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REPORT OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA

FOR

THE YEAR 1985-86

UNION GOVERNMENT (DEFENCE SERVICES)

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PREFATORY REMARKS

This Report has been prepared for submission to the President under Article 151 of the Constitution. It relates mainly to matters arising from the Appropriation Accounts of the Defence Services for 1985-86 together with other points arising from audit of the financial transactions of the Defence Services.

The cases mentioned in the Report are among those which came to notice in the course of test audit during the year 1985-86 as well as those which had come to notice in earlier years but could not be dealt with in previous Reports; matters relating to the period subsequent to 1985-86 have also been included, wherever considered necessary.

CHAPTER 1

BUDGETARY CONTROL

1. Budget and Actuals

The table below compares the expenditure incurred by the Defence Services in the year ended 31st March 1986 with the amount of original and supplementary appropriations and grants for the year :—

(i) *Charged Appropriations*

	(Rs. in crores)
Original	7.22
Supplementary	0.35
Total	7.57
Actual Expenditure	4.19
Saving	(—)3.38
	(percent)
Saving as percentage of the total provision	44.65

There were overall savings in the preceding 10 years also. The percentages of savings as compared to the total provisions during the years 1981-82 to 1984-85 ranged between 14.41 and 62.40.

(ii) *Voted Grants*

	(Rs. in crores)
Original	8044.48
Supplementary	206.17
Total	8250.65
Actual Expenditure	8354.86
Excess Expenditure	(+)104.21
	(per cent)
Excess as percentage of total provision	1.26

2. Supplementary grants/appropriations

(a) *Supplementary grants* : Supplementary grants (voted) aggregating Rs. 206.17 crores were obtained in 3 grants in March 1986 as indicated below :—

(Rs. in crores)

Grant No.	Amount of Grant			Actual Expenditure	Excess(+) Saving(—)
	Original	Supplementary	Total		
20—DS—Army	4787.08	153.90	4940.98	4963.89	(+)22.91
22—DS—Air Force	1729.93	38.35	1768.28	1825.65	(+)57.37
23—Capital Outlay on Defence Services	925.52	13.92	939.44	963.74	(+)24.30
Total	7442.53	206.17	7648.70	7753.28	(+)104.58

Inspite of obtaining supplementary grants in March 1986 there was excess expenditure in all the 3 grants indicating that the Supplementary grants obtained in all the 3 cases proved inadequate.

(b) *Supplementary Appropriation (Charged)*

Supplementary appropriation (Charged) of Rs. 0.35 crore was obtained under Grant No. 22—Defence Services—Air Force in March 1986 for making payments in satisfaction of Court decrees. Though an advance of this amount was obtained from the Contingency Fund of India on 14th January 1986 for making immediate payments and Supplementary appropriation was obtained in March 1986 for recouping the amount to the Fund, no payment was made on this account during 1985-86 and the entire amount of the supplementary appropriation thus remained un-utilised.

3. Excess over Voted grants

There are in all 4 grants for Defence Services. Of these, 3 grants disclosed excess expenditure. Excess aggregating Rs. 104,57,72,022 over voted portion of 3 grants as given below, requires regularisation under Article 115 of the Constitution :—

Grant No.	Total Grant Rs.	Actual Expenditure Rs.	Excess Rs.
20—DS—Army	4940,98,15,000	4963,88,68,508	22,90,53,508
22—DS—Air Force	1768,27,90,000	1825,65,26,680	57,37,36,680
23—Capital outlay on Defence Services	939,44,00,000	963,73,81,834	24,29,81,834
Grand Total	7648,70,05,000	7753,27,77,022	104,57,72,022

The excess under Army was mainly under 'Transportation' due to heavy movement of personnel and stores by rail, 'Military Farms' due to purchase of fodder at higher rates owing to draught conditions in some states, 'Ordnance Factories' due to more materialisation of supplies than anticipated, 'Works' due to grant of additional dearness allowance, interim relief and rise in cost of stores and 'Inspection Organisation' due to more materialisation of stores than anticipated. In regard to Sub-Heads 'Military Farms' and 'Inspection Organisation' the expenditure exceeded the final grant during preceding 6 years and 4 years respectively.

The excess under Air Force was mainly under 'Pay and Allowances of Air Force' due to grant of additional dearness allowance and bonus, 'Transportation' due to increased movement of personnel and hike in fares, 'Works' due to execution of inescapable special repairs and increase in cost of stores and 'Special Projects' due to better performance in progress on Radars. In regard to Sub-Heads 'Works' and 'Special Projects' the expenditure exceeded the final grant during preceding 7 years and 9 years respectively.

The excess under 'Capital Outlay on Defence Services' was mainly under 'Army' ('Land' and 'Construction Works') due to 'on account' payment to a State Government for acquisition of land and more expenditure on Capital Works, 'Navy' ('Construction Works') due to escalation in the cost of building materials, 'Air Force' ('Special Projects') due to better progress of works and 'Ordnance Factories' ('Construction Works') due to incurring of expenditure on certain time bound projects.

4. **Control over Expenditure**

The following are some instances of defective budgeting relating to Voted grants :

(a) Instances of Supplementary Grants remaining wholly unutilised :—

(Rs. in crores)

Grant No. / Sub-Head	Original Grant	Supplementary Grant	Amounts reappropriated	Total Grant	Actual Expenditure	Saving(—)
22—DS—Air Force						
A.3—Pay and Allowances of Civilians	42.24	1.29	(+)0.09	43.62	41.73	(—)1.89
23—Capital Outlay on Defence Services						
A.3—Air Force						
A.3(1)—Land.	3.53	0.62	(+)3.23	7.38	6.25	(—)1.13

(b) Instances in which re-appropriations made were wholly or partially unnecessary :—

(Rs. in crores)

Grant No. / Sub-Head	Sanctioned Grant	Amount re-appropriated/Surrendered	Final Grant	Actual Expenditure	Excess(+) Saving(—)
20—DS—Army					
A.1—Pay and Allowances	1593.60	(+)18.08	1611.68	1601.32	(—)10.36
A.3—Pay and Allowances of Civilians	229.83	(+)23.62	253.45	244.42	(—)9.03
21—DS—Navy					
A.4—Transportation	17.00	(—)1.93	15.07	15.80	(+)0.73
A.5—Stores	370.00	(—)30.65	339.35	350.58	(+)11.23
22—DS—Air Force					
A.1—Pay and Allowances of Air Force	254.52	(—)1.65	252.87	255.51	(+)2.64
A.3—Pay and Allowances of Civilians	43.53	(+)0.09	43.62	41.73	(—)1.89
A.7—Special Projects	57.00	(—)3.32	53.68	55.69	(+)2.01
23—Capital Outlay on Defence Services.					
A.1—*Army*					
A.1(2)—Construction Works	229.00	(—)14.80	214.20	227.66	(+)13.46
A.3—*Air Force*					
A.3(1)—Land	4.15	(+)3.23	7.38	6.25	(—)1.13
A.3(2)—Construction Works	71.84	(—)1.33	70.51	71.21	(+)0.70

5. Injudicious surrender of Funds

In the following case surrender was made on 28th February 1986 though the actual expenditure exceeded the final grant. Thus the surrender proved injudicious :

(Rs. in crores)

Grant No. / Sub-Head	Original	Re-appropriation	Surrender	Total Grant	Actual Expenditure	Excess
21—DS—Navy						
A.5—Stores (Voted)	370.00	(—)10.77	(—)19.88	339.35	350.58	(+)11.23

6. Persistent Savings

In the following cases there have been persistent savings during the last 3 years :—

(Rs. in crores)

	Year	Original Grant	Supplementary	Re-appropriation	Total	Actual Expenditure	Saving
Army							
A.9—Stores	1983-84	890.37	23.02	(—)4.21	909.18	886.09	(—)23.09
	1984-85	971.84	86.67	(—)13.90	1044.61	1039.54	(—)5.07
	1985-86	1379.98	—	(—)141.07	1238.91	1197.90	(—)41.01
Air Force							
A.8—Other Expenditure	1983-84	12.97	—	(+)4.43	17.40	16.89	(—)0.51
	1984-85	22.00	0.45	—	22.45	21.75	(—)0.70
	1985-86	22.95	—	(+)1.78	24.73	24.47	(—)0.26

7. Watching of expenditure against allotments under locally controlled heads

The authorities to whom allotments are made are responsible for watching the progress of expenditure. The Controller of Defence Accounts (CDA) is also required simultaneously to keep a watch on the progress of expenditure against the sanctioned allotments and bring to the notice of the allottees, cases in which the progress of expenditure is abnormally heavy or unusually low. In the following cases it was noticed that either sanction for additional allotment was awaited or statements of expenditure were not rendered :

(i) An examination of Bill Booking Register of local purchase maintained in an Area Accounts Office 'AA' of CDA 'A' revealed that in the following Supply Depots expenditure incurred during 1985-86 (upto March 1986) was in excess of the allotment :

(Rs. in lakhs)

No. Name of the unit	Code Number	Allotment	Expenditure upto March 1986
1. Supply Depot ASC 'X' 9A(a)	11/401/01	135.10	142.14
2. Supply Depot ASC 'X' 9A(b)	11/402/01	0.08	0.25
3. Supply Depot ASC 'Y' 9A(a)	11/401/01	95.31	134.27
4. Supply Depot ASC 'Y' 9A(d)	11/404/01	3.80	4.89
5. Supply Depot ASC 'Z' 9A(a)	11/401/01	34.28	38.52
6. Supply Depot ASC 'Z' 9A(d)	11/404/01	1.10	1.49

Sanction for additional allotment was awaited to end of March 1986.

(ii) An examination of registers maintained in Accounts Section of CDA 'B' revealed wide variations between the sanctioned allotments and actual expenditure in respect of the following Code Heads :

(Rs. in lakhs)

Nature of Expenditure	Code Head	Allotment made for CDA 'B' vide AHQ letter No. 81054/ LP/OS-28 dt. 27-12-85 (1985-86)	Expenditure booked upto the end of March 1986
AOC Stores			
Ordnance Stores	Ordnance Stores Local Purchase 415/01	55.66	174.55
Clothing Stores	Clothing Stores Local Purchase 416/01	61.66	98.34
MT Stores	Mechanical Transport Stores Local Purchase 417/02	20.83	26.01

The expenditure was admitted by the CDA 'B' provisionally pending receipt of the additional allotments which were awaited in March 1986.

(iii) In the case of CDA 'C' it was noticed that monthly statements of actual expenditure were not being sent to the allottees. The CDA reported in October 1986 that "this office could not render expenditure statements to the authorities concerned due to non-receipt of allotment letters in time. However, with special efforts we could collect a large number of allotment letters at the close of the year and noted the allotments in the locally controlled head registers for the year 1985-86. Expenditure statements from September 1986 onward are being sent".

(iv) In the case of CDA 'D', it was noticed that no statements of expenditure were issued to the 23 allottees during the year 1985-86.

8. **Stores losses**

Mention was made in paragraph 9 of the Report of the Comptroller and Auditor General of India for the year 1984-85, Union Government (Defence Services) of stores losses of Rs. 1110.01 lakhs written off during that year. Total stores losses written off during the year 1985-86 amounted to Rs. 1656.77 lakhs Of these, losses written off due to theft, fraud or gross neglect amounted to Rs. 1019.24 lakhs. Details of individual losses exceeding Rs. 0.75 lakh due to theft, fraud or gross neglect are given in Appropriation Accounts, Defence Services for the year 1985-86.

CHAPTER 2

MINISTRY OF DEFENCE

9. Loss due to delay in revision of rates for supply of electricity

Supply of electricity to the Armed Forces and to certain other private consumers is arranged by the Military Engineer Services (MES) either from their own generating installations or through bulk purchase from other sources. Consumers not entitled to free supply of electricity are charged at all-India flat rates (at half the rates from service officers for electricity consumed for light and fan) fixed by the Government from time to time for different classes of consumption. These rates are worked out by the Engineer-in-Chief's (E-in-C's) Branch on "no profit, no loss" basis with reference to the all-India average all-in-cost of generation and purchase.

Mention was made in paragraph 26 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1979-80 about the delay in revising the all-India flat rates of recovery for electricity and consequent loss of revenue (Rs. 189.52 lakhs) during 1974-75 to 1977-78. In the remedial/corrective action taken note issued by the Ministry of Defence (Ministry) on this paragraph in December 1981, it was stated that the all-India flat rates had been revised and notified in July 1981 and made effective from 1st April 1981. The Ministry further added that "it has been decided to revise the all-India flat rates after three years". Though the orders provide for determination of the all-India flat rates of recovery on "no profit, no loss" basis, the rates for recovery fixed in 1981 were found in audit to be well below the all-India average all-in-cost rates of generation and purchase during the previous year viz. 1980-81 as shown below :

Class of consumption	All-India flat rates effective from 1st April 1981 (Paise per unit)	All-in-cost rate for 1980-81 (Paise per unit)
Class 'A' (illumination and ventilation)	50	74
Class 'B' (Power purposes during all hours)	32	50
Class 'C' (Power purposes during restricted hours)	32	35
Class 'D' (Street lighting)	65	74

The effect of the rates fixed in 1981 was that the supply of electricity could not have been on "no profit, no loss" basis, and that the losses continued to increase.

In May 1983, the Ministry issued formal orders laying down periodicity for revision of all-India flat rates for electricity as once in every three years. Accordingly, these rates were due for revision from 1st April 1984. However, the all-India flat rates of recovery fixed in 1981 were not revised despite progressive increases in the all-India average all-in-cost rates as indicated below :

Class of consumption	All India Flat Rates effective from 1st April 1981 (Paise per unit)	All-in-cost Rate (Paise per unit)		
		1981-82	1982-83	1983-84
Class 'A'	50	88.83	93.19	97.79
Class 'B'	32	61.79	65.75	67.04
Class 'C'	32	42.36	47.95	45.43
Class 'D'	65	88.83	93.19	97.79

A comparison of the all-India flat rates taken into account for billing for 'Paying' consumers effective from 1st April 1981 vis-a-vis the all-in-cost rates during the period 1st April 1981 to 31st March 1983 revealed a loss of Rs. 682 lakhs. The loss for 1983-84 works out to Rs. 438 lakhs. In spite of the losses sustained during these years and also the fact that the rates made applicable from 1st April 1981 were much less than the all-India average-all-in-cost rates, action was not taken to revise the all-India flat rates which other wise also became due for revision with effect from 1st April 1984. The all-in-cost rates for the year 1984-85 have not so far been computed by the E-in-C's Branch (February 1986). Based on the data available for 1983-84, the E-in-C's Branch initiated proposal only in February 1986 for revision of the rates. The rates have not so far been revised (November 1986). Thus losses continued to mount further for want of revision of recovery rates since April 1984.

The Ministry stated in November 1986 that :

— In regard to all-India-flat rates effective from 1st April 1981 being lower than all-in-cost rates of 1980-81 it may be stated that while working out the all-India-flat rates the figures of preceding years are taken into account and the cut-off year for working out these rates was 1978-79. This is so because voluminous data from various Commands have to be collected and processed which takes roughly 2-3 years.

— As per directions of the former Raksha Rajya Mantri, the proposal for freezing of rates of electricity for 5 to 7 years was under consideration as it was felt desirable in the interest of welfare of Defence Personnel. The case for fixation of all-India-flat rates effective from 1st April 1986 onwards is now in progress in consultation with Finance Division. (The grounds given by the Ministry for delay in revision of the rates are not, however, tenable as no orders for freezing the rates were issued. On the other hand Ministry had confirmed that the proposal for freezing of the rates remained under consideration with them in consultation with the Finance Division and finally the periodicity of 3 years for revision of all-India-flat rate was laid down in the Ministry's order of 12th May 1983).

10. Premature failure of batteries

Based on the requirements of the Navy a supply order was placed on 19th January 1972 by the Department of Defence Production and Supplies (DDPS) on a firm for supply of 2 sets (later increased to 5 sets in April 1975) of under water batteries at Rs. 70.36 lakhs per set. The batteries were guaranteed for 6 years of actual use or 600 cycles whichever was completed earlier. In the event of failure of a battery within the guarantee period, the firm was required to reimburse within 30 days of the written notice, the proportionate cost of a new set for the number of years falling short of six alongwith the cost of fitment and transportation of the battery. The supply order further stipulated that "for the purpose of the warranty, the maintenance and performance records maintained in the log book of the submarine and the laboratory records maintained in respect of laboratory tests shall be final and legally binding on the contractor". Two batteries (set Nos. 2 and 3) were received on 16th December 1976 and 26th August 1977 and were commissioned in April 1978 and March 1979 respectively. In December 1983, the Naval Headquarters (HQ) informed the DDPS that these two batteries received against the supply order had failed prematurely leading to immediate replacement from the batteries in stock. Set No. 2 failed after 5 years and 2 months after completing 111 cycles and set No. 3 failed after 4 years and 9 months after completing 95 cycles.

Premature failure of these batteries was investigated by the Naval HQ in July 1983 and February 1984 alongwith the supplying firm and it was concluded in April 1984 that the failure of set number 2 was largely attributable to human causes notwithstanding a few lacunae in the maintenance instructions recommended by the manufacturers. It was also concluded that set number 3 failed due to :

— Inferior level indicator manufactured and recommended by the firm.

— Poor air agitation system.

— Lack of restriction on the partial charges.

— Absence of deep discharges in the maintenance instructions recommended by the firm.

Naval HQ, therefore, recommended to the DDPS on 23rd April 1984 that reimbursement of the cost of the remaining life of the battery be taken up with the firm.

In the internal meeting held in the DDPS on 30th April 1984 representative of Naval HQ stated that set number 2 had failed largely due to in-efficient handling by the Navy (users). Premature failure of set number 3 which gave a life of 4 years and 9 months was largely due to manufacturer's failures. It was further observed in the meeting that "though Naval HQ had given the broad specification and qualitative requirements, neither Naval HQ nor the inspection authorities had approved the design of the battery being manufactured by the firm with foreign collaboration".

On 20th June 1984 the Department wrote to the firm for their comments and reactions on the suggestions and recommendations made by the Naval HQ. The firm in their reply on 11th July 1984 disowned responsibility for the failure of the batteries on the ground that the premature deterioration of set number 3 was not due to any manufacturing fault but inadequate maintenance by the users and that they were not, therefore, liable to pay any reimbursement of the cost of the remaining life of the battery.

On 11th September 1984 the Naval HQ stated that since the failure of set number 2 was due to both human causes and design failures, the subject of reimbursement of cost (Rs. 27.6 lakhs approximately) was not taken up with the firm whereas in the case of set number 3 it cannot be agreed that the failure was entirely due to inadequate maintenance and human lapses. The amount recoverable from the firm in respect of set number 3 was worked out by Naval HQ as Rs. 42 lakhs.

The matter was discussed by the Department again on 19th March 1985. It was recorded that in respect of set number 2 no compensation had been claimed from the firm on the grounds of equity, since both the Naval HQ and the firm had contributed to its failure. The firm was, however, liable to pay compensation in respect of set number 3 which failed due to "faulty agitation system design" and "design inadequacy" of the battery. It was also anticipated that there may be problems in enforcing the claim under the warranty clause.

The DDPS informed Audit on 29th July 1986 that the case was under examination in consultation with integrated Finance.

The Ministry of Defence stated in November 1986 that :

— In regard to loss of Rs. 27.6 lakhs in respect of set No. 2 recovery is not proposed to be made as the failure was partly due to lack of adequate up keep by ship's crew for which disciplinary action has been taken against concerned personnel. Action has also been initiated to regularise the loss to be borne by the State.

— As regards set No. 3 arrangements have been made to carry out life cycle tests to prove whether there was any design deficiency. These tests are being carried out and will necessarily take time to complete. After such a test a view would be taken on the question of recovery of compensation.

— The remaining 3 sets received against order of January 1972 were decommissioned as follows :

Set No.	Life
1	5 years 11 months
4	5 years 6 months
5	5 years 2 months

The case reveals that :

— Due to lack of efficient handling on the part of users (in the case of set number 2) and design inadequacy (in the case of set number 3) two costly batteries failed prematurely causing a loss of Rs. 69.6 lakhs.

— The premature failure of the 2 batteries was reported to the DDPS in December 1983. Neither has the loss due to inefficient handling by the users (Rs. 27.6 lakhs) for set number 2 been regularised nor has any claim for Rs. 42 lakhs due to premature failure of set number 3 on account of design defect been preferred even after a lapse of about 3 years (November 1986).

CHAPTER 3

ORDNANCE AND CLOTHING FACTORIES

11. General

1. *Introduction*

The ordnance factories are one of the oldest manufacturing establishments in the country. They function as departmental undertakings under the Department of Defence Production producing a wide variety of items for the Defence Services, Para military forces, Civil Police, etc. Spare capacity is also used for producing items for civil trade. The number of factories has increased from 16 in 1947 to 36 in 1985 including two factories which are being set up. Groupwise classification of the factories is: metallurgical-6, engineering-13, filling-5, chemical-4, ordnance equipment-5, armoured vehicles-2 and miscellaneous-1. The factory under miscellaneous group and one factory under armoured vehicle group have not yet started production.

In 1979 the ordnance factories organisation was restructured for effective functioning. An Apex body called the Ordnance Factory Board (OFB) was constituted with a Chairman and 7 full time members. Two Additional Directors General of Ordnance Factories are incharge of the factories belonging to the ordnance equipment group (OEF) and the armoured vehicle group respectively.

The objectives behind the re-organisation of the ordnance factories and setting up of the OFB were to improve fulfilment of production targets, utilisation of capacities, maintenance of quality standard, product development and technology transfer, indigenisation and project implementation, etc. In February 1985 Government constituted a working group to review the working of the OFB and to evaluate, *inter alia*, its performance against these objectives. The working group was asked (February 1985) to complete the work within 3 months and submit its report to the Department of Defence Production. The report was called for in audit (July 1985) but has not been made available (October 1986).

The overall statistical data on the activities of the ordnance factories for the period 1982-83 to 1984-85 is shown in the annexure.

2. *Capacity and utilisation*

The project capacity and installed capacity of most of the old established factories are not known. There are, however, 12 factories (9 new and 3 old) whose project capacity and installed capacity could be worked out in audit. Of these factories, utilisation of project capacity was 60 per cent and above but below 80 per cent in 3 factories, 40 per cent and above but below 60 per cent in 4 factories, 20 per cent and above but below 40 per cent in 3 factories and below 20 per cent in 2 factories. Similarly, utilisation of installed capacity was 80 per cent and above in 2 factories, 60 per cent and above but below 80 per cent in 4 factories, 40 per cent and above but below 60 per cent in 2 factories and 20 per cent and above but below 40 per cent in 4 factories. The OFB stated (November 1986) that the gap in capacity and actual production cannot be avoided.

3. *Budget and actuals*

Budget grant and actual expenditure for 1982-83 to 1984-85 in respect of Revenue and Capital for ordnance and clothing factories were as under:

Year	Revenue		Capital	
	Budget	Actual	Budget grant	Actual
	(In crores of rupees)			
1982-83	777.02	749.04	69.83	59.78
1983-84	857.185	797.43	89.98	81.70
1984-85	889.47	853.34	103.80	87.30

4. *Cost of orders in hand*

The cost of outstanding orders in hand of the ordnance factories at the end of the year is not worked out though the accounting procedure provides that at the end of each year a list of all outstanding extracts will be prepared and the values will be worked out for budgetary purpose.

5. *Work-in-progress*

As on 1st April 1984, 54060 manufacturing warrants valuing Rs. 341.90 crores issued upto 1983-84 were outstanding. Of them, about 61 per cent (32,922 warrants) were cleared during 1984-85 and the balance (21,138 warrants valuing Rs. 115.08 crores) were awaiting completion at the end of March 1985. Together with the fresh manufacturing warrants issued during 1984-85 but not completed, 42,334 manufacturing warrants (valued at Rs. 361.24 crores) were outstanding at the end of the year under review (March 1985).

The table below shows the age of the work-in-progress and the manufacturing warrants against which the works remained incomplete on 31st March 1985.

Year in which works started	Number of manufacturing warrants	Work-in-progress (in crores of rupees)
1952-53 to 1974-75	221	1.43
1975-76 to 1979-80 . . .	2,568	6.02
1980-81 to 1983-84 . . .	18,349	107.63
1984-85	21,196	246.16
	42,334	361.24

The normal life of a manufacturing warrant is only six months.

6. *Civil trade*

One of the objectives of the OFB was to maximise utilisation of installed capacaity where necessary by diversification of production for civil and export markets. The civil trade during 1984-85 had shown a downward trend. The value of civil trade, profit involved and amount of foreign exchange earned during 1983-84 and 1984-85 were as under :

	1983-84	1984-85
	(in crores of rupees)	
Value of civil trade . . .	36.01	32.56
Profit involved	2.16	1.60
Foreign exchange earned . .	1.26	0.87

The foreign exchange expenditure incurred in production of the civil trade items is not known. The OFB stated (November 1986) that the Ordnance Factory's entry into civilian markets by diversification of installed capacity is dependent entirely on capacities available after meeting services demand.

7. *Overtime*

All the factories continued systematic overtime throughout the year 1984-85. The details of overtime work for the last three years were as under :

Year	Man-hours (in lakhs)	Value (Rs. in crores)
1982-83	822.47	36.56
1983-84	841.76	42.55
1984-85	853.65	47.26

8. *Inventory*

As against the total value of Rs. 664.56 crores and Rs. 713.31 crores in respect of inventories held in the factories as on 31st March 1983 and 31st March 1984 respectively, the total value thereof held as on 31st March 1985 was Rs. 740.67 crores as detailed below :

Particulars	Value in crores of rupees		
	31-3-1983	31-3-1984	31-3-1985
1. Working stock :			
(A) Active . . .	512.00	556.16	587.87
(B) Non-moving . .	40.03	37.55	33.86
(C) Slow-moving . .	37.49	38.83	42.45
2. Waste and obsolete .	18.63	21.61	13.32
3. Surplus stores . .	7.05	5.44	8.26
4. Maintenance stores . .	49.36	53.72	54.91
Total . . .	664.56	713.31	740.67

The stock holding in terms of average monthly consumption of direct and indirect stores worked out to 10.43 months against 9 months requirements on average in terms of all varieties of stores.

The total number of items of non-moving (stores not drawn for a continuous period of 3 years or more) and slow-moving (stores not drawn for a continuous period of one year) stores during the years 1982-83 to 1984-85 were as under :

Year	Non-moving		Slow-moving	
	Items	Value	Items	Value
		(Rs. in crores)		(Rs. in crores)
1982-83 . .	1,31,434	40.03	41,794	37.49
1983-84 . .	1,18,057	37.55	40,306	38.83
1984-85 . .	1,22,841	33.86	37,013	42.45

9. *Stock verification*

Cases of deficiencies are increasing in the ordnance factories. Annual stock verification carried out by an independent group under the control of OFB/OEF Headquarters found the following deficiencies and surpluses in the factories :

Year	Deficiencies	Surpluses
	(in lakhs of rupees)	
1982-83	23.93	33.21
1983-84	28.83	68.12
1984-85	108.37	48.24

The total number of items for which stock was not verified during 1984-85 was 73,287 in 8 factories.

10. *Services rendered on payment*

Outstanding dues on account of stores supplied and services rendered on payment by the ordnance factories upto March 1985 to outside parties including central department, State Government, railways, private parties etc. amounted to Rs. 12.13 crores as at the end of June 1986 as follows :

	value of outstanding dues
	(Rs. in crores)
Central departments : (excluding railways) . .	10.12
Foreign Government	0.07
State Government	1.20
Railways	0.01
Public Sector undertakings	0.41
Private parties	0.32
	12.13

The case was referred to the Ministry of Defence in August 1986 but their comments were still awaited (November 1986).

ANNEXURE (Referred to in sub-para-I)

Overall Statistical Data

		1982-83	1983-84	1984-85
1	2	3	4	5
1.	Average value of fixed capital assets (Rs. in crores)	431.92	467.80	506.75
2.	Man-power (No. in lakhs)	1.79	1.78	1.83
3.	Net cost of production (excluding inter factory demands) (Rs. in crores)	697.75	803.93	913.34
4.	Capital output ratio .	1:1.62	1:1.72	1:1.80
5.	Factory cost analysis in terms of percentage of gross value of production : Material	67.68	67.40	65.90
	Labour.	6.44	6.80	6.75
	Others	25.88	25.80	27.35
6.	Gross contributed value (value of production less materials and outside supplies and services) (Rs. in crores) . .	281.11	331.60	396.93
7.	Wages (Rs. in crores) .	55.99	69.10	78.60
8.	Net contributed value (gross contributed value less wages) (Rs. in crores)	225.12	262.50	318.33
9.	Net contributed value per Rs. 1 crore, of fixed capital assets (Rs. in crores)	0.52	0.56	0.63
10.	Average earnings per employee (Rs.) . .	12,149	14,122	16,110
11.	Net contributed value per employee (Rs.). .	12,606	14,714	17,420
12.	Value of abnormal rejection (Rs. in crores) .	5.05	4.12	5.68
13.	Percentage of abnormal rejection on gross value of production . .	0.58	0.40	0.49
14.	Customer composition (percentage of total issue net of Inter-Factory Demands) . . .	88.86	87.90	90.07
	Army, Navy, Air Force and others . . .	3.64	3.85	3.05
	Civil Trades . . .	5.12	5.30	4.38
	Own stock and capital works	2.38	2.95	2.50
15.	Extent of requirement of stores (Armament, Ordnance, Clothing, Mechanical Transport) met by Ordnance Factories in terms of percentage .	55.08	54.94	54.80
	Army, Navy, Air Force and others . . .	37.69	30.27	22.51
16.	Value of inventories (Rs. in crores) . . .	664.56	713.31	740.67
17.	Surplus, obsolete, slow-moving and non-moving inventories (Rs. in crores)	103.20	103.43	97.89
18.	Norms of general inventory holdings in terms of months requirements	6 months	6 months	6 months
19.	Inventories in terms of months consumption .	11.11 months	10.89 months	10.43 months
20.	No. of warrants pendency (*i*) Total No. of warrants on 31 March 1983/1984/1985 . .	56,862	54,060	42,334
	(*ii*) No. of warrants more than one year old onwards on 31 March 1983/1984/1985 .	32,079	29,603	21,138
21.	Normal manufacturing cycle/normal life of manufacturing warrants. .	6 months	6 months	6 months
22.	Value of components and products in stock (Rs. in crores)	131.41	135.78	193.45
23.	Components and products holding in terms of months production .	1.81 months	1.61 months	2 months

12. Injudicious/unnecessary purchase of stores

(i) *Acceptance of defective stores involving loss*

A Gun Development Team (GDT) set up in 1965 for developing an equipment and its ammunition, took up development of ammunition in February 1978. The design of the ammunition was finalised in August 1981 with empty shell bodies obtained from factory

'A' and other matching components from trade. As Ordnance Factory Board (OFB) expressed inability in October 1981 to supply additional shell bodies for users' confirmatory and range and accuracy trials, the GDT placed a trial order (November 1981) on firm 'X' for 50 shell bodies at Rs. 2,800 each (valuing Rs. 1.40 lakhs). According to Ministry of Defence (Ministry) (November 1986) trade sources were not having substantial orders from OFB in 1981. Hence it was decided to obtain supplies of shell body forgings from trade for quicker delivery. It has been observed in audit that the average cost of shell bodies in factory 'A' during 1983-84 was only Rs. 710.78 each (the average cost of factory A's supplies during 1981 is not available). The capacity created in factory 'F' for production of shell bodies for the ammunition was also lying unutilised to a considerable extent.

The shell bodies received from firm 'X' in April 1982 were subject to trial firings in May 1982 after being assembled at factory 'B' and majority of them were found to be defective (May 1982). Yet, two orders were placed on firm 'X' in November 1981 and May 1982 for a bulk quantity of 1,100 sets of matching components at Rs. 549 per set and 1,080 shell bodies at Rs. 2,800 each for conducting further trials. The order for shell bodies provided supply within 3 months and inspection by the GDT before supply. The firm supplied the matching components in September 1982 and 410 shell bodies during August to December 1982 duly inspected by the GDT. Out of the first consignment of 280 shell bodies supplied till October 1982, 165 shell bodies were assembled at factory 'B' in November 1982. The shell bodies failed in trials (December 1982) and defects of major and unsafe nature were noticed. Although the delivery date expired the order on firm 'X' was not shortclosed but the ordered quantity was increased (January 1983) from 1,080 numbers to 1,330 numbers. The GDT stated (January 1986) that the order was not shortclosed as the Inspecting Officer satisfied himself that the defects in the shell bodies had been rectified by the firm.

The firm submitted 670 shell bodies for inspection during January to May 1983, 651 of them were accepted and 19 were rejected. The additional 250 shell bodies ordered in January 1983 were supplied in October/November 1983 without prior inspection and acceptance. These were subsequently rejected in inspection in September 1984.

The supplies received after December 1982 were found to be defective in July 1983 after assembly and trial of a part of the supplies (235 numbers). An Inspection Team set up by the OFB in July 1984 to carry out an inspection of the unused shell bodies observed (June 1985) major and critical defects in them. The team also noticed that the shell bodies were not conforming to the stipulated specification and that the matching components supplied by the firm were in badly rusted condition. As the shell bodies and the components could not be put to any other alternative use, the GDT recommended for their disposal as scrap (June 1985).

The total cost of 1,061 shell bodies and 1,100 sets of matching components was Rs. 36.11 lakhs. 100 per cent payment for the stores was made to the firm during November 1982 to March 1984 on the basis of the inspection notes. No detailed inspection reports are, however, available in the records of the GDT on the basis of which the inspection notes were cleared. The estimated cost of assembly of a part of the supplies (400 numbers) was about Rs. 6.84 lakhs. The total loss due to acceptance of defective supplies including assembly and filling costs work out to Rs. 45 lakhs approximately. The OFB stated (April 1986) that the exact loss would be assessed only after disposal action is initiated.

The case reveals the following :

(i) Factory 'A' earlier manufactured and supplied shell bodies for the ammunition at a much cheaper cost (Rs. 710.78 each) but OFB expressed inability to undertake further production for that purpose and it was decided to procure the shell bodies from trade as trade sources were not having substantial orders from OFB in 1981. Consequently a trial order for 50 numbers at Rs. 2,800 each of shell bodies was placed on firm 'X'.

(ii) Though majority of shell bodies received from firm 'X' against the trial order of November 1981 were found to be defective; two more orders (1,080 numbers of shell bodies and 1,100 sets of matching components) valuing Rs. 36.11 lakhs were placed on them in May 1982 (for shell bodies) and November 1981 (for matching components).

(iii) Though the delivery schedule of the order of May 1982 for shell bodies expired when the firm supplied only 410 numbers of which 165 numbers had already failed on trials the order was not shortclosed, on the other hand the quantity on order was increased by 250 numbers.

(iv) The shell bodies (1,061 numbers) supplied by firm 'X' against the order of May 1982 were found defective and could not be put to any use. The matching components (1.100 sets) received against the order of November 1981 also could not be put to any use.

(v) No detailed inspection reports were available in the records of the GDT on the basis of which the inspection of the shell bodies was cleared.

(vi) The total cost of 1,061 numbers of shell bodies, 1,100 sets of matching components, including the cost of assembly and filling, which could not be put to use works out to Rs. 45 lakhs approximately.

The Ministry stated (November 1986) that the case is under investigation by Central Bureau of Investigation.

12(ii) *Avoidable expenditure in the purchase of stores*

According to the instructions issued by the Director General Ordnance Factories in August 1975, the ordnance factories were required to make 100 per cent payment within 10 days of receipt of despatch documents for stores supplied by the Minerals and Metals Trading Corporation (MMTC). The Ministry of Commerce urged the Ministry of Defence (Ministry) in July 1981, that as the factories were taking 10 to 322 days for making payments to the MMTC against various supplies made from August 1975, suitable instructions should be issued to the factories to make payments in advance like all other customers including Government Departments and collect the stores thereafter from the godowns or distribution centres. Necessary instructions for the advance payments were, however, not issued by the Ministry immediately. Only in December 1984 Government orders authorising the Ordnance Factory Board (OFB) and the factories to make 100 per cent advance payments with the placement of orders on the MMTC and other public sector enterprises were issued.

Meanwhile, the MMTC released the following sale notes in July and August 1981 and October 1982 for supply of refined nickel (in pellet form) to factory 'X' and tin ingot to factory 'Y' against the demands placed by the factories :

Sale Note	Quantity and rate	Validity period of the sale note
9th July 1981 .	22 MT of refined nickel (Rs. 90,000 per MT).	31st July 1981
5th August 1981 .	22MT of refined nickel (Rs. 94,000 per MT).	31st August 1981.
6th October, 1982	9 MT of tin ingot (Rs. 2,00,000 per MT)	30th October 1982

The sale notes provided that the factories should make 100 per cent payments in advance within the validity of the sale notes and that in default of the payments within the time the sale notes would automatically stand cancelled. Despite such stipulation two orders were placed (July and August 1981) by Factory 'X' on the MMTC for supply of 44 MT of refined nickel at the quoted rate with the provision that payment for the supplies would be made within 10 days of receipt of the proof of despatch of the store. As the MMTC returned (August 1981) the order of July 1981 stating that the advance payment was required before supply, the factory requested the OFB (August 1981) to settle the matter with the higher authorities or to direct the accounts authoriies to issue cheques for advance payments. The OFB intimated the factory only in Aprli/May 1982 that the question of advance payments was being taken up with the Ministry and that in the meantime the requirements of canalised items could be obtained by making advance payments to the MMTC on provisional basis. The OFB did not, however, issue similar instructions to other factories simultaneously. The OFB stated (August 1986) that after receiving Government sanction (December 1984) for making 100 per cent advance payment, instructions to all factories were issued in February 1985.

Meanwhile the MMTC cancelled the sale note (July and August 1981) in August 1981/April 1982. Factory 'X' procured 43 MT of refined nickel during November/December 1982 at higher rates (Rs. 98,600 and Rs. 1,07,400 per MT) after 100 per cent advance payments were made against fresh sale notes issued by the MMTC (September and October 1982). The Ministry stated (October 1984) that the enhanced procurement cost was due to import of the store by the MMTC.

Similarly, factory 'Y' received in September 1982 sale release order from the MMTC which also stipulated advance payment before supply. The factory referred the matter to the OFB in September 1982 but OFB's decision was not conveyed. Factory 'Y' placed an order in October 1982 on the MMTC for supply of 9 MT of tin ingots at the quoted rate of Rs. 2,00,000 per MT stipulating that 100 per cent payment would be made within 10 days of receipt of despatch particulars of the store. As advance payment was not made the MMTC cancelled the sale note in November 1982. Despite several reminders the OFB advised the factory only in February 1983 to make advance payment provisionally subject to *ex-post facto* Government sanction. The OFB stated (August 1986) that as the factory simultaneously took up the matter with the MMTC for continuance of existing procedure, the OFB was waiting for the outcome.

The MMTC issued in March 1983 a fresh sale note valid till 31st March 1983 for supply of the tin ingot at Rs. 2,50,000 per MT. Meanwhile, as funds were exhausted, the factory could not place any order against this sale note. Subsequently against another sale note issued in May 1983 the factory procured 9 MT of tin ingots in August 1983 at Rs. 2,65,000 per MT after making advance payment with the order.

Failure of the Ministry and the OFB in 1981 and 1982 to issue timely instruction to all ordnance factories regarding 100 per cent advance payment to the MMTC with the placement of orders on provisional basis pending issue of Government sanction, involved an extra expenditure of Rs. 11.10 lakhs in the procurement of refined nickel and tin ingot by factories 'X' and 'Y'.

12(iii). *Purchase of unsuitable stores*

(i) To improve the quality of communication system, factory 'D' invited (September 1983) tenders from 10 firms for supply of 5,000 metres each of armoured cables of types I and II with 0.71 mm dia copper conductor. Of the four offers opened on 25th October 1983, the offer of firm 'P' was the lowest (Rs. 59.76 per metre for type I and Rs. 28.44 per metre for type II). The factory could not finalise the order on the firm due to the latter's confusing stand on excise duty and insistence on 100 per cent payment based on despatch documents. In December 1983 the user section of the factory telegraphically requested a unit of a Public Sector Undertaking manufacturing cables (firm 'X') for their quotations for cables with 0.41 mm dia or 0.71 mm dia conductor or to the nearest sizes of their manufacturing range. According to Ordnance Factory Board (OFB) (October 1986) the enquiry was informal. Firm 'X' quoted (January 1984) Rs. 48,148 per km. for type I and Rs. 24,599 per km. for type II with 0.51 mm dia conductor.

As the rates of firm 'X' were cheaper and their products had better manufacturing process, quality control and economic insulation, the factory reinvited tenders from 9 firms including firm 'X' in April 1984. Although diametre of conductor was not a stringent factor and cables with 0.51 mm dia conductor were also acceptable, the retender enquiry specified only 0.71 mm dia conductor instead of both 0.51 mm dia and 0.71 mm dia. The OFB stated (October 1986) that in order to keep the option wide open to various firms the diametre of the cables was not reduced. The fact, however, remains that had the factory specified both diametres, the option for the firms producing and supplying cables with 0.51 mm dia conductor would have been wider.

Firm 'X' did not respond to the retender and no offer for cables with 0.51 mm dia conductor was received from any firm. Of the 3 offers opened on 26th April 1984 the offer of firm 'R' was the lowest (Rs. 58.48 per metre for type I and Rs. 28.48 per metre for type II) and that of firm 'Q' was the second lowest (Rs. 61,89 per metre for type I and Rs. 30.99 per metre for type II). Both the firms quoted for cables with 0.71 mm dia conductor. In June 1984, when the factory asked firm 'R' to confirm that their supplies would be of firm 'X' or firm 'Y' or firm 'Z' make at the quoted prices, the latter intimated on 22nd June 1984, that the firms mentioned by the factory were not regularly manufacturing the cables of the required type and that their offer was for other types of assured quality. Meanwhile on 1st June 1984 firm 'Q', on their own, submitted another offer for supply of cables of firm 'X' or firm 'Y' make to their respective specification, at Rs. 64.98 per metre for type I and Rs. 33.15 per metre for type II observing that their earlier offer was not found suitable by the factory. The factory rejected (July 1984) the lower offer of firm 'R' on the ground that the same was for unknown make and quality and without enquiring whether the cables offered by firm 'Q' in their quotation of June 1984 were with 0.71 mm dia conductor, the factory placed an order (July 1984) on them for supply of 5,000 metres of each type of cable with 0.71 mm dia conductor of firm 'X' or firm 'Y' make. Subsequently at the request of firm 'Q' (October 1984) the factory revised (November 1984) the specification of the cables on order, from 0.71 mm dia to 0.50 mm dia conductor, to conform to that of firm 'X' make. The cables of firm 'X' make with 0.50 mm dia conductor were thus ordered on firm 'Q' at higher rates (Rs. 64.98 per metre for type I and Rs. 33.15 per metre for type II) as compared to those offered by firm 'X' in January 1984 (Rs. 48.15 per metre for type I and Rs. 24.60 per metre for type II).

Though the store section of the factory, while initiating procurement action (August 1983), stipulated that prior approval of advance sample before bulk supply would be required this condition was not provided in the order. Due to the closure of the works of firm 'X', firm 'Q' could not supply the cables by 30th September 1984 as stipulated in the order. The delivery period was extended from time to time and finally till 30th April 1985. The firm started supplies from January 1985. Although the user section of the factory intimated (January 1985/February 1985) that the stores supplied by the firm were of cheaper/inferior materials and unfit for use and not acceptable even with price reduction, the order was allowed (March 1985) to continue with 7 per cent price reduction on actual cost for full quantity. The reduced rates (Rs. 60.53 per metre for type I and Rs. 30.94 per metre for type II) were much higher than those offered by firm 'X' in January 1984 (Rs. 48.15 per metre for type I and Rs. 24.60 per metre for type II). The firm supplied in all 5,373 metres of type I and 5,260 metres of type II cable by July 1985. The entire stock (cost : Rs. 5.06 lakhs) was lying unused (September 1986) being unsuitable for the intended purpose. Besides, procurement of cables of firm 'X' make at higher rates from firm 'Q' instead of from firm 'X' direct, involved an avoidable extra expenditure of Rs. 1 lakh.

The case was referred to the Ministry of Defence in June 1986 but their reply was still awaited (September 1986).

(ii) Factory 'B' was removing scraps recovered from steel ingots from forge shop to steel melting shop in lots of 7MT to 20MT by trucks or wagons. Quotations were invited in March 1981 from 7 firms for supply of 20 steel boxes of a special type to shift the scraps in bulk. An open advertisement was also made in April 1981 for supply of these boxes. The boxes were bulky and heavy and the factory did not have adequate facility for lifting the heavy scrap loads and filling them in the boxes but this aspect was not considered when the quotations were invited. Three offers were received against the tender of March 1981. The Tender Purchase Committee recommended in May 1981 the offer of firm 'M' (Rs. 10,793 each) which was the lowest, for a reduced quantity of four. For the balance, it recommended placement of order against the open advertisement. The capacity of firm 'M' was certified by an officer of the factory in May 1981 after visiting the firm. However, as the factory had doubts about the firm's capability to manufacture the boxes and its delivery period (8 to 10 months) was considered to be long, the order was not placed on the firm. It was decided (May 1981) to manufacture the boxes in the factory out of available structural items.

The offers received from three firms (Rs. 11,972 to Rs. 18,880 each) against the open advertisement were also rejected (June 1981) as the boxes were decided to be manufactured in the factory. However, the factory did not take any action subsequently to manufacture the boxes and within 3 months tenders were again invited (30th September 1981) for supply. Six offers (Rs. 15,500 to Rs. 21,500 each) were received and an order was placed in January 1982 on firm 'N' for 20 boxes at Rs. 15,500 each. Supplies of the boxes (cost : Rs. 3.26 lakhs) were completed in February 1983. Upto March 1986, 12 boxes were taken from stock but could not be utilised due to handling difficulties and the balance 8 boxes were lying in stock (October 1986). OFB stated (October 1986) that magnet facility in the forge shop was envisaged for lifting the scraps and filling in the boxes. The fact, however, remains, that the boxes were procured without providing these facilities and these facilities have not yet been provided even more than three years after the receipt of the boxes.

The case was referred to the Ministry of Defence (June 1986) but their reply was still awaited (September 1986).

12. (iv) *Extra expenditure in purchase of an ingot*

Factory 'X' was using zinc base alloy ingots as per ISI specification of 1966 for the manufacture of die cast components. In February 1981 the ISI specification was revised to provide iron content to the extent of 0.03 per cent against 0.075 per cent in the earlier specification, but the factory continued to use ingot of old specification. In February and March 1983 the factory placed two demands on the Ordnance Factory Board (OFB) for 240 tonnes ingots as per old specification. Though, after receipt of copies of the demands, the Controller of Inspection, Metals (CIM) intimated the revision in the ISI specification to the OFB and the factory on 30th April 1983, the demands were not amended. On 4th May 1983 the OFB invited tenders for supply of the ingots but they also did not update the specification. The tender notice was also not endorsed to the CIM for vetting of specification. The OFB stated (November 1986) that as the CIM's letter was not received at their end, the specification which was endorsed in the demands was incorporated in the tender and that the tender notice was inadvertantly not issued to the CIM.

Based on the quotations received the OFB placed the following orders on four firms for supply of 240 tonnes ingot with old specification at Rs. 20,250 per tonne.

Firm	Month of placing order	Quantity in tonnes	Delivery schedule
'A'	August 1983	100	50 tonnes per month after 4 weeks from the receipt of order.
'B'	August 1983	25	12.5 tonnes per month after 10 to 12 weeks from the receipt of order.
'C'	August 1983	25	12.5 tonnes per month after 4 to 6 weeks from the receipt of order.
'D'	October 1983	90	45 tonnes per month from November, 1983.

In September and November 1983 the CIM again requested the OFB to amend the specification in the orders. According to the OFB (November 1986) these letters were also not received by them and on receipt of further communication from the factory they had intimated the factory (January 1984) that the amendment was not possible at that stage and that any such amendment would result in complications.

Firms 'A' and 'B' completed the orders for 125 tonnes in November 1983 and February 1984 respectively. Against the extension till February 1984, firm 'C' supplied 6.29 tonnes (November/December 1983) out of 25 tonnes ordered on them. The supplies were made according to old specification and accepted. Although the delivery schedule of firm 'D' was extended till March 1984, supplies were not received from them. As the factory continued to insist (April 1984) on supply as per revised specification, the OFB amended the specification in the orders with firms 'C' and 'D' in May 1984 though earlier the amendment was not carried out on the ground of likely contractual complications. Firm 'C' refused (August 1984) to accept the amendment without price increase. Firm 'D' agreed (April/May 1984) to supply the ingots as per revised specification at the ordered price as the cost increase due to the revised specification was considered to be slightly higher, provided the delivery schedule was extended/refixed without any liquidated damages and price with reference to MMTC price of zinc prevailing during April, May and June 1984 was accepted. As the OFB did not agree to the conditions due to considerable increase in the price of zinc during 1984, the amendment to specifications was not accepted by the firm (May 1984).

According to the OFB (May 1986) the permissible limit for iron in the die casting being 0.1 per cent, ingots with old specification having 0.075 per cent iron content were also suitable for production. Although the factory was using these ingots for a long time and firms 'C' and 'D' were contractually bound to supply these ingots of old specification at the contracted price (price increase after the original stipulated delivery period being not admissible), the order on firm 'D' was cancelled (July 1984) and that on firm 'C' was shortclosed (August 1984). Subsequently, the OFB placed (April and May 1985) orders for ingots as per revised specification for the cancelled/shortclosed quantity (108 tonnes) on firm 'P' (40 tonnes) at Rs. 29,230 per tonne and on firm 'D' (68 tonnes) at Rs. 29,400 per tonne. Firm 'P' supplied the ingots during May 1985 to March 1986 and firm 'D' during June 1985 to May 1986. Computed with the rate in 1983 for ingots with old specification, the procurement in 1985 of 108 tonnes ingot with revised specification involved an extra expenditure of about Rs. 10.21 lakhs.

The OFB stated (May 1986) that since the ingots with old specification were to be exhausted first, this was a case of postponment of procurement of ingots with revised specification commensurate with the time of their use to avoid accumulation of inventory. They also added (November 1986) that prior to the cancellation/shortclosure of the orders on firms 'C' and 'D' there was a total stock and reserve of about 223 tonnes of ingots with old specification which was about 11 months requirements. The facts, however, remain that :

(i) inspite of revision in specification, orders were placed in 1983 for ingots of old specification after considering the requirements;

(ii) although ingots of old specification were also suitable and being used since long the orders on firms 'C' and 'D' were later cancelled/shortclosed without considering the eventual extra expenditure in the purchase of ingots of revised specification;

(iii) the factory had used ingots of old specification satisfactorily during 1984/1985; and

(iv) extra expenditure of Rs. 10.21 lakhs was involved in the purchase of ingots of revised specification.

The case was referred to the Ministry in July 1986, their reply was still awaited (November 1986).

12.(v) *Unnecessary import of dead axles for Shaktiman Vehicles*

The facility for machining of dead axle forgings for Shaktiman Vehicles was set up in factory 'A' in 1969-70. The indigenous sources (firms 'X' and 'Y') for the forgings were established in 1971. Factory 'A' placed two orders on firm 'X' in December 1971 and on firm 'Y' in March 1980 for supply of 15000 forgings and 18395 forgings respectively. Firm 'X' supplied 9757 forgings till September 1979; thereafter no supplies were received from them till January 1982 due to breakdown of power hammer in their works. Firm 'Y' supplied 8577 forgings till June 1981

The production programme of Shaktiman Vehicles, quantity of dead axles machined by factory 'A' and quantity supplied by firms 'X' and 'Y' from 1981-82 to 1985-86 were as follows :

Year	Production programme of Shaktiman vehicle	No. of dead axles machined by factory 'A'	Dead axles supplied by	
			Firm 'X'	Firm 'Y'
	(in number)	(in sets)	(in sets)	
1981-82	3,600	3,454	100	2,000
1982-83	3,700	3,817	2,059	3,152
1983-84	3,800	3,495	790	1,907
1984-85	3,800	3,668	Nil.	2,021
1985-86	3,800	3,737	Nil.	3,376

(Note :—One set comprises of two numbers and each vehicle requires one set).

