

**Report of the
Comptroller and Auditor General
of India**

for the year ended March 1997

Union Government (Defence Services)
Army and Ordnance Factories
No.7 of 1998

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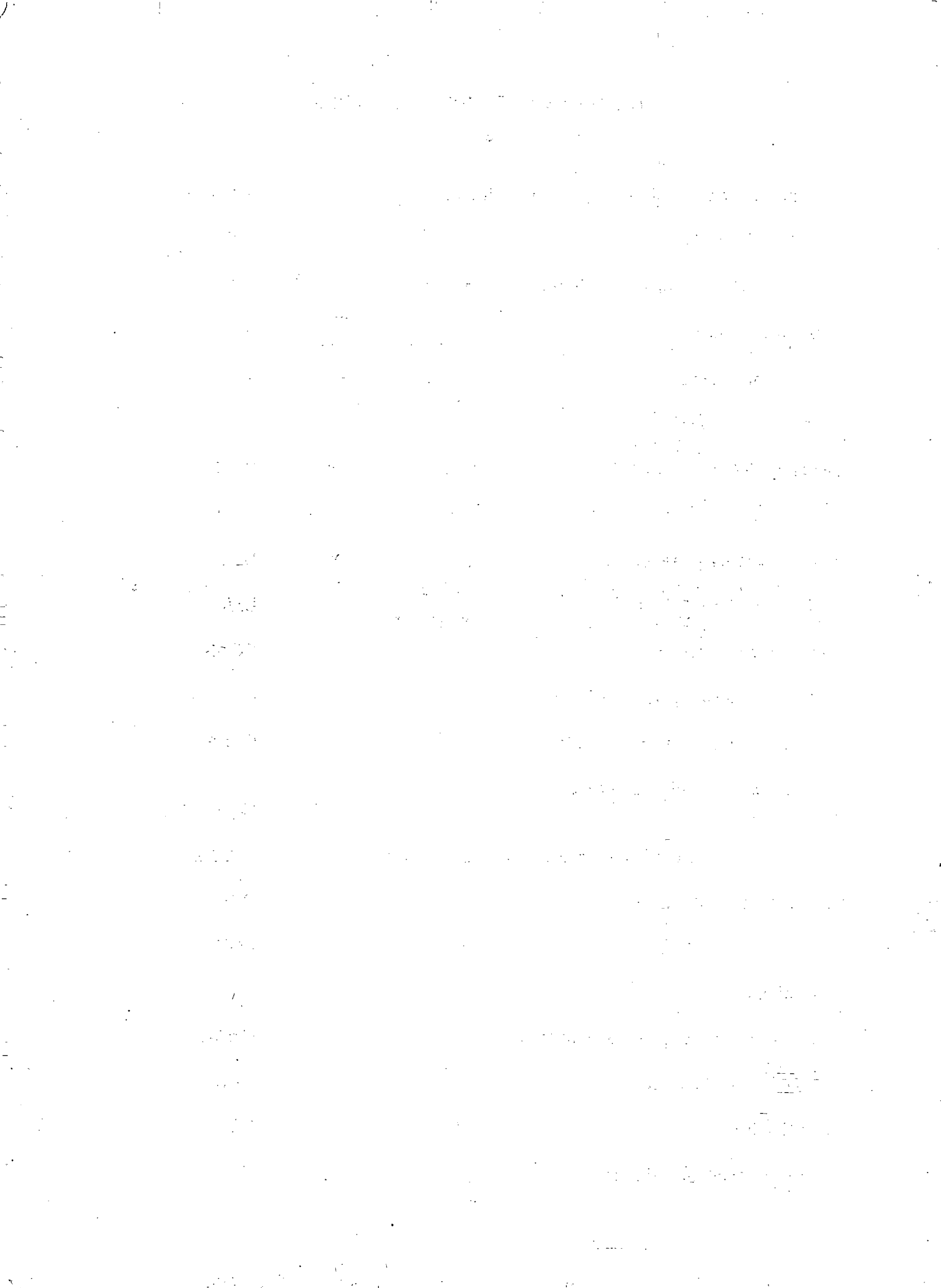
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PREFATORY REMARKS

This Report for the year ended 31 March 1997 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 1996-97 together with other points arising from the test audit of the financial transactions of Ministry of Defence, Army and Ordnance Factories including Defence Research and Development Organisations.

2. The Report includes 89 Paragraphs and 3 Reviews on (i) Design and development of main battle tank -ARJUN (ii) Development of mini remotely piloted vehicle (iii) Working of military farms. The Draft Paragraphs and Draft Reviews were forwarded to the Ministry of Defence for furnishing their reply within six weeks. However, replies to 43 Draft Paragraphs and 1 Draft Review have not been received as of December 1997 as per details given in Paragraph 69 and 92.

3. The cases mentioned in this Report are among those which came to notice in the course of audit during the year 1996-97 and 1997-98 as well as those which came to notice in earlier years but could not be included in the previous Reports.

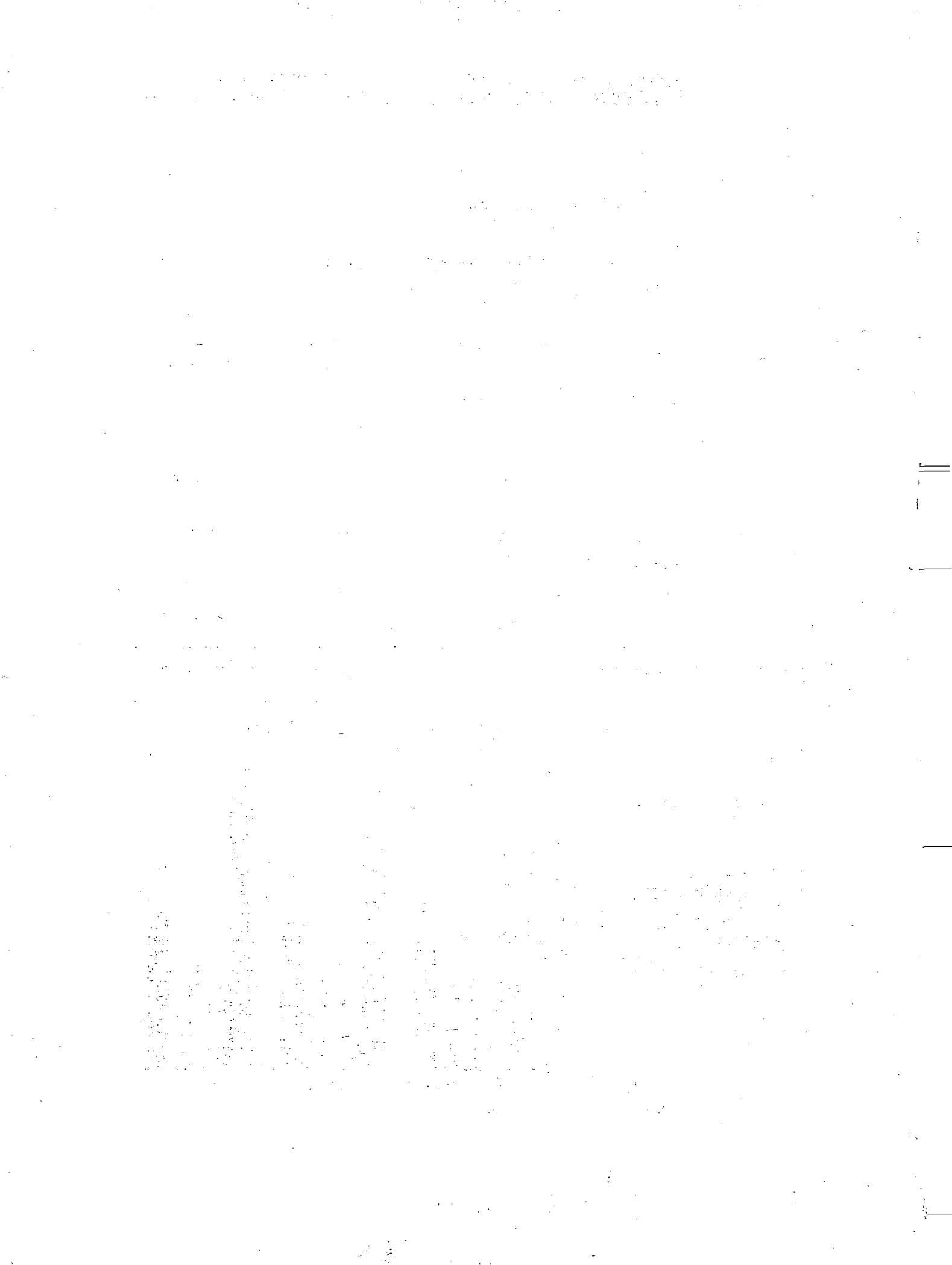


GLOSSARY OF ABBREVIATIONS

Armament Research and Development Establishment	ARDE
Army Base Workshop	ABW
Aeronautical Development Establishment	ADE
Army Headquarters	Army HQ
Army Service Corps	ASC
Action Taken Notes	ATN
Bharat Earth Movers Limited	BEML
Border Roads Development Board	BRDB
Bharat Electronics Limited	BEL
Boyavayika Machino Pekoti	BMP
Chief of the Army Staff	COAS
Central Armoured Fighting Vehicle Depot	CAFVD
Cabinet Committee on Political Affairs	CCPA
Controllerate of Quality Assurance (Ordnance Factory Vehicles)	CQA(OFV)
Combat Vehicle Research and Development Establishment	CVRDE
Chief Controller of Explosive	CCE
Central Ordnance Depot	COD
Court of Inquiry	CI
Comptroller and Auditor General of India	C&AG
Central Ammunition Depot	CAD
Chief Engineer	CE
Controller of Defence Accounts	CDA

Commander Works Engineer	CWE
Controller General of Defence Accounts	CGDA
Completely Knocked Down	CKD
Central Vehicle Depot	CVD
Director General Quality Assurance	DGQA
Defence Research and Development Organisation	DRDO
Defence Metallurgical Research Laboratory	DMRL
Director General of Border Roads	DGBR
Embarkation Headquarters	EHQ
Engineer-in-Chief	E-in-C
Foreign Exchange	FE
Garrison Engineer	GE
General Officer Commanding	GOC
General Manager	GM
General Electric Company Limited	GEC
General Staff Qualitative Requirement	GSQR
Haryana State Electricity Board	HSEB
Headquarters	HQ
Indian Naval Ship	INS
Infantry Combat Vehicle	ICV
Junior Commissioned Officers	JCOs
Letter of Intent	LOI
Military Engineer Services	MES
Major General Army Ordnance Corps	MGAOC

Master General of Ordnance	MGO
Maharashtra State Electricity Board	MSEB
Ministry of Defence	Ministry
Military College of Electrical & Mechanical Engineers	MCEME
Military Farm	MF
Ordnance Factory Board	OFB
Public Accounts Committee	PAC
Public Sector Undertaking	PSU
Punjab State Electricity Board	PSEB
Research and Development	R&D
Senior Surveyor of Works	SSW
Special Surplus Stores Disposal Committee	SSSDC
Superintending Technical Examiner	STE
State Bank of India	SBI
Tank Fire Control System	TFCS
Tender Purchase Committee	TPC
United States of America	USA
Vehicle Factory, Jabalpur	VFJ
Vehicle Research and Development Establishment	VRDE



OVERVIEW

Accounts of the Defence Services

The total budget provision for the Defence Services under the five Demands for Grants was Rs 30994.86 crore for the year 1996-97 against which the total actual expenditure aggregated to Rs 30545.27 crore. The Ministry obtained supplementary Grants totalling Rs 2074.56 crore. Savings of Rs 430.28 crore occurred against the total budget provision of Rs 8936.75 crore in the voted section of Grant No. 21 Capital outlay on Defence Services which calls for an explanatory note to PAC. In four grants 16 *per cent* to 29 *per cent* of the total expenditure was incurred in the month of March 1997.

(Chapter I)

Questionable deal

Ministry concluded a contract with a foreign country for import of TFCS ignoring the prevailing political and unstable conditions in that country. Despite advance payment of Rs 27.63 crore made in October 1991, the foreign country failed to supply the TFCS and the Ministry also failed to encash the bank guarantee rendering the recovery of Rs 27.63 crore doubtful.

(Paragraph 16)

Loss of ammunition due to improper storage

Failure of Army authorities to provide proper storage facilities had rendered ammunition worth Rs 61.30 crore as major repairable and Rs 8.27 crore as unserviceable.

(Paragraph 15)

Extra expenditure on modification of radar

The Ministry accepted foreign technology for updating of radars which was a costlier option as compared to indigenous one which involved extra expenditure of Rs 208 crore.

(Paragraph 14)

Abnormal delay in repair/overhaul of tanks

Vijayanta Tanks/BMPs valued at Rs 391 crore were lying with a CVD and a Mechanised Unit for want of overhaul/repairs for the last 8 to 14 years affecting operational efficiency and defence preparedness.

(Paragraph 29)

Procurement of defective radars

Five Radars costing Rs 21.69 crore procured from a PSU found to have faulty design had resulted in their lying in defective condition for the last three years.

(Paragraph 17)

Design and development of main battle tank - Arjun

(Main Battle Tank Project sanctioned in May 1974 envisaged the manufacture of prototypes and their trials by the Army to be followed by trickle production and thereafter bulk production by 1984. This time frame was not adhered to and was revised from time to time and as per the last revision bulk production was to commence in 1990 after manufacture of pre-production series of tanks and its trials.) However as of November 1997 clearance for bulk production of MBT was yet to be given by the Army. (The actual expenditure booked at the time of closure of the project in March 1995 was Rs 307.48 crore. Subsequently, two supplementary projects costing Rs 41.98 crore for product support and modifications to MBT were sanctioned without CCPA approval and would result in underwriting the project cost of MBT to this extent.)

Though the automotive trials of prototypes carried out by the Army revealed major deficiencies, Ministry gave clearance for production of Pre-production series (PPS) tanks without first sorting out the deficiencies. 15 PPS tanks which were subjected to extensive user and troop trials upto Summer of 1997 failed to meet fully even the bottom line parameters of the user. The Army had also pointed out the mismatch between engine and transmission of MBT and performance of the Fire Control System not being as per requirement. According to the Army the overall reliability of MBT Arjun was far from satisfactory. The Defence Research and Development Organisation however, contended that the Summer trials of 1997 clearly met eight out of ten parameters but had agreed to make efforts for changes/requirements which can then be incorporated in due course in the Limited Series Production.

Despite Army's reservations regarding MBT in its present form and even though a fully integrated PPS tank was yet to be successfully evaluated by the Army, the Ministry in August 1996 sanctioned the manufacture of 15 numbers of Limited Series Production tanks by Ordnance Factory Board at an estimated cost of Rs 162 crore without obtaining CCPA's approval.

In view of MBT's large size and weight special wagons and trailers are required for its transportation by rail and road. Use of special wagons for transportation by rail will entail payment of 150 *per cent* more than the normal charges for the transportation of even empty wagons.

MBT Arjun configured around the present design would require 16 additional three ton vehicles and 45 personnel per regiment to sustain its operational mobility,

(Paragraph 26)

Development of mini remotely piloted vehicle

Remotely Piloted Vehicle (RPV), an operational requirement of Army sanctioned in October 1991 for design and development by Defence Research and Development Organisation and scheduled for completion by March 1995 was delayed by more than 33 months as of December 1997 and a further delay of 12 months is anticipated. The extension of the completion date indicates over optimism on the part of DRDO in the design and development fields.

20 Developmental flights carried out upto June 1997 revealed deficiencies in minimum speed and endurance and accordingly more flights are planned in view of the technological problems encountered. Consequently a fully integrated prototype has yet to be made available to the users for their full fledged evaluation.

Design of the airframe was completed only in June 1993 although Phase I development trails were scheduled from March 1993. There were shortfalls in the supply of components for five sets of the airframe by a DRDO establishment as well as delays in the supply of six airframes by a private firm - Last two airframes were supplied in August 1997.

Four different types of engines were imported for the development project before a particular type of engine was selected keeping in view the increased all up weight and the need to reduce the acoustic signature of the RPV. The indigenous engine was still under development.

The indigenous development of two systems of the payload was yet to be taken up. The import of Forward Looking Infra Red was delayed by six years on account of delays in the development of the Gimbal Payload Assembly. The import option in respect of the Infra Red Line Scan was still under study.

The slippages in the development of the RPV had resulted in the cost of the project having to be revised to Rs 48.90 crore with a FE content of Rs 15.50 crore as against the original cost of Rs 34 crore with a FE content of Rs 8 crore.

(Paragraph 27)

Working of military farms

A review of management of MFs disclosed that despite having huge infrastructure, sufficient cattle and land, MFs cultivated only 24 *per cent* of their total cultivable land and met 55 to 62 *per cent* of total requirement of fodder and the deficiency was met by local purchase of fodder worth Rs 2607 lakh during last five years.

Despite increase in herd strength MFs could meet 50 to 59 *per cent* of total requirement of milk during the period 1991-92 to 1995-96 and the deficiency was met through local purchase of milk worth Rs 6943 lakh. The local purchase rate of milk and fodder were lower than their cost of production in MFs. The production of fodder and milk is, therefore, not cost effective.

Annual accounts of MFs for the last five years had shown profit of Rs 392 lakh to 749 lakh but analysis of the accounts revealed that MFs actually suffered heavy losses ranging from Rs 747 lakh to Rs 1533 lakh which were camouflaged by artificial/inflated profit.

The continuance of MFs in their present working form is, therefore, not commercially viable and needs appropriate steps to review the set up and remedy the deteriorating situation.

(Paragraph 28)

Extra expenditure on procurement of rifles and ammunition due to failure to adequately safeguard Government interest

Failure to adequately safeguard the interest of Government in entering into a contract resulted in extra expenditure of Rs 15.94 crore on import of rifles

(Paragraph 18)

Import of defective parachutes

Parachutes imported at a cost of Rs 12.04 crore in 1995 could not be put to use due to defects and accordingly anticipated savings of Rs 14.17 crore could not accrue.

(Paragraph 19)

Loss of revenue

Though Ministry had frozen the ceiling on free consumption of electricity of JCOs/ORs in January 1983, a test check at 26 stations revealed that the Station Commanders increased the scales of free consumption of electricity resulting in revenue loss of Rs 12.61 crore.

(Paragraph 52)

Excess procurement of barrels

Non-working out of the requirement on yearly basis by Army HQ as directed by the Ministry led to excess procurement of 251 barrels valuing Rs 4.67 crore which would last for 84 years.

(Paragraph 20)

Extra expenditure due to non adherence of contract provision

Ministry's failure to insist on price reduction for supplying ammunition without self destruction mechanism despite provision to that effect in the contract resulted in extra expenditure of Rs 4.09 crore.

(Paragraph 21)

Procurement of incomplete equipment

Due to failure of COD to synchronise the procurement of complete equipment schedule to make the equipment serviceable, equipment valued Rs 2.15 crore were lying in unserviceable condition.

(Paragraph 31)

Avoidable payment of container detention charges

Failure of Air HQ/consignees in sending shipping documents to EHQ in time resulted in extra expenditure of Rs 233 lakh.

(Paragraph 30)

Avoidable expenditure on construction of single officers accommodation

A station was having 320 quarters against the authorisation of 250 quarters, despite this, by showing incorrect position in the accommodation statement, 96 more quarters were sanctioned and constructed at a cost of Rs 429.10 lakh.

(Paragraph 54)

Import of defective missiles

Failure of Army authorities to carry out within warranty period thorough inspection and serviceability test immediately on receipt of the imported missiles resulted in loss of Rs 1.65 crore.

(Paragraph 22)

Non-occupation of married officers quarters due to faulty planning

Faulty planning/wrong sequencing of the work services had resulted in 72 quarters constructed more than three to six years back not being put to use resulting in an investment of Rs 249.40 lakh remaining idle besides avoidable payment of Rs 13 lakh towards hire charges of accommodation.

(Paragraph 47)

Extra expenditure due to acceptance of higher rates

Conclusion of contract for replacement of Central Air Conditioning Plant at higher rates by a CE for similar work at the same station resulted in extra expenditure of Rs 1.10 crore.

(Paragraph 55)

Non-utilisation of imported testing equipment

300 Wattmeters valuing Rs 103.26 lakh imported in July 1990 could not be utilised for more than six years for want of important accessories and maintenance spares.

(Paragraph 23)

Extra expenditure due to inordinate delay in the execution of a married accommodation project

Delay of over three years in finalising lay out plan of a married accommodation project by MES resulted in extra expenditure of Rs 210.65 lakh.

(Paragraph 39)

Avoidable expenditure due to inadequate design

The technical accommodation of RCI developed premature leakage/seepage resulting in avoidable special repairs at an expenditure of Rs 91.79 lakh.

(Paragraph 40)

Unfruitful expenditure on procurement of sub-standard hot mix plants

Acceptance of substandard plants rendered the entire expenditure of Rs 107.68 lakh incurred on its procurement and commissioning infructuous as the plants were yet to be made operationally fit.

(Paragraph 64)

Infructuous expenditure on procurement of substandard cylinders

Failure to provide proper drawings and specifications, procurement of cylinders from a firm not approved to manufacture the cylinders under GCR and with no provision in the supply order for final acceptance subject to clearance by CCE resulted in the expenditure of Rs 78.73 lakh being rendered infructuous.

(Paragraph 32)

Unauthorised payment of special duty allowances to non-entitled persons

Despite Supreme Court decision of September 1994 to stop payment of special duty allowance to civilian employees, CDA continued to make payment to ineligible employees resulting in overpayment of Rs 1.18 crore of which Rs 23.52 lakh had been recovered.

(Paragraph 33)

Non-recovery of sale value

Acceptance of Letter of Credit on a non-specified bank without proper verification by management led to non-recovery of sale proceeds worth Rs 66.26 lakh.

(Paragraph 35)

Premature failure of tubewells

Failure of MES in pointing out substandard digging of tubewells by HSMITC before taking them over led to premature failure of 11 tubewells dug at a cost of Rs 56.43 lakh. Besides an expenditure of Rs 36.63 lakh incurred on connected works had also been rendered infructuous.

(Paragraph 41)

Extra expenditure due to wrong preparation of tender

The wrong preparation of tender for construction of married accommodation for officers and airmen at Srinagar led to an extra expenditure of Rs 101.23 lakh.

(Paragraph 56)

Non-utilisation of residential accommodation

Failure of Ministry/MES to synchronise water and electricity services with the construction of the residential accommodation had resulted in non-utilisation of accommodation constructed at a cost of Rs 89.22 lakh.

(Paragraph 48)

Extra expenditure due to indecision in selecting site

Construction of married accommodation sanctioned in December 1986 and to be completed by December 1989 was completed in August 1995 after a delay of five and a half years due to delay in deciding the change in the site. The work was finally executed at the original site at an extra cost of Rs 68 lakh.

(Paragraph 42)

Non-utilisation of a building due to defective workmanship

Due to substandard execution of work, the building constructed in September 1994 at a cost of Rs 59.61 lakh was lying unutilised for more than three years for want of rectification of defects. Responsibility for acceptance of substandard work was yet to be fixed.

(Paragraph 43)

Infructuous expenditure on development of a machine

Adoption of outdated technology had resulted in the development of equipment which could not achieve the desired results and the project had to be foreclosed resulting in infructuous expenditure of Rs 75.79 lakh.

(Paragraph 65)

Non-utilisation of a bridge

Abnormal delay of more than 10 years in finalisation of land acquisition and construction of approach road had resulted in a bridge constructed at a cost of Rs 74.28 lakh not being utilised during the last five years besides escalation in cost of land alone by Rs 22.57 lakh.

(Paragraph 66)

ORDNANCE FACTORY ORGANISATION

Performance of Ordnance Factory Organisation

The Ordnance Factory Organisation comprising of 39 factories, with a manpower of 1.55 lakh produced more than 1126 principal items for arms, ammunition, equipment and component. The Organisation is under the administrative control of the OFB. The value of their production aggregated to Rs 3929.04 crore in 1996-97, which was 17 *per cent* higher than the value of production of Rs 3338.98 crore in 1995-96.

The net expenditure of Ordnance Factory Organisation had increased substantially over the last three years.

Production of 94 out of 289 items of completed products was behind the schedule fixed by OFB. OFB did not fix target for production of 42 completed items.

Export and civil trade activities declined during the year by 62.88 and 22.62 *per cent* respectively as compared to 1995-96. Average inventory holdings in terms of number of days exceeded the prescribed norm of 180 days consumption. Holding of finished articles and components increased by Rs 87.39 crore and Rs 56.32 crore respectively during 1996-97. In six factories, holding of finished articles and components ranged between 22.72 to 50.17 *per cent* of the total value of outturn. In seven factories, average stock holding ranged between 10 and 18.78 month's requirement, which was in excess of the prescribed norms.

(Paragraph 70)

Hydraulic Press and raw material for ICV

Import of large number of bottom plates for Infantry Combat Vehicle and premature procurement of steel to manufacture bottom plates with the help of the Hydraulic Press imported at a cost of Rs 7.17 crore, despite reduction in the production the annual target of production of the Infantry Combat Vehicle resulted in steel valued at Rs 64.32 lakh remaining unused for eight to 13 years besides the Hydraulic Press also remaining unutilised for at least five years.

(Paragraph 71)

Foreclosure of indent resulted in avoidable expenditure

Inability of Armament Research and Development Establishment and Gun Carriage Factory Jabalpur to meet the demand of Army for modifications in the lighter version of field gun developed by ARDE and produced in Gun Carriage Factory led to the foreclosure of the project after an expenditure of Rs 10.21 crore in production of 20 guns by the Gun Carriage Factory. Besides the 20 guns, which are not acceptable to the Army, the Gun Carriage Factory was holding surplus components valued at Rs 6.53 crore. Thus, the stalemate about the qualitative requirement of the gun between ARDE and Army has rendered the entire expenditure of Rs 16.74 crore unproductive.

(Paragraph 73)

Abnormal rejections in production

This Report contains three cases in which rejection of finished material/component in excess of the permissible norm led to wasteful expenditure. General Manager Metal and Steel factory Ishapore did not promptly investigate abnormal rejection in production of steel billets for shell of an ammunition and continued the production despite abnormal rejections. The cost of abnormal rejections was Rs 1.57 crore. Similar negligence by the GM Metal and Steel factory Ishapore in production of alloy steel bars led to abnormal rejection of over 65 tonne steel bar, valuing Rs 23.41 lakh. Another case of abnormal rejection of bomb bodies by Ordnance Factory Muradnagar led to waste of Rs 17.41 lakh.

(Paragraph 75, 76 & 77)

Defective manufacture

Gun and Shell Factory Cossipore utilised sub-standard shell material produced by Metal and Steel Factory Ishapore to manufacture shell of an ammunition, which were rejected due to cracks developed during filling under pressure. The defects were traced to high Boron content in the shell material. The net loss due to production of defective shell material was Rs 14.24 lakh. Similarly production of sub-standard picrite by Ordnance Factory Bhandara used in manufacture of triple base propellant resulted in the factory holding 846 tonne of material valued at Rs 1.87 crore. In another case, defective processing of blanks for manufacture of base of a tank ammunition by Ordnance Factory Ambajhari led to rejection of 2000 bases valuing Rs 22.16 lakh.

(Paragraph 74, 78 & 79)

Procurement of stores at higher rates

Ordnance Factory Ambernath and Ordnance Factory Board purchased Zinc and Aluminum ingot from Hindustan Zinc Limited and National Aluminum Company at higher price than those paid to Mineral and Metal Trading Corporation. The purchases from Hindustan Zinc Limited and National Aluminum Company resulted in extra expenditure of Rs 52 lakh.

(Paragraph 80)

Waste due to rejection of imported delay element

Import of 40000 delay elements for manufacture of fuse of the ammunition for 155 mm gun without testing the advance sample or carrying out pre-despatch inspection resulted in the entire consignment being declared defective. The total loss in this import was Rs 29.63 lakh.

(Paragraph 82)

Extra expenditure on wooden chests

Rifle Factory Ishapore purchased semi finished wooden chests at Rs 1565 each and spent another Rs 2286 on converting them into finished chests for despatch of 5.56 mm rifles. Compared to the total cost of Rs 3851 each on conversion of semi finished wooden chests, the finished chests were available from trade at only Rs 1265 each. The extra expenditure on purchase of semi finished chests and converting them into finished chests was Rs 28.59 lakh.

(Paragraph 83)

Arbitrary increase in price

Chairman OFB arbitrarily increased the price of transmission assemblies and interface items purchased from BEML. The total impact of this unjustifiable increase in price was an extra expenditure of Rs 1.76 crore. On being pointed out by Audit, the Ministry stated that Rs 1.51 crore would be recovered from the pending bill of BEML.

(Paragraph 84)

Infructuous expenditure

General Manager Vehicle Factory Jabalpur placed purchase orders and controller of quality assurance, Ordnance Factory Vehicles gave clearance for bulk production of brake actuation equipment for Shaktiman Vehicle without waiting for the outcome of performance

of the equipment produced as pilot batch. Area Inspector cleared 275 defective units supplied by the supplier. The expenditure of Rs 26.57 lakh on purchase of 370 defective brake units has been rendered wasteful.

(Paragraph 85)

Unauthorised expenditure

General Manager Field Gun Factory Kanpur purchased equipment at Rs 1.52 crore for induction furnace and spent another Rs 1.01 crore on civil works, installation and commissioning in disregard of limit on financial powers delegated to him. The General Manager purchased induction furnace item by incorrectly classifying them as replaced items, while actually these were equipment for assembling two new induction furnaces. Despite increase of the capacity by 2000 tonne with the commissioning the two new furnaces, the production of ingots has dropped.

(Paragraph 86)

Deficiency of grenade components

Ministry has taken more than three years in investigation of deficiency of 2.70 lakh empty hand grenades in Ammunition Factory Kirkee pointed out in the earlier Audit Report. Further deficiency of components of hand grenades valued at Rs 49.7 lakh was also noticed. OFB attributed the deficiency to drawal of components on temporary receipts. The delay in investigation and continued drawal of components of this sensitive item on temporary receipts raises a doubt about the efficiency of the system of maintenance of stock accounts and security of the hand grenades and its components.

(Paragraph 87)

Loss in export and civil trade

Ordnance Factory Board suffered a loss of Rs 55.49 lakh on export of blank cartridges of an ammunition. The realisation did not even cover the direct input cost of Rs 54.35 lakh. Similarly Machine Tool Prototype Factory Ambernath suffered a loss of Rs 54 lakh on civil trade.

(Paragraph 88 & 89)

Follow-up on previous Audit Reports

Ministry did not send remedial Action Taken Notes on 104 Paragraphs included in the Ordnance Factory section of the previous Audit Reports despite the recommendation of the Public Account Committee to submit them within three/four months. Out of these 27 Paragraphs were those which were included in the Audit Reports of 1990 to 1994.

(Paragraph 91)

Response of the Ministry to Draft Audit Paragraphs

Despite recommendation of the Public Accounts Committee, followed by directions of the Finance Ministry to all ministries/departments to send their comments on the Draft Audit Paragraphs, which are forwarded to the secretaries of the ministries/departments through Demi Official letters, within six weeks, Secretary Department of Defence Production and Supplies did not send the comments of the Department on 10 out of 22 Paragraphs included in the Ordnance Factory section of this Report.

(Paragraph 92)

CHAPTER I : Accounts of the Defence Services

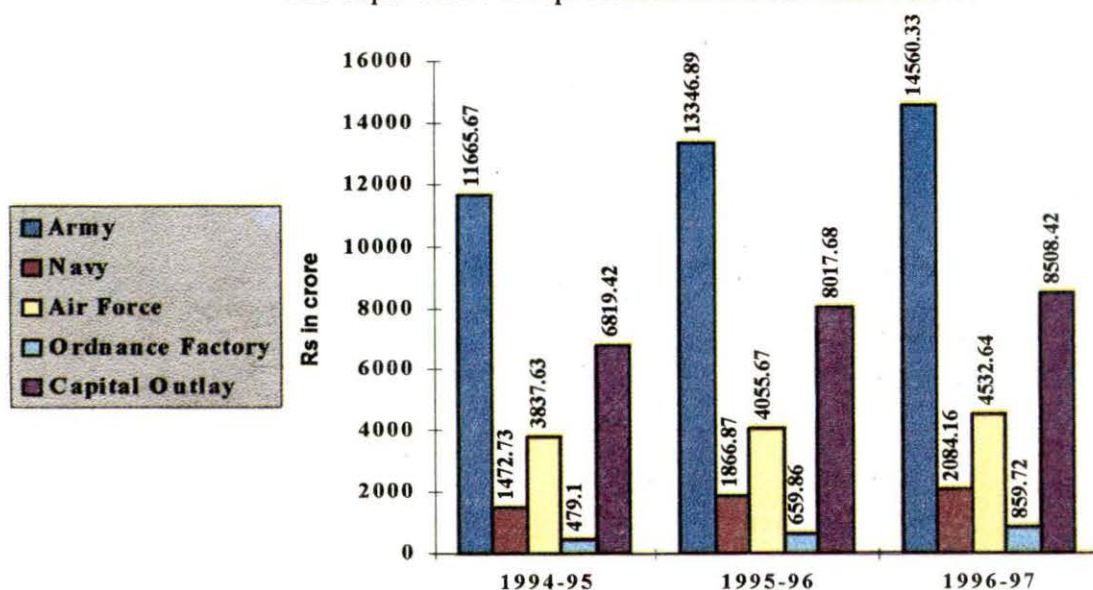
1. Defence Expenditure

The expenditure on major components of Defence activities during 1994-97 was as under:

(Rs in crore)

	1994-95	1995-96	1996-97
Army	11665.67	13346.89	14560.33
Navy	1472.73	1866.87	2084.16
Air Force	3837.63	4055.67	4532.64
Ordnance Factories	479.10	659.86	859.72
Capital Outlay on Defence Services	6819.42	8017.68	8508.42
Total	24274.55	27946.97	30545.27

The expenditure is represented in the bar chart below:



2. Appropriation Accounts

A summary of Appropriation Accounts of sums expended during the year ended 31 March 1997 compared with several sums authorised in the schedules appended to the various Appropriation Acts passed by Parliament during the year 1996-97 under Articles 114 and 115 of the Constitution of India, is given below:

(Rs in crore)

	Original Grant/app- ropriation	Supple- mentary Grant	Total	Actual expen- diture	Total Saving(-) Excess(+)
Revenue					
17-Army					
Voted	13357.10	1197.60	14554.70	14554.26	(-)0.44
Charged	10.09	0.12	10.21	6.07	(-)4.14
18-Navy					
Voted	1867.74	216.52	2084.26	2084.08	(-)0.18
Charged	2.72	3.94	6.66	0.08	(-)6.58
19-Air Force					
Voted	4057.34	474.59	4531.93	4531.92	(-)0.01
Charged	0.65	0.20	0.85	0.72	(-)0.13
20-Ordnance Factories					
Voted	680.03	179.69	859.72	859.69	(-)0.04
Charged	0.75	-	0.75	0.04	(-)0.71

Capital

21-Capital Outlay on Defence Services

Voted	8936.75	-	8936.75	8506.47	(-)	430.28
Charged	7.13	1.90	9.03	1.95	(-)	7.08

3. Saving

(i) Voted Grants

The overall savings in all five Grants of Defence Services under voted section aggregated to Rs 430.95 crore, which consisted mainly of savings in the Grant No.21 - Capital Outlay on Defence Services. Details of saving over one crore are given below:

Minor Head	Amount (Rs in lakh)	Reasons for saving given in Appropriation Accounts
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Grant No. 21

01- Army

102- Heavy and Medium vehicle	470	Non-materialisation of supplies
105-Military Farm	162	Lesser outgo than anticipated

02 - Navy

050 - Land	165	Refund of compensation of cost of private land
101 - Aircraft and Aeroengine	454	Non-materialisation of sanctions as well as certain foreign payments
103 - Other equipment	226	- do -
202 - Construction Works	322	Slow progress of work than anticipated
205 - Naval Dockyard	1051	Non-materialisation of certain foreign payments

03 - Air Force

202 - Construction Works	1048	Slow progress of works
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04 - Defence Ordnance Factories

052 - Machinery and Equipment	785	Non-materialisation as well as delay in commissioning of certain plants and machinery
111 - Works	456	Less utilisation against MES works
799 - Suspense	1789	Lower bookings

05 - Research and Development Organisation

111 - Works	1592	Non-materialisation of certain activities under special schemes
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(ii) Charged Appropriations

The overall savings of Rs 18.64 crore under charged section against overall provision of Rs 27.50 crore for all Grants constituted 68 per cent of the provision. The Grant wise saving ranged between 15.29 per cent to 98.80 per cent as shown below:

(Rs in crore)

Revenue/ Capital	Sanctioned Percentage appropriation	Actual expenditure	Saving	of saving
Grant No.17	10.21	6.07	4.14	40.55
Grant No.18	6.66	0.08	6.58	98.80
Grant No.19	0.85	0.72	0.13	15.29
Grant No.20	0.75	0.04	0.71	94.67
Grant No.21	9.03	1.95	7.08	78.41

The savings were stated to be mainly due to finalisation of less number of court cases than anticipated.

4. Non-utilisation of funds

- (a) In the following cases, the entire amount of original Appropriations during the year remained unutilised.

(Rs in lakh)

Grant No.	Minor Head	Sanctioned amount (charged)
17-Army	106-Military Farm	34.00
18-Navy	101-Pay and allowances of Navy	1.00
	111-Works	1.00
19-Air Force	101-Pay and allowances of Air Force	1.00
20-Ordnance Factories	110-Stores	30.00
21-Capital Outlay on Defence Services		
Navy	050-Land	100.00
	202-Construction works	10.00

(b) In the following case, Supplementary Grant (voted) obtained was not utilised and the entire amount of the Grant was surrendered. Thus, there was no necessity for Supplementary Grant.

(Rs in lakh)

Grant No.	Minor head	Supplementary Grant
20-Ordnance Factories	800-Other Expenditure	949.00

(c) In the following cases, supplementary Grants (voted) obtained were not utilised wholly or partially. Thus, Supplementary Grants were not assessed properly in these cases.

