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# Report of the Comptroller and Auditor General of India

for the year ended March 1998



## Union Government (Defence Services)

Army and Ordnance Factories

No. 7 of 1999

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# CONTENTS


| | Paragraph | Page |
|---|---|---|
| Prefatory Remarks | | *iv* |
| Overview | | *v* |
| **CHAPTER I – ACCOUNTS OF THE DEFENCE SERVICES** | | |
| Defence expenditure | 1 | 1 |
| Budget and Actuals | 2 | 2 |
| Control over expenditure | 3 | 3 |
| Unspent provision in grant(s) exceeding Rs100 crore | 4 | 3 |
| Injudicious re-appropriation | 5 | 4 |
| Persistent unspent provisions | 6 | 5 |
| Persistent excess | 7 | 7 |
| Outstanding claims/dues | 8 | 7 |
| Non-verification of credits | 9 | 7 |
| Outstanding dues on account of licence fee | 10 | 8 |
| Cash losses | 11 | 8 |
| **CHAPTER II – MINISTRY OF DEFENCE** | | |
| Presumptive fraud in import of ammunition | 12 | 9 |
| Defective training ammunition supplied by Bofors | 13 | 10 |
| Delay in renewal of lease agreement | 14 | 11 |
| Premature deterioration of imported ammunition | 15 | 13 |
| Mishandling of Missiles | 16 | 13 |
| Procurement of defective sleeping bags | 17 | 14 |
| Loss of revenue | 18 | 17 |
| Recovery at the instance of Audit | 19 | 18 |
| Failure to computerise Ammunition Depots | 20 | 19 |
| Response of the Ministries/Departments to Draft Audit Paragraphs | 21 | 20 |
| Follow up on Audit Reports | 22 | 21 |

| | | |
|---|---|---|
| **CHAPTER III – ARMY** | | |
| **Review** | | |
| Development of Multi Barrel Rocket Launcher System (Pinaka) | 23 | 22 |
| **Miscellaneous** | | |
| Negligence in framing terms of supply orders | 24 | 30 |
| Unauthorised transfer of defence land | 25 | 32 |
| Excess manning by attachment of service personnel | 26 | 33 |
| Procurement of Radars without vital part | 27 | 35 |
| Non-recovery of advance | 28 | 36 |
| Injudicious acquisition of land under urgency clause | 29 | 37 |
| Failure to meet operational requirement | 30 | 38 |
| Under recovery of training charges | 31 | 39 |
| Non-utilisation of friction drop hammers | 32 | 40 |
| Failure to observe proper issue procedure for batteries | 33 | 41 |
| Procurement of substandard electronic teleprinters | 34 | 42 |
| Improper sanction and execution of work | 35 | 43 |
| Non-recovery/overpayment of electricity charges | 36 | 45 |
| Avoidable extra expenditure in the purchase of leather cloth | 37 | 46 |
| Failure to administer a risk and expense contract | 38 | 47 |
| **CHAPTER IV – WORKS AND MILITARY ENGINEER SERVICES** | | |
| Delay in Missile storage accommodation | 39 | 48 |
| Delay in setting up of repair facilities for helicopters | 40 | 49 |
| Avoidable payment of water charges | 41 | 51 |
| Non-utilisation of a bulk petroleum installation | 42 | 52 |
| Avoidable procurement of stores | 43 | 53 |
| Extra expenditure due to substandard work | 44 | 53 |
| Avoidable expenditure due to excess construction | 45 | 54 |
| Negligence in deciding the area of building | 46 | 55 |
| Additional expenditure due to non adherence of instructions | 47 | 56 |
| **CHAPTER V – BORDER ROADS ORGANISATION** | | |
| Foreclosure of a bridge work due to defective design | 48 | 57 |