Due to unsatisfactory supplies of forgings from firms 'X' and 'Y', the factory proposed in August 1981 to import 2,000 forgings from its foreign collaborator at a cost of Rs. 65.86 lakhs to meet production requirement. The Ministry of Defence (Ministry) released (February 1982) Rs. 30.54 lakhs in foreign exchange for 1,000 forgings. However, as the supplies from firms 'X' and 'Y' improved meanwhile from January and March 1982 respectively and the stock position became comfortable the import order for the forgings was not placed and the factory decided (August 1982) to import instead machined dead axles from the collaborator with the released foreign exchange. The approval of the Ministry for import of machined dead axles in lieu of forgings for which the foreign exchange was released was not taken. The order on the collaborator for 650 machined dead axles at a total cost of DM 698,808 (F.O.B.) (Rs. 30.05 lakhs) was placed in September 1982. Due to price increase the total cost was subsequently increased (November 1983) to Rs. 31.50 lakhs (F.O.B.) and it was decided (November 1983) to meet the additional foreign exchange from the General Manager's imprest.

The machined dead axles were received from the collaborator during August 1983 to June 1984. However, the factory had met its requirements since the month of placing the import order till February 1986 mainly with indigenous forgings, the stock of which increased to 4,484 numbers in November 1982. Out of the 650 imported machined dead axles only 468 numbers were used (March 1984 to March 1985).

As supplies of indigenous forgings showed improvement from early 1982, the import of 650 machined dead axles at a cost of Rs. 31.49 lakhs was unnecessary. Further import of machined dead axles in lieu of forgings, for which foreign exchange was released involved an extra expenditure of Rs. 6.77 lakhs in foreign exchange computed with reference to the cost of imported forgings plus their cost of machining in the factory. Besides foreign exchange was not sanctioned for import of finished dead axles.

The Ordnance Factory Board stated (November 1986) that though supplies of forgings from indigenous sources improved since 1982, increased breakdown in the machining line compelled import action for machined dead axles to supplement the shortfall in factory's machining capacity. They also stated that the covering sanction for the import was being obtained from the Ministry. The fact however, remains that the machining line to manufacture the dead axles from indigenous forgings had met the requirements for the production of Shaktiman Vehicles during 1981-82 to 1985-86. When the foreign exchange for import of forgings was sought for in August 1981 and foreign exchange was released in February 1982, the situation of the machining line was not considered critical. While initiating action in August 1982, to import 650 machined dead axles the critical condition of the machining line was not intimated to the Ministry to obtain their concurrence for the import.

The case was referred to the Ministry of Defence in August 1986 but their comments were still awaited (November 1986).

12(vi). *Unnecessary import of a propellant*

Mention was made in paragraph 13(ii) of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for 1983-84 about the continued shortfall in production of an ammunition in factory 'X'. It was stated therein that :

- against the envisaged capacity for 40,000 numbers per year, the actual production of the ammunition was 24,000 numbers in 1981-82, 10,000 numbers in 1982-83 and 2,875 numbers in 1983-84;
- to meet the shortfall in production, ammunition and its components (total cost : Rs. 15.62 crores) were imported during 1979-80 to 1983-84 and
- according to the Ordnance Factory Board (OFB) (November 1984) the envisaged capacity could be achieved after the commissioning of the full sets of plant and machinery sanctioned in April 1976/August 1977 and September 1980.

One of the imported components was the propellant (144 tonnes valuing Rs. 1.10 crores including freight charges) for the ammunition. Since 1978-79 the requirements of factory 'X' for the propellant were being met by factory 'M' and though the maximum production of the ammunition achieved in a year was only 10,896 numbers (1977-78) and the full sets of plant and machinery were not in position to augment the production of the ammunition the import of the propellant was arranged in October 1980. The imported propellant was received in the factory during March to June 1982.

As on 1st April 1981 factory 'X' had a stock of 74.142 tonnes of propellant. Besides the import of 143.952 tonnes, factory 'M' had supplied 271.23 tonnes to factory 'X' during 1981-82 to 1983-84. Factory 'X' also received a further quantity of 49.950 tonnes valuing Rs. 35.92 lakhs (approximately) in October 1981 against an import demand of November 1977. Out of imported and indigenous stock only 129.274 tonnes were used during the period and 328.698 tonnes were lying in stock at the end of March 1984. The supplies from factory 'M' were stopped during 1984-85 and 1985-86 (December 1985). According to factory 'X' (July 1986), factory 'M' was asked not to effect any supply in view of availability of huge stock and also due to less production of ammunition for want of filled fuzes ex-import. The stock of the propellant at the end of December 1985 was 182.275 tonnes adequate to meet about 2 years' production with reference to the production of the ammunition achieved (24,000 numbers) during 1984-85.

The case reveals the following :

(i) Though factory 'M' was supplying propellant to meet the requirements, 143.952 tonnes of the propellant valuing Rs. 1.10 crores (approximately) were imported during March to June 1982 despite shortfall in production of the ammunition at factory 'X'.

(ii) Consequent to import and adequate supply of propellant by factory 'M' and shortfall in production of the ammunition at factory 'X' leading to accumulation of huge stock, factory 'M' was asked not to effect any supply during 1984-85 and 1985-86.

(iii) At the end of December 1985 the stock of the propellant was 182.275 tonnes adequate to meet about 2 years production with reference to the production of the ammunition achieved (24,000 numbers) during 1984-85. The import of propellant valuing Rs. 1.10 crores was thus avoidable.

The case was referred to the Ministry of Defence in June 1986, but their replies were awaited (November 1986).

13. Infructuous Expenditure

(i) *Loss in the disposal of a store*

The procedure for disposal by auction of waste products by the ordnance and clothing factories lays down that the reserve price of the stores should be fixed on the basis of their condition, prices obtained at previous sales and the prevailing market price where it can be ascertained. The rules also provide for acceptance by the General Managers (GMs) of bids upto 20 per cent below the reserve prices so fixed.

In a clothing factory the unserviceable knitted portion of jerseys was sold in auction in February 1981 (1,936.12 kgs) and May 1981 (2,500 kgs) at Rs. 25.52 per kg. and Rs. 24 per kg. respectively. The sale prices were below the reserve prices which were Rs. 28 per kg. and Rs. 25.20 per kg. respectively. Although a declining market trend was noticed in the auction of May 1981, the subsequent auctions for disposal of further accumulation of the store were not held in quick succession. After May 1981 four auctions were held with a gap of 4 to 8 months between successive auctions and the bids gradually came down and these were not accepted being lower than the reserve prices. The month of the auctions, quantities offered for disposal, reserve prices fixed and the highest bids received were as follows :

Month of auction	Quantity offered for disposal	Reserve price	Highest bids
		(per kg.)	(per kg.)
November 1981	5,000 kgs.	Rs. 28.10	Rs. 24.00
April 1982	14,000 kgs.	Rs. 28.00	Rs. 23.20
December 1982	14,500 kgs.	Rs. 24.82	Rs. 16.69
April 1983	14,500 kgs.	Rs. 26.20	Rs. 13.10

The highest bids of November 1981 and April 1982 were about 14.30 per cent and 17.14 per cent below the respective reserve prices and were acceptable under GM's power like the earlier two auctions as the store was accumulating and the value was coming down. The Ministry of Defence stated (December 1985) that acceptance of the bids below the reserve price was not obligatory on the part of the GM/ auction supervising officer and they had used their discretion.

In November 1983 keeping in view the market price and the condition of the store the reserve price was refixed at Rs. 13 per kg. and the store (14,000 kgs. plus fresh arising of 5,000 kgs.) was again auctioned. The highest bid was Rs. 11.05 per kg. and this time the bid was accepted under the GM's power and the store was disposed.

The downward trend in the market price of the store continued during 1984 and 1985 and the factory sold 5,000 kgs. in July 1984 at Rs. 10.20 per kg. and equal quantity in January 1985 at Rs. 10.64 per kg. The failure of the factory to timely assess the downward trend from 1981 and to accept the highest bids of April 1982 considering such trend, involved a loss of Rs. 1.70 lakhs in the disposal of 14,000 kgs. of the store.

13(ii) *Infructuous expenditure on manufacture of components*

Factory 'A' was producing an armoured vehicle from 1965. The aircleaner assembly for the engine of the vehicle was being obtained from trade. Although the trade source was adequate, the factory took up manufacture of 100 aircleaners in May 1976 on development basis. The Additional Director General Ordnance Factories Armoured Vehicles (ADGOFAV) stated (October 1986) that the manufacture was initiated to attain self sufficiency in addition to developing trade sources.

When manufacture of the aircleaner was taken up, probable cost of manufacture was not worked out to see whether it would be economical. Against the financial power of the General Manager(GM) for Rs. 5 lakhs on development works, Rs. 5.90 lakhs were spent by the factory on manufacture of the item till 1978 and the work was thereafter suspended in June 1978. The reasons attributed by the factory for discontinuance of manufacture were as follows :

- extra capacity was not created for manufacture of the item;
- adequate testing facilities were not available; and
- creation of testing facility was not economical.

ADGOFAV stated in October 1986 that no schedule to work out the cost of the item was available as the item was a regular bought out one. Only a provisional material estimate was prepared and no labour estimate could be prepared due to absence of cost schedule. He further stated that as no estimate for the item was prepared, it could not be ascertained whether the cost of manufacture would exceed the financial powers of the GM.

Out of the unfinished components worth Rs. 5.90 lakhs, components valuing Rs. 5.53 lakhs were still lying in the factory at the end of September 1986. The ADGOFAV stated that efforts were being made to offer certain items to trade as well as to Army and that the loss would be written off on completion of disposal of the items.

The case was referred to the Ministry of Defence in July 1986 whose comments were yet to be received (November 1986).

13(iii). *Infructuous expenditure in the manufacture of an ammunition*

In order to avoid hold up in production of ammunition due to shortage of components and delay in clearance of the components in proof test by the Inspectorate, the Ordnance Factory Board (OFB) directed in August 1983 that after considering the past performance of the components the filling factories could advise the feeder factories to supply the components in anticipation of clearance in proof test. The procedure was, however, being followed by some feeder and filling factories even earlier than August 1983.

During 1980-81 to 1983-84, factory 'A' produced and supplied 12.33 lakhs numbers of an ammunition to an Ordnance depot pending proof clearance of empty and filled fuzes and those ammunition were bonded separately in the depot. Factory 'A' received the empty fuzes for the ammunition from factory 'B', factory 'C', factory 'D' and trade.

Out of the bonded ammunition in the ordnance depot, 34,894 numbers (cost : Rs. 1.24 crores) were rejected after proof during 1980-81 to 1983-84. According to OFB (October 1986) the ammunition was rejected due to failure of filled fuzes fitted to the ammunition. As these rejected ammunition were not suitable even for training/practice purposes and the various components *viz.* primary cartridges and augmenting charges had outlived 50 per cent of their lives, the Army authorities directed the OFB in March 1985 that either factory 'A' should repair these ammunition forthwith in the ordnance depot and get them cleared by the Inspectorate or it should take back the ammunition under its own arrangement.

Factory 'A' repaired 34,809 numbers of the defective ammunition during September to December 1985 by replacing the fuzes. The cost of the new fuzes was about Rs. 34.81 lakhs. The infructuous expenditure on account of the cost of the defective fuzes,their filling, assembling, and removing is yet to be worked out (November 1986). The transportation charges of the ammunition fitted with the defective fuzes from factory 'A' to the depot and back were Rs. 1.25 lakhs.

OFB stated (November 1986) that factory 'A' constituted an investigation board to investigate the cause of failure of the ammunition/fuzes. Investigation Board's report is yet to be finalised (November 1986).

The case was referred to the Ministry in June 1986, but their reply was still awaited (November 1986).

13(iv). *Loss due to non-observance of procedure*

Factory 'A' had been purchasing forgings and castings for vehicle components from trade from 1970-71/1971-72. According to the contracts the firms were required to replace free of cost the stores if these were found defective during machining in the factory.

For the proper accounting and watching of free replacements, the General Manager of the factory instructed in March 1974 that :

- the rejections should be noted by the production shops in the registers item wise;
- cumulative quantity rejected in each month should be entered in rejection form to be forwarded to Accounts Office alongwith others;
- the rejected stores should be returned to stock alongwith rejection forms for accounting in shadow bin card and watching replacements;
- only on receipt of replacements, the rejected stores should be returned to the firms; and
- if the rejections were not replaced by the firms, the cost should be recovered from the bills of the firms against other orders.

It was observed in audit (May 1981) that due to non-adherence to the prescribed procedure and improper maintenance of the documents the cases awaiting replacements or recoveries from the firms were not ascertainable. The Accounts Officer of factory 'A' also stated (August 1981) that the free replacement orders (FROs) were not being sent to him by the factory regularly and that the few FROs which were sent to him, did not contain any material information to watch the replacements. However, the factory intimated (February 1983) to the Ordnance Factory Board (OFB) that the relevant instructions were being followed from 1974 onwards, that as far as possible adjustments/recoveries had been effected from the supplies and that adjustment/recoveries from 12 firms totalling Rs. 6.68 lakhs could not be effected since the firms had stopped supplies.

In June 1983 OFB set up a Board of Inquiry (BI) to investigate the case. The terms of reference *inter alia* provided the following :

- to determine how far concerned sections had complied with the instructions prescribed in March 1974 for the purpose of accounting and watching progress on securing free replacements of the rejected castings/forgings supplied by the trade firms,
- to determine the causes and circumstances leading to the failure, if any, in complying with the instructions, and
- to find out the quantum of rejected castings/forgings (firm-wise) with value against the various supply orders placed on trade firms for which supplies were received during April 1974 to February 1983 and no recovery/only partial recovery could be effected and why the factory had failed to regularise these cases through replacements/recoveries.

According to OFB's instructions (June 1983) the BI were required to submit findings by 30th September 1983. OFB intimated (November 1986) that the BI had since submitted its report and OFB had advised the factory (i) to initiate arbitration proceedings against defaulting suppliers; (ii) to prepare loss statements where the firms were not existing and (iii) to evolve a fool proof system to properly account for and centrally monitor the FRO rejections till replacements are received/recoveries are effected.

The case reveals that :

- Although instructions were issued by factory 'A' in March 1974 for proper accounting and watching of free replacements of defective stores supplied by the firms, such instructions were not being followed by the factory properly even in 1981.
- Due to non-adherence to the prescribed procedure and improper documentation, the cases awaiting replacement of defective stores or recoveries therefor were not ascertainable.
- Due to improper maintenance of the documents, Rs. 6.68 lakhs could not be recovered from 12 firms.

The case was referred to the Ministry in June 1986 but Ministry's comments were yet to be received (November 1986).

14. Production loss

(i) *Non-utilisation/Partial utilisation of a Nitric Acid Plant and resultant loss*

In paragraph 8 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for 1978-79 it was mentioned that :

— due to delay of over 4 years to commission a new nitric acid plant (cost : Rs. 63.28 lakhs) a factory continued to use two old plants to produce weak nitric acid and incurred an extra expenditure of Rs. 11.67 lakhs during 1972-73 to 1975-76 due to higher consumption of ammonia;

— due to breakdown of the new plant in July and December 1976 and a major breakdown of its compressor unit in October 1977, only 6,533 tonnes of weak nitric acid were produced in the plant in 3 years during 1976-77 to 1978-79 against the installed capacity of 5,280 tonnes per annum; and

— due to shortfall in production the factory had to procure weak and strong nitric acid costing Rs. 196.44 lakhs from trade during January 1976 to February 1979 to meet its requirements.

The under utilisation of capacity of the new plant continued after 1978-79 also and the factory produced only 1920, 2845 and 460 tonnes of weak nitric acid during 1979-80, 1980-81 and 1981-82 (upto May 1981) respectively. According to the factory (September 1978) the original capacity of the plant was restricted to 3,960 tonnes per annum (75 per cent of the capacity) due to operational defects associated with the motor of the air compressor. While the plant capacity was remaining largely under utilised even with reference to the restricted capacity, 545 tonnes of weak nitric acid (cost : Rs. 8.32 lakhs) were obtained from factory 'A' and 1,550 tonnes (cost : Rs. 25.89 lakhs) were ordered on trade during 1979-80 to 1980-81. From June 1981 there was no production of nitric acid in the plant as its aircompressor suffered (June 1981) a major damage due to breakdown of its rotor. The factory stated (November 1981) that the breakdown was "apparently on account of the mechanical fatigue resulting from the inherent high speed of the compressor".

In response to a tender enquiry (July 1981) of the factory quotations were received from the foreign supplier of the plant (July to November 1981) for repair of the damaged rotor at DM 96,820 (Rs. 3.26 lakhs), supply of a new rotor at DM 2,55,330 (Rs. 9.50 lakhs) and supervision of erection of either of them at DM 13,580 (Rs. 0.55 lakh). The factory, however, decided (November 1981) to purchase new rotor in preference to repair of the damaged one on the following considerations :

(i) The durability of the repaired rotor would be less.

(ii) The repair of the damaged rotor would take more time than the procurement of a new rotor.

(iii) The functioning of a new rotor would be smoother and trouble free; and

(iv) In case of repair, the firm had given guarantee only for the new parts to be supplied and there might be difficulty to pin point the causes of defects, if any, in future which might lead to complications from guarantee aspect.

Accordingly, for purchase of a new rotor the factory placed a demand on the Ordnance Factory Board (OFB) in November 1981 and later, on the directives of the OFB (May 1982), an operational indent was placed (June 1982) on the Supply Wing of an Indian Mission abroad (SW) for a new rotor assembly with modified impellers of welded construction instead of original design of rivetted impellers which was found damaged due to mechanical fatigue. The SW concluded a contract with the foreign firm for the supply of the rotor at a cost of DM 3,69,180 (Rs. 13.74 lakhs).

In the SW contract the supervision of erection of the rotor and recommissioning of the nitric acid plant was not provided though it was asked for in the factory's indent. The contract was, therefore, amended in October 1984 to provide these services on payment of mobilisation fee (DM 1030) erection fee (DM 105 per hour), daily allowance (DM 77 per calender day) with free accommodation and economy class air ticket for to and fro Journey. Certain additional parts worth DM 60,000 (Rs. 2.23 lakhs), which the firm considered to be inescapable for erection and commissioning, were also simultaneously included in the contract and the delivery schedule of the rotor was refixed from December 1983 to September 1985. The firm shipped the rotor in February 1986 which was received in the factory in June 1986 and commissioned in August 1986.

Meanwhile, the two old plants were revamped during 1981/1982 at a cost of Rs. 9.52 lakhs to work as standby. When the new plant remained out of operation from June 1981, during 1981-82 to 1984-85 the factory produced 7,825 tonnes of weak nitric acid (cost : Rs. 312.34 lakhs) in the old plant, obtained 719 tonnes (cost : Rs. 21.01 lakhs) from factory 'A' and ordered 4,670 tonnes (cost : Rs. 91.20 lakhs) on trade. Additional expenditure of Rs. 47.98 lakhs was incurred in the production of 7,825 tonnes due to excess consumption of ammonia in the old plant as compared to the stabilised consumtpion (325 kgs. per tonne) in the new plant.

As compared to the prevailing trade cost also, the factory's cost of weak nitric acid was high from 1982-83. While the estimated cost of manufacture was Rs. 872 per tonne in 1978 against the landed cost of Rs. 1,473 per tonne for weak nitric acid procured from trade, the difference gradually disappeared and with reference to the trade cost an extra expenditure of Rs. 37.17 lakhs was involved in the production of weak nitric acid during 1982-83 to 1984-85 in the old plant. According to the factory (March 1986), to meet the requirements for manufacture of ammonium nitrate of explosive grade, it was necessary to produce special quality of weak nitric acid in factory's plant under special process with the help of a bleacher to minimise nitrous acid. During 1982-83 to 1984-85, out of the production of 6,205 tonnes the factory, however, had used only about 1,102.59 tonnes of weak nitric acid in the manufacture of ammonium nitrate and the balance was used in the manufacture of other explosives not requiring special type of nitric acid.

A part of the weak nitric acid is processed further in a nitric acid concentration plant to get strong nitric acid. The production achieved in a new concentration plant of two units (capacity : 15 tonnes per day in each unit), costing Rs. 116.94 lakhs and commissioned in August 1981 was only 4,260 tonnes of strong nitric acid during 1981-82 to 1984-85. The deficiencies were met by obtaining 3,670 tonnes (cost : Rs. 141.89 lakhs) from trade and 791 tonnes from factory 'A' (cost : Rs. 62.89 lakhs). According to Ministry of Defence (November 1986) dependance on trade for procurement of strong nitric acid would always exist as the total requirements of weak and strong nitric acid of the factory to meet the production targets were much higher and could not be met from the captive capacity of the new nitric acid plant and the nitric acid concentration plant. They further added that in the prospective planning done under modernisation of TNT plant project, the High Level Committee decided that the factory should procure strong nitric acid from a Public Sector Undertaking and the Committee ruled out any major capital investment in the factory for manufacture of strong nitric acid. The fact, however, remains that during 1981-82 to 1984-85, the factory had purchased weak and strong nitric acid due to under/non-utilisation of its capacity installed with huge capital investment.

The case reveals the following :

(i) 5,225 tonnes of weak nitric acid were produced in the new plant during 1979-80 to 1981-82 (upto May 1981) against the installed capacity of 5,280 tonnes per annum.

(ii) While the plant capacity was under-utilised, 1,550 tonnes of weak nitric acid were ordered on trade and 545 tonnes were obtained from factory 'A' during 1979-80 to 1980-81 at a total cost of Rs. 34.21 lakhs.

(iii) After the breakdown of the new plant in June 1981, contract was concluded after 2 years in June 1983 for supply of a new rotor for the air compressor; the contract was amended in October 1984 to provide the supervision of erection of the rotor and recommissioning of the plant. The rotor was received in the factory in June 1986 and the plant was recommissioned in August 1986.

(iv) Due to the breakdown of the new plant, 7,825 tonnes of weak nitric acid were produced in the factory in the old plant during 1981-82 to 1984-85 entailing additional expenditure of Rs. 47.98 lakhs due to excess consumption of ammonia; further 4,884.16 tonnes were obtained from trade and factory 'A' (total cost : Rs. 102.57 lakhs) during the period.

(v) The cost of factory produced acid in the old plant during 1982-83 to 1984-85 (6,205 tonnes) was higher by Rs. 37.17 lakhs than the prevailing market price.

(vi) The new plant for production of strong nitric acid (cost : Rs. 116.94 lakhs) remained under-utilised and 3,670 tonnes of strong nitric acid (cost : Rs. 141.89 lakhs) were procured from trade and 791 tonnes (cost : Rs. 62.89 lakhs) from factory 'A' during 1981-82 to 1984-85.

14(ii) *Manufacture of defective fuzes in a factory*

Factory 'K' was producing a fuze for an ammunition from August 1965. During 1977 to August 1983 twelve manufacturing warrants were issued for production of 9,44,402 fuzes. Against 6 manufacturing warrants 5,45,725 fuzes were produced and all passed in proof test. Against the other 6 warrants, 3,98,677 fuzes were produced during November 1977 to August 1983 of which 87,113 (cost : Rs. 48.46 lakhs approximately) failed (November 1977 to February 1984) in proof test. The quantity produced against each of these warrants, quantity rejected and percentage of rejections in proof were as follows.

Warrant number and date of issue	Quantity produced	Quantity rejected	Percentage of rejection	Date of rejection
	(Numbers)	(Numbers)		
00010/14-11-1977	10,000	6,148	61.48	November 1977 to to July 1982
00020/29-12-1977	10,000	5,475	54.75	December 1977 to July 1982
00350/29-6-1980	1,00,000	15,801	15.80	June 1980 to July 1982
00360/26-12-1980	1,00,000	45,725	45.72	December 1980 to July 1982
00370/9-7-1981	1,00,000	9,976	9.97	January 1982 to August 1982
00390/28-8-1983	78,677	3,988	5.07	September 1983 to February 1984

Although heavy rejections occurred from 1977, the General Manager of factory 'K' set up a committee only in April 1981 to investigate the causes of rejections of 73,149 fuzes (cost : Rs. 40.70 lakhs) against the four warrants issued till 1980. The committee could not conclusively pinpoint the exact causes of the failure but it observed (July 1981) that the probable cause was mainly due to swelling of the rotor. The committee recommended (July 1981) that the rotor material (alzen bar) should be thoroughly studied metallurgically and alternate material should be noted; humidity condition in the shop should be improved; any complaint of defective component should be attended promptly and immediate action should be taken to investigate failures. It was observed in audit that alzen bar was being used for rotor from 1965 and its use was continued even after 1981 when there was no appreciable rejections of the fuze. How the material could suddenly be the cause for heavy rejections during 1977 to 1980 against only a few of the warrants running during the period was not investigated by the committee. Ordnance Factory Board stated (October 1986), the alzen bar had a tendency to swell and the swelling occurred due to accumulation of empty fuzes and components from 1977 and their exposure to atmosphere. They further added that accumulation of fuzes and components occurred due to scaling down the production of end store.

The rejected lots of the fuzes valuing Rs. 48.46 lakhs had not been repaired or retrieved due to risk involved in their breakdown. The deficient quantities were met by fresh manufacture of the fuzes against replacement orders.

The case reveals the following aspects :

(i) Of 3,98,677 fuzes manufactured by factory 'K' during November 1977 to March 1984, 87,113 fuzes (cost : Rs. 48.46 lakhs) were rejected.

(ii) Although rejection first occurred in November 1977, factory set up a committee only in April 1981 to investigate the causes of rejection. The Committee did not pin-point exact causes of failure of the fuzes.

(iii) The rejected fuzes (cost : Rs. 48.46 lakhs) could not be repaired/retrieved and the deficient quantity of fuzes was met by fresh manufacture.

The case was referred to the Ministry of Defence in July 1986 but their reply was still awaited (November 1986).

15. Purchase of a defecitve spherical milling machine

The Director General, Ordnance Factories, placed in November 1978 an indent on the Director General, Supplies and Disposal (DGSD) for a special purpose spherical milling machine for factory 'A' to manufacture block holders for telescopic items. The indent provided that tooled up machine should be supplied and that the machine should be proved before acceptance at the maker's works with factory's materials or with materials to factory's specification.

As suitable offers were not received from trade, the DGSD sent in February 1980 the indent to Supply Wing of an Indian Mission abroad (SW). Of the offers of firm 'X', 'Y' and 'Z' forwarded by the SW, the offer of firm 'Z' was recommended in October 1981 by factory 'A' and the Ordnance Factory Board (OFB) for acceptance subject to approval of detailed design of the machine by the factory and satisfactory production of end products in it.

The SW concluded a contract with firm 'Z' in October 1981 for supply of the machine with two years' spares at a cost of £ 36.750 (Rs. 6,28 lakhs). The contract stipulated inspection of the machine by the SW at the firm's premises before despatch, but trial of the machine with the factory's materials or with materials to the factory's specification was not provided. Nor was supply of suitable tools appropriate to the materials to be operated provided initially. On these being pointed out by the OFB in December 1981 the SW made a provision in the contract in October 1982 for trial run of the machine, in the presence of the SW Inspectors, with factory supplied blanks for block holders and despatch of the machine after acceptance of the machined blocks by the factory. A separate contract for the toolings was concluded with the same firm in May 1983 at a cost of £ 3220 (Rs. 0.58 lakh).

The factory approved the design details of the machine in March 1982. The blanks for the block holders were airlifted to the firm in September 1982. After inspection of the machined blocks received from the firm in February 1983, the factory intimated (April 1983) the SW and the firm that the measurements of the machined blocks were differing from those given by the firm. However, as the firm was pressing for payment due to financial difficulties, without further trial or settlement of the dispute, the OFB agreed in June 1983 to accept supply of the machine subject to withholding of 5 per cent of the cost till its satisfactory commissioning in the factory with the assistance of the firm free of cost. The machine was despatched to the factory in July 1983 and 95 per cent of the cost i.e. £ 34,854 (Rs. 5.77 lakhs) was paid to the firm in 1983. The toolings were despatched by the firm to the factory in October 1983.

The machine and the toolings (total cost Rs. 12.03 lakhs including Customs duties, Transit Insurance, Sea freight and Railway freight) were received in the factory during October 1983 to December 1983. After the machine was installed in November 1983 its cutter spindle motor was found to be defective. Although the detailed design particulars were earlier received, scrutinised and approved by the factory before the machine was supplied, the firm was asked in December 1983 to supply detailed electronic circuit diagram of the machine for investigating the defect. The firm was also requested (January 1984) to depute its engineers for satisfactory commissioning of the machine. But the firm went into liquidation in February 1984. Despite OFB's instructions (February 1985) that further payment for the machine should not be released till its successful commissioning, the SW paid £ 4224.50 to the liquidator in April 1985 against the contracts for the machine and the tooling. Incomplete drawings were sent to the factory by the liquidator in April 1985. Till March 1986 the complete drawings were not received. Nor was any engineer deputed by the liquidator to commission the machine.

The case reveals that :

(i) Though after inspection the performance of the machine was considered unsatisfactory the OFB agreed to its despatch and paid 95 per cent of the cost in contravention of the provision in the contract and inspite of knowing that the financial position of the firm was not sound.

(ii) Defects noticed on installation of the machine in the factory, could not be rectified as the firm went into liquidation after receiving 95 per cent payment towards supply of the machine.

(iii) The SW paid £ 4,224.50 to the liquidator despite OFB's instruction that further payment should not be made for the machine till its successful commissioning.

(iv) Payment for only £ 832.85 now stands withheld but as the liquidator had not deputed engineers to rectify the defects in the machine and commission it, the machine and its toolings (total cost : Rs. 12.03 lakhs) are lying unused in the factory for more than 2 years since receipt and meanwhile, the warranty period had also expired (October 1984).

The case was referred to the Ministry of Defence in July 1986 and their reply was still awaited (October 1986).

16. Delay in planning, implementation and achieving objects of a project

Planning :

Factories 'A' and 'B' set up during the second world war are supplying non-ferrous materials for other factories. Due to gradually diminishing output on account of use of old and outmoded plant the two factories could not meet from 1974-75 onwards the enhanced requirements of strips for small arms ammunition (SAA) and quick firing ammunition (QFA) and the deficiencies were being made good by import/trade purchases at higher cost. The Director General Ordnance Factories (DGOF), therefore, submitted a project report to the Ministry of Defence, Department of Defence Production (Ministry) in June 1976 to modernise and augment the melting and strip making capacities in the two factories at a total cost of Rs. 19 crores including foreign exchange (FE) expenditure of Rs. 10.03 crores. When the project was under consideration of the Ministry, the DGOF proposed in December 1976 (as phase 1A of the project) installation in factory 'A' of 4 brass melting furnances (value Rs. 8.62 lakhs) imported in May 1970 and lying unused. Mention about the non-utilisation of these 4 melting furnaces was made in the Audit Report, Defence Services for 1972-73 and the Ministry informed the Public Accounts Committee that the installation of the furnaces was under consideration. DGOF's proposal (December 1976) envisaged that with the installation of the 4 melting furnaces along with holding furnaces and continuous strip casting machines at factory 'A' at a cost of Rs. 3.50 crores, an annual production of 12,600 metric tons (MT) of cast strips (8,160 MT of finished strips) under modern cast line process would be achieved which would cover the immediate gap in requirements and avoid import/trade purchases. In August 1978 the Ministry approved the execution of phase 1A of the project at a cost of Rs. 3.95 crores (FE Rs. 1.65 crores) which was increased to Rs. 7.40 crores (FE Rs. 3.63 crores) in September 1981. Phase 1A of the project catered for melting, casting and milling of strips but did not include rolling, annealing and cupping facilities. Phase 1B of the project which covered modernisation and augmentation of the existing capacities (25,560 MTs) in factories 'A' and 'B' and provided cold rolling, annealing and cupping facilities in factory 'A' was sanctioned by the Ministry in February 1983 at a cost of Rs. 33.83 crores (FE Rs. 14.23 crores). Phase 1B of the project envisaged an annual production of 36,689 MT of brass ingots (32,547 MT of finished strips), which, with phase 1A, would cover the total requirements of 52,289 MT of ingots (41,547 MT of finished strips). Phase 1B was planned for completion in 4 years time (February 1987).

Implementation

Phase 1A :

The four melting furnaces were installed in factory 'A' in February 1983 and put to use in May 1983. Other plant and equipments were ordered during September 1980 to February 1983, received during May 1981 to May 1985 and erected during June 1981 to February 1986. The civil works were sanctioned in November 1979 and completed by September 1982 The planned date of completion (1980-81) of the phase was revised from time to time, due to delay in completion of civil works, ordering machines etc. and consequently the initial project cost of Rs. 3.95 crores sanctioned in August 1978 was revised to Rs. 7.40 crores in September 1981.

Phase 1B

Civil Works for production shops in factory 'A' were sanctioned in June 1984 and those in factory 'B' in July 1984 and March 1985. The expected dates of completion of the works were December 1986 in factory 'A' and September 1987 in factory 'B' against planned dates of May 1985 and July/September 1985, Out of 56 machines required by the two factories orders for only two were placed (March 1986). According to Ordnance Factory Board (OFB) the phase 1B would be completed in March 1988 against February 1987 as planned.

Aims and achievements

In Phase 1A besides an annual production of 12,600 MT of cast strips under modern cast line process and reduction in trade purchases, the following objectives were envisaged :

(i) quality production of a wide range of strip sizes at less cost to meet requirements for SAA cartridge cases; and

(ii) availability of the entire existing capacities in factories 'A' and 'B' for QFA cartridge cases.

Factory 'A' commenced production of cast strips for SAA cartridge cases from May 1983. Against the installed capacity of 12,600 MTs per year of Cast Strips, the actual production, and percentage of capacity utilisation during 1983-84 to 1985-86 were as under:

Year	Production achieved (in MTs)	Value of production (in crores of rupees)	Capacity utilisation (*percent*)
1983-84 (from May 1983)	31.50	7.86	20.88
1984-85	3745.00	13.67	29.72
1985-86	4364.95	16.32 (approximately)	35

It was observed (December 1985) in audit that the production figure for 1984-85 (3,745 MT) included 700 MT of cast strips (cost · Rs. 252.82 lakhs) which had been accounted for in the production ledger card only during the subsequent year (August

1985). For production of these 700 MT cast strips the virgin materials (106 MT copper valuing Rs. 44.35 lakhs and 49.07 MT zinc, valuing Rs. 13.33 lakhs) and brass scraps (607.60 MT valuing Rs. 200.67 lakhs) were charged off from stock in August 1985. Labour payments (Rs. 0.54 lakh) for the production had also not been made so far (October 1986). Further, while the job cards reflected a production of 238 MT on average per month during April 1984 to February 1985, the total production during March 1985, including the 700 MT, came to 1,122 MT against the total available capacity of 1,050 MT in March 1985. According to the factory (December 1985) the production was actually done during 1984-85 but documentation was made belatedly. It was further clarified that the labour payment was not made for administrative reasons as the piece work profit exceeded the normal trend of profit in the section (53 percent to 55 per cent) during March 1985. OFB stated (October 1986) that the material (700 MTs) was manufactured in 1984-85, but escaped actual weighment due to non-availability of proper weighing facilities in the section which was then in the very initial stage of production. They further added that the case was a stray one. The fact, however, remains that no labour payment was made (September 1986), and relevant documents like Bin Cards for raw materials, Stock verification sheets for raw materials and finished products, semi-statement of the shop as on 31st March 1985, etc. do not show that the material (cost : Rs. 252.82 lakhs) was manufactured in 1984-85.

Due to non-provision of facilities for cold rolling, annealing and cupping of the cast strips in phase 1A, factory 'A' did these operations by utilising their old available capacities which were inadequate for such down line processing and reduction of thickness of the strips from 6 mm to 4.2 mm. Consequently, the factory had in stock 569.83 MT, 1,940.89 MT and 3,373.75 MT of cast strips/slabs at the end of 1983-84, 1984-85, and 1985-86 respectively. To establish a trade source for down line processing, OFB placed two orders (December 1983 and November 1984) on a Public Sector Enterprise (PSE) for cold rolling of 1,000 MT of factory produced cast strips of 6 mm thickness to 4.2 mm thickness at a cost of Rs. 4,200 per MT (for 200 MT) and Rs. 4,450 per MT (for 800 MT) but the PSE had not been able to establish required capacity (October 1986).

Meanwhile, due to delayed execution of phase 1A, the gap in the requirements of brass strips was continued to be covered by trade purchases. In paragraph 17(ii) of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for 1984-85 purchase of 1,208 MT of brass strips (cost : Rs. 450.82 lakhs) by the factory from trade during 1982-83 and extra expenditure of Rs. 97.02 lakhs in the production of brass blanks from these strips were mentioned. While the factory's strip making capacity under phase 1A was largely underutilised (about 65 to 79 per cent) from 1983-84 and a considerable portion of the produced cast strips/slabs was lying in stock, orders were placed on trade during 1983-84 to 1985-86 for conversion of 10,610 MT of factory supplied scraps into strips under conventional method of manufactures (by hot rolling followed by cold rolling) at a total cost of Rs. 10 crores. The conversion involved additional expenditure of Rs. 743.97 lakhs over factory 'A' 's cost of conversion.

The envisaged plan was to utilise the strips produced under cast line process in the manufacture of SAA cartridge cases and the strips produced under conventional method in the manufacture of QFA cartridge cases. However, the factory was producing brass cups for SAA cartrdige cases also from strips manufactured under conventional method and obtained from trade. for SAA cartridge cases also from strips manufactured duction by use of cast strips and strips manufactured under conventional method by the factory and trade during 1983-84 to 1985-86 was as under :

SAA	Year	Actual production (in (MT)	Cups produced out of cast Strips (in MT)	Strips produced under oconventional method (in MT)	Strips Obtained from trade (in MT)
X	1983-84	2,053	20	2,033	..
	1984-85	2,370	634	1,736	..
	1985-86	2,701	1,078	1,520	103
Y	1983-84	1,069	20	1,049	..
	1984-85	984	..	984	..
	1985-86	1,038	55	748	235
Z	1983-84	195	..	195	..
	1984-85	196	..	196	..
	1985-86	220	..	220	..

According to the OFB (March 1986) due to product mix and constraints in rolling capacity the SAA cups were continued to be produced out of strips manufactured under conventional method.

The case reveals the following :

(i) Due to piecemeal and delayed approval of the project, the estimated cost increased from Rs. 19 crores to Rs. 41.23 crores.

(ii) Due to non-provision of the facilities in phase 1A of the project for down line processing of cast strips, the capacity utilisation was only 20.88 per cent to 35 per cent during 1983-84 to 1985-86 and 3,373.75 MT of cast strips/slabs were lying in stock at the end of March 1986.

(iii) Although the bin cards indicated drawals of raw materials only in August 1985 and there was no labour payment, 700 MT of cast strips had been accounted for as produced during 1984-85 out of these raw materials.

(iv) While the capacity under phase 1A was lying considerably underutilised, trade assistance was being taken for conversion of scraps into strips at high cost, involving extra expenditure of Rs. 743.97 lakhs.

The case was referred to the Ministry of Defence in July 1986 and their comments were still awaited (November 1986).

17. Unsatisfactory provisioning of stores

Factory 'A' was producing shells for an ammunition from 1976-77 for which stores 'X' and 'Y' were required. The requirements for the stores were met mainly by import and supplies from a sister factory. In May 1980 for the first time 3 orders were placed on indigenous firms for supply of 87 tonnes of the stores but the supplies were not established till August 1981.

The Ordnance Factory Board (OFB) intimated (May 1980) factory 'A' the following production programme for shells during 1980-81 to 1983-84 :

1980-81—20,000 numbers
1981-82—24,000 numbers
1982-83—36,000 numbers
1983-84—60,000 numbers

To meet the production target the factory required 40.50 tonnes of store 'X' and 66 tonnes of store 'Y'. The provisioning procedure stipulated that indents for imported stores might be placed 36 months in advance of the period of utilisation which would be 12 months. It was also stipulated that 12 months requirements might be stocked at a time. Although the indigenous sources were yet to come up, the factory placed a demand on the OFB only in March 1981 for import of 106.50 tonnes of the two varieties of stores (estimated cost : Rs. 73.75 lakhs) to fulfil production targets upto December 1983 when the stock of store 'X' (3.4 tonnes) was sufficient for 2 months and that of 'Y' (8 tonnes) for 4 months. The dues in (store 'X' : 52.417 tonnes and store 'Y' : 59.21 tonnes) were mainly from the indigenous sources (store 'X' : 40 tonnes and store 'Y' : 47 tonnes). The balance of the dues in (store 'X' : 12.417 tonnes and store 'Y' : 12.210 tonnes) was from the sister factory and foreign firm 'P' on whom orders were placed in May 1978 and September 1979 respectively.

When the import proposal was sent by the OFB to the Finance Division in April 1981 the Finance Division had enquired in May 1981 (i) about the prospect of supplies against the outstanding orders, (ii) how the requirements in the absence of receipts were met, and (iii) basis of estimated cost etc. Although the information was of a minor nature, the same was furnished to the Finance Division only in August 1981. To another query of Finance Division regarding DGTD's clearance only an interim reply was furnished. OFB stated (November 1986) that their reply was delayed due to non-receipt of DGTD's clearance and that Finance Division concurred in the import (18th September 1981) only on receipt of DGTD's clearance (29th August 1981). However, stores not being banned items, DGTD's clearance was not necessary.

Meanwhile, even before the proposal was concurred by the Finance Division, the OFB invited tender on 1st May 1981 from foreign firm 'P' on single tender basis for supply of 26 tonnes of the two varieties (11 tonnes of store 'X' and 15 tonnes of store 'Y') of stores in view of the urgency of requirements and to meet the shortfall in targetted requirements for 1981-82. The stores were, however, not proprietory items. Under OFB's financial powers regarding foreign exchange expenditure the order was placed on the firm after 5 months in October 1981 for 10 tonnes of the first variety (cost: DM 18,446.91 per tonne) and 14 tonnes of the second variety (cost: DM 18,287.35 per tonne) at a total cost of DM 440,491.72 (Rs. 16.30 lakhs) to be supplied during April to July 1982. Due to deviation in specification, the total cost was subsequently (May 1982) reduced to DM 430,140.17 (Rs. 15.92 lakhs).

After placement of the order on foreign firm 'P' OFB approached (October 1981) the Ministry of Defence Department of Defence Production (Ministry) for release of foreign exchange (Rs. 85.37 lakhs) for importation of the balance quantity (82.50 tonnes) of the stores. Foreign exchange (Rs. 66.44 lakhs) was released in April 1982 on condition that after inviting global tenders by the Supply Wing of an Indian Mission abroad (SW), the lowest suitable offer should be accepted. Within the foreign exchange sanctioned, OFB placed an indent for 24.5 tonnes of store 'X' and 25.5 tonnes of store 'Y' on the SW in July 1982 who concluded a contract in December 1982 with firm 'Q' for the stores at a much cheaper rate of DM 9,750 per tonne for each variety to be supplied within 18 weeks from the date of receipt of the orders. The placing of the order on firm 'P' earlier in October 1981 on single-tender-basis thus involved an extra expenditure of Rs. 7.26 lakhs as compared to the price of firm 'Q'. OFB stated (November 1986) that as normal procurement through the SW would have involved more time, direct procurement of smaller quantity was made to meet short term need and that there would have been substantial production loss if the procurement was not made. The fact, however, remained that this situation could have been avoided had provisioning action been taken in time.

Against the two orders (October 1981 and December 1982), firm 'P' tendered the stores for inspection to the SW in April 1982 and firm 'Q' in April to June 1983. After inspection, factory 'A' received the stores of firm 'P' during December 1982 and of firm 'Q' during December 1983. These were used during 1983-84 and 1984-85. Due to delayed provisioning of the stores there was shortfall in the production of the shells to the extent of 56,532 numbers (cost : about Rs. 662.33 lakhs) during 1980-81 to 1983-84. The OFB stated (November 1986) that the shortfall in production was not only due to delayed receipt of materials but also due to non-positioning of machines.

Following points emerge :

(i) There was delay in provisioning of the stores contributing to shortfall in production of shells valuing Rs. 662.33 lakhs.

(ii) The placing of the order on firm 'P' on single-tender-basis at higher cost was necessitated by delay in provisioning action and this involved an avoidable expenditure of Rs. 7.26 lakhs.

The case was referred to the Ministry in August 1986 but their reply was still awaited (November 1986).

CHAPTER 4

WORKS AND MILITARY ENGINEER SERVICES

18. Short recovery of electricity charges at a station

In December 1969, Chief Engineer of Command 'X' and Secretary 'Y' of the Defence Services Welfare Fund entered into an agreement, effective retrospectively from 3rd November 1967, for supply of electric energy to Defence Services Officers' Institute (Institute) at Station 'Z'. The consumption of electric energy under the agreement as recorded by the metering equipment was to be billed in accordance with the all-in-cost rate per unit supplied for the previous financial year which was to be revised every year by the supplier.

During the course of audit it was noticed in May 1985 that although the all-in-cost rates during the years 1968-69 to 1983-84 ranged between 31.90 paise and 93 paise per unit, the Barrack Stores Officer (BSO) responsible for billing had billed for the electric energy supplied during September 1975 (from which month consumption details are available) to March 1985 at a rate of 17.83 paise per unit. The incorrect billing resulted in short-recovery of electric charges amounting to Rs. 15.23 lakhs for the period September 1975 to March 1985. This amount would further go up if short recovery for the period from November 1967 to August 1975, for which records are not available, is also taken into account. In March 1985 the BSO floated arrear bills of electric energy for the period September 1975 to March 1985 amounting to Rs. 15.23 lakhs as amended on the basis of difference of cost as per all-in-cost rates of various years. The payment of these arrear bills had not been made by the Secretary 'Y' so far (October 1986). Secretary 'Y' had, however, started making payment of electric bills prepared by the billing authority at all-in-cost rates (i.e. at revised rates) from April 1985 onwards. The Ministry of Defence stated in October 1986 that :

— Arrear bills amounting to Rs. 15.23 lakhs for the period 1975 to 1985 were sent to the institute but there was no response from them.

— Working out of arrears for the period between 1967 to 1975 was held up because some of the records pertaining to that period were not readily available. The concerned Chief Engineer had been directed to do the needful and issue arrear bills.

— It is admitted that Military Engineer Services should have revised the rate annually as per December 1969 agreement. An enquiry is being ordered to fix responsibility for the lapse.

19. Avoidable expenditure in execution of work

Mention was made in sub-para (c) of paragraph 12 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) 1973-74 about a contract for construction of married accommodation concluded for Rs. 55.69 lakhs at a station in May 1966, which was subsequently cancelled on 1st September 1972 due to unsatisfactory progress of the work.

The work under the contract commenced on 25th May 1966 and was scheduled to be completed in three phases 'A', 'B' and 'C' by 24th August 1967, 24th November 1967 and 24th May 1968 respectively. Due to delay in handing over of sites (in the case of block of Squadron Leaders' quarters which was part of phase 'C', the site was handed over to the contractor after a delay of 1½ years), non-issue of cement, delay in issue of door and window frames, inadequate water supply, civil disturbance and additional works ordered in February 1967 through deviation order, the date of completion of work was extended. The works under phase 'A' (except 2 blocks of 4 married Squadron Leader quarters) and 'B' (except 2 blocks of 4 married Squadron Leader quarters), were, however, completed in June 1968 and March 1969 respectively and date of completion of the balance work under phases 'A', 'B' and 'C' was extended upto 30th/31st December 1969.

In February 1967/September 1969 the Garrison Engineer (GE) ordered execution of certain additional works involving 30 quarters (cost : Rs. 2.70 lakhs approximately) outside the work site contemplated in the contract through a formal deviation order. In May 1967, the contractor conditionally accepted the proposal, but in June 1967 he expressed his inability to execute the additional work due to increase in cost of material, labour etc. In July 1967, the contractor intimated the GE that contractually the quantum of additional work implied a radical change in the scope of the work and should be ordered through an amendment instead of a deviation order.

The matter remained under correspondence with the GE, Commander Works Engineer (CWE) and the Zonal Chief Engineer (CE) till December 1969 and in the meantime there was no progress in the work ordered through deviation. In December 1969 the Zonal CE sought the advice of the Engineer-in-Chief's (E-in-C) Branch who opined in January 1970 that there was no justification for issue of deviation order as the additional work was not contingent upon the original work.

Up to August 1970 the total progress of original work referred to above was 73.5 per cent only. The site for additional work ordered through deviation was handed over to the contractor only in December 1970, but there was still no progress of work (April 1971). In May 1971 the Zonal CE warned the contractor about slow progress of work and asked him to accelerate the progress failing which work would be got completed at his risk and cost. The contractor abandoned the work on 21st May 1972. As there was no further progress of original as well as additional work the Zonal CE cancelled the contract effective from 1st September 1972 at the risk of defaulting contractor.

In November 1972 the defaulting contractor filed an appeal against the decision of the Accepting Officer in the Court of Assistant Deputy Commissioner 'X'. The Court issued interim injunction restraining the department from concluding a contract at the risk and cost of the contractor. The appeal filed by the Government against the decision of the lower Court in the Court of the Additional Deputy Commissioner 'Y' failed. However, in October 1974 the injunction order was vacated by the High Court. The value of the left over work as assessed by the Zonal CE was Rs. 11.17 lakhs in respect of the original work and Rs. 2.06 lakhs for the additional work ordered through deviation. In March 1975, the Zonal CE concluded a contract for the execution of the left over work. The work commenced in March 1975 and was completed in December 1976.

The contractor filed an appeal in the High Court against the vacation of injunction order and the High Court set aside in August 1975 the orders of injunction so far as it prohibited the allotment of left over work to other agency and directed that any claim arising out of this contract would be deducted only when it was legally adjudicated.

The E-in-C appointed an arbitrator in July 1978/May 1979. The claims and counter-claims by the contractor and the Government respectively were filed before the arbitrator. The arbitrator published his award on 20th April 1982. Against the claims of the department amounting to Rs. 21.62 lakhs in respect of original as well as additional work ordered through deviation the arbitrator awarded only an amount of Rs. 0.08 lakh on account of defective sub-standard work. On the other hand out of the total claim of the contractor for Rs. 28.92 lakhs against original work the arbitrator awarded him an amount of Rs. 19.19 lakhs. The award was decreed by the Court on 15th December 1982. In accordance with legal advice offered earlier in August 1982 by the Ministry of Law, the Zonal CE decided to contest the award. The appeal was filed in the Court on 12th April 1983 which up-held the award of the arbitrator in August 1983. The Ministry of Law advised in November 1983 that there was no ground to contest the award, and the award was thereupon implemented and a sum of Rs. 21.87 lakhs (including interest of Rs. 8.60 lakhs upto February 1984) was paid through Court to the contractor in February 1984.

The Ministry of Defence stated in November 1986 that :

- The additional works ordered through a deviation letter in February 1967 were not included in the contract agreement of May 1966 due to over-sight.
- The delay of over 3 1/2 years in handing over site of additional works was due to siting of buildings.
- Though the contractor abandoned the work from 21st May 1972, it was finally cancelled in September 1972 as in the meantime it was expected that he would resume the work and also progress it expeditiously.
- Though extensions were granted for completion of work due to some delay in handing over site to the contractor, non-issue of cement, delay in issue of door and window frames and inadequate water supply and additional works ordered in February 1967 etc., the slow progress on the part of contractor played major part in prolongation of the contract and its subsequent cancellation.
- Though the E-in-C's Branch opined in January 1970 that there was no justification for issue of deviation order as the additional work was not contingent upon the original work, the Zonal CE decided to order a deviation instead of an amendment to protect Government interest as there was no radical change in the scope of the work. The arbitrator completely ignored and rejected Government claims.

