, the recommendations and conclusions of the Committee have been printed in thick type in the body of the Report and have also been reproduced in a consolidated form in Appendix II to the Report.

5. The Committee place on record their appreciation of the assistance rendered to them in the matter by the Office of the Comptroller and Auditor General of India.

NEW DELHI;
August 11, 1989.
Srivana 20, 1911 (S).

P. KOLANDAIVELU,
Chairman,
Public Accounts Committee.

CHAPTER I

REPORT

1.1 This Report of the Committee deals with the action taken by Government on the Committee's recommendations/observations contained in their report* on extra expenditure due to delay in development of an equipment.

1.2 The Committee's report contained 14 recommendations/observations. Action taken notes on all these recommendations/observations have been received from the Ministry of Defence (Department of Defence Research and Development). The action taken notes have been broadly divided into four categories as indicated in Appendix I.

1.3 The Committee hope that final replies to the recommendations in respect of which only interim replies have so far been furnished will be expeditiously submitted after getting them duly vetted by Audit.

1.4 In the succeeding paragraphs the Committee deal with action taken on some of their recommendations/observations.

****Delay in development of the equipment**

1.5 Project for the development of equipment 'B' by the R&D Establishment was sanctioned in August, 1972. The model of equipment 'B' was to be developed by R&D Establishment and made available for user trials by mid-1975 and thereafter for series production by mid-1977. The Committee had found that though more than 15 years had already elapsed since the sanction of the project in 1972, there was no specific indication about the time by which this equipment of great importance would be actually made available for use

*Hundred and Fourteenth Report (8th Lok Sabha) on Paragraph 24 of the Report of the Comptroller and Auditor General of India for the year 1985-86, Union Government (Defence Services).

**Sl. Nos. 2, 3 and 11, Paragraphs 22, 23 and 48 of 114th Report.

with the Army. It was also found that the inordinate delay in development of equipment 'B' led to huge escalation in developmental cost from Rs. 53 lakhs sanctioned in 1972 to Rs. 265.92 lakhs. The Committee had expressed their deep concern over the inordinate delay in the development of this equipment.

1.6 In their action taken note on Paragraph 22, the Ministry of Defence (Department of Defence Research and Development) have stated as follows:

"The development time for this equipment was estimated as three years. This equipment envisaged facilities like multi-target handling which even now is not available in most of the equipments supplied by advanced countries. Due to some of the grey areas in the development involved the laboratory model of the equipment got ready by September 1976 and was tried out in the field for technical evaluation in October 1976.

As a result of the above evaluation, it was found that certain design changes were necessary. After incorporating these changes, the model was again offered for user trials in March 1978. Due to certain shortcomings, the equipment was not acceptable to users and was taken back to the laboratory, reworked and was offered for retrials in January 1980, and final user trials were conducted in December 1980. The major features of multi-target capability was demonstrated satisfactorily during this phase. However, as regards the maximum range of detection and all-weather performance, there were some shortfalls. These are being examined by the Laboratory and a proposal to effect certain improvements both in regard to range and all-weather performance are being discussed with the Army HQ".

1.7 The non-availability of equipment 'B' has affected the operational preparedness to such an extent that a number of Army units had to remain equipped with the out-dated and cumbersome equipment 'A' and others had to be equipped with imported equipment 'C'. The Committee had recommended that atleast now serious, coordinated and time bound efforts should be made to ensure that the equipment was made available to the Army urgently. In the action taken note on Paragraph 28, the Ministry of Defence, (Department of Defence Research and Development) have *inter alia* stated as follows:

“Since the time of sanction of the project to the Laboratory, it is submitted that several stages of equipment trials have taken place, which has resulted in acquiring a significant amount of design information. The version which was tried out in 1978 proved in principle the concept of multi-target capability even though the performance of the equipment had fallen short in certain aspects. When the Army decided to import a limited number of equipments to meet their immediate requirements, DRDO decided to take advantage of the availability of equipment ‘C’ to propose development of a hybrid version to meet the future requirements of the Users.