(Rs in crore)

Grant No. Saving	Minor Head	Supplementary Grant	
17-Army	101-Pay and Allowances of Army	612.73	51.32
	104-Pay and Allowances of civilian	71.12	1.63
	109-Inspection Organisation	45.00	17.71
18-Navy	101-Pay and Allowances of Navy	43.52	1.58
	104-Pay and allowances of civilian	33.03	1.21
	105-Transportation	5.00	0.89
19-Air Force	101-Pay and Allowances of Air Force	123.83	5.70
	110-Stores	338.32	2.17
20-Ordnance Factories	054-Manufacture	170.20	13.09

5. Savings of Rs100 crore or more

The Public Accounts Committee in para 1.24 of their 60th Report (Tenth Lok Sabha) took note of the sharp increase in the savings as compared to the sanctioned provision. The Committee desired that Ministry of Finance should take the issue seriously with appropriate measures to overcome the unfortunate situation of large

savings and also desired that detailed explanatory note in respect of savings in a Grant or Appropriation during each year involving Rs 100 crore and above be furnished to the Committee. Savings of Rs 430.28 crore occurred in the voted section of Grant No. 21:
Capital Outlay on Defence Services

Capital Voted	Sanctioned Grant	Actual Expenditure	Savings	Percentage of Saving
Grant No.21	8936.75	8506.47	430.28	4.81

Original Grant
8936.75

+

Supplementary Grant
NIL

Total Grant
8936.75

Actual Expenditure
8506.47

-

Saving
430.28

The savings were attributed by the Ministry to slow progress of works, non-materialisation of supplies, non-materialisation of certain activities under special schemes, non-materialisation of certain foreign payments due to 31 March 1997 being a closed day in those countries on account of easter Monday, non-materialisation as well as delay in commissioning of Plant and Machinery, lower bookings, etc.

An explanatory note to the PAC on savings in this Grant is called for.

6. Injudicious re-appropriation

In the following cases where re-appropriation from/to various heads were made, there were savings/excess of more than Rs 5 crore suggesting that re-appropriation made during the year were not assessed properly:

(a) Re-appropriation to heads without requirement

In the following case the original approved provision were sufficient to meet the requirement and thus, there was no necessity for re-appropriation of funds to this minor head:

(Rs in crore)

Grant No. and minor head	Sanctioned provision	Re-appropriation	Actual expenditure
17- Army 101-Pay and Allowances of Army	5808.35	(+) 11.72	5768.75

(b) Re-appropriation from heads where expenditure was more than the final provision

In the following cases, the actual expenditure turned out to more than the balance provision after re-appropriation from these heads.

(Rs in crore)

Grant No.	Sanctioned provision	Re-appropriation	Final provision	Actual expenditure	Excess with reference to final provision
17-Army					
103-Auxiliary Forces	73.21	(-)14.71	58.50	64.09	5.59
112-Rashtriya Rifles	174.16	(-)13.16	161.00	166.30	5.30
21-Capital Outlay					
01/103-other equipment	2185.42	(-)250.05	1935.37	1999.69	64.32
02/204-Naval Fleet	1531.75	(-)20.88	1510.87	1524.34	13.47

(c) **Re-appropriation to heads where expenditure was less than the final amount.**

In the following cases, the amount of re-appropriation were not utilised fully:

(Rs in crore)

Grant No.	Sanctioned provision	Reappropriation	Final provision	Actual expenditure	Savings with reference to the final provision
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20-Ordnance Factories

800-other expenditure	223.94	(+)37.45	261.39	249.39	12.00
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21-Capital Outlay on Defence Services

Sub Major Head 05 - Research and Development Organisation

111-works	437.93	(+)142.00	579.93	564.01	15.92
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7. Persistent savings

During the last three years there were persistent savings under various Grants as per details given below:

(Rs in crore)

Grant No.	1994-95	1995-96	1996-97
17-Army			
101-Pay and Allowances of Army	25.78	21.29	51.32
104-Pay and Allowances of civilians	12.82	15.65	1.63

19-Air Force

104-Pay and Allowances of civilians	6.62	5.30	0.07
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20-Ordnance Factories

001-Direction and Administration	1.20	1.06	0.55
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053-Maintenance-Machinery and equipment	1.13	0.77	1.43
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111-Works	1.43	0.15	0.47
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800-Other Expenditure	8.34	4.18	12.00
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21-Capital Outlay on Defence Services**Sub Major head 02 Navy**

101-Air craft and Aero engine	2.92	6.06	4.54
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103-Other equipments	4.74	7.66	2.26
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202-Construction works	0.75	0.25	3.22
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Sub Major Head 03 Air Force

202-Construction works	14.72	12.05	10.48
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Sub Major Head 04 Ordnance Factories

111-Works	6.28	4.06	4.56
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**Sub Major Head 05- Research and
Development Organisation**

111 - Works	2.09	12.02	15.92
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8. Persistent excess

During the last three years, there were persistent excess with reference to approved provision as per details given below:

(Rs in crore)

	1994-95	1995-96	1996-97
21-Capital Outlay on Defence Services			
Sub Major Head - 01 - Army			
103-Other equipment	35.24	1.98	64.32
Sub Major head - 02 - Navy			
204-Naval Fleet	10.58	6.82	13.47

9. Loss of stores

The amount of store losses due to other causes showed an increasing trend as compared to the previous years as per details given below:

(Rs in crore)

Year	Amount of loss due to other causes	Percentage increase
1994-95	11.48	-
1995-96	13.56	18
1996-97	40.33	197

10. Losses awaiting regularisation

Mention was made in the Controller General of Defence Accounts certificate in the Appropriation Accounts, Defence Services regarding losses awaiting regularisation for more than one year.

A review of losses awaiting regularisation revealed that there was no progress towards settlement of the old cases besides increasing trend as indicated below:

(Rs in crore)

Year	No. of cases	Amount involved
1992-93	1225	117.01
1993-94	1279	169.25
1994-95	1306	175.19
1995-96	1407	200.83
1996-97	1568	237.21

Action to review and settle these cases needs to be taken.

11. Non-recovery of the amount on account of Special flights/air lifts

The amount due for recovery on account of special flights/air lifts provided by the Air Force authorities had increased from Rs 66.46 crore as on 30 June 1996 to Rs 81.91 crore as on 30 June 1997 showing an increase of 23 *per cent*.

12. Authorisation and Expenditure

A detailed examination of the authorisation and expenditure pertaining to Grant No. 17 and 21 in respect of E-in-C's Branch and

Remount Veterinary Directorate covering the last 4 - 5 years revealed the following:

Savings

(a) Engineer-in-Chief's Branch

Minor head 111-works

(Rs in crore)

Year	Final Grant	Actual expenditure	Savings
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Major works executed under Operational Works Procedure

1993-94	30.64	30.13	0.51
1994-95	72.44	64.50	7.94
1995-96	92.00	64.25	27.75
1996-97	88.89	84.95	3.94

Other Revenue Works

1994-95	12.80	4.87	7.93
1995-96	12.50	11.11	1.39
1996-97	12.00	11.53	0.47

Maintenance - Buildings

1994-95	103.00	99.38	3.62
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Maintenance - Furniture

1994-95	19.39	17.76	1.63
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Maintenance - Miscellaneous

1994-95	10.40	5.29	5.11
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Maintenance - Special Repair - Buildings, Roads and Furniture

1994-95	41.00	33.67	7.33
1995-96	46.73	38.93	7.80

Rent for hired/leased buildings

1992-93	8.55	2.63	5.92
1993-94	8.10	2.65	5.45
1994-95	9.00	1.83	7.17
1995-96	3.21	1.75	1.46

Payment for Railway sidings and platforms

1992-93	1.35	1.15	0.20
1993-94	7.00	6.29	0.71
1994-95	5.00	4.94	0.06
1995-96	5.00	4.47	0.53
1996-97	5.00	4.72	0.28

General charges - Miscellaneous

1992-93	1.09	1.07	0.02
1993-94	1.50	1.25	0.25
1994-95	1.50	1.27	0.23
1995-96	1.50	1.32	0.18

Ground Rent - Hall of State at Pragati Maidan

1994-95	0.12	-	0.12
1995-96	0.12	-	0.12
1996-97	0.12	-	0.12

Wages and Salaries

1993-94	1.85	1.52	0.33
1994-95	2.00	1.73	0.27
1995-96	2.20	1.93	0.27

1996-97	2.40	2.39	0.01
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Tools and Plants - New Supplies

1993-94	1.50	1.11	0.39
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1994-95	2.00	1.21	0.79
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1995-96	2.50	2.02	0.48
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Tools and Plants - New Supplies - Vehicles

1992-93	1.00	0.55	0.45
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1993-94	0.90	0.17	0.73
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1994-95	1.50	0.11	1.39
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1995-96	1.54	0.60	0.94
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1996-97	4.00	0.92	3.08
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Procurement of stores for parks and divisional stock

1992-93	43.05	39.05	4.00
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1993-94	14.78	2.67	12.11
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1994-95	10.00	0.98	9.02
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1995-96	10.00	0.39	9.61
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Procurement of equipment and store for research work

1994-95	0.80	0.06	0.74
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1995-96	0.31	0.12	0.19
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Minor Head - 104 Pay and Allowances of civilians

MES - Officers

1993-94	20.50	18.90	1.60
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1994-95	25.00	20.70	4.30
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1995-96	27.00	23.23	3.77
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MES - Others

1994-95	125.00	109.08	15.92
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1995-96	125.00	122.17	2.83
1996-97	144.20	142.85	1.35

ESD - Officers

1992-93	0.24	0.17	0.07
1993-94	0.25	0.23	0.02
1994-95	0.30	0.15	0.15
1995-96	0.35	0.11	0.24
1996-97	0.12	0.11	0.01

ESD - Others

1992-93	2.70	2.40	0.30
1993-94	2.67	2.63	0.04
1994-95	2.95	2.52	0.43
1995-96	3.00	2.70	0.30
1996-97	3.00	2.89	0.11

ESD - Industrial Establishment

1992-93	3.70	2.98	0.72
1994-95	4.40	3.49	0.91
1995-96	4.80	3.91	0.89
1996-97	4.46	2.22	2.24

(b) Remount and veterinary Directorate

(Rs in lakh)

Year	Final Grant	Actuals	Savings
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Minor Head 104(E) - Pay and Allowances of Civilian

1992-93	179.66	177.43	2.23
1995-96	242.00	220.82	21.18
1996-97	270.00	251.57	18.43

Minor Head 110 - Stores - B - Animal

1992-93	10.00	0.75	9.25
1993-94	3.00	1.94	1.06
1994-95	3.00	1.70	1.30
1996-97	27.00	22.09	4.91

Excess**(a) Engineer-in-Chief's Branch****Minor Head 111 - works**

(Rs in crore)

Year	Final Grant	Actual expenditure	Excess
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Maintenance - Military Roads

1992-93	4.50	4.76	0.26
1993-94	6.00	6.05	0.05
1994-95	9.39	9.52	0.13
1995-96	8.40	10.64	2.24
1996-97	9.30	9.59	0.29

Wages and Salaries - maintenance - building, road and furniture

1992-93	56.11	57.95	1.84
1993-94	65.00	66.14	1.14
1994-95	72.00	72.82	0.82
1995-96	80.70	83.36	2.66
1996-97	91.60	92.43	0.83

Payment of tariff bill - Electricity

1992-93	150.63	156.14	5.51
1993-94	186.00	195.66	9.66
1994-95	223.00	223.10	0.10
1995-96	230.01	247.94	17.93

1996-97	263.60	292.18	28.58
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Maintenance - Refrigeration and Air Conditioning

1992-93	10.00	10.93	0.93
1993-94	7.00	7.91	0.91
1994-95	9.00	10.49	1.49
1995-96	9.00	10.12	1.12
1996-97	9.00	11.75	2.75

Maintenance - Miscellaneous

1992-93	4.20	4.54	0.34
1993-94	4.00	4.85	0.85
1994-95	5.00	5.48	0.48
1995-96	5.00	6.00	1.00
1996-97	5.00	6.06	1.06

Grant No. 21 - Army

Major - Carry over Works

1992-93	180.78	197.24	16.46
1993-94	239.30	249.33	10.03
1994-95	279.25	279.66	0.41
1995-96	292.68	301.35	8.67

(b) Remount and Veterinary Directorate

Minor head 104(E) - Pay and Allowances of Civilian

(Rs in lakh)

Year	Final Grant	Actuals	Excess
1993-94	160.00	183.92	23.92
1994-95	165.00	202.38	37.38

Persistent savings/excess are indicative of defective budget monitoring.

13. Rush of expenditure in the month of March

As per Rule 105 of Financial Regulation Part I Volume I of Defence Services rush of expenditure particularly in the closing month of the financial year is to be regarded as breach of financial regularity. Contrary to the above provision, in four Grants 16 *per cent* to 29 *per cent* of the total expenditure was incurred in the month of March 1997 as shown below :

(Rs in lakh)

Grant No.	Total Expenditure	Expenditure in March	Percentage of expenditure in March to total expenditure
17 - Army	145,60,33.16	33,63,96.99	23.10
18 - Navy	20,84,16.23	3,27,70.31	15.72
19 - Air Force	45,32,63.80	8,30,13.56	18.31
21 - Capital Outlay on Defence Services	85,08,41.63	24,26,01.71	28.51

Test check of expenditure under certain minor heads revealed that expenditure in March 1997 ranged between 17 *per cent* to 77 *per cent* of the total expenditure as per details given below :

(Rs in lakh)

Grant No.	Total Expenditure	Expenditure in March	Percentage of expenditure in March to total expenditure
17 - Army			
105-Transportation	3,42,27.13	1,17,58.00	34.35
106-Military Farms	90,51.11	23,93.13	26.44
108-Research and Development Organisation	8,81,52.74	2,17,57.53	24.68
110-Stores	48,00,40.46	13,94,87.79	29.06
111-Works	10,60,62.58	2,04,57.43	19.29
112-Rashtriya Rifle	1,66,28.99	42,55.05	25.59
113-NCC	1,50,52.77	28,07.70	18.65
800-Other expenditure	2,82,92.16	57,77.58	20.42
18 - Navy			
105-Transportation	48,10.65	7,77.67	16.17
111-Works	1,80,03.00	31,86.60	17.70
800-Other expenditure	3,02,75.49	53,98.52	17.83

19 - Air Force

105-Transportation	78,70.40	17,62.35	22.39
110-Stores	29,39,14.72	6,16,87.94	20.99
111-Works	2,95,76.83	52,53.00	17.76
200-Special Project	5,83.32	1,03.56	17.75
800-Other expenditure	68,26.55	32,07.50	46.99

20 - Defence Ordnance Factories

004-Research and Development	2,86.83	2,20.98	77.04
053-Maintenance-Machinery and Equipment	6,63.20	3,17.45	47.87
106-Renewal and Replacement	43,20.92	22,25.88	51.51
110-Stores	17,87,97.25	2,87,04.79	16.05
111-Works	28,01.42	9,59.75	34.26

21 - Capital Outlay on Defence Services

01-Army

050-Land	26,99.73	9,11.91	33.78
101-Aircraft and Aeroengines	80,09.66	50,47.29	63.02

102-Heavy and Medium Vehicles	1,91,64.02	68,90.59	35.96
103-Other equipment	19,99,68.54	4,81,81.82	24.09
105-Military Farms	87.62	52.57	60.00
202-Construction Works	4,17,06.35	71,11.95	17.05
02 - Navy			
101-Aircraft and Aeroengines	1,72,46.03	72,39.27	41.98
102-Heavy and Medium Vehicles	5,93.52	1,22.73	20.68
103-Other equipment	38,73.59	12,90.19	33.31
202-Construction Works	76,78.48	33,93.25	44.19
204-Naval Fleet	15,24,33.75	5,30,84.08	34.82
205-Naval Dockyard	1,13,89.36	58,73.07	51.57
03-Air Force			
050-Land	31.78	15.30	48.14
101-Aircraft and Aeroengines	25,04,70.49	5,93,08.68	23.68

103-Other			
Equipment	5,32,83.05	2,36,31.65	44.35
202-Construction			
Works	1,02,45.89	26,89.43	26.25
206-Special Project	21,66.41	10,12.60	46.74
04 - Defence Ordnance Factories			
052-Machinery and			
Equipments	72,14.82	35,62.57	49.38
111-Works	46,43.58	11,29.04	24.31
05 - Research and Development Organisation			
111-Works	5,64,05.58	1,04,01.28	18.44
06 - Inspection Organisation			
111-Works	5,51.10	1,16.32	21.11

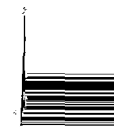
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14. Extra expenditure on modification of radar

Acceptance of costlier foreign technology option for updating of radars resulted in an extra expenditure of Rs 208 crore

Ministry placed a LOI for partial update of radars on foreign technology.

Considering the outdated technology and limited search capability of the Superfledermaus Radar (Radar), the Ministry in March 1991 placed a LOI with M/s BEL, who were to act as the prime contractor of M/s Ericsson (Swedish Firm), for the partial update of the Radar which included incorporating a monopulse tracking technique, a Digital Moving Target Indicator (DMTI) and a Laser Range Finder (LRF) besides complete overhaul of 118 radar structures at a total cost of Rs 200.60 crore.

Ministry decided for full update as partial update of radars was considered inadequate.

LOI was placed for update of 60 radars with foreign technology and 58 with indigenous technology with a ceiling price of Rs 4 crore and Rs 3 crore for each radar respectively.

However, since the partial updating of the radar system would still be left with an obsolete analog computer, whose maintenance was not possible, the Ministry opted in May 1992 for full update of the 118 radars which in addition to the items involved in partial update also included replacement of analog computer with digital computer and modification of tracker drives. The above proposal of the Ministry was also approved by the CCPA in December 1992. Accordingly, a LOI was issued to BEL. The update was to be based on the Ericsson proposal for the first 60 numbers of the radar at a ceiling price of Rs 4 crore per system, with a ceiling price of Rs 3 crore per system for the balance 58 numbers of the radar to be updated with indigenous technology. Formal indent was placed in March 1994 on M/s BEL, for updating 60 radars at a cost of Rs 4 crore each having a delivery schedule of 12 radars during 1993-94, 24 radars during 1994-95 and 24 radars during 1995-96. Subsequently, in September 1996, the Price Negotiation Committee finalised the cost of 12 radars @ Rs 3.69 crore, 33 radars @ Rs 3.78 crore, 15 radars @ Rs 3.87 crore, 24 radars @ Rs 3.34 crore and 34 radars @ Rs 3.51 crore.

2 radars were successfully modified by ABW at a total cost of Rs 30 lakh and were still lying with them.

Ministry observed that indigenous update of radars would result in saving of Rs 1.5 crore per radar but in fact the saving per radar ranged from Rs 1.49 crore to Rs 2.02 crore.

The Ministry had in June 1991, also separately accorded sanction for a project for developing a digital computer to replace the analog computer to be carried out at a cost of Rs 30 lakh by an ABW. The work commenced in June 1991 and the first prototype was successfully evaluated in April - June 1992. The project was completed in June 1993 at a cost of Rs 30 lakh and two radars modified with indigenous technology were put through trials successfully and were found fully functional. These radars were lying with ABW (August 1997).

While examining the proposal with reference to indigenous technology, the Ministry in October 1992 observed that use of indigenously developed LRF and computer for the update of 118 radars would result in savings of Rs 1.5 crore per radar. It was however, seen that after taking into account the cost of partial update (Rs 1.70 crore) and indigenous update (Rs 15 lakh) the savings ranged from Rs 1.49 crore to Rs 2.02 crore per radar.

As of August 1997, M/s BEL supplied 60 updated radars to the COD against a total payment of Rs 181 crore made to them. 12 of these Radars were issued by the COD to an AD Regiment and two each to ADGM school and MCEME. The AD Regiment however, had not accepted the radars as they were found to have certain defects/deficiencies which were yet to be rectified. As regards serviceability of remaining radars the user units were addressed in September 1997 but their response was awaited as of December 1997.

The matter was referred to the Ministry in May 1997; their reply was awaited as of December 1997.

15. Loss of ammunition due to improper storage

Failure of Army authorities to provide proper storage facilities had rendered ammunition worth Rs 61.30 crore as major repairable and Rs 8.27 crore as unserviceable

Mention was made in Paragraph 12 of Report No.8 of 1996 of C&AG regarding delay in repair of imported ammunition, a large quantity of which was also held by Ammunition Depot 'X' (AD) amongst other Depots.

The aforesaid repairable ammunition was occupying valuable covered storage space. Consequently, wooden packages containing other types of serviceable ammunition were kept in the open on improvised plinths although the AD is located in a highly termite infested area.

In December 1994/January 1995, the Army authorities noticed that a large number of wooden packages containing serviceable ammunition were affected by termites and moistures. As a result, ammunition worth Rs 61.30 crore was 'sentenced as major repairable' and Rs 1.91 crore as unserviceable. A CI ordered by Corps HQ in August 1995 to ascertain the extent of loss worked out loss of Rs 8.27 crore due to deterioration of ammunition. The CI attributed area being termite affected, storage of ammunition on plinths in areas which were low lying and prone to water collection as the cause of loss besides ammunition worth Rs 61.30 crore being sentenced as Major repairable. The single most important factor contributing to downgradation and subsequent unserviceability of large quantity of ammunition was lack of interest and commitment shown by Commanding Officers and their team of officers at AD. The CI also found that MGAOC HQ Southern Command did not carry out his mandatory 'Annual Technical Inspection' of the AD from 1992 to 1995.

GOC-in-Chief in August 1996 directed to take administrative action against seven service officers and disciplinary action against one civilian officer for their lapse.

A large number of wooden packages containing serviceable ammunition were affected by termite and moisture.

The CI worked out the loss as Rs 8.27 crore.

The main factor for down-gradation of the ammunition was lack of interest and commitment by all officers at AD.

Thus failure of Army authorities to provide proper storage facilities had rendered ammunition worth Rs 61.30 crore as major repairable and Rs 8.27 crore as unserviceable.

The matter was referred to the Ministry in June 1997; their reply was awaited as of December 1997.

16. Questionable deal

Ministry concluded a contract for import of Tank Fire Control System with a foreign country, ignoring the prevailing political and unstable conditions

Despite political instability in country 'A' contract for procurement of TFCS was concluded.

For modernisation of a certain types of tank, the Army HQ recommended, in April 1990, procurement of 150 Tank Fire Control System (TFCS) ex-country 'A'. In June 1991, considering political instability in country 'A', Hon'ble Defence Minister expressed his reservations about the wisdom of the proposed deal, but the proposal was approved in July 1991 and a contract was concluded immediately thereafter for supply of 150 TFCS at a cost of US\$ 35.4 million. The contract stipulated that 30 per cent of the contractual value was payable in advance on receipt of necessary bank guarantee from the National Bank of country 'A', after which 20 TFCS were to be supplied within six months.

Advance of Rs 27.63 crore was paid to the firm.

Persuant to these conditions, an advance of US\$ 10.63 million (Rs 27.63 crore) was paid in October 1991 against a bank guarantee, valid upto 30 April 1993. In February 1992, the supplier requested the Ministry to arrange pre-despatch inspection of 20 TFCS which were ready for delivery.

Inspection Team could not be deputed on account of disturbed condition in country 'A'.

But no Inspection Team could be deputed on account of disturbed conditions in country 'A' up to June 1992, when the UN imposed a trade embargo with that country resulting in a stalemate. It may be noticed that inspite of the disturbed situation in country 'A', it

was possible to encash the bank guarantee before 30 April 1993, but no such action was taken or even contemplated.

Army HQ informed the Ministry that TISAS should be procured in place of TFCS which was outdated technology.

In February 1995, Army HQ informed the Ministry that Thermal Imager Stand Alone Sight (TISAS) should be procured in the place of TFCS which was an outdated technology. As no supply of TFCS against the advance paid in October 1991 materialised even up to March 1996, efforts were unsuccessfully made to obtain supplies of TISAS from country 'A' in adjustment of the advance of Rs 27.63 crore.

Neither supply of TFCS has been made nor advance refunded.

Although the trade embargo has been lifted from March 1996, no supply against the advance of Rs 27.63 crore has been effected as of May 1997. It will thus be seen that, even after finalising an unwise deal to import equipment from a politically disturbed and unstable country, the Ministry failed to assess the situation and encash the bank guarantee in time. As a result, the recovery of Rs 27.63 crore has become wholly doubtful.

Ministry stated in November 1996 that negotiations with the foreign firm to settle the down payment through future contracts for supply of certain military stores were going on. Ministry further stated in December 1997 that offers for supply of various Defence stores received from the firm were under examination in consultation with Army HQ. Even if supplies take place for the entire amount now the loss of interest for over seven years would be more than the principal.

17. Procurement of defective radars

Due to poor and faulty design five radars procured at a cost of Rs 21.69 crore were lying in defective condition for the last three years rendering the purpose of their acquisition unfruitful

Ministry in December 1985 sanctioned induction of 21 low level surveillance radars (radar) for the Army with a proviso for initial acquisition of six radars at a total cost of Rs 21.60 crore. Accordingly,

an indent was placed on M/s BEL in July 1986 for induction of six radars to be completed by 1990. Subsequently, user evaluation and trials of the production prototypes necessitated the incorporation of substantial additional features to ensure that they are state of the art. As a result the cost of the radars was revised to Rs 26.03 crore in November 1990 for which revised approval was obtained in January 1991. The sole reason for time over run was the failure of the radar to meet the GSQR specifications and users requirements in four successive trials since mid 1989. The shortcomings noticed were in terms of reliability, maintainability and ruggedness.

After successful trial evaluation in July 1992, bulk production clearance was accorded to BEL in January 1993 and the supply of six radars was completed between April 1993 and May 1994.

During exploitation training conducted from May to August 1994, a number of defects/shortcomings were found in all the radars and five radars were brought to an AD Regiment in January 1995 for carrying out complete checks/repairs by a team of engineers of BEL. The repair work continued upto June 1995 and was terminated thereafter as all the defects could not be rectified. The matter regarding repair of radars was yet to be sorted out with BEL. The defects/shortcomings in the radars were attributed by Army to poor and faulty design.

Army HQ in July 1996 stated that the radars were not giving satisfactory performance since their induction and not being available for training would adversely affect operational commitments.

As of May 1997, five radars were lying in defective condition. The state of sixth radar was not known.

Thus due to poor and faulty design, five radars costing Rs 21.69 crore had been lying in defective condition for the last three years rendering the purpose of their acquisition unfruitful.

The matter was referred to the Ministry in June 1997; their reply was awaited as of December 1997.

18. Extra expenditure on procurement of rifles and ammunition due to failure to adequately safeguard Government interest

Failure to adequately safeguard the interest of Government in entering into a contract resulted in extra expenditure of Rs 15.94 crore on import of rifles

Army HQ proposed to import Rifle along with ammunition.

In January 1993, Army HQ proposed the import of 1,22,000 Rifle 'X' along with 500 lakh rounds of ammunition to meet the immediate needs of troops deployed in Internal Security (IS)/Counter Insurgency (CI) environment and as an interim measure to supplement the delivery of rifle 'Y' by OFB.

Failure to enforce contract after firm's failure to produce the export licence resulted in procurement of rifle at higher rates.

Accepting the need for the import, the Ministry after inviting tenders, entered into a contract in May 1994 with Foreign firm 'A' for the import of 1 lakh rifle 'X' and 5 crore rounds of ammunition at the contracted value of US\$ 10.1 million (US\$ 6.5 million for rifles @ US\$ 65 plus US\$ 3.6 million for ammunition @ US\$ 72 per 1000 pcs). Firm 'A' however, failed to produce the Export licence and the contracted supplies did not materialise as the validity of the contract was subject to the production of Export licence. The contract could not be enforced and no action except to impose a ban for five years was taken. Thereafter, the Ministry after negotiating with the remaining tenderers who had quoted earlier, finalised a contract with Foreign firm 'B' in June 1995 for the import of 1 lakh rifles 'X' and accessories at a total cost of US\$ 11.97 million (at the unit rate of US\$ 99) and with Foreign firm 'C' in June 1995, for the import of 50 million rounds of ammunition at a total cost of US\$ 3.25 million (at the unit rate of US\$ 65 per 1000 pcs). The extra cost involved in the import of 1 lakh Rifle 'X' from firm 'B' worked out to US\$ 3.4 million (Rs 11.46 crore). Firm 'C' however, failed to make the supplies of ammunition due to force-majeure situation. On the basis of fresh quotations Ministry entered into a contract with firm 'B' in December 1996 for supply of 50 million rounds of ammunition at a total cost of US\$ 4.5 million (at the unit rate of US\$ 90 per 1000 pcs). The extra cost on this account worked out to US\$ 1.25 million (Rs 4.48 crore).

Audit scrutiny of the documents pertaining to the import of the rifles 'X' and ammunition revealed the following:

- (a) The choice of rifle 'X' for IS/CI duties was not as per a well considered GSQR but on the basis of lower cost.
- (b) The para military forces deployed on CI operations were using the rifle 'Z' and had placed large demands on the Ministry for the transfer of rifle 'Z' to them from the Army. This transfer was likely to result in net receipt of Rs.150 crore to Government.
- (c) The contract with firm 'A' was to become effective only on receipt of Export Licence by firm 'A' from its Government. This was a basic flaw in the contract as authorisation for exports by firm 'A' should have been checked before entering into the contract. The contract for Rifle 'X' was signed by person of the foreign firm who was not authorised. The Foreign firm 'A' stated (January 1997) that contract was falsified and forged, therefore null and void.
- (d) No Performance Bond was obtained at the time of signing the contract thereby interest of the government were not adequately safeguarded.
- (e) Supply of Rifles was received from firm 'B' in three consignments between March 1996 and November 1996.
- (f) The Ministry terminated the contract in February 1997 and preferred a claim for US\$ 1.26 million towards damages on firm 'C' rejecting their contention of a 'force-majeure' situation for their inability to supply the ammunition. The claim was yet to be accepted by the firm as of July 1997.

While accepting the facts, the Ministry stated in July 1997 that the offer of firm 'A' could not have been ignored being the lowest technically acceptable. The Ministry, however, did not confirm that the offer was as per well considered GSQR. The Ministry further stated that supplies of ammunition for Rifle 'X' are likely to be completed in the year 1997.

Thus the following would emerge from the above:

- Failure to adequately safeguard the interests of Government had resulted in the contract entered into with firm 'A' not being enforceable and no action could be taken except to debar it for five years. It had also resulted in extra expenditure of Rs 15.94 crore on import of rifles and ammunition.

- In the absence of ammunition it is not clear how the rifles procured at a cost of Rs 33.38 crore are being utilised.

- This has resulted in the troops committed on IS/CI duties in Northern and Eastern theatre continuing to suffer heavy casualties because of lack of matching fire power.

19. Import of defective parachutes

Parachutes imported at a cost of Rs 12.04 crore in 1995 could not be put to use due to defects and accordingly anticipated savings of Rs 14.17 crore could not accrue.

In April 1993 Army HQ proposed importing 1000 low level parachutes (parachutes) to meet its urgent operational requirements. It was also indicated in this proposal that procurement of 1000 parachutes would meet the requirements of both high altitude and low level parachutes resulting in a saving of Rs 14.17 crore.

The Ministry in May 1994 entered into a contract with a foreign firm for supply of 1000 parachutes alongwith spares at a total cost of 2.71 million UK Pounds (Rs 12.78 crore). The supplies were received between January 1995 and June 1995 in six consignments. A Board of Officers (Board) held in October - November 1995 to inspect the parachutes, noticed a large number of defects/deficiencies and found that the entire consignment did not conform to the sample. The Board, therefore, rejected all the consignments. The DGQA to whom the findings of the Board were referred opined in December 1995, that the parachutes were fit for use as certified by the manufacturer. They

however, suggested that as a matter of abundant precaution trial jumps on some parachutes could be carried out. The trial jumps carried out by users in June 1996 also confirmed the defects and held that the parachutes were substandard and not fit for use in their present state.

On recommendations of Army HQ, Ministry in June 1996, preferred a claim on the foreign firm for replacement of the entire quantity but the foreign firm did not accept the claim stating that the parachutes were supplied in accordance with agreed specifications and drawings which conformed to the sample approved by DGQA in November 1994. Meanwhile, Ministry in 1996 encashed the Warranty Bond amounting to 135363 UK Pounds (Rs 0.74 crore).

Ministry stated in June 1997 that the foreign firm modified some parachutes, which were tried and accepted. The Ministry further stated that the parachutes would be deemed to have been accepted the day all modifications were completed. The firm was yet to complete the modification.

Thus the parachutes procured at a cost of Rs 12.04 crore in 1995 could not be put to use due to defects and accordingly anticipated savings of Rs 14.17 crore could not accrue.

20. Excess procurement of barrels

Failure to work out the requirement on yearly basis led to excess procurement of gun barrels valued at Rs 4.67 crore

In December 1987, the Ministry while according sanction for indigenous production of 73 mm gun barrels for BMP by the DGOF, directed Army HQ to place orders on DGOF depending upon the actual needs on a yearly basis as per Annual Provision Reviews (APR).

In contravention of these directives, Army HQ assessed the requirement for barrels as 494 for 13 years and placed an indent, in March 1988 on DGOF, for supply of 400 barrels at a total cost of

Rs 98.10 lakh for delivery by 1992-93. The DGOF however, failed to commence the delivery by 1992-93.

In August 1992, Army HQ observed that there was a depot ex-import stock of 111 barrels and only 29 barrels had been issued since the inception of BMP in 1981-82 and the present holding was adequate to meet the War Wastage Reserve.

However, despite, the comfortable position of the barrels, Army HQ in December 1992 decided to only reduce the quantity ordered from 400 to 250 barrels which was also agreed to by DGOF in May 1993.

DGOF supplied 251 barrels upto April 1997 at a total cost of Rs 4.67 crore. Based on 10 years average consumption, the 251 barrels would be sufficient to meet the Army's requirement for the next 84 years. As against this, the expected life of the BMP is 15-20 years.

The case was referred to the Ministry in June 1997; their reply was awaited as of December 1997.

24. Extra expenditure due to non adherence of contract provision

Ministry's failure to insist on price reduction for supplying ammunition without self destruction mechanism despite provision to that effect in the contract resulted in extra expenditure of Rs 4.09 crore.

The Ministry concluded a contract with a foreign firm in February 1993 for supply of 2.4 lakh rounds of ammunition 'X' alongwith some other items at a total cost of US \$ 6.48 million (unit rate of US\$ 27.00). The ammunition was to be supplied alongwith self destruction mechanism (SDM). The firm, however, supplied 167280 rounds of ammunition without the SDM. The ammunition supplied without SDM was tested by Army HQ in August 1995 and its performance found to be acceptable. The contract contained a clause stating that if the modification involve change in prices of the

equipment the parties shall settle the prices additionally by separate agreements before its delivery. The firm was approached in October 1995 for suitable price reduction to compensate for the absence of SDM and payments of US\$ 0.49 million was withheld pending settlement of the issue.

The firm did not agree to any price reduction on the ground that the contract contained a provision under which it was entitled to introduce modification in the design or alter the composition of the equipment to be delivered. Ministry, thereafter decided in December 1996 to close the aspect of price reduction in view of long term military/technical cooperation with that country besides critical dependency on them for many items of Defence including spares and the withheld amount of US\$ 0.49 million was also released to that firm in January 1997.

The Ministry's decision to close the aspect of price reduction benefitted the firm by Rs 4.09 crore on procurement of 1.67 lakh rounds of ammunition 'X' without SDM during 1993.

The Ministry contended in August 1997 that there was no extra expenditure on procurement of ammunition without SDM because the ammunition had been modernised resulting in better performance, for which no extra cost was paid to the supplier. The contention of the Ministry does not hold good as the ammunition was procured @ US\$ 21.90 without SDM in December 1994 and March 1996 from the same country. In another contract entered with another foreign country in November 1996 the same ammunition was procured with SDM @ US\$ 20.95 indicating that the modernisation of ammunition had not resulted in extra cost to the supplier.

Thus, failure to insist on price reduction for supplying ammunition 'X' without the SDM despite provisions to that effect in the contract had resulted in extra expenditure of Rs 4.09 crore.

22. Import of defective missiles

Failure of Army authorities to carry out within warranty period thorough inspection and serviceability test immediately on receipt of the missiles had resulted in loss of Rs 1.65 crore

Missiles were received in May 1994.

The Ministry in February 1993 entered into a contract with a foreign firm for import of 80 Missiles at a cost of Rs 33.08 lakh each. The Missiles were received in an Ammunition Depot (AD) in May 1994 and carried a warranty of 12 months from the date of delivery of the consignment.

Out of four, three missiles misfired during field firing.

In April 1995, after 100 *per cent* visual and functional checks were carried out by a Board of Officers (Board) 4 missiles were issued to a Regiment in April 1995. Out of these, three missiles misfired during field firing in May 1995.

Based on the defect report raised by the Regiment, a Board which was ordered in July 1995 opined in December 1995 that the misfiring occurred possibly due to malfunctioning of the missiles and the supplier might have supplied refurbished missiles.

Special inspection was carried out and two more missiles were declared unserviceable.

The findings of the Board remained under consideration of AD/Army HQ upto July 1996 when a special inspection of all the remaining missiles was carried out jointly by Electrical Mechanical Engineers and DGQA and two more missiles were declared unserviceable due to parameters being out of tolerance.

The AD stated in February 1997 that the cause of 3 missiles misfiring and repair action in respect of two missiles was under investigation/finalisation by Army HQ.

Thus, failure of Army authorities to carry out within warranty period thorough inspection and serviceability test immediately on receipt of the missiles resulted in loss of Rs 1.65 crore.

The matter was referred to the Ministry in June 1997; their reply was awaited as of December 1997.

23. Non-utilisation of imported testing equipment

300 Watt Meters imported at a total cost of Rs 103.26 lakh to meet emergent requirement, remained unutilised for more than six years

Contract concluded in 1989 with a foreign firm for supply of 300 watt meters along with accessories/maintenance spares. The accessories/maintenance spares were deleted from the scope of the contract immediately.

Firms supplied watt meters in 1990 along with some other items not contracted.

No discrepancy report was raised for items not supplied.

The Ministry concluded a contract in August 1989 with a foreign firm for import of 300 Watt Meters to be used for testing/repair of all types of Radio equipment at a total cost of Rs 103.26 lakh inclusive of accessories and spares. However, certain accessories and maintenance spares provided @ 12 per cent of cost of the equipment were deleted from the scope of supplies in August 1989 itself through an amendment to the contract.

Due to emergency requirement the Watt Meters were airlifted at a cost of Rs 10.32 lakh and were received in a Depot in March - July 1990. A Board of Officers which completed the checking of the consignments in September 1991 found that certain important accessories were not supplied while certain other items not included in the contract and which could not be utilised with the contracted item had been supplied.

Despite the discrepancies/deficiencies noticed by the Board, the Depot issued 298 Wattmeters to a number of units in October 1991 along with accessories and also intimated Army HQ about the deficiencies/discrepancies but did not raise a discrepancy report. The Depot finally raised a discrepancy report in May 1992 after expiry of warranty period. The MGOs Branch of Army HQ meanwhile pointed out in December 1991 that Wattmeters with accessories were lying unutilised with the units as connectors/assemblies which are essential for using the equipment in the field and which had been included in the list of spares had not been supplied.