## CHAPTER VI – ORDNANCE FACTORY ORGANISATION


| | | |
|---|---|---|
| Performance of Ordnance Factory Organisation | 49 | 58 |
| **Reviews** | | |
| Overhaul of T-72 tank and engines | 50 | 69 |
| Augmentation of brass melting and strip making capacity | 51 | 78 |
| **Production** | | |
| **Planning** | | |
| Avoidable manufacture of steel ingots | 52 | 87 |
| Over provisioning of forms | 53 | 87 |
| **Manufacturing** | | |
| Loss due to defective manufacture of brass cups | 54 | 89 |
| Loss due to defective manufacture of steel blooms | 55 | 90 |
| **Provisioning of stores and machinery** | | |
| **Machinery** | | |
| Non-commissioning of machines | 56 | 90 |
| Procurement of Zinc plating plant from an inexperienced firm | 57 | 92 |
| **Inspection** | | |
| Rejection of bombs due to inspection lapses | 58 | 93 |
| **Miscellaneous** | | |
| Extra expenditure due to unworkable rates | 59 | 94 |
| Theft and damage to buildings | 60 | 96 |
| Extra expenditure due to non-inclusion of option clause | 61 | 97 |
| Avoidable expenditure on airlifting of stores | 62 | 98 |
| Shortclosure of civil trade order | 63 | 100 |
| Avoidable payment of sales tax | 64 | 101 |
| Extra expenditure due to loading of excessive overheads | 65 | 102 |
| Engagement of private clearing agents | 66 | 103 |
| Loss in Civil Trade Order | 67 | 104 |
| Lax control on issue of sulphur | 68 | 105 |
| Follow up on Audit Reports | 69 | 106 |
| Response of Ministries/Departments to Draft Audit Paragraphs | 70 | 106 |
| | | |
| **Annexure I** | | 108 |
| **Annexure II** | | 115 |

## PREFATORY REMARKS

This Report for the year ended March 1998 has been prepared for submission to the President under Article 151 of the Constitution. It relates to matters arising from the Appropriation Accounts of the Defence Services for 1997-98 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.

The Report includes 67 Paragraphs and three Reviews on (i) Development of Multi Barrel Rocket Launcher System (Pinaka) (ii) Overhauling of T-72 tanks and engines (iii) Augmentation of brass melting and strip making capacity.

The cases mentioned in this Report are among those which came to notice in the course of audit during 1997-98 and 1998-99 as well as those which came to notice in earlier years but could not be included in the previous Reports.

# OVERVIEW

## Accounts of the Defence Services

The total budget provisions for the Defence Services in 1997-98 under the five grants for Army, Navy, Air Force, Ordnance Factories and Capital outlay were Rs 37946.63 crore. The total actual expenditure aggregated Rs 36479.21 crore. The Ministry obtained supplementary grants of Rs 1282.37 crore. The unspent amount of Rs 1156.12 crore, 102.56 crore and 193.04 crore respectively in the voted sections of grant Nos. 17, 20 & 21 respectively were the highest in the last three years, which calls for explanatory notes to Public Accounts Committee.

Some of the major findings in audit of accounts of Army and Ordnance Factories and associated Research and Development Organisations and matter arising from last audit of financial transactions included in this Report are mentioned below:

## Development of Multi Barrel Rocket Launcher System

- Multi Barrel Rocket Launcher System 'Pinaka' is a weapon for destroying/ neutralising enemy troop concentration areas, communication centres, etc. and for laying mines by firing rockets from several warheads. Ministry had sanctioned competence build-up projects for the Pinaka in early eighties with the plan to induct regiments equipped with this modern artillery warfare system from 1994. As of 1998, Defence Research and Development Organisation is nowhere near accomplishing this target.
- The warheads and all the three vehicles necessary for launching the rockets viz. launch, replenishment and command post vehicles were yet to be developed even after 11 years of sanction by the Ministry. Against the requirement of eight types of warheads for the rockets only three have been developed, of which, one is not acceptable to Army and another is only a dummy.
- The development and selection of launcher vehicle was yet to be completed. The vehicle required to load and replenish two salvos within four-five minutes in the launcher, needed up to 40 minutes to load one salvo. The development of command post vehicle has also been delayed due to selection of a chassis, which failed to match the mobility of the launcher.
- Out of 29 General Staff Qualitative Requirements set by Army, only seven have been met during the trials carried out so far. Some of the Qualitative Requirements not yet fulfilled related to critical aspects such as range, area of neutralisation, fire power, loading time of salvo and deployment time. More importantly, since the system has not been able to achieve the desired range, it is likely to be vulnerable since it will have to operate with in a close range of enemy targets.
- The delay in the development has compelled the Army to continue to depend upon their existing outdated system whose range is much less compared to that envisaged for 'Pinaka'.

***(Paragraph 23)***

## Presumptive fraud in import of ammunition

The circumstances leading to rejection of the entire consignment of 10000 rounds of 130 mm illuminating ammunition valued at Rs 11.84 crore imported from Pitcare Ltd., Hongkong raises a doubt about the entire transaction. The payment was released on an inspection certificate of suspected credentials. The names of the persons who carried out the inspection and authority under which they were to inspect the ammunition were not indicated. Contrary to the terms of the contract, stipulating inspection to be carried out within 60 days of receipt of ammunition, the inspection certificate was issued on the day of despatch of consignment from the foreign country.