Subsequent trials showed some deficiency in performance of the hybrid version, and it was therefore decided to carry out the necessary improvements. A tentative production plan and future course of action to overcome the deficiencies of the present model has been submitted to the Army HQrs. for early introduction of hybrid version of the equipment ‘B’ and it has been accepted by them. Army HQrs. have given the bulk production clearance for quantity 10 of the modified version of the equipment ‘B’ subject to successful evaluation of the equipment”.

1.8 The Committee’s earlier examination had also revealed that the state of development of the latest model of the hybrid version of equipment ‘B’ which the R&D Establishment had produced after, huge time and cost overrun still suffered from numerous limitations. In their action taken note on paragraph 48 the Ministry of Defence (Department of Defence Research and Development) have stated as follows:

“The limitations observed in the hybrid version of equipment ‘B’, as brought out during the trials of 1987, have been thoroughly discussed with the Army. It has been noted that, especially in regard to marginal improvement in range and all weather capability certain modifications are required. These have been examined, and a fresh proposal to develop and incorporate these modifications in the equipment ‘B’, as also a revised production schedule has been worked out by the Laboratory jointly in conjunction with the production agency. This proposal is presently under the active consideration of the Army HQrs.”

1.9 The Committee are deeply concerned to note that though 17 years have already elapsed since sanction of the project in August, 1972 for development of equipment 'B', this equipment of great importance has not yet been made available for use with the Army and that the non-availability of the equipment has affected operational preparedness of the Army. Further the inordinate delay in the development of this equipment led to huge escalation in development cost from Rs. 58 lakhs sanctioned in 1972 to Rs. 265.92 lakhs in February 1987. Thus a project which was expected to take 3 years has not yet materialised even after 17 years with huge escalation of cost is a matter of serious concern. This has also affected the operational preparedness adversely. What is still more distressing is the fact that the limitations detected in the hybrid version of equipment 'B' during the trials of 1987 have not been removed so far. In spite of the fact that the Committee had strongly recommended in their earlier report that serious, coordinated and time bound efforts should be made to ensure that the equipment is made available to the Army urgently, it is still not certain as to when the Army will be able to use indigenously developed and produced equipment. The Committee need hardly stress that concerted efforts should be made by all concerned to ensure that the limitations detected in the hybrid version of the equipment are urgently removed to the satisfaction of the user. Effective and urgent steps should also be taken to ensure that the revised production schedule worked out by the Laboratory in conjunction with the production agency is strictly adhered to.

CHAPTER II

RECOMMENDATIONS AND OBSERVATIONS WHICH HAVE BEEN ACCEPTED BY GOVERNMENT

Recommendation

The Committee are led to believe that the scientists of the R&D Establishment had taken up a challenge which they have not been able to quite cope with. The scientists, perhaps, carried away by their enthusiasm, over-estimated the scientific capability and infrastructure available in the country. It does not appear wise on the part of the R&D Establishment to take up this particular challenge by estimating the cost and time frames of Rs. 53 lakhs and 3 years for completing the development of equipment 'B' because both the estimates have been very wide off the mark. The Committee agree that it may not be possible to precisely estimate the cost and time frames for the completion of the research and development projects. But the estimate should be correct within certain limits and there should not be extraordinary escalations as have been in this case. Any scientific improvement has to be part of continuous upgradation. In this case the concerned agencies were obviously seeking to accomplish a quantum jump without having the necessary competence to do so. The Committee have an inescapable impression that serious efforts have not been made to give this equipment to the Army within a reasonable time frame. The Committee have no doubt that the concerted efforts of all concerned should be directed to ensure that the Army is equipped effectively all the time and is not made to suffer for the delay in the implementation of Research and Development Projects.

[Sl. No. 4 (Para 24) of Appendix III to 114th Report of PAC (8th Lok Sabha)]

Action Taken

Efforts are being made to ensure that the project proposals submitted by the Laboratories are technically evaluated by an expert committee to ensure that they are feasible and realizable within the projected time frame. Also, the Laboratories are being directed to conform to a well-planned cost scheduling in their projects to avoid undue cost escalations.