The matter thereafter remained under correspondence between the Depot, Army HQ and the Ministry. However, in May 1993, a Technical Group from Army HQ analysed the problem and found that

Users pointed out that watt meters cannot be made functional for want of important accessories for which action had been initiated in 1996.

in the absence of the required accessories/spares which had been deleted from the original contract, the imported Watt Meters could not be made functional. The Depot stated in March 1996 that action to procure the desired accessories had now been taken.

Thus,

- deletion of certain accessories/maintenance spares from the purview of the contract had resulted in certain essential items not being supplied by the firm and consequently 300 wattmeters along with accessories costing Rs 103.26 lakh remained unutilised for more than six years.

- the expenditure of Rs 10.32 lakh incurred on air lifting of the wattmeters and accessories also did not serve the intended purpose.

The matter was referred to the Ministry in July 1997; their reply was awaited as of December 1997.

24. Recovery at the instance of Audit

Overpayment of Rs 63.77 lakh detected in Audit towards pay and allowances of JCOs/ORs, officers and non-availment of electricity rebate was admitted and recovery effected at the instance of Audit.

Overpayment of Rs 63.77 lakh pointed out in undermentioned two cases was recovered at the instance of audit.

Case I

Mention was made in Para 14 and Para 17 of the Report of the C&AG Union Government, Defence Services for the year ended March 1989 and March 1995 respectively highlighting recoveries effected at the instance of Audit. In the ATN on Para 14, the Ministry stated in February 1991 that instructions had been issued in March 1989 by CGDA to Controllers to ensure that such cases did not recur and to

continuously undertake a critical review of the internal audit procedures to plug any loopholes brought out by such instances.

A test check of the pay accounts maintained by CDA(Officers) and 3 Pay Accounts Offices conducted between April 1996 and March 1997, revealed overpayments and short recoveries relating to Pay and Allowances, House Rent Reimbursements, Field Allowances, Separation Allowances, Compensation in lieu of Quarters, Daily Allowances, etc. which amounted to Rs 30.97 lakh. These lapses had been accepted by the CDA(O) and the PAOs and recovery effected.

Case II

In May 1995, HSEB revised the rates of rebate on bulk supply of electricity from 7.5 per cent to 15 per cent with effect from 1 June 1995. It was noticed in audit that two GEs did not avail of the rebate at the revised rate which resulted in overpayment of Rs 32.80 lakh towards electricity charges.

On being pointed out by Audit, both the GEs took up the matter with HSEB in January and April 1997 and got the amount of over payment adjusted. The Ministry accepted the facts in November 1997.

25. Follow up on Audit Reports

Despite repeated instructions/recommendations of the PAC, the Ministry did not submit remedial ATN on 161 Audit Paragraphs

With a view to ensuring enforcement of accountability of the executive in respect of all the issues dealt within various Audit Reports, the PAC decided in 1982 that Ministries/Departments should furnish remedial/corrective ATN on all paragraphs contained therein.

PAC recommended submission of all pending ATNs upto 1995 within three months.

The Committee took a serious view of the inordinate delays and persistent failures on the part of large number of ministries/departments in furnishing the ATNs in the prescribed time

From 1995-96 ATNs are to be submitted within four months of placing the Report on the Table.

Ministry failed to submit ATNs to PAC on 120 paragraphs of and up to the Reports for the year ended March 1995.

Ministry did not submit ATNs to PAC on 41 of 48 paragraphs in the Report for the year ended March 1996.

frame. In their Ninth Report (Eleventh Lok Sabha) presented to the Parliament on 22 April 1997, the PAC desired that submission of pending ATNs pertaining to Audit Reports for the years ended March 1994 and 1995 be completed within a period of three months and recommended that ATNs on all paragraphs pertaining to the Audit Reports for the year ended 31 March 1996 onwards be submitted to them duly vetted by Audit within 4 months from the laying of the Reports in Parliament.

Review of outstanding ATNs relating to Army as of November 1997 revealed as under :

⊙ The Ministry failed to submit ATNs in respect of 120 Paragraphs included in the Audit Reports upto and for the year ended March 1995 as per Annexure I. Of these, 68 paragraphs pertained to the Audit Reports upto and for the year ended March 1993.

⊙ Though the Audit Report for the year ended 31 March 1996 was laid on the table of the Parliament on 20 March 1997 and the time limit of four months for furnishing the ATNs has elapsed in July 1997, the Ministry did not submit ATNs on 41 out of 48 Paragraphs included in the Audit Report, details of which are in Annexure II.

The position of pending ATNs was reported to the Ministry in June 1997, their reply was awaited as of December 1997.

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26. Design and development of main battle tank-ARJUN

26.1 Introduction

Main Battle Tank (MBT) occupies a pivotal role in the present day battle field on account of its ability to provide accurate fire power with cross country mobility, reasonable protection from conventional and nuclear threats and flexible response to changing battle situations.

In order to eliminate dependence on foreign countries for design and manufacture of Armoured Fighting Vehicles (AFV) and to place the country on par with super powers with regard to quality of tanks and also to eliminate completely the requirement of foreign exchange (FE) in the production of tanks, Government in May 1974 sanctioned a project for design and development of MBT by Defence Research and Development Organisation (DRDO) at a total cost of Rs 15.50 crore (FE Rs 3.70 crore). The tanks were to be in service during 1985 to 2000 AD and were in replacement of existing tanks which were expected to be out-dated beyond 1985.

26.2 Scope of Audit

Mention was made in paragraph 8 of the Report of Comptroller and Auditor General of India, Union Government, Defence Services for the year 1981-82 and also in paragraph 43 of the report for the year 1987-88 about the delay in development of the MBT, consequential time and cost overrun, delays to bulk production schedule and its impact on defence preparedness. The Public Accounts Committee (1988-89) in its Hundred and Sixty Eighth Report (Eighth-Lok Sabha) had also expressed its displeasure over the steep increase in the project cost and also concern over the inordinate delay in the completion of the development project. The Public Accounts Committee 1991-92 in its Twenty Sixth Report (Tenth Lok Sabha) while reviewing the action taken by Government on its recommendations again urged the

Government to keep unremitting vigil on the progress of the project and ensure speedy solution of the problems if any, so that bulk production may commence at the earliest. The development of the MBT project with reference to the production of prototypes, pre-production series, user assisted technical trials, user trials and action taken for limited series production were examined in Audit during the period March 1997 to July 1997 through a test check of the records at Combat Vehicle Research and Development Establishment (CVRDE), Defence Research and Development Organisation (DRDO), Project Manager MBT - Arjun and Army Headquarters.

26.3 Implementing agency

The programme was entrusted to the CVRDE and its Director/Project Co-ordinator was authorised to allot sub-projects to other DRDO Laboratories/Establishments/ Academic Institutions for development/manufacture of materials, components and sub-assemblies required for the project. In all 12 laboratories/establishments/academic institutions are involved in the project.

26.4 Highlights

- Main Battle Tank Project sanctioned in May 1974 envisaged bulk production by April 1984. However this time frame was not adhered to and was revised from time to time and bulk production was to commence from 1990 onwards but even the revised time frame could not be adhered to.

(Paragraph 26.6 and 26.7)

- 12 MK-I prototypes based on imported propulsion unit, seven MK-II prototypes with indigenous propulsion were to be delivered by June 1987 and June 1990 respectively; 23 MK-I, PPS tanks by December 1988 and bulk production was to commence from 1990 onwards. As against this, 12 MK-I prototypes with imported propulsion were produced by February 1989 and 15 MK-I PPS tanks upto December 1996. MK-II type prototype were not expected to be ready in the near future on account of the delays in the development of the indigenous engine.

(Paragraph 26.6)

The automotive trials of two prototypes carried out by Army during 1988-89 revealed major deficiencies. The Army, therefore, on 26 July 1989 wanted these deficiencies to be sorted out before commencement of production of pre-production series (PPS). However, on 31 July 1989 Ministry decided to place orders for the production of PPS tanks. Two fully integrated prototypes were given to the Army for full fledged evaluation only in March 1990 after the commencement of production of PPS tanks. The evaluation trials of the prototypes also revealed major deficiencies. Subsequent trials were conducted on PPS tanks. Till July 1997, 15 pre-production series tanks which were subjected to extensive user and troop trials failed to meet fully even the bottom line parameters of the user.

(Paragraph 26.6 and 26.7)

MBT Arjun is designed around a fire control system of a foreign country and its performance was far short of the user requirement. While the Army was of the view that the design was no longer responsive to any technical inputs and its performance was at its saturation level, DRDO stated that they had removed the causes for erratic firing.

(Paragraph 26.8)

The imported transmission system of MBT Arjun had been designed to cater upto 60 tonne load where as the all-up weight of MBT Arjun is over 61.5 tonne. This had created a mismatch between engine and transmission resulting in premature failure of six transmission units and frequent overheating of transmission oil. DRDO have however stated that they will not allow the all up weight of the MBT to go beyond 60 tonne.

(Paragraph 26.9)

According to the Army the overall reliability of MBT Arjun was far from satisfactory as it had failed to fully meet even the bottom line parameters. DRDO while contending that the summer trials of 1997 clearly met eight out of the ten bottom line parameters have agreed to make efforts for changes/requirements which can then be incorporated in due course in the limited series production. Despite the Army's reservations regarding the MBT - Arjun in its present form and even though a fully integrated PPS-15 tank (reference tank for bulk production) was yet to be successfully evaluated by the Army, the Ministry in August 1996 sanctioned the manufacture of 15 numbers of Limited Series Production tanks by Ordnance Factory Board at an estimated cost of Rs 162 crore without CCPA's approval

and decided to commence Limited Series Production work using PPS-12 as reference tank. Clearance for bulk production of MBT was yet to be given by the Army as of November 1997.

(Paragraph 26.7 and 26.10)

- A state-of-art modern battle tank ensures its design superiority through more efficient systems, less maintenance and manpower requirements. However, MBT Arjun configured around the present design would require 16 additional three tonne vehicles and 45 personnel per regiment to sustain its operational mobility.

(Paragraph 26.11)

- In view of MBT Arjun's large size and weight a suitable wagon for its rail transportation and a trailer for its transportation by road were required to be developed. Three prototypes of special wagons being designed by RITES at an estimated cost of Rs 1.65 crore are expected to be delivered by January 1999. Use of the special wagons will entail payment of 150 percent more than the normal charges even for the transportation of empty wagons.

(Paragraph 26.11)

- The initial cost of the project estimated at Rs 15.50 crore in 1974 was revised to Rs 56.55 crore in 1980 and to Rs 280.80 crore in 1987. The actual expenditure however was Rs 307.48 crore at the time of closure of the project despite the fact that there was a shortfall in the production of 10 prototypes/pre-production series tanks.

(Paragraph 26.12)

- Two supplementary projects costing Rs 41.98 crore were sanctioned by the Ministry in September 1995 and January 1997 for product support and modifications to MBT without CCPA's approval. This would also result in underwriting the project cost of MBT Arjun to the extent of Rs 41.98 crore.

(Paragraph 26.13)

- Power Pack, Gun control and Fire Control Systems of MBT Arjun are based on imported technology. Cost estimates made in December 1995 indicated that nearly 60 per cent of the cost related to imported supplies.

(Paragraph 26.14)

26.5 *Scope of the project*

The project (Code named as 'Arjun') sanctioned in May 1974 was for design and development of MBT based on a General Staff Qualitative Requirement (GSQR) prepared by the Army in August 1972. This GSQR underwent several changes after mutual discussions between Army HQ and DRDO and the last major revision took place in November 1985. The project envisaged manufacture of 12 prototypes. The prototype plans and availability of sub systems were reviewed in August 1984 and in order to try out individually the various components and sub-systems, to have them integrated with the major system and evaluate their performance before finalising the design, the number of prototypes were increased to 19. In addition, 23 Pre- Production Series (PPS) Tanks were to be manufactured and thereafter bulk production was to commence.

26.6 *Development of prototypes and pre-production series tanks*

As per time frame fixed in May 1974, four mild steel prototypes were to be offered for trials by April 1980 and eight armoured prototypes by April 1982. Trickle production was due to commence by April 1983 and bulk production by April 1984. This schedule was revised from time to time. As per commitment made in May 1987, 12 MK-I prototypes based on imported propulsion unit, seven MK-II prototypes with indigenous propulsion unit were to be delivered by June 1987 and June 1990 respectively, 23 MK-I PPS tanks by December 1988 and bulk production was to commence from 1990 onwards. However, even the revised time frame could not be adhered to. 12 MK-I prototypes with imported propulsion unit were produced by February 1989 and 15 MK-I PPS tanks were produced upto December 1996. Apart from this two torsion bar tanks, one test vehicle, one tank in recovery role and one MK-II test vehicle with imported power unit were also produced. However, MK-II prototype were not expected to be ready in the immediate future on account of delays in the development of the indigenous engine. Accordingly there was a production shortfall of four PPS tanks and six MK-II prototypes. The shortfall was attributable to the fact that CVRDE had recommended the closure of the project from April 1995 and non-availability of indigenous engine for MK-II prototype. The DRDO

Time frame fixed for the project was never adhered to and revised from time to time.

MK-II prototypes are not expected to be ready in the immediate future. There was shortfall in the production of four pre-production series tanks and six MK-II prototypes.

stated in November 1997 that the reason for the shortfall was that major development activities had been completed by March 1995 and the remaining activity was primarily testing and incorporation of modifications arising out of trials without resorting to changes in major subsystems.

26.7 Evaluation of prototypes and pre-production series of MBT

The MBT was scheduled to undergo user assisted technical trials, user trials and troops trials thereafter. A dedicated users' evaluation team constituted in November 1986 on examination of two prototypes between November 1986 and February 1987 pointed out various deficiencies. These were then examined by five taskforces constituted for optimising the prototypes built and finally two prototypes were made available for users' automotive evaluation till July 1989.

The automotive system evaluation of two prototypes carried out till July 1989 by the Army revealed major deficiencies such as overheating of engine, excess weight, very low mission reliability etc. In the Steering Committee Meeting held on 26 July 1989, when the matter relating to the commencement of production of pre-production tanks came up, the Army emphasised that "since not a single fully integrated tank had as yet been evaluated by the users, they cannot recommend placement of orders for Pre-Production Series (PPS) tanks". However, within a week (31 July 1989) in a meeting taken by Raksha Mantri it was decided to place orders for six PPS tanks (two each to Heavy Vehicle Factory and two Public Sector Undertakings).

Two fully integrated prototypes were made available to the users in March 1990 and these were subjected to automotive and weapon trials. During the trials a number of deficiencies had come to light, some were quite major. The Army, therefore, indicated in the Steering Committee Meeting held on 24 August 1990 that the major problems in areas like bogie wheel, suspension units, ammunition, fuel starvation etc. needed to be sorted out before PPS were taken up for manufacture. The CVRDE then assured the committee that since orders for PPS had already been placed, all the deficiencies pointed out

Production of Pre-Production tanks commenced without evaluation and acceptance of prototypes by the users.

Trial evaluation of two prototypes by the Army in March 1990 revealed a number of deficiencies.

by the users would be resolved and modifications incorporated in the six PPS tanks ordered.

Two PPS tanks were demonstrated in February 1993. The results of the demonstration which included gunnery and automotive capabilities were stated to be satisfactory. Thereafter, between June 1993 and July 1996, 14 PPS tanks were handed over to a Field Regiment for trials. These PPS tanks were thereafter subjected to extensive user and troop trials in the desert/semi desert terrain, plains and riverine terrain.

Summer trials of PPS tanks carried out in June 1993 revealed major deficiencies.

COAS spells out the minimum "Bottom Line" parameters acceptable for the MBT in May 1994.

The trials carried out subsequent to June 1993 revealed major deficiencies and failed to meet the requirement projected in the GSQR. The weapon system's performance was also well below the acceptable level and the mission reliability of the tank was alarmingly low and the tank was accordingly not acceptable to the users. Thereafter, in May 1994 the COAS spelt out the minimum 'Bottom Line' parameters acceptable for the MBT.

Following the summer 1994 trials, Army HQ in consultation with DRDO laid down ten imperatives for acceptance of MBT as under:

Army lays down ten imperatives for acceptance of MBT.

- improved accuracy of the gun at battle ranges,
- establish accuracy in the dynamic mode to acceptable levels,
- enhancement of overall mission reliability,
- fielding of Nuclear, Biological, Chemical (NBC) and Medium Fording capability,
- configuration of ammunition bin with blow-off panel, (new requirement added for the first time in 1994)
- ergonomics needs substantial attention,
- cruising range to be enhanced,
- firing in the rear arc at zero degree is a must,
- provision of an emergency power traverse and Auxiliary Power Unit (APU), and
- an all electric power traverse to obviate the problem of leaks that occur in the present system in our environmental conditions (new requirement added in 1994).

The above bottom line/ten imperatives according to the Army represented a dilution of GSQR to a point below which no parameters could be allowed to fall and were considered to be of an interim nature based on a firm belief that the final product would meet the GSQR in full.

Despite carrying out modification/improvements by DRDO user trials carried out during Summer 1996 revealed major deficiencies.

The 14 PPS tanks with modification/ improvements were again subjected to user trials during 1995 and 1996. The user trials carried out by the Army in 1996 established that except in a few areas, the performance of the PPS tanks fell far short of even the bottom line/ten imperatives. Major deficiencies pointed out by the Army were:

- the accuracy level of the main gun in all modes of firing at different battle ranges was far below the levels laid down in GSQR,
- the lethality of ammunition was neither specified nor demonstrated,
- overheating of engines in desert conditions,
- mission reliability was far below the bottom line requirement,
- firing over engine deck with zero degree elevation could not be achieved,
- arrangement for emergency traverse was not satisfactory.

MBT Arjun in its present form will require increased maintenance time and effort-says the Army.

The Army accordingly expressed grave concern on the reliability and maintainability of MBT and pointed out that while the world over the trend was to reduce the maintenance time, it had increased with MBT Arjun. According to DRDO, the views expressed by the Army are only a subjective opinion and the analysis of data shows an upward trend in mean time between failures (MTBF) over the years. DRDO have pointed out that trials carried out clearly brought out the efficiency/improvements effected in weapon system and in the automotive area ability to cover the required range in the stipulated time was also proved. They further contended that there is no overheating of the engine in desert conditions.

Summer trials of 1997 indicated that the performance was below the acceptable standards.

The Summer trials carried out in April 1997 on PPS-15, reference tank for bulk production indicated that though there was improvement from the previous years, it was still below the acceptable standards. The major deficiencies pointed out in the summer trials of 1996 i.e. accuracy of gun at battle ranges, mission reliability, lethality

Army says in June 1997 that the overall reliability of MBT Arjun was far from satisfactory.

Army recommended in June 1997 that Limited Series Production should commence only after all the observations and shortcomings noticed were rectified and shown to them

DRDO contended that eight out of ten bottom line requirements were met.

Performance of imported fire control system of MBT Arjun fell far short of user requirement.

of ammunition, containerisation of ammunition bin, emergency traverse etc. continue to persist and were yet to be solved. The Army accordingly indicated in July 1997 that in its present form, the overall reliability of MBT Arjun was far from satisfactory. The Army further indicated that periodic failures of equipment and subsystems tend to reduce the confidence level of troops. The Army also observed that the aspect of armour protection had not been tried out.

As PPS-15, reference tank for bulk production, during user evaluation trials in April 1997 had indicated many shortcomings, the Project Manager MBT Arjun recommended in June 1997 that limited series production should commence only after all the observations and shortcomings noticed were rectified and shown to the users and that there should be no design freeze till this was confirmed by the users. DRDO however, contended that the summer trials of 1997 clearly met eight out of the ten bottom line requirements laid down by the Army. They added that containerisation of ammunition will be demonstrated in 1998 but that the development of on all electric gun control system which is a new requirement will take three to four years. It was however, noticed in Audit that certain priority contentious issues like accuracy at battle ranges, fire control system, quality of ammunition, transmission, mission reliability, protection etc. were deliberated between the Army and DRDO and in November 1997 DRDO agreed to make efforts to incorporate changes/ requirements in due course in the limited Series Production and thereafter. It is not clear how these changes can be incorporated when production facilities are established. Interestingly, in a similar situation when the Army refused to give clearance for production of PPS tanks before successful trial evaluation of prototypes and sorting out all deficiencies before commencement of production of PPS tanks, the CVRDE gave a similar assurance and went ahead with the production of PPS tanks. Subsequent events however, proved that the CVRDE was unable to keep the promises it made to the Army.

26.8 Defective Fire Control System

The MBT was designed around a imported Fire Control System (FCS). The firing results of the user trials carried out upto Summer 1997 indicated that firing accuracy was erratic and unpredictable. The user trial reports also proved that in its present shape the armament

system of MBT Arjun fell far short of the user requirement. The Army were of the view that the design was no longer responsive to any technical inputs and its performance was at its saturation level. The DRDO stated in November 1997 that by 1995 they had removed the causes for erratic firing accuracy and taken measures to control and improve it. However, the Army even in the joint approach meeting held from 20 October 1997 to 13 November 1997 reiterated their earlier stand that the imported FCS had reached its development limit.

26.9 Mismatch in transmission ratings

As the indigent efforts to develop a suitable engine and transmission system for the MBT were beset with problems, 42 power packs with transmission units were imported between November 1983 and 1988 from Germany for use on the prototypes and PPS tanks. However, as the imported transmission system was designed to cater upto 60 tonne load as against the all-up weight of 61.5 tonne for the MBT, a mismatch had arisen between engine and transmission which had resulted in bulging of side walls of the hull. As a consequence six transmission units failed before the stipulated life of 6000 Kms. Frequent overheating of transmission oil, noticed during user trials, clearly indicated that the transmission was working outside its design parameters. The DRDO stated in November 1997 that the weight will not be allowed to go beyond 60 tonne and that the failures of transmission units were traced as failure of externally mounted brazed tubes for pressure sensing and the same had since been corrected. The Army, however, pointed out in November 1997 that the transmission was working at its optimum peak when the weight of MBT Arjun was 58.5 tonne.

Power pack is not suitable to MBT Arjun because of its excess weight.

26.10 Limited Series Production

Before commencement of production of a defence equipment/system, the design has to be frozen and GS Equipment Policy Committee have to approve its introduction into service. As the Army was not satisfied with the performance and maintainability of PPS 1 to 14, made available to them for evaluation, it was mutually decided by the Army and DRDO in March 1996 that no design freeze will be made till a fully integrated PPS 15 was made available and successfully evaluated by the Army. Accordingly, the Ministry

Limited Series Production of 15 MBT Arjun tanks at a cost of Rs 162 crore (approximate) was sanctioned in August 1996 without CCPA's approval.

Despite the fact that the Army was not satisfied with the performance of MBT, activities involved in the productionisation of 15 Limited Series Production of Arjun tanks continue without waiting for clearance from the Army.

An MBT Arjun regiment would require 16 additional three tonne vehicles and 45 personnel per regiment to sustain its operational mobility.

(Department of Defence Production) in August 1996 sanctioned the manufacture of 15 Limited Series Production (LSP) tanks by Ordnance Factory Board using PPS-15 as reference tank after its successful trial evaluation by Army. The Ministry also accorded its approval for the import and transfer of technology from foreign companies for the Power Pack, Gun Control and Fire Control Systems. However, subsequently in the Steering Committee Meeting held on 27 August 1996, it was decided to commence limited series production work using PPS-12 as reference tank. This decision was yet to be ratified by the Army (November 1997). A fully integrated PPS-15 was yet to be successfully evaluated by the Army and thereafter design frozen. However, in the Arjun Executive Board (AEB) meeting held on 9 September 1997 it was decided that Director General Ordnance Factories (DGOF) should continue with the activities involved in the limited series production of Arjun tanks without waiting for formal clearance from the users for production of MBT Arjun (LSP) subject to final General Staff approval. The AEB also recommended that all feasible improvements suggested by the users be incorporated and demonstrated to users on PPS 15 tank so that it becomes a reference tank.

The sanction of Rs.162 crore for the limited series production was also accorded without obtaining the CCPA approval on the grounds that the expenditure would be met from the budgetary allocation of DGOF and also on the plea that the initial sanction of MBT included production of 42 tanks of which only 27 tanks were now planned for production. The stand of the Ministry is not tenable as DRDO had already produced 32 tanks (12 prototypes, 15 PPS, two torsions bar tanks, one test vehicle, one recovery tank and one MK-II vehicle) and had also exceeded the sanctioned cost in producing these 32 prototype/PPS tanks. Thus, sanction of LSP for 15 tanks without approval of CCPA was irregular. The DRDO stated in November 1997 that while CCPA approval was being expedited for production of 124 tanks, a decision was taken to go ahead with the production of a small batch of 15 tanks, in order to maintain continuity.

26.11 Operational mobility

A state-of-art modern battle tank ensures its design superiority through more efficient systems, less maintenance and manpower requirements, and logistic reliability. However, the MBT Arjun

regiment configured around the present design would require 16 additional three tonne vehicles and 45 personnel per regiment to sustain its present operational mobility.

Army do not have suitable wagons or trailers for transportation of MBT Arjun by rail or road.

The MBT Arjun in its present configuration being the largest in size i.e. height and width among contemporary tanks will require a special wagon for its rail transportation along with its full pay load as the wagons available with the Army presently are not capable of carrying this tank. The Ministry accordingly, in January 1997, accorded sanction for the design and development of three prototype special bogie flat wagons for its rail transportation at an estimated cost of Rs 1.65 crore with the time schedule for completion of this work as 24 months i.e. January 1999.

Transportation of even empty wagons specially designed for Army would entail payment of additional transportation charges of 150 percent more than the normal charges.

Any consignment which exceeds the limits of standard moving dimension becomes over dimensional consignment (ODC) for which the railways charge one and a half times over the normal charges. Most defence equipment/vehicles when loaded in wagons for rail transportation are categorised as ODC class consignments but the empty wagons are categorised as non-ODC. In the case of wagons specially designed and built for the rail transportation of MBT Arjun, the wagons will move as ODC class even in the reverse empty direction and would thus entail payment of additional transportation charges of 150 *per cent* more than the normal charges. Further, the Railways are yet to give route clearance certificates for the transportation of MBT Arjun on all sections of Indian Railways (November 1997).

The height, width and weight of MBT Arjun would also affect its tactical mobility by road as the Army at present do not have suitable trailers to carry a tank of over 60 tonne.

26.12 Financial Status

Project cost escalated by twenty times i.e. from Rs 15.50 crore to Rs 307.48 crore.

The project was sanctioned in May 1974 at a cost of Rs 15.50 crore (FE Rs 3.70 crore). Consequent on revision of GSQR, escalation of prices etc. the project cost was revised to Rs 56.55 crore (FE Rs 12.96 crore) in October 1980. As a result of the need for increased number of prototypes and PPS tanks, import of power packs, price escalation, consultancy charges etc. the project cost was further revised to Rs 280.80 crore (FE Rs 102.32 crore) in May 1987. The

total expenditure of the project at the closure of project was Rs 294.70 crore (FE Rs 97.87 crore).

Expenditure on manpower amounting to Rs 12.78 crore was not booked to the project account.

Interestingly the CVRDE did not book the expenditure on manpower for the years 1993-94 and 1994-95 amounting to Rs 12.78 crore to the project account on the grounds that funds allocated for MBT manpower had been exceeded. The Ministry was yet to issue orders regularising this expenditure (July 1997). Thus the total expenditure of the project at the time of closure of the project in March 1995 was Rs 307.48 crore as against the revised cost of Rs 280.80 crore.

26.13 Sanctioning of supplementary Projects without CCPA approval

The MBT project was closed on 31 March 1995 apparently to bring the cost of the project within the ambit of the sanctioned amount of Rs 280.80 crore in order to comply with Para 2.12 of the recommendations of the PAC made in their 168th report (Eighth Lok Sabha). However, the activities on the MBT project continued even beyond March 1995. These are discussed below:

26.13.1 Product Support

Additional expenditure of Rs 16.98 crore (FE Rs 6.50 crore) had been incurred without CCPA's approval for extended user trials.

The extensive user trials of MBT Arjun carried out by the Army during the years 1993 and 1994 did not fully meet the laid down parameters. This necessitated extended users' trials during the years 1995, 1996 and 1997 for clearance by the users for bulk production. The extended users trials were an additional requirement not originally catered for in the CCPA paper. Since the development activity on MBT Arjun had been completed and project was closed by 31 March 1995, the CVRDE initiated a separate project for product support for this extended user trial. The project was sanctioned by Ministry in September 1995 at a total cost of Rs 16.98 crore (FE Rs 6.50 crore). This cost comprised of Rs 9.98 crore (FE Rs 6.50 crore) for provision of maintenance and product support and Rs 7.00 crore towards cost of manpower. The PDC of the project was 31 March 1996. This was extended upto 31 March 1997.

The additional expenditure of Rs 16.98 crore (FE Rs 6.50 crore) was solely necessitated as the PPS tanks made available for users' evaluation trials by the CVRDE failed to completely meet the required parameters.

26.13.2 Modifications to MBT Arjun

Improvements to systems of MBT Arjun at a cost of Rs 25 crore (FE Rs 5 crore) was sanctioned without CCPA's approval.

Though the Army authorities had reservations about the present design of the tank, the Ministry in January 1997 sanctioned a project for "improvements to systems of MBT" at a total cost of Rs 25 crore by CVRDE. The PDC of the project is 30 September 1999.

Thus, sanctioning of two supplementary projects by the Ministry in September 1995 and January 1997 for product support at a total cost of Rs 16.98 crore (FE 6.50 crore) and for improvement to systems of MBT at a cost of Rs 25 crore (FE Rs 5.00 crore) respectively were irregular and should have been done only with the approval of CCPA as the main project of MBT Arjun was still on. This had also resulted in underwriting the project cost of MBT Arjun to the extent of Rs 41.98 crore.

26.14 Foreign Exchange Content

Nearly 60 percent of the production cost of MBT Arjun related to imported supplies.

As per the estimates made in early 1987, the import content of MBT Arjun was 27 per cent and the expenditure in FE was 45 per cent. Three major systems of MBT Arjun i.e. Power Pack, Gun Control and Fire Control Systems are based on imported technology. The cost estimate made for 15 LSPs in December 1995 indicated that nearly 60 per cent of the total cost estimate related to imported supplies.

27. Development of mini remotely piloted vehicle

27.1 Introduction

Remotely piloted vehicle (RPV) is an unmanned aircraft capable of being flown and manoeuvred from the ground and is utilised, inter alia, to gather and retrieve accurate and timely intelligence concerning tactical developments on the battle field, to

Project was sanctioned in October 1991 to meet Army's operational requirement.

acquire targets for engagements by artillery/SS missiles, to designate targets for air to ground weapons, to serve as a communication relay platform and to function as a decoy/defence suppression/harassment device. It is reckoned as an important force multiplier of current and future warfare.

To meet the Army's operational requirement of an RPV it was decided in September 1988 that Defence Research and Development Organisation (DRDO) would undertake the indigenous development of the RPV. The General Staff Qualitative Requirement (GSQR) was finalised by the Army in May 1990. In October 1991 Government sanctioned the project covering the design and development of RPV at a cost of Rs 34 crore (FE Rs 8 crore).

27.2 Scope of Audit

A review was conducted by Audit during May and June 1997 covering the design and development of an RPV to meet the Army's operational requirement.

27.3 Implementing agency

The project was entrusted to Aeronautical Development Establishment (ADE) and its Director/Project Coordinator was authorised to allot sub-projects to other Defence Research and Development Laboratories/Establishments for development/manufacture of systems, components and sub-assemblies required for the project. In all eight laboratories/establishments are involved in the project.

27.4 Highlights

- **RPV, an operational requirement of Army sanctioned in October 1991 at a cost of Rs 34 crore to be developed by ADE with scheduled date of completion as March 1995 was delayed by more than 33 months and a further delay of 12 months beyond December 1997 is anticipated. The ADE upto June 1997 carried out 20 development flight trials. These development trials revealed deficiencies in minimum speed and endurance. More flights are planned in view of the technological problems encountered. Accordingly, a fully integrated prototype has yet to be made available to**

the users for their full fledged evaluation. The extension of the completion date indicates over optimism on the part of DRDO in the design and development fields.

(Paragraph 27.6, 27.10 and 27.14)

Although Phase I development flight trials were scheduled from March 1993, ADE was able to complete the design of air frame only by June 1993. Thereafter orders were placed on a DRDO establishment and supply of components for 5 sets was to be completed by January 1994 but this establishment was able to supply components for only three sets by June 1994 and the supply order was finally shortclosed in November 1995. There were also delays in the supply of six air frames by the private firm on which orders had been placed and the last supply of two air frames was actually completed in August 1997.

(Paragraph 27.6 and 27.7)

Four different types of engines were imported for the development project. Three type 'C' engines procured at cost of Rs 22.29 lakh could not be utilised and the expenditure on its procurement had become infructuous as it was subsequently decided to use type 'D' engine for the RPV in view of its increased all up weight and the need to reduce its acoustic signature. The indigenous engine is still under development.

(Paragraph 27.8)

The indigenous development of two systems of the payload was yet to be taken up. The import of forward looking infra red was delayed by six years on account of delays in the development of the gimbal payload assembly. The import option in respect of the infra red line scan was still under study.

(Paragraph 27.9)

The slippages in the development of the RPV had resulted in the cost of the project having to be revised to Rs 48.90 crore with a FE content of Rs 15.50 crore as against the original cost of Rs 34 crore with a FE content of Rs 8 crore.

(Paragraph 27.12 and 27.13)

The Management Board and Apex Board did not monitor the project as per the time schedule laid down. Annual progress of the project was also not rendered to the Cabinet Committee on Political Affairs as per its instruction.

(Paragraph 27.15)

27.5 *Scope of the project*

Project to be completed by March 1995.

The scope of the project provided for development of one system consisting of two air vehicles, associated sensors and ground equipment being made available for user trials. DRDO were optimistic that they would be able to produce a prototype as per the GSQR approved by the Army in May 1990 in 42 months i.e. by March 1995.

27.6 *Development of RPV*

The major sub-systems of an RPV are air frame, propulsion system, data link, power supply system, payload sub-system, recovery system and development telemetry. It also has a ground support system which includes launcher (rocket assisted and hydro pneumatic), ground control system, antenna vehicle, power supply vehicle, recovery vehicle and other vehicles for infrastructure requirement in the field.

The development and evaluation under this project were planned in two standards i.e. MK-I and MK-II, in response to the priorities of operational roles indicated by the user. The MK-I standard was meant for priority operational roles such as day/night surveillance, reconnaissance and identification of targets for long range weapons. It was to be launched by Rocket Assisted Launcher (RAL) and recovered by Parachute System. The payloads include Day Light TV (DLTV) Laser Range Finder (LRF) and Mini Panoramic Camera. The MK-II standard was to be designed with enhanced capabilities such as Hydro Pneumatic Launcher (HPL) instead of RAL, Net Recovery System and additional Payloads such as Forwards Looking Infra Red (FLIR), Electronic Intelligence (ELINT), Communication Intelligence (COMINT), Laser Range Designator (LRD) and Infra Red Line Scan (IRLS).

Slippages in developmental activities by all the participating laboratories.

As per the time schedule fixed for the project, design freeze was to be completed by April 1992, Phase I and II development trials by March 1993 and August 1993 respectively and the extended user trials by December 1994. The design freeze was completed in April 1992 as planned and the sub-system design commenced thereafter. However, the project had not progressed as per time schedule on account of delays in development/fabrication of systems, components

A fully integrated prototype for user trials not made available even after a delay of 33 months.

Although Phase I development flight trials were scheduled from March 1993, ADE was able to complete the design of air frame only by June 1993.

Unadjusted advance of Rs 2.14 lakh was yet to be realised.

Against five sets of airframes to be supplied by January 1994 only three sets were supplied in June 1994 and supply order was short closed in November 1995.

and sub-assemblies by all the participating Laboratories/ Establishments. Consequently the planned date of completion (PDC) had to be revised twice. The Phase I development flight trials planned to commence in March 1993 ultimately commenced in January 1995 after a delay of 22 months. The ADE stated in May 1997 that MK-I and II had been merged and the complete system was undergoing developmental trials. The revised PDC is now December 1997. This is unlikely to be achieved as ADE had not yet made available a fully integrated prototype for initial user trials (November 1997).

27.7 Air frame

The project envisaged fabrication of 15 air frames for development and user trials. The first five airframes were to be assembled in ADE. These were for the initial flight trials to validate the airframe design and aerodynamic performance. The balance 10 were to be procured from selected vendors with the objective of identifying vendors for various sub-systems of RPV. The airframe of RPV is essentially of Fibre Reinforced Plastic (FRP) structure with metallic components. Although the Phase I development flight trials were scheduled from March 1993, the ADE could not even complete the design of airframe by that time. The design of airframe components was ultimately completed by the ADE by June 1993. Thereafter, it took another six months by the ADE in placing the supply order. An order for the supply of five sets of FRP components and one set of tools at a cost of Rs 17 lakh was placed on Composite Product Centre (Comproc) in December 1993. The supplies were to be made in January 1994. Comproc was paid 100 *per cent* advance in January 1994. However, Comproc supplied the first batch of items comprising of three sets in June 1994. The remaining two sets were not supplied even after extension of delivery date. Components supplied by Comproc had deviations which were corrected by ADE. Supply order was ultimately short closed in November 1995. The unadjusted advance amounting to Rs 2.14 lakh due from Comproc was yet to be realised (December 1997).

Two supply orders for the supply of a total of six air frames were placed by ADE on a private firm in August 1995 and May 1996 respectively at a total cost of Rs 1.20 crore with scheduled dates of supply as December 1995 and September 1996 respectively. The firm

supplied first two air frames in September and October 1996. Two more airframes were supplied in November and December 1996. The remaining two airframes were supplied in August 1997.

27.8 Propulsion System

One engine procured at a cost of Rs 4.28 lakh was used only for wind tunnel test and remains in stock.

As the RPV technology was not available within the country, engines for this development project were to be imported. One engine of type 'A' was imported from UK in September 1991 at a cost of Rs 4.28 lakh for initial development work. However, this was not utilised further and remains in stock with ADE. The DRDO stated in November 1997 that these engines were needed to generate data from wind tunnel test and engine test bed runs.

In February 1993 one engine of type 'B' was imported from Germany at a cost of Rs 3.39 lakh for development trials. Later six engines of type 'C' were imported from UK between February and October 1994 at a cost of Rs 40.39 lakh for the same purpose. The ADE in June 1995 procured one more engine of type 'B' at a cost of Rs 4.05 lakh on the basis of an order placed in May 1994.