Controller of Quality Assurance carried out the inspection more than two years after receipt of the ammunition against the stipulated 60 days and rejected the entire consignment. Meanwhile the firm, which had supplied the ammunition, was wound up.

***(Paragraph 12 )***

## Procurement of defective sleeping bags

A series of acts of omissions and commissions by the Ministry and Quality Assurance Officer in inspection of sleeping bags imported at Rs 7.65 crore for use of troops at Siachen glacier and extension of Letter of Credit had rendered the expenditure unfruitful. The Quality Assurance Officer cleared three consignments of defective sleeping bags even while the sample bag was not available for comparison. He cleared the fourth lot of defective sleeping bags even after the sample was made available to him.

Ministry extended the Letter of Credit despite being aware of the defects in the sleeping bags. The sleeping bags were issued to troops at lower altitude and the main objective of import for their use at Siachen glacier was not fulfilled.

Disagreement between Departments of Defence and Defence Production and Supplies on the finding of inquiry report ordered by the Ministry led to their inability to fix responsibility.

***(Paragraph 17)***

## Negligence in framing terms of supply orders

In the supply order on Nagaland Industrial Raw Materials and Supply Corporation Dimapur for purchase of timber for Army Ordnance Depots, Director General Supplies and Disposals left all controls viz. inspection, despatch, and payment terms to them. Despite all controls with the supplier, 90 *per cent* payment was to be released on proof of inspection and the balance 10 *per cent* was payable on proof of despatch or on 121$^{st}$ day after inspection, whichever was earlier even if the despatch did not take place. This enabled the supplier to obtain payment of Rs 2.23 crore for the 3650 cubic meter of timber, which was never supplied.

The Directorate General Ordnance Services did not follow up with the suppliers. The Nagaland Corporation disposed off the timber statedly at half the price and retained the sale proceeds of Rs 1.12 crore without permission of or intimation to Directorate General Ordnance Services.

***(Paragraph 24)***

### Non recovery of advance

Failure of Director General Ordnance Services to cancel the orders for combat jackets and combat trousers against a defaulting firm▲ and conclude risk and cost contract within the validity period of 12 months after the date of breach resulted in non recovery of extra expenditure of Rs 5.53 crore from the defaulting firm. Besides, interest free advance of Rs 1.42 crore given to the firm had not been recovered for over eight years. The firm enjoyed unintended interest benefit of atleast Rs 2.04 crore.

***(Paragraph 28)***

### Unauthorised transfer of land

Defence land cannot be transferred to any other agency by any subordinate authority without sanction of the Ministry. A Board of officers of Headquarters, Western Naval Command unauthorisedly decided to transfer 15000 square meter of defence land valued Rs 9.30 crore to Mumbai Municipal Corporation. Headquarters, Western Naval Command did not take any action to supersede this decision. The Garrison Engineer Bhandup excluded 15000 square metre of land at the time of constructing the boundary wall, while the Defence Estates Officer did not carry out inspection of this site for six years. The sequence of events gave an impression that Navy and MES, in effect, facilitated unauthorised appropriation of the defence land.

***(Paragraph 25 )***

### Delay in renewal of lease agreement

Ministry failed to determine the rent of the Defence land measuring over 153 acre leased to Calcutta Turf Club in time and to revise it immediately on the expiry of the earlier lease in 1992. It did not enter into fresh lease agreement even after determining the rent in 1994 on the basis of the prevailing norms of 5 *per cent* of the market value and premium for commercial use, etc., despite the fact that the old rate of Rs 20000 *per annum* was negligible in comparison to the new rent assessed at Rs 23.20 lakh per acre for the 56.416 acre used for commercial purpose.

Subsequently in 1998, the Ministry arbitrarily reduced the rent to Rs 5.83 lakh for commercial use against the assessed rent of Rs 23.20 lakh. Even after this, the total rent of Rs 22.93 crore was not recovered as of October 1998.

***(Paragraph 14 )***

### Loss of revenue

Ministry issued sanctions in 1991 for renewal of lease of 23901 sq. ft. of defence land at Chennai to Thomas Educational and Charitable Trust for a period of 30 years at annual rent of Rs 7.11 lakh. Prior to this, this Trust was paying annual rent of only Rs 1867.70. Defence Estate Officer, Chennai did not comply with the orders of the Ministry nor Director General Defence Estate ensure

▲ Rehabilitation Industries Corporation Limited Calcutta compliance to the orders. As a result, the Trust was holding the defence land without any lease agreement. Lease rent of Rs 56.87 lakh had not been recovered.