A high power committee under the Chief Controller R&D has been appointed for a thorough appraisal of the key R&D projects and their effective monitoring to avoid cost and time over-runs. This Committee would specifically review the causes for the delays in projects with a view to suggest a realistic plan so that all projects are carefully planned and executed satisfactorily. The Committee is expected to issue shortly comprehensive guidelines/recommendations streamlining the procedures for progressing of the R&D Projects.

[Ministry of Defence (Department of Defence Research and Development) letter No. Adm./6347/RD-26 (ii) dated 2-6-89]

Recommendation

The Committee are of the opinion that the rational way of assessing completion of a project would be to break down the objective into a number of small comprehensive activities/work packages and then estimate the time and cost requirement of each of these constituted activities based on past experience of similar activities. Only then it would be possible to correctly frame the time schedule and costing of Research Projects. The Committee hope that the Government will draw a lesson from the past experience and take adequate precautions in preparing time frame and cost estimates for Defence Research Projects so that there is no serious dislocation in defence preparedness due to delay in successful completion of these projects.

[Sl. No. 5 (Para 25) of Appendix III to 114th Report of PAC
(8th Lok Sabha)]

Action Taken

Our reply to Sl. No. 4 (Para 24) of Appedix III refers.

[Ministry of Defence (Department of Defence Research and Development) letter No. Adm./6347/RD-26 (ii) dated 2-6-1989]

Recommendation

Due to the inordinate delay in the development and consequently of production of equipment 'B' the Ministry had to accord sanction in April 1982 for the import/licence manufacture of some number of equipment 'C' at a cost of Rs. 28.10 crores. The Committee deprecate that this extra expenditure had perforce to be incurred to meet urgent operational requirements despite the fact that this make fell short of Army specifications.

[Sl. No. 7 (Para 39) of Appendix III to 114th Report of PAC
(8th Lok Sabha)]

Action Taken

As a result of user trials in 1978-79 and subsequent trials in 1980-81, it was noted that the equipment required certain modifications to improve the performance which would require certain time. As such, Government decided to import a certain minimum numbers of equipment 'C' to meet the urgent operational requirements of the Army. At the same time DRDO decided to take advantage of the availability of equipment 'C' to develop the hybrid version incorporating some good features of equipment 'C'.

[Ministry of Defence (Department of Defence Research and Development) letter No. Adm./6347/RD-26 (ii) dated 2-6-1989]

Recommendation

It is seen from the Annual Report of the Department of Defence Research and Development for the year 1986-87 that the research and development in DRDO has resulted in the production of defence items worth Rs. 1385 crores. The Committee are of the opinion that this figure is not encouraging for a big country like ours. The Committee recommend that foremost concern of the Research Department should be to achieve production capabilities based on our own research effort in the shortest possible time and on a much larger scale with appropriate budgetary support so as to reduce our foreign dependence as far as possible.

[Sl. No. 13 (Para 52) of Appendix III to 114th Report of PAC
(8th Lok Sabha)]

Action Taken

The cumulative production value of item worth Rs. 1385 crores upto March 1986 based on indigenous R & D work has arisen due to the investment of only Rs. 609 crores in DRDO from April 1961 to March 1981. Taken in this perspective, it is encouraging. This production figure will rise many fold when some of the major systems currently under development like missiles, tanks radars. Aircrafts etc., enter into production during 90's. Our dependence on foreign countries would thus be considerably reduced.

[Ministry of Defence (Department of Defence Research and Development) letter No. Adm./6347/RD-26 (ii) dated 2-6-1989]

Recommendation

It is also learnt that the Department has drawn its Perspective Plan for 1958—2000. The Committee hope that the implementation

of this perspective Plan is properly monitored so that time-frame and cost estimates are not subject to enormous variation, as had sadly happened in the instant case. These plans should also be reviewed every year in the light of performance and demand projections. It is imperative that serious efforts are made with a view to ensuring self reliance in Defence requirements indigenously as far as possible.

[Sl. No. 14 (Para 53) of Appendix III to 114th Report of PAC
(8th Lok Sabha)]

Action Taken

The perspective Plan 1985—90 of the Department seek to achieve self-reliance in defence technologies by the end of the century so that the nation is not forced to import defence systems for lack of indigenous capabilities. This will be achieved by not only strengthening the development base acquired over the past 25 years but by involving the industrial infrastructure of the country to the maximum possible extent.

