HUNDRED AND FIFTY-SIXTH REPORT

PUBLIC ACCOUNTS COMMITTEE (1982-83)

(SEVENTH LOK SABHA)

ESTABLISHMENT OF PRODUCTION FACILITIES FOR AN AMMUNITION

MINISTRY OF DEFENCE DEPARTMENT OF DEFENCE PRODUCTION



Presented in Lok Sabha on 29-4-1983

Laid in Rajya Sabha on 29-4-1983

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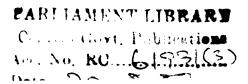
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(PART II*)

Minutes of sittings of the Committee held on:-

21.12.1982

26.4.1983



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- 2. Shri K.C. Rastogi Chief Financial Committee Officer
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INTRODUCTION

- I. The Chairman of the Public Accounts Committee as authorised by the Committee do present on their behalf this Hundred and Fifty-Sixth Report on paragraph 9 of the Report of Comptroller and Auditor General of India for the year 1980-81, Union Government (Defence Services) on establishment of production facilities for an ammunition.
- 2. The Report of the Comptroller and Auditor General of India for the year 1981-82, Union Government (Defence Services) was laid on the table of the House on 5 April, 1982
- 3. The Committee's examination has revealed that there has been complete lack of planning and care in the execution of the project for establishing facilities for indigenous production of the ammunition for a new medium range imported gun meant for attaining self-sufficiency in a vital area. Apart from escalation in the cost of the project to the tune of Rs. 6.53 crores, huge additional expenditure had to be incurred in foreign exchange by resorting to import of the ammunition to the tune of Rs. 21.50 crores and import of components worth Rs. 699.87 lakhs which could have been avoided had the project progressed as per schedule. This is a matter of serious concern. The manner of utilisation of funds ungrudgingly voted by Parliament for such defence projects leaves much to be desired. The Committee have recommended that the lapses in the execution of the project should be brought to the notice of the highest level and remedial measures taken to avoid recurrence.
- 4. The Committee (1982-83) examined paragraph 9 at their sitting held on 21 Dcember, 1982. The Committee considered and finalised the Report at their sitting held on 26 April, 1983. Minutes of the sitting from Part II* of the Report.
- 5. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in thick type in the body of the Report and have also been reproduced in a consolidated form Appendix to the Report.

^{*}Not printed. (One cyclostyled copy laid on the Table of the House and five copies placed in Parliament Library).

- 6. The Committee would like to express their thanks to the officers of the Ministry of Defence (Deptt. of Defence Production) for the cooperation extended by them in giving information to the Committee.
- 7. The Committee place on record their appreciation of the assistance rendered to them in the matter by the Officers of the Comptroller and Auditor General of India.

New Delhi:

April 27, 1983

Vaisakha 7, 1905 (S)

SATISH AGARWAL

Chairman

Public Accounts Committee

REPORT

ESTABLISHMENT OF PRODUCTION FACILITIES FOR AN AMMUNITION

(Audit Paragraph)

Introduction

- 1.1 A new medium range gun had been introduced in service since 1966. Both the new gun and its ammunition were, however, being imported from a foreign country. As the new gun was expected to be in service for the next 20 years or so, it was proposed (1965) to establish facilities for indigenous production of the ammunition to achieve self-snfficiency. According to the Ministry of Defence (November 1980), the gun would remain in service at least till the end of this century. In November 1965, a contract was concluded with the foreign country for supply of licence and technical documentation for the establishment of indigenous production of the ammunition. The documentation was received by Government in April-May, 1966.
- 1.2 In April 1968, it was decided in a Defence Ministry Production Committee (DMPC) meeting the set up facilities for production of 5,000 rounds of both HE and AP types of the ammunition in a single shift of 8 hours per month. In July 1968, a contract was coucluded with the foreign country for supply of 8 items (16 numbers out of 159 numbers required) of plant and machinery at a cost of Rs. 5.43 lakhs. In February 1969, a protocol was signed for preparation of a limited technical project report (LTPR) to cover the technological process of production of shell body and cartridge case as well as of filling of fuze detonator and primer. In June 1969, it was decided to restrict the production to 5,002 rounds of HE type ammunition only as the AP type was not required to be produced indigenously. The foreign country was requested to prepare the LTPR accordingly.
- 1.3 Meanwhile, in view of delay in finalising the project report by the foreign country, the DMPC decided (July 1971) with the approval of the Defence Production Board (October 1971) that the Director General, Ordance Factories (DGOF) should go ahead with the import of plant and machinery from other sources, if assistance from the foreign country was not forthcoming. The project was finally sanctioned in October 1972 at

a total cost of Rs. 16.47 crores comprising plant and machinery (Rs. 12.27 crores), civil works (Rs. 3.50 crores) and inventory items/contingencies (Rs. 0.70 crores). It envisaged production of 5,000 rounds of HE type ammunition in a single shift of 8 hours per month in three factories, viz., Factory 'A' (shell body), factory 'B' (cartridge case) and factory 'C' (final assembly and filling of shell, cartridge case and fuze). Empty fuze required for the ammunition had already been decided (1969-70) to be produced in factory 'A'. However, according to the Minlstry (November 1981), the production of fuze in small quantity could be expected only in the year 1980-81.

1.4 The project was expected to be completed within 5 years from the date of its sanction (by October 1977). The date of completion of the project was revised to August 1978 and finally to June 1984. The production cost of the ammunition was then (May 1972) estimated to be Rs. 1,100 per round against the then import price of Rs. 1,350 per round.

Execution of the project

1.5 Till February 1978, 2 administrative approvals for civil works aggregating Rs. 304.66 lakks had been issued, the details of which are indicated below:

Factory	Month of issue of of administrative approval with cost	Probale date of completion	Actual date of completion
ʻA'	February 1978* (Rs. 39.12 lakhs)	September 1978	October 1978
' B'	October 1973** (Rs. 97.50 lakhs)	December 1975	June 1976
,C,	November 1973** (Rs. 168.04 lakhs)	March 1976 .	October 1976

^{*}Deley in issue of administrative approval was due to delay in finalisation of procurement action for shell forge plant, for which the works were intended.

^{**}Delay in issue of approval was due to time taken in processing of cases for government snaction.

- 1.6 The administrative approval of November 1973 pertaining to factory 'C' provided for part air-conditioning of the shell filling shop at a cost of Rs. 6.62 lakhs. The works were completed in October 1976, but without air-conditioning as it was not considered (May 1974) to be a technical necessity at a temperature of 60 degree centigrade. However, later (August 1977) it was decided to air-condition the building as the operators felt uncomfortable in working continuously on the plant and as other forms of forced ventilation could not be adopted due to presence of explosive dust. In November 1978, therefore, a supplementary approval was issued by Government for air-conditioning of the shop involving additional cost of Rs. 10.68 lakhs. In July 1980, the Ordinance Factory Board (OFB) revised the approved cost upwards under its own powers to Rs. 16.03 lakhs due to increase in tendered rates and non-acceptance of an offer before its date of validity (20th February 1980).
- 1.7 Consequent on delay in obtaining financial concurrence, the air-conditioning work was completed in July 1981 but plant was yet to be commissioned (October 1981).

1.8 The position of plant and machinery (excluding accessories) in respect of the 3 factories as on 31st March 1981 was as under:—

	Factory 'A'	Factory 'B'	Factory 'C'	Total
(i) Number initially assessed as required	75*	56	97	228
(ii) Number finally assessed as required	114	57**	166	337
(iii) Number ordered	8 8	55	160	303
(iv) Number received	78	52	156	286
(v) Number installed/ commissioned	73	48	136	2 57

^{*}Includes 16 numbers contracted for in July 1968.

^{**}Includes and additional tapering press for cartridge case shop at factory 'B' sanctioned for procurement (Rs. 44 lakhs) by Government in April 1981. According to the Ministry (November 1981), the press was was not meant for this project whereas the Government sanction indicated that it was meant for this project.