***(Paragraph 18)***

## Injudicious acquisition of land under urgency clause

Land acquired for technical and married accommodation at an Air Force station invoking urgency clause at a cost of Rs 2.84 crore remained unutilised for the intended purpose for over seven years. The Station Commander instead utilised the land for cultivation and diverted 75 *per cent* of the proceeds to a non Government account in contravention of Government orders .

***(Paragraph 29)***

## Improper sanction and execution of work

General Officer Commanding-in-Chief, Western Command, Chandigarh approved special repairs under urgency clause at a massive expenditure of Rs 30.69 lakh to a married accommodation at Shimla despite availability of other inspection bungalows and officers messes at the station for his use during tour. Renovation of kitchen, toilets and woodwork consumed Rs 13.34 lakh, garage and sentry post accounted for Rs 5.76 lakh, outhouses and retaining walls, etc for Rs 5.84 lakh. Besides, Rs 2.83 lakh was spent "as directed by the Army Commander". The sanction of this expenditure transgressed the accepted norm of financial propriety since the Army Commander approved such an extravagant renovation of an accommodation for his exclusive use during his occasional tours to Shimla.

***(Paragraph 35 )***

## Defective training ammunition supplied by Bofors

Army could not derive any value for money for Rs 26.29 crore spent on import of training ammunition from AB Bofors during 1988. Exudation was noticed in 86,000 rounds of a shell stored in ammunition depots in 1989. The supplier was allowed to repair bulk of the defective stock despite their unsuccessful attempt to repair 500 shells initially. Director General of Quality Assurance had not accepted the repaired shells since their use was risky. While the training of the Army personnel suffered, the Ministry could neither obtain replacement of defective shells nor recovered any compensation from the supplier as of March 1998. The shelf life of 10 out of 15 years of the ammunition was already over.

***(Paragraph 13 )***

## Procurement of Radars without vital part

Failure of Director General Ordnance Services to procure muzzle velocity units necessary for calculating the muzzle velocity of the shell to be fired from the guns along with the radar valuing Rs 94.92 crore impaired the accuracy of the system severely. In the absence of this unit, the velocity of the shell to be fired can not be determined accurately with reference to the position of the target in the air. Besides, one of the radars valued at Rs 7.91 crore, which was found defective within the warranty period, had not been repaired even after two years of its receipt.

***(Paragraph 27 )***

## Avoidable procurement of stores

A Garrison Engineer resorted to indiscriminate purchase of electrical stores worth Rs 81.32 lakh without establishing demand during 1995. Even after three years only Rs 3.70 lakh worth of stores could be consumed and stores worth Rs 12.42 lakh were directed to other formations leaving an idle inventory of Rs 65.20 lakh.

***(Paragraph 43 )***

## Excess manning by attachment of service personnel

Director General Electrical and Mechanical Engineering shifted up to 29 clerks, 28 drivers, 49 technical staff and four Personal Assistants etc. from other field units to his headquarters on regular basis over and above the sanctioned strength in his office of 81, nil, 18 and 33 respectively. This deprived the units of their sanctioned manpower and concentrated excessive manpower in the Directorate. In the grade of drivers, the Director General Electrical and Mechanical Engineering kept between 18 and 28 persons diverted from other units though not a single post was sanctioned for Headquarters.

***(Paragraph 26 )***

## Under recovery of training charges

Admission in the Armed Forces Medical College, Pune implies compulsory permanent service liability. Withdrawal or removal from permanent service liability makes the cadets liable to refund the cost of training. Failure of the Ministry to apply the revised rate of recovery to those students who had joined prior to the revision, but were provided with free rations, etc. which was the ground for revision of rates resulted in short recovery of Rs 60.95 lakh from 21 cadets.

***(Paragraph 31)***

## Delay in setting up of repair facilities for helicopters

Inadequate soil investigation led to foreclosure of a contract for construction of hangar for repair and maintenance of Chetak helicopters of Coast Guard in December 1994 after an expenditure of Rs 46.50 lakh due to unfavourable soil condition encountered during construction. This necessitated radical change in design. Meanwhile the scope of work was also modified to provide for an EOT crane. However, even after four years of stoppage of work, revised sanction for the hangar had not been issued. In the absence of its own repair facilities, Coast Guard was compelled to send its helicopters to HAL for repair and maintenance.