Subsequently, it was decided in April 1996 to import engine type 'D' a variant of type 'C' from UK as a consequence of the increased all up weight of air vehicle and need to reduce the acoustic signature of the RPV. Accordingly four engines of type 'D' were imported between April and August 1996 at a cost of Rs 40.83 lakh and it was also decided that the initial production of indigenous RPV would be based on imported Type 'D' engine.

Over provisioning of three engines costing Rs 22.29 lakh.

Out of 12 type 'B', 'C' and 'D' engines imported, two engines of type 'B', four of type 'C' (one was withdrawn later) and two of type 'D' were integrated to seven air frames upto December 1996 for development trials. Since the initial production of indigenous RPV would be based on type 'D' engine, there was no prospect of utilisation of three engines of type 'C'. The expenditure of Rs 22.29 lakh on procurement of these three engines had, therefore, become infructuous. DRDO have however, contended that whatever engines still remaining in the project can be made available as part of production models or be used in further development flights in future programmes. The reply is not tenable in view of the decision to use type 'D' engine for the RPV.

Indigenous engine not ready.

In August 1992 development work of an indigenous engine for the RPV was assigned to Vehicle Research and Development Establishment (VRDE) at a cost of Rs 56 lakh (FE Rs 15 lakh). Three prototypes of the indigenous engines were to be supplied by VRDE between April 1995 and July 1995. These were however, not supplied and the prototypes were reported to be still in the test bed as of March 1997 and were now expected to be supplied before the closure of the project. Supply of prototype at a later stage may not serve the intended purpose as it will have to be integrated first with the airframe and thereafter undergo development and user trials.

27.9 Payload

Indigenous development of two important systems of the payload has not yet been taken up.

Payload to be made available included forward looking infra red (FLIR) and infra red line scan (IRLS). The FLIR was to be mounted on gimbal payload assembly (GPA). As per the original projections, three sets each of FLIR and IRLS were to be imported in 1991 at an estimated cost of Rs 20 lakh and Rs 18 lakh respectively. Subsequently, these were to be replaced by indigenous version to be developed by a Defence research and development laboratory (R&D Lab). However, the indigenous development projects have not been entrusted to this R&D Lab so far (November 1997). The DRDO stated in November 1997 that the indigenous development was proposed to be taken up only after necessary competence was built up.

Two FLIRs were imported from Israel in May 1997 at a unit cost of Rs 82.50 lakh. The delay of six years in import of FLIR was stated to be due to delay in development of GPA based on which the FLIR requirements were to be finalised. The import of IRLS had not been finalised till June 1997 as the import options were still under study.

27.10 Development flight trials

The ADE assembled Seven air vehicles with the airframes received by them. These air vehicles were fitted with imported engine. A flight readiness review Board was constituted in January 1995 for evaluation of the air vehicle assembled. The Board cleared the air vehicle for flight in January 1995 and the first development flight of

20 development trials carried out so far have revealed deficiencies in minimum speed and endurance.

RPV was conducted in January 1995 with an objective to validate air vehicle design in respect of basic aerodynamic, airframe structure, digital flight control/flying qualities, propulsion integration, on board electrical system and para recovery system. This was followed by a series of development flight trials with progressive addition of capabilities to validate the requirements specified in the GSQR. These developmental flights were preceded by static trials and helicopter trials to validate the sub-systems before integrating them in air vehicle. In all a total of 10 flight trials had been planned as preparation for user trials. On successful completion of these developmental trials (10 flights), one system was to be offered to user for their evaluation. As against 10 flight trials planned to be carried out before the RPV was to be offered for user evaluation, the ADE carried out 20 developmental trials between January 1995 and June 1997. The DRDO stated in November 1997 that more flights were needed in view of the technological problems and they now expect the evaluation to be completed by December 1998. They also stated that three flights had already taken place when it was decided to merge MKI and MKII to give a fully integrated version for user trials. The developmental trials (20 flight upto June 1997) revealed deficiencies in minimum speed and endurance. The recovery system also failed in two developmental trials. Further, the ADE is yet to make available a fully integrated prototype for users' evaluation trials (November 1997).

27.11 Financial progress

The total expenditure on the project as on 31 March 1997 was Rs 38.06 crore (FE Rs 11.90 crore). The FE element constituted 31 per cent of the total expenditure.

27.12 Revision of project cost

The project was sanctioned in October 1991 at a cost of Rs 34 crore (FE Rs 8 crore) and was scheduled for completion by March 1995. However, ADE, in July 1995, proposed enhancement of project cost to Rs 54 crore (FE Rs 15.53 crore) citing adverse impact of FE variation and world price index increase leading to cost escalation since 1990 as reasons. The Apex Board (AB) recommended in July 1995 enhancement of cost to Rs 48.90 crore (FE Rs 15.50 crore). However, Government, in August 1995, enhanced the cost to only

Cost overrun of Rs 14.90 crore (FE Rs 7.50 crore).

Rs 43 crore (FE Rs 13.50 crore). In October 1996, ADE again emphasised the need to restore the cost ceiling to Rs 48.90 crore (FE Rs 15.50 crore) as recommended by the AB. This enhancement was sanctioned by the Government in December 1996 resulting in cost overrun of Rs 14.90 crore (FE Rs 7.50 crore). The DRDO stated in November 1997 that this enhancement was necessitated mainly on account of adverse exchange rate and price escalation of material.

27.13 Revision of time frame

The project was tailored to meet the requirement of the Army. ADE was optimistic that they would be able to produce a prototype for the completion of users' evaluation by March 1995. The important milestones and the time schedule for their completion were as under:

Event	Completion period	
	Months	Date
1. Design Freeze	06	April 1992
2. Phase I development Flight trials	17	March 1993
3. Phase II development Flight trials	22	August 1993
4. Initial user trials	38	December 1994
5. Extended user trials to completion of development project	42	March 1995

Project- Expected to be completed in December 1998 after a delay of 45 months.

This schedule was revised twice and latest PDC is December 1997. However, various milestones set for completion of the project within the extended PDC of December 1997 could not be achieved. With the present stage of development of the RPV, this PDC is bound to undergo further change. The DRDO stated in November 1997 that the users' evaluation programme is expected to be finalised by December 1997 and formal evaluation of the system would commence thereafter. They expect that evaluation would be completed by December 1998. Consequently, the Army which considered the RPV

as an operational requirement has yet to evaluate a fully integrated RPV.

The extension of the completion date by 33 months and the likelihood of further extension by 12 months upto December 1998 indicates over optimism on the part of DRDO while undertaking this project.

27.14 Monitoring

Monitoring of project
was inadequate

The project was to be monitored by a two tier management structure i.e. apex Board and management Board. The apex Board headed by the Scientific Adviser to Raksha Mantri (SA to RM) was to meet every six months to oversee the progress of the project, monitor major milestones and take remedial action to ensure timely achievement of project goals within the sanctioned cost. The management Board headed by Director ADE was to meet every three months to ensure the development within the parameters of time and cost. Further, a report on the progress of the project duly approved by apex Board was to be submitted to the CCPA every year. However, till June 1997 the apex Board had met only twice and the management Board eight times as against the required number of eleven and twenty three respectively. Further, no annual report on the progress of the project had been submitted to the CCPA so far. DRDO in their reply stated that the meeting of the two apex Boards are not the sole indicators of monitoring and that this project was reviewed in 10 DRC and other meetings by SA to RM and twice by COAS as also by other senior officials in the Ministry.

28. Working of military farms

28.1 Introduction

Military farms (MFs) were established with a view to supply milk and other dairy products to troops and dry fodder to animals. As of March 1996, 50 MFs were functioning with 14111 hectares of land

and 14717 cattle. In the cantonments where MFs are not functioning, ASC arranges for the supply of milk to the Armed Forces.

Mention was made in Paragraph 33 of Report No.2 of 1988 of the C&AG of India Union Government, Defence Services (Army and Ordnance Factories) about the shortfall in capacity utilisation, low yield of milk and unrealistic profits of the MFs. In May 1997, Ministry stated in their ATN that an expert Committee on dairy farming set up for rendering advice about continuance or restructuring of MFs had recommended that MFs be continued as a departmentally run organisation. Another Committee on accounting procedures recommended that MFs be considered as a service organisation and the cumbersome accounting system be simplified. These recommendations were yet to be implemented.

28.2 Organisational Set Up

MFs function under the overall Control of Quarter Master General who is assisted by a Dy. Director General, MFs at Army HQ. At Command level, there is a Director and each MF has an Officer-in-Charge.

28.3 Scope of Audit

A review of the working of 11 MFs covering the period from 1991-92 to 1995-96 was carried out during 1997 through a test check of records.

28.4 Highlights

- MFs cultivated only 24 per cent of their total cultivable land by which they could meet 55 to 62 per cent of total requirement of fodder. The deficiency was met by local purchase of fodder worth Rs 2607 lakh during last 5 years.

(Paragraph 28.5.1)

- Milk and fodder production targets were never achieved resulting in annual loss of Rs 2700 lakh to Rs 3057 lakh between 1991-92 and 1995-96.

(Paragraph 28.5.1 and 28.6.1)

- Local purchase rates of milk and fodder were lower than their production cost in MFs resulting in extra expenditure of Rs 714 lakh between 1991-92 and 1995-96.
(Paragraph 28.5.2 and 28.6.2)
- 11 to 39 percent TB affected animals in two MFs were not provided any treatment, as a result animals valuing Rs 20.48 lakh died.
(Paragraph 28.6.4)
- Issue of concentrates to animals in excess of admissibility resulted in an extra expenditure of Rs 179 lakh in 9 MFs between 1991-92 and 1995-96.
(Paragraph 28.6.5)
- Production cost of dairy produce by MFs was higher than their local purchase rates resulting in an extra expenditure of Rs 84 lakh during last five years.
(Paragraph 28.6.7)
- Despite a 74 per cent increase in herd strength milk production could increase by only 53 per cent. MFs could produce only 50 to 59 percent of total requirement of milk resulting in avoidable expenditure of Rs 6943 lakh on local purchase during the last five years.
(Paragraph 28.6)
- Annual accounts of MFs for 1991-92 to 1995-96 had shown profit of Rs 392 lakh to Rs 749 lakh but analysis of accounts revealed that MFs actually suffered heavy losses ranging from Rs 747 lakh to Rs 1533 lakh which were camouflaged by artificial/inflated profit.
(Paragraph 28.7)

28.5 Cultivation of land for fodder production

28.5.1 Under utilisation of land

MFs held 11,657 hectares cultivable land but cultivated on an average 2,748 hectares (24 per cent) between 1991-92 and 1995-96 and met 55 to 62 percent of the total requirement of fodder. Production of fodder ranged from 18 MT to 20 MT per hectare as against the target of 60 MT resulting in loss of Rs 2490 lakh to Rs 2670 lakh besides avoidable expenditure of Rs 384 lakh to

Under cultivation of land resulted in local purchase of fodder.

Rs 677 lakh on local purchase made to meet the deficiency. Army HQ stated in September 1997 that considerable portion of irrigated land available with the farms was utilised for production of cash crops, fodder, seed and hence targets were not achieved. This contention was not tenable as the crops are required to be planned primarily to meet requirement for fodder throughout the year.

Thus, failure of Army HQ to ensure optimum utilisation and proper management of land resulted in avoidable expenditure of Rs 2607 lakh on local purchase of fodder.

28.5.2 Higher Production Cost

Production of fodder by MFs was not cost effective.

A comparison of all India average local purchase rate of fodder (Rs 1318 to 1509 per MT) and average farm production rate (Rs 1345 to 1725 per MT) for the years 1992-93 to 1995-96 revealed that the latter was always higher resulting in extra expenditure of Rs 281.37 lakh during the last four years. Thus production of fodder by MFs was not commercially viable.

28.5.3 Injudicious expenditure on inter transfer of fodder

Fodder worth Rs 4873.80 lakh was transferred from one MF to another between 1991-92 and 1995-96 and an expenditure of Rs 2560.54 lakh i.e. more than 50 per cent of the cost of fodder was incurred on its transportation. There was no documentary evidence to support that only surplus fodder produced within MF was transferred to the other MF. Thus, possibility of transfer of locally purchased fodder from one MF to another involving avoidable transportation charges could not be ruled out.

28.5.4 Loss due to bailing hay

Shortage of 186 MT of bailed hay costing Rs 8.78 lakh was noticed in MF Bareilly during stock taking carried out in March 1997. Another discrepancy of 140 MT of bailed hay costing Rs 6.60 lakh was also noticed due to fraudulently altering the figures in two vouchers of October and November 1996. The Station HQ Bareilly convened CI in March - April 1997, to investigate the loss of hay costing

Rs 15.38 lakh. The proceedings of CI were yet to be finalised (November 1997).

28.6 Milk Production

Increase in Milk Production was not commensurate with increase in herd strength.

The herd strength of 1985-86 (8458) had increased by 74 per cent (14717) in 1995-96 but the milk production had increased by only 53 per cent. The average milk yield per animal per day had come down from 7.76 litres to 6.76 litres. Thus, milk production was not commensurate with the percentage increase in herd strength. MFs could produce between 50 to 59 per cent of total requirement of milk during the period 1991-92 to 1995-96 and the deficiency was met through local purchases of milk worth Rs 6943 lakh at the rates (Rs 6.06 to 9.19 per litre) which were lower than the cost of production (Rs 6.56 to Rs 9.23 per litre) in MFs.

28.6.1 Low yield of milk

Milking targets were not achieved.

The laid down milk-yield targets for high cross breed (HXB) and low cross breed (LXB) were 12 Kgs (11.67 litres) and 10 kgs (9.72 litres) respectively. Audit scrutiny in 11 MFs revealed that there had been shortfall ranging from 7 to 40 per cent in the yield resulting in annual losses ranging from Rs 210 to 387 lakh, besides avoidable expenditure of Rs 8.95 crore on local purchase of milk to meet the deficiencies.

Analysis of shortfall in milking targets revealed maximum 13 to 40 per cent shortfall in MF Bangalore, Meerut, Panagarh and Namkum and minimum 7 to 16 per cent in MF Kirkee. In other farms at Deolali, Ambala, Agra and Ferozpur it ranged from 18 to 33 per cent. MF Bangalore attributed the shortfall in milking target to non-availability/contaminated supply of water while MFs Deolali and Namkum attributed this to insufficient supply of water, shortage of fodder and concentrates, MF Meerut and Kirkee attributed shortfall to outbreak of foot and mouth diseases among the cattle. These reasons furnished were indicative of poor management of MFs.

28.6.2 Higher production cost

Production cost of milk was higher than local purchase rate.

A comparison of local purchase rate of milk (Rs 4.44 to Rs 10.65) and its cost of production in cattleyard (Rs 5.11 to Rs 11.63) in 8 MFs revealed that the latter was persistently higher resulting in extra expenditure of Rs 432.54 lakh. The position in other MFs needs to be reviewed to conclude whether milk production in MFs was economical.

28.6.3 Uneconomical rearing of calves

Rearing of calves was uneconomical.

Expenditure on rearing was more than value of young stock matured into milking animals primarily because of rearing of calves beyond prescribed percentage of 25. This resulted in annual losses ranging from Rs 127 lakh to Rs 316 lakh for the period 1991-92 to 1994-95. In 1995-96 valuation rates of young stock were abnormally increased and a profit of Rs 108 lakh had been shown. The basis for increasing the rate was not made available to Audit. Thus, genuineness of the inflated profit could not be verified.

28.6.4 Diseases in animals

Sick animals were not provided any treatment.

MF Namkum and Jabalpur were holding sick animals suffering from Tuberculosis (TB) varying from 11 to 39 *per cent* of their total holding. Treatment of T.B. infected animals was not considered economical due to financial crunch. As a result 317 animals valuing Rs 20.48 lakh died during 1991-92 to 1995-96.

28.6.5 Overfeeding of concentrates

Concentrates worth Rs 1.79 lakh were fed in excess of authorisation.

Based on instructions issued in 1984 production ration over and above the basic ration to animals are to be issued against the yield of milk exceeding 15 Kg in ratio of 1:2 instead of on the entire yield of milk.

It was however, noticed that contrary to the above instructions, production ration was issued based on total yield of milk in the ratio of 1:2 resulting in excess issue of production ration worth Rs 179 lakh in 9 MFs. The position of other MFs would therefore need to be

reviewed to ensure proper implementation or otherwise of the said instructions.

28.6.6 Loss of milk

Variation in butter fat content resulted in loss.

The milk after milking in cattleyard was issued to Dairy Section after recording the butter fat content for further supply to troops/paying customers. Thus, butter fat content as well as quantity of milk recorded in cattleyard and Dairy Stock Sheets should be the same. Test check revealed that although the quantity of milk remained the same percentage of butter fat varied from 0.2 to 0.7 per cent in both the sections in MF Lucknow, 0.3 to 0.7 in MF Jabalpur and 0.1 to 0.4 in MF Ambala. Thus there was dilution in the quality of milk delivered indicating a loss of milk which was neither noticed nor investigated.

Audit pointed out loss of milk worth Rs 3.28 lakh on this account in MF Ambala from April 1996 to December 1996. Loss on this account in all MFs needs to be worked out for fixing responsibility.

28.6.7 Loss on preparation of dairy products

Test check of cost of production of cream/butter in 6 MFs revealed that it was higher than local purchase rates resulting in extra expenditure of Rs 84 lakh.

28.6.8 Extra expenditure on pasteurisation

MF Ambala had been pasteurising the milk procured from Haryana Development Corporation which was already pasteurised. This resulted in an avoidable expenditure of Rs 21.48 lakh on pasteurisation besides loss of milk valuing Rs 2.46 lakh in handling of milk for pasteurisation between July 1995 and December 1996.

28.6.9 Non-receipt of dairy produce

Dairy produce worth Rs 140.62 lakh were issued by MF Lucknow to various units/formations during December 1996. The consignee units acknowledged the receipt of dairy produces worth Rs 42.52 lakh only and receipts of the balance quantity worth Rs 98.10 lakh were yet to be confirmed.

28.6.10 Non-recovery of packing material

MF Kirkee was supplying milk in sachets but cost of sachets was neither included in the price of milk nor was it recovered separately. The expenditure incurred on manufacturing sachets during 1993-94 to 1995-96 was Rs 28.77 lakh which remained unrecovered from paying customers on account of the above pricing policy.

28.7 Overall working results

Annual accounts of MFs for 1991-92 to 1995-96 had shown an overall profit ranging from Rs 392 lakh to Rs 749 lakh. Analysis of annual accounts revealed that MFs actually suffered heavy losses if large amount of notional interest on Government banking accounts and profit due to artificially inflated rates for free issue of milk to troops and sale of fodder to ASC were excluded as shown below:

Notional interest and inflated profit camouflaged the loss.

Year	Inflated Profit on Sale of Milk/Fodder to troops/ASC								
	Milk			Fodder					
	Quantity in lakh litre	Production cost per litre	Sale rate per litre	Inflated amount Rs in lakh	Quantity in Metric tonne	Average receipt rate per kg	Average sale rate for ASC per kg	Average sale rate for other MFs	Inflated amount Rs in lakh
1991-92	655	6.56	7.03	307.85	356.63	1.90	3.20	2.30	320.97
1992-93	674	7.40	8.23	559.42	353.20	2.01	3.59	2.44	406.18
1993-94	633	8.04	8.91	550.71	260.08	2.88	5.31	2.86	637.20
1994-95	593	9.10	9.48	225.34	266.96	3.08	5.52	2.62	774.18
1995-96	582	9.23	10.53	756.60	255.53	3.22	5.88	3.04	725.71

Thus, actual losses ranging from Rs 747 lakh to Rs 1533 lakh had been camouflaged by unrealistic notional interest and inflated profit as shown below:

Year	Profits in annual accounts	Element of notional interest	Inflated profit		Actual losses
			On issue of milk to troops at inflated rates	On sale of fodder to ASC at inflated rates	
(Rs in lakh)					
1991-92	392.16	509.87	307.85	320.97	746.53
1992-93	597.70	571.60	559.42	406.18	939.50
1993-94	551.26	593.51	550.71	637.20	1230.16
1994-95	433.43	678.67	225.34	774.18	1244.76
1995-96	748.64	799.09	756.60	725.71	1532.76

28.8 *Summing up*

Despite having huge infrastructure as well as sufficient cattle and land, production of milk and fodder in MFs was not cost effective and MFs were actually running in losses. The MFs are procuring 41 - 50 *per cent* of milk from trade for supplying to troops after processing. Since the trade can conveniently take care of the requirements of the troops, continuation of the MFs in the light of commercially unviable yield is questionable. It is recommended that government should close down the MFs without further delay.

The review was referred to Ministry in October 1997 and their comments were awaited as of December 1997.

29. Abnormal delay in repair/overhaul of tanks

Tanks/BMPs valued at Rs 391 crore were lying with a CVD and a Mechanised Unit for the last 8 to 14 years affecting operational efficiency and Defence preparedness.

Tanks/BMPs valued at Rs 391 crore were lying with a CVD for the last 8 to 14 years affecting operational efficiency and Defence preparedness as brought out below:

Case I

415 tanks valued at Rs 325 crore were lying with CVD for overhauls.

As of April 1996 CVD held a stock of 415 Vijayanta tanks pre mark 1A, 1B and 1C valued at Rs 325 crore received between 1983 and 1989, for feeding to Base Workshop for base overhauls.

Out of 39 tanks to be overhauled, one tank was downgraded, 14 overhauled tanks could not be issued in the absence of instructions from Army HQ.

Out of 415 tanks 296 pre mark 1A tanks were withdrawn from overhauling programme and thus only 119 were required to be overhauled. 39 tanks were fed to workshop between December 1989 to October 1996 for base overhauls. Of these 14 were received duly overhauled between December 1996 and March 1997 but could not be issued as of August 1997 in the absence of instructions from Army HQ, one number was downgraded for disposal, 24 tanks were awaiting receipt from workshop, duly overhauled. The balance 80 tanks were yet to be fed to workshop as of March 1997.

104 tanks valued at Rs 81.46 crore were awaiting overhauling by the workshop for the last 8 to 14 years.

Thus, 104 tanks valued at Rs 81.46 crore were awaiting overhauling by the workshop for the last 8 to 14 years thereby affecting Defence preparedness and a further 310 tanks (including 14 overhauled) were lying with the CVD. The position regarding disposal of one downgraded tank was also not known.

Case II

Thirty three BMPs of Russian origin valued at Rs 66 crore introduced into service during 1982 and 1983, were received by a Mechanised unit during 1988 and 1989. During their periodic inspection from August 1990 to September 1993 the concerned

The IC tubes fitted in the BMPs had become defective and they were yet to be replaced affecting the operational efficiency.

workshop found that Image Converter (IC) tubes fitted had become defective and they were accordingly declared unserviceable. The unit had also been reflecting the deficiency of IC tubes regularly to higher authorities in their monthly reports but the IC tubes had not been procured and replaced as of January 1997. The unit stated in October 1996 that non-replacement of IC tubes was affecting the operational efficiency during night operations.

The matter was referred to the Ministry in June 1997; their reply was awaited as of December 1997.

30. Avoidable payment of container detention charges

Failure of Air HQ/consignees in sending shipping documents to EHQ in time resulted in extra expenditure of Rs 233 lakh.

Mention was made in Para 31 of the Report of the C&AG for the year ended 31 March 1992 wherein avoidable payment of container detention charges by EHQ Bombay was pointed out. Despite this, a failure of systems was detected in the following two cases resulting in an extra expenditure of Rs 26.53 lakh.

Case A

One FCL containing Naval Stores arrived at BPT on 9 August 1995 with Last Free Date (LFD) as 13 August 1995. The intimation regarding arrival of the vessel was communicated to EHQ by the consignee in February 1997 i.e. a year and half after receipt of final auction notice from the shipping agent and the consignment was cleared in March 1997 after payment of detention charges of Rs 17.13 lakh for the delayed period.

Case B

A vessel containing spare parts for Aircraft/Helicopter berthed in May 1995 at BPT with LFD as 19 May 1995. Intimation was given

to EHQ regarding berthing of the vessel by Air HQ after 2 months alongwith the original documents. The containers were cleared on 11 September 1995 after payment of Rs 9.40 lakh towards detention charges for the delayed period.

In August 1997, while accepting the facts Army HQ stated that the above payment could have been avoided had original documents been received in time from Air HQ/consignee. The Army HQ further admitted that a payment of Rs 2.06 crore had to be made in similar type of cases during the period March 1992 to March 1997.

Thus failure of Air HQ/consignees in sending shipping documents to EHQ in time resulted in extra expenditure of Rs 233 lakh.

The matter was referred to Ministry in June 1997; their reply was awaited as of December 1997.

31. Procurement of incomplete equipment

Due to failure of COD to synchronise the procurement of Complete Equipment Schedule items, equipment valued Rs 2.15 crore were lying in unserviceable condition.

Army HQ placed SO for procure-ment of an equipment at a total cost of Rs 2.15 crore.

Army HQ in June 1994, placed a Supply Order (SO) on a firm for supply of 100 sets of an equipment at a total cost of Rs 2.15 crore to a COD. The equipment required to be mounted on trailers 1 tonne to be supplied to the firm by CAFVD Kirkee were supplied between April and July 1995. COD received 100 sets mounted on trailers between May/November 1995 and August 1996.

COD reported to Army HQ that essential CES items were not included in the SO, as a result the equipment could not be made serviceable.

COD in January 1996 reported to Army HQ that Complete Equipment Schedule (CES) items were essential to make the equipment serviceable but the same were not included in the SO, therefore, the equipment were taken on charge as 'serviceable incomplete'. Army HQ pointed out in January 1996 that under the existing instructions, COD was responsible to procure CES items on receipt of SO of June 1994 but the COD was yet to procure the CES items (December 1997). As a result, the equipments could not be

made serviceable. As of December 1997, four sets of equipment had been issued to user units without CES items.

The Ministry stated in December 1997 that quantity 96 was held as reserve against the authorised reserved stock of 205 and CES items were provisioned and procured individually and separately in this case and their non-procurement implies that CES items were available. This contention of Ministry is not tenable as COD in January 1996 informed Army HQ that procurement of the equipment less CES was contrary to the directions issued by Army HQ and procurement action for CES items had already been initiated by COD. Thus, due to failure of COD to synchronise the procurement of CES items, equipment valued Rs 2.15 crore were lying in unserviceable condition.

32. Infructuous expenditure on procurement of substandard cylinders

Failure to provide proper drawings and specifications, procurement of cylinders from a firm not approved to manufacture the cylinders under gas cylinder rules (GCR) and with no provision in the supply order for final acceptance subject to clearance by CCE resulted in infructuous expenditure of Rs 78.73 lakh.

A COD in July 1992 raised an indent on Army HQ for procurement of 3028 seamless cylinders to replace the welded ones as the CCE refused permission for refilling of welded cylinders in terms of gas cylinder rules (GCR).

Tender enquiries made by Army HQ (January 1993) revealed that indigenous firms had no expertise in manufacturing seamless cylinders and the offers received showed that cylinders made out of seamless pipes did not fulfill the specification.

Accordingly, Army HQ in April 1993 sought permission from the CCE for use of welded cylinders in relaxation of the GSR but the same was turned down. CCE, however, forwarded the names of three

firms including one PSU who were manufacturing seamless cylinders in the country.

In February 1994, Army HQ placed a supply order (SO) for procurement of 3028 cylinders at a total cost of Rs 78.73 lakh on M/s Perfect Drop Pins Manufacturing (PDP) which did not figure in the list of three firms forwarded by CCE but was one of the firms which was considered at the tender enquiry stage and in respect of which reservation on capability to manufacture totally seamless cylinders was expressed.

The cylinders were supplied by M/s PDP in between October and December 1994 duly inspected and passed by inspecting authority.

The samples of cylinders subsequently sent to CCE by COD in September 1995 for obtaining fitness certificate were however rejected by CCE on the grounds that M/s PDP was not approved under GCR to manufacture the compressed air cylinders and those cylinders do not conform to any known national/international standards. The cylinders were also stated to be of substandard design and construction.

This view was reiterated by CCE in August 1996 in response to a letter from the Ministry of Defence Production and Supplies and they refused to permit filling of gas in such cylinders.

Meanwhile, M/s PDP in November 1995 stated that supplies made by them were strictly in conformity with the specifications mentioned in the supply order. Each lot was cleared by the inspecting officer and the advance samples were also found satisfactory and final acceptance of the cylinders in terms of the contract was not subject to clearance by the CCE.

Army HQ stated in October 1997 that the SO was placed on a firm duly approved by DGQA and the drawings and other details as provided by them were incorporated in the order. However, a CI to investigate the lapse has been ordered and necessary action would be initiated on receipt of its findings. It was also stated that CDA was being asked to withhold the amount already paid from the other pending bills of the firm because of the breach on their part for not fulfilling the requirement of GCR.

Thus, failure to provide proper drawings and specifications, procurement of cylinders from a firm not approved to manufacture the cylinders under GCR and with no provision in the SO for final acceptance subject to clearance by CCE resulted in infructuous expenditure of Rs 78.73 lakh.

The matter was referred to Ministry in June 1997; their reply was awaited as of December 1997.

33. Unauthorised payment of special duty allowances to non-entitled persons

Despite Supreme Court decision of September 1994 to stop payment of special duty allowances to civilian employees recruited in NER a sum of Rs 1.18 crore was paid to the ineligible employees between October 1994 and August 1996 of which Rs 23.52 lakh had been recovered

In January 1984, the Ministry sanctioned payment of special duty allowances (SDA) to Central Government employees having "All India Transfer Liability" on their posting to north east region (NER). The Ministry of Finance clarified in April 1987 that the concession was not admissible to employees who were either transferred from one station to another in NER or to those recruited in NER. This order was effective from 1 November 1983.

A test check of such payments in three units revealed that contrary to the above instruction, a CDA allowed and paid Rs.1.31 crore between November 1983 and February 1994 towards SDA to civilian employees who were recruited in NER. On being pointed out by Audit the Ministry in September 1994, intimated that the case was pending for decision in the Supreme Court. In September 1994, the Supreme Court while ordering stoppage of further payment of SDA to employees recruited in NER waived the recovery of the payments already made.

Contrary to instructions
CDA paid Rs 1.31 crore
to ineligible employees.

Contrary to decision of Supreme Court, Rs 1.18 crore was paid to ineligible employees of which Rs 23.52 lakh had been recovered.

A further test check of payments in 17 units revealed that despite above decision of Supreme Court the payment of SDA continued and a sum of Rs 1.18 crore was paid to employees recruited in NER between October 1994 and August 1996 of which Rs 23.52 lakh had been recovered.

- The Ministry, while accepting the facts, stated in September 1997 that the amount paid on account of SDA to ineligible persons after the Supreme Court decision of September 1994 will be recovered.

34. Unauthorised issue of free rations

Free rations valuing Rs 67.07 lakh were unauthorisedly issued by a unit to Defence civilians.

Field Service concessions which interalia included free ration were extended to Defence Civilians posted at a field station from September 1984 onwards. The station was, however, reclassified in January 1994 as modified field station retrospectively from April 1993. Consequent upon reclassification, Command HQ in June 1994 clarified that civilian employees posted at the Station were entitled to modified field service concessions which excluded free rations. The concessions admissible to Defence civilians were subsequently spelt out by Ministry in January 1995 applicable retrospectively from April 1993.

Audit scrutiny revealed that free rations valuing Rs 67.07 lakh were unauthorisedly issued by the unit to Defence Civilians from April 1993 to 31 March 1995 thereafter it was stopped.

Ministry stated in August 1997 that it was decided in September 1995 to implement the decision regarding field service concession with effect from 31 January 1995 instead of 1 April 1993. However, reasons for this change were not spelt out.

The case revealed that despite clarificatory orders issued by Command HQ in June 1994, free rations were unauthorisedly continued to be issued by the unit and Ministry instead of fixing

responsibility for the lapse and ordering recovery, decided not to effect recovery by changing the effective date of its order which lacked justification. Ministry was also silent in their reply about the free rations issued during February and March 1995.

35. Non-recovery of sale value

Acceptance of letter of credit on a non-specified bank without proper verification by SSSDC/CVD/CAD led to non-recovery of sale proceeds worth Rs 66.26 lakh.

The Firm opened letter of credit for Rs161.60 lakh with a non-specified Bank.

The Bank refused to honour Government claim for Rs 66.26 lakh as the firm did not have sufficient balance at its credit.

SSSDC of the Ministry approved sale of steel scrap, small arms scrap and bomb shell scrap from COD Jabalpur and CAD Pulgaon to M/s Haryana Concast Limited (firm) at a fixed rate against a letter of credit (LC) to be opened by the firm in favour of Commandant COD and CAD at SBI Jabalpur and Pulgaon respectively. The firm however, opened LCs for a total amount of Rs 161.60 lakh with Bank of Maharashtra (Bank), New Delhi payable through its local branches at Jabalpur and Pulgaon. However, when claims against 634.268 MT scrap valued at Rs 56.50 lakh lifted from COD in March - April 1995 and 118 MT scrap valued at Rs 9.76 lakh lifted from CAD in February 1995, were presented, the Bank refused to honour the claims on the ground that the firm did not have sufficient balance at its credit. In November 1995, SSSDC asked the firm to make payment of Rs 66.26 lakh through bank drafts. The SSSDC was subsequently wound up with effect from April 1996 COD and CAD, were yet to receive the payments (October 1997).

Thus, acceptance of LC on a non-specified bank without proper verification by SSSDC/COD/CAD led to non-recovery of sale proceeds worth Rs 66.26 lakh for more than two years.

The matter was referred to the Ministry in May 1997; their reply was awaited as of December 1997.

36. Procurement of batteries at higher rates

Placing supply orders for procurement of batteries for quantities less than the maximum limits of the existing firms and procurement from other firms at higher rates had resulted in extra expenditure of Rs 37.39 lakh.

A COD placed 53 supply orders (SO) against Rate Contracts (RC) on different firms for supply of batteries between 1992 and 1996. The conditions of RC prescribed the maximum quantity and financial limits upto which SO could be placed on the firms depending on the latter's capacity to fulfil orders.

Audit scrutiny, however, revealed that SOs placed by COD were for quantities much lower than the maximum quantity/financial limits of the firms according to RC. At the same time, however, SOs were placed on other firms at higher rates which resulted in extra expenditure of Rs 37.39 lakh.

The matter was referred to the Ministry in June 1997, their reply was awaited as of December 1997.

37. Avoidable expenditure on manufacturing of head percussion

COD under-assessed manufacturing cost of an item which led to placement of the order by the Army on COD instead of on trade resulting in extra avoidable expenditure of Rs 16.60 lakh on manufacture of 64,300 head percussions besides unnecessary production of 32,500 HP, leading to blocking of Rs 21.71 lakh.

At the instance of Army HQ, COD Kanpur assessed in December 1990, the unit cost of manufacture of Head Percussion (HP) in their workshop at Rs 35.05. As this unit cost compared favourably with the unit cost at which supply was made by the trade (Rs 41 per

unit), an order was placed in October 1991 by the Army HQ on COD for manufacture of 1.20 lakh HPs.

After undertaking manufacture and supply in accordance with the Supply Order, COD in February 1993 informed Army HQ that manufacture of the balance quantity of 55,700 of HPs would be undertaken if current provisioning review revealed requirement. Army HQ in February 1994 informed COD to withhold further manufacture of HPs. Despite this, COD continued and completed manufacture of 32,500 HPs valued at Rs 21.71 lakh upto May 1994. Army HQ, finally cancelled the production of the remaining quantity of 23,200 HPs in July 1994.

An analysis of cost of the manufacturing showed that COD had grossly under-assessed the unit cost of manufacture at Rs 35.05 while it actually worked out to Rs 66.81 as against Rs 41 being cost of procurement from the trade.

Thus, placement of the order on COD instead of on trade had resulted in extra avoidable expenditure of Rs 16.60 lakh on manufacture of 64,300 HPs besides unnecessary production of 32,500 HP, leading to blocking of Rs 21.71 lakh. The total financial impact of these two aspects worked out to Rs 38.31 lakh.

The matter was referred to the Ministry in April 1997; their reply was awaited as of December 1997.

38. Extra expenditure on the procurement of charging sets

Poor management in procurement of charging sets resulted in avoidable extra expenditure of Rs 18 lakh.

Ministry placed a SO for supply of charging set. Firm failed to supply and SO was cancelled at the risk and cost of the firm.

The Ministry in January 1987 placed a supply order (SO) on firm 'X' for manufacture and supply of 400 charging sets with tools, spares and accessories at a unit cost of Rs 4,500. The prototype of the charging set supplied in June 1987 was under trial upto November

1992 with DGQA. But, when the users wanted the prototypes for confirmatory trials the firm failed to supply the same and the SO was therefore, cancelled in December 1993 at the risk and cost of the defaulting supplier.

In the meantime, the Ministry separately processed another case and placed a SO in October 1991, on firm 'Y' for supply of 800 numbers of the same item at a unit cost of Rs 9000. In December 1993, on the same day when the first SO was cancelled instead of risk purchase being resorted to for 400 numbers, bulk production clearance was granted to firm 'Y' for supply of entire quantity of 800 numbers resulting in extra expenditure of Rs 18 lakh on materialisation of supply. Firm 'Y' supplied 787 numbers of the item between March 1995 and May 1996 and the balance quantity was yet to be supplied (December 1997).

Thus, poor management of the procurement of charging sets resulted in an avoidable extra expenditure of Rs 18 lakh.

The matter was referred to the Ministry in April 1997, their reply was awaited as of December 1997.

Deficient planning and execution

In the following eight cases, deficiencies in planning and execution resulting in extra/avoidable expenditure of Rs 6.31 crore were noticed :-

39. Extra expenditure due to inordinate delay in the execution of a married accommodation project

Delay of over three years in finalising lay out plan and subsequent delays in finalisation of execution of the works of a married accommodation project by MES resulted in extra expenditure of Rs 210.65 lakh.

HQ Southern Naval Command, Cochin (HQ SNC) and Naval HQ accorded two sanctions in July 1986 and January 1987 respectively for construction of married quarters for 25 officers at a total cost of Rs 189.21 lakh.

The works were released for execution in October 1986 and February 1987 respectively. The lay out plan formulated by CE Cochin Zone (CE CZ) in January 1988 remained under correspondence between various authorities and was finally approved by HQ SNC only in February 1990 after a delay of three and a half years from the dates of sanction.

The CE CZ concluded a contract in April 1991 at a cost of Rs 250.65 lakh after obtaining financial concurrence. The work scheduled for completion by May 1993 was delayed on account of delay in issue of schedule 'B' stores by the Department, heavy rains, slow tactics by labourers and non-finalisation of reinforcement of machine room floor and roof slabs etc. The work was completed in October 1996 at a cost of Rs 399.86 lakh.

In the meantime, in December 1993 a covering sanction for Rs 328.95 lakh for both the sanctions was issued by the Ministry.