- 1.9 In October 1980, the project estimate was revised from Rs. 16.47 crores (1972) to Rs. 23 crores comprising plant and machinery (Rs. 17.97) crores), civil works (Rs. 4.73 crores) and inventory items/conplingencies (Rs. 0.30 crores). The increase (Rs. 5.70 crores) in the cost of plant and machinery had been attributed to escalation of price between the period of preparation of estimates and actual procurement as well as to additional requirement, and in that of civil works (increase: Rs. 1.23 crores) to additional requirement for shell forge shop in factory 'A' and for production of smoke pellets in factory 'C'
- 1.10 The expenditure booked against the project up to 31 March 1981 was Rs. 15.43 crores comprising plant and machinery (Rs. 12.30 crores) and civil works (Rs. 3.13 crores).
- 1.11 Production—During Jaunary 1974 to April 1978, the Army authorities placed 5 indents on the DGOF for total 2.33 lakh rounds of the ammunition. The DGOF planned (July 1976/1977) to produce 2,675 lakh rounds during 1976-77 (500 rounds), 1977-78 (2 000 rounds), 1978-79 (15,000 rounds), 1979-80 (50,000 rounds), 1980-81 (1 lakh rounds) and 1981-82 (1 lakh rounds) although some vital items of plant and machinery were yet to be received and/or commissioned. According to latest indication (November 1981), however, 5'000 rounds (1979-80) and 11,000 rounds (1980-81) were produced and issued. The production planned for 1981-82 was 25,000 rounds. According to the Ministry (November 1981) the shortfall in production was due to shortage of shell forging and also problems of selection/procurement of material for fuze body. As on 31st March 1981, the position in the 3 factories was as under:—
- 1.12 Factory 'A'—During December 1973 to April 1979, it received 6 demands aggregating 1,99,500 numbers of shell body from factory 'C' production against which was expected (February 1972) to commence by October 1976 with the commissioning of the shell forge plant. The plant was ordered on a Government undertaking in June 1977 at a cost of Rs. 4.13 crores after issue of a letter of intent earlier in December 1976 and it was received during July to December 1978. But It was yet to be commissioned and taken on charge (November 1981). The delay in ordering the plant was attributed by the Ministry (November 1980) to delay on its part in taking a decision (April 1975) for procurement of the plant with a capacity for forging of higher calibre shells, together with the time taken by the DGOF in discussing technical aspects of the offers received and provision of additional funds for the purpose.

- 1.13 Factory 'A' produced 400 numbers of shell in 1976-77, 1,095 numbers in 1977-78, 1,000 numbers in 1978-79, 1,995 numbers in 1979-80 and 510 numbers in 1980-81 from 5,000 'numbers of imported shell body (2,500 numbers bottled and 2,500 numbers unbottled) received during May to July 1975 at a cost of Rs. 14.81 lakhs under a supplementary contract concluded with foreign country in October 1974. During 1980-81, it produced in addition 5,680 numbers of shell indigenously. Thus, factory 'A' could produce, in all, 10,680 numbers of shell against a demand of 1,99,500 numbers.
- 1.14 For fuze, Factory 'A' received demands for 3,40,190 numbers during December 1972 to April 1979 from factory 'C' and produced 22,522 numbers (256 numbers in 1977-78, 2,692 numbers in 1978-79, 11,764 numbers in 1979-80 and 7,810 numbers in 1980-81).
- 1.15 Other points of interest noticed in factory 'A' were as follows:—
 - (i) On the basis of a request of the Army authorities, it was decided by the Ministry (May 1977) to set up a capacity of 2 lakh numbers of shell per annum in factory 'A' covering 20,000 numbers forged shell and 17,000 numbers of finished shell per month. However, the capacity of the shell forge plant ordered (June 1977) was 72,000 numbers in a single shift of 8 hours assuming 50 percent efficiency. According to the Ministry (November 1981), it was decided in December 1978 that the production of ammunition should be restricted to 1.20 lakh rounds per annum in two shifts and that the balance requirements should be imported.
 - (ii) In addition to the import of 5,000 numbers of shell body as indicated above, and against a demand submitted by factory 'A' in March 1977 for 60,000 numbers of forging (15,000 numbers unbottled and 45,000 numbers bottled) estimated to cost Rs. 1.57 crores, 7,500 numbers of unbottled forging valued at Rs. 32.32 lakhs were received from the foreign country in August-September 1979 under a supplementary contract of August 1978; out of 500 numbers (bottled) of this forging earlier ordered by the DGOF in April 1978 at a cost of Rs. 3.37 lakhs 382 numbers were received in August 1980 and the balance quantity was yet to be received (Novee-Imb 1981) that the remaining

52,000 numbers could not be ordered since the foreign country expressed its inability to supply, having gone out of production.

- (iii) For indigenous production of shell, factory 'A' placed an order (September 1975) on trade for 600 tonnes of steel of a particular specification and against it, 640 tonnes (cost: Rs. 29.78 lakhs) were received during February 1976 to March 1977. In March 1977, the Chief Inspector acting as the authority holding sealed particulars (AHSP), however, deleted the specification indicated in the order although it was originally approved by it. In October 1978, another order was placed on trade for 1,000 tonnes of steel of specification as prescribed subsequently by the AHSP at a cost of Rs. 49.75 lakhs, against which 1,043 tonnes were received during September 1979-September 1981 (50 tonnes were used for commissioning trials of the plant up to October 1980 and 602 tonnes were drawn for use in production up to March 1981). Further orders were placed on trade in Nobember 1979 and December 1980, 3,560 tonnes of steel of the latter specification at a total cost of Rs. 231.40 lakhs under normal procedure in anticipation of commissioning of the steel forge plant in the later half of 1980, 1,274 tonnes (Rs. 82.81 lakhs) were received against these orders during September 1980—July 1981. Out of 2,957 tonnes of steel received up to July 1981, 2,024 tonnes (cost: Rs. 118.96 lakhs) were yet to be used (November 1981) This included 359 tonnes (cost: Rs. 10,70 lakhs) lying unused since March 1977.
- 1.16 Factory 'B'—During December 1973 to April 1979 it received 6 demands for total 1,75,500 numbers of cartridge case. Against the first demand for development of 500 numbers, 415 numbers were completed by February 1978 and issued in June 1979 after acceptance by Services Inspector against the expected date of commencement of production by June 1977 and the balance quantity was yet to be completed (November 1981). Besides, 5,500 numbers of blanks were produced in February 1979. There was no futher production (November 1980) due to non-commissioning of an induction annealing furnace imported from the foreign country in November 1974 (cost; Rs. 6.50 lakhs). The furnace could not be commissioned due to not ordering, at the same time, a high frequency generating set and its controlling equip-

ment as it was assumed in the absence of full details from the foreign country that the same would be supplied complete in all respects. This omission was pointed out by factory 'B' only on receipt of the furnace. Efforts to procure them from the foreign country having failed, action was initiated in August 1976 for their procurement from trade sources, and finally in January 1977 an order was placed on a trade firm for import at cost of Rs. 4.63 lakhs. The supply was received in Decmber 1977—January 1978 and the furnace was commissioned in August 1978, but it was taken on charge in November 1979 after pre-commissioning trials. During August 1980 to March 1981, two orders for 11,500 numbers of blanks and one order for 10,000 numbers of new cartridge case were placed by factory 'B'. According to the Ministry (November 1981), the factory produced 9,500 blanks in 1979-80 and 18,625 new cartridge cases in 1980-81. Production planned during 1981-82 for new case and blanks was 12,000 numbers and 18,000 numbers respectively.

- 1.17 Other points of interest in factory 'B' were as follows:
- (i) 5,000 numbers of sillicon brass blank (cost: Rs. 17.73 lakhs) alongwith other items were ordered for import from the foreign country under a supplementary contract concluded in July 1977 (total value of contract: Rs. 185.43 lakhs), of which 4,707 numbers (cost: Rs. 16.69 lakhs) received in February 1979 were lying in stock unused due to technical reasons; the balance quantity (cost: Rs. 1.04 lakhs) had been pilfered in transit.
- (ii) Cartridge case was planned to be produced by factory 'B' with 70/30 brass blanks. No extra capacity was created for melting and blanking under this project and for supply of blanks to factory 'A' trade assistance was being obtained. This position would continue till such time as an augmentation, project for brass melting and strip making in the factory senctioned in August 1978 was commissioned (target date is August 1982) and would thus affect the production schedule of cartridge case.
- 1. 18 Factory 'C'—During April 1974 to June 1978 it received 9 orders for 2.33 lakh rounds of the ammunition from the DGOF. The main shell filling plant ordered in May 1975 and received in March 1978 was erected/commissioned in April 1979 by the suppliers as per contract. Although production had been established, regular production was held up for want of primer alongwith propellant, as it took

time to have the nomencluture of the items clarified from the foreign country. During 1976-77, and 1977-78 the factory produced 975 rounds of the ammunition (cost: Rs. 1,450 each approximately) assembled and filled with propellant from 1,000 sets of components including shell cartridge case, primer and propellant (except fuze) received in July 1976 from the foreign country under the supplementary contract of October 1974 at a cost of Rs. 12.93 lakhs. In 1979-80, the factory produced and issued 5,000 rounds of the ammunition with imported components Rs. 2,000 per round (approximate) and in 1980-81, produced 11,000 rounds with imported and indigenous components Rs. 1,591 per round.