The case reveals that:

- There was a delay of about 1-1/2 years in handing over site for Squadron Leaders' quarters to the contractor. Despite the opinion of the E-in-C's Branch that the additional work in question amounted to a radical change in the scope of work which was not contingent upon the original work and could not be ordered through deviation, the decision of the Zonal CE for getting the work done through a deviation order, as well as the delay in handing over the site referred to above, dragged the department to arbitration which resulted in the department incurring an extra expenditure of Rs. 15.77 lakhs on the completion of left over works undertaken at the risk and cost of the contractor. The department's claim for this amount was not accepted by the arbitrator. In addition, the department had to pay Rs. 15.01 lakhs (including Rs. 8.60 lakhs on account of interest) and an amount of Rs. 5.17 lakhs for increase in cost of material, wages and overheads awarded by the arbitrator as compensation to the contractor.

- Recovery for Schedule 'B' stores etc. overdrawn and not returned by the contractor amounting to Rs. 2.54 lakhs could not be enforced.

20. Infructuous and avoidable expenditure arising from commencement of work without proper clearance.

A siting-cum-costing board convened by the Naval Command Headquarters (HQ) for the setting up of a Forward Naval Operating Base at station 'X' recommended **inter alia** in July 1982 the construction of hangar, taxi track, dispersal area and other facilities. At a meeting held on 13th July 1983 by the Naval authorities at station 'X', it was stressed by the Civil Aviation authorities that the Naval and Military Engineer Services (MES) authorities submit a detailed proposal covering the various aspects to the Director General Civil Aviation (DGCA) and the International Airport Authority of India (IAAI) for their clearance. On 26th July 1983 sanction was accorded by a Naval Commander for the immediate commencement of works relating to taxi tracks and dispersal area etc. by the MES. Pending clearance of the proposals by the DGCA and IAAI, certain preliminary works such as soil investigation and trial bores were carried out at the site by the MES during September 1983 to January 1984 at a cost of Rs. 1.03 lakhs. On 15th October 1983, the Zonal Chief Engineer 'X' concluded a contract with firm 'Y' for the construction of the requisite civil works at a cost of Rs. 43.62 lakhs. The work was commenced on 21st October 1983 and was due for completion by 20th April 1984. The work was, however, suspended with effect from 5th December 1983 due to changes proposed in the alignment of the dispersal area and the taxi track so as to conform to the safety requirement of the airport authorities. Though the suspension was lifted on 15th December 1983, the department failed to obtain and issue permission to the contractor to enter the work site and therefore no work could be done and the suspension was reimposed on 23rd January 1984 for want of No Objection Certificate (NOC) from the Civil Aviation authorities. The progress of work at the site was about 6 per cent. NOC from the DGCA was received only in May 1984. In June 1984, the Naval Commander ordered the convening of a resiting board necessitated by resiting of dispersal area on the advice of DGCA and IAAI. After prolonged suspension of the work under the above contract, the work site was shifted to a revised location and the resumption order was given to Firm 'Y' with effect from 15th September 1984. However, firm 'Y' could not progress the work at site as the IAAI authorities disputed ownership of the new site and refused access to the site in the absence of lease agreement. Extension of time was, therefore, recommended upto and including 15th January 1985 by the MES authorities. In November 1984 the firm informed the department that although the work had been resumed, suspension continued to exist for all purposes and that this indefinite position kept them in great suspense with consequential losses. On 21st December 1984, the firm intimated to the Garrison Engineer that the work stood terminated with effect from 20th December 1984. While giving notice of termination of contract, the firm also preferred a claim for a sum of Rs. 8.67 lakhs as compensation on account of salaries, wages, idle labour, materials etc. Firm 'Y' was, however, informed by the contract accepting officer in February 1985 that the department was left with no option except to carry out the balance work through another agency. There was no further progress of the work because no agreement could be reached between the Navy and the IAAI on the area of land to be taken on lease by the Navy and the execution of the project was still uncertain (February 1986) though the facilities were initially required to be completed by April 1984. The total expenditure incurred upto February 1986 by the Department was Rs. 2.12 lakhs. Meanwhile at the request of firm 'Y' in August 1985, the Army HQ (E-in-C's Branch), referred the case to arbitration in December 1985 wherein the firm put forward an increased claim for Rs. 15.12 lakhs ; the final outcome of arbitration is awaited.

For the execution of the civil works contracted in October 1983, 1,688 MT of cement was received between September 1983 and March 1984 for this work. Out of 1,688 MT cement received only 3.200 MT had been issued to the work, and 1507.95 MT cement was transferred to outstation MES Divisions and other works in the same Division. The expenditure on freight and handling of 870 MT of cement from station 'Z' to station 'X' and transferring of 814 MT to outstation Divisions (including 200 MT to same Division at station 'Z') at a cost of Rs. 5.12 lakhs was avoidable.

The Ministry of Defence (Ministry) stated in February 1986 that since the representatives of the IAAI and DGCA were present during the deliberations of the siting-cum-costing board held in July 1982, no difficulty in getting the formal clearance from these agencies was anticipated and considering the operational urgency the work was commenced in anticipation of receipt of clearance from them. This contention of the Ministry is, however, not borne out by facts as in the meeting held in July 1982, the representatives of the IAAI/DGCA stated that they had no information about this project. Further in the subsequent meeting held in July 1983 it was stressed by the civil aviation authorities that the Navy and the MES should submit a detailed proposal to the IAAI/DGCA for their clearance. The Ministry further stated that the execution of the work will commence after approval of the lease agreement with the IAAI by the Government and advance payment of annual licence fee.

The case reveals the following :

— Pending clearance of the proposals by the appropriate civil airport authorities, sanction was accorded by a Naval Command in July 1983 to commence the work in respect of the above project.

— Certain preliminary works carried out by MES at a cost of Rs. 1.03 lakhs became infructuous due to non-approval of the site by the civil airport authorities subsequently.

— A contract for civil works could not be progressed and the contractor had put forward a compensation claim for Rs. 15.12 lakhs due to prolonged suspension of work with effect from 23rd January 1984. The execution of works which was due for completion on 20th April 1984 is uncertain (February 1986).

— In the absence of these facilities which were stated to be of "operational urgency", considerable difficulty is being experienced by the Navy in meeting the assigned tasks as "the aircraft had to be operated from West Coast to meet the task of East Coast."

— Commencement of the work without proper clearance led to expenditure of Rs. 5.12 lakhs on avoidable movements of cement.

21. Extra expenditure due to failure of a contract

Tenders for work relating to improvement to roads at a station were invited in September 1974. Nine firms quoted in October 1974 rates ranging from Rs. 9.42 lakhs to Rs. 13.75 lakhs. The five lowest rates obtained were as under :

Firm	Rate	Class of the contractor
'Q'	Rs. 9.42 lakhs	'D'
'R'	Rs. 11.26 lakhs	'A'
'S'	Rs. 11.36 lakhs	'B'
'T'	Rs. 11.47 lakhs	'D'
'U'	Rs. 11.53 lakhs	Special

The upper tendering limit for 'A', 'B', 'C' and 'D' class contractors was Rs. 30 lakhs, Rs. 10 lakhs, Rs. 5 lakhs and Rs. 2.50 lakhs respectively. The Commander Works Engineer awarded the contract to contractor 'Q' enlisted as Class 'D' contractor who would normally be entrusted with work only upto a limit of Rs. 2.50 lakhs. The work required to be commenced in October 1974 and completed by June 1975 was taken up for execution in March 1975. The contractor abandoned the work in April 1975 and the contract was cancelled in May 1975. After inviting fresh tenders a contract was concluded with contractor 'V' (an 'A' class contractor who had earlier quoted Rs. 12.82 lakhs in October 1974) in September 1975 for Rs. 13.83 lakhs (amended to Rs. 14.12 lakhs in June 1976) at the risk and cost of the defaulting contractor. The work was completed in July 1976 at a cost of Rs. 15.18 lakhs. The extra cost recoverable from the defaulting contractor by the department to complete the work, was provisionally worked out at Rs. 4.67 lakhs. Contractor 'Q' was asked to deposit the amount in December 1975. The amount being large and since no money was due to him for adjusting the claim, the department referred the case to arbitration in April 1976. The department preferred a claim for Rs. 4.95 lakhs before the arbitrator towards extra cost of completion of the work. The contractor submitted a counter claim of Rs. 1.90 lakhs against the department. The arbitrator while rejecting (August 1981) the contractor's claim, awarded only Rs. 0.37 lakh in favour of the department.

The award was filed in the Court on 13th November 1981 to make it a rule of the Court. The Court passed a decree in favour of the Government in June 1983. The amount has not been recovered from the contractor so far (August 1986).

The Zonal Chief Engineer stated in August 1980 that in view of the paucity of applications from contractors of appropriate class and the station being in an out of the way locations, applications from the contractors of other classes were also considered for selection.

The Ministry of Defence stated in September 1986 that :

- Action to recover the amount (Rs. 0.37 lakh) was delayed because the whereabouts of the firm could be known from the Police only in May 1986. Action was in hand to recover the same.
- Instructions have been issued to avoid recurrence of a case like this in future.

The fact remains that the contractor who was enlisted as a class 'D' contractor with capacity to execute works up to Rs. 2.50 lakhs, was awarded a contract of the value of Rs. 9.42 lakhs which should normally have been awarded to a Class 'B' contractor. This being beyond his capacity led to failure of the contract in the execution of the work and extra cost of Rs. 3.55 lakhs (after excluding Rs. 0.37 lakh awarded by the arbitrator in favour of the department) as compared to the rate obtained from the lowest tenderer of appropriate class.

22. Non utilisation of assets

For meeting additional requirements of filtered water of an Ordnance Factory (OF) a Commander Works Engineer (CWE) concluded a contract with a specialist firm on 4th November 1978 for provision of a water supply pipeline from a pumping station to the OF premises, for Rs. 18.75 lakhs. Cast iron pipes valuing Rs. 6.25 lakhs had been procured departmentally earlier in December 1977 for issue to the contractor "free for laying". The work executed under the supervision of a Garrison Engineer commenced on 29th November 1978 and was completed on 15th January 1981 against the original date of completion of 28th December 1979 at a cost of Rs. 22.24 lakhs including Rs. 6.25 lakhs for cost of pipes. The pipeline taken over by the Engineers in January 1981, was tested on 13 occasions between 19th May 1981 and 2nd October 1982, but the tests were suspended due to several defects viz. leaking through expansion joints, inability to sustain pressure due to leakage in joints, bursting of pipes etc. In the meantime, the maintenance period of the contract ended on 14th January 1982. The Factory authorities (users) pointed out in June 1983 that the pipeline had not been taken over by them and was lying unused because of the "sub-standard workmanship or faulty designs" and requested the Chief Engineer to get the defects in the pipeline rectified. In order to commission the pipeline CWE proposed in April 1984 to undertake rectification|additional works for strengthening and improving the pipeline at a cost of Rs. 5.98 lakhs which inter alia included (i) redoing runlead joints (cost : Rs. 0.30 lakh), (ii) replacing CI pipe with MS pipe under road crossing (cost : Rs. 0.72 lakh) and (iii) provision of anchorages to pipe line (cost : Rs. 4.50 lakhs). An additional contract agreement for improvement to the new pipe line at a cost of Rs. 7.55 lakhs was concluded by the CWE in August 1985 and the work is expected to be completed by December 1986.

The Ministry of Defence stated in November 1986 that:

- Factory authorities did not take over the work due to leakage of water in pipe found during testing. The additional contract was concluded for certain improvements to the new pipeline as they were located in the hilly region and with high velocity of water flowing in the pipeline a thrust of great magnitude developed in the bends which resulted in leakage through the joints.
- The assets have not been handed over to the users so far and it is hoped that leakages will be stopped on completion of the additional work in December 1986.

To sum up :

- The fact that pipe lines were to be laid through hilly region was known to the Engineering authorities at the time this work was planned. The leakages were thus due to defective designing|planning. The measures required to be taken to arrest the heavy water pressure considered in the new contract concluded after over 4½ years of the completion of the original work should have been taken into account in 1978 itself.
- As a result of this lapse assets created in January 1981 at a cost of Rs. 22.24 lakhs (approximately) had not been taken over by the users till November 1986. The pipe line remained unutilised for about 6 years after completion of the work and the additional

supply of filtered water could not be made available to the OF.

— The additional contract for Rs. 7.55 lakhs entered into in August 1985 for improvement to the pipe lines laid during November 1978 to January 1981 but not put into commission inter alia included redoing runlead joints and replacement of certain CI pipe with MS pipe at a cost of Rs. 1.02 lakhs.

— The cost of the works has gone up to Rs. 29.79 lakhs.

23. Extra expenditure due to shifting/rerouting of water pipes

Water pipes of various sizes were laid during 1966-67 and 1974—1976 at a station at a cost of Rs. 11.60 lakhs. Later on through two separate contracts concluded in March 1975 and June 1976 sewer lines were also laid at this station and the central sewage scheme was made functional with effect from April 1979. This included about 600 metres of sewer line which was laid in close vicinity of water lines laid earlier in upper terrain during 1966-67. In order to avoid contamination of water due to the water mains being in the vicinity of the sewer lines in the upper terrain and stagnant water in the helipad ground in the lower terrain the following works were taken up on urgent medical grounds :

(i) Work of shifting of existing water mains (about 700 metres of 150 mm dia) from the vicinity of the sewer lines and another 86 metres of water mains of 300 mm dia from the stagnant polluted water in the helipad ground to new alignment at an estimated cost of Rs. 10.05 lakhs was sanctioned by the Formation Commander in May 1983.

(ii) Work of rerouting of the balance pipeline (about 575 metres of 300 mm dia) which also became submerged in water due to increased water logging from the vicinity of stagnated polluted water to new alignment in the helipad ground area was sanctioned by the Sub-Area Commander in April 1985. The technical sanction for this work was issued by the Commander Works Engineer for Rs. 10.38 lakhs in June 1985.

Contract agreements 'A' and 'B' for the works sanctioned in May 1983 and April 1985 were concluded in September 1983 and August 1985 for Rs. 11.46 lakhs and Rs. 14.59 lakhs respectively.

Contract 'A'

The work was commenced in October 1983 to be completed by October 1984. The work could not be completed by the contractor as the pipes laid were found burst/cracked during testing in March 1984. On investigation of the case by the CBI it was found that the pipe burst was due to acceptance and incorporation of inferior quality pipes in the work executed by the department. By 28th May 1986 the contractor replaced the defective pipes and by end of October 1986 the progress of work was 95 per cent.

Contract 'B'

The work was commenced in August 1985 to be completed by May 1986. However, the progress of work at the end of September 1986 was 80 per cent. The delay in completion of works was stated to be due to delay in movement of pipes, sub-zero weather conditions and unprecedented heavy rains.

The Ministry of Defence stated in October 1986 that :

— Because of ruling gradient for sewer lines being not available anywhere else in the area about 600 metres of line were laid by the side of the water pipes.

— At the time of laying 300 mm dia raising mains at helipad ground the route was totally dry. The problem of stagnant water arose at helipad ground in the lower terrain over the years due to progressive reclamation of the area by the civilians and construction activities by Military Engineer Services.

— As regards acceptance of inferior quality pipes, administrative action against the persons found guilty was being taken.

The case revealed that :

— Laying of 600 metres of sewer line in close vicinity of water lines in the upper terrain and 300 mm dia water pipes in lower terrain which subsequently submerged in stagnated polluted water has resulted in extra expenditure of about Rs. 26.05 lakhs on shifting/rerouting of water mains. The major portion of extra expenditure could have been avoided had the sewer lines laid in 1975 to 1979 been kept at a safe distance from the existing water mains in the upperterrain and also the likelihood of water logging in the lower terrain of helipad area been foreseen as the pipeline of 300 mm dia laid in helipad ground during 1974—76 had to be subsequently shifted.

— The shifting|rerouting of water pipes sanctioned in May 1983 and April 1985 on urgent medical grounds could not be completed even by end of October 1986.

CHAPTER 5

RESEARCH AND DEVELOPMENT ORGANISATION

24. Extra expenditure due to delay in development of an equipment

Based on the sanction accorded by the Ministry of Defence (Ministry) in 1962, a Research and Development (R&D) Establishment developed equipment 'A' which was productionised by a Public Sector Undertaking (PSU) and introduced in the early 1970s for use as field artillery radar. Due to certain limitations, this equipment could not meet the requirements of the Army fully. A General Staff Qualitative Requirement was therefore drawn up by the Army Headquarters in April 1970 for equipment 'B' which was approved by the General Staff Equipment Policy Committee on 8th August 1972. The R&D Establishment stated in March 1972 that the estimated cost of a somewhat similar foreign equipment 'C' with far lower performance was about Rs. 15 lakhs and that the cost of productionised version of equipment 'B' was expected to be Rs. 20 lakhs approximately. The Ministry accorded sanction in August 1972 for indigenous development on high priority of 2 models of equipment 'B' at a cost not exceeding Rs. 53 lakhs. Equipment 'B' was to be made available for user trials by mid 1975 and thereafter for series production by mid 1977.

The model developed by the R&D Establishment in November 1977 was subjected to user trials during 1978—81 and was found to fall short of the required range. The users, therefore, wanted retrial after necessary improvements. Meanwhile, as equipment 'A' already in service was being phased out, it was decided by the Army in February 1981 to import/licence manufacture 25 Nos. of equipment 'C' (eventhough this make fell short of Army specifications) to meet the immediate short term operational requirement. The required balance quantity of 38 Nos. was proposed to be left for indigenous development/production. Accordingly, the Ministry accorded sanction on 1st April 1982 for import-cum-licence manufacture of 26 Nos. of equipment 'C' (including one for R&D Establishment to facilitate further development) at a cost of Rs. 28.10 crores ; the estimated cost of 26 Nos. in 1972 was Rs. 3.90 crores only. 10 numbers of equipment 'C' ex-import were received during 1982-83 and the balance quantity is being produced under licence by the PSU.

The total expenditure incurred on the development project of equipment 'B' upto December 1982 was Rs. 51.56 lakhs against Rs. 53 lakhs sanctioned in August 1972. Since the model of equipment 'B' as developed by R&D Establishment fell short of the required range the Ministry accorded revised sanction in December 1982 (as further amended in August 1984) for development of field artillery radar based on the design of equipment 'B' developed by R&D Establishment by further incorporating some of the good features of equipment 'C' at a total cost of Rs. 240.13 lakhs (including Rs. 53 lakhs sanctioned earlier in August 1972). Thus, the development of equipment 'B' sanctioned in August 1972 and planned to be completed in 1977 had not been completed till October 1986.

The Ministry stated (October 1986) that :

- The improved version of equipment 'B' is under users' trials.
- The final cost of development of equipment 'B' was estimated to be Rs. 265.92 lakhs.
- The non-availability of equipment 'B' is having an adverse effect on defence preparedness.

The case reveals that :

- On account of the inordinate delay in development and production of equipment 'B', the Ministry had to accord sanction in April 1982 for the import/licence manufacture of 26 numbers of equipment 'C' at a total cost of Rs. 28.10 crores, even though equipment 'C' fell short of Army requirements in many respects.
- Ministry's sanction of August 1972 envisaged development of equipment 'B' at a cost not exceeding Rs. 53 lakhs against which Rs 51.56 lakhs had been spent upto December 1982 when the sanctioned amount was enhanced/revised. The cost of development of equipment 'B' has now gone up from Rs. 53 lakhs to Rs. 265.92 lakhs and the equipment which was initially expected to be available by 1977 is still (October 1986) stated to be under users' trials.

— The non-availability of equipment 'B' is having an adverse effect on the defence preparedness.

25. Extra expenditure in procurement of stores for a Defence Research Institute

On 28th February 1985, a Defence Research Institute (Indentor) placed an indent on the Supply Wing of an Indian Mission abroad (Supply Wing) for procurement of certain stores, for use in one of its Faculties (Faculty), at an estimated cost of DM 115,055 plus US $ 36,000. The indent was accompanied by two quotations dated 21st and 23rd November 1984 of firm 'A', received through their Indian agent and valid upto 28th February 1985. According to these quotations, the total price of the seven items of stores indented for worked out to DM 205,055 plus US $ 36,000; due to some calculating error, the indentor had worked out the estimated cost as DM 115,055 plus US $ 36,000 (equivalent to Rs. 9.03 lakhs) against foreign exchange clearance of Rs. 9.50 lakhs already obtained in September 1984.

The indent was received by the Supply Wing on 14th March 1985 i.e. 14 days after expiry of the validity of the two available quotations of firm 'A'. In response to a limited tender enquiry, issued by the Supply Wing to seven firms on 25th April 1985, only firm 'A' submitted their quotation on 4th June 1985 pricing the stores at DM 470,860. There being some discrepancy in the specifications of items 5 and 6 as quoted by the firm vis-a-vis those given in the indent, the Supply Wing sought (1st July 1985) the indentor's acceptance of the firm's quotation which the indentor communicated on 8th October 1985, inter alia, intimating that the Indian agent of the firm had confirmed that items 5 and 6 now offered by the firm were better than those mentioned in the indent.

The Supply Wing's telex request of 1st July 1985 to the firm, for maintaining the rates quoted to the indentor in November 1984 through their Indian agent, failed to elicit any response. The firm, however, agreed in response to another request from the Supply Wing to extend the validity of their offer of June 1985 till 24th December 1985, simultaneously stating that from 1st January 1986, they would be charging prices which would be 9 per cent higher. Keeping in view the validity of the firm's offer and likelihood of the firm charging higher prices from 1st January 1986, the Supply Wing, after obtaining a telephonic confirmation from the indentor that adequate funds for the equipment were available, awarded the contract to the firm on 24th December 1985 for their quoted price of DM 470,860 ; this was DM 158,515 (Rs. 6.44 lakhs) higher than the price quoted by the firm in November 1984 through their Indian agent.

The following points were noticed :

(i) The Faculty had projected the requirement for procuring the equipment in April 1984 ; the foreign exchange to the extent of Rs. 9.50 lakhs required for the purpose was sanctioned by the Ministry of Defence on 10th September 1984 ; and the firm's quotations for the equipment were received on 26th| 28th November 1984. Still, the Faculty requested their stores Section for initiating procurement action only on 4th January 1985. Further, the indent for procuring the equipment was, in turn, issued by the Stores Section to the Supply Wing only on 28th February 1985 (i.e. on the last date of the validity of the quotations of November 1984), after they had received a reminder (6th February 1985) from the Faculty stating that the supplier's agent had intimated in his letter of 30th January 1985 that orders placed after 28th February 1985 would be accepted only on revised prices applicable from 1st March 1985.

Delay of over 3 months in raising the indent after receipt of the firm's quotation of November 1984 even when foreign exchange sanction for procurement of the stores was already available, resulted in the Government being put to an avoidable extra expenditure of DM 158,515 (Rs. 6.44 lakhs). Even after attributing the whole differential in cost of items 5 and 6 to their reportedly better quality, as compared to the quality of the items offered by the firm in November 1984, the extra expenditure in respect of the remaining 5 items works out to DM 108,890 (Rs. 4.42 lakhs). Had timely action been taken by the indentor in issuing the indent and had orders been placed before expiry of the firm's offer of November 1984, extra expenditure of DM 108,890 (Rs. 4.42 lakhs) on items 1 to 4 and 7 could have been avoided.

(ii) Although the indentor had informed (December 1985) the Supply Wing that adequate funds for the equipment were available, additional foreign exchange sanction required to meet the higher cost of procurement was still (March 1986) awaited.

The Indentor stated (March 1986) that the placing of the indent was delayed due to procedural formalities involved in processing the case. An examination of the indentor's records by Audit (October 1986), however, revealed that casual handling of the case at various levels mainly contributed to the delayed placement of indent.

CHAPTER 6

ARMY

26. Court of Inquiry proceedings

Introduction

1. Under the existing orders and regulations, in order to enforce adequate financial discipline and prompt implementation of remedial measures for avoiding losses of public money and stores, Courts of Inquiries (CIs) are to be held to investigate losses of public money amounting Rs. 5,000 or more and losses of stores due to theft, fraud or neglect amounting Rs. 10,000 or more. In cases of (i) losses of public money of less than Rs. 5,000 (ii) losses of stores due to theft, fraud or neglect where loss is less than Rs. 10,000 and (iii) losses of stores not due to theft, fraud or neglect upto Rs. 50,000, holding of a CI will be at the discretion of the competent financial authority. Where losses of stores not due to theft, fraud or neglect exceed Rs. 50,000 in value, concurrence of Government of India will be necessary for dispensing with the holding of CI. The departmental orders and regulations require the CIs to be convened immediately but in no case later than 15 days from the date of discovery of loss/irregularity and proceedings to be completed within a period of one week to one month from the date of its convening depending upon the nature and extent of the loss. The recommendations of the CIs are expected to be endorsed by competent authority within 10 days from the date of receipt of CI proceedings.

A test check of records pertaining to CI proceedings ordered/convened mostly during 1982-83 and 1983-84 in 5 Army Commands viz. 'A', 'B', 'C', 'D' and 'E' was conducted and the findings are contained in the paragraphs which follow.

2.1 *Reporting of losses to Controllers of Defence Accounts and to statutory audit*

The Army authorities are required to report to the concerned Controller of Defence Accounts (CDA) immediately after detection of details of cases of financial irregularities including losses of public money and stores exceeding specified limits indicating *inter alia* the nature of the irregularity/amount of loss, period involved, *modus operandi* in the case of fraud, how detected, whether any disciplinary action has been/is proposed to be taken and remedial measures, if any, taken/proposed to be taken and whether a CI has been orderd. The orders also prescribe that a copy of this report be furnished by the CDA to the local statutory audit authorities. However, the CsDA sent no report to the local statutory audit in all the 5 Army Commands. Further the CDA in Command 'E' stated in May 1986 that it was not receiving any reports from the Army authorities. The Ministry of Defence (Ministry) stated in November 1986 that the Controller General of Defence Accounts (CGDA) had reported that "serious cases of financial irregularities detected in internal audit are being reflected in 'Quarterly Major Financial and Accounting irregularities Report' submitted to the Army authorities with copies to the local statutory audit authorities". In this connection it may be mentioned that the CGDA has mentioned about the serious cases of financial irregularities detected by internal audit only. The fact remains that the requisite reports in respect of all the cases prescribed under the rules have not been rendered by the CsDA to the local statutory audit authorities.

2.2 *Convening of CI*

Out of 195 cases reviewed by Audit in 5 Army Commands, it was observed that CIs were convened within the prescribed period of 15 days only in 92 cases. In the remaining 103 cases there was delay upto 3 months (37 cases), 3 to 12 months (24 cases), 1 to 2 years (20 cases) and over 2 years (22 cases). Command-wise position of delays in convening the CIs is given in the table below :

Command	No. of cases examined by Audit	CIs convened				
		Within prescribed 15 days	16 days to 3 months	3 to 12 months	1 to 2 years	over 2 years
'A'	32	9	2	3	8	10
'B'	52	15	25	6	4	2
'C'	88	68	7	9	2	2
'D'	7	Nil	Nil	1	Nil	6
'E'	16	Nil	3	5	6	2
Total	195	92	37	24	20	22

2.3 *Completion of CI proceedings*

Out of the 195 cases referred to above, the CI proceedings were completed within the stipulated period of one month from the date of convening of CIs in 12 cases. In 140 cases the proceedings were completed within 3 months (35 cases), 3 to 12 months

(63 cases), 1 to 2 years (29 cases), over 2 years (13 cases). In 16 cases proceedings were not finalised till December 1985 and in 27 cases the exact date(s) of finalisation is not available. Command-wise position of delay in completion of the CI proceedings is given in the table below :

Proceedings completed

Command	No. of cases examined by Audit	within prescribed period of one month	within 3 months	3 to 12 months	1 to 2 years	Over 2 years	Not finalised so far
'A'	32	2	18	11	1	Nil	Nil
'B'	52	1	4	21	13	9	1(a)
'C'	88	9	11	28	10	2	4(c)
'D'	7	Nil	Nil	Nil	Nil	2	5
'E'	16	Nil	2	3	5	Nil.	6(b)
Total	195	12	35	63	29	13	16

(a) Information about the date of completion was not available in 3 other cases.

(b) Includes 2 cases in which CIs were not finalised as the over payment was recovered from the contractor/stores believed missing were subsequently traced.

(c) In 24 other cases the information about the date of finalisation was not available.

3.1 *CIs held in Command 'A'*

(a) Loss of ammunition

(i) A CI convened in May 1982 at an Ammunition Depot for the purpose of 'Investigating the circumstances under which large quantities of ammunition held by the various Ammunition Depots located at peace and field areas, have been declared unserviceable' recommended on 3rd July 1982 that the loss of Rs. 5.27 crores worth of ammunition be written off by the State, as it was held by them that the downgradation was not due to lack of suitable storage accommodation or failure to look after the stores properly while in storage. The Court attributed the loss to overaging of a certain component of the ammunition within its shelf life|failure of the lubricants in the time mechanism. In spite of the fact that these ammunitions were held as repairable by various depots and had been kept segregated for repairs, the CI did not, while recommending the write off, state why the ammunition could not be taken up for repairs or upgradation and possible utilisation. Till December 1985 the loss of Rs. 5.27 crores had not been regularised. The Ministry stated in November 1986 that "the CI proceedings were approved|agreed to by the Commandant of the Depot on 3rd July 1982. However, the statement of case and opinion of the Commandant got revised as the concerned CDA pointed out certain changes in prices of various marks of the subject fuze".

(ii) In 17 other cases the CIs held between September 1982 and September 1984 in the same Ammunition Depot for the purpose of investigating the circumstances under which large quantities of another ammunition valued at Rs. 36.28 lakhs were declared unserviceable, opined after investigation that the reasons for the ammunition becoming unserviceable within its shelf life were sub-standard storage conditions in the forward areas|lack of storage facilities resulting in their excessive deterioration. The conclusion reached by the various CIs was that as no one was to be blamed for the lack of proper storage accommodation the loss was to be borne by the State. The findings, however, did not mention whether adequate steps were|could have been taken to provide proper storage to avoid loss and what, if any, remedial measures had to be taken to avoid such losses in future.

The Ministry stated in November 1986 that normally the prescribed shelf life for any ammunition item can be attained only if the ammunition is kept under ideal storage conditions, fully protected from adverse climatic effects and such conditions are neither always available nor is it always feasible to construct suitable storage accommodation at the user units where these ammunitions are stored. The Ministry further added that in view of the foregoing perhaps no specific remedial measures were suggested by Courts in their findings to prevent deterioration of the ammunition.

(b) Delay in implementation of CI's recommendation on pilferage of medicines in Command Hospital

In March 1984, certain discrepancies were pointed out by internal audit in the issue of expendable medicines to wards and OPDs of a Command Hospital. These discrepancies were in the form of overwritings, erasures and alterations in figures appearing in the day book, expense vouchers, bin cards as well as in ledgers for the period April 1983 to February 1984. The irregularities involved 51 items of medical stores valuing over Rs. one lakh. A CI convened on 3rd April 1984 and finalised on 16th April 1984 found inter-alia that :

— The alterations were planned and premeditated and were committed by the officer-in-charge of medical stores and his subordinates.

— Tamperings have been made to cover irregularities of store holders and to create surpluses for financial gain.

The CI recommended in April 1984 that suitable disciplinary action be taken against two Havildars and one Major, and disciplinary action against the former was completed in May/November 1985 and trial against the latter was completed in April 1986 but no loss statement was submitted to the CDA till October 1986.

The Ministry stated in November 1986 that the delay in initiation of trial was mainly due to procedural formalities at various levels and that the case for initiation of loss statement for regularisation of loss was pending since confirmation of sentence against one Major involved was awaited from higher authorities.

3.2 *Command 'B'*

(a) Undue delay in completing inquiries

Out of the total produce of 50,600 Kgs. of cow peas during the two years 1978-79 (31,790 Kgs.) and 1979-80 (18,810 Kgs.) in Military Farm 'X', 42,736 Kgs. were declared surplus to its requirement. Of this, 22,070 Kgs. (value : Rs. 0.99 lakh) of cow peas were sold/issued on loan to the State Government/Civil authorities during 1980 as seeds, out of which 5,750 Kgs. (value : Rs. 0.26 lakh) were received back from three live-stock officers as being unfit for sowing.

In June 1980, 20,192 Kgs. (value : Rs. 1.07 lakhs) were transferred to Military Farm 'Y' for green manuring out of which 17,808 Kgs. (value : Rs. 0.96 lakh) were still (July 1985) lying in stock with that Farm.

To avoid deterioration in storage, the Command Headquarters (HQ) decided to utilise the stock of cow peas for feeding farm animals but this could not be done as the stock had got insect infested and had been treated with gammexane rendering it unfit for consumption by live-—stock.

Even though a CI was convened in June 1982 to investigate the circumstances under which 20,192 Kgs. of infested cow peas was transferred to Military Farm 'Y', the deliberations were not finalised till August 1986.

(b) While handing over/taking over of the furniture section in a Military Engineer Services (MES) Division in April—September 1979, discrepancies in furniture items costing Rs. 4.84 lakhs, as evaluated by Garrison Engineer (GE) of the Division were noticed. A CI ordered on 27th September 1979 with a Major as the Presiding Officer observed that ·

— Regular quarterly physical verification and 100 per cent physical annual check of furniture were not being carried out.

— A number of issue vouchers were unnumbered, uncontrolled, some of the issue vouchers were not available on records and lack of continuity made the verification hazardous.

— A large number of receipt vouchers were unnumbered and uncontrolled and hence no continuity existed. A number of these vouchers were not traceable.

— A number of Barrack Damage vouchers were uncontrolled.

— In view of records not being upto date it was safe to assume that annual stock verification of furniture could not have been complete and correct in all respects.

The CI blamed 5 civilian officials and 1 Naib Subedar for their lapses. As the findings of the CI did not clearly quantify the extent of discrepancies, a second CI was ordered in March 1980 for recording further information relating to discrepancies of furniture. This CI finalised in March 1981 assessed the amount of loss as Rs. 3.96 lakhs.

The General Officer Commanding-in-Chief (GOC-in-C) of Command 'B' observed that the GE being overall incharge of the Division and having failed to exercise proper command and control, could not be absolved of his responsibility and that he should be called upon to make good a sum of Rs. 3,000 towards the loss and show cause why severe displeasure should not be conveyed to him. GOC-in-C also recommended severe disciplinary action against the Commander Works Engineer(CWE) for not taking notice of the irregularities in administration and accounting.

The Zonal Chief Engineer stated in July 1985 that a penal recovery of Rs. 3,000 each was made from the GE, a Subedar and a civilian officer in addition to disciplinary action against 5 civilians.

The Regulation provides that when the character or Military reputation of an officer is likely to be a material issue, the presiding officer of the CI whereever possible, will be senior in rank to that officer. However, in this case involving deficiency of furniture costing Rs. 3.96 lakhs in an MES Division in the charge of a Major the CI was presided over by another Major. The Presiding Officer did not recommend any recovery or action against the Major. The Ministry stated in November 1986 that in addition to recovery of Rs. 3,000 "recordable displeasure was administered to the GE as per directions of the GOC-in-C". The Ministry further added that the discrepancy arose at the time of handing and taking over by the subordinates working in a BSO Sub-Division under the GE's Division and as such GE's responsibility was not technically direct and the character or Military reputation of the Major (GE) was not a material issue. This contention of the Ministry is not acceptable as the CI presided over by a Major held only the Junior Officers responsible whereas because of failure to exercise proper command and control and existence of irregularities in accounting in his Division the GE was awarded "recordable severe displeasure" by the GOC-in-C besides effecting recovery of Rs. 3,000.

3.3 *Command 'C'*

(a) Loss due to M.T. accident cases

In two Army Service Corps Battalions (ASC Bn) of Command 'C' 45 cases of losses for which CIs were held during 1982-83 and 1983-84(besides 20 cases of 1984-85) were reported. In 43 cases of 1982-83 and 1983-84 the loss amounting to Rs. 8.50 lakhs was ordered|recommended to be borne by the State. In two cases of one ASC Bn pertaining to the year 1982-83, the loss of Rs. 0.74 lakh was ordered to be recovered in February|March 1984 from the owners of civil vehicles. The compensation claim was still in progress till October 1986. The losses in 5 cases out of 26 cases of 1982-83 and 9 cases out of 19 cases of 1983-84(besides 15 cases out of 20 cases of 1984-85) were yet to be regularised till December 1985. Thus, in 43 out of 45 cases the CI recommended loss to be borne by the State.

(b) Promotion of Officers during pendency of CI

Discrepancies of steel items valued at Rs. 1.20 lakhs were noticed during handing|taking over of the charge of an Engineer Park in July 1983. A CI was ordered by Sub-Area HQ in June 1984 with a Major as Presiding Officer and the proceedings completed in April 1985 were finally endorsed by the GOC-in-C on 24th December 1985. Meanwhile the Officers incharge of the Division|Stores were promoted, one from the rank of a Major to Lt.Col. on 15th July 1985 and the other from Barrack Stores Officer to Senior Barrack Stores Officer on 1st February 1985.

The Ministry stated in November 1986 that until the officers are chargesheeted, they cannot be regarded as involved in any disciplinary case. The Ministry further added that the details required for the finalisation of the chargesheet against the BSO were awaited from the Command HQ. The fact remains that the Officer was promoted during pendency of the CI and the chargesheet could not be framed even after a period of about one year after the proceedings of the CI were approved by the GOC-in-C.

(c) Quantum of punishment vis-a-vis loss of Rs. 14 lakhs sustained by Government due to proven misappropriation of stores ordered to be borne by the State

Unit'P' issued certain stores to unit'Q' on 7th November 1981 which were duly receipted by the latter on 16th November 1981 without physical movement of stores on the mutual unrecorded understanding of the then Commandants of the Unit 'P' and Unit 'Q' for effecting economy to the State and avoiding unnecessary haulage. The stores were agreed to be lifted afterwards. There was transfer of charge between the stock holders on 29th June 1982 and the handing|taking over certificates reflected the ground balances as those entered in the account cards. Thus, the items which were supposed to be held (vouchered off to unit on 7th November 1981 but stores not actually lifted) were not physically found in stock of Unit 'P'. In November 1983 Unit 'P' requested the Sub-Area to investigate the matter through a staff CI.

The CI in their findings brought out loss of undermentioned stores estimated to cost Rs. 14 lakhs.

(a) Dynamo of sorts	480 Nos.
(b) Self starter of sorts	370 Nos.
(c) Armature of sorts	1800 Nos.
(d) Alternator of sorts	145 Nos.

These stores were, however, priced at Rs. 1.33 lakhs only in May 1985 by internal audit as per last auction rates for salvaged items even though the stores were selected for repairs.

The court held the then Commander(Salvage Coy) and a Havildar of the unit'P' responsible for the loss of stores due to misappropriation, fraud and charged the administration of Units 'P' and 'Q' with deviating from laid down procedure.

In a case of proven misappropriation involving Rs. 14 lakhs as per court's conclusion facilitated by non-lifting of stores arising out of mutual unrecorded understanding between Commandants of Units 'P' and 'Q', the loss was ordered to be borne by the State and the disciplinary authority had merely awarded the punishment of severe reprimand. Even the loss statement of Rs. 1.33 lakhs drawn up on 9th May 1985 (for the loss of Rs. 14 lakhs as computed by the CI) was awaiting regularisation till February 1986.

(d) Monitoring of CI cases

In a Sub Area it was noticed that though a register for monitoring the cases of CIs convened by them was maintained, no entry had been made therein at all thereby indicating that proper and timely monitoring of CIs was not being done.

The Ministry stated in November 1986 that Army HQ have been advised to issue suitable instructions to all concerned for maintaining registers properly.

3.4 *Command 'D'*

(a) Delay in finalisation of CI

During handing|taking over of stores between two Store Keepers of an MES Division in July 1984 surpluses|deficiencies in the stock of timber stores were reported. The CWE ordered in August-September 1984 a Board of officers (BO) to carry out physical stock taking. The BO held in September 1984 detected deficiencies of stores valuing Rs. 5.14 lakhs and surpluses to the extent of Rs. 0.32 lakh. It was observed that several gate passes for the period 1979 onwards bore endorsement "Indent to follow". The deficiency in stock crept in because stores were being issued on temporary chits in violation of existing orders and had not been regularised through proper Indent. On 10th September 1984 the CWE reported the matter to the Station HQ requesting for holding a CI. The Station HQ in turn reported the matter to the Sub Area/Area HQ and Army HQ. On 10th November 1984 the Sub Area HQ ordered a staff CI to pinpoint the responsibility for the loss irregularity. Although the CI was convened in November 1984 the proceedings thereof were finalised by the GOC-in-C on 6th February 1986.

The Ministry stated in November 1986 that delay in finalisation of the CI was due to prolonged correspondence between Station HQ, Sub Area|Area and Command HQ in regard to reconciliation of the discrepancies found in the Board proceedings.

(b) Inadequate probing by a CI

(i)During handing|taking over of items of furniture in another MES Division on 14th February 1984, a deficiency of furniture items valuing Rs. 2.49 lakhs was noticed. The shortage was charged off from the furniture stock ledger. The Barrack Stores Officer reported in February 1984 the matter to the GE. A preliminary Inquiry was held on 9th March 1984 and based on report of Inquiry dated 27th March 1984 Station HQ ordered a CI in May 1984 for investigating the circumstances leading to the occurrence of the loss and to pinpoint the responsibility. The Court examined the documents during the course of evidence conducted on 6th August 1984 and subsequent days and forwarded the proceedings to Sub Area HQ. On receipt of proceedings of the CI the Sub Area HQ observed on 5th February 1985 that the CI was inadequately conducted to the following extent and returned the proceedings to the Station HQ in February 1985:

(a) The Court did not attach the number of documents examined nor did it record any facts pertaining to these documents after perusal.

(b) The Court did not bring out the reasons leading to the huge discrepancy. The findings and opinion were more or less speculative.

(c) All Officers involved in the chain of receipt of new furniture were not examined and documents pertaining to the transactions were not called for and perused.

(d) The Court did not probe deeper into the case and scrutinise the ledgers, receipts, issue vouchers, proceedings of board held to accept|receive new items of furniture, issues made to units at various stages, stock taking board proceedings, distribution list of furniture issued to various units, condemnation Board certificates of furniture condemned and not auctioned, to reach certain conclusion.

The CI re-assembled and opinion on the proceedings was endorsed by the Station HQ on 22nd August 1985. Thereafter it was processed by the Sub Area|Area HQ and directions of the GOC-in-C were recorded on 25th August 1986. The Ministry stated in November 1986 that disciplinary action| penal recoveries of part of the value of the discrepancies from the concerned personnel were being processed.

(ii) On 16th March 1982 a Command HQ reported a case of accident involving an ammunition manufactured in January 1980 within the shelf life of 8 years. On the basis of a technical investigation, the accident was attributed to loose filling resulting in erratic burning leading to bursting of tubes. The entire lot of ammunition was sentenced as unserviceable by Army HQ on 11th October 1983. The Ammunition Depot holding stock of the said lot of ammunition valuing Rs. 0.46 lakh ordered a CI in October 1983-March 1985. The delay from October 1983 to March 1985 was stated to be due to most of the Presiding officer|members detailed for CI having been posted out and CI left uncompleted. The CI actually held in March 1985 opined that the Depot followed the correct procedure and negligence could not be pinpointed at this belated stage and recommended the loss to be written off.

(c) Loss due to metallurgical defects in ammunition

In May 1980, a Command HQ reported a case of accident which occurred on 26th March 1980 with an imported ammunition manufactured in 1968 having a shelf life of 18 years. A technical investigation attributed the accident to metallurgical defects in fin assemblies of the ammunition. In July 1981, the entire lot of ammunition was sentenced as unserviceable. An Ammunition Depot holding stock of said lot of ammunition valuing Rs. 1. 13 lakhs ordered a CI on 16th April 1982. The Court held on 4th November 1982 conducted the Inquiry, and while recommending write off, opined on 22nd November 1982 that downgradation was not due to lack of suitable storage accommodation or failure to look after the articles properly while in storage. In May 1985, after a period of 30 months the loss was regularised under orders of Government of India. The CI did not investigate as to why the defect could not be noticed at the time of inspection when ammunition was imported.

The Ministry stated in November 1986 that this aspect was not investigated by the CI probably because of passage of time ex-import and holding of CI.

(d) Delay in finalisation of CI

(i) In February 1975, a Field Ordnance Depot (FOD) issued 1,10,163 nos. of jute bags to a Supply Depot (SD) of which 47,458 nos. of jute bags valuing Rs. 1.16 lakhs were not collected by the latter. The SD called for the issue vouchers in 1979 from FOD but no reply was sent by the latter. In January 1981, the SD again requested for the said vouchers in reply to which it was stated by FOD in February 1981 that these documents were retainable only for 3 years and therefore were destroyed. In December 1983, the SD reported the matter to Sub Area HQ who directed the SD to approach Station HQ for holding a CI. The SD approached the Station HQ in January 1984, who ordered a CI in February 1984 to pinpoint the responsibility for the loss. The proceedings of the CI were not finalised till September 1986.

(ii) In compliance with instructions of Army HQ issued in October 1976, a FOD despatched 20,000 nos. of unserviceable blankets to a State Government for flood relief. The FOD segregated 14,000 more unserviceable blankets for flood relief. Army HQ intimated in March 1977 that no further blankets were required for flood relief. Eventhough, a BO assembled in February 1977 recommended the disposal of segregated unserviceable blankets, the FOD took no action to dispose them of and the same remained stocked in open area exposed to weather hazards from March 1977 to 1979. Attempts were made to dispose of these stocks through auctions held in 1979 and 1980 but these lots did not attract any bid. The FOD reported in June 1983 that these stocks had turned into dust due to prolonged stocking in the open. In July 1983, Sub Area HQ ordered a CI to investigate the circumstances under which 14,000 unserviceable blankets valuing Rs. 0.96 lakh could not be disposed of. The CI held on 13th July 1983 stated in their findings that no responsibility could be pin pointed at this belated stage and therefore recommended the loss to be borne by the State. The proceedings of the CI were submitted to Sub Area HQ in September 1985. In May 1986 Sub Area HQ remarked that no one was to be blamed for the loss and FOD should take adequate measures to avoid such losses in future.

3.5 *Command 'E'*

(a) Loss of Rs. 3.87 lakhs on account of non-linking of vouchers

During the audit of a Supply Depot in January—March 1966 the credit in respect of 5 consignor's issue vouchers for the following items could not be verified in the consignee's ledgers by Local Audit Officer (LAO).

1. Kerosene Oil (Superior)	1,04,400 litres in 696 Barrels of 150 litres each.
2. Kerosene Oil (Superior)	27,000 litres in 180 Barrels of 150 litres each.
3. DHPP (Diesel)	93,240 litres in 4662 nos. of jerricans.
4. Vit 'C'	8,00,000 nos.
5. Cauliflower	400.970 Kgs.

Non-credit of the stores costing Rs. 3.87 lakhs in the ledgers of consignee was placed under objection by the LAO. During the period from 1966 to 1972 eventhough there was exchange of letters between the concerned parties, these credits could not be linked and the whereabouts of the aforesaid stores were not known. The matter remained under correspondence between the consignor and the consignee units during the period August 1973 to June 1979 but credits could neither be linked nor could the whereabouts of the stores be located.

In July 1979 a statement of case was prepared by the consignee unit and forwarded to Regional Audit Officer (RAO) for remarks. After obtaining RAO's remarks, the consignee unit prepared (August 1980) a loss statement for an amount of Rs. 3.87 lakhs and sent it to the Station HQ. The Station HQ ordered a CI only in February 1982. However, another CI was ordered in May 1982 by Sub Area which could not make any progress due to non-availability of members. A third CI was ordered in February 1984 which opined in August 1984 about possible redirection of stores to erstwhile supply point, as credits of the stores were not available in the ledgers of the Supply Depot. Further, the CI did not suspect any foulplay and recommended the loss to be written off. The opinion of the court was confirmed by Sub Area Commander in September 1984 with the remarks that the case of non-tracing/crediting of stores was about 20 years old and all the documents had been destroyed/ were untraceable at that belated stage. Till September 1985 the loss had not been regularised by the Competent Financial Authority (CFA).

(b) Deficiencies of reproduction and technical stores costing Rs. 4.51 lakhs

On 2nd May 1982 an attempt was made by a non commissioned officer and his accomplices to remove some printing papers from unit 'R' but they were caught red handed. A CI was ordered in May 1982 to investigate the aforesaid case. The investigation revealed the following :

(1) Discrepancies were noticed in all the 30 items of reproduction stores and more stores were being charged off from the ledger than the actual consumption.

(2) A theft of photo films had occurred on 27th April 1982.

A BO was held between 19th October 1982 and 18th January 1983 at unit 'R' to carry out the stock taking of reproduction/technical stores and to prepare list of shortages, assigning reasons therefor. The board found deficiencies/surpluses of items borne on various ledgers, but could not find out the reasons for deficiencies/surpluses. It recommended that the surpluses might be taken on ledger charge and deficiencies regularised immediately.

A CI ordered in April 1983 finalised its proceedings in September 1983 and assessed the cost of deficient items at Rs. 4.51 lakhs and was of the opinion that discrepancies in the technical and reproduction stores occurred due to non-observance of laid down procedure for accounting and handling of stores and lack of supervision by supervising staff. Consequently two service persons were awarded rigorous imprisonment and were dismissed from service and a non-commissioned officer was reduced in rank. The summary of evidence against two officers was recorded. In respect of one officer disciplinary proceedings were dropped by HQ of Command 'E' on 17th December 1984 and administrative action was initiated. However, in respect of the other officer no disciplinary action was contemplated.

The CI also prepared a list of deficient items costing Rs. 4.51 lakhs. The CI *inter-alia* recommended that a special audit of the unit be carried out and that surplus stores be adjusted against deficient stores of similar type. However, till March 1986 the loss had not been regularised even after a lapse of about 4 years from the date of detection of loss in April/May 1982.

(c) Loss of copper wire valuing Rs. 1.63 lakhs

Under telegraphic orders, followed by a signal of May 1980 from Command HQ, a special stocktaking was carried out in unit 'S' in May 1980 by a Brigadier and shortage of 3,644 Kgs of copper wire costing Rs. 1.63 lakhs approximately was noticed. A unit CI was convened in July 1980 and a copy of the same was sent to Command HQ in November 1981. The case was also reported to the CDA in June 1983 by Command HQ. A staff CI was ordered to be convened in July 1984 which was to be finalised by 10th August 1984. The proceedings of the CI had not been completed till March 1986.

The Ministry stated in November 1986 that proceedings of the CI have been received at Command HQ for concurrence of the GOC-in-C and the same were under consideration.

4. *Non convening of CIs in significant case of losses*

Heavy consignments of coal were received in a RHSD for meeting the requirements of coal of various units/formations other than MES of Command 'C'. In this Depot 13,741.550 M.T. of coal were charged off from ledger charge for the period April 1982 to March 1984 on account of short receipt of coal (other than full missing wagons for which claims were preferred with Railways). For the above quantity of coal received short in a total of 125 days, 746 loss statements for an aggregate amount of Rs. 26.74 lakhs were prepared on the authority of equal number (746) of Station BOs on the ground that the consignments had been booked from the Collieries against 746 railway receipts. One BO for loss against a railway receipt was the pattern even though the consignments were received in the unit on 125 calendar days and were taken on charge through Daily Balance sheets on 125 days. In 735 cases 13,540 M.T. of coal (out of 1,16,137 M.T. consigned) representing about 12 per cent was found short. Had the Depot consolidated the entire loss during a financial year two loss statements would have been sufficient. This, however, would have in turn attracted powers of higher CFA.

It was further observed by Audit that freight charges of approximately Rs. 200 per metric tonne paid to the railways had not been included while working out the amount of loss in the different loss statements. Had these charges been added, the aggregate amount of loss statements would have worked out to Rs. 54 lakhs (approximately) against Rs. 26.74 lakhs shown by the Depot.