The current five year plan 1985—90 is the first module of the Perspective Plan. Based on the performance during this Plan period, the next plan for the period 1990—95 would be drawn. It is also proposed to institute a system of monitoring of the plan so as to minimise variation between projections and actual performance. In addition, system of project monitoring based on anticipatory approach is being implemented which will considerably reduce variation in time/cost frame.

[Ministry of Defence (Department of Defence Research and Development) letter No. Adm./6347/RD-26(ii) dated 2-6-1989]

CHAPTER III

RECOMMENDATIONS AND OBSERVATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN THE LIGHT OF THE REPLIES RECEIVED FROM GOVERNMENT

Recommendation

The very fact that the Government took more than two years to accord approval in August 1972 to this QR goes to prove the lackadaisical approach of the Government from the initial stage itself in meeting the urgent requirement of the Army. The Committee desire that such delays must be eliminated in future in the interest of the country's defence preparedness and recommend that appropriate changes should be made in the decision making procedure to achieve this end.

[Sl No. 1 (Para 10) of Appendix III to 114th Report of PAC
(8th Lok Sabha)]

Action Taken

It is stated that based on the operational requirements prepared by Director General of Military Operations and the then state of art (as assessed by the Laboratory), the Artillery Directorate formulated the draft GSQR in April, 1970. This was discussed with the DRDO laboratory and the DRDO HQ over a period of time and a revised draft issued in January, 1971 for examination by concerned agencies. Based on comments received from various agencies, a final draft GSQR was issued in March 1972 and placed before GSEPC (General Staff Equipment Policy Sub-Committee) in April 1972 and GSEPC (General Staff Equipment Policy Committee) in August 1972 for approval. This time period presently involved in finalising the GSQR's is constantly being reviewed by Army HQrs. On discussion with Army HQrs the position emerge as under:—

As a general guiding principle, the draft GSQR initially floated by the users is discussed with the development agency in considerable detail, in order to ensure that the various technical parameters are realisable by indigenous development and yet at the same time are reasonably

state-of-art. This exercise tends to take considerable time, when dealing with major systems like a radar system for field use, where not only a number of electronic equipments are involved, but also mechanical/electromechanical parts, vehicles, generators etc., are involved.

Since frequently the development agency desires a certain relaxation/concession in some of the individual technical parameter specifications which have to be thrashed out by the users/designer, it is difficult to reduce this time taken significantly. However, attempts are being made to progressively reduce the overall cycle through more frequent and effective interaction between all the agencies concerned. It will be appreciated that the time for finalising a QR can be widely different for different types of system. Whereas a purely standalone electronic sub-system of system can be configured to an agreed GSQR in a relatively short time, when a fulfilled radar system is involved, the time taken tends to be much longer.

However, it is submitted that a thorough and detailed technical dialogue between the User-Services and the developing agency at the QR formulation stage itself helps to clarify many grey areas and enable formulation of QR for a system which has a better chance of being fully realized.

[Ministry of Defence (Department of Defence Research and Development) letter No. Adm./6347/RD-26 (ii) dated 2-6-1989]

Recommendation

The disquieting feature distinctly noticed by the Committee is that no serious efforts appear to have been made either by the Army or the R & D Establishment to keep themselves abreast of the position relating to development and availability of equipment 'C' even though the original GSQR for equipment 'E' was more or less akin to equipment 'C'. Had this been done the proposal approved in March 1980 for importing equipment 'C' for trial would have been initiated much earlier and a lot of delay in the development of equipment 'B' could have been avoided. The decision taken in 1982 for incorporating some of the good features of equipment 'C' in the development of hybrid version of equipment 'B' could have been taken much earlier as the original GSQR for equipment 'B' was claimed to be akin to equipment 'C'. The Committee are of the

opinion that there is no real coordination between the various agencies and there was complete lack of planning in the R & D establishment. The Committee would urge the Government to take steps to ensure that research programmes are drawn up realistically having regard to the available technological competence, domestic industrial infrastructure, availability of foreign know how, components etc. a time bound packages with well defined objectives and responsibilities. The Committee also desire that effective monitoring of all such research programme to be made routinely and at frequent intervals.