- 1.19 As contemplated under the project, 5,000 sets of fuze were received from another foreign country in Mrach 1974 at a cost of Rs. 5.27 lakhs under a contract concluded in January 1973; 3,400 sets (cost: Rs. 3.58 lakhs) were assembled and issued with the ammunition during 1976-77 to 1979-80, 1,600 sets costing Rs. 1.68 lakhs having been expended in proof trials and assembly rejections.
- 1.20 As regards primer, factory 'C' placed demand (April 1979) for 97,500 numbers (revised to 64,900 numbers) for 2 types on another factory for establishment of indigenous production and 8,080 numbers of one type (for reduced charge ammunition) were supplied to factory 'C' in 1980-81 after establishment of production in 1979-80. The production of other type was also established in 1980-81, but supply to factory 'C' was yet to commence (November 1981).
- 1.21 According to the Army authorities (October 1979), no ammunition was imported after 1976 and further import would depend on the capability of the DGOF to produce it. In May 1980, they ordered import of 1.10 lakh rounds of the ammunition at a cost of Rs. 18.01 crores.
- 1.22 Other points of interest noticed in factory 'C' were as follows:—
 - (i) Under the supplementary contract of July 1977, the factory received alongwith other items 3,000 numbers of filled shell in February 1978, 20,000 sets of propellent in 1978, 12,000 numbers of cartridge case blank in 1979 and 8,000 numbers of empty shell in November 1979 at a total cost of Rs. 185.43 lakhs. Although import of these items (except propellant, import of which was contemplated till establishment of production) was not contemplated, tihs was done due to non-

commencement of indigenous production and for using empty shells during commissioning trials of the filling plant.

- (ii) Under another supplementary contract concluded in April 1979, 1,04,000 numbers of primer costing Rs.15.39 lakhs were received in November 1979. The contract also covered supply of 27,500 sets of full and 56;500 sets of reduced charge propellant as well as 95,000 numbers each of 2 types of fuze detonator costing Rs. 365 lakhs, which were received during November, 1979 to July 1980. Imports of the items were contemplated to match with propellant till establishment of production which had, however, been delayed.
- (iii) The factory earmarked for production and supply of the propellant (phase I—stage I) was due for commissioning in may 1980, but revised date was 1982-83. Commissioning had been delayed due to:
 - delay in issue of revised Government sanction for the project (July 1976), and
 - delay in issue of Government sanction empowering the DGOF/Chairman, Ordinance Factory Board for direct procurement of plant and machinery (July 1976),
 - 1.23 Meanwhile another factory had been enthrusted with production of reduced charge propellant, but bulk production was yet (November 1981) to be taken up pending manufacture and clearance of experimental batches planned to be taken up in the last quarter of 1981-82 as it was heavily booked for other out turn items.
- 1.24 Summing up The following are the main points that emerge:
 - The project was conceived in 1965 and after a long period of gestation was sanctioned in October 1972 for commissioning by October 1977. The date of commissioning was revised to August 1978 and finally to June 1984.
 - The delay in establishment and commencement of bulk indigenous production of the ammunition and its component resulted in imports of its various components valued at Rs. 601.51 lakhs including Rs. 500 lakhs approximately for primer and propellant which were not included in the scope of the project.

- Although a decision was taken (1969-70) for production of fuze in factory'A', its production in small quantity could be expected only in the year 1980-81.
- Due to delay in commencement of bulk production of shell body in factory 'A' 2,')24 tonnes of steel procured at the cost of Rs. 118.95 lakhs approximately were yet to be used (359 tonnes since March 1977).
- The life of the gun, for which the ammunition is required, was assessed as 20 years or so in 1965, 15 years of the life have passed, but regular production and supply of the indigenous ammunition to achieve self-sufficiency are not yet (November, 1981) in sight. In May 1980, the ammunition was, therefore, ordered for import at a cost of Rs 18.01 crores.
- The delay in commissioning of the project had also increased its cost from Rs. 16.47 crores (October 1972) to Rs. 23.00 crores (October 1980).

[Paragraph 9 of the Report of the Comptroller & Auditor General of India for the year 1980-81. Union Government (Defence Services)]

Establishment of production for an ammunition

- 1.25 A new medium range gun had been introduced in service since 1966. Both the new gun and its ammunition were, however, being imported from a foreign country. As the new gun was expected to be in service for the next 20 years or so, it was proposed in 1965 to establish facilities for indigenous production of the ammunition to achieve self- sufficiency. In November 1965, a contract was concluded with the foreign country for supply of licence and technical documentation for the establishment of indigenous production of the ammunition. The documentation was received by Government in April-May 1966.
- 1.25 In April 1968, it was decided in a Defence Ministry Production Committee (DMPC) meeting to set up facilities for production of 5,000 rounds of both HE and AP types of the ammunition in a single shift of 8 hours per month. In July 1963, a contract was concluded with the foreign country for supply of 8 items (16 numbers out of 159 numbers required) of plant and machinery at a cost of Rs. 5.43 lakhs.
- 1.27 The Committee desired to know why a decision to set up facilities for production of 5,000 rounds of both HE and AP type of the

ammunition was taken in April, 1968 only when the documentation had been received by Government in April-May, 1966. The Department of Defence Production intimated the Committee as follows:

"It is true that the documentation had been received in April-May 1966. The capacity paramaters are normally decided after taking into account a number of factory like, war wastage Reserve Annual Training Requirements, stabsilised force level investment required for differnt levels of capacity The collaborator had advised that a project report should first be made. The Indian side submitted a project report to the foreign collaborator in August 1966 and also the items of plant and machinery required for the project. After holding protacted discussions with the collaborator and after taking into account the stabilised requirement of Army, a decision regarding capacities to be set up could be taken only in April, 1968."

1.28 The Committee further enquired why it was subsequently decided that the AP Type was not required to be produced indigenously when originally its indigenous production was contemplated. In reply the Department of Defence Production have stated:

"Army decided to delete its requirement for AP Type of ammunition as this type of ammunition was also deleted by it for another weapon system. Since this type of ammunition was no longer required by the Army, the question as to how its requirement was met did not arise."

1 29 The Committee desired to know the reasons for delay in finalising the project report for the production of HE type ammunition. The Committee further enquired whether the matter was pursued vigorously with the foreign supplier. The Deptt. of Defence Production intimated the Committee as follows:

"After receipt of technical documents in May, 1966, the Director General of Ordinance Factories prepared the necessary Project Report in August, 1966, and sent it to the foreign country. Discussions were held with the foreign Government from time to time to finalise the project report. Various contracts/protocols were signed with the foreign Government in regard to the supply of plant and machinery between 1968-70

Discussions were also held in regard to the grant of special defence credit. After detailed discussions and negotiations at all levels, the foreign Government submitted the Project Report in November, 1970."

1.30 According to the Audit paragraph, the project was expected to be completed by October, 1977. The Committee desired to know the date/dates on which the project was actually completed together with the reasons for delay. In reply, the Department of Defence Production have intimated the Committee.

"The project was sanctioned by Government in October, 1972 and was Scheduled to be completed by October, 1977. The Project covered facilities to be created at three Ordinance Factories. In Factory B, involving 35% of the total capital outlay, the project was completed very nearly according to Schedule with a Slippage of 5 months, caused on account of delay in receipt of power pack. The establishment of production in the Factory B, was achieved in February, 1978.