The Station BO had all along stated that the losses of coal had occurred due to pilferage enroute. Though heavy losses were involved, no CI was convened to investigate the losses. On one single day viz. 23rd September 1983, the loss of coal was heavy being 954.700 M.T. valued at Rs. 4.39 lakhs (approximately) including freight.

The Audit paragraph was issued to the Ministry on 1st July 1986 but their reply pertaining to 9 sub-paras was still awaited (26th November 1986). The Ministry, however, stated in November 1986 that there were a few common factors for delay in holding as well as finalisation of the CI as under :

— "Procedural delays on account of there being a doubt as to whether the CI is to be held or not.

— Civil case also being involved as the matter has also to be taken up with the Police in case of the theft.

— Because of non-availability in time of necessary documents/evidence and of the witnesses for cross-examinations, etc."

The Ministry further stated that with a view to avoid delay in finalisation of CI proceedings disciplinary cases and move of witnesses in connection with the disciplinary cases, detailed instructions were issued by the Army HQ on 27th June 1986 and 10th November 1986.

5. *To sum up* :

— Outof 107 cases reviewed in Commands 'A', 'B', 'D' and 'E' CIs were convened in the prescribed period of 15 days in 24 cases only (22 per cent) in Command 'A' and 'B' while no case was finalised within this prescribed period in Commands 'D' and 'E'. In Commands 'A', 'D' and 'E' CIs in respect of 18 cases (56 per cent), 6 cases (20 per cent) and 8 cases (50 per cent) respectively were convened after a period of 1 year and above after the discovery of the loss.

— Out of 195 cases reviewed in Commands 'A', 'B', 'C', 'D' and 'E', only in 12 cases (6 per cent) CI proceedings were completed within the prescribed period of 1 month in Commands 'A', 'B' and 'C' while no case was finalised within this prescribed period in Commands 'D' and 'E'. Of these 195 cases reviewed, 42 cases (22 per cent) were finalised after a delay of one year or more and another 16 cases (8 per cent) were awaiting finalisation.

— A CI while recommending that loss of ammunition worth Rs. 5.27 crores be written off did not state why there ammunition kept segregated for factory repairs could not be taken up for repair|upgradation. The loss of Rs. 5.27 crores had not been regularised till December 1985.

— In 17 other cases of loss of ammunition worth Rs. 36.28 lakhs within the shelf-life due to sub standard storage, the CI did not indicate whether adequate steps were taken to provide proper storage and what remedial measures were to be taken to avoid similar loss in future. The CI recommended the loss to be written off. The loss of Rs. 1.86 lakhs (2 cases) was regularised in January 1986; the remaining loss of Rs. 34.42 lakhs (15 cases) was yet (August 1986) to be regularised.

— A CI recommended in April 1984 disciplinary action against officers responsible for loss of medical stores valuing over Rs. 1 lakh due to alterations|tampering of records but disciplinary action|proceedings against 2 Havildars was completed in November 1985, and trial against one Major was completed in April 1986. The confirmation of sentence is awaited from higher authorities in November 1986. The loss is yet to be regularised (November 1986).

— No responsibility for loss of cow peas valuing Rs. 0.96 lakh could be fixed even after 5 years of the loss. The CI convened in June 1982 had not finalised its deliberations till August 1986.

— In one case a second CI was ordered as the findings of the first CI did not clearly quantify the extent of discrepancies and cost thereof nor did CI pin point responsibility for each of the discrepancy. The Regulations provide that when the character or Military reputation of an officer is a material issue, the presiding officer of the CI wherever possible will be senior in rank to that officer. However, in a case involving deficiency of furniture costing Rs. 3.96 lakhs in MES division in charge of a Major the CI was presided over by another Major and not by an officer senior in rank. A penal recovery of only Rs. 3,000 each was recovered from the Major (GE), a Naib Subedar and a civilian as compared to total loss.

— CIs were not convened in cases of losses of coal valued at about Rs. 54 lakhs (approximately). Freight charges of approximately Rs. 200 per MT paid to the Railways were not included while working out the amount of loss in the different loss statements and consequently losses amounting to Rs. 54 lakhs were reported as Rs. 26.74 lakhs only.

— Two officers were promoted to higher ranks (one from Major to Lt. Col. on 15th July 1985 and another from Barrack Stores Officer to Senior Barrack Stores Officer on 1st February 1985) while a case of loss of steel items valued at Rs. 1.20 lakhs noticed during July 1983 was finalised and endorsed by the GOC-in-C in December 1985. The charge-sheet against the BSO was yet to be finalised (November 1986).

— In a case of misappropriation and fraud involving Rs. 14 lakhs worth of repairable stores as assessed by the CI (loss priced at Rs. 1.33 lakhs by internal audit based on last auction rates for unserviceable stores) the disciplinary authority had merely awarded the punishment of severe reprimand.

— In a Sub Area in Command 'C' even though a register for monitoring the cases, of CIs was maintained no entry had been made therein.

— A CI ordered by Sub Area HQ in November 1984 to investigate the deficiency of furniture valuing Rs. 5.14 lakhs in Command 'D' was finalised only in February 1986.

— In another case of deficiency of furniture costing Rs. 2.49 lakhs in Command 'D' revealed during February 1984, the CI was not properly conducted in that its findings and opinion were more or less speculative and some of the officers and documents were not examined.

— The CIs held in March 1985 to investigate into an accident with an ammunition on 16th March 1982 could not pin point any negligence for the failure of ammunition (cost : Rs. 0.46 lakh) due to passage of time.

— In a case of downgradation of ammunition, CI recommended write off of the ammunition valuing Rs. 1.13 lakhs in November 1982. The loss was regularised in May 1985 after a lapse of 30 months. The CI did not investigate as to why the defect could not be noticed in inspection at the time of procurement.

— A CI to investigate a loss of jute bags costing Rs. 1.16 lakhs which occurred during February 1975 in Command 'D' was ordered after a lapse of 9 years in February 1984. The proceedings had not been finalised till September 1986.

— In a case of loss of unserviceable blankets costing Rs. 0.96 lakh, which were kept in the open during 1977—79 by a FOD in Command 'D' the CI was held after 4 years in July 1983 and the proceedings were finalised only in May 1986.

— Non-linking of stores in respect of 5 issue vouchers pertaining to the years 1963-64 was pointed out by internal audit in 1966. Two CIs to investigate the loss of stores costing Rs. 3.87 lakhs were ordered in February 1982 and May 1982 i.e. after about 19 years. Both the CIs could not make progress due to non-availability of members. A third CI was ordered in February 1984. But the documents having been destroyed/ not traceable, the CI recommended the loss to be written off. The loss had not been regularised till September 1985.

— In a case of deficiency of reproduction and technical stores costing Rs. 4.51 lakhs finalisation of CI took 16 months. The CI recommended special audit of the unit; the outcome of this as well as regularisation of loss was awaited till March 1986.

— A CI to investigate into a loss of copper wires costing Rs. 1.63 lakhs in May 1980 was convened in July 1980 and again in July 1984 for completion by August 1984 but the proceedings had not been finalised till March 1986.

— Even though a report about financial irregularities including losses, indicating *inter alia* amount of loss involved, nature and period of irregularity and whether any enquiry has been ordered, disciplinary action taken/proposed to be taken etc. is to be rendered by the CsDA concerned to the local statutory audit authorities it was not given in all the five commands.

27. Procurement of Machine Honing Cylinder

In November 1978, the Army Headquarters (HQ) placed an indent on the supply wing of an Indian Mission abroad(Supply Wing) for supply of one Machine Honing Cylinder at an estimated cost of Rs. 2.83 lakhs. The machine was to be delivered to a Central Ordnance Depot (COD) by June 1979. The Annual Provision Review carried out in October 1977 disclosed a further deficiency of 10 machines but it was decided to procure 6 more machines and the balance 4 was kept pending for subsequent procurement. Accordingly, in March 1979 the Army HQ increased the quantity to 7 at an estimated cost of Rs. 19.79 lakhs. The Supply Wing concluded a contract for 7 machines with a foreign firm on 15th February 1980 at a total cost of DM 3,44,139.79(Rs. 14.07 lakhs), later amended in March 1980 to DM 3,64,719.79 (Rs. 14.92 lakhs). The contract stipulated a warranty period of 15 months after the delivery, or 12 months after the arrival of stores at the ultimate destination in India, whichever was earlier. All the 7 mahcines were to be supplied to the COD within 13 months after receipt of order.

On 16th May 1980 the Army HQ placed another indent on the Supply Wing for 2 more machines required for Base Workshops 'A' and 'B'. The Army HQ informed the Supply Wing on 20th May 1980 that the quantity ordered under the existing contract of 15th February 1980 should be increased by 4 numbers. The Supply Wing concluded a fresh contract with the same foreign firm on 28th November 1980 for 6 machines(Qty. 2 against indent of 16th May 1980 plus qty. 4 against Army HQ letter of 20th May 1980) at a total cost of DM 3,26,960.83 (Rs. 13.37 lakhs), for supply within 12 months after receipt of the order. The warranty clause was the same as in the earlier contract.

Against the contract of 15th February 1980. 7 machines were received and taken on charge by the COD on 30th June 1982 and were issued to 7 Base Workshops on 1st July 1982.

The performance|utilisation of these machines as reported by the users is given below :

User workshop	No. of machines	Issued by COD on	Received by workshop on	Date on which defects intimated	Remarks/performance of machine as reported by the user
(1)	(2)	(3)	(4)	(5)	(6)
'A'	1	1st July 1982	March 1983	14th March 1983	(*i*) Machine not working satisfactorily. (*ii*) Tool holder can hold only 4 sticks against 18 honing sticks per holder. (*iii*) Expansion of honing stick is by hand against Hydraulic.

(1)	(2)	(3)	(4)	(5)	(6)
					(*iv*) Length of the bed not sufficient to accommodate jackets of T-55 engines.
					(*v*) The workshop requested the COD to issue disposal instructions.
'B'	1	1st July 1982	December 1982	17th May 1983	(*i*) Machine not working satisfactorily.
					(*ii*) Hydraulic system faulty.
					(*iii*) Knocking sound causing vibration and with that foundations also start shaking.
					(*iv*) Machine giving jerk due to built-in characteristics in design and manufacture.
					(*v*) Machine not suitable for precision job of cylinder honing as jerk is injurious to accurate finish of products.
					(*vi*) The Indian Agent of the supplier who visited the workshop confirmed that the jerks were due to built-in-characteristics in design.
'C'	1	1st July 1982	September 1982	December 1984	(*i*) The defects were of minor nature and the same were rectified by workshop.
					(*ii*) Machine not in regular use since its receipt.
'D'	1	1st July 1982	1982	—	(*i*) Machine was installed in 1983.
					(*ii*) Machine not used being not provided with moving table hence not suitable for cylinder blocks having more than one bore.
					The Ministry of Defence (Ministry) reported in March 1986 that the possibility of fixing movable tables on these machines are being explored.
'E'	1	1st July 1982	1982	—	(*i*) Workshop had no commitment pertaining to single cylinder engines and as such it could not be put to intended use.
'G'	1	1st July 1982	—	—	Machine could not be put to proper use due to non-availability of movable table.
'H'	1	1st July 1982	—	—	Defects/Utilisation details of the machine are not known.

The Controllerate of Inspection, Engineering Equipment(CIE) to whom the defects were pointed out by Base Workshop 'A' informed the Army HQ in August 1983 that while accepting the quotation of the foreign firm with reference to limited information available with them they had suggested as early in December 1979 and January 1980 that user's opinion should also be obtained before concluding a contract. The CIE also pointed out that if there were any shortcomings, the same should have been reported after receipt of the contract of February 1980 so that remedial action could have been taken before supply commenced. The Ministry stated in March 1986 that though the CIE confirmed that the machines were technically acceptable, neither technical literature on these machines was made available to the CIE nor could the CIE check the machines at consignee's end as it was not associated with the inspection of machines at any stage.

The additional quantity of 6 machines contracted for in November 1980 were received in the COD in December 1982. Of these 3 machines were issued to Base Workshop 'F' in July 1984. The remaining 3 machines were not issued to any Base Workshop till February 1985. The Warranty period was already over.

The case revealed the following points :

— Out of 7 machines received in June 1982 four machines costing Rs. 8.52 lakhs were found to be defective or unsuitable by the Base Workshops 'A', 'B', 'C' and 'D'. Two machines costing Rs. 4.26 lakhs issued to Base Workshops 'E' and 'G' in July 1982 could not be put to use as the workshops had either no commitment pertaining to single cylinder engines or the movable table required for its use was not provided. Information about performance of the remaining one machine is not available.

— Out of 6 machines received in December 1982 three machines costing Rs. 6.68 lakhs were issued to Base Workshop 'F' in July 1984 after over 18 months and the remaining 3 machines costing Rs. 6.68 lakhs were lying in the COD till February 1985. The warranty period of these 6 machines had already expired before their issue. The information whether any defects were noticed in these 6 machines was called for from the Ministry in June 1985 and the same is still awaited (October 1986).

The Ministry of Defence stated in March 1986 that :

— The machines have been procured with fixed table which restricts its usage. The CIE while clearing the quotations had accepted the offer and as such machines have been procured. However, to utilise the machines to the maximum extent the manufacturer has been approached for assessing the feasibility of fixing the movable table.

— Army HQ have been requested to constitute a Court of Inquiry for fixing the responsibility in the matter. They have also been requested to issue instructions to the concerned Directorates to avoid recurrences of such instances in future.

28. Non-utilisation of costly medical equipments procured from abroad

(i) A medical equipment 'A' required for Cardiac investigation was imported in February 1979 at a cost of $ 16,840 (Rs. 1.44 lakhs) for a Cardio Thoracic Centre (CTC) of a Military Hospital at station 'X'. The equipment was installed in April 1979 by the local agents of the foreign supplier, but its ECG monitoring system was found to be defective. Since the defect was within the warranty period, a free replacement of the ECG monitoring system was obtained from the foreign supplier in September 1980. Though the replacement unit was received in September 1980, the local agents could not make equipment 'A' functional resulting in the requisitioning of a consulting engineer in December 1982 who found that the integrated circuit of the equipment required replacement and requested the foreign supplier for supply of the component. The component was received in November 1984 by post but customs clearance could not be effected till July 1986 resulting in the main equipment not being available for clinical use since its receipt in February 1979.

(ii) Another unit of medical equipment 'B' imported at a cost of $ 48,950 (Rs. 4.55 lakhs) for a Command Hospital at the same station was received in January 1983. One of the two voltage stabilisers obtained for equipment'B' in July 1983 was found to be defective. Further some of the parts of equipment'B' were damaged during its installation. Due to delay in obtaining a voltage stabiliser and replacement of damaged parts it was installed in February 1984 only. Rupees 0.22 lakh were paid as installation charges to the Indian agent of the foreign firm. Due to overall shortage a Cardiologist could not be posted to the Command Hospital and the equipment was lying unused. It was, therefore, transferred to a Military Hospital(CTC) at the same station and installed there in August 1984. The equipment was found to be defective and could not be put to use since then. The Indian agent of the foreign firm could not rectify the defects of the equipment due to non-availability of service engineers. Although another Indian agent of the firm was located in November 1984, the equipment was repaired and made functional only in January 1986.

The Ministry of Defence stated in August 1986 that :

— The component required for the equipment'A' has not yet been cleared from customs.

— The functions of equipments 'A' and 'B' are almost similar .In the absence of equipments 'A' and 'B' the patients were referred to the civil institution including medical college for special investigation.

The case reveals that two costly equipments imported at a cost of Rs. 5.99 lakhs for a Cardio Thoracic Centre of a Military Hospital/Command Hospital remained unutilised since their installation in 1979 and 1984 because of defects noticed after their installation. While the defects in equipment 'A' (cost : Rs. 1.44 lakhs) received in February 1979 had not been rectified so far(August 1986), equipment 'B' (cost : Rs. 4.55 lakhs) could be made functional only in January 1986 after three years of its receipt in India.

29. Wasteful expenditure on the procurement of plastic water bottles with cover

(a) Army Headquarters(HQ) placed in February 1984 an order on firm 'A' for supply of 40,000 'Plastic Water bottles with cover' (hereafter called stores) at a cost of Rs. 6.40 lakhs with the stipulation that the supply be made FOR Station 'X'. The Inspectorate of General Stores (IGS) located at Station 'X' and the Controllerate of Inspection, General Stores (CIGS) located at Station 'Y' were nominated as the 'Inspecting Officer' and 'Inspection Authority' respectively. Ninety five per cent advance payment was to be made to the firm on proof of despatch of stores after approval by the Inspecting Officer and the balance 5 per cent after receipt of the stores in full and good condition. As per general conditions of the contract appended to the supply order the consignee had a right to reject the stores within 45 days of actual delivery at destination if the stores were not in all respects in conformity with the terms and conditions of the contract "whether on account of any loss, deterioration or damage before despatch or delivery or during transit or otherwise howsoever". According to the warranty clause of the supply order of February 1984, the stores carried a warranty of 12 months against defective material, workmanship and performance from the date of receipt by the consignee. On 10th August 1984 an amendment was added to the warranty clause that the contractor supplying such defective stores shall accept a suitable price penalty for defective stores as may be decided by the Purchase Officer on the recommendations of the consignee|Inspection Authority.

The entire quantity of stores duly inspected by the Inspecting Officer in October 1984 was received by the consignee Central Ordnance Depot (COD) located at Station'Y' during December 1984 to May 1985. A sum of Rs. 6.08 lakhs representing 95 per cent cost of the stores supplied was paid to the firm on proof of despatch of the stores after approval by the Inspecting Officer. As per the instructions issued by the CIGS in December 1984, the entire stock was kept segregated for carrying out 'standard check'. On 26th March 1985 the CIGS asked the Commandant COD to reject the whole consignment by exercising the right of rejection under the warranty clause as under the'standard check' the stores could not withstand the 'drop test' and had major defects.

After over 3½ to 4½ months of the receipt of stores|report of CIGS the Commandant COD informed firm'A' on 23rd August 1985 of the rejection of the whole consignment. He did not, however, spell out the reasons for the rejection of the stores nor did he specify the clause of the supply order under which the stores were rejected even though this was advised by CIGS.

As reasons for rejection had not been notified by the Commandant COD while rejecting the stores, firm'A' did not accept the rejection and informed the Army HQ accordingly in September 1985. The firm further informed the Army HQ and the Commandant COD in October 1985 that the rejection was not binding on it legally as the same had not been communicated within 45 days of the receipt of the stores by the consignee. This contention of the firm was not correct as under the warranty clause the firm was liable to replace the defective stores for which claim was preferred within 12 months. In spite of this the COD could not enforce the claim.

(b) Army HQ placed in September 1984 another supply order with similar terms as at (a) above on firm 'B' for supply of 58,000 number of similar stores at a cost of Rs. 10.61 lakhs FOR Station 'X'.

At the instance of the CIGS, a consignment consisting of 29,500 plastic water bottles duly passed by the Inspecting Officer in January 1985 and received in the COD during February-June 1985 was segregated for 'standard check'. A sum of Rs. 5.13 lakhs representing 95 per cent cost of the stores was paid to the firm. On 30th April 1985 the CIGS asked the Commandant COD to reject the entire stores on the same grounds as in(a) above. After about 3½ to 4½ months of the receipt of stores/ report of the CIGS, the Commandant COD informed firm'B' on 13th September 1985 of the rejection of the whole consignment but did not spell out the reasons for the rejection nor did he indicate the clause of the supply order under which the rejection was made even though this was advised by CIGS.

In September|November 1985 firm'B' also informed the COD that it did not accept the rejection on grounds similar to those given by firm'A' as at(a) above.

The Ministry of Defence stated in September 1986 that :

— In respect of stores supplied by firm'A' the test report of CIGS was received after 120 days from the date of receipt of first consignment in the Depot and till the entire consignment was received it would have been incorrect to reject the stores which were not received in the Depot. (This contention of the Ministry is not acceptable as the stores were received in part during the period from 1st December 1984 to 6th May 1985. Though the CIGS asked the Commandant COD on 26th March 1985 to reject the whole consignment, the same was done by the latter only on 23rd August 1985).

— The entire quantity of stores supplied by firms 'A' and 'B' were undergoing drop tests and the supplies found defective would be replaced by the firms.

— An amount of Rs. 64,712 had been recovered from firm 'A'.

The case reveals that :

— The entire quantity of the stores(viz. 69,500 numbers) which were duly pre-inspected and passed for acceptance by the Defence Inspecting Officer were found to be defective and unacceptable on their receipt at the consignee's end. Sub-standard stores costing Rs. 11.80 lakhs for which firms 'A' and 'B' had already been paid Rs. 11.21 lakhs representing 95 per cent payment were lying in COD unused and unissued from December 1984/June 1985 onwards.

— The Commandant COD took 3½ to 4½ months in informing firms 'A' and 'B' about rejection of the stores after receipt of the stores|results of standard check.

30. Loss due to non-insurance of imported Defence Stores

Claims for shortlanding/damaged cargo against Shipping Companies, who are signatories to the Gold Clause Agreement, were settled on percentage basis subject to liability being limited to a maximum of £ 400 per package irrespective of the cost of consignment in the package. With a view to avoiding heavy losses to the Defence Department and securing full compensation for costly equipment short landed/damaged, the Government directed in October 1983 that either of the following courses, whichever was economical, should be adopted :

(i) Stores substantially more than £ 400 be insured with the Indian Insurance Companies which are Public Sector Undertakings.

(ii) If insurance charges for stores/package valued at more than £ 400 are more than 3 *per cent ad-valorem*, then the nature and value of stores be declared on the Bill of Lading.

In February 1983, the Ministry of Defence (Ministry) entered into a contract for the import of 45 numbers of a particular type of vehicle alongwith spares and special maintenance tools. These were shipped in 5 consignments during January-April 1984. Out of the first consignment of 10 vehicles shipped in January 1984, one vehicle was lost at sea and the remaining 9 vehicles were received in a damaged condition in February 1984. However, the consignment had not been insured in accordance with the Government directions.

Mention was made in paragraph 25 of the Report of the Comptroller and Auditor General of India for the year 1984-85, Union Government (Defence Services) about the vehicle which was lost at sea and for which a claim for Rs. 30.94 lakhs was preferred by Embarkation Headquarters (HQ) on the shipping company in May 1984. The claim was admitted by the latter in March 1985 for only Rs. 0.06 lakh on the plea that, as a signatory to the Gold Clause Agreement, their maximum liability per package was restricted to only £ 400. The Ministry stated in September 1985 that the claim for Rs. 0.06 lakh admitted by the Shipping Company was under dispute and was not accepted on the ground that the goods were wrongly loaded on the deck instead of under the deck, which was a "deliberate fraud" by the shipping company. It was further noticed that the remaining nine vehicles which were received on 17th February 1984 were found to be in damaged condition as per survey held on 23rd February 1984 as they were brought by the vessel on deck instead of being loaded into the hold. A claim for Rs. 24.90 lakhs was lodged in August 1984 with the shipping company towards cost of damages to 6 vehicles, the remaining 3 vehicles having been repaired by suppliers' team free of charge.

The shipping company demanded in October 1984 a re-survey by their technical team to consider the claim on its merits. Survey was conducted on 31st July 1985 but the survey report was not made available to the Central Vehicle Depot. Consequently, after discussions with the Embarkation HQ, the shipping company made an offer in December 1985 of Rs. 20 lakhs in full and final settlement of the claims, for both loss of one vehicle and damages to the other vehicles amounting together to Rs. 55.84 lakhs. The offer is still pending (25th September 1986).

The Ministry stated in September 1986 that :

- The orders of October 1983 were under review and subsequently modified in March 1984.
- Negotiations with the carriers are being held by the Ministry through Department of Surface Transport and a final decision regarding the acceptance or otherwise of the offer of Rs. 20 lakhs in full and final settlement of the claims has not yet been taken.
- Repair of the vehicles was yet to be undertaken.

As the shipment of the consignment took place only in January 1984 the goods should have been insured in the manner indicated in the Ministry's instructions issued in October 1983 to cover full risk of any loss enroute. As a result of not observing the procedure outlined in the Government instructions of October 1983, there will be a loss, which could have been avoided, of about Rs. 35.84 lakhs even if the offer of Rs. 20 lakhs made by the shipping company in full and final settlement of the claim is accepted. In the meantime, six damaged vehicles imported at a cost of Rs. 1.86 crores have been awaiting (September 1986) repairs in a Central Vehicle Depot since February 1984.

31. Avoidable expenditure due to delay in procurement/commissioning of a dairy plant

Ministry of Defence (Ministry) accorded sanction in February 1972 for procurement of certain items of plant and machinery for pasteurisation of milk in replacement of old condemned plant and machinery in a Military Farm (MF) at Station 'A' at an estimated cost of Rs. 2.37 lakhs. Army Headquarters (HQ) placed in December 1972 an indent on Director General of Supplies and Disposals (DGSD) for supply of the equipment. Since the lowest tender received was for Rs. 5.77 lakhs against the sanctioned amount of Rs. 2.37 lakhs the case was processed for revised sanction. In the meantime validity of the tenders had expired and the DGSD cancelled the indent. A fresh indent was placed on the DGSD in July 1974 for arranging supply and installation of plant at an estimated cost of Rs. 5.96 lakhs for delivery by December 1974. In April 1975 the proposal was dropped by the Army HQ due to increase in the price even though a revised sanction for the plant in question at a total cost of Rs. 5.96 lakhs was issued by the Ministry earlier in March 1975.

The position was reviewed and procurement of certain equipment like milk receiving tank, milk blending tank etc. was dropped and in October 1975, Army HQ placed a fresh operational indent on DGSD for supply, erection and commissioning of a pasteurisation plant at a total cost of Rs. 5.95 lakhs. In August 1976 the officer incharge of MF reported to Deputy Director, Military Farms (DDMF) that "the Officer Commanding Station Health Organisation inspected the MF and he had objected the pasteurisation of milk by ice". The DGSD concluded a contract in November 1975 with a firm for supply, erection and commissioning of the plant at a total cost of Rs. 4.92 lakhs with completion of supplies by 31st January 1977 and erection/commissioning by 30th April 1977 which were further extended upto 15th March 1978 and 15th May 1978 respectively.

The boiler was supplied by the firm during February 1977 and the plant in May 1978 but could not be installed as the foundation required for installation of the plant was to be constructed as per the drawings to be supplied by the firm. The firm submitted the layout drawings in June 1978 and simultaneously detailed their erection team to supervise the construction of the foundation. The team started erection during September 1978 so that work could be completed by March 1979. The DDMF at Station 'A' stated on 24th December 1985 that the work came to a standstill in March 1979, as the erection team was perhaps incompetent and they could not lay the plant according to their own drawing and went back leaving erection of the plant incomplete. A sum of Rs. 3.83 lakhs was paid to the firm on account of 90 *per cent* of the cost of supply of the stores after initial inspection and on proof of despatch of the stores to the consignee.

Earlier in February 1979, the Command HQ informed the Director General Military Farms (DGMF) that all civil works related to the commissioning of the plant had been completed by October 1978 at a cost of Rs. 21,500, compressor including pumps installed and the balance work was expected to be completed by March 1979. The date of commissioning of the plant was extended by the DGSD for the last time upto 15th April 1985 though the DMF, Army HQ had earlier requested the DGSD in June 1979 to terminate the contract and get the work completed at the risk and cost of the firm. The plant has not been commissioned so far (August 1986).

The Officer-in-Charge MF had earlier reported in June 1982 that due to the non-commissioning of the plant, milk was being chilled by ice, an old process by which the MF was put to a recurring loss of Rs. 4,510 per month.

The Controllerate of Inspection (CIE) asked the firm in July 1984 to complete the installation work by 15th September 1984, failing which the work would be got done at its risk and cost. In September 1984 the DGMF Army HQ informed the DGSD that the firm could not complete the work within the notice period and requested the latter to get the work completed at its risk and cost through other agency. In April 1985 the Command HQ asked the DGMF Army HQ to approach the Ministry for an early action. In December 1985 the Command HQ *inter alia* stated that the plant had not been installed and some *modus operandi* in line with legal advice was being evolved to complete the supply and erection of the plant. The DGSD terminated the contract on 10th December 1985 at the risk and cost of defaulting firm.

The Ministry stated in November 1985/August 1986 that:

— In January 1986, Army HQ directed the Command HQ :

(a) to hold a Station Board of Officers (SBO) to take stock of the stores supplied by the firm and to assess their condition ;

(b) to procure the missing parts and to issue tenders for completing the erection work; and

(c) to get investigation done by a Court of Inquiry of the abnormal delay of nine years in the completion of a small dairy project and to suggest remedial measures.

— The proceedings of the SBO assembled in August 1986 were awaited. The plant has not been commissioned so far (August 1986).

— The CIE is responsible to carry out the technical scrutiny of the tenders received and to assess the capability of the tenderers for completing the contracts successfully. All stores supplied by the tenderer and installation and commissioning of the plant are also inspected for acceptance by the CIE. Thus, CIE is responsible for the technical aspects of the indent.

— The DGSD who was responsible for commercial matters of concluding the contract, despite Army HQ and CIE's advice not to place order on this firm which was totally new and inexperienced, awarded the contract to a new firm which failed to complete the job and the details of loss suffered by the MF alongwith the expenditure incurred on getting the balance work completed at the risk and cost of the firm will be intimated to DGSD for filing a claim against the defaulting firm.

— The firm was not traceable during 1981 to April 1985.

The case revealed :

— The dairy plant sanctioned in 1972, which was required for replacement of old condemned plant and machinery, could not be installed and commissioned even after a lapse of over 14 years.

— The MF had to incur an avoidable expenditure of Rs. 5.05 lakhs on chilling of milk for supply to troops from May 1977 (the scheduled date of commissioning of the plant) to August 1986. In addition milk processing with ice was considered as "health hazard to the troops".

— Rupees 3.83 lakhs paid as advance to the firm for supply of the plant in addition to Rs. 0.21 lakh spent for completion of civil works remained unfruitful.

32. Procurement of snipper rifles with telescope

In July 1980, the Army Headquarters (Indentor) raised an 'urgent' indent for procurement of 24 numbers of sniper rifles with telescope (day and night) (Bolt action) on the Supply Wing of an Indian Mission abroad (Supply Wing). Offers of three firms 'A', 'B' and 'C' for BF 54,410 (£ 680), DM 5,820 (£ 1,164) and BF 37,000 (£ 462) each respectively received in response to a limited tender enquiry issued (24th September 1980) by the Supply Wing were forwarded (November-December 1980) to the indentor for study and acceptance. The indentor stated (19th December 1980) that the stores were to be procured from firm 'B' as a proprietary article certificate (PAC) had already been issued (30th August 1980) in favour of that firm.

The firm 'B', in their quotation of 16th October 1980, had offered 'Sniper Rifle............with distance regulation, with mount for night vision device, with carrying case'. The price of DM 5,820 each offered by the firm in October 1980 was reduced (January 1981) to DM 5,400 each after telephonic negotiations. Although description of the item in the firm's quotation did not exactly agree with the details given in the indent, a contract valued at DM 129,600 was placed on that firm on 27th February 1981 without referring the matter to the indentor ; the description of the item in the contract was, however, given by the Supply Wing as detailed in the indent.

While acknowledging receipt of the order on 24th March 1981, firm 'B' pointed out that they had offered only "a sniper rifle with telescope for the day and scope mount for the night vision device but not a sniper rifle with telescope (day and night)". The firm's communication was forwarded by the Supply Wing to the indentor on 1st April 1981 for comments. There was no response from the indentor. In October 1982, however, the indentor stated that since the description of the item in the contract conformed to the description as per the indent, no comments were deemed necessary. The Ministry of Defence stated (September 1986) that as the contract was concluded specifically for Sniper Rifles with telescope (day and night sight) (Bolt Action), on receipt of the firm's letter dated 24th March 1981, the contract should have been cancelled/modified by the Supply Wing.

During inspection of the consignment, after receipt in India, it was observed (June 1982), that the telescope night devices were not provided with the rifles. At the instance of indentor (July 1982), the discrepancy was taken up by the Supply Wing with the supplier who stated (August 1982) that the supply was according to their quotation as clarified in March 1981. While advising the indentor to raise a fresh indent for night vision devices, the Supply Wing admitted (January 1983) that "the fact is that the firm offered an item without night vision devices and we placed the contract thinking that night vision devices were included in the offer".

In this connection, the following points arise :

(i) There was a vital difference between the description of the item as per the indent and that in the firm's quotation. Both the Supply Wing and the indentor failed to scrutinise the firm's quotation properly before placing the order. The supply order describing the item as one with night vision devices was not in accordance with the firm's quote and was erroneous. The indentor failed to realize the correct position even on the basis of the firm's clarification of March 1981. The Ministry of Defence stated (September 1986) that it was true that both the Supply Wing and the indentor should have carefully scrutinized the quotation as well as further clarification given by the firm after the contract was placed.

(ii) The goods were accepted on supplier's warranty without inspection by the Supply Wing. The Supply Wing agreed (May 1986) that the usual condition of inspection as per the standard conditions of contract of the Supply Wing was waived without any 'specific approval'. The discrepancy in the goods supplied by the firm vis-a-vis those mentioned in the contract could not therefore be located before shipment of stores to the indentor.

(iii) the indentor stated (December 1984) that in the absence of night vision sights, the utilisation of the rifles is restricted to employment during the day. Military stores worth DM 129,600 (Rs. 5.26 lakhs) procured to meet an urgent requirement in July 1980 were, thus, procured in such a way that even after a lapse of 6 years these do not meet the exact requirement of the Indentor. The Ministry of Defence admitted (September 1985) that in the intervening period the user unit was handicapped by having to restrict the use of the equipment. The Ministry also stated (September 1985) that Army Headquarters, on the advice of the Supply Wing, had since placed orders on the Supply Wing to acquire night vision devices. In September 1986, the Ministry of Defence stated that indent for procurement of night sight for equipment already received, had not been placed.

33. Delay in obtaining free replacement of medicines deteriorating prematurely

Orders placed by the Director General Supplies and Disposals (DGSD), the Director General Armed Forces Medical Services (DGAFMS) and the Armed Forces Medical Store Depot (AFMSD) on firms for the supply of medical stores to the Armed Forces stipulate that in case of premature deterioration of medicines, free replacement will be made by the suppliers. Losses, if any, due to deterioration or loss of potency of biological or other products during the prescribed life are also required to be made good by the suppliers. It was noticed in Audit that claims preferred by the DGAFMS and the AFMSD 'A' for free replacement of medicines costing Rs. 9.99 lakhs which deteriorated prematurely in AFMSD 'A' during 1979 to 1984 had not been made good by the suppliers. Out of this, the value of defective medicines awaiting replacement for over 3 to 6 years was Rs. 7.09 lakhs. The Officer Commanding of the depot expressed his inability to initiate any legal action against defaulting suppliers and stated in January 1986 that "although it is mentioned in the supply orders that the suppliers will make good the defective stocks, there was no indication of any legal provisions which can be initiated by the purchasing authority in case of failure/non-initiation of action by firm concerned".

The Officer Commanding AFMSD 'A' informed the DGAFMS and Audit in September 1986 that "At no stage legal advice was sought for|obtained on the option open to the department under the Drug Act to enforce the warranty clause by this depot on relevant supply orders. Such a course was possibly not taken since definite and elaborate instructions were never issued by any authority".

Apart from AFMSD 'A', there are two other Depots 'B' and 'C' in which prematurely deteriorated medicines costing Rs. 5.71 lakhs and Rs. 9.86 lakhs respectively are awaiting replacement for 1 to 11 years.

Ministry of Defence stated in September 1986 that:

- A suitable clause is being incorporated in future supply orders by DGAFMS/AFMSDs regarding time bound replacements of defective stocks; failing this either recoveries would be made from pending bills or legal action would be initiated.
- A proposal on similar lines is being taken up with DGSD in respect of purchases made through them.

Non-replacement of medicines which had deteriorated prematurely resulted in loss/blocking of funds to the tune of Rs. 25.56 lakhs during the last 1 to 11 years (September 1986).

34. Loss due to delay in pointing out short/defective supply

An indent for procurement of certain stores/equipment was placed by Thal Sena Mukhyalaya on the Supply Wing of an Indian Mission abroad in December 1978. Since the indented items were out of production the User Directorate approved procurement of in lieu items in July 1979. The Directorate of Ordnance Services, however, approached the Supply Wing only in September 1980 to procure the items. After a gap of 16 months, the Supply Wing asked the User Directorate for additional foreign exchange in January 1982. In April 1982, the User Directorate reduced the quantity of items indented from 17 to 4 to bring the cost within the sanctioned amount. The contract for supply of these items was concluded by the Supply Wing in July 1982 at a cost of \$1,25,060. The consignment was despatched in November 1982 by the foreign firm and received in a consignee depot in April 1983. According to the inspection report issued by the consignee depot in March 1984, 2 items valuing \$ 15,195 were found defective and 110 items valuing \$10,600 were found short. Defective items have since been repaired by the Indian agent of the foreign supplier. The items received short have not been made good. The following points emerge:

(a) Apart from the initial delay in processing the indent, it was observed that the equipment for which the stores were required was declared obsolete on 31st July 1980. The User Directorate, however, stated that the imported parts could be used on other equipment.

(b) In accordance with the instructions issued by the Ministry of External Affairs in January 1979, the Supply Wing is required to bring pointedly to the notice of the indentor or the ultimate consignee as the case may be as follows:

> "It would be appreciated if on receipt of stores ordered, immediate scrutiny is made with the invoice and the bill of lading and deficiencies, if any, are reported to the Supply Wing within 45 days".

No such instructions were, however, sent to the indentor|consignee by the Supply Wing.

(c) According to the terms and conditions of the contract the period of warranty was 15 months after delivery of the stores or 12 months after their arrival at ultimate destination in India whichever was earlier. Though the warranty period expired in February 1984 the inspection report for the stores was prepared by the consignee in March 1984 i.e. 12 months after the receipt of stores by them and one month after the expiry of warranty period.

Thus failure of the Supply Wing to bring to the notice of the indentor the need for immediate inspection on receipt of stores and subsequent delay in pointing out short supply resulted in a loss of \$10,600 (Rs. 1.12 lakhs).

CHAPTER 7

AIR FORCE

35. Induction of an aircraft in the Indian Air Force

Based on the recommendations of a team which evaluated various aircraft for the deep penetration strike role, the Cabinet Committee on Political Affairs (CCPA) approved in October 1978 the acquisition of 'P' number of aircraft 'A' for maintaining 'Q' number of squadrons for the Air Force. 26.7 per cent of the aircraft were to be procured in a fly away condition from foreign manufacturer 'X' and the balance 73.3 per cent to be manufactured indigenously by a public sector undertaking (PSU) under licence agreement with manufacturer 'X'. A letter of intention to proceed was issued by the Government in October 1978 in favour of manufacturer 'X', which was followed by two agreements concluded in April 1979. Under the first agreement the manufacturer 'X' was to supply 26.7 per cent of aircraft 'A' in a fly away condition along with associated equipment at a cost of Rs. 399.69 crores, whereas the second agreement provided for the licensed manufacture by the PSU of the remaining 73.3 per cent aircraft during 1982 to 1989 in a phased manner, 30 per cent to be manufactured by the PSU from imported components supplied by manufacturer 'X' and the balance 43.3 per cent to be manufactured by the PSU from raw material. For the licensed manufacture by the PSU, manufacturer 'X' was to be paid a licence fee of Rs 23.94 crores and a royalty at the rate of 2.5 per cent of the cost of manufacture of the aircraft. The aircraft supplied by manufacturer 'X' were received during September 1980 to October 1982 and were inducted into squadron service.

2. The aircraft supplied by manufacturer 'X' were fitted with engine 'D' manufactured by another foreign manufacturer 'Y'. However, another engine 'E' manufactured by the same manufacturer 'Y' was selected for the aircraft to be manufactured indigenously. The requirement of engine for 73.3 per cent aircraft was assessed to be 'R' number. Agreements were entered into by the Government in December 1978 with manufacturer 'Y' for the supply of 17.6 per cent engines at a cost of Rs. 53.63 crores and for the licensed manufacture by the PSU of the balance 82.4 per cent of engines, technical assistance being provided by manufacturer 'Y' to the PSU for setting up of facilities for manufacture, assembly, repair/overhaul of engine 'E'. The manufacturer 'Y' was to be paid a licence fee of Rs. 4.8 crores and technical assistance fee of Rs. 1.84 crores.

3. In June 1979, the Government authorised the PSU to incur capital and deferred revenue expenditure (DRE) upto a ceiling of Rs. 12.5 crores and Rs. 20.8 crores respectively (revised last in September 1985 to Rs. 115.94 crores and Rs. 177.00 crores respectively) for setting up facilities required for the manufacture of aircraft 'A', engine 'E' and related accessories.

4. In July 1979 the Government sanctioned placement of first order on the PSU for the manufacture and supply of 30 per cent of 'P' number of aircraft 'A' as per the following schedule :

Year	Percentage of aircraft to be delivered
1982-83	5.3
1983-84	10.7
1984-85	10.7
1985-86	3.3

In order to avoid slippages in the production schedule of 30 per cent aircraft ordered on the PSU, Government approved in January 1981 import of sub-assemblies from manufacturer 'X' at an additional cost of Rs. 4.4 crores. These sub-assemblies were earlier planned to be manufactured from raw material by the PSU.

5. The scope of the indigenous manufacturing programme of aircraft 'A' was reviewed during October 1981 mainly on the following grounds :

— the production line of manufacturer 'X' for aircraft 'A' was to be closed in 1982, whereas the assembly of indigenous aircraft by the PSU was to commence only in 1982,

— the design concept of aircraft 'A' was of the sixties and more sophisticated aircraft had been inducted in the Air Force of other countries and

— another aircraft 'L' was proposed to be inducted into the IAF.

As a result of the review, Ministry of Defence (Ministry) proposed curtailment of the production programme of the aircraft by 22.7 per cent and reduction in the number of proposed squadrons of aircraft 'A' by 20 per cent. Though the CCPA initially wanted the manufacture to be limited to only 30 per cent of 'P' number for which order had already been placed on the PSU, in June 1982 it approved the proposal for the licensed manufacture of 50.6 per cent of 'P' number of aircraft 'A' by the PSU at a total estimated cost of Rs. 1076.03 crores (Free Foreign Exchange : Rs. 768.28 crores). The reduction of 20 per cent in the proposed number of squadrons was also approved. The Government, accordingly sanctioned in August 1982 placement of a second order on the PSU for the manufacture and supply of additional 20.6 per cent of 'P' number of aircraft 'A'. The delivery schedule under the second order was as follows:

1986-87 — 10.6 per cent

1987-88 — 10 per cent

With the reduction in the manufacture programme of aircraft 'A' by 22.7 per cent, the quantum of engines to be manufactured indigenously was also decided to be curtailed by 34.4 per cent.

The curtailment in the planned production of aircraft 'A' and engine 'E' by the PSU has resulted in the licence and technical assistance fees totalling Rs. 49.74 crores at March 1985 estimates payable to the foreign manufacturers 'X' and 'Y' and capital and deferred revenue expenditure totalling Rs. 292.94 crores at March 1985 estimates incurred by the PSU being borne by 50.6 per cent of 'P' number of aircraft as against 73.3 per cent of 'P' number of aircraft originally planned. The extra financial burden to be borne by the present manufacture due to the curtailment would work out to Rs. 105.92 crores. The Ministry, however, stated in November 1986 that the amount of licence fee was paid for transfer of technology. This was a fixed amount which was generally not related to the number of aircraft manufactured. The capital and deferred revenue facilities were to be established regardless of the number of aircraft to be produced from raw material. While capital facilities would be made use of for subsequent project as well, a major portion of DRE facilities like test equipment, rigs and some of the assembly rigs would be transferred to the PSU when the overhaul of the aircraft was taken up.

The fact, however, remains that due to curtailment of the number of aircraft to be manufactured by the PSU, the fixed cost had to be borne by a fewer number of aircraft, thereby increasing the per capita cost of aircraft to be manufactured.

6. Even though the Government agreed in January 1981 for the import of additional sub-assemblies costing Rs. 4.4 crores to enable the PSU to adhere to the delivery schedule for 30 per cent of the aircraft, the PSU could deliver only 19.3 per cent aircraft upto March 1986. The expected and actual delivery of aircraft was as follows :

Year	Expected delivery (percentage)	Actual delivery (percentage)
1982-83	5.3	2.0
1983-84	10.7	2.7
1984-85	10.7	5.3
1985-86	3.3	9.3
Total . . .	30.0	19.3

The slippage in the delivery schedule was reviewed by the project board in August 1985 and the delivery schedule for the balance aircraft was revised as follows:

Year	Revised delivery schedule (percentage)	Aircraft already delivered (percentage)
Upto 1984-85	10.0	10.0
1985-86	9.3	9.3
1986-87	8.7	—
1987-88	7.3	—
1988-89	8.0	—
1989-90	7.3	—
Total	50.6	19.3

Thus, as per current estimates, the formation of the squadrons will be completed only in 1989-90 as against 1986-87 envisaged in the original project of 1979. The Ministry stated in November 1986 that the slippages in the delivery schedule were on account of problems experienced during flight trials with modified engine 'E' which called for the manufacturer to make certain modifications to the aircraft system. Further, there was delay in development of system 'G' by organisation 'M' and problems experienced during integration of system 'G' in aircraft 'A'. The Ministry also stated that some delay could also be attributed to the longer time taken in fabrication of indigenous tooling as well as re-work on tooling supplied by manufacturer. Besides, there was uncertainty about the total number of aircraft to be indigenously manufactured.

7. *Delay in development of Navigation system*

Aircraft 'A' supplied by manufacturer 'X' was fitted with navigation system 'H' of a vintage type, which had low reliability. It was, therefore, decided at the time of conclusion of the supply agreement that the aircraft would be re-equipped with an advanced navigation system 'G'. For the development of system 'G' and its integration with aircraft 'A' an organisation 'M' was set up by the Government in April 1980 and Rs. 23 crores were sanctioned for the purpose. Due to delay in selection of the required navigation system 'G', it was decided to incorporate system 'G' only in the aircraft to be produced by the PSU commencing from April 1984. The Government sanctioned in August 1983 structural modification, wiring and installation of system 'G' in 3 aircraft at an estimated cost of Rs. 2.61 crores. Of the aircraft delivered up to March 1986 by the PSU, 4 per cent of 'P' number of aircraft were equipped with navigation system 'H' and 15.3 per cent of 'P' number of aircraft were equipped with system 'G'. The Ministry stated in November 1986 that there were no immediate plans to replace system 'H' by system 'G' in the direct supply aircraft.

System 'H' was prone to frequent repairs. One of the main sub-assemblies of system 'H' costing Rs. 21.8 lakhs had to be prematurely withdrawn frequently from the aircraft for repairs. The total expenditure incurred on repair of the sub-assemblies abroad during the period July 1980 to October 1986 was Rs. 4.99 crores.

8. *Delay in fitment of Radar*

Aircraft 'A' supplied by manufacturer 'X' did not have the maritime strike capability. In order to add this capability, the agreement concluded with manufacturer 'X' in April 1979 for supply of aircraft 'A' had *inter alia* provided for necessary modification in 5.33 per cent aircraft and fitment of radar 'F' at a cost of Rs. 1.78 crores. While the modification was to be done in 5.33 per cent of the aircraft, radar 'F' was to be fitted only in 4 per cent aircraft. Radar 'F' corresponding to 4.66 per cent of the aircraft (for fitment in 4 per cent and reserve for 0.66 per cent of aircraft) were procured in February 1981 from another foreign firm 'Z' at a total cost of Rs. 3.03 crores. These radars carried warranty up to August 1984 and were stored with manufacturer 'X'. At the time of signing of supply agreement in April 1979, it was envisaged that the aircraft on which radar 'F' would be fitted would also be re-equipped with the advanced navigation system 'G'. But due to delay in selection of system 'G', it was decided in October 1979 to fit radar 'F' in the aircraft to be manufactured by PSU instead of the aircraft to be supplied by manufacturer 'X', as the former were to be equipped with navigation system 'G'. Simultaneously, Air HQ also proposed shifting of the point of fitment of radar 'F' from nose to pod of the aircraft to enhance the operational capability of aircraft. As manufacturer 'X' demanded an additional amount of Rs. 1.17 crores for integration of podded version of radar 'F', the Government did not approve the proposal. It was finally decided in November 1981 to embody the radars in the nose of indigenously manufactured aircraft. Manufacturer 'X' had accepted the responsibility for fitment of radar 'F' in the indigenously manufactured aircraft. For this purpose, an advance payment of Rs. 1.00 crore was made to manufacturer 'X' in April 1982.

The Ministry had entrusted in April 1983, the task of integration of radar 'F' with navigation system 'G' at a cost of Rs. 4.3 crores (FFE : Rs. 4 crores) to organisation 'M' which was associated with the development of navigation system 'G'. Due to the delay in selection of suitable navigation system 'G', the radar procured in February 1981 at a cost of Rs. 3.03 crores, for which installation charges of Rs. 1.00 crore had already been paid in April 1982 to the manufacturer 'X' would now be installed in aircraft 'A' to be manufactured during 1986-87 and 1987-88. Meanwhile, the warranty period for these radars had already expired in April 1984. The radars which were stored with the foreign manufacturer 'X' were transferred to the PSU in July 1985. A suitable maritime strike weapon system was to be selected and integrated with radar 'F'. Though aircraft 'A' equipped with radar 'F' would be delivered during 1986-87, it will have no strike capability as the weapon system had not been procured till November 1986.

The Ministry stated in November 1986 that the delay in the delivery of the radar till such time the integration of the new navigation system was completed would have resulted in un-acceptable liabilities on account of escalation. Further, it was not possible to cancel the radar procurement as it would have resulted in penalties and in the radar not being available when required. The serviceability of the radars procured in 1981 was tested immediately on transfer from manufacturer 'X', and again before installation in the aircraft. The Ministry further stated that the weapon system suitable for integration with the radar and the maritime aircraft has been identified and negotiations with the suppliers have been completed.

The supply agreement had also provided for training of 85 personnel of the IAF on the maintenance of equipment including radar 'F'. However, due to change in the programme of modification of aircraft and fitment of radar 'F', the training on radar 'F' was not included in the programme of training given by the foreign manufacturer. Subsequently an expenditure of Rs. 11.23 lakhs had been incurred towards maintenance training on radar 'F' imparted to the IAF personnel by firm 'Z'. The Ministry stated in November 1986 that even if the training on maintenance of radar had been undertaken in 1981-82, it would not have been of much use and it would have been necessary later either to train the additional personnel or to undertake refresher course subsequently.

9. *Induction of indigenous aircraft 'A'*

Aircraft 'A' were to be stationed at stations 'S' and 'T' after their induction. While the delivery of indigenous aircraft manufactured by PSU was to commence in 1982-83, the civil works required for their induction at station 'T', were initiated only in December 1980. However, due to financial constraints the works were sanctioned by the Government only in March 1984 at an estimated cost of Rs. 4.73 crores. The works services were still in progress and were due to be completed by April 1987. Some of the important works yet to be completed were industrial shops, special internal electrification and staff quarters.

The indigenous aircraft were positioned in squadron 'N' at Station 'T' from August 1985. The establishment for the squadron was, however, posted in January 1985 itself. Due to non-completion of essential shop facilities aircraft 'A' stationed at 'T' were being sent to Station 'S' for some essential repairs.

The Ministry stated in November 1986 that due to financial constraints the case could not be processed. However, the delay in sanction and completion of the work services at Station 'T' has not resulted in any extra expenditure. The Ministry further stated that the main industrial shops were likely to be completed by November 1986. During the interim period aircraft used to be sent to Station 'S' for their periodical second line servicing which had since been discontinued.