[Sl. No. 6 (Para 32) of Appendix III to 114th Report of PAC
(8th Lok Sabha)]

Action Taken

To keep ourselves abreast of the position regarding development and availability of similar equipments from foreign sources, the choice available was very much limited during the period prior to 1980. There was only one other equipment, apart from equipment 'C' of this class. This was of a foreign origin, was much costlier and was unlikely to be available to us as this itself was in troop trials stage in 1979 in that country.

Equipment 'C' became available in 1980, for the first time. when it was brought to the country for user evaluation. Soon after, adequate technical information of this equipment became available as a result of user evaluation and subsequent studies in 1981. A plan of action for taking up development of hybrid version by incorporating some of the features of equipment 'C' could be only finalised by 1982.

As regards planning, execution and review of Defence R & D Projects, an elaborate system of monitoring and review exists in Department of Defence Research and Development. These processes are being further stream-lined to make them more effective. Laboratories are now required to plan their projects by carrying out a preliminary study of the technological base available in the country for taking up these projects and also carry out detailed feasibility studies before undertaking major projects with specific commitments. In addition, the projects would be examined in detail from the point of view of cost and time over runs. Realistic assessments of the cost of each sub-activity in the project would be carefully worked out while keeping in view the availability of funds, time for scrutiny by R & D HQrs, timely release of FE, time taken for getting approval at various levels and procurement of components and materials from various sources etc.

A high power Committee under Chief Controller R & D has been appointed to go into all these aspects afresh and issue new guidelines for progressing and effective monitoring of the projects. The Committee is expected to submit its report shortly.

[Ministry of Defence (Department of Defence Research and Development) letter No. Adm./6347/RD-26(ii) dated 2-6-1989]

Recommendation

The inordinate delay in development of equipment 'B' led to huge escalation in development cost from Rs. 53 lakhs to Rs. 265.92 lakhs. The equipment is still under trials and the trials so far held have indicated that some more steps are required to be taken by R & D Establishment to improve its functioning which would naturally involve some additional expenditure. Further, the estimated cost of the hybrid version of equipment 'B' and indigenous production cost of equipment 'C' would be Rs. 126 lakhs and Rs. 140 lakhs respectively in 1989-90, as against the initially estimated cost of Rs. 20 lakhs for productionised version of equipment 'B'. The disproportionate escalation in costs is indicative of the fact that the authorities concerned did not have a clear conception of the amount of development efforts required at the time of initial estimation.

[Sl. No. 10 (Para 44) of Appendix III to 114th Report of PAC
(8th Lok Sabha)]

Action Taken

After 1980-81 user trials of equipment 'B', it was decided to develop a hybrid version of equipment 'C' by incorporating certain good features of equipment 'C' into equipment 'B'. As such, the cost of the project Rs. 53.0 lakhs sanctioned in 1972 was enhanced to Rs. 265.92 lakhs. The enhanced cost caters for Rs. 86.9 lakhs towards acquiring one number equipment 'C' for study and conversion of equipment 'B' into hybrid version and another Rs. 96.72 lakhs were paid to M/s. BEL towards cost of engineering effort for the hybrid version.

[Ministry of Defence (Department of Defence Research and Development) Letter No. Adm./6347/RD-26(ii) dated 2-6-1989]

Recommendation

With a view to achieving the aims of any research and development project of this nature within any practicable time-frame, it is imperative that the research projects are not only properly formulated

at the initial stage but their progress is also effectively monitored till final completion. On analysis of the different stages in the execution of the project, it is felt that none of these aspects have been adequately taken care of. The Committee would recommend that the Department should make an indepth study of the problems faced by them in the implementation of this project and evolve detailed methodologies for ensuring comprehensive and periodic review and appraisal of all research project proposals in terms of detailed planning, coordination, progression and monitoring not only to reduce incidence of cost and time over run but also to make the country self-reliant in the field of modern technology.