In regerd to Factory C, involving 19% of the capital outlay, the project was completed in April, 1979, due to delay in the receipt of a filling plant. The project in Factory A, involving investment of 46% of the total capital outlay on the project has been delayed on account of the following factors:

Delay in receipt of certain critical machinery from both the indigenous and foreign suppliers. For example, machine ordered on an indigenous Public Sector in September, 1975, which was scheduled to be delivered by March, 1977 was actually delivered in March 1980. Similarly a machine ordered from a foreign firm in April, 1975, which was scheduled to be received in December, 1976; was actually, delivered in May, 1980.

Delay by a Public Sector Undertaking in satisfactorily erecting/commissioning the Shell Forge Plant. According to the Contract, the plant was to be erected/commissioned satisfactorily by October, 1978, but a number of defects were noticed during commissioning of the plant, which were removed and final trials were completed in November, 1982.

Initially, it was envisaged that the Shell Forge Plant would be obtained from East European sources under NCR. However, since a plant of the required specifications was not available from the East European sources, it was decided subsequently to place the order on HMT, which imported certain critical portions of the plant from Western European etc. sources in free foreign exchange."

1.31 Further elucidating the reasons for delay the Secretary (Defence Production) stated before the Committee:

"There can be nothing but regret at this particular element of this case where for the reason of one particular equipment a delay of four to four and a half years took place but on account of the pressure that we have put in during the last twelve months now we will soon get regular production of shell forgings which had been the chief bottleneck.

I would also like to submitt that though this project conceived in 1965 yet the work does not begin with conception. This project was distributed to three factories and this was the first case in which we were negotiating with a certain foreign country for a collaboration in the production of ammunition. In this particular case a point came in 1971 when Government felt it had taken six years and we had not been able to move very much and as such, a decision was taken in 1971 to go to the other parts of the world. But soon after the situation changed and with that the whole sequence of events undertook a dramatic turn from 1972 onwards. From 1965 to 1972 one has only to regret the facts in retrospect and leave it at that. From 1972 onwards two of three factories, namely factory 'C' and factory 'B' went into production and took up the work more or less in line with the time schedule. There was delay of five months in respect of factory 'B'. Sir, the prime delay has been one facility that is critical, viz. forging press. This forging press was supposed to have been delivered and commissioned in October, 1978 but had actually materialised only a couple of months ago in 1928."

1.32 The Committee further enquired about the reasons for delay in the placement of the order for shell forging p'ant in June 1977, when during December, 1973 to April, 1979, Factory A had received 6 demands aggregating 1,99,500 numbers of shell body from Factory 'C'. The

Committee also asked whether the shell forging plant has since been fully commissioned and handed over to the Factory and if so what has been the production in this plant since June, 1982. In reply, the Department of Defence Production have stated:

"The question of placement of order for the shell forging plant cannot be linked with the placement of demands for the shells for the ammunition from Factory 'C'. When the project was sanctioned by Government in October, 1972 it provided for the procurement of a shell forging plant. Factory 'A' started taking necessary action for procurement of the Shell Forge Plant, in accordance with the recommendations made by the Licensors, who had recommended the procurement of the plant from a foreign country. Moreover, at that point of time, the policy of Government was to procure plant and machinery from NCR areas than from free foreign exchange areas. Accordingly, Factory A floated a limited tender enquiry in January, 1973 (i.e. 2 months after the project sanction) to probable suppliers including.....recommended by the Licensors. The tender was received from the foreign country in April, 73. In May 1973, clarifications on vital points were sought from the foreign party, which were received in September, 1973, after many expeditors were sent to them. In December, 1973, foreign team arrived for technical discussions regarding Shell Forging Plant. Further discussions were held with the foreign party in March, 1974. It ultimately transpired, after detailed and protracted technical discussions, that they were able to offer only a marginal capacity plant. Since the question of introduction of higher calibre shells for futuristic types of ammunition was then under consideration, DGOF made a reference to the Ministry of Defence in May 1974, for a policy direction regarding procurement of shell forging plant, for higher calibres and also permission to procure the plant from free foreign exchange areas, as a suitable plant was not available from NCR area consideration of the question regarding procurement of a higher calibre shell forging plant, to meet futuristic requirements, and after obtaining release of foreign exchange from the Department of Economic Affairs, the DGOF placed an indent on DGS&D in June, 1975. The DGS&D placed a letter of indent on M/s Hindustan Machine Tools in December, 1976 and the formal A/T was concluded in June, 1977. The shell forging plant was fully

commissioned and after trial runs, as provided in the Contract, the plant was handed over to the Factory 'A' in November, 1982. The Factory 'A' has already commenced bulk production of shell forgings, as an average production of 5000 shells per month has been achieved and this will enable the Factory to produce 72,000 shells annually on single shift basis when peak capacity levels are reached.

The production of shells in the shell forge plant since June, 1982 is given below. It may be mentioned again that the plant was handed over to Factory 'A' after trials runs in November. 1982, and thus the output from the plant prior to November, 1982 should not be taken into account for drawing any conclusions.

June, 1982	780 Nos.
July, 1982	2937 "
August, 1982	Nil
Sept. 1982	1527 "
Oct., 1982	6464 "
Nov., 1982	5361 "
Dec., 1982	4337 "
Jan., 1983	6481 "

1 33 The Committee also desired to know the reasons for placing the order for shell forge plant with a capacity of 72,000 numbers, when it was decided by the Ministry in May, 1977 to set up a plant with a capacity of 2 lakh numbers per annum. The Deptt. of Defence Production intimated the Committee as follows:

"It is true that it was decided in May, 1977 to set up a plant with a capacity of 2 lakh numbers per annum. However on the basis of a technical assessment done by a Technical Team which went to USA and West Germany, the optimum production possible was found to be the extent of 1 70 lakh forgings per year on the basis of 2×8 hr. shift working. Allowing for rejection of 10-12%, this would enable the manufacture of 1.50 lakh, rounds per annum by stretching the working to 2×10 hr. shift.

The matter was reviewed and it was decided that it would be uneconomical to augment the capacities to 2 lakhs rounds per

annum, which involved very high capital investment. It was, therefore, decided that the capacities need not be augmented."

1.34 The Committee further enquired as to how the capacity of the Shell Forging Plant was fixed and how 50 per cent efficiency only was envisaged and how even with the fixation of a lesser (50%) target the future requirements of the Army were proposed to be met The Department of Defence Production have stated in a note:

"The capacity of the Shell Forge Plant was fixed with reference to the capacity sanctioned for the HE Ammn. which was 60,000 Nos. per annum in 1×8 hr. shift. Accordingly, a contract was placed for supply of a Shell Forge Plant which would give a sustained production level of 60 forgings per annum on the basis of continuous 1×8 hours shift for 25 days in a month. However, in actual practice, the efficiency achieved is 50%, due to follwing factors:—

Time consumed

- (a) Preparation of the Shell Forge Press at the beginning and closing of every shift. 2 hours daily
- (b) Time required for tool changing daily. 1 hour daily
- (c) Break-down maintenance 1 hour daily

Thus the Shell Forge Plant would work effectively for 4 hours daily in a shift of 1×8 hour and would be capable of giving a sustained production of 72,000 shell forging per annum, which would give an output of 60,000 of finished shells, after taking 10% for rejection during machining and 10% for proof.

The future higher requirements for 30 mm. Ammn. will be met by double shift working to the extent required, till the requirements are fully met."

Life of the Gun

1.35 The Secretary (Defence Production) informed the Committee during evidence that the life of the gun at the time of origination of the proposal was assumed to be 20 years, that is, till 1985, but they have no doubt now that this gun would be in service nearly upto 2,000 A D. and possibly longer.

1.36 The Committee desired to know the basis on which it was subsequently decided that the gun would remain in service at least till the end of the Century and how much extra maintenance expenditure was expected to be incurred on maintenance of these guns in perfect working condition for a longer span of life. The Committee also enquired as to how far the augmentation of the life span of the gun could be directly attributed to the delay in the manufacture of the ammunition. The Department of Defence Production has stated as follows:

"On the basis of state of art and the threat assessment, a policy decision was taken that the medium range gun should continue in service till 2,000 AD. This decision was not connected with the delay in the manufacture of ammunition. No extra maintenance expenditure is incurred in augmenting the life span of the weapon system, as the life of individual gun is not increased but the guns are discarded after their life is over and are replaced by new Guns."