***(Paragraph 40)***

## Failure to observe proper issue procedure for batteries

Manufacturers are liable for defects in batteries kept without charge up to two years from the date of manufacture. Failure to establish procedure to ensure that the batteries of earlier manufacturing years are issued first before issue of batteries of later years of manufacture, led to a situation wherein the liability for defects in batteries costing Rs 38.92 lakh in an Advance Base Ordnance Depot were not accepted by the suppliers due to manufacturing defect.

***(Paragraph 33)***

## Extra expenditure due to substandard work

Acceptance of substandard work for permanent accommodation of Air Force Selection Board by Garrison Engineer Clement Town Dehradun resulted in widespread seepage in buildings constructed at a cost of Rs 64.97 lakh. Roof treatment at an expenditure of Rs 4.92 lakh was also not found effective. Special repairs had to be sanctioned to rectify the defect, which was estimated to cost upwards of Rs 58 lakh.

***(Paragraph 44)***

## Foreclosure of a bridge work due to defective design

Incorrect assessment of the soil bearing capacity and adoption of inappropriate design resulted in foreclosure of a project after an expenditure of Rs 1.45 crore. Fresh tenders had not been finalised even after eighteen months of foreclosure of the first contract.

***(Paragraph 48)***

## Premature deterioration of imported ammunition

The normal shelf life of imported 122 mm HE ammunition is 20 years. 8233 rounds valued at Rs 4.36 crore deteriorated permaturely while 5510 rounds valued at Rs 2.92 crore were defective requiring repair. Army HQ and the Ministry could not investigate the reason since the Court of Inquiry merely held that the deterioration was not due to storage but did not pin-point the reasons for deterioration.

***(Paragraph 15)***

## Mishandling of Missiles

Ministry was aware of damage to four missiles attributed to mishandling in case of an import in September 1995. Yet it did not make sure that mishandling is avoided in the subsequent import. 31 missiles valued at Rs 8.41 crore out of 200 imported in 1997 were damaged due to careless loading and unloading.

***(Paragraph 16)***

## Delay in missile storage accommodation

Chief Engineer Military Engineer Service of a zone was negligent in works management for construction of the missile storage accommodation at two locations. The accommodation has been delayed by five and seven years. In one place, serious seepage has rendered it unfit for storage of missiles while at the other, the generating set and crane have not been provided. Army's plan of storage of missiles in these two buildings remained frustrated.

***(Paragraph 39)***

## Additional expenditure due to non adherence of instructions

Chief Engineer Bhatinda Zone constructed two overhead reservoirs at Bikaner at Rs 40.36 lakh each based on departmental design.

He overlooked Engineer-in-Chief's instruction to float simultaneous tenders on departmental and contractors designs. As a result during the period he constructed three other overhead reservoirs of similar specification on contractors' design at Rs 22.76 lakh each. The result was an entirely avoidable expenditure of Rs 35.20 lakh on two reservoirs constructed on Department's design.

***(Paragraph 47)***

## Avoidable payment of water charges

Sample checks disclosed that Garrison Engineers did not exercise proper control over payment of water charges to the Municipal Board/Corporations, etc. Two Garrison Engineers at Hyderabad did not avail of the concessional tariff.

***(Paragraph 41)***

## Recovery at the instance of audit

Test check of the payments admitted in the offices of two Controllers of Defence Accounts and five Pay and Accounts offices disclosed over payment/short recovery of Rs 2.02 crore due to deficient internal control. The Controllers of Defence Accounts recovered the amount upon being pointed out by Audit.

***(Paragraph 19)***

# Ordnance Factory Organisation

## Performance of Ordnance Factory Organisation

The Ordnance Factory Organisation comprising of 39 factories with a manpower of 1.54 lakh produced 1210 items of arms, ammunition, equipment and components. The value of production aggregated Rs 4384.58 crore in 1997-98 which was 11.59 *per cent* higher than the value of production in 1996-97.

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

Production of 73 out of 234 items of completed products for which targets were fixed was behind schedule.

***(Paragraph 49)***

## Overhaul of T-72 tank and engines

- The planning, management and execution of the project for setting up repair facilities of T-72 tanks, which is currently the main battle tank of the Army, betrayed unconcern for timely overhaul leading to a serious mismatch between the requirement and capacity.