[Sl. No. 12 (Para 51) of Appendix III to 114th Report of PAC
(8th Lok Sabha)]

Action Taken

Our reply to Sl. No. 6 (Para 32) refers.

[Ministry of Defence (Department of Defence Research and Development) Letter No. Adm./6347/RD-26 (ii) dated 2-6-1989]

CHAPTER IV

RECOMMENDATIONS AND OBSERVATIONS REPLIES TO WHICH HAVE NOT BEEN ACCEPTED BY THE COMMITTEE AND WHICH REQUIRE REITERATION

Recommendation

The Committee are deeply concerned to note the inordinate delay in the development of equipment 'B'. According to the original estimates this equipment was to be made available for user trials by mid 1975 and thereafter for series production by mid 1977. More than 15 years have already elapsed since the sanction of the project in August, 1972, there is no specific indication about the time by which this equipment of great importance would be actually made available for use with the Army. The Committee are not convinced with the contention of the Department that in such cases involving front-line technologies and where assistance cannot be sought from other countries it is difficult to precisely estimate the time frame for fully developing such a sophisticated item to meet the stringent requirements of the Army. The stringent requirements projected by the users in 1970 and approved in 1972 were fully known to the R&D Establishment, when the commitment was made in 1972 that the development would require a period of 3 years from the date of sanction.

[Sl. No. 2 (Para 22) of Appendix III to 114th Report of PAC
(8th Lok Sabha)]

Action Taken

The development time for this equipment was estimated as three years. This equipment envisaged facilities like multi-target handling which even now is not available in most of the equipments supplied by advanced countries. Due to some of the grey areas in the development involved the laboratory model of the equipment got ready by September 1976 and was tried out in the field for technical evaluation in October 1976.

As a result of the above evaluation, it was found that certain design changes were necessary. After incorporating these changes,

the model was again offered for user trials in March 1978. Due to certain shortcomings, the equipment was not acceptable to users and was taken back to the laboratory, reworked and was offered for retrials in January 1980 so the final user trial was conducted in December 1980. The major features of multi-target capability was demonstrated satisfactorily during this phase. However, as regards the maximum range of detection and all-weather performance, there were some shortfalls. These are being examined by the Laboratory and a proposal to effect certain improvements both in regard to range and all-weather performance are being discussed with the Army HQ.

[Ministry of Defence (Department of Defence Research and Development) letter No. Adm/6347/RD-26 (ii) dated 2-6-1989]

Recommendation

The Committee believe that the ultimate aim of all Defence Research and Development efforts is to attain production capability within a reasonable time span so that the country becomes self-reliant in vital defence equipment. The hard fact remains that even today after 15 years of Research and Development efforts the Army has not been provided with this equipment and it is still not certain as to when the Army will be able to use indigenously developed and produced equipment. The non-availability of equipment 'B' has affected the operational preparedness to such an extent that a number of Army units had to remain equipped with the out-dated and cumbersome equipment 'A' and others had to be equipped with imported equipment 'C'. The Committee strongly recommend that atleast now serious co-ordinated and time bound efforts should be made to ensure that the equipment is made available to the Army urgently.

[Sl. No. 3 (Para 23) of Appendix III to 114th Report of PAC
(8th Lok Sabha)]

Action Taken

As mentioned in the oral presentation, this project had envisaged development of a state-of-art technology equipment with multi-target capability. It may kindly be noted that such equipments are not available in most of the countries in the world. Hence when DRDO undertook this difficult task, the intention was to realise the best equipment for the Services. In view of the high technology and several grey areas involved, some delays have taken place, but the laboratory have been steadily building up the quality of the equipment offered for trials.

Since the time of sanction of the project to the Laboratory, it is submitted that several stages of equipment trials have taken place, which has resulted in acquiring a significant amount of design information. The version which was tried out in 1978 proved in principle the concept of multi-target capability even though the performance of the equipment had fallen short in certain aspects. When the Army decided to import a limited number of equipments to meet their immediate requirements, DRDO decided to take advantage of the availability of equipment 'C' to propose development of a hybrid version to meet the future requirements of the Users.