1.37 Some of the important terms of the contract executed with the HMT for the supply of the forge press, as intimated by the Department of Defence Production are as follows:

"Article II-Clause 2.02

The plant shall be guaranteed in respect of its performance of the optimum output, best quality and g ade of shells. The system design and Guaranteed performance would be the joint responsibility of M/s HMT and M/s Verson of USA.

Article VII Delivery-Clause: 7.02

Delivery, erection and commissioning of the complete plant shall be completed by 31.10.1978.

Article XI Liquidated damages for delay in completion of work

In the event of the contractor failing to complete the works specified in the CONTRACT within the time schedule stipulated in Articles VIII, the CONTRACTOR shall pay the purchaser liquidated damages for the late supply/completion of work at the rate of 0.25% of the cost of work uncomplete by the due date for each week or part there of delay, subject to a maximum of 5% of the Contract Price.

Article XII Erection commissioning and performance guarantee Clause 1201

The contractor shall erect the plant and Machinery as described in this contract in accordance with the specifications and technical documentations as per Annexure I and IV in keeping with the sound Engineering practices. The erection shall so be done in conformity with the statutory and other regulations applicable.

The general performance of the complete equipment will be proved on the basis of continuous running of the complete plant on single shift basis a day for a maniumum consequtive period of three days and the total stoppage of the complete plant for any adjustment or minor break down shall not exceed 10% of the total duration of run during the three days.

Further the complete plant will be subjected to production quality and output rate trials for a continuous period of 8 hours. During this period the forgings produced should conform to the dimensions and quality specified.

Clause 12.02

The contractor shall execute complete erection including taking out from the place of final storage of equipments at JOBSITE, Erection or all contract equipments including piping, instruments, electricals and other materials of contractor's supply within the Battery Limit."

- 1.38 The Committee enquired the latest position about the functioning of this forge press and whether the DGTD and other indigenous sources were fully consulted to obtain these forgings indigenously In reply, the Department of Defence Production have intimated as $\frac{1}{s}$:
 - "The shell forging press is now working satisfactorily. It was not necessary to consult DGTD for import of forgings as no indigenous source was having facilities for manufacture of forgings for this ammunition. Department of Defence Supplies is enggaged in developing and locating indigenous sources for manufacture of Shell Forgings required by OFs. While DDS has been able to locate a few sources for........ IFG Forgings, no suitable sources for this Shell Forging has yet been located."

Air-conditioning of the shell filling shop

1.39 The Audit paragraph points out that the administrative approval of November 1973 pertaining to factory 'C' provided for part air-conditioning of the shell filling shop at a cost of Rs. 6.62 lakhs. The works were completed in October 1976, but without air-conditioning as it was not considered in May 1974 to be a technical necessity at a temperature of 60 degree centrigrade. However, later (August 1977) it was decided to air-condition the building as the operators felt uncomfortable in working continuously on the plant and as other forms of force dventilation could not be adopted due to presence of explosive dust. In November, 1978, therefore, a supplementary approval was issued by Government for air-conditioning of the shop involving additional cost of Rs. 10.68 lakhs. In July 1980, the Ordnance Factory Board (CFB) revised the approval cost upwards under its own powers to Rs. 16.03 lakhs due to increase in tendered rates and non-acceptance of an offer before its date of validity (20th February, 1980). The Committee asked whether the Government had investigated the circumstances leading to the loss on account of non-acceptance of tender during its validity period. The Department of Defence Production stated as follows:

"The Board of Inquiry has investigated the matter and according to its finding the sanction within the validity date of the offer could not be pin-pointed. The lowest tenderer was not willing to extend the date of validity due to steep increase in the rates on account of sharp trend of rising market."

Utilisation of Steel

1.40 The Audit paragraph points out that out of 2957 tonnes of steel releived by factory 'A' upto July, 1981, for indigenous production of sl. 2024 tonnes (costing Rs. 118.96 lakhs) were in November, 1981 yet to be used. This included 359 tonnes (cost Rs. 16.70 lakhs) lying unused since March, 1977. The Committee desired to know the present position of utilisation of steel. The Department of Defence Production intimated as follows:

"Out of 2,024 tons stated to be unutilised upto Nov., 81 463 Tons have since been used upto April. 1982 was only 1561 Tons, which is sufficient only for 6 months' requirement as per programmed production. Out of 359 Tons steel of a particular specification lying unused from 1977, 63 Tons have since been used and balance 273 tons is being consumed in a phased manner

Utilisation will pick up. The total stock of steel as on 15 April, 1982 with improved performance of Shell Forging plant."

Frequency Generating Set

1.41 The Audit Paragraph points out that the induction annealing furnace imported from the foreign country in November, 1974 at a cost of Rs. 6.50 lakhs for Factory 'B' could not be commissioned due to not ordering, at the same time, a high frequency generating set and its controlling equipment. An order for their procurement was placed on a trade firm in January, 1977 for import at a cost of Rs. 4.63 lakhs. The supply was received in December 1977-January 1978, and the fuernace was Commissioned in August, 1978, but it was taken on charge in November, 1979 after pre-commissioning trials. The Committee enquired the reasons for not placing the order for frequency generating set and its controlling equipment alongwith the order for induction Annealing Furance in November, 1974. In reply, the Department of Defence Production intimated as follows:—

"The order for the full equipment was placed in December, 1972 on the Licensor, on the basis of the nomenclature, mode and index number of the equipment given by them. Only after the beater was received in November, 74 at site, it came to light that it did not include the power pack. On taking up the matter with the supplier, it was mentioned that the generating set was an equipment of general industrial application and did not, therefore constitute a part of the equipment, and was required to be contracted/ordered separately. Persuasion to supply the generating set within the scope of the contract having failed, there was no other alternative but to procure the same separately from other trade sources and this could be commissioned in August, 1978."

Silicon Brass Blank

- 1.42 The Audit Paragraph points out that 5,000 numbers of silicon brass blank costing Rs. 17.73 lakhs alorgwith other items were ordered for import from the foreign country under a supplementary contract concluded in July 1977 (total value of contract. Rs. 185.43 lakhs), of which 4,707 numbers (cost: Rs. 16.69 lakhs) received in February 1979 were lying in stock unused due to technical reasons; the balance quantity (cost Rs. 1.04 lakhs) had been pilfered in transit.
- 1.43 The Committee desired to know the present position of Silicon Brass blanks lying in stock unused and also whether the loss of

pilferage has since been investigated/regularised. The Department of Defence Production intimated the Committee as follows:

"The entire stock has been processed. 780 Nos. of cartridge cases have been produced during May and June 1982. Balance are in various stages of Production.

The loss due to pilferage was investigated and a claim amounting to Rupees 1.41 lakhs has been lodged against the Railways in January, 1981. This is being pursued."

Capacity for melting and blanking

- 1.44 The Audit Para points out that Cartridge case was planned to be produced by factory 'B' with 70/30 brass blanks. No extra capacity was created for supply of blanks to factory 'A', trade assistance was being obtained. This position would continue till such time as an augmentation project for brass melting and strip making in the factory sanctioned in August 1978 was commissioned (target date is August 1982).
- 1.45 The Committee desired to know the progress made on the augmentation project for brass melting and strip making. The Committee also enquired whether the production schedule of cartridge case was going to be affected due to any delay in commissioning and the extent thereof. The Department of Defence production intimated the

Committee as follows:

"The project is scheduled to be completed by 1985-86. The production schedules have been worked out based on the availability of the stock from trade and Ordinance Factories. As such the production schedule is not likely to be affected."

Production of Primer and Propellant

1.46 It is seen from the Audit Paragraph that during April 1974 to June 1978 factory 'C' received 9 orders for 2.43 lakh rounds of the ammunition from the DGOF. The main shell filling plant ordered in May1975 and received in March 1978 was erected/commissioned in April 1979 by the suppliers as per contract. Although production had been established, regular production was held up for want of primer along with propellant, as it took time to have the nomenclature of the items clarified from the foreign country. The Committee enquired

about the progress made in the production of Primer and Propellant required for the ammunition. The Department of Defence Production intimated as follows:—

"The primer for reduced charge is being manufactured from 1980-81. 12,000 Nos. primers were produced during 1980-81 and 10,000 Nos. during 1981-82. This primer is expected to be available for assembly with ammunition during 1982-83 after proof. Future production programme of this primer is indicated below:—

1982-83 1983-84

20,000 Nos. 40,000 Nos.