- The tanks, introduced from 1979 were due for overhaul after 12/10 years. The Ministry delayed sanction of the project for setting up the facilities at Heavy Vehicles Factory Avadi and Engine Factory Avadi for repair of tanks and engines. The execution of the civil works and purchases, installation and commissioning of equipment as also the deployment of manpower was further delayed by the Ordnance Factory Board and the two Ordnance Factories. The performance of the two factories in overhaul of the tanks and engines was way behind the target. The Heavy Vehicles Factory and Engine Factory Avadi overhauled only 70 tanks and 287 engines respectively up to 1997-98 against the planned target of 228 tanks and 553 engines.

- The envisaged capacity of overhaul of 70 tanks and 170 engines *per annum* is much less than the number of tanks and engines that will be due for overhaul. The poor performance of the factories against the capacity has further aggravated the problem. This has resulted in 698 tanks and 781 engines becoming overdue for overhaul at the end of March 1998. It will require another 10 years to overhaul the tanks already due for overhaul even at their maximum capacity. During this period large number of tanks and engines would further become due for overhaul. This coupled with low production of new tanks has already led to a situation where neither new nor overhauled tanks were made available to Army in planned numbers, affecting the operational preparedness.

***(Paragraph 50)***

## Augmentation of brass melting and strip making capacity

- The Ordnance Factory Ambernath and Katni failed to complete the project for augmentation of the production capacity of brass ingots and strips required for cups and cartridges of small arms and quick firing ammunition sanctioned by the Ministry in 1983 for completion by 1987. The project suffered from delays at all stages. Civil works and purchase and installation/ commissioning of equipment were undertaken with a lethargic approach. Even after 15 years and an expenditure of Rs 53 crore the desired objective remained elusive. This not only frustrated the objective of self-sufficiency in production of brass ingots and brass strips, the investment did not yield any value for money, as production remained even below the pre-augmented capacity.

- Equipment purchased at Rs 32.87 crore have either remained idle or have been utilised only sub-optimally. Rolling mills purchased for Rs 21 crore in 1995 have not been commissioned at Ordnance Factory Ambernath since the mills failed to achieve rolling speed of over 80 meters per minute against the desired 200 metres per minute. Similarly, Continuous Casting plant and Coil Transfer system procured for Ordnance Factory Katni remained idle due to insufficient load and absence of down the line facility.

***(Paragraph 51)***

## Avoidable manufacture of steel ingots

Despite holding 634 tonne steel ingot at the end of March 1990, Metal and Steel Factory Ishapore did not put it to use after identifying its chemical composition. Instead, the factory further manufactured 508.29 tonne steel ingots between 1990-91 and 1996-97 unnecessarily resulting in avoidable stock pile valued at Rs 1.76 crore.

***(Paragraph 52)***

## Over-provisioning of forms

Negligent estimation of requirement of semi -statement forms by Vehicle Factory Jabalpur has resulted in over provisioning leading to accumulation of forms worth Rs 17.14 lakh, which was sufficient to meet the requirement for the next 15 years.

***(Paragraph 53)***

## Loss due to defective manufacture of brass cups

Defective manufacture of 6253 brass cups by Metal and Steel Factory Ishapore for 30 mm Naval Ammunition and its clearance by the Senior Quality Assurance Officer at MSF resulted in a loss of Rs 26.14 lakh due to its rejection by Ordnance Factory Khamaria who was to use them for production of the ammunition. This also calls into question the quality of inspection by the Senior Quality Assurance Officer.

***(Paragraph 54)***

## Loss due to defective manufacture of steel blooms

Failure of Field Gun Factory Kanpur to supply the desired quality of steel blooms to Wheel and Axle Plant, Yelahanka due to their inability to use the vacuum degassed ingots, resulted in rejection of 142.70 tonne blooms costing Rs 26.74 lakh, besides foreclosure of the supply order by the latter. This also affected the goodwill of the factory.

***(Paragraph 55)***

## Non-commissioning of machines

General Manager Ammunition Factory Kirkee accepted five capping, ringing- in, gauging and varnishing machines costing Rs 1.80 crore from Hindustan Machine Tools by relaxing the standards of pre-despatch trials. Four of the five machines received in August 1994 were yet to be commissioned as of October 1998.

***(Paragraph 56)***

## Procurement of zinc plating plant from an inexperienced firm

Ordnance Factory Board procured a zinc plating plant at Rs 1.05 crore for Ordnance Factory Ambernath from a firm, which was not recommended by the factory due to its unsatisfactory performance in the past and their lack of experience in the field of zinc plating. The machine did not yield the desired output. The cartridge cases, zinc plated with the help of this machine failed during crimping operation. The plant was procured without carrying out crimping test for ensuring quality of zinc plating. As a result, Ordnance Factory Ambernath continues to get the cartridge cases zinc-plated from the trade.