The lay out plan was approved after three and a half years from the dates of sanction.

Completion of the work was delayed by more than three years due to delay in issue of stores by Department and heavy rains etc.

HQ SNC held MES responsible for delay in formulating the lay out plan.

HQ SNC in July 1997 accepted the facts and held the MES authorities responsible for delay in finalising the lay out plan.

Thus, delay of over three years in finalising lay out plan and subsequent delays in finalisation of execution of the works resulted in extra expenditure of Rs 210.65 lakh.

The matter was referred to the Ministry in May 1997; their reply was awaited as of December 1997.

40. Avoidable expenditure due to inadequate design

Premature leakage/seepage in buildings resulted in special repairs at an avoidable expenditure of Rs 91.79 lakh.

Technical accommodation of Research Centre Imarat (RCI) constructed between 1986 and 1990 at a cost of Rs 10.40 crore were provided with water proofing treatment by specialist agency with a guarantee from 7 to 10 years.

In June 1990 based on users complaint regarding leakage/seepage in one technical building, MES inspected all the buildings and found that most of the technical buildings were having leakages/seepages.

Leakage/seepage were found in most of the buildings within guarantee period.

Board identified the cause of leakage as inadequate slopes.

The matter remained under correspondence between MES and Research and Development (R&D) authorities from June 1990 to December 1993 when R&D HQ ordered Board of Officers (Board) for assessing the work services for special repairs to roofs of buildings in technical area. The Board assembled in July 1994 and identified the causes of leakage as inadequate slopes and problems of water percolating inside the ducts and stressed the need for urgent repairs of permanent nature as costly equipment/machines/computers were housed in these buildings.

Accordingly, special repairs as recommended by the Board were carried out by MES between August 1995 and June 1996 at a cost of Rs 91.79 lakh.

The Ministry stated in November 1997 that leakage occurred on account of disturbance of water proofing treatment due to erection of machinery/foundation. Ministry's contention is contradictory to the findings of technical Board who identified the causes of leakage as inadequate slopes and problems of water percolating inside the ducts.

The fact remains that premature leakage/seepage in the building resulted in special repairs at an avoidable expenditure of Rs 91.79 lakh.

41. Premature failure of tubewells

Failure of MES in pointing out sub-standard digging of tubewells by HSMITC before taking them over led to premature failure of 11 tubewells dug at a cost of Rs 56.43 lakh. Besides, an expenditure of Rs 36.63 lakh incurred on connected works had also been rendered infructuous.

On the basis of a feasibility report obtained from Central Ground Water Board (Board) and to cater to the water requirement of Defence establishments at Ambala, 15 tubewells were got dug by MES at a cost of Rs 84.41 lakh from Haryana State Minor Irrigation and Tubewell Corporation (HSMITC) between August 1992 and November 1994. In addition, an expenditure of Rs 50.07 lakh was incurred by MES on execution of works connected with the tubewells.

Out of the 15 tubewells dug, 14 costing Rs 77.11 lakh started giving excessive sand and mud within a period of two to twelve months of their completion against the expected life span of five to seven years. As a result, they could not be used for supply of water to the troops. MES therefore, took up the case with HSMITC in February - March 1995 for rectification of defective tubewells.

15 tubewells were got dug by MES from HSMITC at a cost of Rs 84.41 lakh.

Out of the 15 tubewells 14 could not be used for water supply as these started giving excessive sand and mud.

Installation of motors of higher capacity and overpumping were found as the causes for failure of tubewells.

Audit found the depth of tubewells was less than that recommended by the Board of officers and MES failed to point out the same.

After analysing the tubewell data, HSMITC in November 1995 pointed out that installation of motors of higher capacity and overpumping of tubewells were responsible for the failure of the tubewells and asked CWE to place an order on them for repair/rectification of defects. CWE did not agree with the findings and pointed out that failure of tubewells was due to inadequate capacity of compressor used for development of bore holes and handing over of non-sand free bore holes to MES and requested HSMITC to redevelop the tubewells free of cost. But HSMITC did not agree as the same was not covered in the original terms and conditions and asked for additional payment. In the meantime, in January 1995 three defective tubewells were rectified by MES at a cost of Rs 2.32 lakh. The remaining 11 tubewells had neither been rectified/redeveloped nor the case initiated for regularisation of loss as of May 1997.

Audit scrutiny revealed that the depth of fourteen out of fifteen tubewells dug by HSMITC varied from 92 feet to 756 feet as against 820 feet to 984 feet recommended by the Board. Further, MES failed to point out this discrepancy as well as inadequate capacity of compressor used by HSMITC for development of bore holes before taking over the tubewells.

Thus, failure of MES in pointing out sub standard digging of tubewells by HSMITC and taking them over led to premature failure of 11 tubewells dug at a cost of Rs 56.43 lakh. In addition an expenditure of Rs 36.63 lakh incurred on connected works has been rendered infructuous.

The matter was referred to the Ministry in June 1997; their reply was awaited as of December 1997.

42. Extra expenditure due to indecision in selecting site

Abnormal delay in finalising site resulted in steep escalation of cost of the project causing in an extra expenditure of Rs 68.00 lakh.

Headquarters Central Command (HQCC) in December 1986, sanctioned construction of accommodation for separated families of JCOs/ORs at Danapur at an estimated cost of Rs 50.21 lakh. The work was released for execution in June 1987 to be completed by December 1989. In January 1988, HQ CC pointed out that the proposed site of building was not as per the approved zonal plan and required revision. The GE in May 1988 clarified that the proposed site was as per the approved zonal plan and required no revision. In June 1989, the GE while reiterating his contention stated that the Senior Architect who visited the site had also confirmed his contention. Despite this, the Command CE in December 1989, directed CWE and GE to plan the execution of works as per existing sanction but based on revised siting. The sanction was also revised to Rs 96.25 lakh by Army HQ in January 1992 to accommodate the change in site and cost escalation on account of delay.

The construction of the accommodation was completed in August 1995 at a cost of Rs 118.20 lakh. The covering sanction for the excess expenditure was yet to be accorded (February 1997). It was however, noticed that the work was actually executed on the original site as confirmed by the GE in November 1994 and there was also no change in the scope of the work except for a slight change in alignment/orientation of the building.

Thus, abnormal delay in finalising site resulted in steep escalation of the cost of the project resulting in an extra expenditure of Rs 68.00 lakh.

The matter was referred to the Ministry in May 1997; their reply was awaited as of December 1997.

43. Non-utilisation of a building due to defective workmanship

Due to acceptance of substandard work, the building constructed in September 1994 at a cost of Rs 59.61 lakh was lying unutilised for more than three years for want of rectification of defects. Responsibility for acceptance of substandard work was yet to be fixed.

The construction of a school building sanctioned in March 1987 was *inter alia* included in a contract for Rs 17.77 lakh concluded by a CE in October 1988. The work for the school building which was to be completed by March 1991 got delayed and could not be completed despite extension granted upto 30 November 1991 and the contract was cancelled in June 1993 at risk and cost of the defaulting contractor. A sum of Rs 9.61 lakh was paid to the contractor.

The balance work was then awarded in August 1993 at a cost of Rs 33.52 lakh and was completed in September 1994 at a total cost of Rs 50 lakh. CWE informed the CE in March 1995 that certain cracks had appeared in the building and users had, therefore, refused to take over the building till the defects were rectified. The defects have not been rectified so far.

Thus, due to acceptance of substandard execution of work by MES, the building constructed in September 1994 at a cost of Rs 59.61 lakh was lying unutilised for more than three years for want of rectification of defects. Responsibility for acceptance of substandard work was yet to be fixed.

The matter was referred to the Ministry in April 1997; their reply was awaited as of December 1997.

44. Avoidable expenditure due to delay in completion of a contract

Due to poor planning and faulty design, external water supply facilities could not be provided to troops even after incurring an expenditure of Rs 48.58 lakh.

A Zonal CE in February 1993 entered into a contract for Rs 37.14 lakh with a firm for provision of external water supply to a Depot to be completed by August 1994. One of the conditions of the contract provided for testing of pipe lines at Hydraulic pressure of 18 kg/cm².

Inadequate pressure led to non testing of pipes.

Leakages and seepages noticed in pipe line.

CE cancelled the contract as efforts to get the work completed did not yield any result.

The firm completed the entire work by August 1994 except testing of the pipes which according to the firm could not be carried out as the pressure available in the pipe line was very very low and no booster pumps in between the lines had been provided. The firm requested that testing be omitted but this was not agreed to by MES as a lot of leakages and seepages were noticed in the pipe line. All subsequent efforts to get the work completed by the firm did not yield any result, and the CE in March 1997 cancelled the contract and decided to conclude a risk and cost contract, which was yet (August 1997) to be concluded. A sum of Rs 15.88 lakh was paid to the firm in addition to stores worth Rs 32.70 lakh issued free.

In between the STE who examined the work in December 1996 opined that the work suffered from poor planning and faulty design as the working head provided was not sufficient for testing the pipe lines at a Hydraulic pressure of 18 kg/cm².

The depot spent Rs 7.28 lakh in the absence of projected water supplies.

In the absence of projected water supplies, the depot authorities distributed drinking water through lorries to the personnel by incurring an expenditure of Rs 7.28 lakh.

Thus, due to poor planning and faulty design, external water supply facilities could not be provided to troops as of August 1997 even after incurring an expenditure of Rs 48.58 lakh.

The matter was referred to the Ministry in June 1997; their reply was awaited as of December 1997.

45. Inordinate delay in construction of an indoor gymnasium

Due to bad workmanship coupled with inadequate supervision of execution of work services by Engineers training requirement of Bengal Engineers Group and Centre could not be met even after a lapse of 10 years after incurring an expenditure of Rs 33.30 lakh.

To meet training requirement of Indoor Gymnasium of Bengal Engineers Group and Centre, HQ Central Command in February 1987 sanctioned the project for constructing a Gymnasium at a cost of Rs 28.42 lakh. The work was released for execution in November 1987 to be completed by September 1990. The construction cost was revised to Rs 42.22 lakh in March 1993 due to provision of wooden flooring at a cost of Rs 13.14 lakh not originally catered for.

CE concluded contract after 3 years.

The CE after three years concluded a contract for Rs 23.79 lakh in October 1990 which included Rs 3.27 lakh for wooden flooring to be executed by January 1992. In December 1991 due to non-availability of schedule 'B' stores and non-finalisation of design of floor for the Gymnasium hall, the CE granted an extension upto 31 May 1992 for the completion of work.

Rupees 3.27 lakh provided in the contract for the wooden flooring was found inadequate due to escalation in timber prices. Accordingly, in October 1993, a work order for provision of wooden flooring at a cost of Rs 10.09 lakh was placed on the same contractor.

The contractor intimated in December 1994 completion of the work but the same was not accepted by the Engineers on account of defects in the timber flooring due to bad workmanship, inferior quality of timber used and inadequate ventilation.

A Technical Board of Officers which assembled in August 1995, concluded that the contract had not been administered properly and there had been a definite failure on the part of executives. A sum of Rs 33.30 lakh had been paid to the contractor but the work had not been certified by the Engineers as having been completed as of September 1996.

Further, no progress had been made for the rectification of defective works so far and to fix responsibility for the failure on the part of executives.

Thus, due to bad workmanship coupled with inadequate supervision of execution of work services by Engineers, training requirement of the Centre could not be met even after a lapse of more than 10 years and after incurring an expenditure of Rs 33.30 lakh.

The matter was referred to the Ministry in April 1997; their reply was awaited as of December 1997.

46. Avoidable expenditure due to improper construction of a boundary wall

Failure to provide vent ways for proper passage of water in original contract resulted in avoidable expenditure of Rs 19.24 lakh.

A Zonal CE in May 1988 awarded a contract for Rs 94.78 lakh for the construction of boundary wall around the Technical area at Hashimara with date of completion being May 1990. Extensions for completion of work were granted upto August 1993 on account of non-availability of pipes, delay in up-rooting of trees, working in difficult altitude, sinking of double hume pipe in culverts due to rains etc.

In July 1993 when the work was nearing completion, a portion of the constructed boundary wall measuring about 2-3 kilometers collapsed. A Board of Officers set up to assess the damage which met in October 1993 opined that the boundary wall was sheared off at the

ground level due to water pressure and fast current of the flowing water.

As the reconstruction cost (Rs 12.32 lakh) of fallen boundary wall was exceeding the deviation limit of the contract, the CE concluded a contract for Rs 4.77 lakh in November 1994 with the same contractor by making provisions for ventways for passage of water to avoid recurrence of such damage to the wall and flood. The work under both the contracts were completed in March 1995 at a total cost of Rs 1.38 crore and extra expenditure as per financial statement prepared by GE worked out to Rs 19.24 lakh.

The Ministry stated in August 1997 that the vent ways for passage of water were provided to avoid occurrence of such damages as these were required because of ground conditions after occurrence of flood. The additional expenditure of Rs 19.24 lakh was attributable to natural calamity of flooding due to unprecedented rains. This contention of Ministry was not tenable as suitable preventive measures were required to be assessed and provided for according to ground conditions.

The fact, however, remains that the failure to provide vent ways for proper passage of water in the original contract had resulted in avoidable expenditure of Rs 19.24 lakh.

Non-synchronisation of services

Failure of MES to synchronise internal and external work services with the construction of residential accommodation had resulted in non-utilisation of accommodation constructed at a cost of Rs 3.39 crore in the following two cases :

47. Non-occupation of married officers quarters due to faulty planning

Faulty planning/wrong sequencing of the work services had resulted in 72 quarters constructed more than three to six years back not being put to use resulting in an investment of Rs 249.40 lakh remaining idle besides avoidable payment of Rs 13 lakh towards hire charges of accommodation from April 1990 to March 1997.

HQ NC sanctioned construction of 72 quarters for officers.

To solve the problem of acute shortage of accommodation for married officers of a newly raised cantonment, HQ Northern Command (HQNC) sanctioned four works (three in November 1986 and one in August 1987) for construction of 72 dwelling units at a cost of Rs 198.43 lakh.

56 quarters completed in May 1990 but not occupied by users due to non-availability of basic amenities at the location.

The contract for construction of 56 quarters covered under first three works was concluded by a CE with a contractor in September 1987 for Rs 128.83 lakh with date of completion as November 1989. According to the Department, the contractor had completed 95 per cent of work by December 1991. However, according to the contractor, the buildings were completed by him in May 1990 at a cost of Rs 180.74 lakh but could not be taken over by the department, initially because of non-availability of water and electricity and subsequently because of user's unwillingness as neither amenities like shopping centre, schools, medical facilities nor private conveyance were available at the location of the quarters. This is corroborated by the fact that the work for external services and other-than-married accommodation (OTM) was sanctioned for Rs 696.90 lakh by Ministry between March 1988 and March 1992 i.e. much after the sanction of married accommodation, and were completed between October 1994 and April 1997 at a cost of Rs 753.12 lakh.

16 quarters completed in November 1993 had also not been occupied.

The last work for construction of 16 quarters was also awarded by the CE to the same contractor in April 1988 for Rs 41.56 lakh with date of completion as May 1989. The work completed in November 1993 at a cost of Rs 57.36 lakh had also not been taken over as of March 1997. Geysers and furniture items acquired between March

1990 and May 1994 at a total cost of Rs 11.30 lakh for installation/use in these buildings were also lying idle.

Works were not sanctioned in their logical order

It was seen that the works were not sanctioned in their logical order viz. first external services, then OTM accommodation, next married accommodation for JCOs/ORs and finally married accommodation for officers.

Thus, faulty planning/wrong sequencing of the work services had resulted in 72 quarters constructed more than 3 to 6 years back not being put to use resulting in an investment of Rs 249.40 lakh remaining idle besides avoidable payment of Rs 13 lakh towards hire charges of accommodation from April 1990 to March 1997.

The matter was referred to the Ministry in June 1997; their reply was awaited as of December 1997.

48. Non-utilisation of residential accommodation

Failure of Ministry/MES to synchronise water and electricity services with the construction of the residential accommodation had resulted in non-utilisation of accommodation constructed at a cost of Rs 89.22 lakh.

Construction of single accommodation for Adhikaris and Naviks was completed at a cost of Rs 89.22 lakh in September 1995.

The Ministry accorded sanction in February 1992 for construction of single accommodation for 12 Adhikaris and 93 Naviks of a Coast Guard Air Station, at a cost of Rs 61.06 lakh. The work was completed in September 1995 at a cost of Rs 89.22 lakh after obtaining financial concurrence (FC).

Another sanction was accorded for water and electricity as the original sanction did not cater for the same.

The sanction for the said accommodation did not cater for water and electricity supply and another sanction was therefore, accorded by Coast Guard HQ in March 1994 for Rs 70.58 lakh amended to Rs 72.90 lakh in August 1994 which inter-alia provided for sewage disposal and MES key personnel quarters.

Part of external electrification and water supply contracted but yet to be completed.

The balance work of external electrification and water supply was yet to be completed.

A contract for part of external electrification and water supply was accepted by the CE in October 1995 at a cost of Rs 48.30 lakh after obtaining FC. The work which was due for completion in August 1996 was yet to be completed (November 1997).

In respect of balance work relating to external electrification and water supply, the CWE in February 1997 concluded a contract for Rs 16.98 lakh and the work was yet to be completed (November 1997).

Thus, failure of Ministry/MES to synchronise provision of water and electricity services with the construction of the residential accommodation had resulted in the accommodation completed in September 1995 at a cost of Rs 89.22 lakh lying unutilised.

The matter was referred to the Ministry in March 1997; their reply was awaited as of December 1997.

Avoidable payment of electricity charges

Delay in taking timely action by MES resulted in avoidable payment of electricity charges to the tune of Rs 1.64 crore in the following three cases :

49. Avoidable payment due to delay in availing of concessional tariff

Delayed action of MES in availing of concession in tariff resulted in avoidable payment of Rs 118.33 lakh towards electricity charges.

MSEB informed all HT consumers the new concessions in tariff.

In October 1994, MSEB informed all the High Tension (HT) consumers in Pune Urban Zone that a new tariff effective from July 1994 had been introduced for all HT connections separately for residential and commercial buildings. The new tariff introduced two concessions viz. lower energy charges in respect of domestic connections and dispensing with levy of demand charges.

Delay in getting HT connections re-classified as domestic by GEs resulted in excess payment of Rs 118.33 lakh.

An examination of availing of the concessional tariff at Kirkee revealed that there were six HT connections for domestic use, 2 for non-domestic and 3 both for domestic and non-domestic. Of these, the concerned GE got 5 HT connections re-classified as domestic and brought these connections under concessional tariff only from November 1995, 3 connections (one domestic and two having mixed load) were got reclassified only from June 1996. Similarly, three GEs at Pune also got reclassified five HT connections as domestic between April and June 1996. The GEs had by that time made avoidable payment of Rs 118.33 lakh for these 13 connections.

The Ministry in October 1997 stated that MSEB letter of October 1994 regarding the new tariff rates was not received by MES and somehow copy of the same was obtained in November 1995. The contention of Ministry was not tenable as levy of concessional rates from Defence establishments was discussed during Civil - Military liaison Conference held in October 1994 and accordingly the Command CE in October 1994 itself directed all the Zonal CEs to interact with State Government to achieve the concessional tariff. This indicates that the case was not properly pursued by MES after the liaison conference.

Thus, delayed action of GEs in availing of the concessional tariff resulted in avoidable payment of Rs 118.33 lakh. Responsibility for the lapse was yet to be fixed (October 1997).

50. Avoidable payment of electricity charges

Delay in taking timely action to reduce the installed capacity of transformers by MES resulted in avoidable payment of Rs 28.03 lakh

In May 1993 PSEB amended the tariff according to which monthly minimum charges were to be based on the installed capacity of transformers instead of maximum demand load as per agreement.

As the installed capacity of the transformers at Faridkot Cantonment was 4425 KVA against the maximum demand of 3120

The Zonal CE asked the concerned AGE in September 1993 to get the installed capacity of transformers reduced.

KVA as per agreement, Zonal CE asked the concerned Assistant Garrison Engineer (AGE) in September 1993 to get the installed capacity of transformers reduced.

The matter regarding reduction in the number of transformers remained under correspondence between various MES authorities from October 1994 to July 1995 and finally a Board of Officers (Board) was convened in August 1995 to examine the issue. The Board found that the actual installed capacity of transformers was 5525 KVA and recommended reduction of 2150 KVA.

By the time the work regarding shifting/removal of transformers was completed, an excess payment of Rs 28.03 lakh had been made.

On completion of the work required for shifting/removal of transformers, AGE in April 1996 applied to PSEB for reduction of installed capacity of transformers from 4425 KVA to 3500 KVA. The reduction proposal was yet to be approved by PSEB. As a result, an excess payment of Rs 28.03 lakh had been made from May 1993 to February 1997,

CE stated in May 1997 that the Board recommended the reduction to 3375 KVA but the same could not be carried out practically and finally the reduction was only to 3500 KVA which resulted in excess payment of Rs 28.03 lakh to PSEB. The CE, however, did not mention the reasons for not carrying out the reduction.

Thus, delay in taking timely action to reduce the installed capacity of transformers by MES resulted in avoidable payment of Rs 28.03 lakh.

The matter was referred to the Ministry in June 1997; their reply was awaited as of December 1997.

51. Excess payment of electricity charges

Despite E-in-C's instructions to avoid excess payments on account of electricity charges to State Electricity Boards for exceeding contracted demand a GE paid penal charges of Rs 17.52 lakh.

The Ministry in ATN on paragraph 78 of Report No.8 of 1991 and 77 of 8 of 1993 of the C&AG, Union Government Defence Services (Army and Ordnance Factories) regarding Excess payment of electricity charges to State Electricity Boards for exceeding contracted demand etc. stated that suitable instructions had already been issued by E-in-C in February 1991 and June 1993 to all concerned to avoid excess payments on this account by reviewing the agreements by CEs once a year.

Despite issue of above instructions a GE failed to review and initiate timely action to get the contracted demand enhanced and paid penal charges amounting to Rs 17.52 lakh for exceeding the contracted demand between March 1991 and June 1996.

The matter was referred to the Ministry in June 1997; their reply was awaited as of December 1997.

Other Cases

52. Loss of revenue

Contrary to Ministry's instructions Station Commanders increased the scales of free consumption of electricity by JCOs/ORs which had resulted in revenue loss of Rs 12.61 crore.

The Ministry issued instructions in May 1983 that ceiling on free consumption of electricity in respect of JCOs/ORs already fixed by Station Commanders as on 1 January 1983 would stand frozen and

were not to be increased without prior concurrence of Ministry of Finance (Defence).

Test check of records at 26 stations revealed that despite above mentioned instructions, all the Station Commanders increased the scale of free consumption of electricity of JCOs/ORs without prior concurrence of Ministry between January 1984 and December 1994 resulting in revenue loss of Rs 12.61 crore upto July 1997 as per details given in Annexure V. No action to fix responsibility was taken.

The matter was referred to the Ministry in July 1997; their reply was awaited as of December 1997.

53. Payment of conservancy charges

In the absence of nominal roll/details of employees actually deployed for conservancy services by Cantonment Board, the genuineness of the payment of Rs 897.71 lakh made by Station HQ could not be verified in Audit.

Station Commander Delhi Cantonment who is also Chairman of Delhi Cantonment Board, in June 1996, entered into a contract with Cantonment Board, Delhi (CB) for providing conservancy services at a payment of Rs 1.38 crore during 1996-97. This included inter-alia pay and allowances of 379 Safaiwalas and 32 Supervisory Staff. Area Accounts Office paid Rs 137.54 lakh against the contract.

Audit scrutiny revealed that Rs 115 lakh had been paid towards pay and allowances of conservancy Safaiwalas and Supervisory staff but the Station HQ failed to produce the nominal rolls/details of the employees actually deployed by CB for providing the required conservancy services to the Cantonment area.

The Ministry stated in November 1997 that the payment had been made by Station HQ to CB as per provision of the conservancy agreement. The CDA who made the payment, however, stated in November 1997 that the contract agreement lays down the quantum of

Safaiwalas employed on the particular job and there does not appear to be any provision for providing nominal roll but to ensure correctness and effective control over expenditure, provision should be made in the agreement to provide the nominal roll of the staff deployed on these duties.

Further scrutiny of the case in 20 Station HQ revealed that Rs 782.71 lakh as per details given in Annexure VI had been paid towards pay and allowances of Conservancy Safaiwalas and Supervisory staff without obtaining nominal rolls/details of the employees actually deployed by CB for providing required services. Station HQ, Ferozepur, however, made the payment after obtaining the requisite details.

Thus, in the absence of supporting evidence, genuineness of the payment of Rs 897.71 lakh could not be verified in Audit.

54. Avoidable expenditure on construction of single officers accommodation

Preparation of incorrect accommodation statement had resulted in avoidable expenditure of Rs 429.10 lakh on construction of 96 quarters in addition to the cost of construction of 48 quarters.

Based on deficiency of 122 quarters assessed by a Naval Base, Headquarters Southern Naval Command Cochin (HQ SNC) issued four sanctions between March 1987 and March 1988 for construction of 96 Single Officers accommodation at Cochin (Station) which were eventually regularised by the Ministry in July 1993 by issue of a consolidated sanction for Rs 366.06 lakh. The construction of quarters was completed in March 1994 at a cost of Rs 429.10 lakh.

During Audit scrutiny it was noticed that as against the requirement of 250 single officers quarters, 320 quarters (272 existing and 48 under construction) were available. Despite the station already having an excess of 70 quarters, a deficiency of 122 quarters was

assessed by the Board on the basis of 80 quarters as existing and 48 under construction as shown in the accommodation statement.

The HQ SNC in July 1997 while admitting the facts stated that during peak periods of training strength of officers goes upto 380-400 leading to sharing of accommodation. The contention of HQ SNC is not tenable as scales of accommodation do not provide construction of quarters on these grounds.

Thus, deficiency at the station worked out on the basis of incorrect accommodation statement had resulted in avoidable expenditure of Rs 429.10 lakh on construction of 96 quarters in addition to the cost of construction of 48 quarters which was also avoidable.

The matter was referred to the Ministry in July 1997; their reply was awaited as of December 1997.

55. Extra expenditure due to acceptance of higher rates

Conclusion of contracts at higher rates by the CE for similar works at same station resulted in extra expenditure of Rs 1.10 crore.

Separate tenders for replacement of Central Air Conditioning Plants at WECORS, Naval Dockyard and INS Karanja at the same station were received by a CE in April 1996. Contract for the work at Naval Dockyard was concluded with a firm for Rs 2.86 crore in June 1996 and for the work at INS Karanja for Rs 1.99 crore with the same firm in July 1996.

Scrutiny of the rates accepted in both the contracts revealed that the rate for the work at Naval Dockyard worked out to Rs 54,444 per ton capacity of the plant and that for INS Karanja Rs 36,267 against Rs 40,000 - 45,000 prevailing in other zones.

CE, Southern Command stated that no market analysis was prepared and the tender was accepted based on Estimate Data rates

meant for lower tonnage of plants which are invariably on higher side and acceptance of higher rates resulted in extra expenditure of Rs 1.10 crore.

Thus, acceptance of the higher rates for the work at Naval Dockyard resulted in extra expenditure of Rs 1.10 crore. No action to fix responsibility for acceptance of higher rates was taken.

The matter was referred to the Ministry in June 1997, their reply was awaited as of December 1997.

56. Extra expenditure due to wrong preparation of tender

The inclusion of unauthorised item in the tenders for construction of married accommodation for officers and airmen at Srinagar led to an extra expenditure of Rs 101.23 lakh.

The Ministry in March 1988 accorded sanction for provision of married accommodation for officers and airmen at Srinagar at an estimated cost of Rs 281.31 lakh to be completed by November 1990.

The lowest tender received by a CE in May 1989 for Rs 224.62 lakh exceeded the tolerance limit of the amount of Rs 207.55 lakh provided in the administrative approval. The case was, therefore, referred to E-in-C in June 1989 for obtaining financial concurrence (FC). The Ministry did not accord FC on the plea that certain items of work costing Rs 6.05 lakh included in the tender were neither authorised nor covered under the sanction. Ministry in December 1989 advised CE for retendering in accordance with the provisions contained in the sanction. Accordingly the work was retendered three times between May 1990 and January 1991 by excluding the work of external electrification and finally a contract for Rs 297.72 lakh was concluded in May 1991 by CE. The work was completed in June 1996. The work of external electrification was completed in August 1995 through another contract concluded in May 1992 for Rs 22.08 lakhs.

Thus, wrong preparation of original tender led to an extra expenditure of Rs 101.23 lakh besides depriving house facilities to officers/airmen for 6 years due to delay in completion of work.

While accepting the facts the Ministry stated in July 1997 that the extra expenditure was due to unexpected insurgency that erupted in the valley during the period when second and subsequent calls were issued for tenders forcing the contractors to opt for higher rates and poor response from contractors. This contention was not tenable because wrong preparation of tender at the initial stage led to subsequent retendering.

57. Unauthorised use of air conditioners

104 ACs costing Rs 18.31 lakh were installed at unauthorised locations resulting in avoidable expenditure of Rs 49.94 lakh being incurred on electricity consumption.

A Board was ordered in October 1995 to identify ACs installed at unauthorised locations.

Scales of Accommodation for Defence Services stipulates the authorisation of air-conditioners (ACs) for various types of Defence accommodation. Station HQ Bhatinda ordered a Board of Officers (Board) in October 1995 to identify ACs installed at un-authorised locations.

The Board brought out in November 1995 that out of the total holding of 137 ACs purchased between February 1986 and March 1995 at a total cost of Rs 21.22 lakh, 79 ACs valued at Rs 15.20 lakh were installed at unauthorised locations, 42 were at authorised installations and the remaining 16 were unidentified.

104 ACs costing Rs 18.31 lakh were actually installed at unauthorised locations.

Further, Audit scrutiny of the irregularity in concerned GE revealed in September 1996 that out of 42 ACs shown as installed at authorised locations, 25 ACs costing Rs 3.11 lakh were actually installed at unauthorised locations.

The expenditure on electricity consumption alone on the 104 ACs unauthorisedly installed worked out to Rs 49.94 lakh.

The expenditure on electricity consumption alone on 104 ACs unauthorisedly installed during February 1986 to August 1996 worked out as Rs 54.26 lakh of which Rs 4.32 lakh was recovered from the concerned officers. In addition expenditure on their maintenance/repairs was also incurred.

Thus, installation of 104 ACs costing Rs 18.31 lakh at unauthorised locations between February 1986 and March 1995 resulted in avoidable expenditure of Rs 49.94 lakh on electricity consumption till August 1996. Action to fix responsibility for providing ACs at unauthorised locations was yet to be taken.

The matter was referred to the Ministry in June 1997; their reply was awaited as of December 1997.

58. Extra expenditure due to revocation of tender

Divulging the details of the bids received in response to a tender to the representative of the firm by SSW before issue of acceptance letter resulted in extra avoidable expenditure of Rs 24.53 lakh.

A Zonal CE received tenders for provision of other than Married accommodation, at a station in November 1995 and the lowest tender of firm 'X' for Rs 126.55 lakh was accepted on 11 December 1995.

Contrary to instructions before acceptance of the tender SSW in CE's office, divulged details of bids to the firm which led to revocation of the tender.

As per E-in-C's instruction, tender shall be a secret document till issue of acceptance letter. It was noticed that the firm X's representative on 11 December 1995 before acceptance of the tender, contacted SSW in CE's office to ascertain the status of their tender and on ascertaining the difference between the lowest and second lowest got confused, whether their offer was reasonable for the execution of work and revoked their offer vide letter No. nil dated 9 December 1995, one copy of which was delivered by hand in CE's office on 11 December 1995 and another copy was sent through Registered Post on 11 December 1995, which was received in CE's office on 12

December 1995. Though the letter of the contractor was received after the acceptance of the tender, yet the CE accepted revocation.

Despite recommendations of CE, no action was taken against the erring firm.

The CE recommended to HQ Western Command in January 1996 for the downgradation of the firm 'X' from class 'A' to 'B' for committing the technical offence in quoting unbalanced tender and suspension for issue of tender for one year but no further action was taken.

Retendering resulted in extra expenditure of Rs 24.53 lakh.

Tenders for the work were again floated by CE in February 1996 by excluding two buildings, as these were not required by the users and in respect of the sprinkler system specialised tender was to be called, separately. The lowest offer of firm 'Y' amounting to Rs 117.30 lakh was accepted in March 1996. A comparison of accepted tender of firm 'Y' with the lowest offer of firm 'X' which was subsequently revoked revealed an extra expenditure of Rs 24.53 lakh.

Thus, divulging the details of the bids received in response to tender to the representative of Firm 'X' by SSW before issue of acceptance letter resulted in extra avoidable expenditure of Rs 24.53 lakh. No action to fix responsibility for the lapse was taken as of May 1997.

The matter was referred to the Ministry in June 1997; their reply was awaited as of December 1997.

59. Extra expenditure due to delay in according financial concurrence

Failure to obtain financial concurrence within the validity period of the lowest tender, in the second call had resulted in extra expenditure of Rs 20.02 lakh besides causing a delay of two and a half years in completion of the work thereby resulting in hardship to JCOs/Hav/ORs of the Army.

The lowest tender though found reasonable could not be accepted due to non-receipt of FC.

Against a sanction accorded by Army HQ in November 1989 for provision of married accommodation for JCOs/Hav/ORs at Srinagar at an estimated cost of Rs 111.15 lakh, the lowest tender for

Rs 126.32 lakh received by a CE in May 1991 was not accepted rates being higher. In June 1991 tenders were issued for the second time and the lowest tender received in August 1991 for Rs 123.07 lakh was found reasonable but could not be accepted due to non-receipt of Financial Concurrence (FC) within the validity period of tender i.e., upto December 1991.

Tenders were subsequently issued on three more occasions but could not be accepted due to higher rates and lack of response from the tenderers.

The lowest tender received in sixth call was not accepted due to non-receipt of FC. Subsequently second lowest tender was accepted.

The lowest tendered amount of Rs 137.15 lakh received in the sixth call in December 1993 was considered reasonable but this also could not be accepted due to non-receipt of FC within the validity period. The second lowest tender for Rs 143.09 lakh was finally accepted after obtaining FC and the contract was concluded by CE in June 1994.

The CE, while accepting the facts, stated in May 1996 that FC which should have normally been given within a period of two months as per standard norms and as the contractor refused to extend the validity beyond 31 December 1991, the tender for Rs 123.07 lakh could not be finalised.

Thus, non-finalisation of FC within the validity period of the lowest tender, in the second call had resulted in extra expenditure of Rs 20.02 lakh besides causing a delay of two and a half years in completion of the work thereby resulting in hardship to JCOs/Hav/ORs of the Army.

The Ministry accepted the facts in December 1997.

60. Non-utilisation of newly constructed quarters

Quarters constructed at a cost of Rs 17.87 lakh were lying unoccupied since September 1993 rendering the expenditure unfruitful.

Based on the approval of E-in-C, a Corps HQ in October 1991, accorded sanction for construction of 4 Type IV quarters for civilian officers of MES at Agartala at an estimated cost of Rs 17.51 lakh. The construction of the quarters was completed in September 1993 at a cost of Rs 17.87 lakh. The quarters though taken over by MES in September 1993 were lying vacant and unutilised.

CE stated in December 1995 that the quarters remained unoccupied due to non-shifting of GE's office to its new location at the same station and the three officers for whom the quarters meant were provided Defence pool quarters available at the station. It was, however, noticed that GE's office had shifted to its new location in May 1996 but the quarters were lying vacant as of October 1997 as concerned officers still continued in occupation of quarters provided from Defence pool.

The Ministry while accepting the facts stated in October 1997 that the prevailing security situation is not conducive to personal safety of the concerned officers and their families to live in the new location. This contention of the Ministry was not tenable as security aspect was required to be ensured before selection of the site for construction of the quarters.

Thus, the quarters constructed at a cost of Rs 17.87 lakh were lying unoccupied since September 1993 rendering the expenditure unfruitful. Further, possibility of deterioration in their condition due to prolonged non-occupation also cannot be ruled out.

61. Infructuous expenditure on a non-functional laboratory

Decision to shift the laboratory from Jamnagar to Ahmedabad without ensuring the availability of adequate accommodation resulted in infructuous expenditure of Rs 26.77 lakh.

E-in-Cs in the re-organisational plan of December 1991, ordered shifting of a Zonal Laboratory (Laboratory) meant for exercising quality control on material and standard of workmanship from Jamnagar to Ahmedabad. The laboratory was equipped with test equipments valued at Rs 4.14 lakh as well as officers and staff.

Though shifted to Ahmedabad in April 1992, the laboratory was not functional as of July 1997 even after a lapse of over five years due to shortage of accommodation. Test equipments were also not available as they were yet to be shifted from their earlier location. In the meantime a total expenditure of Rs 26.77 lakh was incurred on pay and allowances of officers/staff, stores and miscellaneous items between April 1992 and September 1996.

The Ministry stated in July 1997 that the equipment of the laboratory were lying at Bhuj and Jamnagar and could not be shifted due to shortage of accommodation.

Thus, the decision to shift the laboratory from Jamnagar to Ahmedabad without ensuring the availability of adequate accommodation, had resulted in infructuous expenditure of Rs 26.77 lakh.

62. Infructuous expenditure on import of high speed video recording system

A system imported at a cost of Rs 34.13 lakh became defective within a short period and was lying out of order since January 1993.

Against a contract placed with a foreign firm in February 1990, ARDE, received in April 1990 a high speed video recording system (system) at a cost of Rs 34.13 lakh.

The system was installed in May 1990 and carried a warranty of 12 months from date of installation. It was, however, found defective during recording trials in October 1990. The defects/faults were attended to by the Indian Agent and ARDE also incurred an expenditure of Rs 0.50 lakh on repairs and maintenance, the system was thereafter in use between September 1991 and July 1992. However, from January 1993, the system went out of order and the subsequent efforts made by Indian agent could not make the system functional.

Thereafter, the matter remained under correspondence between ARDE and the firm till September 1996, when ARDE was informed that the system had become obsolete. The firm was, however, prepared to evaluate the system for identification of the parts requiring repairs for which purpose the system was required to be sent either to Germany or USA. However, the firm did not guarantee full repairs. The proposal of the firm was not considered as very sound by R&D HQ in December 1996 which therefore recommended that efforts be made to get the system repaired in India.

The Ministry, while accepting the facts, stated in September 1997 that local firms have been identified for repair/modification of system and their proposal was under technical review by an expert committee.

Thus, a system imported at a cost of Rs 34.13 lakh became defective within a short period and was lying out of order since January 1993 and could not be made functional as of September 1997.