Manufacture of primer for full charge is under establishment. Future production programme of this primer is indicated below:—

1982-83 1983-84

5,000 Nos. 10,000 Nos.

The reduced charge propellant is being manufactured from 1981-82 and will be available for regular use with the ammunition from 1982-83.

Manufacture of full charge propellant has not yet been estabblished. This will be produced in the new propellant factory."

Production of fuze

1.47 The Audit Paragraph points out that for fuze, factory 'A' received demands for 3,43,190 numbers during December 1972 to April 1979 from factory 'C' and produced 22,522 numbers (256 numbers in 19/7-78, 11,764 numbers in 1979-80 and 7,810 numbers in 1980-81) Asked about the action taken to step up production of fuze in Factory 'A', the Department of Defence Production stated in a note:

"The main bottleneck for production was non-acceptance due to cracks in the fuze body. The problem has since been solved. Apart from the same, process layout and inspection schedules have been streamlined based on DGOF's experience of production of about 50,000 Nos. and all gauge schedules have been completed and introduction of all indigenous gauges has been done by DGOF.

Future production programme of the fuze is indicated below:-

1982-83

1983-84

60,000 Nos.

6 0,000 Nos."

Production of Ammunition

- 1.48 According to the Audit Paragraph upto 1980-81, factory 'A' could produce, in all, 10,680 numbers of shell against a demand of 1,99,500 numbers, whereas 5,680 numbers of shell were produced indigenously, the remaining shells were produced from 5000 numbers of shell body imported during May to July 1975 at a cost of Rs. 14.81 lakhs.
- 1.49 Similarly as regards, Factory 'B', it received 6 demands for total, 1,75,500 numbers of cartridge cases during December 1973 to April 1979. 415 numbers were completed by February, 1978. Besides, 5,500 numbers of blanks were produced in February, 1979. There was no further production due to non-commissioning of an induction annealing furnace. Further during August, 1980 to March, 1981, two orders for 1,9500 numbers of blanks and one order for 10,000 numbers of new cartridge case were placed by factory 'B'. According to the Ministry (November, 1981), thefactory produced 9,500 blanks in 1979-80 and 18,625 new cartridge cases in 1980-81 Production planned during 1981-82 for new case and blanks was 12,000 numbers and 18,00 number respectively.
- 1.50 During April, 1974 to June 1978, Factory 'C' received 9 orders for 2.33 lakh rounds of the ammunition from the DGOF. During 1976-77 and 1977-78, the factory produced 975 rounds of the ammunition (cost: Rs. 1,450 each approximately) assembled and filled with propellant from 1,000 sets of components including shell cartridge cases primer and propellant (except fuze) received in July, 1976 from the foreign country under the supplementary contract of October, 1974 at a cost of Rs. 12.93 lakhs. In 1979-80, the factory produced and issued 5,000 rounds of the ammunition with imported components @ Rs. 2,000 per round (approximate) and in 1980-81, produced 11,000 rounds with imported and indigenous components @ Rs. 1,591 per round-
- 1.51 As regards, the production of different items in the factories 'A', 'B' and 'C' during the years 1981-82 and 1982-83, the Committee were informed by the Department of Defence Production that Factory

'B' produced 27,905 and 33,660 cartridge cases during the years 1981-82 and 1982-83, respectively. Similary, factory 'C' produced complete rounds of 14,277 and 15,200 of ammunition during the years 1981-82 and 1982-83, respectively. The production of Factory 'A' during these years was stated to be as follows:—

	1981-82	1982-83
Fuze B429	17,418	24,917
Shell Empty	14,400	16,200

1.52 The Committee desired to know that due to failure of the forging press, how much of the machinery equipment and manpower in the other factories remained idle right from the date of establishing the production facilities in these factories. The Department of Defence Production intimated as follows:

"The other factories involved are Ordinance Factory 'B' for manufacture of cartridge case and Ordinance Factory 'C' for filling and assembly of rounds. Manufacture of cartridge at O.F. 'B' was established in February, 1978. There after the plant produced reformed the quantities of Cartridge cases upto January, 1983:-

Cartridge Case (reformed)	:	70,825 Nos.
Cartridge Case (New)	:	20,060 Nos.
Other calibre cases (New)	:	75,000 Nos.

OF 'B' produced other calibre cartridge cases at a value of Rs. 3.38 crores (@ Rs 450/- per unit) which would have otherwise to be imported. Hence the capacity of the plant was fully utilised.

Shall filling was established at Factory 'C' in April, 1979, Thereafter the following quantities of complete rounds were assembled and issued:

1979-80 : 5,000 Nos. 1980-81 : 11,000 Nos. 1981-82 : 14,277 Nos. 1982-83

(upto Jan' 83) :

15,200 Nos.

TOTAL:

45.477 Nos.

Manpower is never kept idle as its deplopment on new work is done depending upon the work-load."

1.53 The Committee desired to know whether the shortage of shell Forging was continuing during 1982-83 also and if so, what steps were taken to ensure increased production of the item. The Department of Defence production intimated the Committee as follows:

"Yes, the shortage is likely to continue during 1982-83 also. The following steps have been taken to ensure increased/production of the Shell Forging:

- (i) The matter has been taken up both at the ordinance factory Board level and Government level with the plant suppliers, and action has been taken for the rectification of the plant, which is in hand.
- (ii) The user factory has improvised manipulator and couplings in consultation with plant suppliers to continue production.
- (iii) Present indication is that production is expected to pick up from September, 1982."
- 1.54 The Committee further enquired if the Shell Forging plant had since been commissioned and bulk indigenous production of shell Body started in factory 'A' and if so, since when. The Department of Defence Production intimated in a note:

"Shell forging plant has not yet been fully commissioned and handed over to Factory as per terms of the contract. However, it has produced forgings on limited scale from second half of 1980. Production of shell Forgings, during trials runs, is as given below:—

June, 1980 to March, 1981 . . . 12,659 April. 1981 to March. 1982 . . . 24,265 April. 1982 to June. 1982 . . . 3,270°

1.55 Asked whether there has been any further progress in the production of shell forging, the Department of Defence Production stated

in a subsequent note as follows:

"The production of shell forging actually picked up from September, 1982 onwards, as shown below:—

 September, 1982
 1.527
 Nos.

 October, 1982
 6.454
 Nos.

 November, 1982
 5,361
 Nos.

 December, 1982
 4,337
 Nos.

 January, 1983
 6,481
 Nos.

1.56 The Committee desired to know whether the production of other components would match with production of shell even if the Shell Forge Plant goes into full production. The Department of Defence Production stated as follows:

"The production of other components will match with production of shell to the extent of the capacity created under the project as the finished round will have to be assembled with all the matching components. To ensure production of cell matching components, monitoring is being done to:

- (i) Make available raw materials in time;
- (ii) Deplopment of Staff commensurate with the requirements/workload in various plants."
- 1.57 Asked as to how the facilities created for the production of ammunition were going to be alternatively used after the gun went out of service, the Department of Defence Production stated as follows:

"The weapon system is likely to remain in service till 2000 AD. The facilities created for the ammunition will, therefore be reguired up to 2000 AD i.e. for a further period of about 17 years. The plant and machinery installed for production of Ammn. will be fully exploited till 2000 AD, when it will become due for replacement. Moreover, the shell Forge Plant is versatile having capacity upto high calibre Shell Forgings. The Shell Forge Plant can be used to manufacture Shell forgings for futuristic high calibre weapon systems."

Import of Ammunition and equipment

1.58 The Committee desired to know the total quantities of

ammuition and its components imported after 1977, till date and likely to be imported till full production was achieved in 1984. The Department of Defence Production intimated the Committee as follows:

(i) COMPONENTS CONTRACTED AFTER OCTOBER, 1977.

SI. N	o. Component	Quantity
1. S	hell Forgings	33.000 Nos.
2. P	ropellant FVC	27,500 Nos.
3. P	ropellant RVC	56,500 Nos.
. 4. P	rimer	1,04,000 Nos.
5. F	'uze	90,000 Nos.

No further import to components is anticipated.

- (ii) Army Hqrs. have contracted for imports of 1,32,600 rounds of the HE ammunition since 1978 at a total cost of Rs. 2150 Cr. in NCR, out of which 34,000 rounds have since been received.
- 1.59 Asked if there was any plan/proposal by the army for further import of ammunition, the Department of Defence production intimated the Committee as follows:

"A total of 2,40,800 Nos. of HE rounds has been projected for further imports at a total cost of approx. Rupees 39 5 Crores."