10. *Installation of simulator*

The Government also concluded a contract with foreign firm 'Z' in December 1980 for the supply of 2 simulators for aircraft 'A' to be delivered by January 1983 and June 1983. The first simulator was received at Station 'S' and installed in July 1984 and the second was received at station 'T' in July 1985 and installed in September 1985. Thus, while aircraft 'A' were inducted into service at Station 'S' in 1980 the simulator at Station 'S' was commissioned only in July 1984 and simulator was not available for training of pilots for a period of over 3 years. The Ministry stated in November 1986 that even if the simulator had been available from 1980 it would still have been necessary to send pilots abroad for conversion training as simulator training was not a complete substitute for cockpit flying.

The facilities for the overhaul of the simulators have not been established in the country as according to the Air HQ such facilities will not be cost effective. It was, however, seen that the average serviceability of the simulator at Station 'T' was only 48.2 per cent, it being totally unserviceable during December 1985 and March 1986.

11. *Establishment of overhaul facilities*

The PSU was also entrusted with the responsibility for repair/overhaul of rotables for aircraft 'A'. In 1981, Air HQ identified only 292 rotables of aircraft 'A' to be repaired |overhauled by the PSU. Of these 255 rotables were assigned to overhaul division of the PSU. Out of 255 rotables of aircraft 'A' repair facility for 72 rotables had been established by November 1986. Total expenditure incurred till October 1986 on repair of aircraft rotables abroad amounted to Rs. 7.85 crores.

12. *Under-utilisation of an equipment*

One of the ground equipment supplied by manufacturer 'X' under the supply agreement of April 1979 was an equipment 'K', which was meant to reduce the cock-pit temperature to a comfortable level before the pilot gets into the cockpit and also to cool the special avionics system of the aircraft. Based on the requirements projected by the users, the technical details and specifications for equipment 'K' were exclusively designed by firm 'X' for the IAF and were approved by the users. 8 numbers of equipment 'K' costing Rs. 40.36 lakhs were received by IAF during April 1982 to July 1983.

Performance trials in July 1982 and January 1983 after receipt of the equipment revealed that it was technically unsuitable from user's angle due to design snags and due to the operational and logistic problems. The use of equipment 'K' was, therefore, restricted and the average annual rate of utilisation was 36 hours per equipment as against the designed capacity of 600 hours per annum. The Ministry stated in November 1986 that even though the equipment were designed to IAF specification certain shortcomings were noticed during their use which were projected to the manufacturer and rectified without any extra cost. The under-utilisation of the equipment was not due to design snags but due to less flying task during peace time in summer. The Ministry further stated that none of the constraints would be effective during operations when these equipment would have to be used. Thus, equipment 'K' procured at a cost of Rs. 40.36 lakhs was put to negligible use due to operational and logistic problems.

13. *Summing up*

The main points brought out are summed up as follows :

—Even though under the original plan 73.3 per cent of 'P' number of aircraft required for 'Q' number of squadrons were to be manufactured by PSU under licence with foreign manufacturer 'X', the number of aircraft to be manufactured by PSU was reduced to 50.6 per cent of 'P' number after a review in October 1981. The reduction was mainly on the ground that the design philosophy of the aircraft was of the sixties, other countries had inducted new generation aircraft and the foreign manufacturer of aircraft 'A' had themselves planned stoppage of production of the aircraft in 1982, even before the first indigenous aircraft was to be assembled by the PSU.

— The curtailment in the manufacturing programme resulted in an extra financial burden of Rs. 105.92 crores to be borne by the present manufacturer due to the capital and DRE on infrastructure and licence| technical assistance fee payable to the foreign manufacturer being borne by lesser number of aircraft. According to the Ministry capital facilities would be made use of for subsequent projects as well and a major portion of DRE facilities would be transferred to the PSU when the overhaul of aircraft 'A' was taken up.

— Against the expected delivery of 30 per cent aircraft by 1985-86, the PSU had delivered only 19.3 per cent aircraft, despite the Government agreeing to an additional expenditure of Rs. 4.4 crores for import of additional sub-assemblies to avoid slippages in delivery schedule of the aircraft.

— Due to delays in selection and development of navigation system 'G', 26.7 per cent aircraft supplied by manufacturer 'X' as well as 4 per cent supplied by the PSU were equipped with system 'H' which was of a vintage type and was prone to frequent repairs. Expenditure on repair abroad of system 'H' amounted to Rs. 4.99 crores up to October 1986.

— Due to delay in selection of the navigation system, radar 'F' procured in February 1981 at a cost of Rs. 3.03 crores could not be installed in aircraft 'A' supplied by manufacturer 'X' as planned. The radar 'F' is now planned to be fitted in indigenous aircraft 'A' to be manufactured by the PSU during 1986-87 and 1987-88. Meanwhile, the warranty period of radar 'F' had expired in August 1984. The charges amounting to Rs. 1.00 crore for modification of aircraft and fitment of radar 'F' had already been paid to manufacturer 'X' in April 1982.

— The weapon system to be integrated with radar 'F' had not been procured till November 1986 in the absence of which the aircraft 'A' equipped with radar 'F' which are expected to be delivered in 1986-87 would not have maritime strike capability.

— Because of the decision to fit radar 'F' in aircraft to be manufactured by the PSU instead of in the aircraft to be supplied by manufacturer 'X', necessary training in radar 'F' which was the responsibility of manufacturer 'X' could not be imparted to IAF personnel. The training in radar 'F' had to be arranged to the IAF personnel later through another firm at an extra cost of Rs. 11.23 lakhs.

— Works services for induction of indigenous aircraft was initiated in 1980 but sanction was accorded only in 1984 and the works services were due to be completed by April 1987. Due to the non-setting up of some shops because of non-completion of works services, aircraft had to be sent from station 'T' to 'S' for periodical second line servicing.

— Though aircraft 'A' supplied by manufacturer 'X' were inducted into service from 1980, its simulator was installed only in 1984 and the simulator for the aircraft manufactured by the PSU was installed only in 1985. Thus, simulators were not available for over three years period for training of pilots.

— The PSU which was responsible for repair| overhaul of rotables of aircraft 'A' had established repair facilities for only 72 out of 255 rotables. The inadequate repair facilities resulted in rotables being sent abroad for repairs at a cost of Rs. 7.85 crores till October 1986.

— Ground equipment 'K' specially designed for the IAF and procured during the period April 1982 and July 1983 at a cost of

Rs. 40.36 lakhs were found to be technically unsuitable for operational use and their utilisation was negligible due to operational and logistic problems.

36. Review of working of Equipment Depots

1. *Introduction*

1.1 The Indian Air Force (IAF) has 8 Equipment Depots (EDs) which are bulk stock holding depots, primarily responsible for receipt, issue, storage, maintenance and accounting of specified types of airframes, aero-engines, equipment, connected spares and rotables, signal and electrical equipment and other ordnance and clothing equipment as may be assigned to each depot. The EDs provide logistic support to specified IAF units, Base Repair Depots (BRDs) and two public sector undertakings (PSU) entrusted with the manufacture and/or repair/overhaul of specific aircraft and aero-engines.

1.2 The inventory of the EDs is built up and maintained on the basis of periodical provisioning reviews carried out centrally and locally, based on averages of past consumptions and projected annual tasks of flying effort or repair/overhaul of airframe/engines and equipment.

1.3 A review was conducted of the performance of 8 EDs as regards demand satisfaction achieved, inventory holdings, surplus and non-moving stores held, outstanding claims and loans etc. Main points noticed in audit are contained in the paragraphs which follow.

2. *Demand satisfaction*

2.1 Demands placed on the EDs are classified as Aircraft on ground (AOG), urgent or normal, depending on the nature of demand and the priority to be given in compliance. Demands for stores/spares required for making aircraft and radars operational or which affected the serviceability of communication systems are classified as AOG demands. Demands for spares for want of which servicing of aircraft and allied systems will be held up or aircraft on ground will arise or have a bearing on operational efficiency are treated as urgent demands for speedy compliance. Other demands are treated as normal. The demand satisfaction achieved by 6 EDs in respect of AOG, urgent and normal demands during 1981-82 to 1985-86 was as shown below :

Demand satisfaction achieved by EDs (in percentage)

EDs	1981-82	1982-83	1983-84	1984-85	1985-86	Average
AOG Demand						
'SS'	53	52	48	54	56	53
'TT'	57	54	52	55	57	55
'UU'	58	55	47	48	50	52
'VV'	100	94	87	100	94	95
'YY'	88	75	79	74	90	81
'ZZ'	100	100	100	100	NO demand	100
Urgent Demand						
'SS'	57	75	63	71	57	65
'TT'	27	37	39	54	50	41
'UU'	56	61	45	54	60	55
'VV'	88	78	60	83	40	70
'YY'	80	84	89	94	81	86
'ZZ'	94	95	100	100	No. demand	97
Normal Demand						
'SS'	32	44	55	56	62	50
'TT'	28	30	31	35	34	32
'UU'	43	45	50	49	51	48
'VV'	99	100	98	94	33	85
'YY'	77	96	97	98	98	93
'ZZ'	72	90	100	100	No. demand	91

2.2 In three EDs 'SS', 'TT' & 'UU' which are responsible largely for meeting the recurring requirements of spares and equipment of user wings and squadrons, the demand satisfaction achieved averaged about 50 per cent while the EDs 'VV', 'YY' and 'ZZ' stocking spares for specified manufacturing/repair agencies performed better. A further examination of demand satisfaction aircraft-wise indicated that the demand satisfaction was very low for the following aircraft :

(in percentage)

Aircraft	1981-82	1982-83	1983-84	1984-85
'A'	48	36	30	41
'G'	44	28	37	59
'J'	60	35	36	75
'O'	42	25	20	22
P(i) & (ii)	34	40	43	39
W(Weapon system)	15	22	29	22

2.3 As on 31st March 1985 there were 3,836 AOG demands pending pertaining to 670 aircraft out of which 2,004 demands were pending for more than 3 months as shown below :

Months for which pending	Number of AOG demands outstanding
3 to 6	923
6 to 9	425
9 to 12	230
More than one year	426
Total	2,004

2.4 The number of aircraft actually grounded as on 31st March 1985 as a result of pending AOG demands was 219. According to the Ministry of Defence (Ministry), 5,560 AOG demands were outstanding as on 31st March 1986 which had resulted in 325 aircraft remaining on ground.

2.5 An analysis of the pending AOG demands as on 31st March 1985 showed that in respect of aircraft 'J', 'P' (ii) and 'Z' (ii) over 20 per cent of the demands were pending for over one year as per details below :

Sl. No.	Aircraft	Total No. of AOG demands		AOG demands outstanding for more than one year	
		Pending	No. of aircraft affected	No. of demands	No. of aircraft affected
1	2	3	4	5	6
1.	Z(ii)	320	47	67	13
2.	P(ii)	699	149	155	N.A.
3.	J	373	51	115	17

More than 75.83 per cent of the outstanding AOG demands pertained to aircraft 'G'(1,094), 'P'(ii)(699), 'Z'(i)(375), 'J'(373) and 'P'(i)(368).

2.6 The Ministry stated in November 1986 that the major reasons for low percentage of demand satisfaction achieved by EDs were :

- closure of production lines of some of the aircraft/weapon systems in their country of origin,
- initial non-supply of Depot packs for some of the weapon systems purchased from abroad,
- slippages in production by the PSU.

3. *Poor serviceability of aircraft due to inadequate logistic support*

3.1 Poor demand satisfaction affected the serviceability of aircraft. Test check of the records of nine squadrons revealed that due to poor logistic support, the serviceability of some of the aircraft was poor as shown below :

Squadron	Aircraft	Average percentage of serviceability of aircraft to the unit strength during		
		1982-83	1983-84	1984-85
'BB'	'R'	40	35	28
'CC'	'R'	22	32	35
'DD'	'A'A	36	45	48
'DD'	'C'	43	45	47
'EE'	'G'	55	53	53
'FF'	'G'	47	49	54
'GG'	'G'	47	54	51
'HH'	'G'	43	52	54
'II'	'O'	53	60	63
'JJ'	'Q'	58	56	53

4. *Depot inventory and over stocking*

4.1 Under the existing orders of the Government all spares of aircraft and major ground equipment which have been withdrawn from service are to be treated as inactive stores and are to be put for disposal by competent authority. Similarly, all spares pertaining to current aircraft and major ground and signal installations with declining Unit Establishments (UEs) for which there had been no issues or limited issues for over 3 years were to be treated as inactive stores and quantities in excess of the assessed requirement for 15 years were to be put up for approval by competent authorities for disposal. Pending their disposal no inspections were to be carried out and any subsequent changes in their condition were also not to be treated as loss.

4.2 As on 31st March 1986 the EDs were holding large stocks of spares and equipment, for which there were no transactions or had limited transactions in the previous 3 years as indicated below :

Name of ED	Total No. of items held	No. of non-moving items	Percentage of non-moving items	Money value of non-moving items
				(Rs. in crores)
'SS'	58,359	13,917	24	10.39
'TT'	1,12,054	10,991	10	0.02
'UU'	2,32,000	32,158	14	21.02
'VV'	51,584	44,057	85	7.00*
'YY'	85,200	37,510	44	2.47
'ZZ'	10,743	3,256	30	1.46

*Does not include value of aero-engines.

4.3 Of the Rs. 21.02 crores worth of non-moving stores held by ED 'UU' Rs. 11.18 crores worth of stores related to signal equipment and another Rs. 9.84 crores to technical and safety equipment and spares of aircraft 'K' which had been phased out in March 1984. The ED had already identified that spares valued at Rs. 1.91 crores in respect of 10 vocab sections of aircraft and engines had no issue at all for over 15 years.

4.4 44 per cent of the stock held by ED 'YY' was of non-moving items which had no issues or few issues for over 3 years. Besides, ED 'YY' was also holding stock valuing at Rs. 9.63 crores of spares of engines of aircraft 'I', the overhaul of which had been stopped with effect from April 1984. The under-utilisation of the repair facility created for the engines and the excess provisioning of spares for these engines were mentioned in Para 47(B) of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1975-76. In addition the ED was also holding as on 31st March 1985 repairable engines and other equipment relating to aircraft 'I' valued at Rs. 11.06 crores requiring disposal action.

4.5 While the majority of the non-moving items held by ED 'SS' related to armament stores, the depot also held overhaul spares of specialist vehicles which were seldom issued. These included spares of the value of Rs. 33.70 lakhs procured for the overhaul of a mechanical vehicle 'Y' exclusively used by IAF which were transferred by the Army prior to July 1978 to ED 'SS' consequent on the transfer of responsibility for the overhaul of these vehicles to IAF. Out of the stores transferred, there were no issues since transfer in respect of 49 items valued at Rs. 11.05 lakhs and very few issues in respect of 26 other items valued at Rs. 7.66 lakhs ever since the transfer. No action has been taken to assess the surpluses held or to examine their alternative utilisation. The Ministry stated in November 1986 that the spares would be required for the overhaul of vehicle 'Y' which is still in service.

4.6 ED 'VV' had declared inactive stores (held at a BRD) partly relating to aircraft 'B' which were withdrawn from service in April 1983. Out of 5,297 items of spares of aircraft 'B' reported surplus in August 1980, 2,901 items valuing Rs. 24.78 lakhs had been accepted by Air Headquarters (HQ) for disposal. Tenders for disposal had been invited in September 1986 by the Metal Scrap Trading Corporation (MSTC) and had not been accepted till November 1986.

4.7 ED 'WW' was holding 22 specialist vehicles costing Rs. 121.58 lakhs which had not been issued for over 3 to 10 years as on 31st October 1986 as under :

Over 3 years		Over 5 years		Over 10 years	
No.	Value (Rs. in lakhs)	No.	Value (Rs. in lakhs)	No.	Value (Rs. in lakhs)
7	34.26	11	80.14	4	7.18

4.8 The stock holding of ED 'ZZ' pertained to engine of aircraft 'X', which were withdrawn from service with effect from April 1984. The Ministry stated in November 1986 that 3,138 items of spares have been approved for disposal by MSTC.

5. *Surplus reports awaiting sanction for disposal*

5.1 Surplus reports raised by five EDs pertaining to stores of the cumulative value of Rs. 1,281.64 lakhs were awaiting sanction of the Government for disposal as on 31st October 1986 as follows :

Depot	No. of surplus reports pending	No. of items	Value (Rs. in lakhs)
'SS'	2	117	786.00
'UU'	56	13,132	201.42
'VV'	7	1,768	159.03
'YY'	1	113	1.95
'ZZ'	1	3,138	133.24
Total			1281.64

5.2 Stores valuing Rs. 161.24 lakhs in respect of ED 'UU' pertained to aircraft 'K' withdrawn from service in April 1984. Surplus reports raised by ED 'ZZ' related to engines of aircraft 'X' declared obsolete in April 1984.

6. *Delay in disposal of stores declared surplus*

6.1 Surplus stores of the cumulative value of Rs. 397.15 lakhs the disposal of which had been approved more than one year ago were awaiting disposal as on 31st October 1986 in 5 EDs. Their details are given below :

Depot	One to 3 years	Value (Rs. in lakhs)	4 to 5 years	Value (Rs. in lakhs)	Over 5 years	Value (Rs. in lakhs)
'SS'	Nil.	Nil.	Nil.	Nil.	38	57.56
'TT'	22	25.39	..	..	12	14.65
'VV'	Nil.	Nil.	Nil.	Nil.	2	124.23
'XX'	1	102.88	Nil.	Nil.	Nil.	Nil.
'YY'	343	1.36	5	2.20	151	68.88
Total		129.63		2.20		265.32

6.2 The stores awaiting disposal with the EDs 'SS', 'TT' and 'YY' were obsolete weapons and connected stores, which were declared for disposal as early as

October 1979. As the effort to dispose of the items through the Export Promotion Cell was not successful, Government approved in July 1985 their disposal through MSTC but disposal action was awaited in October 1986.

6.3 The surplus stores awaiting disposal with ED 'VV' were spares of aircraft 'R'. Though their disposal was approved by the Government in February 1980, their disposal through Director General of Supplies and Disposal (DGSD) was approved only in April 1982. Due to poor response received by DGSD both on inviting tenders and on conducting open auction, the Government decided in July 1985 to dispose of these as salvage through MSTC. Disposal action had not been completed by MSTC till October 1986.

6.4 The storage accommodation available in 4 EDs and space occupied by surplus stores as at the end of 31st October 1986 was as follows :

Name of ED	Total space available (square metres)	Space occupied by surplus stores (square metres)	Percentage of space occupied by surplus stores
'TT'	39,000	6,402	16.4
'UU'	72,856	9,005	12.3
'VV'.	5,524	2,790	50.5
'ZZ'	4,368	1,578	36.1

Thus the space occupied by non-moving and surplus stores was more than 10 per cent of the available space.

7. *Outstanding railway/shipping claims*

7.1 Claims totalling Rs. 28.59 lakhs were outstanding as on 31st August 1986 against Railway/Shipping agencies, the ED wise details being as follows :

Name of the ED	Outstanding claims as on 31st August, 1986	Value (Rs. in lakhs)
'SS'	3	0.29
'TT'	42	10.59
'UU'	7	0.74
'VV'	1	0.42
'YY'	3	0.50
'ZZ'	33	16.05
		28.59

7.2 Of the claims relating to ED 'TT' 39 were shipping claims involving Rs. 9.40 lakhs raised between 1967-68 and October 1986. In ED 'ZZ', 33 shipping claims for Rs. 16.05 lakhs raised between 1974 and 1983 for short landing of stores were pending settlement.

8. *Outstanding loans*

8.1 Stores/equipment sent abroad for repair or embodiment in aircraft or to the PSU for defect investigation, repair or overhaul are treated as loan issues and their return is watched through a Loan Register Stores/equipment of cumulative value of Rs. 21.11 lakhs given by the EDs on loan to foreign firms and Government were awaiting return for one to more than 5 years as on 31st March 1986 as shown below :

Name of the ED	loans outstanding for: One to 3 years	3 to 5 years	over 5 years	Total	value (Rs. in lakhs)
"TT"	—	—	1	1	0.31
'UU'	56	12	6	74	N.A.
'VV'	—	1	—	1	N.A.
'YY'	4	15	72	91	20.80

NA Not available.

8.2 3,166 items given on loan by the EDs to the PSU were awaiting return as on 31st March 1986 as shown below :

Name of the ED	No. of items outstanding	Value (Rs. in lakhs)
'UU'	800	Not known.
'VV'	2329	Not known.
'XX'	1	Not known.
'YY'	21	31.72
'ZZ'	15	Not known

9. *Unlinked foreign invoices*

9.1 Consignments received from abroad are accounted for as received and the correctness of the receipts are later verified with reference to the paid invoices received by the Controller of Defence Accounts (CDA). The number of vouchers remaining unlinked as on 31st October 1986 were as follows :

Name of the ED	Vouchers remaining unlinked for: 1 to 5 years		5 to 10 years		10 to 20 years		Total value of unlinked vouchers as on 31st October 1986 (Rs. in lakhs)
	No.	Value (Rs. in lakhs)	No.	Value (Rs. in lakhs)	No.	Value (Rs. in lakhs)	
'TT'	18	86.59	8	3.35	—	—	89.94
'UU'	91	NA	101	NA	—	—	NA
'VV'	150	NA	71	NA	—	—	27.83
'XX'	—	—	1	2.11	1	0.01	2.12

9.2 The Ministry stated in November 1986 that the delay in linking of invoices was due to :

— non endorsement of full despatch details in invoices, received through CDA;

— inadequate identification of details on packing cases; and

— inadequate and incorrect information endorsed on vouchers prepared by the ED for the imported stores.

10. *Losses*

10.1 The losses (both cash and stores) registered by the EDs during 1982-83 to 1984-85 were as follows :

Name of the ED	1982-83	1983-84 (Rs. in lakhs)	1984-85
Store loss			
'SS'	1.49	0.48	1.19
'TT'	7.55	24.76	13.70
'UU'	4.98	4.27	4.26
'VV'	2.45	3.82	1.28
'WW'	0.09	0.15	0.10
'XX'	1.00	0.22	1.06
'YY'	2.28	10.74	4.29
'ZZ'	0.02	0.05	0.08
Cash loss			
'SS'	Nil.	0.01	0.04
'TT'	0.77	0.74	6.62
'UU'	9.26	13.46	14.59
'VV'	0.33	0.92	2.66
'WW'	0.03	0.47	Nil.
'YY'	1.96	0.31	0.15
'ZZ'	2.26	0.13	5.01

10.2 The loss statements awaiting regularisation as on 31st March 1986 were as follows :

Name of ED	Store/Cash losses	
	Number	Value (Rs. in lakhs)
'SS'	25	0.97
'TT'	86	11.40
'UU'	58	7.55
'VV'	14	3.30
'WW'	2	0.17
'XX'	11	0.23
'YY'	170	9.50
'ZZ'	12	23.30
Total	378	56.42

10.3 The store losses of ED 'TT' included losses relating to leakage of imported aircraft oils during transit from embarkation point to the ED. The consignments of aircraft oils imported from abroad were being received by Embarkation HQ and despatched to ED 'TT' by rail. During 1980-81 to 1983-84, losses of oils aggregating to Rs. 14.62 lakhs were noticed. The loss was attributed to heavy leakage in transit between Embarkation HQ and ED 'TT' due to non-provisioning of battons and cushioning materials in the railway wagons, weak and flimsy material used for the containers and despatching of barrels in 2 to 4 tiers and in a haphazard manner. Air HQ stated in November 1982 that suitable instructions had been issued for avoiding recurrence of such losses. However, during subsequent years also there were further losses aggregating to Rs. 12.32 lakhs of oil during transit, the yearwise details being as follows :

Year	Quantity of oil lost (litres)	Amount of loss (Rs. in lakhs)
1983-84	28,002	5.59
1984-85	26,904	4.05
1985-86	23,900	2.68
		12.32

10.4 The Ministry stated in November 1986 that delay in regularisation of losses was due to :

— finalisation of court of inquiry which was time consuming,

— obtaining internal audit reports,

— reconciliation of difference of opinion between Executive Authority and internal audit regarding mode of regularisation.

11. *Delay in revision of establishments*

11.1 Air HQ had laid down in April 1977 the scale of equipment staff for the different operations in EDs. The requirement of staff was to be reviewed as and when the role and task of an ED was changed and the staff requirements were to be projected on the basis of scales laid down. The Air Force Standing Establishment Committee (AFSEC) was to review these projections and recommend the staff required for the sanction of the Government. Though the AFSEC had reviewed and recommended revised establishment for 4 EDs the sanction for the revised establishment had not been issued till end of October 1986. The details were as follows :

Name of ED	Establishment sanctioned	Approval for revised role of ED	Establishment reviewed by AFSEC in
'SS'	February 1973	September 1981	January 1985
'TT'	June 1974	N.A.	December 1983
'VV'	April 1972	August 1983	January 1985
'WW'	July 1979	September 1981	December 1983

11.2 The establishment sanctioned in July 1969 for ED 'YY' was being extended from time to time on *ad hoc* basis. The revision of the establishment initiated by the ED in June 1982 was yet to be finally considered by the AFSEC. However, the voucher transactions handled by the ED had declined from 95,429 numbers in 1979-80 to 72,646 in 1983-84 (there was a reduction of 23.8 per cent). The Ministry stated in November 1986 that the establishment sanctioned on *ad hoc* basis had been extended upto January 1987.

11.3 In ED 'VV' the number of items stocked had declined during the years 1979-80 to 1983-84 by 41.25 per cent. Though the policy page of the ED was revised in August 1983; the revision of establishment which was initiated in January 1984 and reviewed by AFSEC in January 1985 had not been considered by the Government till November 1986.

11.4 ED 'ZZ' was responsible for holding stock of overhaul spares of engines of aircraft 'X' and 'R' for issue to PSU which was responsible for the overhaul/repair of these aircraft held by IAF and Navy. The aircraft were withdrawn from service with effect from April 1984 and March 1986 respectively and the role of the ED was revised in March 1986 but no review of the establishment had been carried out and the staff numbering 162 were continuing with the ED. The expenditure on pay and allowances of the staff was :

1984-85	Rs. 18.83 lakhs
1985-86	Rs. 19.40 lakhs

The Ministry stated in November 1986 that a case for revision of the establishment was under consideration.

11.5 Statement of case for establishment sent by ED 'UU' in September 1986 was under consideration of the Air HQ. The Air HQ had also advised ED 'XX' in September 1986 to submit statement of case for revision of establishment. The Ministry stated in November 1986 that finalisation of revision of establishment was likely to take time.

12. *Other points of interest*

12.1 *Procurement of sub-standard nylon mosquito nets*

Cotton mosquito nets were standard items of issue for service personnel. Against two indents placed by Air HQ in February 1980 and August 1980 for supply of 1,71,800 nets mosquito universal khaki, 1,35,986 nylon mosquito nets costing Rs. 1.40 crores were received in ED 'SS' between September 1981 and April 1984 from an Ordnance Factory. 1,35,627 nets were issued to Air Force units and formations upto April 1984.

In accordance with the existing practice the factory packed bales were accepted in the ED 'SS', subjecting the consignment to a percentage check of quantity and quality and no discrepancies were reported by the ED. However, when the factory packed bales were issued to the IAF units and formations reports were received from 12 units by the ED of large holes or opening and darning or stitching of running lengths ranging from one inch to 10 inches.

On enquiries by Air HQ, the Ordnance Factory intimated in September 1983 that the manufacture of nylon mosquito nets was undertaken with the help of sources of supply advised by the Defence Research and Development Organisation (DRDO) which had developed the new item. The factory also stated that on receipt of supplies of nylon netting from the trade, the same was observed as having holes and darned portions but the material was accepted by the factory after imposing appropriate price reduction in consultation with the DRDO and the Chief Inspector of Textiles and Clothing and the manufacture of nets was undertaken.

On the advice of Air HQ in August 1983 the units were advised by the ED not to raise any discrepancy reports in view of the acute shortage of the item but were directed to assess the revised life and where repairs were significant the change of category from new to used stores be regularised by raising necessary loss statements.

As user units were instructed not to raise any discrepancy reports on the condition of the nets received, the extent of sub-standard nets supplied and the consequent loss could not be ascertained.

12.2 *Disposal of Metal Content of ammunition demolished*

ED 'XX' which was responsible for demolition of obsolete and unwanted explosive stores had upto 1977-78 been collecting metal scrap from demolition ground and transferring it to Army Salvage Depot for disposal. The weight of metal contents of ammunition demolished and the scrap collected during the period 1973-74 to 1977-78 were as follows :

Period	Weights of metal content in stores demolished (In Tonnes)	Actual quantity collected
1973-74	478.097	92.458
1974-75	692.253	221.551
1975-76	70.731	291.090
1976-77	110.921	15.000
1977-78	182.817	123.180
	1,534.819	743.279

In April 1975 Government approved auctioning of rights for collection of metal scrap. The detailed instructions for implementing the sanction were, however, issued by Air HQ in July 1977 and revised procedure was given effect to by the ED from April 1978. The rights for collection, possession and disposal of iron scrap from the specified area were auctioned from April 1978 but there was no provision for weighment of the scrap collected.

In December 1981, the HQ Maintenance Command issued instructions for inclusion of appropriate clause in the notices for auction and the memorandum of agreement for charging the reserve price for the metal scrap collected over and above the quantity indicated in the notice for auction. However, since the ED did not have bulk weighing facilities, agreements concluded during 1982-83 to 1984-85 provided for the scrap to be loaded with the help of boxes of specified size made available by the ED and the total weight of metal scrap removed to be arrived at by finding the weight of one loaded box and multiplying the number of boxes loaded by the unit weight. The actual tonnage of metal content of ammunition demolished each year from 1978-79 to 1984-85, the quantity of scrap estimated as per the auction notice and the bid obtained are given in the statement below :

Period	Weight of metal content of demolished stores (in tonnes)	Quantity of metal scrap indicated in the auction notice (in tonnes)		Amount of bid money collected (Rs. in lakhs)
		Ferrous	*Brass*	
1978-79	173.27	35	—	0.53
1979-80	123.72	30	—	3.01
1980-81	31.78	45	—	2.41
1981-82	43.47	75	6	3.08
1982-83	30.92	100	6	1.97
1983-84	41.38	30	2	0.48
1984-85	60.06	30	5	0.78
1985-86	155.50	50	6	N.A.

Even though the ED had sent proposals in April 1982 for procurement of a weighing machine, it had not been procured till November 1986 and the Ministry stated that the proposal had been misplaced.

Thus it would be seen that :

(i) The estimated quantities of the metal content of scrap indicated in the auction notices for 1978-79 and 1979-80 which were only 20.2 per cent and 24.2 per cent of weight of metal content of stores demolished were grossly less than the average of 48.4 per cent recovered during 1973-74 to 1977-78.

(ii) Even though the scrap had brass also in the metal content, the auction notices issued during 1978-79 to 1980-81 indicated only iron scrap and no account was kept of the brass recovered.

12.3 *Non-issue of teleprinters procured as urgent priority requirement*

Air HQ placed 3 purchase orders (one each in September 1982, October 1982 and December 1983) on a PSU for the supply of 443 teleprinters in all at a cost of Rs. 61.78 lakhs. The teleprinters were received in ED 'UU' between May 1983 and November 1985. The position of receipts, issues and balance as at the end of August 1986 was as follows :

Year	Quantity received by ED	Quantity issued to units	Balance quantity held by ED at the end of the period
1983-84	157	8	149
1984-85	67	63	153
1985-86	219	31	341
1986-87 (Upto August 1986)	—	56	285

After the matter was taken up by Audit, 39 teleprinters were issued to units and 32 more have been allotted for issue. At the end of August 1986, the ED was holding a stock of 285 teleprinters and this was despite the fact that there were demands for 171 teleprinters pending which included demands of AOG and operational requirement priority. The Ministry stated in November 1986 that the issues were delayed due to delay in working out the net unit deficiencies.

12.4 *Over provisioning of spares for aircraft 'T'*

ED 'VV' is the stock holding depot for the spares of aircraft 'T' which is in IAF service for more than 35 years. The PSU, the repair agency for the aircraft, had been expressing difficulty in meeting the repair tasks assigned to them due to non-availability of spares. No repair task for the aircraft was issued beyond 1982-83. In September 1983, the Government approved the withdrawal of 5 specific aircraft 'T' from service and ordered disposal action. These aircraft had not been disposed of till October 1986. A surplus report in respect of one more aircraft 'T' raised by ED 'VV' was pending sanction in October 1986. Another serviceable aircraft was also lying without being put to use at ED 'VV' since its receipt in the ED in December 1984. Meanwhile, the engines of the two aircraft held in ED were being inhibited during periodical servicing incurring recurring expenditure of Rs. 0.10 lakh per annum.

On the basis of a provisioning review initiated by Air HQ in 1977 of the requirtment of spares beyond December 1978, an indent was floated on Supply Wing of an Indian Mission (Supply Wing) abroad in February 1978 for spares required for 26 aircraft overhauls seeking delivery by December 1978. Supply order was placed in August 1978 as amended in December 1978 and spares valuing Rs. 4.78 lakhs covering 127 items were received in ED 'VV' between August 1979 and October 1981. It was, however, seen in Audit that only 4 aircraft were overhauled till 1982-83 and stores worth Rs. 4.57 lakhs i.e. 95.60 per cent of the procurement had not been utilised.

On the basis of another provisioning review conducted in March 1979, another indent was placed in February 1980 on the Supply Wing abroad for procurement of spares for 21 aircraft overhauls for delivery by February 1981. Certain items were contracted in July 1980 and the remaining items were contracted in November 1980 after Air HQ reduced the requirements to cover only 13 overhauls as a result of a special review for the period upto March 1984. Stores costing Rs. 3.32 lakhs were procured between July 1981 and December 1983 against these indents but only 2 aircraft overhauls were actually undertaken during 1982-83 and 1983-84, with the result that stores valued at Rs. 2.33 lakhs constituting 70 per cent of the procurement could not be utilised by the ED. The provisioning review initiated in 1977 included 7 numbers of an item 'L' but the Air HQ reduced the quantity to 2 in the indent sent in February 1978 and the supply order placed in December 1978 also included 2 numbers of the item at a cost of £ 1,000. The item was not supplied under the contract. A fresh indent was raised subsequently in November 1979 for 5 numbers of the item and a purchase order was placed by the Supply Wing in May 1980 for the supply of 5 numbers of the item at a cost of £ 2,128 to be delivered by November 1981. Though the Air HQ sent a signal in January 1982 for the supply order to be cancelled due to sudden decrease in task, the order could not be cancelled and supplies were received in 1982-83 and 1983-84 and the item was lying unused in the ED. The failure to enforce delivery of the item under the supply order of December 1978 resulted in avoidable extra expenditure of Rs. 1.03 lakhs and the failure to get the second supply order cancelled resulted in stores costing Rs. 1.98 lakhs lying unutilised in ED.

The Ministry stated in November 1986 that 13 aircraft 'T' were in service, all of which have since been withdrawn and ED 'VV' was still holding spares for aircraft 'T'.

13. Summing up :

The main points brought out are :

— Demand satisfaction in 3 EDs responsible for meeting the demands of user wings and squadrons averaged about 50 per cent during 1981-82 to 1985-86.

— Demand satisfaction was very low in respect of aircraft 'A', 'G', 'J', 'O', 'P'(i), 'P'(ii) and weapon system.

— As on 31st March 1986 there were 5,560 AOG demands which had not been fulfilled and resulted in grounding of 325 aircraft.

— The poor demand satisfaction of spares was attributed by the Ministry to closure of production lines of some of the aircraft/weapon systems, initial non-supply of Depot packs for some of the weapon systems purchased from abroad and slippages in production by the PSU.

— 75.83 per cent of the pending AOG demands pertained to aircraft 'G', 'J', 'P' (i) and 'P' (ii) and 'Z'(i). There were 337 demands pending for more than one year.

— The non-satisfaction of demands by EDs affected the serviceability of aircraft with the squadrons and wings. Test check showed that serviceability in 10 squadrons ranged from 22 to 63 per cent only.

— 35 per cent of the items held by 6 EDs were non-moving items, the monetary value of which aggregated to Rs. 42.36 crores.

— ED 'UU' had Rs. 11.18 crores worth of stores related to signal equipment and Rs. 9.84 crores worth of stores related to technical and safety equipment and spares of aircraft 'K', which had been phased out in March 1984. Disposal review of the stores was yet to be carried out by the ED.

— ED 'YY' had stores worth Rs. 9.63 crores relating to aircraft 'I', the overhaul of which had been stopped with effect from April

1984. The ED had also repairable engines and other equipment relating to aircraft 'I' valued at Rs. 11.06 crores awaiting disposal action.

— 22 specialist vehicles valued at Rs. 121.58 lakhs held by ED 'WW' had not been issued for use for 3 to over 10 years.

— Surplus reports of 5 EDs relating to stores of the cumulative value of Rs. 12.82 crores were awaiting sanction of the Government for disposal.

— Stores of the cumulative value of Rs. 397.15 lakhs were lying in 5 EDs awaiting disposal action though sanction for their disposal was issued one to more than 5 years ago.

— Claims against Railways and shipping companies of the cumulative value of Rs. 28.59 lakhs were awaiting settlement.

— Stores/equipment of the cumulative value of Rs. 21.11 lakhs given on loan to foreign firms and Governments were awaiting return for one to more than 5 years.

— Stores losses of the cumulative value of Rs. 90.31 lakhs and cash losses of the cumulative value of Rs. 59.72 lakhs occurred during 1982-83 to 1984-85 in the 8 EDs.

— Loss statements of the cumulative value of Rs. 56.42 lakhs were awaiting regularisation in the 8 EDs.

— Transit losses of aircraft oils of the cumulative value of Rs. 26.94 lakhs were noticed in ED 'TT', which was attributed to non-provisioning of battons and cushioning materials in railway wagons and flimsy material used for containers.

— No review of establishment of ED 'YY' had been undertaken though the vouchers handled by the ED had declined from 95,429 in 1979-80 to 72,646 in 1983-84.

— In ED 'VV' though the establishment requirement was reviewed in January 1984 due to decline in items of stores held by 41.25 per cent during 1979-80 to 1983-84, Government sanction for the revised establishment had not been accorded upto November 1986.

— No review of establishment of ED 'ZZ' had been undertaken though aircraft 'X' and 'R', the spares of which are handled by the ED had been withdrawn from service from April 1984 and March 1986 respectively.

— The user units were advised by ED not to raise any discrepancy reports in respect of sub-standard nylon mosquito nets supplied to them, as a result of which the extent of sub-standard nets supplied and of the loss could not be ascertained.

— No proper arrangements had been made for weighment of metal content of demolished ammunition collected by contractors. There were wide fluctuations in metal content retrieved. No account of brass content retrieved from the demolished ammunition had been kept during 1978-79 to 1980-81.

— ED 'UU' was holding 285 teleprinters as at the end of August 1986, though 171 demands including AOG and IOR from user units were pending. 39 teleprinters were issued earlier after Audit pointed out the non-issue.

— Over provisioning of stores of the cumulative value of Rs. 8.88 lakhs pertaining to aircraft 'T' was noticed.

— 5 aircraft 'T' for the disposal of which approval was given by the Government in September 1983 were awaiting disposal. Approval for declaring one more aircraft 'T' as surplus was also awaited. Another serviceable aircraft was lying in the ED since December 1984 without being put to use.

— Though all the aircraft 'T' have been withdrawn from service, spares of the aircraft are still being held by the ED.

37. Under-utilisation of indigenous repair facilities for an aircraft—Avoidable expenditure of Rs. 1.47 crores

The contract for the supply of aircraft 'X' entered into by the Government with a foreign manufacturer in August 1971 had inter alia a clause for the supplier to provide assistance in setting up overhaul/repair facilities in India. Though the aircraft was received and inducted into service during 1972, sanction for setting up of repair facilities at a base repair depot (BRD) at a cost of Rs. 3.5 crores was accorded by the Government only in October 1976. The civil works estimated to cost Rs. 48.01 lakhs for the repair facility were sanctioned in June 1977; the cost was revised to Rs. 51.36 lakhs in March 1979.

The delay in the setting up of repair facilities resulting in airframes and engines of the aircraft being sent abroad for repairs at a total cost of Rs. 330.85 lakhs was commented upon in the Reports of the Comptroller and Auditor General of India, Union Government (Defence Services) for the years 1976-77 (Paragraph 6) and 1981-82 (Paragraph 43).

The repair facilities were set up and the overhaul line was commissioned during 1979-80, i.e. 8 years after the induction of the aircraft. A review of the performance of repair facilities created brings out the following interesting points:

(i) The repair facilities created were to cater for the overhaul/repair of 24 aircraft and 48 engines. Although the approved tasks were considerably less than the capacity created, even the approved tasks could not be achieved during the years 1980-81 to 1985-86 in respect of the engines vide figures given below:

Year	Installed capacity for repair/ overhaul of engines	Tasks allotted by Air HQ	Tasks achieved	Percentage of task achieved compared to Col. 2
1	2	3	4	5
1980-81 .	48	10	1	2.08
1981-82 .	48	15	14	29.17
1982-83 .	48	20	10	20.83
1983-84 .	48	18	22	45.83
1984-85 .	48	32	21	43.75
1985-86 .	48	35	35	72.91
Total .	288	130	103	35.76

Thus, as compared to the capacity created, the average overhaul achievement during 1980-81 to 1985-86 was only 35.76 per cent. As compared to the tasks allotted by the Air Headquarters (HQ) the average achievement was only 79 per cent for the same period.

(ii) Apart from the engines, there was also shortfall in the overhaul|repair of main gear box and air compressors during the year 1981-82 as shown below:

Items	Task allotted	Task achieved	Shortfall
Mai n gear box .	17	7	10
Air Compressor. .	23	3	20

(iii) Due to shortfalls in overhaul|repair, there were accumulations of repairable engines and other items and these had to be got repaired by sending them to the foreign manufacturer, the expenditure incurred on the same being as follows:

When got overhauled/ repaired abroad	Items got overhauled/re-repaired abroad		Expenditure (Rs. in lakhs)
	Item	Qty.	
1982. . . .	Engine Main gear box Air compressor	4 10 20	45.30
1985. . . .	Engines	20	102.00

(iv) The shortfalls in achivement during 1980-81 and 1981-82 were attributed to:

(1) an equipment required to be provided in test beds, which was expected to be received in January 1980, being received only in February 1981 resulting in delay in the readying of the test bed and

(2) non-supply of group sets of spares by the manufacturer.

The Ministry of Defence (the Ministry) stated in September 1986 that though the BRD was established for a peak capacity to overhaul 24 aircraft and 48 engines, the target of overhaul of engines and other associated equipment could not be achieved for the following reasons:

(a) Shortage of spares: Indents were placed on the foreign manufacturer in time for spares and associated equipment required to complete the task but full range of spares was not supplied by the manufacturer in time.

(b) Shortage of manpower: The BRD was not sanctioned any new complement of staff for the repair of engines of aircraft 'X'. The manpower rendered surplus because of reduction in the task of another aircraft 'Y' was employed to undertake the task of aircraft 'X' but this manpower was not adequate to meet the task. The BRD had in 1982 projected a requirement of 184 engine trade technicians to meet the overhaul task of 40 engines. The additional manpower requirement of the BRD was examined in detail in 1984 by Air Force Standing Establishment Committee (AFSEC) which recommended in January 1985 a complement of 163 for the BRD. But additional posts could not be created in the BRD due to the ban on creation of additional posts. Against the recommended staff complement of 163, the staff actually employed by the BRD was as follows:

1981-82	52
1982-83	62
1983-84	74
1984-85	87
1985-86	107

The Ministry further stated that the reviews carried out by AFSEC revealed surplus manpower in another BRD in October 1985, by which time the engines had already been sent to the foreign manufacturer to meet operational commitments.

(v) Three types of spares ('A', 'B' and 'C') were indented by the BRD for the overhaul|repair of engines. Yearwise position of spares demanded by the BRD, contracted by the Air HQ and the actual supplies received from the foreign manufacturer was as follows:

Year	Group sets of spares demanded by BRD	Group sets of spares. contracted by Air HQ for supply	Group sets of spares supplied during 1985	1986
TYPE A				
1982-83 .	174	40	40	—
1983-84 .	141	60	30	30
1984-85 .	44	44	—	—
TYPE B				
1982-83 .	17	5	5	—
1983-84 .	14	6	—	6
1984-85 .	6	6	—	—
TYPE C				
1982-83 .	4	1	1	—
1983-84 .	3	2	—	2
1984-85 .	1	1	—	—
Total .	404	165	76	38

Thus, against the 404 group sets of spares indented during the period 1982-85, the Air HQ concluded contracts with the foreign suppliers for 165 group sets of spares and supplies of only 114 group sets were received upto September 1986. There were no supplies at all during 1982-84. The Ministry stated in September 1986 that the spares required for overhaul of engines were included in the indents of 1982-83 and subsequent years on the advice of the foreign manufacturer. The supplies were, however, received in June 1985 which adversely affected production during the period 1983-85.

(vi) There was shortage of engines because of the shortfall in completion of the allotted task by the BRD. During the year 1985, 18 aircraft were on ground for want of engines.

(vii) Due to inadequate maintenance support, the monthly utilisation rate of 45 hours originally prescribed for aircraft 'X' could not be achieved and was reduced by Air HQ in April 1982 to 27 hours. However, even the reduced rates could not be achieved and the utilisation rate achieved during the period 1980-81 to 1985-86 was only 21.7 hours per month.

The more important aspects brought out are summed up as follows :

— The aircraft 'X' was inducted into IAF service during 1972 but repair/overhaul facilities for the aircraft were commissioned only in 1979-80, 8 years after its induction.

— The average number of engines overhauled| repaired during 1980-81 to 1985-86 was 35.76 per cent only of the capacity created and 79 per cent of the tasks allotted by Air HQ.

— There were shortfalls in the overhaul|repair of gear box and air compressors also during 1981-82.

— Due to shortfalls in overhaul|repair by the BRD, engines and other parts had to be sent abroad during 1982 and 1985 for repair|overhaul at a cost of Rs. 147.30 lakhs.

— Shortfalls in repair|overhaul were attributed to shortage of manpower and non-supply of group sets of spares by the foreign manufacturer.

— Against 163 technical personnel recommended by AFSEC for repair of engines, the staff employed by BRD varied from 52 in 1981-82 to 107 in 1985-86.

— Against 404 group sets of spares for engines indented by the BRD during 1982-83 to 1984-85, Air HQ had contracted only for 165 and supplies had been received of only 114 group sets during 1985 and 1986. No supplies had been received in 1982-84.

— Due to inadequate maintenance support, the monthly utilisation rate per aircraft which was originally fixed at 45 hours was reduced to 27 hours in April 1982. The actual utilisation was only 21.7 hours during 1980-81 to 1985-86.

38. Delay in implementation of modernisation programme of meteorological facilities at airfields

In September 1977, Air Headquarters (HQ) prepared a plan for introduction of modern meteorological equipment at airfields with the object of:

(a) improving the facilities for observation of meteorological parameters at the flying stations and

(b) improving the facilities for analysing weather in order to provide more accurate weather briefing for operational flying in the Air Force.

2. These facilities were expected to promote optimum use of flying hours and thereby enhance the operational preparedness of the Air Force and also ensure

flying safety. It would also help in better utilisation of aircraft, proper training and reduction in accidents. Prior to this, meteorological observations specially the visibility and cloud base used to be made by visual estimation without the help of any meteorological instruments. The modernisation programme was proposed to be implemented in a phased manner. To start with, 15 stations were selected for providing these facilities under Priority-I during the Five Year Plan period of 1979-84 at a cost of Rs. 2.35 crores. The plan was approved in 1979. The cost was revised in March 1980 to Rs. 7.88 crores after taking into account the customs duty etc. The remaining stations were planned to be covered in subsequent plans.

3. Equipment 'S' and 'W' for measurement of visibility and cloud base were considered to be vital instruments in the context of aircraft operation and flight safety and were intended to be initially imported. Equipment 'S' and 'W' designed by a foreign firm 'KK' and marketed by its associate foreign firm 'LL' and already being used by the Indian Meteorological Department (IMD) were considered suitable for use in the Air Force.

4. Against the approved modernisation programme for 15 Air stations for the Five Year Plan period of 1979-84, the Ministry of Defence (Ministry) have accorded the following sanctions to cater for the requirements of 8 stations only till March 1986 :

Air Force Station	Date of sanction	Amount	Cost (excluding customs duty) of equipment 'S' and 'W' included in the sanctioned amount	Actual cost of procurement
			(Rs. in lakhs)	
'A' & 'B'	20th September 1979 (sanction amended on 2nd February 1980 and 16th August 1980)	86.00	22.70	46.15
'C', 'D' & 'E'	20th May 1981	128.58	31.20	83.10
'F', 'G' & 'H'	31st August 1981	128.58	31.20	Not procured

5. Indian Navy are having their own airfields. For 2 of their air stations 'J' and 'K', the Ministry also sanctioned in February 1982 procurement of 2 sets of equipment 'S' and 'W' at a cost of Rs. 40.15 lakhs (amended to 40.55 lakhs in March 1983) including Rs. 21.60 lakhs in Free Foreign Exchange (FFE) to meet Navy's operational requirements. This did not include provision for customs duty etc. which was payable on actual basis.

6. The position of procurement and installation of the equipment at the 10 stations (8 of Air Force and 2 of Navy) was as under:

(*a*) *Stations 'A' and 'B' (Air Force)* :

Against an indent placed by Air HQ in October 1979 for supply of equipment 'S' and 'W' required for stations 'A' and 'B', Supply Wing of an Indian Mission abroad (SW) concluded a contract with foreign firm 'LL' in May 1980 for 2 numbers each of equipment 'S' and 'W' with their spares for 2 years at a cost of 13,95,000.00 D. Kr. equivalent to Rs. 20.99 lakhs. The equipment was to be delivered by September 1980 and to be despatched by air.

The equipment 'S' and 'W' were received in India in September 1980. An expenditure of Rs. 1.64 lakhs was incurred towards airfreight and a sum of Rs. 23.52 lakhs was paid as customs duty. Installation of equipment 'S' and 'W' required major works services. These were sanctioned in November 1981 and May 1982 and completed in November 1984 at station 'A' and in November 1983 at station 'B' at a cost of Rs. 5.82 lakhs and Rs. 2.57 lakhs respectively. The equipment were installed at station 'A' in September 1984 and at station 'B' in August 1984. Thus equipment 'S' and 'W' procured at a cost of Rs. 46.15 lakhs and airlifted at a cost of Rs. 1.64 lakhs remained without use for more than 4 years at station 'A' and more than 3 years at station 'B'.

(b) *Stations 'C', 'D' and 'E' (Air Force)* :

While projecting their demand in October 1980 for stations 'C', 'D' and 'E'; Air HQ desired to procure the equipment from firm 'LL' for ensuring uniformity in maintenance, spares, servicing, inventory and training aspects . The Department of Electronics, however, advised Air HQ to procure equipment 'S' and 'W' from a Public Sector Undertaking (Undertaking) which had signed in June 1980 a 'Memo of Understanding' with firm 'LL' for the indigenous manufacture of equipment 'S' and 'W'. Accordingly, the Air HQ sent their indent in June 1981 to the Director General Supplies and Disposals (DGSD) for arranging supply from the Undertaking. The delivery was desired by December 1981. The DGSD concluded a contract with the Undertaking in February 1982 for supply of 3 numbers each of equipment 'S' and 'W' and 2 years' maintenance spares at a cost of Rs. 83.10 lakhs inclusive of customs duty of Rs. 38.57 lakhs on imported components. This involved an extra expenditure of Rs. 13.05 lakhs as compared to the cost of the equipment purchased from firm 'LL' for Stations 'A' & 'B'. The Ministry stated in November 1986 that the extra expenditure would work out to Rs. 4.48 lakhs only taking into account the element of escalation etc. However, the actual cost of 2 sets of equipment 'S' and 'W' contracted with firm 'KK' in January 1985 for IMD worked out to Rs. 19.73 lakhs only as against the cost of procurement in May 1980. Based on this, the extra expenditure for 3 sets of equipment 'S' and 'W' would work out to Rs. 14.94 lakhs.