63. Avoidable payment of customs duty

Placing of supply order by DMRL without obtaining separate price for equipment, accessories and consumable resulted in avoidable payment of customs duty of Rs 40.96 lakh.

As per notifications under the Customs Act 1962, scientific/technical instruments, apparatus and equipments, including spare parts, components and accessories but excluding consumable items are exempt from levy of customs duty when imported by approved non-commercial research institutions.

In August 1987, DMRL, Hyderabad placed a Supply Order (SO) for import of Micro Focus X-Ray real time radiographic system (X-Ray) equipment with allied systems and accessories at a consolidated cost of DM 260190. The order did not indicate prices separately for main equipment, accessories, spare parts and consumables.

Supply Order did not indicate separate price for equipment, accessories and consumables.

The consignment was received in EHQ, Madras, during February 1988. As the Customs Duty Exemption (CDE)/Not Manufactured in India (NMI) Certificates were not submitted before arrival of the consignment, the EHQ paid customs duty amounting to Rs 40.96 lakh. In June 1988, EHQ preferred a refund claim by submitting the required CDE/NMI certificates and invoice, but the same was rejected for want of separate value of equipment, spares and consumables which the DMRL failed to furnish.

Non-submission of CDE/NMI/to EHQ before arrival of the consignment led to payment of Rs.40.96 lakhs towards customs duty.

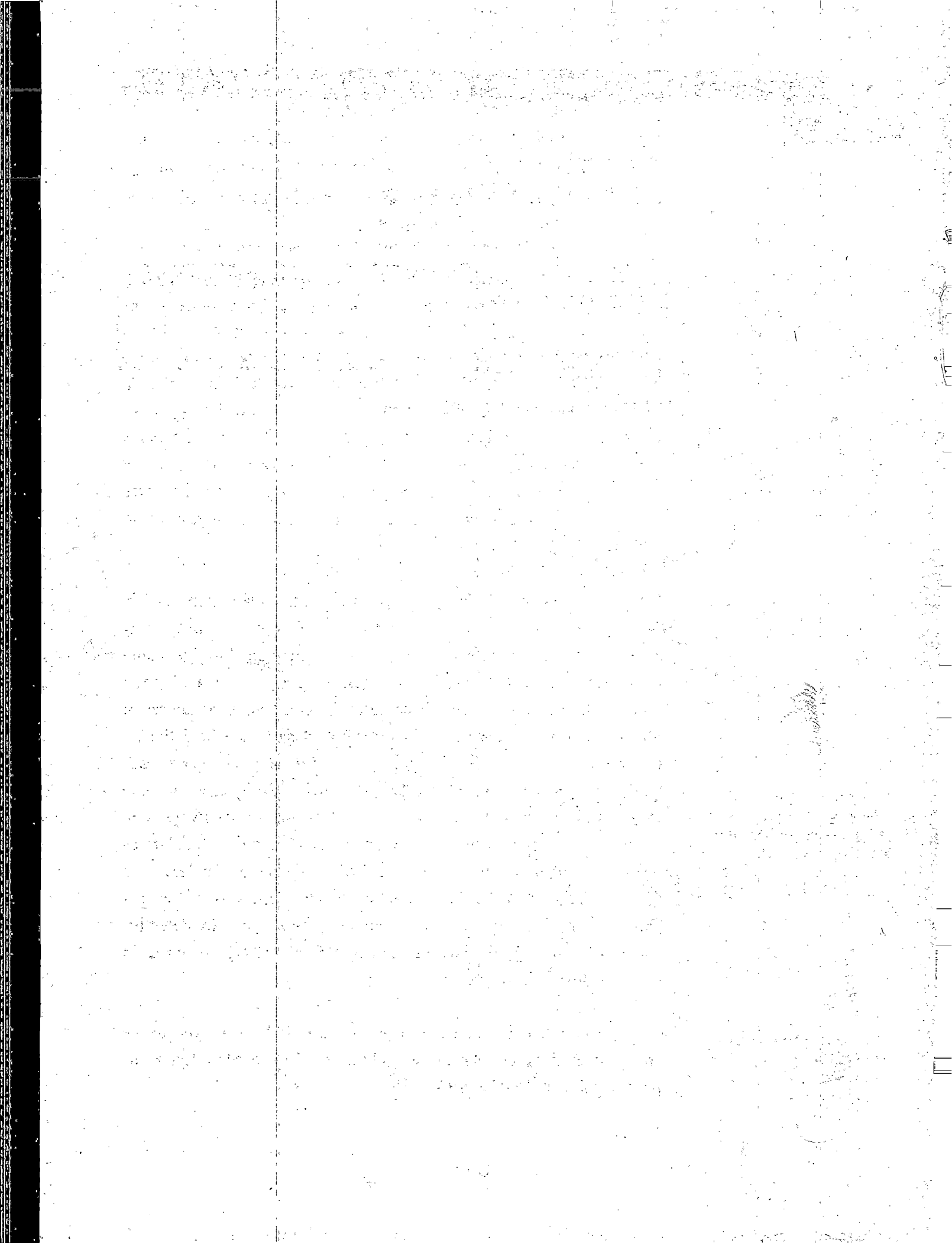
The appeals against the rejection of the refund filed by EHQ in September 1989 and March 1990 were also rejected by Collector of Customs in December 1989 and February 1992 respectively on the same grounds.

Refund claim was rejected for want of separate value of equipment spares and consumables.

A proposal made by the R&D HQ in May 1992 to pursue the matter inter-departmentally with the customs department through a committee constituted by the Cabinet Secretariat, did not come through and it was decided in 1996 to stageclose the case.

The Ministry stated in September 1997 that attempts were made to obtain separate/split up value of items but failed to get the same as the firm no more existed.

Thus placing of SO by DMRL without obtaining separate price for equipment, accessories and consumables resulted in avoidable payment of customs duty of Rs 40.96 lakh.



64. Unfruitful expenditure on procurement of sub-standard hot mix plants

Acceptance of substandard plants rendered the entire expenditure of Rs 107.68 lakh incurred on its procurement and commissioning infructuous as the plants were yet to be made operationally fit.

DGBR placed an AT for procurement of 2 plants at a cost of Rs 95.25 lakh.

In October 1993 DGBR placed an AT on a firm for supply of two Hot Mix Plants (Plants) at a total cost of Rs 95.25 lakh. The plants were received during August and October 1994 by two Project CE duly inspected and accepted by inspecting authorities. The firm was required to commission the plant for which necessary assistance was to be provided by the Department.

One plant installed in October 1995 could not be made operational due to inherent problems.

The erection of plant received in October 1994 commenced in October 1994 and was completed in October 1995 due to short supply of parts/assembly, mis-matching of various components/fittings, faulty alignment and foundation drawing besides design structural short comings of the plant. The Department incurred an expenditure of Rs 6.44 lakh on manufacture of short supplied parts and Rs 5.99 lakh towards manpower made available for erection of plant. Trial runs carried out between November 1995 and March 1996 revealed that due to inherent problems, the plant never ran at the rated capacity and that there was a basic problem with design and fabrication of the plant as neither the output nor the mix remained within design parameters. The CE also found that the plant supplied by the firm was not as per specification given in the AT. The plant was lying in defective condition awaiting repairs/replacement (March 1997) to make it operationally fit for commissioning.

The other plant received in August 1994 was yet to be erected/commissioned.

The other plant received in August 1994 was yet to be erected/commissioned due to the inability of firm to commission the plant supplied in October 1994.

Thus, acceptance of substandard plants rendered the entire expenditure of Rs 107.68 lakh incurred on its procurement and commissioning infructuous as the plants were yet to be made operationally fit. Responsibility for acceptance of substandard plant was yet to be fixed (March 1997).

The matter was referred to BRDB in April 1994; their reply was awaited as of December 1997.

65. Infructuous expenditure on development of a machine

Adoption of outdated technology had resulted in the development of equipment which could not achieve the desired results and the project had to be foreclosed resulting in infructuous expenditure of Rs 75.79 lakh.

BRDB in 1989 signed a contract with BEML for indigenous development and supply of snow clearing equipment based on specifications and technology jointly agreed to by BRDB and BEML. As per terms and conditions of the contract, the development cost of Rs 212.80 lakh was to be equally shared and accordingly BRDB's share of Rs 106.40 lakh was paid during 1988-91.

The prototype of the equipment developed by BEML was found to be not as per specifications during trial evaluations carried out from 1991 onwards. Despite subsequent modifications and exhaustive trials the equipment failed to achieve the desired results and the equipment was declared as unsuitable for Border Roads Organisation (BRO) by the trial team in January 1993. A Board of Officers which assembled in June 1993 to study the feasibility of continuance or otherwise of indigenous development of the equipment concluded that the technology adopted was outdated and other more efficient machines were available with BRO. The Board, therefore, recommended discontinuation of further trials on the indigenously developed equipment and the project was foreclosed in October 1995. BRDB in their reply in September 1997 stated that the technology adopted by BEML was outdated and the prototype equipment developed was not as per specification as experienced during the trials.

BRDB however did not clarify as to why this could not be pointed out by BRO at the initial stage.

DGBR stated in May 1997 that as per foreclosure order the share of the project cost to be borne by them was Rs 75.79 lakh and the balance amount less share of one equipment retained by DGBR had been recovered. It was also stated that remaining items would be disposed off by BEML and sale proceeds would be shared equally by BEML and DGBR. The items were yet to be disposed off by BEML (September 1997).

Thus, adoption of outdated technology had resulted in the development of equipment which could not achieve the desired results and the project had to be foreclosed resulting in infructuous expenditure of Rs 75.79 lakh.

66. Non-utilisation of a bridge

Abnormal delay of more than 10 years in finalisation of acquisition of land and construction of approach road resulted in non-utilisation of a bridge constructed at a cost of Rs 74.28 lakh for the last five years besides escalation in cost of land alone by Rs 22.57 lakh.

BRDB sanctioned construction of a bridge at a cost of Rs 36.72 lakh.

Under a road development programme of BRDB, a permanent bridge over a river and its approach road at both sides were to be constructed. BRDB in December 1987, accorded sanction for construction of the bridge at an estimated cost of Rs 36.72 lakh.

The construction of bridge was completed at a cost of Rs 74.28 lakh. Sanction to regularise the excess expenditure was awaited.

In February 1989, the project CE concluded a contract for the construction of bridge at a cost of Rs 48.00 lakh. The construction of the bridge was completed in May 1992 at a cost of Rs 74.28 lakh. Sanction to regularise the excess expenditure of Rs 37.56 lakh incurred due to escalation in wages and cost of stores was awaited as of May 1997. The construction of the approach road was sanctioned by DGBR in October 1987 for Rs 9.18 lakh (Rs 3 lakh for acquisition of land), revised to Rs 33.10 lakh (Rs 25.57 lakh for acquisition of land) in November 1992 due to escalation in cost of land, and constructional

Construction of approach road was pending for want of acquisition of land as a result the bridge was lying unused.

material. The construction of road could not be commenced for want of acquisition of land from the State Government for which the matter was under correspondence at lower levels, since August 1987 and as a result of which the bridge was lying unused.

While accepting the facts, CE stated in May 1997 that in the absence of the requisite notification from the Government of Manipur construction of approach road was suspended and hence the commissioning of the bridge was not possible.

Thus, abnormal delay of more than 10 years in finalisation of land acquisition and construction of approach road resulted in non-utilisation of the bridge constructed at a cost of Rs 74.28 lakh for the last 5 years besides escalation in cost of land alone by Rs 22.57 lakh.

The matter was referred to BRDB in April 1997; their reply was awaited as of December 1997.

67. Infertuous expenditure on re-alignment of a road

Execution of a road work by CE on changed alignment not sanctioned by the competent authority resulted in expenditure of Rs 53.24 lakh being rendered infertuous.

DGW sanctioned construction of a road at a cost of Rs 703.51 lakh.

In order to ensure effective patrolling to check infiltration from across the border Director General of Works (DGW) accorded three sanctions between March 1993 and January 1994 for construction of a road measuring 33 kms at a total cost of Rs 703.51 lakh.

While work was in progress, CE proposed for changing alignments of a portion of the road and implemented the change without sanction of DGW.

In April 1994, while execution of all the three portions of the road was in progress, the project CE forwarded a proposal for changing the alignment of a section of the road measuring 21 kms on the ground that the area remained sub-merged under water during the monsoon. Though the proposal was awaiting approval, the CE in April 1995 submitted to the DGW revised estimates for Rs 339.32 lakh for effecting the realignment and simultaneously commenced work without waiting for its sanction. Meanwhile as of April 1995 an expenditure of Rs 127.68 lakh had been incurred on the work as per original sanctions.

A technical committee which met in July 1995 considered it not advisable to change the alignment of the road being far away from the border and especially when a considerable amount had already been spent as per original sanctions. In another meeting held in February 1996 the CE was advised to follow original alignment and raise the formation level of the road suitably, wherever required to avoid its submergence. Accordingly, the work on the changed alignment on which an expenditure of Rs 53.24 lakh was incurred upto January 1996 was abandoned and work as per original alignment was taken up and being progressed.

Proposed change was not agreed.

Thus, execution of a road work by CE on changed alignment not sanctioned by the competent authority resulted in expenditure of Rs 53.24 lakh being rendered infructuous.

The matter was referred to BRDB in May 1997; their reply was awaited as of December 1997.

68. Injudicious procurement of stores

Procurement of material without assessing the actual requirement resulted in blocking of funds to the extent of Rs 38 lakh for over two years.

In July 1992, BRDB accorded sanction for the replacement of existing wooden decking of a bridge by steel decking at a cost of Rs 40.82 lakh. Based on the sanction, the DGBR and CE placed two supply orders in July 1993 and October 1993, on two firms for purchase of materials required for the above work at a cost of Rs 43.43 lakh.

Materials were supplied by both the firms between December 1993 and September 1994. Meanwhile, in August 1994, Executive Engineer informed that the parts procured were unsuitable for the existing bridge and therefore could not be utilised for the designated work. In September 1995, a fresh appraisal of the situation was carried

out and it was proposed to replace the decking with wooden members only. The damaged wooden decking was therefore, proposed for replacement on yearly basis under normal maintenance and the work already sanctioned foreclosed. Though the materials procured were proposed to be utilised for other jobs, stores worth Rs 38 lakh were found to be held in stock even as of May 1997.

Thus, procurement of material without assessing the actual requirement resulted in blocking of funds to the extent of Rs 38 lakh for over two years.

The matter was referred to the BRDB in June 1997; their reply was awaited as of December 1997.

69. Response of the Ministries/Departments to Draft Audit Paragraphs

On the recommendation of the PAC, Ministry of Finance issued directions to all Ministries in June 1960 to send their response to the Draft Audit Paragraphs proposed for inclusion in the Report of the C&AG of India within six weeks. The Draft Paragraphs are always forwarded by the respective Audit Offices to the secretaries of the concerned ministries/ departments through demi official letters drawing their attention to the audit findings and requesting them to send their response within six weeks. The fact of non-receipt of replies from the ministries are invariably indicated at the end of each such Paragraph included in the Audit Reports.

Draft paragraphs/reviews proposed for inclusion in the Report of the C&AG of India for the year ended March 1997 : Union Government (Defence Services) : No. 7 of 1998 were forwarded to the *secretaries of the respective ministries/ departments* between April 1997 and October 1997 through demi official letters.

The *secretaries of the respective ministries/ departments* did not send replies to 33 draft paragraphs and one review in compliance to above instructions of the Ministry of Finance issued at the instance of the Public Accounts Committee *as indicated below*. 65 Paragraphs

and 3 Reviews from among those whose drafts were sent to the secretaries have finally been included in this Report. Out of these, in 33 Paragraphs and one Review the response of the secretaries could not be included due to non-receipt of their replies.

Ministry/ Department	Total No. of Paragraphs on the Ministry/Department included in the report	No. of Paragraphs in which reply not received from respective secretaries	Paragraph Number
Ministry of Defence	68	34 (excluding Paragraph no.1 to 13 of Chapter I)	14, 15, 17, 20, 22, 23, 25, 28, 29, 30, 32, 35, 36, 37, 38, 39, 41, 42, 43, 45, 47, 49, 50,51 52, 53, 54, 55, 56, 60, 64, 66, 67 and 68

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is crucial for ensuring the integrity of the financial statements and for providing a clear audit trail.

2. The second part of the document outlines the various methods used to collect and analyze data. It describes how different types of information are gathered and how they are processed to identify trends and patterns.

3. The third part of the document focuses on the results of the analysis. It presents the findings in a clear and concise manner, highlighting the key areas of concern and the potential implications for the organization.

4. The fourth part of the document provides recommendations for improving the current situation. It offers practical advice on how to address the identified issues and how to prevent similar problems from occurring in the future.

5. The fifth part of the document concludes the report by summarizing the main points and reiterating the importance of the findings. It also provides information on how to contact the author for further details or assistance.

6. The sixth part of the document contains a list of references and sources used in the research. This section is essential for providing context and credibility to the information presented in the report.

7. The seventh part of the document includes a glossary of terms and definitions. This helps to ensure that all readers have a clear understanding of the terminology used throughout the document.

8. The eighth part of the document provides a detailed description of the methodology used in the study. This includes information on the data collection process, the analysis techniques, and the criteria used to evaluate the results.

9. The ninth part of the document contains a list of appendices. These provide additional information and data that support the findings of the study but are too large to include in the main body of the report.

10. The tenth part of the document is the index, which provides a quick reference to the various sections and topics covered in the report.

70. Performance of Ordnance Factory Organisation

70.1 Introduction

Thirty nine Ordnance Factories (OFs), with a manpower of 1.55 lakh are engaged in production of 1126 items of arms, ammunition, equipment clothing, etc. primarily for the Armed Forces of the country. In order to utilise available spare capacities, Ordnance Factories have started manufacturing items for civil trade also, as a measure of diversification. At the apex level, Ordnance Factories are managed by a "Board" which is responsible for policy formulation, supervision and control. Director General of Ordnance Factories (DGOFF) is the ex-officio Chairman of the OFB. He is assisted by nine Members/Addl DGsOF, who are in charge of various staff and line functions.

The broad grouping of Ordnance Factories with reference to their production is as under :

Divisions	No. of factories
(i) Materials and Components (M&C)	11
(ii) Weapons, Vehicles and Equipment (WV&E)	10
(iii) Ammunition and Explosives (A&E)	10
(iv) Armoured Vehicle (AV)	3
(v) Ordnance Equipment Factories (OEF)	5

On the basis of the product the factories are also classified as metallurgical (6), engineering (17), filling(6), chemical (4), ordnance equipment (6). Ordnance Factory Bolangir has not yet started production.

70.2 Revenue expenditure

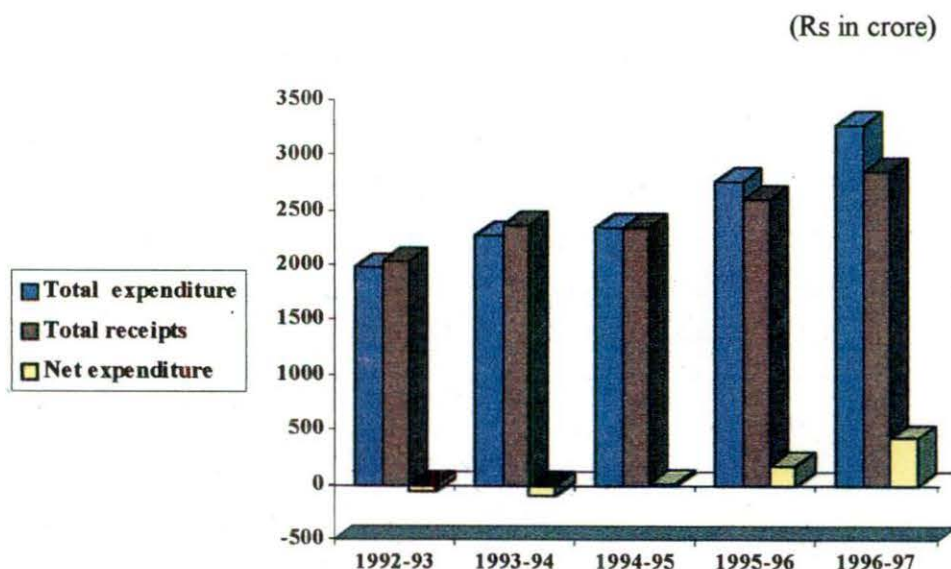
The expenditure under revenue head during 1992-93 to 1996-97 is given in the table below :

(Rs in crore)

Year	Total expenditure incurred by OFs	Receipts against products supplied to Armed Forces	Other receipts and recoveries	Total receipts	Net expenditure of OFs
1992-93	1983.99	1631.49	409.49	2040.98	(-) 56.99
1993-94	2279.84	1813.11	560.15	2373.26	(-) 93.42
1994-95	2347.94	1868.85	473.74	2342.59	(+) 5.35
1995-96	2775.90	2114.82	484.98	2599.80	(+)176.10
1996-97	3275.94	2416.22	436.20	2852.42	(+)423.52

Expenditure of OFB net of receipts and recoveries has been increasing

It may be seen that net expenditure has increased substantially since 1994-95.



70.3 Analysis of performance of OFB

70.3.1 General

The turnover of Ordnance Factory Chanda was the maximum

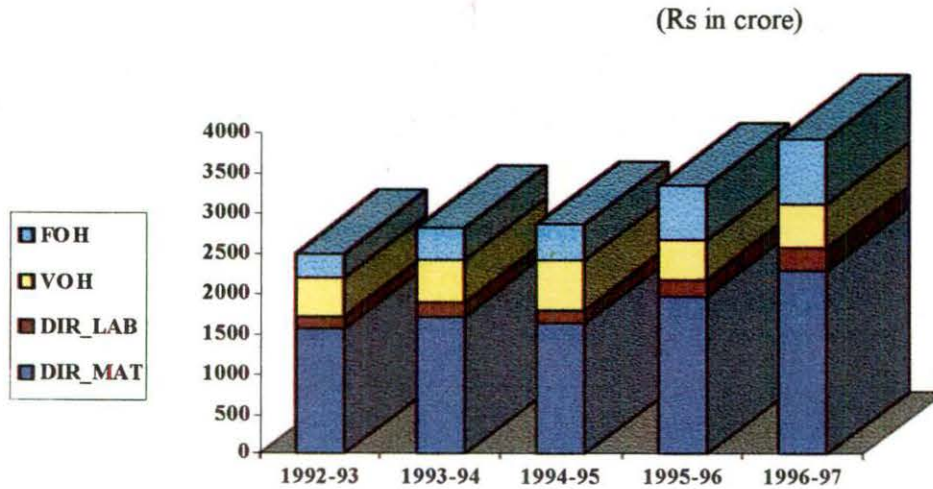
In 1996-97 turnover of Ordnance Factory Chanda was highest at Rs 445.72* crore with 88 per cent material components while that of Ordnance Cable Factory Chandigarh was the lowest at Rs 19.41* crore with material components at 56 per cent.

Note: Figures shown with * mark, wherever used in this chapter are provisional.

70.3.1.1 The following table indicates cost element-wise value of production of articles and components of all Ordnance Factories completed and taken to stock for the last five years:

Element	Value of production (Rs in crore)				
	1992-93	1993-94	1994-95	1995-96	1996-97(*)
(a) Direct Material	1556.87 (62.31)	1725.75 (61.29)	1630.43 (57.05)	1962.48 (58.77)	2299.79 (58.53)
(b) Direct labour	157.16 (6.29)	164.18 (5.83)	168.16 (5.88)	213.26 (6.38)	272.48 (6.94)
(c) Variable overhead	471.40 (18.86)	527.83 (18.74)	607.85 (21.27)	488.78 (14.63)	548.21 (13.95)
(d) Fixed overhead charges	313.03 (12.52)	397.76 (14.12)	450.99 (15.78)	674.46 (20.19)	808.56 (20.58)
Total	2498.46	2815.52	2857.43	3338.98	3929.04

* Figures in bracket are percentages to the total cost of turnover



Whereas the share of direct labour in the cost of production has been varying between 5.83 and 6.94 *per cent*, that of the fixed overhead has shown consistent uptrend from 12.52 *per cent* in 1992-93 to 20.58 *per cent* in 1996-97.

Element of fixed and variable overheads in the total cost of production varied widely from factory to factory during 1996-97, being 82.36 *per cent* in Opto Electronic Factory Dehradun and 9.28 *per cent* in Ordnance Factory Chanda.

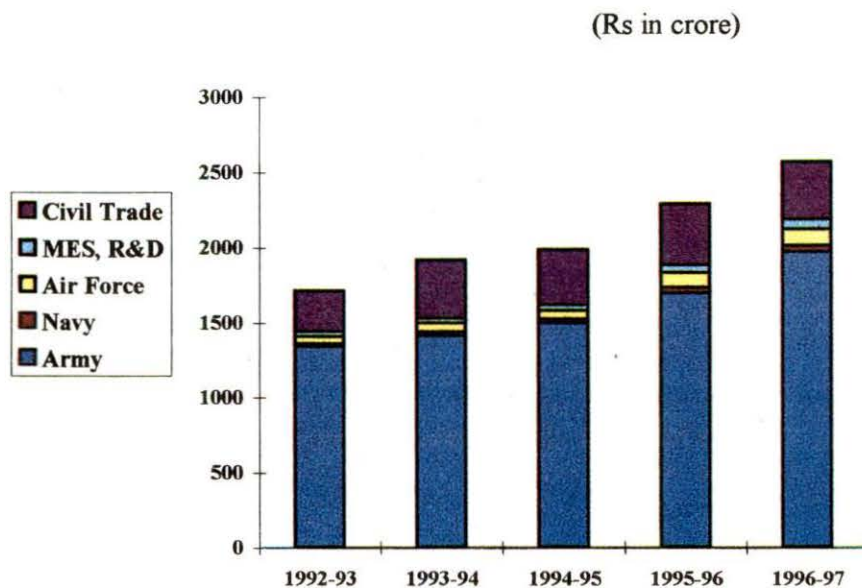
70.3.2 Issue to users

The indenter wise value of issues during the last five years were as under :

(Rs in crore)

	1992-93	1993-94	1994-95	1995-96	1996-97(*)
Army	1339.09	1406.40	1492.58	1690.97	1964.83
Navy	16.88	28.80	28.02	37.41	46.72
Air Force	48.06	58.70	54.12	98.89	101.61
MES, R&D	34.27	28.95	39.55	54.16	71.18
(Other Defence Departments)					
Total Defence	1438.30	1522.85	1614.27	1881.43	2184.34

Civil Trade	271.25	392.83	371.88	404.33	381.55
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70.3.3 *Production, planning and performance*

70.3.3.1 *Production programme vis-a-vis progress*

Achievement in respect of production of several items remained behind targets fixed by OFB. Though orders for manufacture and supply of some items existed, manufacture of these items had not been undertaken during 1996-97 by the factories as OFB did not set production targets for them. During 1996-97, orders existed for 331 items, OFB did not fix targets for 42 items. While out of the remaining 289 items for which targets were fixed, 94 were behind the schedule.

70.3.4 *Capacity utilisation*

OFB assesses capacity utilisation of a factory in terms of standard man hours (SMH) and machine hours. The tables below indicate the extent to which the capacity had been utilised during the last five years :

Table-I
(Capacity utilisation in terms of SMH)

Year	Capacity in SMH	Capacity utilisation in SMH	Percentage of capacity utilisation
1992-93	2139	1461	68.30
1993-94	2051	1387	67.63
1994-95	2040	1359	66.62
1995-96	1914	1485	77.58
1996-97	1847.73	1558.97	84.37

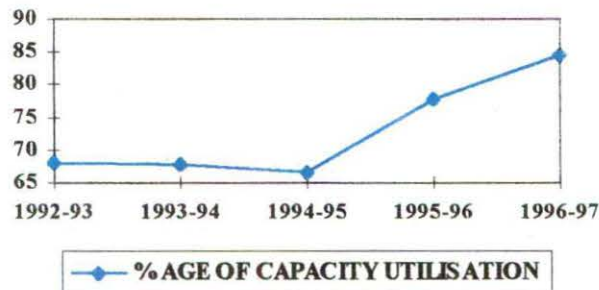
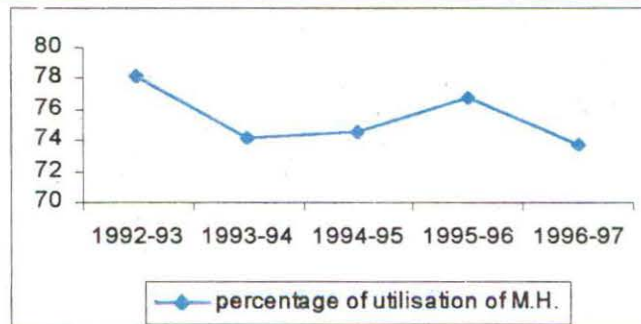


Table-II
(Capacity utilisation in terms of machine hours)

Year	Machine hours available	Machine hours utilised	Percentage utilisation
1992-93	1114.68	871.70	78.20
1993-94	1141.29	846.58	74.18
1994-95	1198.87	894.03	74.57
1995-96	1234.53	946.89	76.70
1996-97	1270.89	936.26	73.67



The overall manpower strength has come down over the years due to the decision of the Ministry not to recruit replacements against wastages due to retirement etc. Machine hour utilisation is dependent on the work load to be discharged during a year. To minimise the effect of the load reduction, the Ministry had approved that Ordnance Factories may secure orders from civil trade and Ministry of Home Affairs (MHA) and for exports.

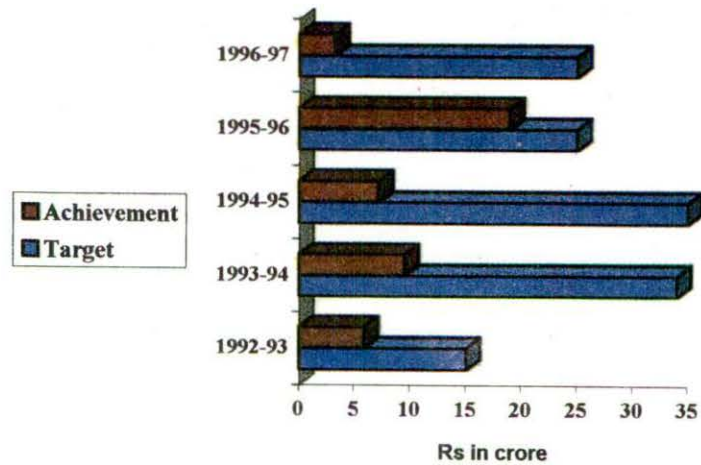
70.3.5 Export and civil trade

The capacity created in Ordnance Factories was not being utilised to the full extent because of diminishing orders from Armed Forces. The Ministry decided in July 1986 to diversify and enter the civil market within the country and tap the export potential of Ordnance Factories to utilise their capacity. The actual achievement was, however, insignificant in export as well as in civil trade.

70.3.5.1 Export

The following table shows the achievement with reference to target in export from 1992-93 to 1996-97.

Year	Number of factories involved	Target (Rs in crore)	Achievement (Rs in crore)	Percentage of achievement
1992-93	10	15.00	5.84	38.93
1993-94	15	34.00	9.48	27.89
1994-95	14	35.00	7.15	20.42
1995-96	11	25.00	18.94	75.76
1996-97	8	25.00	3.22	12.88



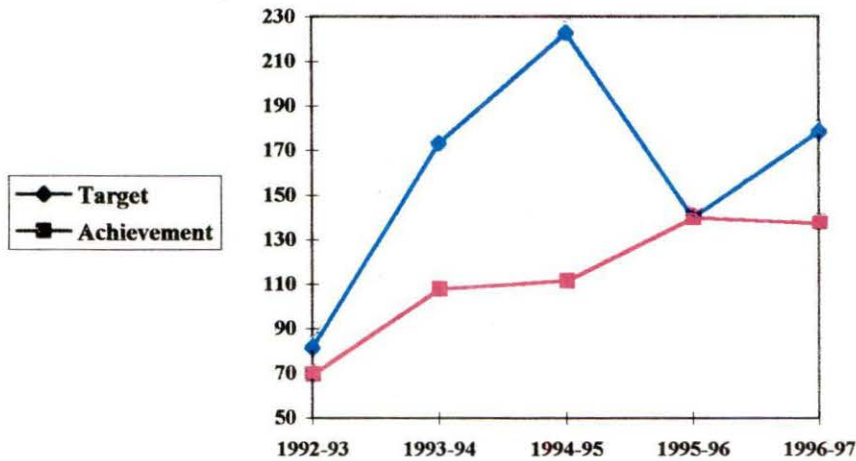
It would be seen that barring 1995-96, the performance of Ordnance Factories on export front has been rather poor. There was sharp decline in export performance during 1996-97 as compared to 1995-96.

According to OFB, decline in export performance in 1996-97 was due to late receipt of export orders from foreign countries.

70.3.5.2 Civil trade

The turn over from civil trade other than supplies to MHA and State Government Police Departments during 1992-93 to 1996-97 were as under :

Year	Number of factories involved	Target (Rs in crore)	Achievement (Rs in crore)	Percentage of achievement
1992-93	37	83.12	70.02	84.24
1993-94	38	174.57	108.13	61.94
1994-95	38	224.30	112.03	49.45
1995-96	38	141.49	140.45	99.26
1996-97	38	180.00	137.96	76.64



The realisation from civil trade in absolute terms showed uptrend upto 1995-96 but slid marginally in 1996-97.

70.3.5.3 Non-realisation of amount towards civil trade activities

According to policy directive issued by OFB in June 1985 all civil indentors are required to pay in cash with order in full or payment through crossed demand draft or irrevocable letter of credit.

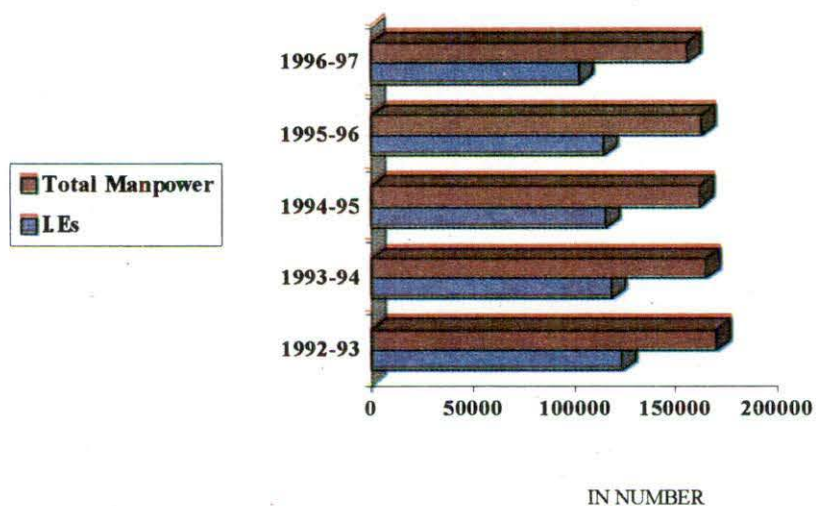
As on 31 March 1997, Rs 39.54 crore was outstanding against civil indentors for supply of different items for them. The outstanding amount was, however, reduced to about Rs 8 crore by July 1997.

70.3.6 Utilisation of manpower

70.3.6.1 Employees of the Ordnance Factory Organisation are classified as (i) "officers", who man senior supervisory levels, (ii) "Non-Gazetted" (NGO) or "Non-Industrial" employees (NIEs) who man junior supervisory levels and clerical establishment and (iii) "Industrial employees" (IEs), who are engaged in the production and maintenance operations. The number of employees of various categories during the last five years as per the table below reveal that the strength of the supervisory level has been showing an increasing trend since 1994-95 while number of IEs has declined.

(In number)

Category of Employees	1992-93	1993-94	1994-95	1995-96	1996-97
Officers	1672	1672	2856	3286	3331
Percentage of officers to total manpower	0.98	1.01	1.76	2.01	2.14
NGO/NIEs	44190	44548	43167	45641	49462
Percentage of NGO/NIEs to total manpower	26.07	27.04	26.69	28.03	31.81
IEs	123583	118488	115702	113865	102675
Percentage of IEs to total manpower	72.93	71.93	71.54	69.94	66.04
Total	169445	164708	161725	162792	155468

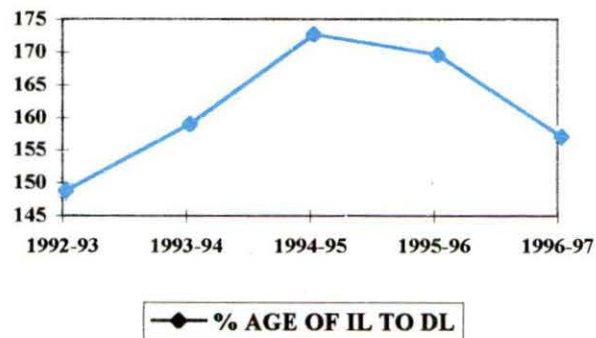


70.3.6.2 The expenditure on labour is charged to production in two ways - 'direct labour' representing expenditure on labour relating

directly to production and 'indirect labour' representing other expenditure on labour like maintenance etc. The expenditure on direct and indirect labour for the last five years are shown below:

(Rs in crore)

	1992-93	1993-94	1994-95	1995-96	1996-97(*)
(a) Total indirect labour	257.38	286.40	316.73	387.29	410.52
(b) Total direct labour	172.91	180.06	183.23	228.13	260.89
(c) Percentage of indirect labour to direct labour	148.85	159.06	172.86	169.77	157.35



70.3.6.3 The number and earnings of employees on piece work and incentive bonus paid to maintenance workers during last five years are as under:

Year	Average no. of piece workers	Piece work employees earnings	Incentive bonus paid to maintenance workers
		(Rs in crore)	
1992-93	69520	86.45	4.30
1993-94	67500	85.86	4.41
1994-95	64815	81.09	4.45
1995-96	63069	91.16	5.89
1996-97	62944	92.69*	6.26*

70.3.7 Inventory management

70.3.7.1 Stock holdings

As per the existing provisioning procedure, the Ordnance Factories are authorised to hold stock of different types of stores as shown below :

Sl.No.	Types of Stores	Months requirement to be held in stock
1.	Imported items	12 months
2.	Difficult indigenous items	9 months
3.	Other indigenous items	6 months

During 1995-96 average stock holdings in seven factories, as given below, ranged between 10* months' and 18.78* months' requirements which exceeded the existing norms.