Subsequent trials showed some deficiency in performance of the hybrid version, and it was therefore decided to carry out the necessary improvements. A tentative production plan and future course of action to overcome the deficiencies of the present model has been submitted to the Army HQrs for early introduction of hybrid version of the equipment 'B' and it has been accepted by them. Army HQrs have given the bulk production clearance for quantity 10 of the modified version of the equipment 'B' subject to successful evaluation of the equipment.

[Ministry of Defence (Department of Defence Research and Development) letter No. Adm/6347/RD-26 (ii) dated 2-6-1989]

Recommendation

The Committee conclude from the above facts that the state of development of the latest model of the hybrid version of equipment 'B' which the R&D Establishment have produced after huge time and cost overrun still suffers from numerous limitations. It is not certain as to within what time span these limitations would finally be removed to meet the user's requirements. The Committee also take note of the fact that even the hybrid version of equipment 'B' does not overcome the problem of low angle detection of guns. For these reasons proposal for a new Weapon-finder equipment has been initiated, which is presently under study at the R&D establishment. The Committee hope that the Government would closely monitor the implementation of this project and take appropriate steps to prevent the slippages/deficiencies.

[Sl. No. 11 (Para 48) Appendix III to 114th Report of PAC
(8th Lok Sabha)]

Action Taken

The limitation observed in the hybrid version of equipment 'B', as brought out during the trials of 1987, have been thoroughly discussed with the Army. It has been noted that, especially in regard to marginal improvement in range and all-weather capability, certain modifications are required. These have been examined, and a fresh proposal to develop and incorporate these modifications in the equipment 'B', as also a revised production schedule has been worked out by the Laboratory jointly in conjunction with the production agency. This proposal is presently under the active consideration of the Army HQrs.

As regards the proposal for a new equipment, the Laboratory is currently studying the desired specifications of this equipment. After a critical analysis of the feasibility of undertaking and completing this project in a time-bound programme, the project proposal of the Laboratory will be referred to the Users and a fresh project will be sanctioned after getting their concurrence. The project will be carefully monitored.

[Ministry of Defence (Department of Defence Research and Development) letter No. Adm/6347/RD-26 (ii) dated 2-6-1989]

CHAPTER V

RECOMMENDATIONS AND OBSERVATIONS IN RESPECT OF WHICH GOVERNMENT HAVE FURNISHED INTERIM REPLIES

Recommendation

It is also regrettable that the performance of indigenously produced equipment 'C' is inferior to that imported from abroad. The authorities have not yet been able to locate the reasons for this and the matter is reported to be under investigation.

[Sl. No. 8(para 40) of Appendix III to 114th Report of
PAC (8th Lok Sabha)]

Action Taken

As regards the relative performance of the indigenously produced version of equipment 'C' vis-a-vis the imported units, it has been decided by Army HQrs to hold comparative trials of both the equipments to compare their performance.

A study team is being formed by the users to study and analyse the performance of the two equipments and suggest remedial measures/actions.

[Ministry of Defence (Department of Defence Research and Development) letter No. Adm./6347/RD-26(ii) dated 2-6-1989]

Recommendation

The Committee are of the opinion that the deficiencies in the indigenous manufacture of equipment should be not only investigated but the reason thereof critically analysed, so that the causes of deficiency are identified and removed with due promptitude and measures taken to avoid such deficiencies/lapses in future. The Committee would like to be apprised of the results of such investigation and analysis.

[Sl. No. 9 (Para 41) of Appendix III to 114th Report of
PAC (8th Lok Sabha)]

Action Taken

Our reply to Sl. No. 8 (Para 40) of Appendix III refers.

[Ministry of Defence (Department of Defence Research and Development) letter No. Adm./6347/RD-26(ii) dated 2-6-89]

NEW DELHI;

August 11, 1989

Shravana 20, 1911 (S)

P. KOLANDAIVELU,

Chairman,

Public Accounts Committee.