***(Paragraph 57)***

## Rejection of bombs due to inspection lapses

The Area Inspector of Directorate of Quality Assurance (Armament), New Delhi failed to identify and reject defective empties of mortar bomb 51mm HE1A procured from trade. This led to 17808 bombs assembled by Ammunition Factory Kirkee using these empties at a cost of Rs 1.19 crore being rejected.

***(Paragraph 58)***

## Extra expenditure due to unworkable rates

Placement of import order by Ordnance Factory Board on a foreign trading firm who neither was the principal manufacturer nor had valid foreign export licence, for procurement of fuze of BMP ammunition, at unworkable rate, necessitated re-tendering and procurement of fuzes from another foreign firm at an extra cost of Rs 44.28 lakh with reference to rates quoted by the same firm on the previous occasion.

***(Paragraph 59)***

## Extra expenditure due to non-inclusion of option clause

General Manager Ordnance Factory Medak failed to incorporate option clause for procurement of 30 additional sets of filtering and ventilation system for BMP-II K vehicles in the supply order despite instruction of the Ministry. Subsequently he procured these additional sets at higher rates within three months of the first supply through another import order resulting in extra expenditure of Rs 36.17 lakh.

***(Paragraph 61)***

## Avoidable expenditure on airlifting of stores

Despite knowledge of availability of ship at Europort, Ordnance Factory Chanda failed to cancel its order on Thunder Bird Industries Inc., U.S.A. for airlift of 27.50 tonne propellant pyro powder and to despatch it through ship. This involved entirely avoidable extra expenditure of Rs 49.42 lakh. The subsequent utilisation of the propellant disclosed that there was no need for airlift instruction in the first place.

***(Paragraph 62)***

## Short-closure of civil trade order

Ordnance Factory Medak failed to adhere to the delivery schedule in respect of an order of Bharat Earth Movers Ltd. for supply of 3950 pressure plates. This led to short-closure of order at 1975, resulting in useless investment of Rs 35.67 lakh on raw materials and semis which were lying in stock.

***(Paragraph 63)***

## Avoidable payment of Sales Tax

Ordnance Factory Badmal incurred extra expenditure of Rs 21.78 lakh towards Sales Tax at a higher rate due to its failure in getting itself registered with the Orissa Sales Tax and avail of the concessional tariff for about six years.

***(Paragraph 64)***

## Extra expenditure due to loading of excessive overheads

Gun Carriage Factory Jabalpur supplied packing boxes to Ordnance Factory Bhandara for packing of explosives at Rs 1003 per box as compared to the cost of Rs 324 at which Ordnance Factory Bhandara procured them from trade around the same time. The extra expenditure to Ordnance Factory Bhandara on supply of 13103 boxes was Rs 88.97 lakh. The costing of Gun Carriage Factory disclosed excessive labour and overheads of Rs 741 on the material cost of only Rs 262 per box. This calls into question efficiency of operation in the factory for as simple a job as manufacturing of packing boxes.

***(Paragraph 65)***

## Engagement of private clearing agents

Ordnance Factory Ambernath and Ordnance Factory Ambajhari engaged a private clearing agent and paid an avoidable clearing charges of Rs 17.89 lakh in gross violation of Ministry of Defence order regarding deployment of Embarkation HQ for clearance of defence stores.

***(Paragraph 66)***

## Loss in civil trade order

General Managers of Ordnance Factories can quote for civil trade provided they recover 30 *per cent* variable overhead over and above the material and labour cost. General Manager, Ordnance Factory Jabalpur exceeded this delegated powers in quoting lower rate for supply of 200 tipper trucks to the Municipal Corporation of Delhi. The factory suffered a loss of Rs 2.49 crore and failed to recover even the material cost of Rs 1.56 crore.

***(Paragraph 67)***

## Response of the Ministry/Departments to Draft Audit Paragraphs

As per the Government instructions issued at the instance of Public Accounts Committee the Ministries are required to send their response to the Draft Paragraphs forwarded demi-officially to the Secretaries within six weeks. Defence Secretary did not send response to 25 paragraphs included in this Report. Similarly, Secretary, Department of Defence Production and Supplies did not send his response for five paragraphs.