(Rs in crore)(*)

Sl. No.	Name of Factory	Opening Balance as on 01 April 1996	Closing Balance as On 31 March 1997	Average holding of stock	Average monthly consumption	Holding of stores in terms of months
1.	OF Khamaria	159.08	191.84	175.46	17.54	10.00
2.	AF Kirkee	91.59	80.37	85.98	8.22	10.45
3.	HVF Avadi	236.07	273.93	255.00	24.12	10.57
4.	OF Kanpur	51.20	55.88	53.54	4.66	11.48
5.	EF Avadi	25.62	29.32	27.47	2.09	13.14
6.	OLF Dehradun	11.88	12.09	11.98	0.89	13.46
7.	OF Medak	132.42	218.39	175.40	9.34	18.78

70.3.7.2 *Stores found surplus on stock-taking*

Stores valued at Rs 5.99* crore were shown as surplus during stock-taking in 1996-97, out of which stores valued at Rs 5.40* crore were found surplus at the three factories as shown below :

Sl. No.	Factory	Surplus at stock taking (Rs in crore)(*)
1.	OF Khamaria	2.50
2.	OF Ambernath	1.48
3.	VF Jabalpur	1.42

Stores found surplus in stock-taking is a reflection on the quality of maintenance of stores records as surpluses could occur due to deficient accounting of stores or overstatement of issues.

70.3.7.3 The average stock holdings in terms of number of days' consumption consistently showed down trend, in excess of the prescribed norm of 180 days. Besides, there was considerable increase

in the holding of slow-moving and surplus/scrap stores over the years as would be revealed by the table below :

(Rs in crore)

Sl.No.	Particulars	1992-93	1993-94	1994-95	1995-96	1996-97(*)
1.	Working stock					
a.	Active	773.01	702.65	736.51	1020.59	1245.91
b.	Non-moving	76.36	81.26	103.75	109.21	77.93
c.	Slow moving	134.86	138.10	126.08	122.10	148.39
	Total	984.23	922.01	966.34	1251.90	1472.22
	Working Stock					
2.	Waste & Obsolete	23.59	16.44	13.12	8.47	8.09
3.	Surplus/Scrap	41.95	38.40	35.29	33.34	41.20
4.	Maintenance stores	96.27	99.13	93.84	76.00	72.82
	Total	1146.04	1075.98	1108.59	1369.71	1594.34
5.	Average holdings in terms of no. of days' consumption	286	254	247	214	209
6.	Percentage of total slow-moving and non-moving stock to total working stock	21.46	23.79	23.78	18.47	15.37

70.3.7.4 Finished stock

There was steady increase in the total holdings of finished stock and components since 1992-93 as indicated below:

(Rs in crore)

	1992-93	1993-94	1994-95	1995-96	1996-97(*)
Finished stock holding	40.42	55.42	73.27	95.19	182.58
Total value of outturn	2404.53	2673.88	2807.79	3338.99	3929.04
Holding of finished stock in terms of no. of days' issues	6	8	10	10	17
Holding in terms of percentage of total value of outturn	1.68	2.07	2.60	2.85	4.65
Finished component holding	208.87	195.13	197.85	247.51	303.83
Holding of finished components in terms of no. of days' consumption	130	123	96	90	99

In six factories percentage of holding of finished stock and component as on 31 March 1997 to the total value of outturn ranged between 22.70 and 50.17 as per table below :

Sl. No.	Name of the Factory	Value of finished stock and component	Total value of outturn	Percentage of 3 to 4
(Rs in crore)				
1.	Cordite Factory Aruvankadu	0.65 + 13.64	62.95	22.70
2.	OF Kanpur	5.40 + 21.26	113.69	23.44
3.	MSF Ishapore	0.00 + 31.28	94.99	32.92
4.	HAPP Trichi	13.57 + 0.00	35.04	38.72

5.	OF Medak	44.80 + 18.45	137.56	45.97
6.	HVF Avadi	70.34 + 100.58	340.66	50.17

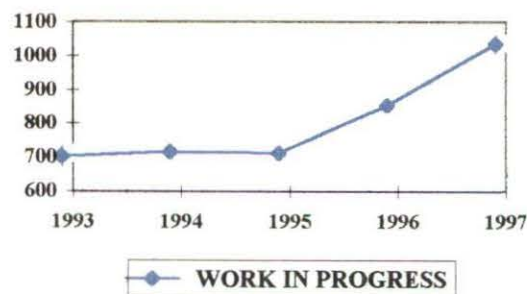
70.3.7.5 Work in progress

The GM of an Ordnance Factory authorises and orders a production shop to manufacture an item in certain quantity by issue of warrant whose normal life is six months. Unfinished items pertaining to different warrants lying at the shop floors constitute work-in-progress.

There was increase in the value of work-in-progress during 1995-96 and 1996-97 as shown in the table below :

As on 31 March	Value of work in progress (Rs in crore)
1993	703.89
1994	717.84
1995	714.24
1996	855.00
1997	1038.35

(Rs in crore)



As on 31 March 1997, 13374 warrants (value: Rs 337.42 crore) were more than one to 13 years old against the normal life of six months. Old warrants need to be reviewed at a regular interval so that the items under production may not become obsolete by the time they are completed and the expenditure rendered infructuous.

70.3.8 Rejections in manufacturing processes

Total value of production, including permissible rejections vis-a-vis value of rejections beyond permissible limits, excluded from the total value of production during the last five years were as under :

(Rs in crore)

Year	Total value of production (including permissible rejection)	Value of rejection (beyond permissible limit)
1992-93	2404.53	6.47
1993-94	2673.88	9.41
1994-95	2807.79	11.41
1995-96	3338.99	7.63
1996-97	3929.04*	12.50*

During 1996-97 major losses due to abnormal rejections occurred in three factories were as under :

(Rs in crore)

Metal and Steel Factory Ishapore	1.68
Ammunition Factory Kirkee	2.82
Ordnance Factory Chanda	4.61

70.3.9 Losses written off

The table below depicts losses written off by competent financial authorities :

(Rs in lakh)

Sl. No.	Particulars	1992-93	1993-94	1994-95	1995-96	1996-97(*)
1.	Over issues of pay and allowances and claims abandoned (A)	5.71	7.74	12.66	3.45	2.44
2.	Losses due to theft, fraud or neglect	7.69	0.92	0.20	0.52	0.92
3.	Losses due to deficiencies in actual balance not caused by theft, fraud or neglect	1.31	7.91	0.40	3.97	18.73
4.	Losses in transit	41.91	11.81	16.80	21.18	15.82
5.	Other causes (eg. conditioning of stores not caused by defective storage, stores, scrapped due to obsolescence etc.)	1.55	14.26	19.75	17.01	22.70
6.	Manufacturing losses	288.25	739.10	377.77	394.07	527.64

7. Losses not pertaining to stock	-	-	-	7.85	5.84
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Total	346.42	781.74	427.58	448.05	594.09
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(A) An amount of Rs 2.51 crore representing outstanding advances on tour/transfer and LTC granted to employees of Ordnance Factory Organisation during 1975 to 1993-94 was lying unadjusted as on March 1997.

Planning

71. Hydraulic press and raw material for ICV

OFB imported large number of bottom plates of ICV besides importing a hydraulic press for manufacturing them. The hydraulic press imported at Rs 7.17 crore remained unutilised for 4 years. Steel worth Rs 64.32 lakh for making bottom plates also remained unutilised.

OFB placed supply order in February 1990 for import of a hydraulic press for manufacture of bottom plates for hull of the Infantry Combat Vehicles (ICV). The equipment received at Ordnance Factory Project Medak in December 1993 at a cost of Rs 7.17 crore was commissioned in October 1994.

OFB imported 1190 bottom plates also during 1986-87 to 1992-93. Of these, 860 were imported after the Army reduced the annual requirement of ICVs from the original 500 to 150 from 1990-91.

Despite reduction in the production programme and import of bottom plates to meet the requirement up to 1998-99, Ordnance Factory Project Medak procured steel valued at Rs 64.32 lakh during 1986-87 to 1991-92 for manufacture of bottom plates with the help of the hydraulic press. Out of this, steel valued at Rs 51.35 lakh was

OFB imported 860 bottom plates after drastic reduction in production of ICVs.

Due to huge stock of bottom plates imported by hydraulic press remained unutilised

procured in 1991-92. Besides, Ordnance Factory Project Medak imported 860 bottom plates at a cost of Rs 74.43 lakh after 1990-91, when they were already aware of the reduction in the annual requirement of ICVs by Army from 500 to 150.

Thus, import of large number of bottom plates despite the reduction in the production programme even while hydraulic press for manufacture of bottom plates was likely to be received soon, was injudicious. This led to idle inventory as well as idling of imported hydraulic press procured at a heavy expenditure of Rs 7.17 crore. Procurement of steel for manufacture of bottom plates, particularly that valued at Rs 51.35 lakh procured after 1990-91, compounded the injudiciousness in the procurements. The entire quantity of steel valued at Rs 64.32 lakh is not likely to be put to use before 1999-2000 i.e., 8 to 13 years after the procurement.

The Ministry stated, in September 1997, that since sufficient CKD bottom plates were available, a lower priority has been accorded to manufacture the tools to commission the press. The Ministry, however, did not offer any comments on import of large number of bottom plates and purchase of steel despite reduction in the production level.

72. Wasteful expenditure

Incorrect projection of requirement by Navy of 4.5 inch ammunition led to infructuous expenditure on manufacture of cartridge cases.

OFB fixed target for production of cartridge cases in a meeting with Navy.

OFB fixed a target for production of 3,000 cartridge cases of 4.5 inch gun ammunition for Navy by Ordnance Factory Ambernath during 1992-93 on the basis of the requirement projected by Navy in a meeting with them in February 1992. This ammunition was in regular production in Ordnance Factory Ambernath. When the OFB did not receive a confirmation from Director General of Naval Armament Supply until June 1992, they asked Ordnance Factory Ambernath not to undertake manufacture of these cartridges. By then, Ordnance

Navy did not confirm the requirement. Cartridge cases and semis manufactured in OF Ambernath became unfit due to corrosion.

Factory Ambernath had already manufactured 840 cartridge cases valued at Rs 13.68 lakh. They also held semi-finished items and raw materials worth Rs 2.28 lakh. These cartridge cases and semis became unfit for use due to corrosion rendering the expenditure of Rs 15.96 lakh as infructuous.

The Ministry stated, in December 1997, that OFB had asked Ordnance Factory Ambernath to undertake production of the cartridge cases on the basis of the requirement projected in the meeting with the Naval Officers in February 1992. They added that they had to stop the production since Navy subsequently did not confirm their requirement. They further added that the salvage value of the damaged cartridge cases was Rs 6.78 lakh.

Thus, bad planning on the part of the Naval Officers in indicating a target and their subsequent failure to confirm the requirement projected in the meeting, resulted in infructuous expenditure of Rs 15.96 lakh.

Manufacturing

73. Foreclosure of indent resulting in avoidable expenditure

Clearance of defective design in the manufacture of prototype guns by ARDE during development trials led to manufacture of defective guns at Gun Carriage Factory and foreclosure of the indent by the Army resulting in an avoidable expenditure of Rs 16.74 crore

ARDE at Gun Carriage Factory Jabalpur designed and developed a lighter version of a field gun. Based on the design given by ARDE cell, Gun Carriage Factory Jabalpur produced eight prototypes of the gun in 1992 which were also cleared by ARDE. In March 1993, Army HQ gave clearance for first production model subject to some modifications.

Army placed an indent on OFB in July 1993 for supply of 60 guns in 1993-94 and 1994-95. Against this, Gun Carriage Factory Jabalpur produced 20 guns at a cost of Rs 10.21 crore by March 1995.

Defects were noticed in the guns in trials and confirmatory trials.

Army foreclosed the indent due to shortcomings in the gun and asked Gun Carriage Factory to improve the 20 guns produced by them.

ARDE and Gun Carriage Factory Jabalpur expressed inability for further improvement.

Guns and components valued at Rs 16.74 crore remain unused.

Army observed certain defects in the guns during trial held in December 1994 and requested Gun Carriage Factory Jabalpur to rectify the defects. In confirmatory trials held in August/September 1995, Army wanted further improvements in jump, stability and recoil system. Further modifications were incorporated as per the new design given by ARDE. Army foreclosed the project in February 1996 and asked Gun Carriage Factory Jabalpur to carry out some more modifications/improvements in the jump, stability and recoil system to all 20 guns before issue.

Based on ARDE's opinion of not being able to carry out further improvements, Gun Carriage Factory Jabalpur reported to OFB in September 1996 that no further improvement was possible in recoil system, stability and jump and requested them to take up the matter with Army for acceptance of 20 guns in their present condition.

As of November 1997, 20 guns valuing Rs 10.21 crore were lying at Gun Carriage Factory Jabalpur. Besides, there was an additional financial repercussion of Rs 6.53 crore on account of surplus components held by them.

OFB stated, in November 1997, that the guns were manufactured as per design and drawings finalised by ARDE and prototypes approved by them. They added that the matter had been taken up with Army for acceptance of 20 guns in their present condition.

Failure of ARDE and Gun Carriage Factory Jabalpur to carry out further modifications/improvements in the gun led to unfruitful expenditure of Rs 16.44 crore in manufacture of 20 guns and surplus items held at Gun Carriage Factory Jabalpur.

The matter was referred to the Ministry in May 1997; their reply was awaited as of October 1997.

74. Defective manufacture of shells

Production of substandard shell material by Metal and Steel Factory Ishapore followed by manufacture of 2366 defective shells out of the substandard material by Gun and Shell Factory Cossipore and filling of large number of them by Ordnance Factory Khamaria contributed to a loss of Rs 14.24 lakh

Ordnance Factory Khamaria rejected entire lot of 2366 shells supplied by GSF due to cracks.

Gun and Shell Factory Cossipore supplied 2366 empty shells valued at Rs 12.42 lakh to Ordnance Factory Khamaria in October 1993. All 2366 shells were manufactured by Gun and Shell Factory in a single lot; No. 21. Ordnance Factory Khamaria rejected the entire lot due to cracks, which got widened during filling under pressure, leading to press fire.

The shells could not withstand filling even at reduced pressure.

Ordnance Factory Khamaria filled 1447 shells at the required 20 tonne pressure. Due to incidence of press fire, they abandoned the filling of the ammunition at the required pressure and instead decided to fill the remaining at the reduced pressure of 17-18 tonne for use as tracer ammunition. The shells could not withstand the filling even at the reduced pressure. Ordnance Factory Khamaria abandoned the filling after filling only 30 shells at low pressure. They spent Rs 1.80 lakh on filling of the shells.

The defects were traced to substandard shell material produced by MSF.

The Board of Inquiry traced the defects in the shells to substandard production of shell material by Metal and Steel Factory Ishapore. They found that the Boron content in this material for this lot produced by Metal and Steel Factory Ishapore was very high at 0.003 per cent against the permissible limit of 0.001-0.002 per cent.

The Ministry stated, in December 1997, that they were advising the factory to take action for regularisation of the loss.

This led to a loss of Rs 14.24 lakh.

Thus, production of substandard quality of shell material by Metal and Steel Factory Ishapore followed by its conversion into shell by Gun and Shell Factory and their filling by Ordnance Factory Khamaria contributed to a net loss of Rs 14.24 lakh, after recovering the scrap.

75. Abnormal rejection

GM Metal and Steel Factory Ishapore failed to promptly investigate the reasons for abnormal rejection of the first lot of shell billets and take remedial measures. Continued production despite abnormal rejection resulted in a loss of Rs 1.57 crore.

Metal and Steel Factory Ishapore produced 3807 tonne billets required for conversion into the shell of an ammunition during April 1992 to March 1995 in nine batches. The estimates prepared by Metal and Steel Factory Ishapore provided for a normal rejection of 15 *per cent*. However, the actual rejection in different batches was between 24.95 and 33.63 *per cent*, constituting an average rejection of 28.10 *per cent*.

The General Manager Metal and Steel Factory Ishapore failed to investigate the reasons for the high rejection of 25.88 *per cent* in the first lot of December 1993 and to take appropriate remedial measures. General Manager Metal and Steel Factory Ishapore waited until the last lot of March 1995 before constituting the Board of Inquiry. The Board of Inquiry, constituted in March 1996, in their report of April 1996, attributed the abnormal rejection to improper roll temperature/soaking temperature and inaccurate control over pass size, which could have been attended to if the General Manager Metal and Steel Factory Ishapore had constituted the Board of Inquiry immediately after first abnormal rejection in December 1993.

Constituting the Board of Inquiry to investigate into the reasons for abnormal rejections, therefore, did not serve any purpose other than formalising the loss already suffered due to deficiency in the process.

Thus, failure of the GM, MSF to constitute the Board of Inquiry promptly after the first abnormal rejections were noticed as well as deficient oversight on the part of OFB resulted in excess rejection of 1031 tonne billets and consequential loss of Rs 1.57 crore excluding the scrap value of the rejected material.

The Ministry stated, in October 1997, that they were taking measures to control the abnormal rejections with the help of temperature control and better supervision.

76. Abnormal rejection of bomb bodies

79 per cent of the 100 bomb bodies manufactured by Ordnance Factory Muradnagar failed in inspection and at final inspection stage. This led to a waste of Rs 49.14 lakh.

Abnormal rejection of bomb bodies during 1994 - 1995 not yet, investigated by OF, Muradnagar.

Ordnance Factory Muradnagar manufactured and processed 100 empties of a bomb at a cost of Rs 62.20 lakh during February 1994 to August 1995 against a warrant issued in February 1994. Out of these 79 empties, were rejected due to bad material and bad workmanship. The rejection led to waste of Rs 49.14 lakh. Ordnance Factory Muradnagar had assumed a rejection of 51 per cent in the estimates, which itself was very high. The actual rejection, however, was much more at 79 per cent. The value of excess rejection over and above the high assumed rate of rejection of 51 per cent was Rs 17.41 lakh.

General Manager Ordnance Factory Muradnagar stated, in March 1997, that they had constituted a Board of Enquiry in December 1996 and suitable action would be taken on receipt of its findings. The Ministry stated, in September 1997, that OFB had been advised to enquire into the abnormal rejections and take appropriate action.

77. Abnormal rejections in manufacture of steel bars

The rejection in production of alloy steel bar in Metal and Steel Factory Ishapore was double the normal rejection. Yet, they did not investigate the reasons

Actual rejection of 29.59 per cent against normal rejection of 15 per cent constituted an excess rejection valued at Rs 23.41 lakh

Out of 449.41 tonne alloy steel bar produced by Metal and Steel Factory for shell body of an ammunition during April 1993 to March 1994, 132.97 tonne were rejected in inspection. The actual rejection of 29.59 per cent was double the normal rejection of 15 per cent. Abnormal rejection of 14.59 per cent constituted 65.56 tonne steel bar valuing Rs 23.41 lakh.

In only 14 of the 46 lots, the rejection was within the permissible 15 per cent, the best performance touching a figure of 0.09 per cent rejection only. In the remaining 32 lots the rejection ranged between 15 and 100 per cent. Yet, Metal and Steel Factory Ishapore did not constitute Board of Enquiry to investigate the reasons for abnormal rejection immediately after abnormal rejections were noticed in the first few lots and continued the production without addressing the reasons for abnormal rejection.

Board of Enquiry not yet constituted by MSF.

Though Metal and Steel Factory completed the production against this warrant in March 1994, they were yet to set up Board of Enquiry to look into the circumstances leading to abnormal rejection as of December 1997 in terms of instruction of OFB.

The Ministry stated, in December 1997, that Board of Enquiry was being constituted to pursue the case.

78. Costly material lying as surplus

Production of substandard picrite by Ordnance Factory Bhandara has led to accumulation of 846 tonne Dicyandiamide valuing Rs 1.87 crore

Ordnance Factory Bhandara received 700 tonne Dicyandiamide (DCD) between January 1990 and September 1990 for use in the

manufacture of picrite for which demand was placed on them by Cordite Factory Aruvankadu which uses picrite in the manufacture of Triple Base Propellant. Besides, Ordnance Factory Bhandara was holding 360 tonne DCD as of September 1990 in stock-pile.

DCD valued at Rs 1.87 crore lying at OF Bhandara due to substandard production of picrite using the DCD.

As the propellant manufactured by Cordite Factory Aruvankadu using picrite ex-Ordnance Factory Bhandara did not meet the specific ballastic parameters, the Cordite Factory Aruvankadu requested OFB to short-close the demand for picrite placed on Ordnance Factory Bhandara. Further, Cordite Factory Aruvankadu requested OFB to place the demand for picrite on Ordnance Factory Itarsi whose picrite was found satisfactory. As 213.78 tonne DCD only could be consumed in production of picrite upto August 1997, Ordnance Factory Bhandara was holding a stock of 846.217 tonne DCD valuing Rs 1.87 crore as surplus, which was attributable to the picrite produced by Ordnance Factory Bhandara not being up to the satisfaction of the user factory.

OFB stated, in August 1997, that DCD was rendered surplus at Ordnance Factory Bhandara due to reduction in users requirement of 105mm ammunition. This contention of OFB is not correct as picrite being an essential constituent of Triple Base Propellant, are required for ammunition of various large calibre guns like 105 mm, 125 mm, 130 mm etc. and not only for 105 mm ammunition.

Thus, production of substandard picrite has led to Ordnance Factory Bhandara holding surplus stock of DCD valuing Rs 1.87 crore as of August 1997.

The matter was referred to the Ministry; in April 1997; their reply was awaited as of December 1997.

79. Defective processing leading to rejection of bases

Defective processing of blanks by Ordnance Factory Ambajhari has led to rejection of 2000 bases valuing Rs 22.16 lakh

2000 bases valued at Rs22.16 lakh failed in proof test.

Ordnance Factory Ambajhari imported 40000 blanks between December 1994 and April 1996 at a cost of Rs 1.07 crore for manufacture of base of a tank ammunition. They manufactured 8000 bases in four lots during 1995-96 utilising 10000 blanks received as a single consignment. Of these, one lot comprising 2000 bases valuing Rs 22.16 lakh failed in dynamic proof test due to flange chipping off during extraction of base from the gun. The lot was finally rejected in August 1996.

Defect arose during processing.

GM Ordnance Factory Ambajhari stated, in November 1997, that the rejection arose due to processing defect. He further added that the rejected cartridge cases were being rectified. He added that cartridge cases would be subjected to proof afresh on completion of rectification, where they are expected to be passed.

The Ministry stated, in December 1997, that rechecking and fresh proof of 2000 bases is under discussion with SQAE Nagpur.

The case, therefore, reveals that defective processing of blanks by Ordnance Factory Ambajhari has resulted in manufacture and subsequent rejection of 2000 bases valuing Rs 22.16 lakh in proof.

Provisioning of stores and machinery

Stores

80. Procurement of stores at higher rates

Ordnance Factory Ambernath and OFB procured the stores at higher rates which resulted in avoidable extra expenditure of Rs 52.21 lakh

In the following two cases Ordnance Factory Ambernath and OFB procured ingots at higher rates leading to avoidable extra expenditure of Rs 52.21 lakh.

Case-I

Ordnance Factory Ambernath placed a supply order on Minerals and Metals Trading Corporation (MMTC) in January 1996 for supply of 3000 tonne Zinc ingot at Rs 38117.70 per tonne excluding the Customs duty. Ordnance Factory Ambernath was to furnish Customs duty exemption certificate at the time of clearance of the consignment. MMTC supplied the 3000 tonne of Zinc ingot during March - December 1996.

Simultaneously Ordnance Factory Ambernath, placed another supply order for 164.587 tonne Zinc ingot in January and February 1996 on Hindustan Zinc Limited at higher rate of Rs 60,492 per tonne, which included Excise Duty of Rs 7800 and Sales Tax of Rs 2392. Compared to the total price paid to MMTC, the procurement from Hindustan Zinc Limited entailed an extra expenditure of Rs 40.32 lakh.

Case II

In another case, OFB placed supply order on MMTC for 2260 tonne Aluminium ingot in April 1995 for Ordnance Factory Ambajhari and Ordnance Factory Ambernath at Rs 63142 per tonne .

OFB issued sanction in May 1995 authorising Ordnance Factory Ambernath to procure 100 tonne ingot at a higher all

Ordnance Factory Ambernath's procurement of zinc ingot from HZL at higher rate resulted in extra expenditure of Rs 40.32 lakh.

OFB's purchase of Aluminium ingot from NALCO was expensive by Rs 11.89 lakh.

inclusive rate of Rs 88,458 per tonne from M/s. National Aluminium Company (NALCO). Against this, Ordnance Factory Ambarnath procured 98.052 tonne in March 1996 incurring extra expenditure of Rs 11.89 lakh, which could have been avoided had the requirement of this 100 tonne quantity been included while placing order in April 1995.

OFB stated, in August 1997 that the MMTC purchases were highsea purchase and orders for immediate supply on Hindustan Zinc Limited and NALCO were given to avoid the situation of stock out and break in production. However, OFB failed to clarify why they did not adhere to the proper ordering level which could have prevented the possible stock out situation. Besides, while the MMTC supplied the first consignment of 628.78 tonne Zinc ingot as early as March 1996 itself, in the case of Aluminium ingot, the urgency was not established since M/s. NALCO supplied them in March 1996 i.e. about 10 months after the sanction.

The matter was referred to the Ministry in April 1997; their reply was awaited as of December 1997.

81. Excess provisioning of additive liners

Indication of the requirement of propellants by Army without adequate care led to unutilised stock of 5906 additive liners valued at Rs 19.79 lakh required for manufacture of propellants

Based on the demand projected by Army in the meeting held in March 1992 for production of propellants of an ammunition, OFB approved a programme in May-June 1992 for production of 9000 propellants at Cordite Factory Aruvankadu. However as the Army subsequently did not confirm their requirement, OFB asked Cordite Factory Aruvankadu in March 1993 not to manufacture propellants further.

Cordite Factory Aruvankadu had already purchased 8900 wear additive liners valuing Rs 29.82 lakh before receiving the order for postponement of further production during November 1992 - January

1993. They produced 1600 propellants using 657 liners from their fresh purchase and 1520 from their existing stock. Out of the balance 8243 liners, Cordite Factory Aruvankadu utilised 2337 liners up to August 1997 leaving 5906 unutilised liners valuing Rs 19.79 lakh.

Thus, projection of the demand by Army in the meeting of March 1992 without adequate care led to a stock of 5906 liners valuing Rs 19.79 lakh lying unutilised for the last four and a half years with no immediate prospect for their utilisation.

The matter was referred to the Ministry in May 1997; their reply is awaited as of December 1997.

82. Waste due to rejection of imported delay element

Ordnance Factory Khamaria imported 40000 delay elements valuing Rs 29.63 lakh in February 1994 for manufacture of fuze of the ammunition for 155 mm gun without testing the advance sample or carrying out pre-despatch inspection. The entire consignment was found defective resulting in a loss of Rs 29.63 lakh

Ordnance Factory Khamaria placed an order on a foreign firm for import of three components of fuze of 155 mm ammunition at a cost of Rs 78.21 lakh in June 1993.

As per the terms of the contract, bulk supply was to commence after satisfactory examination and testing of advance sample of 100 each of the three components in India. OFB asked the foreign firm in September 1993 to supply the consignment by ship without waiting for sample clearance on the ground of non-availability of air lift sanction from Civil Aviation authorities and urgent need of the ammunition. They did not conduct pre-despatch inspection at the supplier's premises either.

Ordnance Factory Khamaria received the components in

Ordnance Factory Khamaria did not carry out pre-despatch inspection

**Ordnance Factory
Khamaria rejected
imported delay
elements in June 1994**

**Foreign firm refused to
replace the rejected
delay element.**

February 1994. Of these, full consignment of 40000 delay elements valued at Rs 29.63 lakh was found defective and were rejected in June 1994. The Ordnance Factory Khamaria intimated the rejection of delay elements to the foreign firm in July 1994 requesting them to replace the defective consignment. But the firm refuted the claim in July 1994 stating that the tests and final inspection carried out by them before despatch were satisfactory and the rejection of delay elements was due to other reasons at the Ordnance Factory Khamaria.

The Ministry stated, in December 1997, that Ordnance Factory Khamaria had issued seven expeditors to the firm for replacing the consignment but had not received any response. The rejected delay elements valuing Rs 29.63 lakh were lying in stock of Ordnance Factory Khamaria as of December 1997.

Thus, dispensing with the advance sample testing as well as failure to carry out pre-despatch inspection at foreign firm's premises resulted in purchase of the defective delay elements valuing Rs 29.63 lakh.

Other cases

83. Extra expenditure on wooden chests

Rifle Factory Ishapore incurred an extra expenditure of Rs 28.59 lakh in purchase and conversion of semi finished chests into finished chests instead of purchasing finished chests from trade

**Rifle Factory Ishapore
purchased semi finished
chests each at Rs 1565
for conversion into
finished chests at a cost
of Rs 2286 each in the
factory**

Rifle Factory Ishapore commenced production of 5.56 mm rifles from 1993-94. It purchased 1125 semi finished wooden chests for packing of 5.56 mm rifles at the rate of Rs 1565 and Rs 1430 respectively per chest against supply orders placed in May and October 1995. It converted the semi finished chests into finished chests in the factory by spending another Rs 2286 bringing the price per finished chest converted from semi finished in the factory to Rs 3851/Rs 3716.

Finished chests were available for only Rs 1265 each

During the same period the Rifle Factory Ishapore, placed orders in June 1995 for 3500 finished chests from the trade at Rs 1265 each.

Compared to the price at which Rifle Factory Ishapore purchased the finished chests, the total cost of semi finished chests converted into finished chests was three times. In fact, not only was the price of semi finished chests purchased by the Rifle Factory Ishapore more than that of the finished chests, the conversion cost in the factory was 1.80 times the cost of finished product from the trade.

The decision of Rifle Factory Ishapore to purchase semi finished chests at a rate which was higher than the cost of the finished chests and incurring expenditure of Rs 2286 on converting them into finished chest betrayed low concern for value for money.

The extra expenditure in purchase and conversion as compared to purchase of finished chests was Rs 28.59 lakh.

Procurement of 1125 semi finished chests and converting them into finished chests in the factory resulted in an extra expenditure of Rs 28.59 lakh.

The Ministry stated, in December 1997, that until the source of finished chests was established, the Rifle Factory Ishapore was compelled to purchase the semi finished chests to avoid hold up of the dispatch of 5.56 mm rifles. The contention of Ministry was not convincing as *prima-facie* the cost of semi finished wooden chests, and more so their conversion at about one and half times the cost of the semi finished chests lacked justification. Besides, as the production process of 5.56 mm rifle had been going on for quite some time, GM Rifle Factory Ishapore ought to have taken advance action for sourcing the finished chests from the trade.

84. Arbitrary increase in price

Arbitrary increase in the price of transmission assemblies and interface items by Chairman OFB resulted in extra expenditure of Rs 1.76 crore

Chairman OFB fixed firm price for transmission assemblies in May 1995.

Subsequently he increased price of the second lot of supplies of the same order by adding 10 per cent to the price of first lot.

10 per cent increase was applicable to the last purchase order and not on the lots of the same purchase order.

Chairman, OFB allowed two rates for supplies during the same year leading to excess payment of Rs 1.51 crore to BEML.

Chairman OFB negotiated the per unit rate for supply of 236 transmission assemblies of BMP with the Director (Marketing) BEML Bangalore in May 1995 at Rs 11.15 lakh for the first 100 assemblies to be supplied during 1995-96 and at Rs 11.26 lakh for the remaining 136 assemblies to be supplied during 1996-97. The two sides decided the rates for supplies during 1995-96 and 1996-97 by adding 10 per cent and 11 per cent respectively to the last per unit purchase rate of Rs 10.14 lakh.

Subsequently, however, on a request by BEML the Chairman OFB decided in October 1995 to increase the unit rate of 136 assemblies to be supplied during 1996-97 from Rs 11.26 lakh to Rs 12.27 lakh by adding 10 per cent to the unit rate of Rs 11.15 lakh for the assemblies to be supplied during 1995-96. This decision of the Chairman OFB to increase the rate of the second lot of the same supply order by 10 per cent of the first lot was flawed, since as per the negotiations the increase in unit rate was to be applicable on the last purchase order, while 236 assemblies constituted a single supply order and called for further reduction of the price due to bulk supply order. Besides, BEML had already agreed to the rate of Rs 11.26 lakh per assembly.

This was further compounded by the fact that though BEML supplied all 236 assemblies during 1995-96 itself, yet the Chairman OFB admitted payment for 136 assemblies out of them at the higher rate of Rs 12.27 lakh instead of at the rate of Rs 11.16 lakh applicable for 1995-96. The impropriety of this decision of the Chairman OFB resulted in an excess payment of Rs 1.51 crore. On being pointed out by Audit, Ordnance Factory Medak referred the matter regarding justification for price increase of 136 assemblies to OFB.

Admitting testing charges on all assemblies rather than on seven only led to excess payment of Rs 22.90 lakh.

Besides, in the original agreement of May 1995, the two sides had decided that the BEML would carry out load testing on only three units of the first lot and four of the second at Rs 10,000/- per unit. However, Chairman OFB admitted the claim of the BEML towards testing charges of all 236 assemblies. This led to excess payment of Rs 22.90 lakh on testing charges of 229 assemblies, which were not required to be tested as per the original order.

OFB had placed supply order on BEML for 236 interface items also along with the transmission assemblies. On the same logic of 10 *per cent* increase on the last price, the Chairman OFB paid Rs 21780/- each for the 136 interface items against Rs 19800/- per unit agreed to by BEML for 100 units to be supplied during 1995-96. BEML supplied the 136 interface items also during 1995-96 itself along with the 136 transmission assemblies. This resulted in excess payment of Rs 2.69 lakh.

Ministry agreed to recover Rs 1.51 crore upon being pointed out by Audit.

Ministry stated, in September 1997, that BEML have been informed of the decision to recover Rs 1.51 crore from their pending bill. They added that load testing was done only on 7 transmission assemblies and the testing charges of Rs 23.60 lakh were distributed on the entire quantity on order. The stand of Ministry about load testing charges is not tenable as only 7 assemblies were to be tested at Rs 10000 each, for which the firm should have been paid Rs 70 thousand only.

Thus, arbitrary increase in the price of transmission assemblies and interface items by Chairman OFB resulted in committing excess expenditure of Rs 1.76 crore, of which only Rs 1.51 crore is proposed to be recovered on being pointed out by Audit.

85. Infructuous expenditure

Negligent clearance of bulk production of equipment for Shaktiman vehicles by CQA(OFV) Jabalpur placing of supply orders by GM Vehicle Factory Jabalpur even before the capability of the firm was established and careless inspection by the Area Inspector resulted in infructuous expenditure of Rs 26.57 lakh.

GM Vehicle Factory Jabalpur placed a development order in August 1986 on Graubrakes Limited New Delhi for supply of 300 sets of brake actuation equipment for Shaktiman vehicle at the rate of Rs 6800/- per set by January 1988. The firm supplied two samples in March 1989. Of these, one was accepted by Controllerate of Quality Assurance (Ordnance Factory Vehicles) {CQA (OFV)} Jabalpur after trials with certain modifications after which he gave clearance for production of a pilot batch of 50 sets in February 1990.

Vehicle Factory Jabalpur placed two more supply orders without awaiting production of pilot batch.

Without waiting for the outcome of performance of the equipment produced as pilot batch of 50 sets, GM Vehicle Factory Jabalpur placed two more supply orders on this firm in November 1989 and January 1991 for supply of 1400 and 1500 sets respectively.

Against the order for pilot batch of 50 sets, the firm supplied 25 sets in April 1991. These sets needed rectification of the deficiencies before they were fitted on the vehicles in February 1992.

CQA Jabalpur gave clearance for bulk production even though Vehicle Factory Jabalpur had partially lost faith in the capability of the firm.

Without first ensuring that the firm was capable of manufacturing defect-free set by testing the remaining 25 sets due against the pilot batch of 50 sets in terms of the order for 300 sets of August 1986, CQA(OFV) Jabalpur gave clearance for bulk production in March 1992, whereas around the same time GM Vehicle Factory Jabalpur cancelled the supply order for 1500 sets of January 1991 due to doubtful capability of the firm.

Area Inspectors accepted defective sets.

The firm supplied remaining 275 sets against the supply order for 300 sets of August 1986 between September and November 1992. These were inspected and accepted by the Area Inspector. Of these, five sets were fitted in the presence of the firm's representative in

January 1993, which needed certain rectification by the firm.

Vehicle Factory Jabalpur fitted 42 of the remaining 270 sets in March 1993 without the presence of the firm's representative and noticed a number of defects in their fitment. In view of the inability of the firm to supply defect-free sets, the GM Vehicle Factory Jabalpur cancelled the supply order for 1400 sets of November 1989 in September 1993. Besides, he shortclosed the supply order for 300 sets of August 1986 in January 1994 at the accepted quantity of 30 sets i.e. 25 sets of the pilot samples and five sets which were accepted by the Area Inspector after rectification.

Meanwhile the firm had supplied 100 sets in March 1993 against the supply order of November 1989, which were rejected by the Area Inspector in August 1993 i.e. after six months as against 60 days stipulated in the supply order. Vehicle Factory Jabalpur directed the firm, in October 1993, to refund Rs 18.12 lakh towards payment already made for the 270 sets of brake system supplied against the supply order of August 1986 which were rejected by them and returned the firm's bill for Rs 8.45 lakh representing the cost of 100 sets against supply order of November 1989, rejected by the Area Inspector.

100 sets supplied by the firm were rejected by Area Inspector after the stipulated period.

The firm contested the decision of the Vehicle Factory Jabalpur to shortclose/cancel the orders and refused to refund Rs 18.12 lakh, stating that 300 brake systems supplied against the order of August 1986 were accepted by the Area Inspector and rejection of 100 brake systems supplied against the order of November 1989 was intimated after the stipulated period of 60 days.

The case was referred to the sole Arbitrator in April 1994. The Arbitrator held, in June 1995, that the firm should be allowed to fit 270 sets on vehicles in presence of the inspector, who had cleared them. For other 100 sets, the Arbitrator directed the firm to ensure that these were fitted on vehicles. The District Court, Jabalpur also upheld the award of the Arbitrator in February 1996 and advised Vehicle Factory Jabalpur to make payment of Rs 8.45 lakh, being the cost of 100 brake systems supplied against the order of November 1989 to the firm along with interest. Vehicle Factory Jabalpur paid

Rs 8.45 lakh to the firm in March 1996 and was holding 370 defective brake system valuing Rs 26.57 lakh as of September 1997.

OFB stated, in July 1997, that bulk production clearance was accorded in view of the satisfactory fitment / trial run. The Ministry, however, stated in September 1997, that OFB had been advised to enquire into the circumstances under which bulk production clearance was accorded and two supply orders placed in November 1989 and January 1991.

Thus, clearance of bulk production by CQA(OFV) Jabalpur, placing of supply orders by GM Vehicle Factory Jabalpur even before the capability of the firm was established, absence of co-ordination between the GM Vehicle Factory Jabalpur and the CQA and carelessness by the Area Inspector resulted in Vehicle Factory Jabalpur holding 370 defective sets valued at Rs 26.57 lakh.