The delivery of the equipment was to be made by August 1982. The contract also provided for guarantee|warranty for a period of 15 months from the date of despatch or 12 months from the date of acceptance of the item by the consignee, whichever was earlier. The items were supplied by the Undertaking during November 1983 to November 1985. The works services for station 'C' were sanctioned in February 1982 at a cost of Rs. 4.02 lakhs. These were completed in September 1983 at a cost of Rs. 3.98 lakhs. The equipment 'S' and 'W' installed at station 'C' worked for 2 months only after which they developed faults. The same were set right in April 1986.

The works services for station 'D' were sanctioned in June 1982 and completed in January 1985 at a cost of Rs. 6.12 lakhs. The equipment meant for station 'D' were found unserviceable at the time of installation. The items were repaired by the Undertaking in early 1986 and were under observation till April 1986. The equipment were made serviceable by the Undertaking only in June 1986.

The equipment at station 'E' were not installed till April 1986 due to change of site. The Undertaking completed the installation of equipment 'S' and 'W' in July 1986.

Thus 3 sets of equipment 'S' and 'W' procured at a cost of Rs. 83.10 lakhs for stations 'C', 'D' and 'E' were not put to use from the date of their receipt to June-July 1986.

(c) *Stations 'J' & 'K' (Navy)* :

Firm 'LL' had offered to supply 2 sets of equipment 'S' and 'W' alongwith their spares required by Indian Navy for their stations 'J' and 'K' at a cost of 13,95,000.00 D. Kr. equivalent to Rs. 20.99 lakhs i.e. the price charged from Air Force for the equipment for stations 'A' and 'B'. On the advice of Department of Electronics, the Naval HQ placed a supply order in April 1982 on the Undertaking for supply of 2 sets of equipment 'S' and 'W' at a total cost of Rs. 40.15 lakhs including Rs. 21.60 lakhs in FFE. The customs duty and Central Excise duty were also payable extra to the Undertaking. The procurement of the item through the Undertaking caused an extra expenditure of Rs. 19.16 lakhs to the State as compared to the cost of equipment purchased from firm 'LL'. Taking into account the cost of equipment 'S' and 'W' purchased for IMD in January 1985, the extra expenditure would work out to Rs. 20.42 lakhs. The equipment for station 'J' were received in April 1983 and the civil works therefor were completed in October 1985. However, the equipment could not be installed till April 1986 partly due to defective sub-systems and partly due to non-completion of civil works by the contractor due to heavy monsoon activity. The equipment meant for station 'K' were received and commissioned in July 1983. After a period of two months, equipment 'S' became unserviceable in September 1983 and equipment 'W' remained partially serviceable i.e. it became non-operational intermittently. Thus, equipment 'S' and 'W' procured in 1983 at a cost of Rs. 40.15 lakhs from the Undertaking for stations 'J' and 'K' were not installed|put to use till April 1986.

(d) *Stations 'F', 'G' & 'H' (Air Force)* :

In December 1982, Air HQ raised two indents on DGSD for supply of three sets of equipment 'S' and 'W' alongwith their spares for stations 'F', 'G' and 'H'. The items were required by March 1983. The DGSD could not progress the indents as the Undertaking had got some problems with their collaborators i.e. firm 'LL'.

The firm 'KK' had terminated their agreement with firm 'LL'. The firm 'LL' had also gone into liquidation. In August 1984, the Undertaking entered into a 'Memo of Understanding' with firm 'KK', the original manufacturer of items 'S' and 'W'. In July 1985, the firm 'KK' also terminated their agreement with the Undertaking for supply of equipment 'S' and 'W'. In February 1986, the Undertaking stated that firm 'KK' had since backed out from their obligation to supply completely tested parts to them as such local manufacture of the equipment 'S' and 'W' would not be possible. In a meeting held in March 1986 in the Ministry, it was brought out that the Department of Electronics intended to blacklist firm 'KK' and desired to locate alternative source of supply. In April 1986, Air HQ floated an enquiry to gather necessary literature on the various types of equipment in use in Meteorological offices abroad. Further procurement action was to be taken on technical evaluation of the information received and the cost implications are not known.

The Ministry stated in November 1986 that due to rapid advancement in electronics industry, the new equipment available in the world market in place of equipment 'S' and 'W' was of a much simpler and compact design and costs less than the original equipment procured by IAF in May 1980. The Ministry further added that a technical-cum-evaluation committee had been appointed to select suitable equipment for use in IAF in lieu of equipment 'S' and 'W'. Further action could be taken only after the recommendations of the committee are available and subject to certain assumptions coming true, the modernisation programme might be completed well before 1990.

General :

The maintenance support for 2 sets of equipment directly imported from firm 'LL' and 5 sets purchased through the Undertaking would not be available as the firm 'LL' had gone into liquidation and their principal, firm 'KK', have terminated their links with firm 'LL'.

The Ministry stated in November 1986 that two IAF Met officers had been trained in the maintenance of the equipment and therefore limited maintenance support was available with IAF. For serious maintenance problems, the engineers of the Undertaking could be called in and the spares required could be obtained from firm 'KK'. The Ministry also stated in November 1986 that the procurement of further sets of equipment 'S' and 'W' for the remaining 5 airfields has got stalled for the following reasons :

- the working of the sets indigenously procured was not upto the mark and there were lots of teething problems;
- no more indigenously manufactured sets were available after April 1983; and
- alternate sources for the equipment were yet to be identified.

Summing up :

The main points brought out are :

- The implementation of Air Force modernisation programme for meteorological facilities at 15 airfields, approved in 1979 for implementation during the plan period of 1979—84 was far behind schedule.

- Against the Air Force requirement for 15 airfields upto the end of March 1984 sanctions were issued for procurement of equipment 'S' and 'W' for 8 airfields and actual procurement was, however, done for 5 airfields only. For the remaining 10 airfields, no revised time schedule was prescribed till November 1986. Even the source from which the equipment is to be procured had not been identified till November 1986.
- Equipment 'S' and 'W' purchased for 5 airfields of the Air Force at a cost of Rs. 129.25 lakhs and an expenditure of Rs. 18.49 lakhs incurred on works services were not available for use within the plan period 1979—84 excepting at station 'A' where they were available for a short period of four months only during 1983-84.
- Equipment 'S' and 'W' purchased for two Naval airfields in 1983 at a cost of Rs. 40.15 lakhs on operational priority basis were not available for use till April 1986 excepting equipment 'S' for a short period of two months at station 'K' and intermittent use of equipment 'W' at station 'K'.
- There were considerable delays as shown below in installation|making operational the equipment purchased at a cost of Rs. 169.40 lakhs :

Station 'A'	: 4 years.
Station 'B'	: 3 years.
Station 'C'	: 2 to 3 years.
Station 'D'	: 3 years (equipment operational only in June 1986).
Station 'E'	: 3 years (operational only in July 1986)
Station 'J'	: 3 years } Item 'S' unserviceable and item 'W' is partially serviceable.
Station 'K'	: 3 years } Item 'S' unserviceable and item 'W' is partially serviceable.

- There was an extra expenditure of Rs. 32.21 lakhs on procurement of the equipment through the Undertaking. The equipment supplied by the Undertaking did not function well, there were lot of teething problems. Besides, the Undertaking also failed to establish indigenous-production line.
- The maintenance support for 2 sets of equipment directly imported from firm 'LL' and 5 sets purchased through the Undertaking was adversely affected as the firm 'LL' has gone into liquidation and their principal firm 'KK' have terminated their links with firm 'LL'.

— The failure of the Undertaking to meet their commitment for supply of the equipment for the three stations and non-identification of alternate sources for supply of equipment would delay the implementation of the modernisation plan for meteorological equipment. Out of the 15 air stations planned for modernisation by 1979—84, only 5 have modernised equipment by July 1986.

39. Development and manufacture of a weapon carriage system

A Directorate of the Research and Development Wing decided in June 1970 to commission a Defence Research and Development Establishment (DRDE) to undertake a project to develop a reusable weapon carriage system (system 'Y') for the Air Force planes for carrying and firing an indigenously manufactured weapon 'X'. The cost of the project which was initially estimated in June 1970 at Rs. 3.69 lakhs was subsequently revised in January 1971 to Rs. 17.60 lakhs and again in April 1979 to Rs. 26.60 lakhs.

As per the recommendations made in January 1975 by a weapon study group an Air Staff Requirement (ASR) for system 'Y' was issued in July 1975 to be introduced within a time frame of 18 months after successful completion of trials.

A supply order, on cost plus 10 per cent profit basis was placed in December 1971 by the DRDE on a public sector undertaking (undertaking) for fabrication of 10 prototype sets of system 'Y', which was subsequently reduced to 8 prototypes. The first prototype was delivered by the undertaking in October 1973 as against the delivery schedule of August 1972 indicated in the supply order and two more prototypes of the system without nose cones and retaining cone castings were delivered in the last quarter of 1974. The incomplete prototypes were subjected to flight evaluation trials with imported nose and retaining cones. Various tests|flight trials including user evaluation trials as applicable to imported aircraft were completed satisfactorily during 1973 to 1977.

Against the 8 sets of prototype of system 'Y' ordered, the undertaking supplied 4 complete and 4 incomplete sets including retaining cones and consumable items at a cost of Rs. 21.50 lakhs. While the 4 complete sets were used in trials, the incomplete sets, according to DRDE, would be utilised for flight evaluation trials, as required, with nose cones to be delivered from the production batch. After incurring a total expenditure of Rs. 22.72 lakhs including Rs. 0.32 lakh in foreign exchange, the project was formally closed in Febraury 1981. In its closure report the DRDE had recommended introduction of system 'Y' into the service.

DRDE on its own undertook the responsibility for establishing production of critical components like nose cones and retaining cones required for system 'Y' even though the same was the responsibility of the undertaking and placed an indent in May 1977 for import of a LPDC machine on the Supply Wing of an Indian Mission abroad (SW) and the same was imported in July 1979 at a cost of £ 58,980.24. A low presssure die for development of nose cone assembly was also imported at an additional cost of £ 60,800. This machine was airlifed in November 1981 incurring additional expenditure on airlift. Inspite of specific request made repeatedly by the DRDE to the SW to include a guarantee clause for diamensional accuracy of casting as per technical specifications for the LPDC the same was not included in the contract for supply of the machine. Though the supplying firm had initially agreed to produce twenty numbers of casting conforming to specifications in July 1981 the firm indicated that it would wish to restrict itself to the terms and conditions of the contract only i.e. to supply without any guarantee of specification being satisfied in testing. No further action could also be taken against the firm as the firm went into liquidation. DRDE was, therefore, forced to seek the help of a casting engineer from a foreign country and had to incur an additional expenditure of Rs. 1.47 lakhs on his visit. Though the DRDE had incurred an expenditure of Rs. 22.66 lakhs on the import of these machines no financial adjustment had been made so far with the undertaking which was responsible for the supply of complete prototypes.

Even before the final type approval for bulk production was issued by DRDE, two Repair, Manufacture and Supply (RMS) orders were placed on the undertaking by Air Headquarters (HQ) in November 1979 and December 1982 for supply of 75 numbers and 805 numbers of the carriage system at a cost of Rs. 1.20 crores and Rs. 17.066 crores respectively. The delivery against the first order of 75 numbers was to be made by 1980-81 later extended to 1983-84 and against the second order of 805 numbers during 1984-85 to 1986-87. The second order of 805 numbers had to be placed on the undertaking as the undertaking had shown its inability to plan production for a small order of 75 numbers.

Advance on account payments totalling Rs. 219.16 lakhs had been made to the undertaking upto December 1985.

In May 1985 the undertaking requested Air HQ to revise the unit cost of system 'Y' from Rs. 1.60 lakhs (price indicated in first RMS order) and

Rs. 2.12 lakhs (price indicated in second RMS order) to Rs. 3.89 lakhs on the following grounds :

- The estimated unit price indicated in the two RMS orders was at 1978-79 and 1981-82 level.
- The complete system 'Y' assembly manufacture was at the development stage all these years necessitating incorporation of design| process changes.
- Productionising and proving of production batch of nose and retaining cones had involved considerable development work.
- Introduction of modification to tail cone assembly.
- Impact of normal escalaltion of prices both in labour and materials.

As the undertaking had indicated its inability to meet the indicated delivery schedule, Air HQ intimated the undertaking in October 1985 that the short closure of the two RMS orders was under active consideration and asked the undertaking to indicate the break down of financial implications on short closure at the supply levels of 25, 75 and 450 systems 'Y'. The undertaking was also advised to withhold further financial commitment towards the manufacture of system 'Y'. The undertaking intimated in November 1985 that there would not be any redundancy if the order was short closed at 450 numbers but redundancy of the order of Rs. 5.16 crores would occur if the existing RMS order price of November 1979 was adopted. They also confirmed that they were withholding further financial commitment awaiting Air HQ decision. In December 1985 Air HQ intimated the undertaking that due to slippage in production and delivery of system 'Y' the requirement of Air Force for the system was only 25 numbers and wanted the undertaking to intimate the financial liability on account of redundancy at the level of foreclosure of the supply at 25 numbers in order to obtain the Government sanction for the foreclosure. In the meantime the undertaking had completed the supply of 100 numbers of system 'Y' and the cost of redundancy was worked out as Rs. 152.23 lakhs. The Air HQ also decided in April 1986 to request the undertaking not to produce any more system 'Y' beyond the quantity already manufactured and supplied and reduce the cost of redundancy further.

In July 1986 Air HQ stated that their requirement was only 25 number of system 'Y' and they had to accept 100 numbers as the undertaking had physically manufactured them and the items would be used in trainer aircraft of Air Force and by Navy. The formal order of the Government for foreclosure of the manufactue of system 'Y' was still to be issued in July 1986.

In the meantime, due to delay involved in the manufacture of system 'Y' by the undertaking and technical problems relating to production of the weapon, it was decided to import another weapon to meet the training and war wastage reserve needs of the IAF.

Ministry of Defence stated in November 1986 that:

- The DRDE undertook to establish the production technology for nose cone casting since the undertaking encountered problems in bulk production of items.
- As the undertaking was not in a position to supply 4 acceptable nose cones, the DRDE accepted incomplete sets.
- No formal decision has yet been taken for reimbursement of the cost of LPDC services provided or the cost of the LPDC die.
- The first RMS order for quantity 75 was placed in November 1979 before the provisional type approval was accorded in March 1982. The subsequent order for quantity 805 was placed in December 1982 only after the issue of provisional type approval.
- The delivery against first order was to be extended from 1980-81 to 1983-84 as the undertaking was unable to deliver the item.
- As the shortclosure of the project is still under consideration it is premature to confirm the figure of redundancy.

Summing up

The main points brought out are summed up as :

- The development of system 'Y' took 10 years and the project for the development cost Rs. 22.72 lakhs against Rs. 3.69 lakhs originally sanctioned.
- Though the first batch of 75 numbers was to be delivered by 1980-81 the undertaking had to be given extension upto 1983-84 for the first batch and delivery schedule for the second batch had to be changed from 1984-85 to 1986-87.
- Due to the failure of the undertaking to meet the delivery schedule for system 'Y' the two RMS orders had to be foreclosed at 25 numbers and the Air Force had to import another weapon system to meet the training and war wastage needs.

- Though the Air HQ had intimated the undertaking that the two RMS orders were being foreclosed at 25 numbers, the Air Force had to accept 100 numbers of system 'Y' as the undertaking had physically produced them. These are to be used in trainer aircraft of the Air Force and by Navy.
- Redundancies of the estimated value of Rs. 152.23 lakhs are likely to occur due to the foreclosure of the orders for 880 numbers after delivering 100 numbers.
- Though the responsibility for establishing the production process of the system based on the item developed by DRDE was of the undertaking, the DRDE had incurred on its own, an extra expenditure of Rs. 22.66 lakhs for the import of machinery required for establishing the manufacture of critical components.
- Due to failure on the part of contract concluding authority to include a guarantee clause, DRDE had to incur an extra expenditure of Rs. 1.47 lakhs in seeking the help of a Casting Engineer from a foreign country.
- The amount of Rs. 21.50 lakhs for the manufacture of prototype paid to undertaking included payment for 4 incomplete sets of the system.

40. Development of an airborne device

In June 1967, the Indian Air Force (IAF) requested a Defence Research and Development Establishment (DRDO) to undertake evaluation of an airborne device existing in other countries. The study was to enable IAF to choose a device best suited to its requirements. DRDO recommended in Febraury 1968 development of a device in use in country 'B' as a short term measure, pending development of an entirely new ammunition fitted with device, which was expected to take about two years.

Considering the extremely complex nature of the development and the delay involved in making a prototype by the DRDO, Air Headquarters (HQ) imported in June 1969 four numbers of the device at a cost of Rs. 0.26 lakh and 4 more were obtained free from the firm manufacturing it. Encouraged by the results obtained during trials carried out on the device, the Air HQ imported another 200 numbers of the device at a cost of Rs. 18.70 lakhs to meet urgent operational requirements against war reserve, to carry out necessary studies connected with the carriage of the device on certain types of aircraft and make a few available to DRDO for development purposes, if necessary.

In May 1971, Government sanctioned the incurring of expenditure not exceeding Rs. 20.32 lakhs by the DRDO for design and development of the proposed device. The required numbers of samples of the imported device were, however, not supplied to the DRDO as they were stated to have been damaged during war. The development project got delayed for various reasons and Government approved the shortclosure of the project in March 1976, after an expenditure of Rs. 0.40 lakh had been incurred.

Meanwhile, Air HQ authorised a Base Repair Depot (BRD) in December 1971 to take up the development of 8 sets of the device by modifying a subassembly of a weapon system 'S' at a cost of Rs. 0.20 lakh.

On the basis of the satisfactory results of trials conducted on the prototype fabricated by BRD, Government sanctioned in March 1972 a further expenditure of Rs. 5 lakhs on development of the device. In all 49 units were manufactured and on the basis of trials carried out between April 1972 and October 1973, Government sanctioned in March 1974 the manufacture of 100 units at a cost of Rs. 10 lakhs (later amended to 150 units in December 1975) for carrying out trials on aircraft by Aircraft System Testing Establishment (ASTE). This was followed by another sanction of the Government in December 1975 for the manufacture by BRD of approximately 160 units of the device at a cost of Rs. 12.00 lakhs (later revised to Rs. 13.50 lakhs) to be used for further development and trials.

The requirements of this device were estimated at 4,712 numbers as reserves in addition to an annual training requirement of 1,360 numbers. Since the BRD had limited production capacity, an order was placed on a Public Sector Undertaking (PSU) in June 1976 for manufacture of 1,000 units of this device at a cost of Rs. 214.96 lakhs for delivery during 1977-78 and 1978-79 when the flight trials by the ASTE were still in progress.

Although a certificate of performance and acceptability of the device was issued by the Air HQ in October 1976 for initial batch production of 1,000 units, the mandatory type approval clearance by the Directorate of Aeronautics (DOA) before an airborne store is accepted into service was not obtained. The supplies by the PSU commenced in 1978-79 and were completed in 1984-85. The Ministry of Defence (Ministry) stated in October 1986 that the device developed by BRD was not subjected to mandatory type approval by DOA as it was not required before order for production was placed on the PSU. This contention of the Ministry was at variance with the stipulation of the DOA which requires mandatory type approval before an airborne store is accepted for service use. The Ministry also stated that they had decided to place order for 1,000 numbers of the device on PSU on the basis of successful trials carried out by ASTE, the other factor being urgent requirement of this device since import was not favoured at that time.

Further trials of the device supplied by BRD/ PSU to assess its reliability and evaluate its performance were carried out by ASTE in November 1977 and April|May 1978. Based on these trials, ASTE recommended certain modifications to be embodied on the device to improve operational safety and to prevent damage and deterioration during transit and storage. Accordingly the Government sanctioned in October 1981 the retromodification of 1,000 numbers of the device at a cost of Rs. 18.28 lakhs.

As these modifications were recommended and ratified after the PSU had manufactured 750 numbers of the device, the modifications had to be retro-fitted in these 750 units and 250 units were modified during production itself by the PSU. A total number of 953 devices have been modified by May 1986.

The mandatory type approval test by the DOA comprised both environmental and air evaluation trials. It was only in December 1980 when the devices had been manufactured by PSU and a major part of the supply had already been completed that environmental tests were ordered and a sanction was issued for carrying out these tests on 12 numbers of the device at a cost of Rs. 3.50 lakhs. Environmental tests were carried out between 1981 and March 1983 on seven units but all the units failed and the DOA suggested in June 1983 suitable modification of the device and their re-submission for environmental tests. The environmental tests were expected to be completed by September 1986. The Ministry stated in October 1986 that the device had failed in the environmental tests because cleaning and lubricating were not done before subjecting the device to test and it was decided that no modification of the device was required for the environmental tests.

The Ministry also stated in October 1986 that the user trials were carried out in November 1985 which did not categorically confirm any malfunctioning of the system as such and it was at best only a suspicion because no detailed investigation could be carried out since the unexploded ammunition could not be recovered. The Ministry added that during further trials carried out on 8 devices in March 1986, the success rate was about 62.5 per cent but the reasons for the failure in the three cases could not be analysed as in one case the unexploded ammunition was dropped from a height lower than the cleared height, in another the detonator was defective and in the third the ammunition was drowned in a marshy land. The trials which were carried out in March 1986 were, however, much below the prescribed specifications both as regards the released speed and the released height.

Meanwhile, as the device developed by the Air HQ did not meet the Air Staff requirement parameters a project for design and development of the device was entrusted in January 1977 to DRDO and a project estimated to cost Rs. 48.59 lakhs was sanctioned in May 1981 to be completed by May 1983. An order was also placed in March 1984 on the DRDO for supply of 1,500 numbers of the device to be delivered between December 1984 and December 1985. Only 100 numbers of the device have been supplied till March 1986.

The main points brought out are summed up as :

- The project for development by DRDO of the airborne device which was sanctioned in 1971 was short closed in March 1976 after an expenditure of Rs. 0.40 lakh had been incurred. The project was entrusted to a BRD.

- Bulk order for production of 1,000 numbers of the device developed by BRD was placed on a PSU without the mandatory type approval by the DOA. The devices supplied failed in the type approval tests carried out between 1981 and 1983.

- The device manufactured by the PSU at a cost of Rs. 214.96 lakhs failed in trials caried out by ASTE in November 1977 and April|May 1978 and retromodifications at a cost of Rs. 18.28 lakhs were recommended and sanctioned. In the latest user trials carried out in March 1986 also the success rate was only about 62.5 per cent even though the trials carried out were much below the specifications as regards the released speed and height.

— As the device developed by BRD did not meet the Air Staff Requirement parameters, the development of the device was entusted again in January 1977 to DRDO at a cost of Rs. 48.59 lakhs and an order for manufacture of 1,500 numbers of the device has been placed on them. But only 100 numbers of the device have been supplied till March 1986.

41. Re-engining of a trainer aircraft

Aircraft 'A' built indigenously around an imported engine 'X' was inducted into service in the Air Force in 1953 as a basic trainer for imparting ab initio training to pilots. In November 1965, the Air Headquarters (HQ) proposed replacement of aircraft 'A' by 1970 by a more modern one and a public sector undertaking(PSU) was asked to carry out a feasibility study for developing and manufacturing a suitable aircraft for the purpose. The delays in the design and development of the aircraft by the PSU were mentioned in Paragraph 7 of the Report of the Comptroller & Auditor General of India, Union Government (Defence Services) for the year 1979-80. An order for manufacture and supply at a total cost of Rs. 770.00 lakhs of 'M' number of aircraft 'B' developed by the PSU was placed on it in October 1981 with provisional delivery during 1983-84 to 1985-86. Only 32.5 per cent of aircraft 'B' had been delivered upto January 1986.

Aircraft 'A' which was the only basic trainer available with Air Force was to be progressively phased out between 1981 and 1984. However, there had been a steep deterioration in the serviceability of their engines. During the years 1979-80 to 1981-82, there were a number of accidents and incidents attributed to engine malfunctioning and these included a fatal accident involving a pupil pilot. As a remedial measure solo flying on this aircraft by pupil pilots was totally stopped in November 1980.

In view of the unreliability of engine 'X', the diminishing prospects of their further overhaul and further slippages anticipated in the production of aircraft 'B', the PSU under its own research and development programme proposed in May 1980 to fit engine 'Y' on aircraft 'A' and one aircraft 'A' was given to the PSU for re-engining under this programme. Flight trials on the re-engined aircraft carried out by PSU and an Air Force System Testing establishment were found successful. Based on the trial findings Air HQ proposed re-engining of 'N' number of aircraft 'A' with engine 'Y' taking into account the availability of aircraft for re-engining and the requirements for the flying instructor course and the Army pilots course. The Government, however, sanctioned in March 1982 the re-engining of only 'P' number of aircraft 'A'. Air HQ placed an order on the PSU on 2nd March 1982 for re-engining of 'P' number of aircraft 'A' on an urgent basis at an estimated cost of Rs. 83.60 lakhs at 1980 price level(revised to Rs. 89.10 lakhs in April 1985); the delivery of re-engined aircraft was to commence from 31st December 1982 and was to be completed by 31st March 1983. An 'on account' payment of Rs. 70 lakhs was sanctioned by the Government in March 1984. The re-engined aircraft were delivered by the PSU between December 1983 and February 1984 after a delay of one year.

64 per cent of the re-engined aircraft were inducted into service in February 1984 for flying instructor's course. However, these aircraft could not be effectively used owing to 'engine cut problem'. From the date of induction in February 1984 to February 1985, 16 cases of engine cuts were reported and the technical authorities at Air HQ indicated in February 1985 that 13 cases remained unsolved despite numerous remedical measures recommended by PSU having been carried out. During the said period there were 23 incidents of engine malfunctioning involving 85.7 per cent of the aircraft inducted into service. The average utilisation of the aircraft upto July 1986 was only 14.75 hours per month as against 30 hours envisaged.

The remaining 36 per cent of the re-engined aircraft 'A' which was earmarked for imparting ab-initio training to pupil pilots has not so far been inducted into service. Air HQ stated in January 1986 that due to engine problems and numerous engine cuts, it was considered not prudent to induct the re-engined aircraft for imparting flying training to ab initio pilots. Again in September 1986 the Ministry stated that during the first half of 1986 there was only one engine cut and the position regarding induction of these re-rengined aircraft for imparting ab-initio training to pupil pilots would be reviewed by Air HQ in December 1986.

Thus, 36 per cent of re-engined aircraft 'A' on the re-engining of which Rs. 32.40 lakhs had been spent, has not been inducted into service for the past more than 2 years due to engine problems and engine cuts. Further the average utilisation of the re-engined aircraft inducted into service in the flying instructor's course was 14.75 hours per month as against the 30 hours envisaged.

42. Delay in installation of a simulator-Avoidable expenditure of Rs. 8.52 lakhs in sending pilots for training abroad

A contract was entered into in October 1982 by the Government with a foreign manufacturer 'X' and their associates for supply of a new aircraft 'A' to the Indian Air Force (IAF), the delivery to be made from September 1984 to April 1986. The supply of the aircraft actually commenced from December 1984 and the aircraft were inducted into squadron service immediately thereafter. The first batch of pilots were also trained at the manufacturer's place abroad. Under the contract the supplier was also to supply a simulator at a cost of Rs. 5.71 crores for the training of pilots. The simulator was to be supplied by June 1985 but the supplier was to provide design data by April 1983 so as to enable the IAF to design and construct the building required for the installation of the simulator. The IAF was to make available the completed building for inspection of the manufacturer by June 1985 and carry out, if necessary, rectifications advised by the manufacturer.

The go-ahead sanction for the execution of work services for induction of the aircraft at station 'Y' was given in July 1983 and administrative approval for work services including those required for the installation of the simulator was accorded in August 1984 for Rs. 15.05 crores. A contract for Rs. 92.22 lakhs for works including the building for the simulator (Cost : Rs. 36 lakhs) was concluded in February 1985 with the probable date of completion of the contract as March 1986. The building work commenced in March 1985. Another contract relating to air conditioning and cold water plant for the simulator was entered into in June 1985 with probable date of completion in January 1986. The work commenced in July 1985. The simulator was evaluated at the manufacturer's place in July 1985 and was received at station 'Y' during the period April 1986 to October 1986. The Ministry of Defence(Ministry) stated in November 1986 that in view of the complicated nature of the work services, the probable date of completion of June 1985 originally proposed by Air Headquarters was not found to be realistic. The simulator was now expected to be commissioned by January 1987. According to the Ministry the delay was due to changes in design and technical specifications which were unforeseen.

Due to non-availability of the simulator for aircraft 'A' because of slippages in completion of work services and receipt of simulator at station 'Y' for training, the Government sanctioned in November 1985 deputation of another batch of pilots to the manufacturer's place abroad for training on the simulator at an estimated cost of Rs. 8.52 lakhs. These pilots were to man a new squadron to be formed in January 1986. This expenditure could have been avoided had the simulator been installed as per schedule.

43. Premature withdrawal of an aircraft

In 1956 Government approved a project for the design, development and production of an indigenous aircraft by a public sector undertaking (undertaking). The time for development was initially estimated as 4 years and the cost as Rs. 1.09 crores. The aircraft (MK-II) was to be designed around an engine 'B', then under development by a foreign firm. This project was, however, dropped in September 1960 as the foreign firm abandoned the project for development of the engine in 1959 and due to financial implications of the development of the engine in India. 5 specific attempts to locate or develop a suitable engine during 1956—75 did not meet with any success. Upto March 1975, an expenditure of Rs. 11.29 crores had been incurred by the undertaking on the project against Rs. 11.40 crores sanctioned by the Government.

Mention was made in paragraph 10 of Reports of the Comptroller and Auditor General of India, Union Government, Defence Services, 1966 and 1974-75 and also in paragraph 7 of the Report of the Comptroller & Auditor General of India, Union Government. Defence Servces, 1975-76 about the infructuous expenditure incurred on the project for the development of the engine. The Public Accounts Committee (70th Report-3rd Lok Sabha 1966-67) had commented on the infructuous expenditure and about a costly project having been undertaken without ensuring the availability of a suitable engine.

Pending the designing and development of MK-II aircraft, aircraft MK. I was developed with a readily available but less powerful engine 'A' and 122 MK. I aircraft were manufactured and delivered by the undertaking to the Air Force at a cost of Rs. 89.81 crores and inducted into service during 1967—74.

After a review of the project, the Air Headquarters (HQ) decided in September 1974 to continue with the investigation of the problems connected with the project and further development and modification of MK. I aircraft with a view to enhancing its fatigue life from 1,800 hours to a minimum of 2,500 hours and improving its operational safety as well as efficiency. Sanction was accorded in July 1976 for incurring at additional expenditure of Rs. 102 lakhs on further development and modifications/improvements in MK. I aircraft already in service with a view to improving their operational effectiveness and safety. The modifications were carried out by the undertaking at a cost of Rs. 12.42 crores.

In July 1980 Air HQ issued the firm task for repair/overhaul of MK. I aircraft to be undertaken by the undertaking during 1981-82. In December 1980, the Air HQ informed the undertaking that the reduction of Unit Establishment (UE) of the aircraft was under consideration of the Government and that the overhaul task for 1981-82 will be nil as against 16 fixed earlier. The undertaking was asked to plan their future requirements on that basis and intimate the redundancies and financial repercussion. On this basis the overhaul work on 19 aircraft taken up by the undertaking was not completed. The undertaking had meanwhile been paid an 'on account' payment of Rs. 76.64 lakhs representing 60 per cent of the cost of the firm overhaul task as per the fixed quotations given by them. The 'on account' payment has not been adjusted so far. The surpluses and redundancies with the undertaking were of the order of Rs. 11 crores.

The Ministry of Defence (Ministry) stated in November 1986 that the UE of MK. I aircraft was drastically reduced because the aircraft had serious limitations as a weapon system affecting its operational utility in the environment of eighties coupled with problems relating to maintenance and product support.

MK. I aircraft was inducted into service during 1967—74 and were expected to remain in squadron service upto 1984-85. Because of persistent problems relating to under-powered engine, which could not be replaced despite repeated efforts, since 1981 Air HQ pressed for the premature withdrawal of the aircraft from service. The Government sanctioned in March 1985 the withdrawal of 112 aircraft with retrospective effect from 1st April 1983. The book value of the 112 aircraft was Rs. 112.41 crores. The Ministry stated in November 1986 that out of 112 MK. I aircraft ordered to be withdrawn only 4 had completed 50 per cent of their approved fatigue life of 1,800 hours, 51 had completed more than 25 per cent but less than 50 per cent of the approved fatigue life and 42 had completed only less than 25 per cent of the approved fatigue life. The number of hours flown by the remaining 15 aircraft were not known. Orders for the disposal/utilisation of the airframes, engines, equipment etc. of the withdrawn aircraft were, however, issued only in July 1986 and no disposal action was taken till October 1986.

The Ministry stated in November 1986 that

— The aircraft (MK. II) designed around the engine 'B' then under development by a foreign firm, was intended to be capable of a speed of Mach 2.

— The project had resulted in the development of MK. I trainer aircraft which had served the IAF till recently.

— The aircraft was designed as supersonic jet fighter/bomber and it had reached speeds beyond Mach 1 in dives.

— The project for MK. II was dropped as no suitable engine could be identified.

— The aircraft withdrawn were yet to be disposed of and they are occupying an uncovered area of 15,997 square meters in the open at 17 different locations.

— The proposal to reduce the UE was taken up with the Government in January 1980 but due to non-finalisation of plan for new type of aircraft to replace the MK. I aircraft the proposal was deferred.

Summing up :

The main points brought out are :

— even after incurring an expenditure of Rs. 11.20 crores on the design and development of MK. II aircraft and after 19 years of effort, the aircraft could not be developed and MK. I aircraft with an underpowered engine was manufactured by the undertaking and brought into squadron service;

— due to the failure of the undertaking to incorporate the modification and improvements in the aircraft, serious limitation of the aircraft as a weapon system, which affected their operational utility and the old design of the aircraft, the UE of MK. I aircraft was drastically reduced in December 1980, resulting cancellation of the firm overhaul task for 16 aircraft already given to the undertaking for 1981-82. 'On account' payment of Rs. 76.64 lakhs given to the undertaking for the overhaul task for 1981-82 had not so far been adjusted.

— as a result of the abrupt change in the overhaul/repair tasks stores of the value of Rs. 11.00 crores lying with the undertaking became surplus or redundant;

— 112 MK. I aircraft had to be withdrawn prematurely with effect from 1st April 1983 due to persistent problems relating to under-powered engine, which could not be replaced despite repeated efforts for 19 years;

— 97 out of the 112 MK. I aircraft had done on an average 516 hours only as against the prescribed fatigue life of 1,800 hours. The number of hours flown by 15 other aircraft was not known to Ministry: and

— Orders were issued only in July 1986 for disposal|utilisation of the air-frames, engines, equipment etc. of 112 MK. I aircraft of the book value of Rs. 112.41 crores withdrawn from service with effect from April 1983 and no disposal action has been taken till October 1986.

44. Unnecessary import of a spare part

Based on the requirements projected by an Equipment Depot (Depot), Air Headquarters (HQ) raised a demand in March 1980 on Supply Wing of an Indian Mission abroad (SW) for procurement of 156 numbers of an item 'C' along with other spare parts of hydraulic equipment of aircraft 'A' from a proprietory firm 'B'. A contract concluded by SW on 12th November 1980 with firm 'B' included supply of quantity 156 of item 'C' at a cost of Rs. 9.17 lakhs, the supply to be made within 7 months. Considering the urgency of requirements the contract also provided for despatch of item 'C' by air.

Meanwhile, in October 1980 item 'C' was indigenously developed by Air Force Station 'D' at a cost of Rs. 4,632. The cost of local manufacture of the item was assessed as Rs. 772 per piece against the contract rate for imported item of Rs. 5,879 in free foreign exchange. The item 'C' developed indigenously was type approved on 31st December 1980. On 25th February 1981, i.e. 8 weeks after type approval of the indigenous item the Depot informed Air HQ that the item was capable of local manufacture and desired cancellation of its demand. On 12th March 1981, Air HQ approached SW for cancellation of their demand for the item but did not pursue the matter. The supply of the item was completed during 1981-82. In addition to above, a stock of 19 numbers was also available with the Depot as on 1st April 1979.

At the instance of Audit, Air HQ asked SW in July 1983 to indicate the reasons for non-cancellation of the item from the contract. The SW informed Air HQ in August 1983 that Air HQ communication of 12th March 1981 requesting for cancellation of the item had not been received by them. The import of item 'C' at a cost of Rs 9.17 lakhs as compared to the assessed cost of indigenous manufacture of Rs. 1.20 lakhs only resulted in extra expenditure of Rs. 7.97 lakhs.

The Ministry of Defence (Ministry) stated that within a month of the request for cancellation of the item 'C' from the indent, the same started arriving in India and it was presumed by Air HQ that the cancellation was not accepted by the supplier as the item was already in the supply line.

During April 1979 to September 1985 quantity 36 of item 'C' was issued by the Depot to units. Based on this trend of issue, the stock of 139 numbers as on 1st October 1985 would last for at least 25 years. The Ministry stated that aircraft type 'A' are expected to stay in service till 1995 and there would be continued need for item 'C' upto 1995 and the entire quantity of item 'C' is likely to be fully consumed.

The case reveals that the Depot had projected its demand for item 'C' in excess of its requirements. Based on past issues, the existing stock would meet at least 25 years requirements whereas Aircraft type 'A' for which the item was imported is expected to be in service upto 1995. Had timely action been taken for cancellation of import of item 'C', there would have been a saving of Rs. 7.97 lakhs.

45. Extra expenditure on procurement of integrated circuits

The Project Director, Radar and Communication Project (Indentor) raised in January 1980 an 'operational' indent on the Supply Wing of an Indian Mission abroad (Supply Wing) for procurement of 123 items of 'Integrated Circuits for Radars'. The indent was accompanied by a proprietary article certificate (PAC) in favour of manufacturing firm 'A' for 21 items; for remaining items another firm 'B' was cited as an alternative source. The indent estimate of F.F. 3,23,535 for all the 123 items was based on firm 'A' quotation of 28th September 1979 valid upto 31st December 1979. The quotation was, however, not received with the indent.

Pending receipt of correct address of firm 'B' from the indentor, the Supply Wing issued (31st March 1980) a single tender enquiry to firm 'A'. The enquiry was, however, not sent to the correct address as given in the PAC and there was no response to it.

No enquiry was sent to firm 'B' even after the correct address of that firm was received on 9th May 1980 from the indentor.

The Supply Wing did not follow up the matter at all; and, in April 1983, without any reference to the indentor it treated the indent as cancelled. In September 1983, the indentor reminded the Supply Wing that a contract covering the indent was still awaited and the latter issued on 3rd November 1983 a fresh tender enquiry to firm 'A' at the address given in the PAC. In response, firm 'A' quoted on 26th April 1984 SFR 1,32,270 (Rs. 5.80 lakhs) for supply of 103 of the items and a contract was finally placed on them on 25th July 1984 at the quoted prices. The contracted prices were higher by Rs. 3.15 lakhs than the estimated cost of FF. 1,51,723 (Rs. 2.65 lakhs) of these 103 items as per the indent. The remaining 20 items (estimated cost. FF. 1,71.813) costing more than 50 per cent of the indent estimates and not quoted for by 'A'. were deleted (7th July 1984) by the indentor.

The following comments are offered :

Failure of the Supply Wing to, ab initio, issue the tender enquiry at the correct address led to lack of response from firm 'A'. Their failure to issue a tender enquiry to firm 'B' also deprived the Government of the benefit of competitive prices. These, coupled with their failure to take any follow-up action for more than 3½ years, resulted in steep escalation of costs putting the Government to avoidable extra expenditure of Rs. 3.15 lakhs in procurement of 103 items alone; the prices paid were 118.9 per cent higher than those quoted by the firm in September 1979. Further the contract against this 'operational' indent raised in January 1980 could be finalised only in July 1984 i.e. 4½ years later. The indentor stated (June 1986) that due to prolonged delay, operational requirements suffered and the equipment was operated with reduced capabality by making use of redundancy available in the equipment and by procuring certain spares from the local markets even though the quality of such spares was not assured.

The Supply Wing stated (September 1986) that long silence of over 3 years on the part of the indentor led them to presume that the requirement had ceased to exist and the indent was therefore treated by them as cancelled in April 1983. The indentor, however. stated (June 1985) that between 25th April 1980 and 14th March 1984, he had sent 11 reminders to the Supply Wing to expedite procurement.

46. Procurement of aircraft stores

In April 1979, Air Headquarters (Indentor) raised an indent on the Supply Wing of an Indian Mission abroad (Supply Wing) for procurement of 34 numbers of an item (bearing part number 'X') of aircraft at an estimated cost of Rs. 27.57 lakhs. The indent which was accompanied by a proprietory article certificate (PAC) in favour of manufacturing firm 'A' indicated a Supply Wing contract of 7th February 1979 (issued in April 1979) as a reference to the last source of supply; supply against that contract, with part number 'Y', had been received from firm 'B'. By means of a Note on the indent, the indentor desired the Supply Wing to ensure that maximum possible quantity of the item was procured 'at the lower quotation' (apparently from firm 'B' or other sources of supply, if any) and only the balance, if any, from the manufacturing firm at the higher rate.

On 15th May 1979 the Supply Wing issued a single tender enquiry to firm 'A'; no enquiry was issued to firm 'B'. In response, firm 'A', stated (28th June 1979) that part number 'X' was superseded by part number 'Y' and quoted a price of £ 5,031.13 each for the new part number; delivery to be completed in 14 months. Since the price quoted was higher by as much as 36.36 per cent than the last purchase price of February/April 1979, the Supply Wing issued (17th July 1979) an enquiry to firm 'B' also. In reply, firm 'B' also stated (6th August 1979) that the item of stores bearing part number 'X' was obsolete and had been replaced by part number 'Y' which was fully interchangeable with the former. Firm 'B' quoted a unit price of £ 3,680.77 for the item bearing part number 'Y'.

The Supply Wing then referred (7th August 1979) the matter to the indentor stating that firm 'A' had quoted a price of £ 5,031.13 each for stores bearing part number 'Y' as stores bearing part number 'X' had been superseded They also stated that firm 'B' who had supplied the stores in the past had offered the item, with part number 'Y', at £ 3,680.77 each.

The indentor in his telex of 27th August 1979 asked the Supply Wing to procure only the "original unmodified stores" i.e. part number 'X'. Thereupon the Supply Wing asked (4th September 1979) firm 'A' to quote only for original stores bearing part number 'X'. Firm 'B' were not invited to quote. Firm 'A' quoted (30th October 1979) a unit price of £ 5,460.06 with a delivery schedule of 18 months from the receipt of the order. After negotiating with that firm the Supply Wing placed an order (30th November 1979) with them for supply of 34 numbers of the item bearing part number 'X' at a price of £ 5,079 each. After allowing for a cash discount of 3.75 per cent the total cost of the order worked out to £ 1,66,210.28.

Subsequently, on 23rd May 1980, firm 'A' informed the Supply Wing that since the item conformed to an early modification standard they were experienceing delivery problems and would not therefore be able to meet the delivery target of 18 months. Instead, they offered delivery of 10 numbers in June 1981 and the balance in September 1981. The Supply Wing accordingly issued (7th December 1980) an amendment to the contract refixing the delivery schedule, as desired by the firm.

On 3rd July 1981 the indentor sent a telex to Supply Wing asking for the airlifting of 14 numbers of the part on AOG (Aircraft on ground) priority. In the same telex he asked the Supply Wing to amend the contract so as to procure the items with the modified part number 'Y' instead of part number 'X'. The Supply Wing wrote to the firm accordingly on 6th July 1981 without mentioning anything about the much lower price of part number 'Y'. There was no response from the firm. The Supply Wing neither pursued the matter nor issued any amendment to the contract. The supply of 32 numbers, out of the contract for 34 numbers, bearing part number 'X' was made by the firm and paid for between June 1981 and November 1981; the remaining 2 numbers were supplied in October 1982 and March 1983.

The following points arise :

(i) Firm 'B' had supplied the same stores bearing part number 'Y' against contract of February/April 1979. According to the Indentor's note on the indent also, cheaper stores from sources other than the manufacturing firm (in whose favour a PAC was issued) were to be preferred. Issue of a PAC by the indentor was, therefore, avoidable; it resulted in the issue of a single tender enquiry to firm 'A' by the Supply Wing.

(ii) Against previous contract of February/April 1979 the indentor had accepted from firm 'B' stores with part number 'Y' which was a later version of part number 'X' and fully interchangeable with it. In this case the indentor not only asked for part number 'X' but insisted upon it even when the relative merits and costs of part number 'X' and 'Y' were explained to him By the time the indentor decided to go back to the procurement of part numbers 'Y' (July 1981), it was too late as supplies under the contract had already commenced in June 1981. The belated decision of the indentor in accepting the fully interchangeable part number 'Y' resulted in an avoidable extra expenditure of £ 41,064.10 (Rs. 7.39 lakhs.)

(iii) In addition to the avoidable extra expenditure of Rs. 7.39 lakhs, procurement of stores with part number 'X' resulted in supplies getting delayed to such an extent that in July 1981, the stores were required on AOG priority; delivery of stores with part number 'Y' would have been completed, as per the June 1979 offer of firm 'A' before 1980 end. Further, the stores procured had already been superseded, a fact, which the indentor, too, noticed though belatedly in July 1981.

The Supply Wing stated (August 1986) that the audit observation related primarily to the indentor's action in delaying their decision by one year and seven months to change the original part again to the new part and added that no firm would accept a change in the contracted item, particularly an obsolete unmodified part specially put on production line for the purchaser, at such a belated stage.

The Ministry of Defence, however, stated (October 1986) that, the supplier insisted on procuring unmodified hubs apprehending problems in the procurement of modified tubes to go with the modified hubs. They added that firm 'B' could supply only 4 numbers of modified hubs and even if these were procured from them the saving in cost would have been of the order of Rs. 1.36 lakhs only. Both the arguments are incorrect as in their quotation of 6th August 1979 firm 'B' had specifically offered 34 numbers of modified hubs and also made it quite clear that the original unmodified tube was fully inter-changeable and useable on the modified hubs.

47. Procurement of accessories for Aruna System

An indent for procurement of accessories for Aruna System (estimated cost : Rs. 3.25 lakhs) by Air Headquarters (Indentor) on Director General Supplies and Disposals (DGSD) in January 1981, was cross-mandated to the Supply Wing of an Indian Mission abroad (Supply Wing) in February 1981 on the ground that Indian agent of the firm in whose favour proprietory article certificate (PAC) was issued by the indentor, was not known. The requirement was indicated as 'very urgent'. The indent estimate was based on an offer of 11th April 1980 of the PAC firm valid upto 30th July 1980.

On receipt of the indent (3rd March 1981) the Supply Wing issued a single tender enquiry (29th April 1981) to the PAC firm inviting their quotation by 9th June 1981. The firm did not quote by the due date or thereafter. The Supply Wing also did not remind the firm. When the indentor made enquiries (4th November 1981 and 15th April 1982) the Supply Wing reminded the firm on 4th March 1982|5th May 1982 who, on 5th October 1982 sent their quotation of 10th June 1982, valid upto 31st January 1983. The Supply Wing referred the quotation to the indentor on 20th October 1982 for confirmation, inter-alia, asking for additional foreign exchange sanction. The indentor, however, in his letter of 24th|31st January 1983, intimated his revised requirement of reduced quantities and requested the Supply Wing to approach the firm for revalidation of their offer (expiring on 31st January 1983) and for confirmation that reduced quantities would be supplied at the rates quoted; enhanced cost sanction was to be obtained thereafter.

Instead of approaching the firm for revalidation of their offer of 10th June 1982 for supplying reduced quantities required by the indentor, the Supply Wing issued (14th February 1983) a fresh tender enquiry for the reduced quantities. The firm stated (18th March 1983) that they had already given two offers on 16th April 1980 and 10th June 1982. validity of which had already expired and that they would submit a new offer, if required. The Supply Wing asked (31st March 1983) the firm to expedite their quotation. There was no response from the firm and the Supply Wing also did not pursue the matter.

In the meantime, the indentor, in his two letters of 17th March 1983 and 30th September 1983 informed the Supply Wing that enhanced cost sanction had been obtained and desired procurement of the item as it was required 'critically'. The Supply Wing issued another tender enquiry to the firm on 14th October 1983. The firm quoted (3rd January 1984) further enhanced prices valid upto 31st March 1984. This offer of the firm was also referred (5th January 1984) to the indentor for advice and for confirmation of availability of foreign exchange. The indentor replied (14th March 1984) that the matter regarding enhanced cost had been referred to the Ministry of Defence and desired that validity of th offer of January 1984 be got extended at least by one month. The Supply Wing's request of 3rd April 1984 to the firm for extending the validity of the offer upto 31st May 1984 remained unreplied. However, on receipt of the indentor's message of 29th May 1984 that additional foreign exchange had been released, the Supply Wing, based on the firm's quotation of 3rd January 1984 (valid upto 31st March 1984) placed a contract dated 1st June 1984 (actually issued on 28th June 1984) on the firm for US Dollars 37,000 simultaneously confirming the order by a telex message on 6th June 1984. As the order was placed after expiry of the firm's offer on 31st March 1984, the firm demanded (25th June 1984) a price readjustment of US Dollars 740 which was allowed by amending the contract in July 1984. The stores handed over by the firm in May 1985|July 1985 were shipped to the indentor in October 1985.

The following points were noticed :

(i) The Supply Wing took nearly 2 months in floating a single tender enquiry to the PAC firm after receipt of the indent on 3rd March 1981. Even thereafter the Supply Wing did not pursue the matter between June 1981 and March 1982; it issued a reminder to the firm only on 4th March 1982 after the indentor made enquiries in November 1981.

(ii) The indentor was informed by the Supply Wing on 20th October 1982 about the offer of the firm which was valid upto 31st January 1983. The indentor, however, took over 3 months in revising his requirement and intimating the same to the Supply Wing for taking up the matter with the firm.

(iii) Late receipt of the revised requirement by the Supply Wing on expiry of the offer of June 1982 left little scope for the Supply Wing to negotiate with the firm for supplying the reduced quantiies at June 1982 prices after getting validity thereof extended. This resulted in Government being put to an avoidable extra expenditure of US Dollars 16,710 (Rs. 2.02 lakhs) as compared to the June 1982 offer of the firm.

(iv) In addition to the avoidable extra expenditure of Rs. 2.02 lakhs delays and the generally casual attitude on the part of both the indentor and the Supply Wing in pursuing the procurement led to the stores required by January 1982 (as per the indent) to meet an 'urgent requirement' being shipped to the indentor as late as in October 1985. According to the indentor (January 1985) the delay in supply of stores adversely affected the serviceability of the equipment for want of spares.

The delay in issue of the tender enquiry (3rd March 1981 to 29th April 1981) and lack of follow up action thereafter till 4th March 1982 were attributed by the Supply Wing (September 1985) to reduction of their staff strength in 1981. The Supply Wing, however, assigned no reasons for the lack of follow up action between April 1983 and October 1983.

The Ministry of Defence stated (October 1986) that the delay in revising the requirement by the indentor and finalising the contract by the Supply Wing was beyond the control of the two organisations.

48. Repairs|overhaul of HS-748 propellers

Air Headquarters (HQ) approved repair| overhaul of 26 and 21 propellers of a certain aircraft for the years 1979-80 and 1980-81 respectively. Indian Airlines was the repairing agency for these propellers. However, since 1977 Indian Airlines was not able to cope with the repair needs of Air HQ. Air HQ mooted a proposal in August 1979 to get the propellers overhauled from the manufacturer or any other foreign agency. Accordingly, enquiries were made through Supply Wing of an Indian Mission abroad from foreign firms. The enquiries revealed that the propellers could be repaired at a maximum unit cost of £ 8500 (Rs. 1,46,455) including the cost of replacement spares by firm 'A' (manufacturer), Firm 'B' quoted the rate of basic overhaul at \$ 2,100 and total cost ranging between \$ 9000 and \$ 18,000 including the cost of spares excluding replacement of hubs and blades. Till 1981 the matter remained under correspondence between Air HQ and the Supply Wing and no action was taken to place firm orders although the firms have been indicating escalation in the cost of repair.