- 1.60 The Committee further asked for the quantum of foreign exchange involved in such imports to delay in establishment of production and what monitoring steps were being taken to avoid such drain on foreign exchange in future. The Department of Defence Production stated as follows:
 - (i) Foreign Exchange involved in import of components

 Contracted after October, 1977:

 Rs. 699,87 lakhs.
 - (ii) Foreign exchange involved in import of complete ammunition:

Army Hqrs. contracted for import of 1.32,000 complete rounds since 1978 with a foreign Govt. at a cost of Rs. 21,50 crores in NCR."

1.61 Explaining the position about the Shell Forging Plant, the Department of Defence Production have intimated as follows in a subsequent note:

"With the satisfactory commissioning of Shell Forge Plant in November, 1982, the production of the HE Ammunition would pick up gradually and the follwing higher production programmes have been laid down:

1983-84 — 60,000 Nos. 1984-85 — 80.000 Nos.

The imports of ammunition could have been avoided had the Shell Forge Plant been commissioned satisfactorily in October, 1978, as scheduled No further import of any components is anticipated, as the Shell Forge Plant has been satisfactorily commissioned in November, 1982.

HMT imported various components and finally assembled Shell Forge Plant after fabricating their portion of supply. DGOF does not have the facilities for fabricating a Shell Forge Plant. The order was placed on HMT so that this Public Sector undertaking could acquire the knowhow and expertise in fabricating such Forge Plant which would also required in future."

Cost of the Project

1.62 The Project was sanctioned in October, 1972 at a total cost of Rs. 16.47 crores comprising plant and machinery (Rs, 12.27 crores), Civil works (3.50 crores) and items/contingencies (Rs. 0.70 crores). The Committee desired to know the anticipated cost of the project when completed as the date of commissioning of the project has been revised from August, 1978 to June, 1984. The Department of Defence Production intimated the Committee as follows:

"The anticipated cost is Rupees 23.00 crores as per revised Govt. sanction issued under Ministery of Defence letter No. 12 (25)/80/D (Projects), dated 15.10.1980."

Cost of Ammunition

1.63 The Audit paragraph points out that the cost of production of the ammunition estimated in May. 1972 was Rs. 1,100 per round against the then import price of Rs. 1,350 per round. Asked about the

cost of production of the ammunition during the year 1981-82, the Department of Defence Production intimated the Committee as follows:—

"The cost of production of the ammunition per unit during 1981-82 is as follows:

RVC Round — Rs. 2,251,00

FVC Round — Rs. 2,429.00".

1.64 A new medium range imported gun was introduced in service in 1966. Its ammunition was initially imported from a foreign country. As the gun was expected to be in service for the next 20 years, it was proposed in 1965 to establish facilities for indigenous production of the ammunition to achieve self-sufficiency. In November, 1965, a contract was concluded with the foreign country for supply of licence and technical documentation for this purpose. The Decomentation was received in April-May, 1966. Though the decision was taken in April 1968 to set up facilities for production of 5,000 rounds of both HE and A.P. type of the ammunition in a single shift of 8 hours per day, the project was finally sanctioned in October, 1972 at a total cost of Rs. 16.47 crores. Subsequently, it was decided that AP type was not required to be produced indigenously as it was no longer required by the Army.

1.65 Although the project was targetted for commissioning by October, 1977, the date was revised to August, 1978 and the project is now expected to be campleted by June 1984. In the meantime, the estimated cost of the project has also increased from Rs. 16.47 crores to 23 crores. The Committee cannot but express their dismay at the fact. that there has been a delay in this project at every stage. Although the project was conceived in 1965, and documentation was received in 1966 the project was actually sanctioned only in 1972. While the project was expected to be completed in 5 years, it is now expected to take 12 years for completion with an escalation in cost of more than Rs. 6 crores. The Committee deplore this delay on the part of authorities in implementing a project of such vital importance to our defence forces. This lapse on the part of the authorities in completing the project has cost the nation dearly as is borne out by the fact that ammunition worth Rs. 21.50 crores had to be imported since 1978, because of the inability to ensure indigenous production. The Committee are not satisfied with the reasons given by the Ministry for the delay. The Committee desire that the matter should be enquired into and the

findings together with the action taken thereon may be intimated to the Committee within six months.

- 1.66. According to the Ministry, at the time of introduction of the gun in 1965 it was accepted that this would be in use till 1985. project for indigenous production of ammunition required for the gun was pursued in such a casual manner that the full scale production thereof is not expected to establish till 1984 which is practically the terminal year for use of this gun. This speaks volumes of the inefficient, if not negligence, of the machinery in charge of planning and execution of projects. The Committee are not only surprised but shocked at this state of affairs. A bigger surprise is that it has now been claimed that the gun will be in use till 2000 AD. This was not intimated to The Audit at any stage. The Committee consider that either the earlier assessment was wrong or the present statement is only an alibi to cover the lapses. In matters of defence such alibies may lead the country to disastrous results. It so appears that our craze for imported equipment has throttled all our national efforts for indigenisation in the field of defence production. The Committee take very serious view of this situation and desire that the observations of the Committee in this case may be brought to the notice of the Minister of Defence.
- 1.67 The project for production of the ammunition covered facilities to be created at three Ordinance Factories 'A', 'B' and 'C'. Factory 'A' was to produce shells and fuzes for the ammunition. Factory 'B' was to produce cartridge cases and blanks and factory 'C' was to cater for assembly and filling up of the ammunition. According to the original estimation, the entire project was to be completed by October, 1977. In Factory 'B', involving 35% of the total capital outlay, the project was completed in February, 1978 with a slippage of 5 months. In regard to Factory 'C' involving 19% of the capital outlay, the project was completed in April 1979. There is, however, inordinate delay in the completion of the project in factory 'A' involving investment of 46% of the total capital outlay and where the very important constituent of the ammunition viz. shell was to be produced. The Department of Defence Production has put the blame for this on the delay in the commissioning of forging press in Factory 'A'.
- 1.68 The Committee note that when the project was sanctioned in October, 1972, it provided for the procurement of a shell forging plant for Factory 'A'. Further, during December, 1973 to April 1979, after

holding discussions with the foreign party from whom this plant was proposed to be procured, it transpired that they were able to offer only a marginal capacity plant. Thereafter, three precious years were wasted and the formal acceptance of tender for the procurement of this plant was concluded with Hindustan Machine Tools, a public sector undertaking in June, 1977. Though according to the terms of the contract with HMT, the delivery, erection and commissioning of the complete plant was to be completed by 31 December, 1978, the plant was handed over to the factory only in November, 1982.

- 169. It is evident that while the Department have miserably failed to process the proposal far procurement of the shell forging plant with the requisite speed, the HMT also miserably failed to honour the terms of the contract for completion of the delivery, erection and commissioning. The Committee cannot but express their dismay at the failure of this premier public undertaking. They would ike to be informed as to how much liquidated damages were recovered from HMT as per Article XI of the contract for delay in completion of work.
- 1.70 Similarly lack of proper planning and foresight by the concerned authorities is noticed in the procurement, installation and commissioning of a number of important equipment and various machines required for the three Ordnance Factories.
- 1.71 The Committee are concerned to note that the annealing furnace imported for factory 'B' in November, 1974 could not be commissioned as the high frequency generating set and its controlling equipment was not ordered simultaneously. The generating set and its controlling equipment was subsequently procured from trade and as such the annealing furnace was commissioned only in August, 1978 and taken over in November, 1979.
- 1.72 Another instance of bad planning was that no capacity for the production of brass blanks, required for the production of cartridge case, was created in Factory 'B'. Augmentation project for brass melting and strip making, sanctioned subsequently in August, 1978 is scheduled to be completed only by 1985-86 a year after which it was supposed to have become obsolete according to initial projection.
- 1.73 It is again disquieting to note that regular production in the main shell filling plant, erected and commissioned in Factory 'C' in April, 1979 was held up for a very long time for want of premier along with propellant, as the authorities failed to get the nomenclature of the item

from the suppliers for a long time. Due to this failure, whereas the reduced charge propellant would become available for regular use with the ammunition from 1982-83, the manufacture of full charge propellant has not so far been established.