86. Unauthorised expenditure by General Manager, Field Gun Factory Kanpur

GM, Field Gun Factory Kanpur installed two new induction furnaces at Rs 2.53 crore in disregard of the limits on his financial powers on the basis of misrepresentation of the facts

The GM Field Gun Factory Kanpur placed supply order on M/s GEC Alstom for supply of 11 induction furnace items at a cost of Rs 1.52 crore in June 1993. The items of equipment were received during October 1993. The GM Field Gun Factory Kanpur spent another Rs 1.01 crore on installation, commissioning and civil works during October 1993 to July 1995. Scrutiny of the transaction disclosed the following:

GM Field Gun Factory purchased items not within his delegated powers.

- (i) The GM does not enjoy any financial power for capital investment. Yet he placed supply orders for equipment valued at Rs 1.52 crore, which was more than 15 times the upper limit of his financial powers in respect of other items.

GM Field Gun Factory purchased items for assembling induction furnaces misrepresenting them as replacement items.

(ii) The GM misrepresented the facts in as much as he placed orders for the 11 items of equipment as replacement of different electrical accessories and furnaces due to considerable wear and tear of the major components of these electrical accessories. Scrutiny by audit disclosed that 11 items of equipment were, in fact, new procurements for assembling two new induction furnaces each of 1000 tonne capacity rather than replacement of worn out parts of equipment.

Augmentation of capacity for civil trade orders was against Ministry's instructions.

(iii) The main reason indicated in the Tender Purchase Committee meeting of the factory under the chairmanship of the GM, in which they took the decision for procurement of 11 items of induction furnaces was that they would be in a position to meet the pending civil trade order of more than Rs 20 crore. The decision of the GM was against the Ministry's orders for civil trade by ordnance factories which prescribed that only the additional spare capacity of the ordnance factories should be used for the civil trade.

Treating the items as proprietary of GEC foreclosed the scope of competition and lower prices.

(iv) The GM purchased equipment from M/s GEC Alstom as their proprietary item on the plea that the existing 20 ton arc furnace with the factory was of GEC make. His logic was flawed since items of equipment purchased by him in 1993 were actually components of new induction furnaces. Thus, the flawed argument of the GM foreclosed the option of generating competition and therefore lower prices.

There was slump in production during 1996-97 despite increased capacity.

(v) Subsequent scrutiny of production after July 1995, when two new induction furnaces were commissioned, disclosed that while during 1995-96 the Field Gun Factory produced 8078 tonne of ingots in comparison to 6281 tonne and 6498 tonne during the preceding two years when they were equipped with only 20 ton arc furnace; there was sudden slump in the production of ingots during 1996-97 to 5404 tonne, despite additional capacity of 2000 tonne with the commissioning of the two induction furnaces.

OFB stated, in September 1997, that the Field Gun Factory increased their capacity from existing 6500 tonne, being the derated capacity of 20 tonne arc furnace by another 2000 tonne through these two induction furnaces. The OFB did not, however, indicate the reason for drop in the production. The OFB did not also indicate whether any action has been taken against the persons responsible for exceeding the delegated powers and misrepresentation of the facts, despite the Board

of Inquiry, constituted after the findings of Audit were reported, clearly established the acts of omission and commission of the GM.

The matter was referred to the Ministry in April 1997; their reply was awaited as of December 1997.

87. Deficiency of grenade components

Ministry has taken a long time of more than three years in investigation of deficiency of 2.70 lakh empty hand grenades valued at Rs 2.44 crore despite being pointed out in the earlier Audit Report. Further deficiency of components of the grenade valued at Rs 49.70 lakh has also come to notice

Deficiency of hand grenades costing Rs 2.44 crore pointed out by Audit in 1995 was yet to be investigated.

Deficiency of 2.70 lakh empty hand grenades valuing Rs 2.44 crore at Ammunition Factory Kirkee was brought out in the Report of the C&AG, Union Government - Defence Services (Army and Ordnance Factories) for the year ended 31 March 1994 (No. 8 of 1995). In their Action Taken Note, Ministry had stated, in January 1996, that the deficiency had arisen due to drawal of the material against temporary receipts and added that a Board of Enquiry was constituted to investigate the matter. The Board of Enquiry was yet to submit its report as of December 1997.

Stock verification in 1994 and 1996 in AFK revealed further deficiency of grenade components valuing Rs 49.70 lakh.

Further examination of stock verification reports in Ammunition Factory Kirkee disclosed additional deficiencies in the stock of four components of the grenades namely Base plug, Striker, Retaining pin & Ring and Centre piece valued at Rs 49.70 lakh during the stock verifications conducted in March 1994 and March 1996. GM Ammunition Factory Kirkee and OFB repeated the earlier stand of the Ministry that the deficiency was not actual and that it had arisen due to drawal of components on temporary receipts which have not been entered into the Bin Cards in view of non finalisation of the report of Board of Enquiry.

The system followed in the Ammunition Factory Kirkee therefore, does not provide assurance about security of the sensitive

materials. In the first place, there can be no justification for drawal of components on temporary receipts. Secondly, even after being pointed out in the Stock Verification Report and Audit Report, they have taken a long time in investigation, ostensibly necessitating further drawals on temporary receipts until the investigation is completed. If this limitation on their ability to draw the components from the stock on proper indents and simultaneous entry in the Bin Cards is accepted, the OFB is never likely to set the matter right, since there will always be a time gap between the occurrences of deficiency and the investigation of deficiencies.

The manner of drawal of such sensitive components on temporary receipts and huge deficiencies detected in stock verification calls for an independent investigation of the entire matter.

The Ministry stated, in December 1997, that factual position would be revealed on completion of investigation.

88. Loss in export order

OFB exported six lakh blanks of an ammunition at net realisation of Rs 28.57 lakh against actual cost of production of Rs 84.06 lakh, resulting in loss of Rs 55.49 lakh

OFB concluded a contract in June 1994 with a foreign firm for supply of six lakh rounds blank cartridges of an ammunition at a cost of US \$0.105 million, equivalent to Rs 33.13 lakh under the dispensation to the Ordnance Factories for export.

Ammunition Factory Kirkee manufactured the blanks and packing boxes. Ordnance Factory Varangaon belted and packed them and supplied 6.05 lakh blanks to the foreign firm in August 1994.

Examination of the documents in Ammunition Factory Kirkee disclosed that the cost of manufacture of 6.05 lakh blanks and packing boxes at Ammunition Factory Kirkee worked out to Rs 71.99 lakh and that of belting and packing at Ordnance Factory Varangaon to

OFB suffered a loss of Rs 55.49 lakh in executing export order.

Rs 12.07 lakh. Thus, against the actual cost of Rs 84.06 lakh, net realisation from export was only Rs 28.57 lakh resulting in a loss of Rs 55.49 lakh in the civil trade operation by the OFB.

OFB stated, in November 1997, that export order was undertaken based on Ministry's guidelines of October 1992 regarding execution of a job at marginal cost, whereby the direct input costs on material and energy are fully recovered along with some surplus. They further added that in view of Ministry's above guidelines regarding price fixation, OFB was able to recover a surplus of Rs 0.78 per unit over the full material and energy costs and hence there was no loss in execution of the export order.

OFB's contention of having recovered a surplus of Rs 0.78 per unit over full material and energy cost was not correct.

OFB's reply is not correct, as the cost of material for blank cartridge and packing boxes alone at Ammunition Factory Kirkee was Rs 44.15 lakh and the cost of material and energy at OF Varangaon was Rs 10.20 lakh.

Thus, OFB realised only Rs 28.57 lakh against the direct input cost of material and energy of Rs 54.35 lakh, entailing a loss of Rs 25.78 lakh, which was in violation of Ministry's guidelines.

The matter was referred to the Ministry in June 1997; their reply was awaited as of December 1997.

89. Loss in civil trade order

Failure of Machine Tool Prototype Factory Ambernath to follow the guidelines of OFB while quoting rates for civil trade led to a loss of Rs 54 lakh based on the estimated cost.

OFB authorised the General Managers of Ordnance Factories to go up to minimum quotation for civil trade at the estimated cost of material plus labour plus 30 *per cent* of variable overheads.

Test check of six supply orders placed in 1995 by Air India and Chittaranjan Loco Works Burdwan on Machine Tool Prototype Factory

Ambarnath disclosed that the factory suffered a loss of Rs 54 lakh due to violation of above guidelines by them as shown below :

Name of the item	Date of supply order	Quantity	Estimated labour	Estimated material	30 per cent of variable overhead	Price as per OFB guidelines	Realisation based on rates quoted	Loss per unit	Total loss
(Rs in lakh)									
Air India									
Container Dollies	31 March 1995	10	0.26	0.35	0.18	0.79	0.37	0.42	4.2
Baggage Trolleys	23 March 1995	10	0.17	1.11	0.12	1.40	0.24	1.16	11.6
Pallet Dollies	01 June 1995	13	0.13	1.80	0.09	2.02	0.44	1.58	20.5
Chittaranjan Locomotive Works									
Gear Wheel 64T	27 March 1995	30	0.06	0.42	0.05	0.53	0.32	0.21	6.3
Gear Wheel 65T	21 February 1995	40	0.06	0.42	0.05	0.53	0.39	0.14	5.6
Pinion 16T	21 February 1995	40	0.03	0.04	0.03	0.11	0.05	0.06	2.4
Pinion 18T	8 February 1995	60	0.03	0.04	0.03	0.09	0.03	0.06	3.6
Total									54.20

Based on the actual cost of material and labour for four each of container dollies and baggage trolley and one pallet dolly supplied up to September 1997, the loss is likely to be much more, since the actual costs were higher than the estimated cost of material and labour.

The matter was referred to the Ministry in June 1997; their reply was awaited as of November 1997.

90. Surplus stores lying unutilised

GM Ordnance Factory Trichy back-loaded 110 tonne of material meant for 7.62 mm rifle sent by Rifle Factory Ishapore in disregard of OFB's orders. Apart from waste of Rs 2 lakh on freight, further use of material by Rifle Factory Ishapore is doubtful in view of discontinuance of production of 7.62 mm rifle by them.

350 tonne of stores became surplus in Rifle Factory Ishapore on discontinuance of manufacture of 7.62 mm rifle in May 1994. With the approval of OFB, the GM despatched, after inspection by Quality Controllers, 235 tonne of surplus stores to Ordnance Factory Trichy between March and July 1995, where production of this weapon was continuing.

In disregard of the directive of OFB, GM Ordnance Factory Trichy rejected and back-loaded 110 tonne of materials valuing Rs 51.11 lakh in August 1995 on the ground that these were not required by them. Since there was no prospect of its utilisation at Rifle Factory Ishapore, the expenditure of Rs 2 lakh on its transportation to Ordnance Factory Trichy and subsequent backloading besides the labour cost in loading/ unloading was infructuous. If Ordnance Factory Trichy did not require the materials, action could have been taken for their disposal instead of backloading to Rifle Factory Ishapore.

GM Rifle Factory Ishapore stated, in March 1997, that 20 tonne of back loaded materials had since been utilised and disposal of 205.83 tonne of surplus materials valuing Rs 131.41 lakh which included 90 tonne of back-loaded material was in hand.

Surplus materials were found defective by OF Trichy and back-loaded to Rifle Factory Ishapore.

Surplus stores valuing Rs 131.41 lakh lying unused.

OFB stated, in November 1997, that Ordnance Factory Trichy's rejection of the material was not on the basis of actual test and trial. OFB, however, did not state if any action had been taken for unauthorised backloading of the stores by GM Ordnance Factory Trichy and recovery of pecuniary loss to Government due to such action.

Thus, backloading of the stores by GM, Ordnance Factory Trichy not only resulted in avoidable expenditure of Rs 2 lakh on freight etc. but also closed the avenue for its possible alternative utilisation in view of the production of 7.62 mm rifle at Rifle Factory Ishapore having been discontinued.

The matter was referred to the Ministry in June 1997; their reply was awaited as of December 1997.

91. Follow up on Audit Reports

Despite repeated instructions/recommendations of the PAC, the Ministry did not submit remedial ATN on 104 Audit Paragraphs

With a view to ensuring enforcement of accountability of the executive in respect of all the issues dealt with in various Audit Reports, the PAC decided in 1982 that ministries/departments should furnish remedial/corrective ATN on all paragraphs contained therein.

The Committee took a serious view of the inordinate delays and persistent failures on the part of large number of ministries/departments in furnishing the ATNs in the prescribed time frame. In their Ninth Report (Eleventh Lok Sabha) presented to the Parliament on 22 April 1997, the PAC desired that submission of pending ATNs pertaining to Audit Reports for the years ended upto March 1995 be completed within a period of three months and recommended that ATNs on all paragraphs pertaining to the Audit Reports for the year ended 31 March 1996 onwards be submitted to them duly vetted by Audit within 4 months from the laying of the Reports in Parliament.

PAC recommended submission of all pending ATNs upto 1995 within three months.

From 1995-96 ATNs are to be submitted within four months of placing the Report on the Table.

Ministry failed to submit ATNs to PAC on 71 paragraphs of and up to the Reports for the year ended March 1995

Ministry did not submit ATNs to PAC on 33 of 35 paragraphs in the Report for the year ended March 1996

Review of outstanding ATNs relating to Ordnance Factories as of December 1997 revealed as under :

- ⑥ The Ministry failed to submit ATNs in respect of 71 Paragraphs included in the Audit Reports up to and for the year ended March 1995 as per Annexure III. Of these, 27 paragraphs pertained to the Audit Reports up to and for the year ended March 1993.
- ⑥ Though the Audit Report for the year ended 31 March 1996 was laid on the table of the Parliament on 20 March 1997 and the time limit of four months for furnishing the ATNs has elapsed in July 1997, the Ministry did not submit ATNs on 33 out of 35 Paragraphs included in the Audit Report, details of which are in Annexure IV.

The position of pending ATNs was reported to the Ministry in June 1997, their reply was awaited as of December 1997.

92. Response of the ministries/departments to Draft Audit Paragraphs

On the recommendation of the PAC, Ministry of Finance issued directions to all ministries in June 1960 to send their response to the Draft Audit Paragraphs proposed for inclusion in the Report of the C&AG of India within six weeks. The Draft Paragraphs are always forwarded by the respective Audit offices to the secretaries of the concerned ministries/departments through Demi Official letters/Unofficial Notes drawing their attention to the audit findings and requesting them to send their response within six weeks. The fact of non-receipt of replies from the ministries are invariably indicated at the end of each such Paragraph included in the Audit Reports.

Draft Paragraphs proposed for inclusion in the Ordnance Factory section of the Report of the C&AG of India for the year ended March 1997 : Union Government (Defence Services) : No. 7 of 1998 were forwarded to the *Secretary Department of Defence Production and Supplies, Ministry of Defence* between April 1997 and December 1997 through Unofficial Notes.

The *Secretary Department of Defence Production and Supplies* did not send replies to 10 draft Paragraphs in compliance to above instructions of the Ministry of Finance issued at the instance of the PAC. 22 Paragraphs from among those whose drafts were sent to the Secretary have finally been included in this Report. Out of these, in 10 Paragraphs, the response of the Secretary of the Ministry could not be included due to non-receipt of replies.

Ministry/ Department	Total No. of Paragraphs on the Ministry/Department included in the Report	No. of Paragraphs in which reply not received from respective secretaries	Paragraph number
Ministry of Defence Department of Defence Production And supplies	22	10	70, 73, 78, 80, 81 86, 88, 89, 90 and 91

Sudha Rajagopalan

(SUDHA RAJAGOPALAN)
Director General of Audit, Defence Services

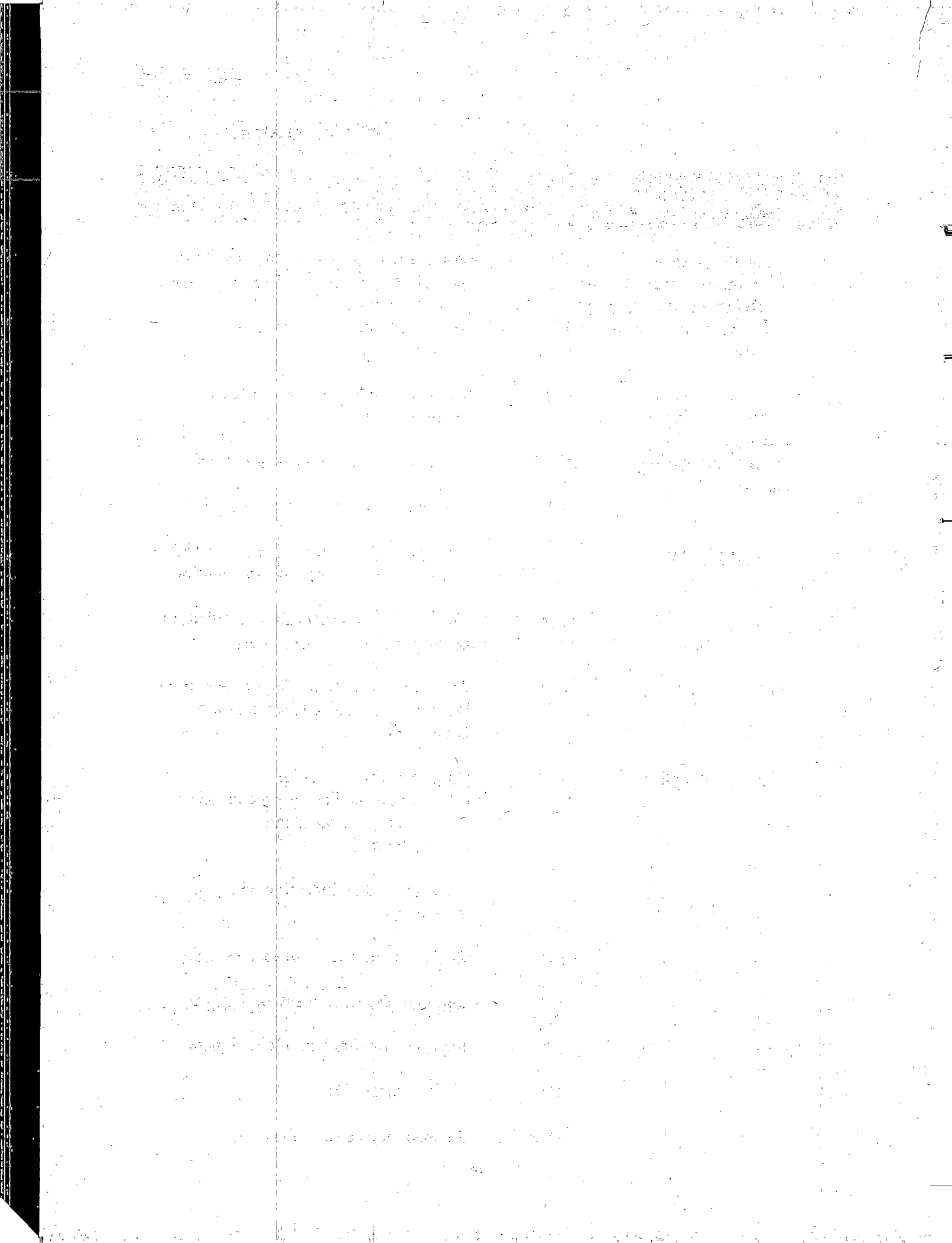
New Delhi
Dated

Countersigned

V. K. Shunglu

(V.K.SHUNGLU)
Comptroller and Auditor General of India

New Delhi
Dated



Position of outstanding ATNs

Sl.No.	Report No. and year	Para No.	Subject
1.	Audit Report Union Government (Defence Services) for the year 1985-86	34*	Loss due to delay in pointing out short/ defective supply
2.		69*	Failure to recover charges for use of Defence siding
3.	No.2 of 1988	9*	Purchase of Combat dress from trade
4.		41*	Loss in procurement of wax special
5.	No.2 of 1989	11	Purchase and licence production of 155 mm towed gun system and ammunition
6.		18*	Undue delay in rectification of defects in guns
7.		81*	Review on utilisation of equipment in Defence Research and Development Organisation
8.	No.12 of 1990	9*	Contracts with Bofors for (a) Purchase and licence production of 155mm gun system and (b) counter trade
9.		10*	Induction and de-induction of a gun system
10.		15*	Repair facilities for a weapon system
11.		17*	Import of fire control system for tank
12.		19*	Import of ammunition of old vintage
13.		46*	Ration article - Dal
14.		113*	Payment of electricity duty/tax

15.	No.8 of 1991	1.7*	Non-verification of credits for stores
16.		5*	Delay in modernisation of a tank
17.		10*	Procurement of stores in excess of requirement
18.		13*	Central Ordnance Depot, Agra
19.		15*	Extra expenditure due to wrong termination of a meat contract
20.		17*	Infructuous expenditure on procurement of dal chana
21.		90*	Faulty construction of overhead tanks
22.	No.8 of 1992	7*	Extra expenditure on the procurement of sheet ground light weight OG
23.		12	Procurement of computer
24.		18*	Supply of sub-standard timber softwood
25.		20*	Procurement of sub-standard goods in an Ordnance Depot
26.		28*	Avoidable payment of maintenance charges for Defence tracks not in use
27.		58	Procurement of stores in excess of requirement
28.		67*	Delay in construction of BPIs
29.		72*	Delay in construction of storage accommodation
30.		81*	Redundant payment of service charges to a Cantonment Board
31.		91*	Delay in investigation into untraceable/missing items of furniture
32.	No.13 of 1992	Part I*	Recruitment of ORs
33.		Part II	Training of Other Ranks

34.	No.14 of 1992	Entire Report	Army Base Workshops
35.	No.8 of 1993	7	Extra expenditure due to delay in issue of allotment letters
36.		13*	Infructuous expenditure on development of radar
37.		15*	Non-utilisation of assets
38.		16	Procurement of rubber bushes
39.		19*	Court of Inquiry proceedings
40.		23*	Procurement of sub-standard goods
41.		25*	Holding of surplus target sleeves
42.		29*	Import of mountaineering equipment and sports items
43.		31*	Avoidable payment of detention charges
44.		33*	Additional expenditure due to rental of an exchange
45.		68*	Civil works for a Naval Air station
46.		69	Non-utilisation of assets created for a computer centre
47.		71* Case II	Irregular provision of compound walls
48.		74 Case II	Provision of training sheds
49.		75*	Extra expenditure due to delay in according financial concurrence
50.		80*	Construction of an Officers' Institute/ Non-Gazetted Officers' club
51.	No.8 of 1994	10*	Establishment of a National War Museum

52.		17*	Import of defective equipment
53.		18*	Non-commissioning of a plant
54.		23*	Avoidable payment of customs duty
55.		64*	Infructuous expenditure due to inadequacies in design and execution of works
56.		65*	Non-utilisation of assets due to improper planning and their sub-standard execution
57.		66*	Unfruitful expenditure on swimming pool
58.		67*	Construction of married accommodation and its re-appropriation
59.		68*	Extra expenditure due to delay in finalisation of a water supply scheme
60.		70*	Non-utilisation of stores purchased without sanction
61.		71*	Avoidable payments made to CPWD
62.		72*	Procurement of an item at higher rate
63.		73*	Extra expenditure due to failure in timely submission of revised estimates
64.		76*	Establishment of an Army Public School
65.		78*	Short recovery of electricity charges
66.		80*	Non-utilisation of assets due to defective construction
67.		82*	Loss of revenue due to non-completion of works of external electrification and water supply
68.		85*	Provision of defective gravent ventilation system
69.	No.8 of 1995	9*	Unadjusted amounts of security deposits lying with the courts

70.	12*	Working of the Department of Defence Supplies
71.	13*	Delay in repair of defective imported ammunition
72.	16*	Unauthorised payment of Daily Allowance to Service Officers
73.	17*	Import of radar
74.	18*	Loss on account of non-permissible wastage of wheat in grinding
75.	22* Case II	Recovery at the instance of Audit
76.	23*	Issue, repair and utilisation of 'B' vehicles
77.	24*	Import of defective barrels
78.	29	Manufacture of defective parachutes
79.	30	Non-utilisation of parachutes
80.	34*	Avoidable extra expenditure on procurement of roof trough
81.	36*	Blocking of funds
82.	75*	Non-refund of energy charges paid in excess
83.	77*	Extra expenditure due to delay in execution of contract
84.	80*	Execution and payment for defective work
85.	81*	Under-utilisation of assets
86.	83* Case II	Avoidable payment of load violation charges/penalty surcharges

87.		84*	Avoidable extra expenditure due to defective construction
88.		85*	Avoidable hiring of accommodation due to delay in completion of married accommodation
89.		86*	Non-commissioning of automatic fire fighting system
90.		87*	Collapse of an overhead water tank
91.		88*	Review on equipment, manpower and material management in six Research and Development Establishments
92.	No.8 of 1996	6	Expenditure incurred without Government sanction
93.		7	Non-settlement of Audit objections
94.		8	Non-verification of credit of imported stores
95.		11*	Delay in procurement of simulators
96.		12	Inordinate delay in repair of imported ammunition
97.		14*	Additional expenditure due to non-acceptance of offer within validity
98.		18	Extra expenditure due to delay in placing orders
99.		19*	Injudicious import of tensile tester
100.		20	Follow up on Audit Reports
101.		21*	Recruitment and Training of Army Officers
102.		22*	Hiring of vehicles
103.		24*	Wasteful expenditure on injudicious procurement of tyres

104.	25	Avoidable procurement of mounting tripods
105.	26	Loss on account of procedural lapse
106.	27*	Non-utilisation of diesel hydraulic locomotive shunter
107.	28*	Loss from life expired oil
108.	29*	Non-utilisation of an imported equipment
109.	63*	Nugatory expenditure due to lack of planning
110.	64*	Avoidable payment of electricity charges
111.	67*	Savings at the instance of audit
112.	68	Delay in construction of married accommodation for sailors
113.	69*	Irregular expenditure on a public school
114.	70*	Supply of sub-standard high strength cement
115.	71*	Construction of sub-standard roads
116.	73*	Overpayments to a firm
117.	74*	Avoidable expenditure due to excess provision of single accommodation
118.	75*	Unauthorised construction of squash courts
119.	76*	Infructuous expenditure on design and development of half track multirole vehicle
120.	77*	Blockage of funds and delay in implementation of a project

* **Final ATN awaited**

Position of outstanding ATNs

Sl.No.	C&AG of India's Report No. and year	Para No.	Subject
1.	No.7 of 1997	7	Losses awaiting regularisation
2.		8	Outstanding claims/dues
3.		9*	Non-utilisation of Armoured recovery vehicles for want of spares
4.		10	Non-recovery of general damages from defaulting firms
5.		11*	Unnecessary procurement of engines
6.		12*	Excess provisioning of steel cases
7.		13	Delay in moving newly raised platoons
8.		14	Loss due to improper despatch of imported equipment
9.		15	Over provisioning of seats and cushions for vehicles
10.		16	Follow up on Audit Reports
11.		17*	Procurement and utilisation of medical stores and equipment
12.		19	Defective mines
13.		20*	Irregular payment to Indian Oil Corporation to avoid lapse of fund
14.		21	Loss due to formation of copper azide in fuzes
15.		22*	Loss due to deficient fire prevention measures

16.	23*	Avoidable expenditure on Demurrage charges
17.	24	Undue favour to a firm
18.	25	Injudicious procurement of forklifts
19.	26	Procurement of defective steering assembly
20.	27	Non-realisation of claims from the Railways
21.	28	Under-utilisation of manpower in an Army Base Workshop
22.	29	Delay in procurement of bin steel portable
23.	30	Infructuous expenditure on re-rubberisation of road wheels
24.	31*	Non-utilisation of an imported machine
25.	32	Irregular payment of charges
26.	33	Infructuous expenditure due to erroneous despatch of vehicles
27.	69	Defective construction of blast pens and taxi track
28.	70	Unfruitful expenditure due to delay in completion of work
29.	71*	Loss due to irregular accounting
30.	72	Escalation in cost due to delay in according Financial Concurrence
31.	73	Extra expenditure due to abnormal delay
32.	74	Avoidable construction of perimeter wall
33.	75	Unauthorised expenditure on procurement of cast iron pipes of higher specification

34.	76	Non-recovery of excess issue of departmental stores from contractors
35.	77	Non-utilisation of swimming pool
36.	78	Non-recovery of extra expenditure from a defaulting contractor
37.	79*	Non-utilisation of assets due to faulty planning
38.	80*	Avoidable payment of load violation charges
39.	81	Execution of sub-standard work
40.	82*	Non-commissioning of a Heating System
41.	83*	Avoidable expenditure on acquisition of land

* Final ATN awaited

ANNEXURE - III

Showing Details of Paragraphs on which ATN/final ATNs were awaited.

Audit Report No. and Year	Sl. No	Paragraph No.	Subject	Remarks
Report 12 of 1990	1	51	Material Management in Ordnance & Ordnance Equipment Factories	ATN not at all received
-do-	2	58	Productionisation of aviation gun and its ammunition.	-do-
-do-	3	50	General Performance of Ordnance & Clothing Factory	Final ATN awaited
-do-	4	60	Expansion of capacity without prospective need.	-do-
-do-	5	66	Production of field gun ammunition	-do-
-do-	6	89	Supply of bogie type furnace	-do-
Report 8 of 1991	1	24	Indigenous production of an ammunition	Final ATN awaited
-do-	2	25	Working of the Gray Iron Foundry, Jabalpur	-do-
-do-	3	32	Production action without formal indent	-do-
-do-	4	36	Rectification of cartridge cases	-do-
-do-	5	49	Unnecessary procurement of tracks	-do-
-do-	6	51	Purchase at inflated price	-do-
-do-	7	53	Purchase without buyer's option clause and consequent loss of rate advantage.	-do-
-do-	8	59	Violation of operating instructions.	-do-
-do-	9	65	Premature failure of acid storage tanks.	-do-
-do-	10	68	Loss due to condemnation.	-do-
-do-	11	69	Claim foregone due to lack of evidence.	-do-
-do-	12	70	Overpayment of customs duty	-do-
-do-	13	72	Loss of revenue.	-do-
Report 8 of 1993	1	52	Procurement of containers for a phased out ammunition.	Final ATN awaited
-do-	2	54	Non-utilisation of stores due to non-procurement of a correct instrument.	-do-
Report 8 of 1994	1	30	Short-closure of an order for empty bodies of a bomb	Final ATN awaited
-do-	2	31	Short-closure of an order.	-do-

-do-	3	33	Unplanned reduction in production programme- blocking of funds.	-do-
-do-	4	38	Infructuous expenditure due to placement of orders without approval of an item.	-do-
-do-	5	49	Procurement of a robotic welding station.	-do-
-do-	6	50	Infructuous expenditure on procurement of a defective testing machine.	-do-
Report 8 of 1995	1	40	Indian Small Arms System(INSAS) - review	Final ATN awaited
	2	46	Loss due to transfer of production and rejection.	-do-
	3	47	Blocking of capital due to short-closure of orders.	-do-
	4	50	Abnormal rejection during proof.	-do-
	5	55	Suppression of loss in production.	-do-
	6	56	Imported stores lying rejected.	-do-
	7	57	Delay in procurement leading to loss of productivity.	-do-
	8	59	Rejection of stores procured from sister factory due to long storage.	-do-
	9	62	Unproductive investment on commissioning of a machine.	-do-
	10	66	Loss of stores due to fire.	-do-
	11	67	Unintended benefit given to a foreign firm.	-do-
	12	68	Huge deficiency of empty grenades in stock.	-do-
	13	69	Shortage of jerricans.	-do-
	14	43	Loss due to failure in production of a rifle.	-do-
	15	61	Defective equipment lying without any use.	ATN not at all received
Report 8 of 1996	1	30	Performance of Ordnance Factory Organisation.	ATN not received even for the first time
	2	31	Production of artillery training ammunition.	-do-
	3	32	Computerisation in Ordnance Factory Organisation.	-do-
	4	33	Surplus inventory due to cancellation of orders.	Selected by PAC for discussion

	5	34	Questionable expenditure.	ATN not received even for the first time
	1	35	Financial repercussion due to change in user's requirement.	-do-
	2	36	Loss due to indigenous steel sheet.	-do-
	3	37	Loss due to defective forging.	-do-
	4	38	Bulk production of detonators before issue of development extract.	-do-
	5	39	Production of defective ammunition.	Selected by PAC for discussion
	6	40	Loss due to rejection of barrel forgings.	ATN not received even for the first time
	7	41	Rejection of bombs.	-do-
	8	42	Production in anticipation of formal order.	-do-
	9	43	Defective production of grenades.	-do-
	10	44	Avoidable rejection.	-do-
	11	45	Injudicious import of copper crusher cylinder	-do-
	12	47	Idling of an ammunition assembly.	-do-
	13	48	Extra expenditure on rectification of defects.	-do-
	14	49	Sub-optimal utilisation of plant.	-do-
	15	50	Unproductive Investment.	-do-
	16	51	Non-commissioning of imported testing device.	-do-
	17	53	Non-utilisation of an imported machine.	-do-
	18	54	Rejection of empty shots.	-do-
	19	55	Loss of stores in stock.	-do-
	20	56	Excess consumption of an ammunition in proof.	-do-
	21	57	Shortage of pig iron.	-do-
	22	58	Avoidable payment of energy tax.	-do-
	23	59	Avoidable construction of a swimming pool.	-do-
	24	62	Follow up on Audit Report.	-do-

ANNEXURE - IV

Showing Details of Audit Paragraphs issued under Report No.7 of 1997 against which Action Taken Note is yet to be received from the Ministry of Defence

Audit Report No. and Year	Sl. No	Paragraph No.	Subject	Remarks
Report 7 of 1997	1	34	Performance of Ordnance Factory Organisation.	ATN not received even for the first time.
-do-	2	35	Review on Infantry Combat Vehicles.	-do-
	3	36	Surplus inventory.	-do-
	4	37	Infructuous production of empties.	-do-
	5	38	Unproductive expenditure on production of fuze.	-do-
	6	39	Under utilisation of forging capacity.	-do-
	7	40	Idling of inventory.	-do-
	8	41	Premature clearance for bulk production of 5.56 mm rifle.	-do-
	9	42	Unfruitful expenditure due to change in propellant of an ammunition.	-do-
	10	43	Rejection of ammunition due to use of deficient explosive.	-do-
	11	44	Loss due to defective manufacture.	-do-
	12	45	Abnormal rejection of castings.	-do-
	13	46	Rejection of brass cartridge cases.	-do-
	14	47	Unwarranted procurement of tachometers.	-do-
	15	48	Surplus inventory due to non-finalisation of specifications.	-do-
	16	49	Avoidable expenditure due to delay in placement of order.	-do-
	17	50	Injudicious placement of demand for steam chests.	-do-
	18	52	Extra expenditure due to piece-meal procurement of nickel.	-do-
	19	54	Injudicious procurement of annealing and pickling plant.	-do-
	20	55	Machine testing without requisite material.	-do-
	21	56	Non-utilisation of diesel shunter.	-do-
	22	57	Additional expenditure due to violation of guidelines.	-do-

	23	58	Non-observance of receipt procedure.	-do-
	24	59	Shortage of brass blanks.	-do-
	25	60	Avoidable expenditure on pigging of aluminium alloy.	-do-
	26	61	Loss in export order.	-do-
	27	62	Reduction of bin card balance of stock without consumption.	-do-
	28	63	Financial repercussion.	-do-
	29	64	Loss in Civil Trade.	-do-
	30	65	Non-recovery of arbitrator's award.	-do-
	31	66	Questionable regularisation of loss of stores.	-do-
	32	67	Rejected ammunition classified as work-in-progress.	-do-
	33	68	Follow up on Audit Report.	-do-

Annexure V

(Referred to in paragraph 40)

Sl.No.	Station	Period	Extra expenditure Rs
1.	Wellington	10/92 to 4/97	4,43,520.00
2.	Chennai	2/88 to 4/97	4,88,130.00
3.	Hebbal, Bangalore	1/85 to 4/97	66,82,948.80
4.	Avadi	1/84 to 4/97	21,27,086.00
5.	Jalahalli	12/87 to 7/97	19,08,361.20
6.	Udhampur	6/89 to 4/97	1,46,77,365.00
7.	Satwari	11/89 to 4/97	15,69,561.60
8.	Pathankot	5/90 to 4/97	33,82,596.60
9.	Akhnoor	4/93 to 4/97	8,97,710.40
10.	Sambha	12/92 to 4/97	25,77,660.00
11.	Delhi Cantt.	9/89 to 4/97	43,20,068.40
12.	Pune	12/94 to 4/97	1,01,152.80
13.	Meerut	4/94 to 7/97	1,30,29,411.90
14.	Agra	2/94 to 7/97	79,49,859.20
15.	Gwalior	8/87 to 7/97	89,43,590.40
16.	Dehradun	9/86 to 6/96	1,60,08,818.60
	Clementown	9/86 to 3/95	47,44,779.00
17.	Bagdogra	3/87 to 3/97	20,40,499.80
18.	Chabhua	10/91 to 3/97	20,75,973.90
19.	Silcher	4/89 to 3/97	13,63,181.40

20.	Johrat	5/92 to 3/97	1,81,992.00
21.	Patiala	9/89 to 4/97	14,85,993.60
22.	Amritsar	4/88 to 4/97	95,91,739.20
23.	Chandigarh	4/94 to 4/97	69,63,291.00
24.	Adampur	10/86 to 4/97	24,44,619.10
25.	Jabalpur	1/94 to 4/97	74,05,470.90
26.	Babina	1/93 to 4/97	26,88,120.00

12,60,93,500.80

Say Rs 12.61 crore

Annexure VI

(Referred to in paragraph 41)

Sl.No.	Name of the Station Headquarters	Amount of Pay & Allowances of safaiwalas and supervisory staff for the year 1996-97 (Rs. in lakhs)
1.	Madras	35.68
2.	Ahmednagar	12.15
3.	Ahmedabad	1.22
4.	Aurangabad	6.51
5.	Secunderabad	27.41
6.	Deolali	29.27
7.	Khadki	22.52
8.	Srinagar	49.04
9.	Jammu	43.94
10.	Amritsar	52.64
11.	Ferozepur	102.02
		Acquittance roll held with Station HQ
12.	Jalandhar	110.00
13.	Kanpur	32.29
14.	Lucknow	104.62
15.	Barrackpore	29.96
16.	Shillong	30.03
17.	Danapur	13.82

18.	Mhow	53.95
19.	Meerut Cantt	42.98
20.	Agra	71.62
21.	Morar Gwalior	13.06

	Total	884.73
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	Less amount of station HQ Ferozepur as Acquittance Roll held with them	(-)102.02
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		<u>782.71</u>
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