APPENDIX I

(Vide Para 1.2)

***Statement showing classification of action taken notes received
from Government***

- (i) Recommendations and observations which have been accepted by Government;
Sl. Nos. 4, 5, 7, 13 and 14.
- (ii) Recommendations and observations which the Committee do not desire to pursue in the light of the replies received from Government;
Sl. Nos. 1, 6, 10 and 12.
- (iii) Recommendations and observations replies to which have not been accepted by the Committee and which require reiteration;
Sl. Nos. 2, 3 and 11.
- (iv) Recommendations and observations in respect of which Government have furnished interim replies;
Sl. Nos. 8 and 9.

APPENDIX II

Conclusions and Recommendations

Sl. No.	Para No.	Ministry/Department Concerned	Conclusion /Recommendation
1	2	3	4
1	1.3	Defence (Department of Defence Research and Development)	The Committee hope that final replies to the recommendations in respect of which only interim replies have so far been furnished will be expeditiously submitted after getting them duly vetted by Audit.
2	1.9	Defence (Department of Defence Research and Development)	The Committee are deeply concerned to note that though 17 years have already elapsed since sanction of the project in August, 1972 for development of equipment 'B', this equipment of great importance has not yet been made available for use with the Army and that the non-availability of the equipment has affected operational preparedness of the Army. Further the inordinate delay in the development of this equipment led to huge escalation in development cost from Rs. 53 lakhs sanctioned in 1972 to Rs. 265.92 lakhs in February 1987. Thus a project which was expected to take 3 years has not yet materialised even after 17 years with huge escalation of cost is a matter of serious concern. This has also affected the operational preparedness adversely. What is still more distressing is the fact that the limitations detected in the hybrid version of equipment 'B' during the trials of 1987 have not been removed

-do-

so far. In spite of the fact that the Committee had strongly recommended in their earlier report that serious, coordinated and time bound efforts should be made to ensure that the equipment is made available to the Army urgently, it is still not certain as to when the Army will be able to use indigenously developed and produced equipment. The Committee need hardly stress that concerted efforts should be made by all concerned to ensure that the limitations detected in the hybrid version of the equipment are urgently removed to the satisfaction of the users. Effective and urgent steps should also be taken to ensure that the revised production schedule worked out by the Laboratory in conjunction with the production agency is strictly adhered to.

PART II

MINUTES OF THE 7TH SITTING OF THE PUBLIC ACCOUNTS COMMITTEE HELD ON 8-8-1989

The Committee sat from 1500 hrs. to 1520 hrs.

PRESENT

Maj Gen. R. S. Sparrow—*In the Chair*

MEMBERS

2. Shri Abdul Hannan Ansari
3. Shri M. Y. Ghorpade
4. Shri Y. S. Mahajan
5. Smt. Usha Rani Tomar
6. Dr. Chandra Shekhar Tripathi
7. Shri Vijay N. Patil
8. Dr. G. S. Rajhans
9. Shri Rameshwar Thakur
10. Shri Jagesh Desai
11. Shri Surender Singh
12. Shri P. N. Sukul

SECRETARIAT

1. Shri G. L. Batra—*Joint Secretary*
2. Shri K. K. Sharma—*Director*
3. Shri A. Subramanian—*Senior Financial Committee Officer*

REPRESENTATIVES OF AUDIT

1. Shri R. Parameswar—*Addl. Dy. CAG*
2. Shri S. B. Krishnan—*Director (Reports)*
3. Shri R. V. Bansod—*Principal Director of Audit (DS)*
4. Shri Baldev Rai—*Director of Audit (AF&N)*
5. Shri R. Ramanathan—*Director (INDT)*
6. Shri Arjun Thapan—*Joint Director of Audit (AFN)*

7. Shri R. P. Singh—*Joint Director of Audit (DS)*

8. Shri S. K. Gupta—*Joint Director of Audit (INDT)*

2. In the absence of Chairman, the Committee chose Maj. Gen. R. S. Sparrow to act as Chairman for the sitting.

3. The Committee considered and adopted the following draft Action Taken Reports:

(i) * * *

(ii) * * *

(iii) Action Taken Report on 114th Report of PAC (8th L) re. Extra expenditure due to delay in development of equipment.

4. * * *

5. The Committee authorised the Chairman to finalise the draft Reports (indicated in paragraph 3) in the light of verbal and consequential changes arising out of factual verification by audit and present the same to the House.

The Committee then adjourned.