- 1.74 Another lapse indicative of casual approach of the authorities occurred with regard to the use of 5000 silicon brass blanks, procured at a cost of Rs. 17.73 lakhs. Though these blanks were received in February 1979, 4707 numbers remained unused till May and June 1982 and the balance quantity, costing Rs. 1.04 lakhs, had been pilfered in transit. It is surprising that the claim for this loss lodged with the Railways in January, 1981 has not been finalised as yet.
- 1.75 The Committee are gravely concerned to note yet another case of bad planning resulting in an infructuous additional expenditure of about Rs. 10.68 lakks relating to the airconditioning for the shell filling shop of factory 'C'. The Committee find that first it was decided to have the airconditioning and for this offers were invited. It was subsequently decided not to have the air-conditioning. The Committee are surprised at the authorities blowing hot and cold. Part of this additional expenditure was also attributable to the non-acceptance of an offer before the expiry of validity viz. 20 February, 1980. It is surprising that responsibility for delay in issuing the sanction within the validity period of the offer, could not be pin-pointed even by the Board of Inquiry, who investigated this matter.
- 1.76 The Committee note that factory 'A' could produce barely 22,522 numbers of fuze till 1980-81 as against the orders for 3,43,190 numbers received by it from factory 'C' till April, 1979. The main bottlencck for-production was non acceptance due to cracks in the fuze body. This problem is now stated to have been solved. The Committee would like to know why adequate care was not exercised to ensure that the fuzes were free from all defects. They would like to emphasize that efforts should be made to achieve the production programme of 60,000 numbers for this item at least in 1983-84.
- 1.77 The Committee are deeply concerned to note that there was unconscionable delay in establishment and commencement of bulk indigenous production of the ammunition and its components. During April 1974 to June 1978, factory 'C' received 9 orders for 2.33 lakh rounds of of the ammunition from the DGOF. During 1976-77 and 1977-78, the factory produced only 975 rounds of the ammunition. The total produc-

tion of ammunition from 1979-80 to January 1983 was 45,477 Nos. which was far from satisfactory. Even this production of ammunition could be made possible by importing various components costing as much as Rs. 699.87 lakhs, comprising 33,000 Nos. of shell Forgings, 27,500 Nos. of Propellant FVC, 56,500 Nos. of Propellant RVC, 1,04,000 Nos. of Primer and 90,000 Nos. of Fuze. N P. 1.78 The Committee further note that due to delay in the commissioning of Shell Forging Plant,2,957 tonnes of steel received by Factory 'A' upto July 1981, costing Rs. 118.96 lakhs, for production of shell, virtually remained unutilised. According to Audit Paragraph, this included 359 tonnes, costing Rs. 16.70 lakhs, lying unused since March, 1977. According to the Ministry, however, 63 tons out of these 359 tons, have been used and balance 273 tons is being consumed in a phased manner.

1.79 The facts narrated above abundantly prove that there has been complete lack of planning and care in the execution of the project, meant for attaining self-sufficiency in production of ammunition for this particular gun. Apart from escalation in the cost of the project to the tune of Rs. 6.53 crores, huge additional expenditure had to be incurred in foreign exchange by resorting to import of the ammunition to the tune of Rs. 21.50 crores and import of componets worth Rs. 699.87 lakhs which could have been avoided had the project progressed as per schedule. This is matter of serious concern. The manner of utilization of funds ungrudingly voted by Parliament for such defence projects leaves much to be desired

Inordinate delays and huge cost escalation in certain other defence projects of a vital nature such as replacement of a basic trainer aircraft, 87th Report (7th Lok Sabha) Development of a helicopter, 76th Report (Seventh Lok Sabha) and Procurement and utilisation of 10-ton chassis and vehicle built thereon (239th Report—Seventh Lok Sabha) have come to the notice of the Committee during the last few years. These cases reflect very adversely on the quality of Defence planning and the manner of implementation of vital projects. The fact that Parliament is so generous in granting funds for Defence Forces casts an additional responsibility on the Ministry to ensure that these funds are put to the optimum use and delays in execution of projects which have vital implications for the battle

worthiness of the troops are obviated. The Committee therefore recommend that the lapses in the execution of the project for establishment of production facileties for an ammunition as highlighted in the foregoing paragraph should be brought to the notice of the Cabinet and remedial measures taken to avoid recurrence. The Committee would like to be apprised of the action in this regard within six months.

NEW DELHI

SATISH AGARWAL, Chairman,

April 27, 1983

Vaisakha 7, 1905 (S)

Public Accounts Committee

APPENDIX
(Conclusions and Recommendations)

SI. No.	Para No.	Departmen	
		Concerned	
1	2	3	4
1	1.64	Defence (Department of Defence Production)	A new medium range imported gun was introduced in service in 1966. Its ammunition was initially imported from a foreign country. As the gun was expected to be in service for the next 20 years, it was proposed in 19.5 to establish facilities for indigenous production of the ammunition to achieve self-sufficiency. In November, 1965, a contract was concluded with the foreign country for supply of licence and technical documentation for this purpose. The documentation was received in April-May, 1966. Though the decision was taken in April 1968 to set up facilities for production of 5.000 rounds of both HE and A.P. type of the ammunition in a single shift of 8 hours per day, the project was finally sanctioned in october" 1972 at a total cost of Rs. 16. 47 crores. Subsequently, it was decided to that AP type was not required to be produced indigenously as it was no longer required by that Army.
2	1.65	-do-	Although the project was targetted for commissioning by October, 1977, the date was revised to August, 1978 and the project is now expected to be completed by June 1984. In the meantime, the estimated cost of the project has also increased from Rs. 16.47

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3 1.66 Defence

(Department of Defence Production)

According to the Ministry, at the time of introduction of the gun in 1965 it was accepted that this would be in use till 1985. The project for indigenous production of ammunition required for the gun was pursued in such a casual manner that the full scale production thereof is not expected to establish till 1984 which is practically the terminal year for use of this gun This speaks volumes of the inefficient, if not negligence, of the machinery in charge of planning and execution of projects. The Committee are not only surprised but shocked at this state of affairs. A bigger surprise

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project to the tune of Rs. 6.53 crores,	huge

additional expenditure had to be incurred in foreign exchange by resorting to import of the ammunition to the tune of Rs. 21.50 crores and import of components worth Rs. 699.87 lakhs which could have been avoided had the project progressed as per schedulc. This is a matter of serious concern. The manner of utilization of funds ungrudingly voted by Parliament for such defence projects leaves much to be desired.

Inordinate delays and huge cost escalation in certain other defence projects of a vital nature such as replacement of a basic trainer aircraft, 87th Report (7th Lok Sabha) Development of a helicopter, 76th Report (Seventh Lok Sabha) and Procurement and utilisation of 10-ton chassis and vehicle built thereon (139th Report-Seventh Lok Sabha) have come to the notice of the Committee during the last few years. These cases reflect very adversely on the quality of Defence planning and the manner of implementation of vital projects. The fact that Parliament is so generous in granting funds for Defence Forces casts an additional responsibility on the Ministry to ensure that these funds are put to the optimum use and delays in execution of projects which have vital implications for the battle worthiness of the troops are obviated. The Committee therefore recommend that the lapses in the execution of the project for establishment of production facilities for an ammunition as highlighted in the foregoing paragraph should be brought to the Cabinet and remedial measures taken to avoid recurrence. The Committee would like to be apprised of the action taken in this regard within six months.

- 20. Atma Ram & Sons, Kashmere Gate, Delhi-6.
- J.M. Jaina & Brothers,
 Mori Gate, Delhi.
- The English Book Store,
 7-L, Connaught Circus,
 New Delhi.
- 23. Bahree Brothers, 188, Lajpatrai Market, Delhi-6.
- 24. Oxford Book & Stationery Company, Scindia House, Connaught Place, New Delhi-1.
- 25. Bookwell,4, Sant Narankari Colony,Kingsway Camp,Delhi-9.

- The Central News Agency,
 23/90, Connaught Place,
 New Delhi.
- 27. M/s. D. K. Book Organisations,74-D, Anand Nagar (Inder Lok),P.B. No. 2141,Delhi-110035.
- M/s. Rajendra Book Agency,
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- M/s. Ashoka Rook Agency,
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- Books India Corporation B-967, Shastri Nagar, New Delhi.

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