In July 1981, Air HQ placed an indent on the Supply Wing of another Indian Mission for the repair of 12 propollers at an estimated cost of \$ 2.46 lakhs (Rs. 19.68 lakhs) and followed it up by sending it to firm 'B' in October 1981. Firm 'B' quoted rates ranging between \$ 31,855 and \$37,967 per unit repair on examination of the propellers. These rates were intimated to Air HQ by the Supply Wing in October 1981 who requested the Supply Wing to insist on firm's adherence to the original quotation.

On 2nd November 1981 the Air attache of the Supply Mission informed Air HQ as under :

"It was understood from the firm's representative that although they had maintained overhaul labour rates at 1979 levels, the increase in repair|overhaul estimates is mainly due to the escalation in cost of materials over which the firm has no control since these are procured from manufacturers| other suppliers. It was also stated that the propellers sent by Indian Air Force (IAF) had been in storage in unserviceable condition for several years (1974 to 1981) causing considerable corrosion and other forms of deterioration. As a result the work required in bringing them back to serviceable condition is much more than in the case of propellers sent for overhaul immediately after removal."

It was, however, seen in audit that the cost of repair had no relevance with the date of removal of propeller from aircraft as analysed below :

Sl. No.	Date of removal from aircraft	Cost of repairs (final) in dollars
1.	28-8-1980	32,393.16
2.	22-5-1974	32,436.32
3.	18-5-1978	34,126.66
4.	18-10-1979	34,039.48
5.	5-2-1981	31,038.73
6.	26-2-1981	32,200.88
7.	16-7-1980	33,408.08
8.	15-9-1980	37,002.77
9.	30-10-1980	*25,766.00
10.	4-4-1981	32,829.27
11.	12-9-1978	*24,253.65
12.	12-9-1978	*29,665.99
	Total	3,79,161.09

*without blades costing \$ 72435 each.

In January 1982, the Supply Wing informed Air HQ that the firm threatened to dispose of the propellers in order to recover their costs if the contract was not finalised within a week.

Air HQ conveyed (March 1982) approval of the Government to get the work done at enhanced costs. Although the prices had been revised by firm 'B', the revised prices from firm 'A' were not enquired as firm 'B' was being treated as a proprietory firm. An order for repair|overhaul of the 12 propellers at a total cost of \$ 3.79 lakhs (Rs. 35.26 lakhs) was placed in March 1982 involving extra expenditure of Rs. 15.47 lakhs over the maximum cost quoted in 1979.

The Ministry stated (September 1985) that the cost of repair|overhaul of 12 propellers was only \$ 267878 (Rs. 24.91 lakhs), \$ 110315 being the cost of spares supplied by IAF. Thus, extra expenditure over and above the estimated cost has been of the order of Rs. 4.96 lakhs only and not Rs. 15.47 lakhs. In this connection, it was observed that as the cost of spares was included in the rates offered by the firm in August 1979 the spares supplied by IAF constituted extra expenditure which could have been avoided if the order had been placed against original quotations.

Although it was clear in 1979 that the output from Indian Air lines was not matching the repair needs and the repair|overhaul had to be done from foreign firms, it took 23 months to finalise the indent resulting in extra expenditure of Rs. 15.47 lakhs.

CHAPTER 8

NAVY

49. Review of Naval Air Stations

The Air Squadrons of the Indian Navy operate from Naval Air Stations and ships which provide facilities for the operation and maintenance of these squardons. A review of the working of the two Naval air stations 'M' and 'N' and the squadrons based on them was conducted and the findings are contained in the paragraphs which follow :

2. *Aircraft availability/serviceability*

Based on the role and task assigned to each squadron, the Unit Establishment (UE) of the squadron signifying the type and the number of aircraft to be provided to the squadron is authorised by the Government. The average percentage of aircraft made available to the squadrons during the years 1981 to 1985 as compared to the authorised UE and the percentages of serviceability of the aircraft made available were as follows :

Stations/ squadrons	Type of aircraft	Average percentage of availability of aircraft against UE sanctioned during 1981-85	Average percentage of serviceable aircraft against the aircraft made available during 1981-85	Average percentage of serviceable aircraft against the sanctioned UE during 1981-85
Station 'M'				
'P'	'D'	83.33	64.86	54.05
'Q' & 'R'	'H' & 'I'	76.19	67.00	51.05
'S'	'E'	66.67	29.10 } 27.18	19.40 } 18.22
'T'	'E'	67.48	25.23	17.03
Station 'N'				
'U'	'A'	—	68.44	—
'V'	'B'	94.00	61.45	57.76
'W'	'G'	77.20	41.79	32.26
'X'	'C'	64.72	63.84	41.32
'Y'	'F'	40.00	74.80	29.92
'R'	'H' & 'I'	131.60	68.15	89.68

2.1 *Aircraft 'H' & 'I'*

While the authorised UE of 'H' & 'I' aircraft was not made available at Station 'M', more than the authorised UE of aircraft were made available at Station 'N'. The Ministry of Defence (Ministry) stated in November 1986 that the aircraft held in excess were earmarked for 'Antartica Expedition' and their allotment to Station 'N' was only for accounting purposes.

2.2 *Aircraft 'E'*

The average serviceability of aircraft 'E', it would be seen, was very poor being only 18.22 *per cent* of the aircraft made available. The poor serviceability was attributed by the Naval authorities to :

— the high rate of failure and poor serviceability of the communication equipment fitted in the aircraft,

— spares for the aircraft having to be imported and the lead time being very long,

— the rapid obsolescence of the avionic systems owing to fast changes in technology and increasing difficulty time wise and inavailability in spares procurement,

— limited first, second and third line servicing facility available with Navy for the aircraft components and systems and deep level servicing having to be done only at the manufacturer's works abroad.

The delay in the setting up of repair facilities in the country for aircraft 'E' and the consequent expenditure incurred in having to send aircraft|parts to the foreign manufacturer for repair were commented upon in paragraph 52 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1982-83. For want of essential spares, aircraft 'E' remained on ground (AOG) for 735 days, 910 days, 593 days and 983 days during the years 1981, 1982, 1983 and 1984 respectively.

Acquisition of additional number of aircraft 'E' together with spare engines/spares etc. was sanctioned in August 1983 and May 1985 at a cost of Rs. 423.82 crores in free foreign exchange but repair facilities have not been augmented.

2.3 *Aircraft 'F'*

The average serviceability of aircraft 'F' was also poor being only 29.92 per cent of the authorised UE and this was attributed by the squadrons mainly to the shortage of spares and assemblies.

2.4 *Aircraft 'G'*

Aircraft 'G' also had a poor average serviceability of 32.26 per cent, though it was built indigenously by a public sector undertaking (PSU). The poor serviceability was attributed to lack of spares and abnormal delay in inspection of the aircraft by the repair agency i.e. the Air Engineering Department (AED) at Station 'N'.

The AED at Station 'N' had taken in 8 cases much more than the standard time of 3 months for inspection as shown below :

Time taken for inspection	Number of cases
6 months to one year	6
1 to 3 years	1
More than 3 years	1

The number of days the aircraft 'G' remained on ground were as follows :

Year	No. of days of AOG
1981	179
1982	266
1983	121
1984	265
1985	700 (upto September 1985)

3. *Shortfall in performance of approved tasks*

The shortfall in performance of approved tasks during the year 1981 to 1985 with reference to aircraft made available was as follows :

Squadrons	Aircraft	Percentage of shortfall in achievement of task during				
		1981	1982	1983	1984	1985
'P'	'D	25	NIL	NIL	NIL	NIL
'Q' & 'R'	'H'&'I'	39.8	NIL	NIL	NIL	NIL
'S'	'E'	49.08	24.41	47.1	38.3	33.5
'T'	'E'	43.80	50.00	61.8	71.33	44.00
'U'	'A'	—	—	—	39.50	48.3
'V'	'B'	NIL	NIL	17.83	21.41	27.3
'W'	'G'	42.70	55.00	56.00	54.6	50
'X'	'C'	34.8	NIL	10.00	22.92	0.09
'Y'	'F'	22.6	28.33	56.00	NIL	NIL
'R'	'H'&'I'	40.00	4.00	31.6	27.1	NIL

The shortfalls were attributed by the Naval authorities broadly to :

— poor availability of aircraft compared to UE due to lack of spares and assemblies,

— erratic availability of radar,

— weather conditions affecting flying,

— unpredictable major unserviceability,

— delay in setting up maintenance infrastructure and support facilities (squadron 'X'),

— inadequate training abroad of technical personnel (squadron 'X').

4. *Non-giving of gunnery training in aricraft 'D'*

Government sanctioned in March 1980 acquisition of additional 'M' number aircraft 'D' at a cost of Rs. 368.37 lakhs in FFE for squadron 'P' to meet the proposed increase in training tasks to be done by the squadrons, which inter alia included gunnery practice. The aircraft were received in squadron 'P' during December 1980|February 1981. On the basis of 28.8 per cent of total tasks assumed for gunnery practice, the average number of aircraft acquired for gunnery training worked out to 2 including the maintenance reserve and strike off wastages. It was, however, seen in audit that the squadron was not sanctioned to hold guns and the gunnery training was not imparted in aircraft 'D'. The Ministry stated in November 1986 that the delay in allotment of guns was due to certain technical problems and this has since been sorted out in 1985 and the guns allotted.

5. *Delay in setting up of overhaul/repair facilities for aircraft 'C' and 'F'*

Aircraft 'C' and 'F' were procured from a foreign supplier and inducted into service in Indian Navy in 1977 and 1980 respectively. A contract for the establishment of overhaul facilities at station 'N' for these aircraft with the technical assistance of the foreign supplier was concluded by the Government with the supplier in November 1981. Though the project report was received from the supplier in October 1982, the administrative approval for the connected civil works estimated to cost Rs. 435.47 lakhs was accorded by the Government only in January 1986 with probable date of completion in 270 weeks (i.e. by March 1991).

Meanwhile, equipment/documents costing Rs. 177.17 lakhs were contracted for in 1983 and 1984 and received in a stock holding depot 'O' during January 1984 and October 1985. Of the total 108 items of equipment received 11 were issued to station 'N' during October-November 1985 and the remaining equipment costing Rs. 141.05 lakhs were being held in stock holding depot 'O'. The warranty period of 12 months for the equipment had already expired. Pending the setting up of repair facilities, the overhaul/repair of all types of rotables and components of aircraft 'C' and 'F' is being done in the foreign country. The cost of such overhaul/repairs done in the foreign country so far, amounts to Rs. 4.98 crores. The Ministry stated in November 1986 that the overhaul facilities being set up at Station 'N', envisages the overhaul of only 284 types of rotables/components. The remaining rotables/components together with all airframes and aeroengines would still be required to be overhauled by a repair agency other than the Indian Navy.

6. *Simulator for aircraft 'E'*

Aircraft 'E' was inducted into service in the Navy during 1970-71. The procurement of a simulator for aircraft 'E' at a cost of Rs. 263 lakhs (revised to Rs. 267 lakhs in February 1977 and to Rs. 267.5 lakhs in April 1979 and finally to Rs. 290 lakhs in October 1979) was sanctioned by the Government in August 1974, but the administrative approval for the connected civil works estimated to cost Rs. 14.31 lakhs (revised to Rs. 16.22 lakhs) for the simulator at station 'M' was accorded by the Naval HQ only in October 1977 i.e., after more than 3 years. The Ministry stated in November 1986 that the contract for the simulator could be concluded only in November 1976 as the global tenders earlier received by the Director General Supplies and Disposals were rejected by the Purchase Committee being in excess of the sanctioned cost. The Ministry further stated that the drawings for the buildings were received only in 1977.

The simulator was received in November 1978, the civil works were completed in February 1979, and the installation of the simulator completed in June 1979.

Even though, the simulator was meant for training of aircrew and maintenance personnel, no course for training maintenance personnel was undertaken on the simulator until October 1986.

While submitting proposals for procurement of simulator the Naval HQ had in December 1973 stated that utilisation of the simulator would be 1,472 hours *per annum*, against which the Naval Command had fixed flying hours of 1,000 hours *per annum*. Even the reduced flying hours could not be achieved and the average utilisation was only 423 hours *per annum* during the years 1980-85. The Naval authorities attributed the under-utilisation to the poor serviceability of the simulator due to :

— inadequacy of tools and test equipment,

— shortage of spare parts,

— lack of trained technical personnel,

— frequent power failure,

— inadequacy in air conditioning.

According to the terms and conditions of the contract under which the simulator was procured, the supplier was to train Naval personnel and supply spare parts and test equipment. The Naval authorities stated in November 1981 that the list of tools, test equipment and spares submitted by the manufacturer did not include spares for computers and these were subsequently ordered. A proposal submitted in September 1981 by the Naval Command for entering into a maintenance contract for the computer of the simulator with Computer Maintenance Corporation was not approved by Government.

To overcome frequent power failures provision of a stand-by generating set for the simulator was sanctioned in May 1982 at a cost of Rs. 3.97 lakhs (revised to Rs. 5.66 lakhs in October 1982). The set was expected to be provided within 60 weeks i.e. by December 1983. The generating set which was installed in January 1985 broke down due to mechanical defects during trial runs. The Ministry stated in November 1986 that the generator was repaired and is operational.

7. *Befab Safeland Arrester Barrier* :

In December 1983, the Naval HQ sought immediate sanction of the Government for procurement of three Befab Safeland Arrester Barriers (BSAB), one each for installation at either end of the runway at Station 'N' and the third as a stand-by set. BSAB was considered an inescapable and mandatory safety requirement. Government sanctioned in December 1983, the procurement of 3 systems of BSAB, with two sets of spare parts at a total cost of Rs. 46 lakhs (Rs. 38 lakhs in FFE) from a foreign firm. The Naval HQ raised an indent for the same in February 1984. A contract was concluded with the firm in March 1984 for the supply of the equipment at a cost of Rs. 36.5 lakhs and the sets were received in a Store Depot during March/May 1985. Even before placing the indent for the item in February 1984, a proposal to further extend the runway due to acquisition of a heavier aircraft was under consideration of the Navy and the administrative approval for the work services for extension of the runway was accorded by the Government in September 1984, with probable date of completion of the work services as March 1989. The equipment procured at a cost of Rs. 36.5 lakhs cannot be installed till the completion of extension of runway and is therefore, lying in the stock of the stores Depot. The warranty period of 12 months for the equipment had already expired.

8. 50 *Watt VHF Transreceivers*

In July 1982 Government sanctioned the procurement of 17 VHF transreceivers 50 Watts Air Traffic Control Communication (including a reserve of two sets) from a public sector undertaking (undertaking) at an estimated cost of Rs. 36.28 lakhs, 5 each of these communication sets were to be installed in Stations 'M' and 'N', 2 for a newly developed station 'NN' and the remaining 3 at a new station proposed to be set up. The Naval HQ placed an order in August 1982 on the undertaking for supply of the above 17 sets together with accessories by 31st January, 1983. The 5 sets allotted to station 'N' were received and installed in September 1983. The remaining 12 sets costing Rs. 12.01 lakhs were received in 2 Naval Store Depots from July 1983 onwards without accessories and they could not be installed at Stations 'M' and 'NN'.

9. *Airfield Ground Traffic Barrier*

Naval HQ sanctioned in June 1983 the procurement of 10 airfield ground traffic barriers with three years' maintenance spares at a cost of Rs. 3.82 lakhs. 4 of these sets were meant for Station 'M' and the remaining 6 were for Station 'N'. These equipment were received between November 1983 and May 1984, but have not yet been installed as the civil works required for their installation were yet to be sanctioned in November 1986.

10. *Aircraft Accidents* :

46 accidents occured during 1980-85 in the 2 stations in which 12 aircraft costing Rs. 519.36 lakhs were totally lost. The largest number of accidents numbering 28.26 per cent pertained to aircraft 'E'. One of the accidents in 1983 involving aircraft 'E' was attributed to non-carrying out of an essential modification.

11. *Summing up* :

The main points brought out are :

- the authorised UE was not made available to most of the squadrons and even the available aircraft were not fully serviceable. The serviceability rate of aircraft 'E', 'F' and 'G' was consistently poor, the average serviceability during 1981-85 being less than 35 per cent;
- shortfall in performance of approved tasks were consistently high for aircraft 'E' and 'G';
- though the sanctioned UE for aircraft 'D' received in squadron 'P' during December 1980/February 1981, included 2 aircraft costing Rs. 96.12 lakhs for gunnery training, guns have been provided to the squadrons only in 1986 and as a result no gunnery training was imparted during the interim period;
- equipment costing Rs. 1.41 crores procured for setting up overhaul facilities for aircraft 'C' and 'F' received between January 1984 and October 1985, are not likely to be installed before 1991, as civil works for them were sanctioned only in January 1986 and were expected to be completed by 1991 only;
- pending the setting up of repair facilities the overhaul/repair of all types of rotables and components of these aircraft is being done in the foreign country. The expenditure so far incurred amounts to Rs. 4.98 crores;
- simulator for aircraft 'E' was procured 9 years after the aircraft was inducted in service. The utilisation of the simulator installed at a cost of Rs. 3.06 crores was much below the norms prescribed, the average annual utilisation being only 423 hours against 1,000 hours fixed;
- arrester barriers procured at a cost of Rs. 36.51 lakhs and received in March/May 1985 were not likely to be installed before March 1989, as the extension of runway which is in progress was expected to be completed by March 1989;
- 12 communication equipment costing Rs. 12.01 lakhs received in two Naval Store Depots from July 1983 onwards were without accessories and hence not fit for installation; and
- 10 airfield ground traffic barriers costing Rs. 3.82 lakhs received between November 1983 and May 1984 could not be installed so far as the civil works for the same were yet to be sanctioned.

50. Reconditioning and Essential Modernisation of two Naval frigates

Naval Headquarters (HQ) proposed in February 1974 the reconditioning and essential modernisation of two Naval frigates 'P' and 'Q' which were commissioned in the Indian Navy in 1960. The frigates were to remain operational for 10 more years after refit and were also to have increased surface to surface strike capability and enhanced antisubmarine capability. The reconditioning and modernisation of both the frigates were to be undertaken in the Naval Dockyard at station 'X' in a phased manner to be completed by 1977. The Government sanctioned in October 1974 the reconditioning and essential modernisation of frigates 'P' and 'Q' in the Naval Dockyard at an approximate cost of Rs. 13.04 crores including Rs. 4.82 crores in free froeign exchange (FFE) and Rs. 4.14 crores in non-convertible rupee payments. As the work was to be undertaken at the Naval Dockyard at station 'X', the sanctioned cost covered only the cost of equipment, machinery and essential yard material. On the basis of this sanction equipment and stores worth Rs. 12.95 crores were indented by the Navy during 1975-76. As considerable delays were experienced in procurement of required machinery and equipment from abroad, the Naval HQ decided in 1974 to have certain essential modification of weapon system carried out as Phase-I of the modernisation. These essential modifications were carried out in frigate 'Q' between November 1974 and December 1975 and in frigate 'P' between November 1976 and November 1977.

In April 1979 the Naval HQ proposed the off-loading of refit of frigate 'P' to a Public Sector Undertaking (PSU) on the grounds that :

- the Naval Dockyard was committed to undertake modernisation refit of another Naval vessel 'R' between January 1979 and December 1980 and the entrustment of the refit/modernisation of frigates 'P' and 'Q' also to the Naval Dockyard would affect the refit of vessel 'R' and the periodical refit of other ships.
- there was considerable commonality of machinery of frigates 'P' and 'Q' and of the other class of ships 'L' being built by the PSU for the Navy.

Accordingly, the Government approved in October 1979 entrustment of refit and modernisation of frigate 'P' to the PSU at an estimated cost of Rs. 4.60 crores indicated by the PSU subject to cost variations not exceeding 5 *per cent* over the estimated cost and contract to this effect was concluded with the PSU in February 1980.

Time Overrun

Though the Navy had estimated the time required for completion of the refit by the PSU as 18 to 29 months the contract contemplated the PSU to intimate the date by which work was expected to be completed, immediately on receipt of order for work. The refit of frigate 'P' though taken up in November 1979 was completed only in December 1984 barring a few items.

A study team appointed by the Naval HQ in March 1984 attributed the delay in completion of the modernisation refit to the following :

- the work package as projected to the PSU at the time of commencement of refit was far from complete and after the ship was taken in hand the work package increased substantially. Throughout the period of refit changes in the modernisation concept were ordered on the PSU resulting in rework and delay. Changes in the inspection standards caused delay in completion of the refit.
- Logistic support afforded to the refit was unsatisfactory. The spares which were procured for refit of the frigates were used in other ships instead of being kept earmarked for the project which resulted in considerable delay in the refit of frigate 'P'.
- There was a total lack of planning of work on this project by the PSU.
- The refit work was being handled by ships repair section of the PSU which normally handled repair of commercial ships only.
- The PSU claimed that there was a delay of two years in making available the drawings to them in the absence of which certain items of work had to be carried out on trial and error basis.

The Ministry of Defence (the Ministry) stated in November 1986 that :

- the actual extent of work connected with restoration of material state of ship was established only after opening up of machinery, equipment, fittings and stripping the hull for hull survey,
- a frontline ship under modernisation needed updating in all respects for operational efficiency,

— the inexperience of the Repair Section of PSU in handling the repair of warship resulted in poor quality of work and needed rework and

— the drawings of the ship needed by the PSU had to be called for from the original builders of the ship of a foreign country and its non-availability with the original builders necessitated fresh preparation of drawings.

The Naval authorities responsible for inspection and acceptance of the refit work had also reported in October 1983 that the reporting system followed by the PSU did not allow very close monitoring.

Cost overrun

Against the estimated cost of Rs. 4.60 crores sanctioned in October 1979 for the refit of frigate 'P', the PSU had preferred bills aggregating Rs. 18.04 crores for the refit work. Upto March 1986 payments totalling Rs. 16.42 crores had been authorised by the Government and paid to the PSU pending final settlement of the claim of PSU after check by internal audit. Besides the PSU had also estimated in July 1985 liabilities totalling Rs. 42.5 lakhs for certain items of work which remained to be completed.

The nearly 400 per cent escalation in the cost of refit was attributed by the study team appointed in March 1984 to :

— Gross underestimation of work package and its increase after detailed survey.

— Increase in service charges due to time overrun like dry docking for 40 months against 12 months anticipated.

— Low initial estimation by the PSU at the time of quotation.

— Inflation over the period of refit proportional to time overrun.

— Design changes to improve operational ability.

— Strike in a gas factory which affected hot work and increased the period of dry docking of the frigate.

— Cost increase in airconditioning systems entrusted to firm 'Z'.

— Lack of experience of the PSU in tackling refit|modernisation work.

The total cost of refit and modernisation of frigate 'P' was Rs. 36 crores including the cost of Navy supply items.

Increased expenditure due to misalignment of propulsion system

The PSU had in its estimates of March 1979 included Rs. 9.40 lakhs for opening, cleaning and overhauling the propulsion system. Checks undertaken by the Warship Production Superintendent in October 1981 after the overhauling of the propulsion system was completed by the PSU showed exhorbitant misalignment in the shafts. Correction of the alignment had to be taken up, for which gear boxes had to be moved. Consequently, the work connected with shafts was estimated to cost Rs. 60 lakhs in the revised estimates submitted by the PSU as against Rs. 9.40 lakhs indicated in March 1979. The Ministry stated in November 1986 that the PSU had grossly under estimated the work involved "perhaps" due to lack of experience. The Ministry also stated that the structural renewal in the aft portion was extensive.

Non-provision of Helicopter handling system

One of the facilities to be provided during the modernisation refit of frigate 'P' was a helicopter handling system. It was, however, decided in April 1984 to delete this item of work as the system was not suitable for the type of helicopter borne on the frigate. In the meanwhile, the PSU had incurred an expenditure of Rs. 4.78 lakhs on the system which became infructuous and the Naval HQ had also procured equipment costing Rs. 12.08 lakhs (FFE £ 66,937.5) which remained unused. The Ministry stated in November 1986 that the system was common to what was provided on certain other frigates and the equipment procured for frigate 'P' had been merged in stock for likely use by other ships and as war damage replacement.

Non-installation of Sonar simulator

The refit project sanctioned by the Government in October 1974 included the installation of an imported sonar simulator on board frigate 'P' at a cost of Rs. 16 lakhs. Before the order for import of the equipment was placed, the Department of Electronics offered to develop and supply the equipment at a cost of Rs. 20 lakhs including Rs. 6 lakhs in FFE. The offer of the

Department of Electronics was considered by Naval HQ to be cheaper and technically more advantageous. Government sanctioned in July 1975 the procurement of sonar simulator from the Department of Electronics instead of through import and an order was placed on Department of Electronics in December 1975 for the supply of sonar simulator at a cost of Rs. 20 lakhs (Rs. 6 lakhs in FFE) and on board spares at a cost of Rs. 1 lakh. The Naval HQ had stated in July 1976 that the simulator was expected to be delivered by December 1977 and installed in early 1978.

A prototype of the simulator was developed by the Department of Electronics and was taken on board a ship for trial in 1983 but the test could not be carried out as the ship was not free for testing of sonar. The simulator had not been supplied by the Department of Electronics till November 1986 and the modernised frigate 'P' is deficient of the simulator.

Airconditioning

The refit programme of frigate 'P' and 'Q' *inter alia* included airconditioning of the ships at a cost of Rs. 100 lakhs. The Naval HQ decided in 1978 that the airconditioning plants supplied by firm 'Z' which were identical to airconditioning plants installed in frigates constructed by the PSU were suitable for frigates 'P' and 'Q' also. A supply order was, therefore, placed in September 1978 by the Department of Defence Supplies on firm 'Z' after negotiations and without calling for open competitive quotations for manufacture, supply, installation and commissioning of complete airconditioning system on both the frigates on a turnkey basis at a fixed price of Rs. 37.26 lakhs (including FFE of £ 60,000) per frigate. The price was exclusive of customs duty. As per terms of the supply order the equipment were to be supplied within 12 to 15 months of placing the supply order and installation, testing and commissioning completed within 8 months from the date the ships were made available. For installation of the plants the first ship was to be made available September 1979 and the second by January 1981. However, due to delay in the refit of frigate 'P', it was made available for installation of the airconditioning plant only in August 1981 and frigate 'Q' was not made available as the ship was decomissioned. In 1981 the firm demanded increase in price on account of the delay in making available the frigates by way of increase in cost of imported as well as indigenous items, excise duty, labour charges etc. Pending settlement of their claims the firm stopped the work in May 1982. After protracted discussions, the firm was allowed an increase in price of Rs. 18.30 lakhs as follows :

Reasons for increase in cost	Amount of increase (Rs. in lakhs)
Increase on account of payment of excise duty at 125 per cent instead of concessional rate of 21 per cent.	6.40
Increase in cost of imported items due to delay in issue of import licence.	2.63
Increase in cost of indigenous stores and labour charges.	8.11
Increase in work	1.16
TOTAL	18.30

The PSU had also incurred an expenditure of Rs. 45 lakhs against their initial quotation of Rs. 7.5 lakhs on items of work relating to airconditioning of frigate 'P' which were not covered by the contract with firm 'Z'. The Ministry stated in November 1986 that the increase in cost was due to cost escalation of labour and material and increased scope of work in addition to initial gross under-estimation of work by PSU.

The airconditioning system was installed in frigate 'P' in February 1984 and was inspected by the Naval authorities between January 1984 and May 1985 and Inspection Certificate was issued in June 1985. Besides the increase in cost, airconditioning equipment procured at a cost of Rs. 44.28 lakhs for frigate 'Q' remained unutilised. The Ministry stated in November 1986 that the airconditioning plant was common with other ships in service and would be used for ships having similar plants.

System integration and interfacing

The modernisation of frigates 'P' and 'Q' included fitment of new equipment/system of diverse origins. Government sanction for system integration and interfacing at an estimated cost of Rs. 200 lakhs was accorded in February 1977. An agreement was entered into with another Public Sector Undertaking (Undertaking) in June 1979 to carry out the system integration and interfacing on the frigates on a cost plus basis. The budgetary cost agreed upon provisionally was Rs. 72.90 lakhs per ship including profit of 12.5 per cent.

The supply of equipment/material was completed by the undertaking in May 1984. System integration and interfacing on the frigate 'P' was undertaken by the undertaking during its modernisation. However, interfacing of 4 systems could not be completed till April 1986 with the result that functioning of these system was hindered by interference from other systems of the frigate.

In January 1986 the undertaking indicated that they had incurred a total expenditure of Rs. 157.40 lakhs against which Rs. 109.62 lakhs had been paid to them.

Avoidable expenditure on removal and re-installation of weapons and connected system

Due to delay in taking up the modernisation refit of frigate 'P', the work relating to major weapons and connected systems was taken up through the Naval Dockyard during November 1976 to November 1977 at a cost of Rs. 30 lakhs. When the refit/modernisation of the frigate through the PSU was taken up from November 1979 to 1984, the major weapons and connected systems had to be removed and reinstalled after the refit/modernisation of frigate 'P'. The PSU had incurred an expenditure of Rs. 36 lakhs towards the same as against Rs. 5 lakhs included in the estimated cost of Rs. 4.6 crores sanctioned in October 1979.

Decommissioning of frigate 'Q'

While sending the proposal for the refit/modernisation of frigate 'P' and 'Q' in February 1974, the Naval HQ had stressed the urgency of refit as the 2 frigates which were commissioned in 1960 had already completed their midlife, when major refits were due. As per the proposals, the frigates were to have a life of 10 years after the refit which was expected to be completed by 1977. The modernisation/refit of frigate 'P' which was taken up first in 1979 was, however, completed only in December 1984 and the refit of frigate 'Q' could not be taken up at all. In February 1985, the proposal for the refit/modernisation of frigate 'Q' was reviewed by the Naval HQ and the decommissioning of the frigate was recommended on ground of :

- operational ineffectiveness and deterioration in the material state of the ship, and
- modernisation on the lines of frigate 'P' would cost Rs. 45 crores plus.

Government approval was accorded in November 1985 for the decommissioning of frigate 'Q' with effect from 31st October 1985 and its disposal through Metal Scrap Trading Corporation.

Meanwhile, equipment and stores required for the refit/modernisation of frigate 'Q' had been acquired by the Navy along with the requirements for frigate 'P'. Out of equipment and stores worth Rs. 12.95 crores, acquired for the modernisation/refit of both the frigates, equipment and stores worth Rs. 7.08 crores, Rs. 16.75 lakhs and Rs. 65.90 lakhs have been utilised so far for frigate 'P', frigate 'Q' and other ships respectively, leaving unutilised equipment and spares worth Rs. 5.04 crores. In September 1985, Ministry proposed the diversion of equipment worth Rs. 1.66 crores for the modernisation of another frigate 'N' and the merger of equipment and stores worth Rs. 2.17 crores in the stock of spares for frigate 'P' and other frigates. The modernisation of frigates 'N' sanctioned in September 1985 was yet to be taken up in November 1986.

The Ministry stated in November 1986 that after the PSU's performance with frigate 'P', Naval HQ is keen to assign the work to Naval Dockyard where capacity does not exist at present.

Summing up :

The main points brought out can be summed up as follows :

- though the modernisation refit of frigates 'P' and 'Q' through the Naval Dockyard was approved in 1974 and was expected to be completed in 1977, the modernisation refit of only frigate 'P' was taken up and that too in 1979 through a public sector undertaking. Due to delayed completion of refit of 'P' in 1984 and due to lack of capacity in Naval Dockyard at station 'X', the refit of frigate 'Q' could not be taken up at all though equipment and spares for its modernisation refit had been acquired. Frigate 'Q' was finally decommissioned in 1985;
- against the contract cost of Rs. 4.6 crores subject to variation upto 5 per cent for refit of frigate 'P' the final claim of the PSU amounted to Rs. 18.04 crores;
- some of the items of stores procured for the refit were issued to other ships resulting in fresh procurement and consequent delay in refit;
- there was misalignment of the propulsion system by the PSU at the time of the refit of the frigate and the consequent rectification resulted in the cost of works related to shafts going up from the estimated cost of Rs. 9.4 lakhs to Rs. 60 lakhs;
- the decision not to have the helicopter handling system due to its non-compatibility with the helicopter borne on the frigate resulted in expenditure of Rs. 4.78 lakhs on the system becoming infructuous and equipment procured at a cost of Rs. 12.08 lakhs remaining unutilised;

— sonar simulator estimated to cost Rs. 20 lakhs which was expected to be supplied by the Department of Electronics had not been supplied till November 1986 and the modernised frigate was deficient of the simulator;

— due to delay in making available frigate 'P' to the airconditioning contractor increase in price amounting to Rs. 17.14 lakhs had to be allowed to the contractor towards cost of imported as well as indigenous items, excise duty, labour charges etc.;

— system integration and interfacing amongst various equipment had not been completed in respect of 4 systems causing hindrance in the functioning of 4 systems by interference from other systems of the frigates;

— due to non-taking up of the modernisation/refit of frigate 'P' as scheduled in 1974, the modernisation of major weapons and systems had to be taken up first during November 1976 to November 1977. The removal and reinstallation of the weapons and connected systems again during the refit of the frigate from 1979 to 1984 resulted in fresh expenditure of Rs. 36 lakhs;

— equipment and stores worth Rs. 5.04 crores acquired for the refit of frigate 'Q' remained unutilised due to the decision to decommission the frigate.

51. Establishment of repair facilities for special purpose vessels

The Indian Navy acquired from a foreign country Type 'A' vessels during January 1971 to April 1971, Type 'B' vessels during February 1976 to November 1977, Type 'C' vessels during December 1976 to January 1978 and Type 'D' vessels during December 1977 to June 1980. Mention was made in paragraph 49 of the Report of the Comptroller and Auditor General of India, 1974-75 Union Government (Defence Services) of the delay in the setting up of shore support facilities for Type 'A' vessels. A project estimated to cost Rs. 2.5 crores (later revised in February 1977 to Rs 3.87 crores) for the setting up of repair/overhaul facilities for the engine of types 'A' and 'B' vessels was approved in January 1975 by the Cabinet Committee on Political Affairs as part of the total shore support facilities for those vessels at an estimated cost of Rs. 10.03 crores. The project based on a report submitted in mid 1973 by specialists of the foreign country envisaged setting up of a main repair shop and a test station. Administrative approval for the civil works estimated to cost Rs. 74.91 lakhs was accorded by the Government in April 1975 stipulating completion by May 1978.

In December 1975 when acquisition of Types 'C' and 'D' vessels was negotiated with the foreign country, a working protocol was signed for the creation of repair facilities for the engines of these vessels also by making additions/modifications to the project already under execution. Revised administrative approval for the civil works was accorded in November 1977 for Rs. 109.70 lakhs. Certain additional work services found necessary during execution were also sanctioned for Rs. 33.08 lakhs in February 1977. The civil works for the main repair shop were completed in November 1978 and those for the test house in January 1980.

Imported machinery and equipment required for the project were procured from the foreign country during May 1974 to March 1975 and June 1978 to December 1978. Of these, a test equipment costing Rs. 1.48 lakhs for engine of Type 'A' vessels was lost in a fire on board the ship prior to landing. The claim for recovery of the loss lodged with the shipping agent in August 1979 was rejected in November 1980 for want of original bill of lading. The Ministry of Defence (the Ministry) stated in November 1985 that the original bill of lading forwarded in July 1979 by the Naval Attache to the Embarkation Headquarters (HQ) could not be traced. The equipment imported again at a cost of Rs. 4.05 lakhs was installed in December 1983. In the interim period improvised testing procdures were followed resulting in undue delay in the overhaul of the engines.

Of the indigenous items for the procurement of which sanctions totalling Rs. 1.90 crores were issued during July 1975 to March 1977, 57 standard and 692 non-standard items were procured during April 1977 to August 1984 and 48 non-standard items had not been received upto November 1985. The workshop and the test house were commissioned with effect from February 1979 and January 1980 respectively. The Ministry stated in November 1985 that the 48 non-standard items were no longer required as the repairs were being undertaken by using suitable/alternative equipment already available in the workshop and action was being initiated by Naval HQ for shortclosing the orders for these equipments.

The project report had recommended manpower complement appropriate to the envisaged annual overhaul output of 24 engines. The Naval HQ proposed in August 1976, 15 per cent more manpower mainly for the afloat work, which was not contemplated in the project report. Manpower complement for an annual workload of 10 engines only was, however, recommended by the Naval Standing Establishment Committee (NSEC) after taking into account the anticipated repair accruals and this was sanctioned by the Government in February 1978/March 1978 for a period of 3 years. The personnel were positioned in a phased manner from April 1978 but till February 1979 they were deployed on installation work. Pending the establishment of the repair facilities 19 engines were got overhauled in the foreign country during 1972 to 1979 at a cost of Rs. 1.52 crores.

The manpower requirement was reviewed in February 1983 by the NSEC and based on its recommendations additional manpower for the overhaul of 26 engines was sanctioned in May 1985.

The proposed repair facilities were for the complete overhaul and testing of engines of all the 4 types of vessels. Upto November 1986, complete overhaul and testing were being undertaken only of engines of Type 'A', 'B' and 'D' vessels except for the dynomometer fitted in the gearbox of Type 'D' vessels. The facility for overhaul and testing of engines of Type 'C' vessels could not yet be established due to constraints of space at the chosen site and non-establishment of certain specific facilities required for overhaul of the Main Transmission Units (MTU) of these engines. A project report for a separate new facility for overhaul of MTU of Type 'C' engines and for the complete modification of the existing test house had been obtained from the foreign country by end of 1985. The Ministry stated in November 1986 that the project is to be examined and accepted in principle. Meanwhile upto 1984-85 nine engines of Type 'C' vessels were sent abroad for overhaul at a cost of Rs. 4.06 crores.

The overhaul output of engines during the years 1980-81 to 1985-86 fell short of the created capacity and the manpower deployed as indicated below :

Year	Number of engines overhauled	Percentage of shortfall in output against manpower deployed for 10 engines upto 1984-85 and 26 engines from 1985-86	Percentage of shortfall in output against created capacity for 24 engines
1980-81	4	60	83
1981-82	1	90	96
1982-83	8	20	67
1983-84	4	60	83
1984-85	7	30	71
1985-86	11	58*	54

*Shortfall is with reference to manpower sanctioned in May 1985.

The Ministry stated in November 1985 that these vessels had the most advanced diesel engines in the world and were different from engines fitted on other ship and thus required a precision of much higher order in their repair. Therefore, expertise of personnel with a thorough knowledge of the complex repair and test task could be built up only over a period of time. Further, considerable afloat work was undertaken over the years due to premature failure of engines of all types of vessels. The average number of personnel engaged on the work was stated to be approximately 50 against the total strength of 204 excluding officers. The Ministry stated in November 1986 that manpower sanctioned in May 1985 for overhaul of 26 engines would become operative only from 1986-87 due to time involved in recruitment, training etc.

As a consequence of the shortfall in the overhaul output the engines awaiting overhaul at the end of each year steadily increased as follows :

Year	Engines awaiting overhaul at the end of the year			Total
	A	B	D	
1980-81	2	1	—	3
1981-82	15	2	—	17
1982-83	16	3	1	20
1983-84	20	6	2	28
1984-85	18	6	4	28
1985-86	20	9	6	35

The increase in the repairable stock due to inadequate overhaul output and the consequent depletion of reserves of serviceable engines necessitated the import of 5 engines (3 of Type 'B' and 2 of Type 'D' vessels) from the foreign country at a cost of Rs. 178.7 lakhs. Of these, 2 engines each of Type 'B' and Type 'D' were scheduled for delivery in the first quarter of 1986 and the first half of 1985 respectively. Supplementary agreement for one engine of Type 'B' vessels was awaited in November 1985 from the foreign country.

While no scales of reserve engines specific to these vessels have been prescribed, as per the general provisioning directives issued by the Government in January 1957, the reserve of engines should have been 6 each only for Types 'A' and 'B' vessels and 3 for Type 'D' vessels. Against these, the Navy had already procured 15, 6 and 6 engines of Type 'A', 'B' and 'D' vessels as reserves. Besides, purchase of 3 and 2 engines respectively of Type 'B' and 'D' vessels had been sanctioned. The Ministry stated in

November 1986 that procurement of new engines was necessitated due to :

- expiry of service life of engines;
- pre-mature failure of many of the engines at the initial period; and
- delayed setting up of the repair facility.

Main points brought out can be summed up as :

- Even though Type 'A' vessels were acquired in 1971, overhaul facilities for their engines were established only in February 1979—January 1980.
- Meanwhile, engines of Type 'A' vessels were got repaired abroad during 1972 to 1979 at a cost of Rs. 1.52 crores.
- Though the proposed overhaul facilities envisaged the undertaking of overhaul of engines of all the four types of vessels 'A', 'B', 'C' and 'D' complete overhaul of engines of type 'A' 'B' & 'D' vessels excepting the dynomometer fitted in the gearbox of Type 'D' vessels could only be undertaken so far. Facilities for overhauling of MTU of engines of Type 'C' vessels and its testing were yet to be established in November 1986.
- The facilities for overhaul and testing of engines of Type 'C' vessels had not been set up due to constraints of space at the chosen site and non-establishment of certain specialised facilities required for the repair of MTU of these engines. A project for creating these facilities was expected to be completed only by 1989-90. Meanwhile, the engines of Type 'C' vessels were got repaired abroad at a cost of Rs. 4.06 crores till 1984-85.
- The manpower complement sanctioned upto April 1985 was only for overhaul of 10 engines per annum against 24 engines for which facilities had been created. The actual output of overhaul during 1980-81 to 1984-85 was only 4.8 engines per annum on an average and the shortfall against capacity created and manpower deployed ranged from 67 to 96 per cent and 20 to 90 per cent respectively.

- Additional manpower for the overhaul of 26 engines was sanctioned in May 1985 but there was shortfall in the actual output of overhaul of engines during 1985-86 also to the extent of 58 per cent.
- At the end of March 1986, 20 engines of Type 'A' vessels, 9 engines of Type 'B' vessels and 6 engines of Type 'D' vessels were awaiting overhaul.
- The inadequate overhaul output and the depletion in the serviceable stock of reserve engines necessitated the import of 5 new engines at a cost of Rs. 178.70 lakhs.
- Against the reserve of 6, 6 and 3 engines of Types 'A', 'B' and 'D' vessels respectively as per the norms prescribed in the general provisioning directives issued by the Government in 1957, Navy had procured 15, 6 and 6 engines respectively of Types 'A', 'B' and 'D' vessels as reserves. Besides, purchase of 3 and 2 engines respectively for Types 'B' and 'D' vessels had been sanctioned.

52. Procurement of inflatable hangars

Helicopters Type 'A' were inducted in Naval Service in 1971. In February 1980 *i.e.* eight years after induction of the helicopters, Naval Headquarters (HQ) mooted a proposal for procurement of collapsible/inflatable hangars from firm 'B' of country 'C'. The hangars were intended to provide "hangarage facilities" to the helicopters operating from Advance Landing Grounds (ALGs) in remote areas where no such facilities were available and the aircraft were parked in the open. The acquisition was considered essential and unavoidable for safe conduct of detached operations and optimum exploitation of the capabilities of the helicopters during planned exercises. The requirement of inflatable hangars was stated to be peculiar to helicopter type 'A' only. After technical evaluation of four offers, Naval HQ recommended procurement of eight hangars from firm 'B' at a cost of Rs. 38.18 lakhs. The life span of the proposed hangars was stated to be over 10 years. The hangars were required to be stored in air-conditioned spaces when not in use.

As per standing orders, proposals for introduction of new equipment valuing Rs. 5 lakhs and above are required to be considered by the Naval Equipment Policy Committee (NEPC) which is to ensure that the equipment is suitable for carrying its assigned role. In this case, however, the proposal was not got considered by NEPC on the ground that it was a one time buy and no additional procurement was contemplated in the near future. As the inflatable hangars were being introduced for the first time in Indian Navy and the Indian Air Force had no experience of this type of hangars, the Ministry of Defence (Ministry) accepted the proposal for acquisition of two hangars only at a cost of Rs. 9.87 lakhs against the eight recommended by Naval HQ. An operational indent was placed by Naval HQ on 4th July 1980 on Supply Wing of an Indian Mission abroad (SW) for arranging supply by December 1980. The SW concluded a contract with firm 'B' on 19th August 1980 for £ 54,868 (Rs. 10 lakhs) for supply by March 1981 of two hangars and associated equipment. The contract also stipulated 5 years guarantee against material deterioration while subjecting the hangars to use in Indian environmental conditions.

The consignment which was shipped on 15th May 1981 was received and cleared at station 'D' on 15th September 1981. The hangars were issued to a Naval Air Base at station 'D' in September 1981 for inspection and trials. The trials were conducted between 6th May and 17th May 1982. After trials the Officer Commanding Naval Air Base at station 'D' brought out that :

— the hangar required continuous 220V AC supply to inflate and maintain the inflation. Such supply was not likely to be available at ALGs;

— the hangar was not supposed to collapse for 6 hours but in reality it collapsed after only 4 hours. Even 6 hours time was not considered adequate;

— the hangar was found to be very heavy and should any cell collapse and fall on the aircraft it would damage the same. The weight also affected its portability;

— should a hangar collapse on the aircraft it would be impossible to remove the hangar from the aircraft unless crane/pulley blocks were available; and

— the hangar was pegged down by pegs and ropes which required firm ground. The hangar would never have adequate anchoring qualities on wet ground and sandy terrain. As such the arrangement was considered totally unsatisfactory.

HQ Naval Command, station 'D' in their recommendations stated that the hangar's disadvantages were far more than its advantages and the induction of the hangar would hamper the operational efficiency rather than increase it. Resultantly, the hangars were not put to use.

The Ministry stated in July 1986 that the hangars were erected off and on at the Naval Air Base at station 'D' where the helicopters were permanently based instead of at the ALGs as there were no prolonged detached operations from such ALGs after the hangars were procured. In the case of short detached operations when full squadron maintenance equipment are not carried, aircraft are protected from adverse weather by using canvas covers.

In July 1985, Naval HQ issued orders for use of the hangars in another Naval Command. These were yet to be transferred in March 1986. The Ministry stated in July 1986 that the delay in transfer was due to the fact that no immediate requirement was foreseen for ALG operaions in that command.

The case reveals that :

— the hangars were purchased without getting the proposal cleared from the NEPC;

— the hangars were procured without proper evaluation of their limitations and the facilities available at ALGs where these were intended to be used;

— since their receipt in September 1981 the hangars had not been put to use for the purpose for which these were procured and no guarantee was available after 5 years of procurement;

— after trials, the disadvantages of the hangars were found to be more than their advantages; and

— the expenditure of Rs. 10 lakhs incurred on their procurement has not proved fruitful.

53. Continuance of a Naval Liaison Cell after the phasing out of an aircraft.

Five aircraft of type 'X' originally acquired by the Indian Air Force from Air India were transferred in November 1976 to the Navy for the performance of specified role. The maintenance/overhaul of these aircraft was, however, continued to be got done by the Air India.

In February 1977, Government sanctioned the establishment of a liaison cell at station 'A' with a complement of 96 personnel. Additional complement of 75 personnel was sanctioned in December 1977. The functions of the liaison cell were:

- stock-holding, receipt, inspection and issue of stores of aircraft 'X',
- accounting and issue of overhaul spares pertaining to airframe of aircraft 'X',
- accounting and issue of rotables to the operating units, and
- provisioning of spares and liaison with Air India on technical matters.

The average annual flying done by the 5 aircraft during 1976 to 1983 was only 923 hours as against the 1,800 hours fixed by the Navy. From January 1984 onwards no flying was done by the aircraft as these were not air worthy. The Air India had been recommending the phasing out of the aircraft since November 1979 and the Naval Headquarters (HQ) approached the Ministry of Defence (Ministry) in February 1982 for the phasing out of 2 aircraft. Sanction of the Government for withdrawal from service and disposal of 2 aircraft through Director General of Supplies and Disposals (DGSD) was issued in September 1983, which was later revised in December 1985 to disposal through Metal Scrap Trading Corporation (MSTC). Sanction for the disposal of 2 more aircraft through MSTC was also issued by the Government in December 1985. These 4 aircraft had not been disposed of till June 1986 due to the fact that MSTC had not concluded an agreement with the Ministry for disposal of defence stores. Orders for disposal of the fifth aircraft which was grounded in January 1983 after an accident had been issued only in October 1986. 14,371 items of spares costing Rs. 42.41 lakhs pertaining to the aircraft had also not been disposed of/transferred till October 1986 even though a board convened in September 1984 had identified some items for alternate use and transfer of some other items to Air India had been approved by the Government.

With the non-flying of 5 aircraft with the Navy from January 1984, the purpose for which the liaison cell was created ceased to exist. However, sanctions of the Government for continuance of the cell with its full complement of establishment were issued from time to time, the latest sanction being for continuance upto September 1987. The expenditure towards salary of the staff employed was Rs. 38.53 lakhs from April 1984 to June 1986. This apart, an amount of Rs. 13.95 lakhs had been paid to the Air India towards rent and allied charges for the period 1984-85 and 1985-86 for the retention of the hangar hired for the liaison cell. The Ministry stated in October 1986 that until the aircraft and spares/equipment have been finally taken out of Naval responsibility and custody, it could not be said that the purpose for which the liaison cell was created ceased to exist.

To sum up, even though all the aircraft had ceased to fly from January 1984, the liaison cell created for holding stock of spares for the aircraft was continuing with its complement of 171 personnel which involved expenditure on salary amounting to Rs. 38.53 lakhs for the period April 1984 to June 1986 and rent and other allied charges amounting to Rs. 13.95 lakhs for the period 1984—86 paid to the Air India for the hangar used for the cell. Though sanction of the Government was issued for disposal of 2 aircraft in September 1983, 2 in December 1985 and one more in October 1986, the aircraft were yet to be disposed of. Sanction for utilisation/disposal of aircraft stores costing Rs. 42.41 lakhs was awaited in October 1986.

54. Non-utilisation of an imported equipment

Mention was made in paragraph 24 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1963 about the delay in testing of 6 numbers of an imported equipment costing Rs. 12 lakhs (approximately) which were received in India in September 1958 and had not even passed the stage of trials by January 1963. Since the defects which occurred during the first attempt to carry out the trials of the equipment could be rectified only by end of 1962 the first attempt to install the equipment was made only in 1963 but the yardcraft on which trials were made was found unsuitable for towing. An attempt to identify a suitable craft for towing the equipment from civilian sources was also not successful. In 1964, the acquisition/construction of suitable craft was considered by the Naval Headquarters (HQ) but the idea was dropped when it was found that it would cost about Rs. 2 crores to procure the vessels capable of handling the equipment. However, it was decided to try out the towing of the equipment in type 'A' vessel which required modification to tow the equipment. Two type 'A' vessels were modified in 1969-70 and 2 numbers of the equipment were installed and successfully tested. The other 4 numbers of the equipment were retained as strategic reserve.

Due to their large size and weight, the equipment could not be transported to any storage depot and were stored in a temporary shed of a dockyard. A Board of Officers had recommended in May 1967 the construction of a building for the storage of the equipment as signs of deterioration had been noticed during visual inspection in September 1964. However, no permanent accommodaton was constructed due to constraints of space and the equipment were kept covered by tarpaulin.

The general condition of the equipment deteriorated in 1971 and during 1974-75 the coils of the equipment were found to develop defects. Efforts were made to locate an indigenous agency to rewind the same. However, the cost of repair was estimated to be Rs. 4 lakhs as against their procurement cost of Rs. 0.69 lakh. The Naval HQ decided in July 1979 to declare the equipment as beyond economical repairs on the grounds that :

— the equipment were over 20 years old and the remaining life and continued reliability of even the generators and electronic equipment were doubtful;

— the cost of repair of the equipment was high; and

— the type 'A' vessels on which the equipment were to be embarked had outlived their lives and were to be decommissioned.

A Board of Officers was constituted in December 1979 to carry out a detailed examination of the equipment with a view to identifying the items which could be retained in stock and those to be disposed of and also to suggest alternate use. The Board was of the view that due to lack of maintenance and storage facilities and the wearing of the conductor coils the eqiupment had degenerated to a non-useable state, their repair would not be cost effective and these were of limited value to the services due to their obsolescence and the proposed decommissioning in March 1981 of the 2 type 'A' vessels which were modified in 1969-70 to tow the equipment. The Naval HQ issued orders in February 1985 for the disposal of the equipment in the best interest of the State. However, no action for the disposal of the equipment has been taken till October 1986.

The Ministry of Defence stated in October 1986 that :

— the equipment were procured in 1958 as a strategic reserve to be used on as required basis,

— having established the feasibility of fitment of 2 numbers of the equipment on modified type 'A' vessels it was apparent that if the situation so warranted other type 'A' vessels could also be modified to take the equipment but the tactical situation did not warrant installation of the equipment on the remaining type 'A' vessels,

— the equipment could not be auctioned earlier as the various components thereof were being subjected to critical examination by the Technical Staff at a Naval Store Depot, with a view to finding alternate use. As a result 10 items out of the list of items recommended for disposal have been found to be useful for other purposes.

Thus, though 6 numbers of the equipment were imported at a cost of Rs. 12 lakhs approximately, only 2 type 'A' vessels were modified for their installation and no arrangement for the fitment of 4 numbers of the equipment was made as the tactical situation did not warrant their installation. Furher due to lack of maintenance and storage facilities the condition of the equipment deteriorated beyond economical repairs. Even though the equipment were declared as beyond economical repairs by the Naval HQ in July 1979, action for their disposal had not been taken till October 1986 due to delay in identifying items which could be put to alternate use.

55. Procurement of defective Danbuoys without proper user trials

A Naval Command in 1981 directed the Naval Officer Incharge (NOIC), Station 'X' to locate a source for the indigenous manufacture of light danbuoys, which were being imported from country 'A'. The NOIC after consultation and discussion with a number of firms chose firm 'B' for the development of the item.

The NOIC reported in March 1982 that the danbuoy developed by firm 'B' had undergone successful harbour and sea trials by a class of ships 'M' and that it was in all respects superior to the imported equipment in its handling characteristics, stability and visual and radar ranging capabilities and therefore, recommended its induction for use by class 'M' ship. Considering the then acute shortage of the item, the Naval Command recommended in April 1982 to the Naval Headquarters (HQ), the procurement of 100 numbers of the equipment from firm 'B'.

The Controller of Procurement (CPRO) placed 3 local purchase orders on firm 'B' for supply of 10 numbers of danbuoys at a cost of Rs. 1,00,559 between April 1982 and January 1983. These were supplied between May 1982 and April 1983 and the Chief Inspectorate of Weapon Equipment/Stores (CIWS), after inspection of the equipment in February 1983 as per the firm's drawings, wanted user trials to be conducted as the equipment was indigenously manufactured for the first time. NOIC, however, clarified that no acceptance trials were required since they had been conducted earlier and the drawings were made and approved only after satisfactory acceptance trials. On the basis of this clarification, the danbuoys were accepted in consultation with users.

Meanwhile, Naval HQ placed an exclusive indent in January 1983 on the CPRO for procurement from firm 'B' as a proprietory article of 115 numbers of danbuoys to make good the deficiencies for class 'M' ships (25 numbers) and to cater for class 'N' ships (90 numbers). CPRO concluded a contract in March 1983 with firm 'B' for the supply of 115 numbers of danbuoys at a cost of Rs. 11.90 lakhs. The contract inter alia had a warranty clause for 12 months against defective material, workmanship and performance. The supplies were made between June 1983 and December 1983 and were accepted after joint inspection by CIWS and the users as per firm's drawings.

8 out of the danbuoys supplied during May 1982 to April 1983 were issued to 4 Naval ships in May 1983, of which 5 held by two ships were lost during exercises in June 1983 and February 1984.

In May 1984, during further trials carried out by ship 'M' in the presence of a representative of firm 'B' with two danbuoys both sank and were lost. The NOIC reported in January 1985 that 10 out of 16 danbuoys issued to different ships were lost and two major defects were noticed in them, namely, the dan cans of these were found to sink in the sea due to leaks in the can and the dan stove, a part of the equipment, was found to bend even with the application of slight force. The cans were, therefore, required to be modified and the dan stove strengthened without which these danbuoys could not be put to any operation. The cost of modification was estimated as Rs. 2,000 per piece. While, harbour trials carried out of the modified danbuoys supplied by the firm in October 1984 were found satisfactory, the sea trials carried out in November 1984 and December 1984 were found inconclusive and re-trials were considered necessary. NOIC reported in August 1985 that the trials could not be conducted due to non-availability of the representative of firm 'B'. The Naval Command directed in November 1985 that the possibility of repair of these danbuoys through trade sources might be explored by the Controller of Technical Services. Further developments were awaited in November 1986. Out of 125 numbers danbuoys procured, as in November 1986, 11 numbers were lost, 12 numbers were held by ships and the balance 102 numbers were held in depot stock.

The Ministry of Defence (the Ministry) stated in November 1986 that the danbuoys were very much in use during the last three years and the modifications suggested were to improve the existing stock. The Ministry added that the tenor of NOIC's communication in January 1985 was more to put additional pressure on the supplier to incorporate modifications free of cost in the original supply of danbuoys and not so much as to write off the dans as unserviceable. The arguments of the Ministry regarding utilisation of the danbuoys is not correct as only 12 numbers of the danbuoys are held by the ships against their projected requirement of 85 and 102 were held in depot stock.

The case reveals that :

— Despite the fact that CIWS had wanted user trials to be conducted on the danbuoys as they were indigenously manufactured, no user trials were carried out on the ground that acceptance trials had been carried out on the prototype and supply order for 115 danbuoys was placed on the firm,

— though losses of danbuoys were reported during exercises in June 1983 and in May 1984 no action was taken to invoke the warranty clause in the contract or to have the items replaced by the supplier. Instead the Naval Command had, after the warranty had expired, ordered in November 1985 to explore the possibilities of repair of danbuoys through trade sources, and

— out of the 125 danbuoys procured, 11 costing Rs. 1.14 lakhs have been lost and only 12 were held by ships against a projected requirement of 85 and 102 costing Rs. 10.55 lakhs were held in depot stock even after 3 years of procurement.

56. Non-completion of the construction of a boat due to the lending of the engine to a private club

In October 1968 Government sanctioned the construction of 8 numbers of 45 feet work boats at an estimated cost of Rs. 19.20 lakhs. The construction was to be got done within naval resources failing which through the Director General Supplies and Disposals (DGSD). In November 1968 the Naval

Headquarters (HQ) entrusted the construction of these boats to a Naval Dockyard (Dockyard) at Station 'X'. The engines required for the boats were purchased through DGSD at a cost of Rs. 4.69 lakhs and were received by the Dockyard in June 1971.

After 3 years in February 1972 the Dockyard expressed its inability to undertake the said work for want of logistics support and due to higher priority accorded to another type of boats. Thereupon, in June 1973 Naval HQ placed an operational indent on the DGSD for the construction and supply of boats through trade. However, as the Naval HQ due to financial constraints, could not provide the additional funds required for accepting the lowest quotation of Rs. 28 lakhs received by the DGSD the latter treated the indent as cancelled in December 1973. The work was thereafter re-entrusted to the Dockyard in March 1975 and construction of 7 boats was completed by April 1977. The eighth boat, which was proposed to be completed by May 1977, could not, however, be completed as the marine diesel engine procured for it at a cost of Rs. 0.59 lakh was loaned to a private club along with certain stores under orders of Government issued in July 1976. The loan issue was to enable the club to undertake the "Sail Boat expedition to Bali island" which was to commence in October 1976. The club was required to return the engine and the Naval stores by July 1977 and was to pay hire charges of Re. 1 per month. The Government gave extension for the retention of the loan issues, the last extension being upto 15th August 1982. The club was first approached by Naval HQ to return the engine in May 1982. After numerous efforts to get back the engine from the club failed, Naval HQ asked the Naval Command in January 1986 to initiate legal action against the club. The Ministry of Defence (Ministry), however, stated in November 1986 that legal action was not initiated during 1982-83 as the Naval HQ were in correspondence with the club and were trying to persuade them to return the engine without resorting to legal formalities. The club had not returned the engine and the Naval Stores upto October 1986.

Meanwhile, for want of the marine engine the hull of the eighth boat completed at the Dockyard by May 1977 at a cost of Rs. 4 lakhs had remained unutilised with the possibility of deterioration in its condition due to storage for long period. The hull was also occupying the much needed Dockyard work space of 1,000 Square feet approximately. In June 1980 Naval HQ approached the Government for according sanction for procuring a new engine for this boat; sanction was awaited in October 1986.

Against Rs. 19.20 lakhs sanctioned in October 1968 for construction of 8 boats, an expenditure of Rs. 43.07 lakhs has so far been incurred. (Rs. 38.38 lakhs on construction and Rs. 4.69 lakhs on the procurement of marine engines).

The Ministry stated in November 1986 that the case for obtaining revised Government sanction for Rs. 43.07 lakhs as against the earlier sanction for Rs. 19.20 lakhs for construction of 8 boats and for procurement of new engine would be taken up very shortly.

To sum up the case revealed the following :

- Due to the lending to a private club of the marine engine procured for the boat and its non-return by the club and Government's failure to get back the engine for more than 9 years, the hull of a boat constructed by May 1977 at a cost of Rs. 4 lakhs was lying in the Dockyard un-utilised.
- Against Rs. 19.20 lakhs sanctioned for construction of 8 boats, expenditure of Rs. 43.07 lakhs has been incurred.

57. Procurement of a defective ammunition

In October 1981, the Ministry of Defence (Ministry) approved the use of ammunition 'B' on aircraft 'A'. In December 1982, Naval Headquarters (HQ) raised an indent on Supply Wing of an Indian Mission abroad (SW) for procurement of 2,448 numbers of ammunition 'B' to meet the practice requirements of aircraft 'A' for three years from 1983-84 to 1985-86. In the indent staggered delivery at the rate of 816 numbers per year was indicated. In December 1982 itself the Navy of the foreign country had introduced ammunition 'F' for use in place of ammunition 'B' as production of ammunition 'B' had ceased. In February 1983, the Naval Inspection Directorate also informed the indentor about the supersession of ammunition 'B' by ammunition 'F' and the possibility of the supplier off-loading obsolete stock against the Naval HQ indent of December 1982. The user Directorate at Naval HQ had confirmed that ammunition 'F' was compatible with aircraft 'A' and was found acceptable in lieu of ammunition 'B'. However, the indent for ammunition 'B' was allowed to stand and procurement of ammunition 'F' was proposed to be considered after the use of ammunition 'B' for three years. The SW concluded a contract with firm 'C' in January 1983 for supply of 2,448 numbers of ammunition 'B' for Rs. 16.55 lakhs in free foreign exchange (FFE). The delivery stipulated in the contract was 800 numbers per week instead of 816 numbers per annum indicated in the indent. The entire quantity of 2,448 numbers was received by the consignee in June 1984. The consignment was, however, not accompanied by a certificate of serviceability from the manufacturer as was the normal practice. The ammunition was not subjected to inspection within a fortnight as required under rules but was subjected to inspection only in January 1985 when the certificate of serviceability was received. On inspection only 544 numbers were found serviceable and the remaining 1,904 numbers were found repairable as their nuts, bolts and retaining springs were rusted. Firm 'C' intimated in May 1985 that samples of the affected items could be forwarded to them for investigation. Till October 1986 neither the repairable stock had been repaired nor any replacement obtained from firm 'C'. 1,904 numbers of ammunition 'B' are, thus, lying in stock in repairable condition since June 1984. The serviceable stock of 544 numbers of ammunition 'B' has also not been released for use on aircraft 'A' although the certificate of serviceability was received in January 1985.

The life of the entire lot of ammunition 'B' had already expired as the expected life of the ammunition was only 2 years.

The Ministry stated in October 1986 that though the firm had agreed to receive the worst affected samples, the rusted bolts and nuts could not be recovered without making the ammunition unserviceable and the firm was therefore requested to confirm whether the complete ammunition could be sent but no reply had been received from the firm.

Ministry also stated that ammunition 'B' simulates a live ammunition "X", the indigenous development of which had been completed and was likely to be introduced into service and that since ammunition 'X' has still not been introduced into service no adverse effects have accrued.

The case reveals that :

— Ammunition 'B' which was superseded by ammunition 'F' in the foreign Navy was procured in June 1984 at a cost of Rs. 16.55 lakhs. Even though the indentor wanted the supply to be spread over 3 years, the supply order stipulated delivery spread over 3 weeks.

— The entire lot of 2,448 numbers of ammunition 'B' purchased in June 1984 has not been put to use till October 1986. Out of these 1,904 were received in rusted and repairable condition but have not been got repaired or replaced by the supplier even after the lapse of more than 2 years. The remaining 544 numbers had not been released for use as the live ammunition 'X' which they were to simulate has not still been introduced into service.

— The life of the entire lot of ammunition 'B' had already expired as the expected life of the ammunition was only 2 years.

58. Procurement of Mineral Oil

In September 1980, the Naval Headquarters (HQ) initiated a demand for procurement of 250 kilolitres of Oil Mineral type 'X' (Mineral Oil) through Supply Wing of an Indian Mission abroad (SW). The cost of the Mineral Oil was assessed at £ 0.90 per litre which was stated to be based on the last procurement price and the Professional Officer's estimate. Provision of funds of Rs. 48.60 lakhs in free foreign exchange (FFE) was got approved from the Ministry of Defence (the Ministry) in November 1980 and an indent was placed on SW in December 1980. The SW concluded the contract on 8th April 1981 at a rate of £ 0.33 per litre. As per the indent and the contract the consignee was Naval Store Depot (NSD) station 'A'. On 23rd April 1981, the Naval HQ informed the SW that 50 kilolitres of Mineral Oil was required at station 'A' and the balance 200 kilolitres at station 'B' as there were no Embarkation HQ at station 'A' and the facilities available could cater only for disembarkation of explosives. The SW accordingly amended the contract on 6th May 1981.

As per the contract Embarkation Commandant station 'B' was the landing officer for the consignment which was shipped on 24th July 1981. The vessel was berthed at station 'B' on 25th August 1981. Thereafter, the Shipping Company's reprsentative informed the Embarkation Commandant, Station 'B' that the consignment was meant to be off-loaded at station 'A' although as per documents the consignment was to be off-loaded at station 'B'. The consignment arrived at station 'A' on 28th August 1981 but it could not be got cleared immediately for want of shipping documents. These were despatched by the SW on 1st September 1981 i.e. 5 weeks after the shipment of the consignment and the same were received by the NSD at station 'A' on 19th September 1981 through the Embarkation Commandant, station 'B'. The customs formalities were completed on 25th November 1981 i.e. after three months of the arrival of the consignment and the consignment was ultimately got cleared on 27th November 1981 after paying an amount of Rs. 1.61 lakhs towards demurrage charges to the Port Trust Authorities A claim for the refund of the amount was preferred against the shipping agent but the same was not accepted.

200 kilolitres of Mineral Oil was transferred from station 'A' to station 'C' during January 1982 to January 1983 by spending Rs. 0.27 lakh as freight charges. In this process 2,931 litres of Mineral Oil costing approximately Rs. 0.17 lakh was reported as transit loss.

It was also observed that though Mineral Oil was last purchased from abroad in March 1980 at the rate of £ 0.33 per litre, while releasing funds in FFE a rate of £ 0.90 per litre was adopted, resulting in extra provision of funds to the extent of Rs. 30.78 lakhs in FFE which could have been earmarked for other demands of the services.

The Ministry stated in November 1986 that the avoidable expenditure on demurrage charges was incurred due to the lapse on the part of shipping Company and late receipt of documents.

The case reveals that:

—the consignment which as per the contract and the shipping documents was meant to be landed at station 'B' was carried to station 'A'. This coupled with the delay in despatch of the shipping documents to the port of landing and delay in clearance of consignment resulted in avoidable extra expenditure of Rs. 1.61 lakhs by way of demurrage charges.

—the change in the ultimate destination of consignment caused unnecessary handling at station 'A' besides extra expenditure of Rs. 0.27 lakh in transferring the stock to station 'C' and transit loss of Rs. 0.17 lakh between station 'A' and station 'C'.

59. Over-provisioning of Bulbs

Certain types of ships in service with the Indian Navy use bulbs electric which are not in the normal line of production in the country. The requirements of these bulbs were mainly met by imports from a foreign country. In July 1981, the Naval Headquarters (HQ) placed an indent on Department of Defence Supplies (DDS) for procurement of 2,00,000 numbers of Type 'A', 2,25,000 numbers of Type 'B' and 50,000 numbers of Type 'C' bulbs at an estimated cost of Rs. 24.25 lakhs. The quantity indented was not based on past consumption as required under the rules but on assessed consumption as intimated by the Naval Commands. Based on this indent, the DDS concluded a contract in December 1981 with firm 'P' for supply of these three types of bulbs at a cost of Rs. 24.53 lakhs excluding sales tax.

The following quantities of bulbs were supplied after inspection and acceptance to Naval Store Depots (NSD) at station 'E' and 'F' during July 1982 to October 1983:

Type of bulbs	Quantity supplied to		
	NSD(E)	NSD(F)	Total
A	1,77,686	20,147	1,97,833
B	1,96,836	24,887	2,21,723
C	41,973	5,998	47,971

The total cost of the bulbs supplied was Rs. 26.57 lakhs including sales tax and freight.

Meanwhile, based on 3 local purchase requisitions placed in June 1981 and April 1982 by the Controller of Material Planning (CMP) at station 'E', the Controller of Procurement (CPRO) placed a local purchase order (LPO) on firm 'Q' in July 1981 for supply of 3,000 numbers of Type 'C' bulbs and 2 LPOs in February 1983 on firm 'R' for supply of 10,000 and 5,000 numbers of Types 'A' and 'B' bulbs respectively, the total cost of the 3 LPOs being Rs. 1.13 lakhs. The supplies were to be made within 8 weeks from the date of placing the LPOs

Firm 'Q' supplied 2,904 numbers of Type 'C' bulbs only in November 1983 after a delay of over 2 years and firm 'R' supplied 9,920 numbers of Type 'A' bulbs and 4,880 numbers of Type 'B' bulbs in July 1983, after delays of over 3 months.

The local purchase of bulbs was, however, avoidable in view of the following:

— the CMP was aware of the contract entered into by DDS in December 1981 with firm 'P'. In respect of Types 'A' and 'B' bulbs, the supplies against the contract with firm 'P' started materialising from July 1982 onwards. At the time of placing the LPO by CPRO in February 1983 NSD at station 'E' had a stock of 1,61,509 numbers of Type 'A' bulbs and 1,27,371 numbers of Type 'B' bulbs. Therefore, the CMP who maintains the ledger accounts should have taken action to cancel the local purchase requisitions in July 1982 itself, and

— in respect of Type 'C' bulbs, the supplies against the contract with firm 'P' started materialising from February 1983 onwards whereas firm 'Q' had failed to supply the bulbs within 8 weeks of the LPO as stipulated and threfore, action should have been taken in February 1983 itself by the CMP;

CPRO to cancel the LPO placed on firm 'Q' particularly when the supplier had failed to deliver the supplies within the stipulated delivery schedule of 8 weeks.

The Ministry of Defence stated in November 1986 that :

— this lapse was on account of change in personnel and due to oversight,

— in respect of LPO placed on firm 'Q' they had problems of labour unrest and lockouts and the Department was informed about this and therefore the supplier was granted extension of time for delivery upto 30th March 1983 when the stores were inspected.

The actual issues of bulbs type 'A', 'B' and 'C' during 1981-82 to 1985-86 are given below :

Year	Type of Bulbs			Number of user ships
	A*	B@	C	
1981-82	7218	14238	30	42
1982-83	2772	13716	575	44
1983-84	2824	12601	1069	46
1984-85	10641	21783	3124	52
1985-86	30889	36666	1895	56
Average issue	10869	19800	1339	

*Includes issues against demands for type 'X' bulbs also.
@ Includes issues against demands for types 'Y' & 'Z' bulbs also.

While there was a nominal increase in the number of user ships during 1984-85 and 1985-86, there was abnormal increase in the issue of bulbs during these years, the reasons for which have not been explained.

At the end of March 1986, NSDs at stations 'E' and 'F' were holding 1,83,744 numbers of type 'A', 1,90,090 numbers of type 'B' and 46,526 numbers of type 'C' bulbs valuing Rs. 21.79 lakhs. Based on the average annual issue rate during the years 1981 to 1986 the stck of types 'A', 'B' and 'C' bulbs would last for over 16 years, 9 years and 34 years respectively.

To sum up, the case reveals that :

— the provisioning of bulbs based on assessed consumption had resulted in the NSDs holding inventory of bulbs valuing over Rs. 21.79 lakhs which will meet the requirement of navy for over 9 to 34 years.

— local purchase of bulbs valuing Rs. 1.13 lakhs was avoidable as the supplies against regular contract had materialised before supplies against local purchase orders and

— while there was only a nominal increase in the number of user ships during 1984-85 and 1985-86 there was abnormal increase in the issue of bulbs type 'A', 'B' and 'C' during these years.

60. Avoidable procurement of shoe brakes for Naval Ships

Five 'A' Class ships were held by Indian Navy, of which 3 were gifted to foreign Governments in April 1973, April 1974 and July 1974. Thus, in 1977-78 only 2 ships remained in service with Indian Navy. During December 1978, the Naval Headquarters (HQ) raised an indent on the Supply Wing of an Indian Mission Abroad (SW) for procurement of 6 numbers of shoe brakes for use in the gear box of the engines of 'A' class ships. The SW concluded a contract with a foreign firm in May 1979 for supply of 6 sets (each set consists of 12 numbers) at a cost of Rs. 2.07 lakhs. The supplies were received and taken on charge in November 1980 by a Naval Store Depot (NSD). At the time of receipt of the 6 sets the NSD already held 5 sets in stock.

In the meantime one more ship was decommissioned in June 1980 leaving only one ship in service. The 11 sets were issued by the NSD to the ship in November 1983. The ship retained one set and returned 10 sets to the NSD as 'no longer required'. The last ship was also decommissioned in March 1986. At the time of decommissioning of the last ship the NSD was holding 10 sets of shoe brakes costing Rs. 2.99 lakhs.

The Ministry of Defence stated in November 1986 that :

— although the quantity shown in the indent was 6 numbers, the SW concluded a contract for 6 sets of the item. This anomaly could not be detected by the staff dealing with the scrutiny of contract in Naval HQ as well as in lower formation;

— when indent for 6 numbers was raised in December 1978 there was no indication of the other 2 ships being decommissioned;

— while requirements of foreign Navy of one country were still being met by the Indian Navy, there had been no issue of stores to another country since 1978;

— possibilities were being explored for the utilisation of the item on other ships;

— Navy of the friendly foreign country had requested in July 1986 for spares of class 'A' ships and it was expected that the item would be issued to them and

— the quantity procured could have been utilised had the 2 ships remained in service for a longer period.

The case revealed the following :

— 72 numbers (6 sets) of shoe brakes valuing Rs. 2.07 lakhs were procured against a demand for 6 numbers.

— A quantity of 5 sets (60 numbers) was available when the indent for 6 numbers was raised.

— the 6 sets procured in November 1980 had not been used and after the decommissioning of the last ship in March 1986, 10 sets valuing Rs. 2.99 lakhs were held in stock, the utilisation of which was yet to be determined.

61. Extra expenditure on purchase of metal polish

Metal polish is an item of issue to Indian Naval Ships and establishments. The Naval Headquarters (HQ) carried out a provisioning review of this item in June 1983 and placed an indent on Director General Supplies and Disposals (DGSD) on 1st August 1983 for procurement of 89,000 tins of 180 ml metal polish. The DGSD placed a supply order for this quantity at Rs. 2.40 per tin on 26th September 1983 against the rate contract for the item wih firm 'X'. The supply was to be made by 31st March 1984 which was later extended to 31st July 1984. Meanwhile the Controller of Material Planning (CMP) raised four adhoc local purchase requisitions (LPR) on Controller of Procurement (CPRO) between 29th September 1983 and 11th April 1984 for procurement by local purchase of 23,150 tins of 250 ml metal polish.

The powers of CPRO for local purchase of items for which rate contracts exist was limited to Rs. 10,000 at a time and Rs. 50,000 in the aggregate in a year. Though the value of each of the requisitions placed by the CMP for this item on rate contract was beyond the local purchase powers of the CPRO, the CPRO issued tender enquiries for local purchase against these requisitions on four occasions between 20th January 1984 and 17th April 1984 and placed four local purchase orders at rates varying between Rs. 3.32 to Rs. 17.00 per tin (250 ml) as listed below :

Sl. No.	Date of requisition	Date of issue of tenders	No. of firms who gave quotations	Date of placing local purchase orders	Quantity ordered in tins	Rate per 250 ml. tin (Rs.)	Total value per order (Rs.)
1.	29-09-83	20-1-84	3	3-4-84	2,900	17.00	49,320
2.	21-10-83	20-1-84	3	5-4-84	2,900	17.00	49,320
3.	23-12-83	23-3-84	3	7-5-84	14,450	3.32	49,500
4.	11-04-84	28-3-84	4	26-4-84	2,900	16.80	49,000
					23,150		1,97,140

It would be seen that while the requirement was continuous, the local purchase orders were issued within a few days of each other in order to make them fall within the financial powers of the order placing authority.

These supplies materialised between June 1984 and September 1984 and involved an extra expenditure of Rs. 1.40 lakhs as compared to the price paid under the DGSD rate contract.

As no supplies materialised even after the extended date, the supply order with firm 'X' was cancelled by the DGSD and a risk purchase order was placed on firm 'Y' on 2nd April 1985 for the same quantity at Rs. 3.74 per tin of 180 ml. The difference in price (Rs. 1.19 lakhs) due to the risk purchase could not, however, be recovered from firm 'X' as under the general terms of the contract, risk purchase due to contractor's failure had to be effected within six months of the date of failure which in the instant case was not done. The supplies against this order were completed in September 1985.

The Ministry of Defence stated in November 1986 that :

— the LPRs were issued with a view to avoid stock out situation as supply against DGSD supply order did not materialise even within extended period of delivery,

— the LPRs raised were within the local purchase powers of CMP taking into account the previous DGSD rate contract rate of Rs. 2.40 per tin,

— the local purchase orders placed at the rate of Rs. 17 and Rs. 16.80 were for a superior quality. This argument of the Ministry is, however, not tenable as the DGSD purchase as well as one of the local purchases were not of superior quality polish and when the usual quality polish was adequate for meeting the requirements of the Navy there was no justification for purchase of superior quality polish costing 5 times as much as the usual quality,.

— implementation of risk purchase clause could not be carried out by the DGSD as advised by their legal advisers.

The local purchase of the polish made by the CPRO by splitting up the orders in order to bring the purchases within his powers resulted in an extra expenditure of Rs. 1.40 lakhs. Besides, the extra cost of Rs. 1.19 lakhs on the risk purchase made by DGSD could also not be recovered from the defaulting firm as the risk purchase was not made within six months of default as required under the general terms of the contract.

62. Loss due to unnecessary raising of indents for a Naval aircraft instrument

Instrument 'A' is used on aircraft 'X' which was inducted into Indian Naval Service in 1961. In 1974 country 'Y' where aircraft 'X' was manufactured, introduced instrument 'B' in place of instrument 'A' in aircraft 'X' in service with their Navy as manufacture of instrument 'A' had ceased. Both the instruments are meant to discharge the same function and despite their design changes their working details remained almost the same.

The Indian Navy which had a stock of 12 instruments 'A' (7 serviceable and 5 repairable) placed an indent in January 1978 on Supply Wing of an Indian Mission abroad (SW) for procurement of 5 instruments 'B' amongst other items. The SW concluded a contract in May 1978 with firm 'W' for supply of instrument 'B' at FF 13,844.80 each. These were received in February 1979 in a Naval Stores Depot at station 'C'.

While the contract action on the indent of January 1978 was in progress with SW, the Indian Navy raised another indent in April 1978 on SW for procurement of 10 instruments 'B'. The SW concluded a contract with firm 'Z' in October 1978 for supply of instrument 'B' at a higher rate of FF 19,146 each. The item was despatched to India in July 1979 but the same was reported not traceable at Bombay Dock. The consignment was not insured. A claim for Rs. 4,41,123.85 was preferred on the carriers in December 1979 who paid in June 1984 a sum of Rs. 1,560 only, being the maximum liability under the relevant clause in the bill of lading. In December 1985, the Ministry of Defence accorded sanction to drop the claim for the balance amount of Rs. 4,39,563.85 and to regularise the loss as loss of public money. When the Naval Headquarters was considering alternate procurement of 10 instruments 'B' lost in transit, Naval Aircraft Yard (NAY) at station 'C' reported in August 1980 that the existing stock of 11 instrument 'A' could meet the anticipated requirements and there was no need for alternate procurement.

5 instruments 'B' indented in January 1978 and received in February 1979 together with the 10 indented in April 1978 were planned to be utilised on aircraft 'X' after carrying out suitable modification. These modifications were to be carried out by NAY at Station 'C' instead of at foreign country 'Y' as the unit cost of carrying out modifications in India was considered much cheaper. With the loss of consignment of 10 instruments 'B' the modification plan was reviewed and was held in abeyance.

In August 1986, the Indian Navy had a stock of 8 instruments 'A' (5 serviceable and 3 repairable) procured prior to 1972 and 5 instruments 'B' received in February 1979. Ministry of Defence stated in November 1986 that 5 instruments 'B' received in February 1979 would be utilised only when the stock of instrument 'A' is exhausted. The issue of instrument 'A' during the period 1st April 1977 to 31st March 1986 was only 9 and there was no issue after 30th July 1983. Taking into account the average annual issues the existing stock of 5 serviceable instruments 'A' would last for another 5 years and the utilisation of instrument 'B' thereafter will depend on aircraft 'X' remaining in service.

The case reveals the following :

— instruments 'A' and 'B' are meant to discharge the same functions. Therefore the procurement of 15 instruments 'B' was unnecessary as the existing stock of instrument 'A' could meet the anticipated requirement;

— the raising of two indents within a period of 3 months had resulted in an extra expenditure of FF 5301.20 (Rs. 9,542 approximately) per instrument; the total extra expenditure being FF 53012.00 (Rs. 0.95 lakh approximately) for 10 numbers;

— 5 instruments 'B' procured at a cost of FF 69224.00 (Rs. 1.25 lakhs approximately) in 1978 had not been utilised; and

— the consignment of 10 instruments 'B' valued at Rs. 4.41 lakhs was lost but only Rs. 0.02 lakh could be recovered from the carrier.

63. Overpayments of interest on deposits under Compulsory Deposit Scheme

Under the Additional Emoluments Compulsory Deposit (Government Employees) Scheme 1974 as amended in 1976, the compulsory deductions made from the salary of the Central Government employees earned simple interest from the first day of the month subsequent to the month to which the salary related.

Test check by Test Audit of individual ledger accounts of the Defence Combatants (Navy) and Defence Civilians-Gazetted and non-gazetted (Navy) maintained by the prescribed authorities showed that the compulsory deductions were posted in the ledger accounts in the column of the month to which the Additional Dearness Allowance pertained instead of in the column for the following month resulting thereby in overpayment of one month's interest on all the deductions. At the instance of audit the Controller of Defence Accounts (Navy) reviewed the cases of payment of interest and detected overpayments totalling Rs. 5.21 lakhs. Only, Rs. 3.47 lakhs out of the above are reported to have been recovered so far.

The Ministry of Defence stated in October 1986 that a statement of case for the irrecoverable amount of Rs. 1.74 lakhs has been sent to Naval Headquarters in November 1985 for obtaining Government sanction for regularisation.

64. Irregularities in the maintenance of Provident Fund Accounts

The responsibility for the maintenance of Provident Fund accounts of the civilians of the Indian Navy was transferred to the Controller of Defence Accounts (CDA) Navy from the Joint Controller of Defence Accounts, Meerut (JCDA) with effect from 1st April 1976 under the orders of the Controller General of Defence Accounts. The transfer was to be completed by August 1976. However, the transfer commenced only in October 1976 and was completed in September 1983.

In February 1976, the CDA, Navy promulgated a drill for maintenance of Provident Fund accounts and in April 1976, the CDA Navy issued orders for opening of Fund Cards in his office with effect from 1st April 1976.

The drill provided for :

— monthly as well as yearly reconciliation of the transactions in the fund ledger cards and the totals of broad sheets with the compiled actuals, and

— annual completion of postings in the broad sheets.

However, no reconciliation was done till December 1983 though this was pointed out by Test Audit in March/April 1978 and thereafter. The failure to carry out the monthly as well as yearly reconciliations with the compiled actuals had resulted in huge differences between the compiled actuals and the Broad sheet figures remaining unadjusted. The total difference as worked out in October 1984 by the CDA Navy was Rs. 10,25,359.55 less in debit and Rs. 56,70,583.70 excess in credit, vide details given below :

	Credit	Debit
Amount compiled for 1976-77.	8,24,48,176.30	1,79,13,833.55
Amount as per Broad sheets for 1976-77.	8,81,18,760.00	1,68,88,474.00
Amount yet to be reconciled.	56,70,583.70 (Excess)	10,25,359.55 (Less)

The excess credit would mean that more amounts have been posted in the ledger cards than the recoveries which have come through the accounts.

The Ministry of Defence stated in October 1986 that the unreconciled debits have been brought down to Rs. 0.13 lakh and the reconciliation of excess in credit has been taken up in right earnest and would be completed or the difference narrowed down by the end of 1986. The Ministry attributed the delay to acute shortage of staff.

The fact, however, remains that even after 10 years of transfer of the Provident Fund Accounts large excess credits have remained unreconciled with possible risk of over-payments to retiring or retired employees.

65. Inordinate delay in adjustment of proforma payments

In July 1973, the Ministry of Defence (the Ministry) approved the introduction on an experimental basis of a scheme for on the spot payment to suppliers by cheque upto Rs. 20,000.00 after taking delivery of stores purchased locally by Controller of Procurement (CPRO) at station 'A'.

The scheme was later approved on a permanent basis in July 1975. The salient features of the scheme were as follows :

— A bill on behalf of the supplier or a proforma bill of the supplier would be preferred by the CPRO and forwarded to the Controller of Defence Accounts (CDA), Navy along with the proposed purchase order for issue of cheque.

— The cheque received from CDA, Navy would be handed over to the supplier by the CPRO after delivery had been taken of the stores|material purchased duly inspected by the competent inspection authority.

— A stamped receipt for the cheque indicating the quantity and cost of material was to be obtained from the supplier and forwarded to the CDA, Navy.

— A final bill in settlement of the claim would be obtained subsequently from the supplier indicating the amount of the claim for the stores supplied and acknowledging the payment already made and forwarded to the CDA, Navy.

The procedure prescribed above, if followed scrupulously, would ensure that all proforma payments were adjusted within a short time and no payment would be outstanding for want of adjustment bills. However, a review of the payments made by CDA, Navy under the scheme revealed that 139 cases of proforma payments amounting to Rs. 11.42 lakhs pertaining to the period from 1979-80 to 1983-84 were outstanding for want of adjustment bills as on 30th September 1986. The yearwise details of the outstanding amount were as follows :

Year	No. of cases outstanding	Amount of proforma payments awaiting adjustment
		Rs. P.
1979-80	7	42,620.26
1980-81	39	3,03,818.18
1981-82	36	2,86,677.44
1982-83	35	3,18,302.60
1983-84	22	1,91,020.35
TOTAL	139	11,42,438.83

The Ministry stated in September 1986 that the unsatisfactory pace of clearance of advance payments was due to non-submission of adjustment bills by CPRO. The Ministry added that due to concerted efforts the outstandings had come down substantially and efforts were on hand to liquidate the same. The fact, however, remains that even after the lapse of 2½ to 6 years, these advance payments have remained unadjusted.

CHAPTER 9

OTHER TOPICS

66. Payments of fraudulent claims due to non-observance of rules

Every year the Corps of Signals is entrusted with Telephone Administrative Grant to cover charges in respect of telephones including trunk call charges, exchanges and junctions tie lines, local printing of Army telephone directories and purchase of Cardex cards or other stationery items for maintaining the records of telephone and trunk call bills etc. The stores received are to be accounted for in ledgers which are subject to audit by the Local Audit Officer (LAO) under the Controller of Defence Accounts (CDA). The authorities to whom allotments are made are responsible for watching the progress of expenditure. In order to help the Controlling authorities in monitoring expenditure, the prescribed procedure required the CDA to render monthly statements of actual expenditure to the allottees by the 25th of the following month showing serial numbers of claims admitted by his office and the amounts debited against the allotment. The CDA is required simultaneously to keep a watch on the progress of expenditure against the sanctioned allotments and bring to the notice of the allottees cases in which the progress of expenditure is abnormally heavy or unusually low. Bills of local purchase are received in the Miscellaneous section of CDA's office and after audit these are sent to the Accounts section for verification of the availability of funds and noting in the Register.

In June 1984, while scrutinising and linking the quarterly statements of actuals for January to March 1984 sent by the Accounts section of CDA 'X', the Signal Branch of an Area Headquarters (HQ) called for the payment particulars of two local purchase bills of February 1984 valuing Rs. 38,700 and Rs. 30,100 from the CDA. On receipt of photo copies of these documents, the Area HQ informed CDA on 20th June 1984 that the claims were forged. A further examination of relevant documents/registers by the CDA disclosed fraudulent payments of 41 claims amounting to Rs. 29.60 lakhs to private parties during the period January 1982 to March 1984 on account of the following :

- fictitious local printing of telephone directories and cardex registers from private parties.
- fictitious local purchase of telephone exchange including telephone pieces from a private party.
- fictitious local purchase of stationery and steel almirahs.

A Court of Inquiry convened by the Area HQ in June 1984 could not pinpoint responsibility for the fraudulent payments as the civilian witnesses did not attend. A Board of Officers convened by CDA'X' in August 1984, however, found/observed the following lapses :

(a) *On the part of Area HQ*

(i) Ledger for stores procured was not maintained.

(ii) No action was taken to scrutinise monthly statements of expenditure as well as duplicate copies of cheque-slips sent by CDA.

(iii) Additional allotments of funds for 1982-83 and 1983-84 were demanded without proper scrutiny as shown below :

	1981-82	1982-83	1983-84
		(Rs. in lakhs)	
(*i*) Initial allotment	52.00	51.50	58.50
(*ii*) Additional allotment	—	8.00	18.00
TOTAL	52.00	59.50	76.50
Recorded expenditure	51.56	64.31	76.48
Fraudulent claims	0.26	15.69	13.65

(iv) Specimen signatures of various officers dealing with the grant from time to time were not sent to the CDA.

(b) *On the part of the CDA*

(i) Prescribed specimen signatures register was not maintained.

(ii) Certified copies of receipt vouchers (CRVs) were not scheduled to LAO concerned for credit verification.

(iii) Bills for local printing and purchase of stationery were admitted without regard to financial powers.

(iv) Bills for local purchase of telephone exchanges from a private party were admitted without Government sanction.

(v) Expenditure in excess of allotment for 1982-83 was not objected to.

(vi) Expenditure statements for 1983-84 were despatched to a Command HQ erroneously.

The Area HQ requested the SPE|CBI in October 1984 to investigate the case. Till November 1986 the results of investigations were awaited.

The Ministry of Defence (Ministry) stated in November 1986 that specimen signatures of various officers dealing with the grant were not forwarded to the CDA by the Area HQ and in the absence thereof the CDA should not have made the payments. The Ministry further added that the ledgers have now been opened and the items purchased are taken on charge.

The case thus reveals that procedural lapses and non-observance of the prescribed rules by the Area HQ/CDA authorities over an extended period of time resulted in payments of fraudulent claims amounting to Rs. 29.60 lakhs.

67. Abnormal delay in the utilisation of equipment

Two units of an imported landing aid (equipment'X') costing Rs. 4.42 lakhs received in June 1970 and allotted to an Air Force Station in December 1970 were received in the Station in 1971 for installation in an Airfield.

Proposals for the acquisition of 4 acres and 10 gunthas of land required for the installation of the equipment were mooted in 1971 but agreement for the same could be arrived at only in November 1974 after protracted negotiation and correspondence between the Military Estates Officer, State Revenue authorities and the land owners. The Air Headquarters(HQ) accorded sanction in April 1976 for civil works estimated to cost Rs. 4.75 lakhs, which included Rs. 700 for hiring of land for first year.

As proposals for resurfacing and extension of the main runway at the airfield were pending consideration by the Air HQ, the civil works for installation of the equipment sanctioned in April 1976 could not be proceeded with immediately as it was felt that if the runway was extended the location of equipment'X' would require change. The work on the runway was sanctioned in October 1976 resulting in the fresh demarcation of land for installing the equipment. In the meantime, the Engineers placed supply orders in June 1976 for 4 numbers of diesel generating sets costing Rs. 1.08 lakhs. These were received in 1977 but could not be utilised till September 1984.

In early 1977, another landing aid (equipment 'Y') was installed in the airfield. The Air Command, therefore, proposed in June 1977 that equipment'X' received in 1971 would hardly be of any additional operational advantage and should therefore be transferred to some other station. However, after review in January 1978 the Air Command decided to retain and install the equipment at the original station.

In August 1978 Air HQ directed the Air Command to examine the feasibility of transfer of the equipment'X' to another station. In October 1978 the Air Force station indicated that since the manufacture of equipment'X' had been discontinued by the foreign country, the operation|maintenance of the equipment would become difficult due to inadequate spare backing. The transfer of the equipment to another station was, however, shelved in December 1978 and it was decided to retain and install the equipment.

In March 1979 a Siting Board was ordered for installing the equipment, but it was stated that it had not been finalised. Another Board was held in March 1982 and its proceedings were approved by Air HQ in September 1982. Government sanction for permanent acquisition of land for the project was accorded in January 1983.

In July 1983 the Air Force Station reiterated the need for transferring the equipment to some other station for the following reasons :

(i) The equipment'Y' installed in 1977 had become operational and served the need of the Airfield.

(ii) The cost of operation and maintenance of the equipment 'X' received in 1971 would be of the order of Rs. 3 lakhs to 4 lakhs annually with hardly any additional operational advantage.

In October 1983, the Air Command approached the Air HQ for cancellation of the sanctions for civil works and acquisition of land accorded in April 1976 and January 1983 respectively. The Air HQ|Ministry cancelled the sanction for civil works and acquisition of land in November 1984 and March 1984 respectively. Non-utilisation of the costly imported equipment for about 14 years was pointed out in Audit in March 1984. In the meantime the two units of equipment 'X' were transferred to two other stations in February 1984 and April 1984.

The Air Command stated in September 1984 that the equipment could not be utilised due to administrative and technical reasons and non-execution of works services. It was also stated that the generating sets would be used for other projects being planned.

The Ministry of Defence stated in February 1986 that :

- The two units are now functioning at new stations. These are intended to be maintained by using indigenous substitutes where possible and by cannibalisation where no alternative is available.
- Generating sets are proposed to be utilised for providing stand-by power supply to certain units.

The fact remains that :

- Two units of imported equipment costing Rs. 4.42 lakhs received in June 1970 to serve as landing aid remained unutilised for about 14 years. In the meantime the manufacture of equipment 'X' had been discontinued in the foreign country and superseded by a later version and its proposed operation/maintenance was reported (October 1978) to be difficult due to inadequate spare backing. The equipment was finally transferred to other units in 1984.
- Four diesel generators costing Rs. 1.08 lakhs procured in 1977 in connection with installation of equipment 'X' remained unutilised for about 8 years.

68. Loss on sale of surplus electricity

Mention was made in paragraph 42 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) 1976-77 about the installation in September 1976 of 3 generating sets of 1000 KW each (total capacity : 3000 KW including 1000KW as stand by) at a port to meet shore power requirement of visiting naval vessels and those based at the port. The paragraph mentioned that the sets were not commissioned till December 1977 and that the facilities being created (Sanctioned cost : Rs. 1.27 crores) were not expected to be utilised fully even in the near future as the power requirements at peak load of the Navy at the port were assessed in February 1977 at 390 KW for 1977 and 1978 and at 1200 KW from 1979 onwards. In reply to the audit para the Ministry of Defence (Ministry) stated in January 1978 that the power house was expected to be commissioned in April 1978 and that sale of power for civil use was under consideration.

A further examination by Audit has revealed that since power generation capacity created at the port was much in excess of the Navy's requirement, the Chief Engineer (CE) Dry Dock suggested to the Engineer-in-Chief's Branch Army Headquarters sale of surplus electricity to the local administration. The CE further stated that the cost of generation would be about Re. 0.75 per unit which might go up to Re. 0.83 per unit in 1980. As the local administration was prepared to pay only at Re. 0.32 per unit provided 700 KW power was made available for a period of 7 years, the resultant loss would have to be borne by the Ministry. The Naval power house was put into commission on 31st March 1978. In May 1978, the Naval Headquarters intimated that Government had agreed in principle to the proposal for sale of electricity at a provisional rate of Re. 0.40 per unit to the local administration. In June 1979 the Ministry accorded sanction for sale of electricity at Re. 0.40 per unit (maximum demand : 700 KW) to the local administration for 7 years. The validity of his sanction was further extended by the Ministry in February 1986 for another five years with effect from 21st June 1985. Between 22nd June 1978 and March 1985 the local administration was supplied 197.42 lakh units of electricity. The difference between the cost of generation ranging between Re. 0.53 to Re. 0.97 per unit and the sale price of Re. 0.40 per unit for 197.42 lakh units till March 1985 worked out to Rs. 208.89 lakhs.

It would be seen from the position indicated below that the major portion of the electricity produced was supplied to the local administration :

Year	Total No. of units generated	No. of units sold to local administration
	(in lakh)	(in lakh)
1978-79 (from 22-6-1978)	38.79	29.18
1979-80	46.54	35.22
1980-81	43.43	30.21
1981-82	39.22	26.23
1982-83	43.80	25.44
1983-84	42.98	24.09
1984-85	40.24	27.05

The Ministry of Defence stated in November 1986 that :

- The consideration for selling electricity to local administration was primarily with a view to purchase in turn power from them for other Defence establishments located away from the Naval power house on a mutual basis. The rates payable by the Army to local administration were 60 paise per unit for the first 50 units per KW of the connected load and 45 paise per unit thereafter. If the Naval power station was to supply power directly to the Army, the Defence Services would have to incur enormous capital cost in laying of transmission lines, apart from other administrative cost.

— This arrangement should also be considered in the overall context of development of the surrounding territory.

In this connection it may be mentioned that of 295 lakh units produced (Production cost : Rs. 450.42 lakhs) by the Naval power house during the period from June 1978 to March 1985, 197.42 lakh units (about 67 per cent) were supplied to local administration for Rs. 78.97 lakhs (@ 40 paise per unit) thus resulting in a loss of Rs. 208.89 lakhs. Against this the local administration supplied only 30.14 lakh units during the same period to the Defence units at the rates varying from 38 to 63 paise per unit.

Due to inflated assessment of the actual requirement of electricity, the Department had per force to sell surplus electricity at a rate lower than the cost of production and to incur thereby a loss of Rs. 208.89 lakhs upto March 1985.

69. Failure to recover charges for use of Defence siding

A defence siding at a railway station was established on defence land during World War II to cater for defence establishments. The cost of the siding was met from Railway outlays (Rs. 67.15 lakhs) and Defence outlay (Rs. 86.79 lakhs). Interest and maintenance charges claimed by the Railways, based on the Railway and Defence outlay, were accepted by the Defence authorities. Debits amounting to Rs. 265.82 lakhs for the period upto March 1985 claimed by the Railways as interest and maintenance charges for the siding have been accepted by the Defence.

From 1956, 1959 and 1976 onwards the siding was utilised by three Government Undertakings 'A', 'B' and 'C' respectively. According to the assessment made by a Board of Officers in December 1978 the proportion of traffic moved through the siding by these undertakings was almost the same as that of Defence. The Railway authorities pleaded their inability to reduce the Defence share of the maintenance charges and indicated in November 1978 that the matter for sharing/apportioning the maintenance charges be directly settled by Defence authorities with the undertakings.

The siding was utilised by Undertaking 'A' from 1956 onwards, without any agreement with the Defence authorities. In April 1977 it was indicated by the Railway authorities that based on the traffic moved during December 1964 to November 1965, the charges for the use of the siding should be paid in the following proportions :

Defence	34 *percent*
Undertaking 'A'	58 *percent*
Undertaking 'B'	8 *percent*

The Railways further indicated that the Defence authorities would have to claim these amounts from the Undertakings direct. In December 1978, Undertaking 'A' agreed to pay the charges subject to approval by its Ministry. However, in the same month, Undertaking 'A' went back on its earlier stand in view of the rules and procedures obtaining at various sidings operated by them. No agreement has been entered into by Defence authorities with Undertaking 'A' so far (August 1986) for payment of the charges, for use of defence sidings.

Undertaking 'B' used the siding from 1959 onwards. In 1970, an agreement was concluded by the Defence authorities with Undertaking 'B' for payment of the charges by the latter for use of defence siding. During the period 1959 to 1981 an amount of Rs. 0.32 lakh has been recovered from Undertaking 'B'.

Undertaking 'C' started using the siding from 1976 onwards. Though no agreement was concluded with it, an assurance was given by it in April 1976 under which it agreed to pay all the charges claimed by the Railways. However, the assurance did not stipulate the quantum of siding charges recoverable from the Undertaking. On 11th December 1978 Undertaking 'C' agreed to pay the charges on the number of wagons handled by them through the siding. On 27th December 1980, Undertaking 'C' indicated that since siding charges were already being recovered by the Railways, payment of separate maintenance charges to the Defence would not arise. In January 1981 the Railway authorities informed the Undertaking 'C' as well as the Defence authorities that no siding charges need be collected separately by Railways for use of defence siding by the Undertaking, and that the quantum of charges payable by Undertaking 'C' was to be decided between themselves by the Defence authorities and the Undertaking. The issue of payment of charges by the Undertaking, as well as agreement for use of the defence siding is still (August 1986) to be finalised. The amount outstanding from Undertakings 'A' and 'C' upto March 1985 was approximately Rs. 108.18 lakhs.

The Ministry of Defence (Ministry) stated in September 1986 that :

— Command Headquarters have been advised to order a Court of Inquiry to find out causes for non-conclusion of agreement with the undertakings vis-a-vis non-recovery of their proportionate share of maintenance charges.

— A case has been taken up with undertakings 'A' and 'C' for clearing the dues urgently ; otherwise the Ministry would be compelled to take up the matter with Railway Board for stopping further use of defence sidings.

— Ministry is not in a position to verify the amount recoverable from undertakings 'A' and 'C' as no records regarding movement of traffic are maintained by the Defence authorities.

The case reveals the following :

— Even though the defence siding was being used by Undertaking 'A' from 1956, no agreement exists for the recovery of its share of maintenance charges to the Defence.

— No agreement exists with Undertaking 'C' for the use of defence siding from 1976 eventhough the Undertaking had given an assurance to reimburse the charges paid to the Railways by the Defence.

— This has resulted in failure to recover dues amounting to Rs. 108.18 lakhs approximately from Undertakings 'A' & 'C' upto March 1985.

NEW DELHI
Dated the 2 1 APR 1987

(M. M. B. ANNAVI)
Director of Audit, Defence Services

Countersigned

T. N. Chaturvedi
(T. N. CHATURVEDI)
Comptroller and Auditor General of India.

NEW DELHI
Dated the 2 1 APR 1987

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