***(Paragraphs 21 and 70)***

# CHAPTER 1 : ACCOUNTS OF THE DEFENCE SERVICES

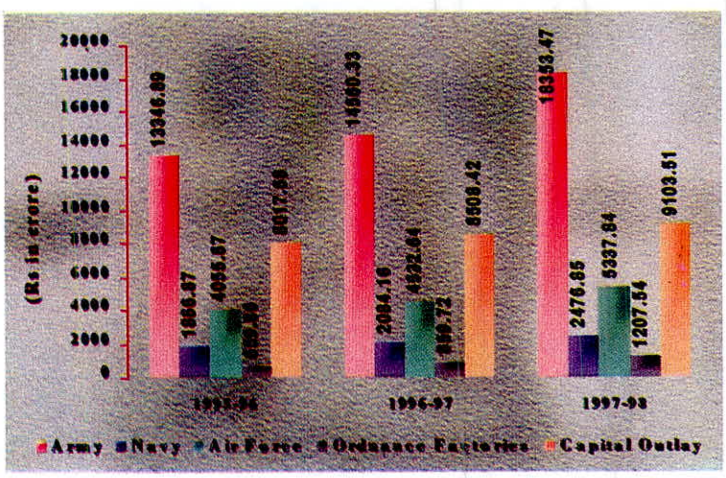
## 1. Defence Expenditure

The expenditure on major components of Defence Services during 1995-98 was as under :

**(Rs in crore)**

| | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|
| Army | 13346.89 | 14560.33 | 18353.47 |
| Navy | 1866.87 | 2084.16 | 2476.85 |
| Air Force | 4055.67 | 4532.64 | 5337.84 |
| Ordnance Factories | 659.86 | 859.72 | 1207.54 |
| Capital Outlay on Defence Services | 8017.68 | 8508.42 | 9103.51 |
| Total | 27946.97 | 30545.27 | 36479.21 |

The expenditure is represented in the bar chart below :



## 2. Budget and actuals

(a) The summarised position of expenditure during 1997-98 against Grants/appropriations was as under :

**(Rs in crore)**

| | | Original Grant/ Appropriation | Supple-mentary grant | Total | Actual expendit-ure | Total unspent provision(-) Excess (+) |
|---|---|---|---|---|---|---|
| **REVENUE** | | | | | | |
| **17 – Army** | | | | | | |
| | Voted | 19504.15 | --- | 19504.15 | 18348.03 | (-) 1156.12 |
| | Charged | 10.30 | --- | 10.30 | 5.44 | (-) 4.86 |
| **18- Navy** | | | | | | |
| | Voted | 2298.55 | 172.61 | 2471.16 | 2470.53 | (-) 0.63 |
| | Charged | 2.60 | 5.00 | 7.60 | 6.32 | (-) 1.28 |
| **19-Air Force** | | | | | | |
| | Voted | 4978.33 | 367.00 | 5345.33 | 5337.47 | (-) 7.86 |
| | Charged | 0.67 | --- | 0.67 | 0 .37 | (-) 0.30 |
| **20 – Ordnance Factories** | | | | | | |
| | Voted | 962.21 | 347.76 | 1309.97 | 1207.41 | (-) 102.56 |
| | Charged | 0.45 | --- | 0.45 | 0.13 | (-) 0.32 |
| **CAPITAL** | | | | | | |
| **21 – Capital outlay on Defence Services** | | | | | | |
| | Voted | 8900.64 | 381.00 | 9281.64 | 9088.60 | (-) 193.04 |
| | Charged | 6.36 | 9.00 | 15.36 | 14.91 | (-) 0.45 |

(b) The overall unspent provision in all the five grants of Defence Services under voted section aggregated to Rs1460.21 crore which consisted mainly of unspent provision in the Grants of Army, Ordnance Factories and Capital Outlay on Defence Services of Rs 1156.12 crore, 102.56 crore and 193.04 crore respectively.

The unspent provision in Grant No.17-Army were under the segments of Pay & Allowances of Army, Civilians, R&D organisation and other expenditure. These unspent provisions were mainly attributed by the Ministry to lower outgo on account of belated issue of revised orders for TA/DA, LTC etc., slow progress of works and lower bookings under central purchase of materials etc.

### *(c) Unspent provision*

The overall unspent provision (voted+charged) under all the five grants of Defence Services during 1997-98 against the total provision increased sharply from Rs 449.59 crore to Rs 1467.42 crore.

## 3. Control over expenditure

In the following cases, supplementary grants obtained in March 1998 under voted section were not utilised fully resulting in unspent provision.

**(Rs in Crore)**

| Grant No. | Total supplementary | Unspent provision |
|---|---|---|
| 19- Air Force | 367.00 | 7.86 |
| 20- Defence Ordnance Factories | 347.76 | 102.56 |
| 21- Capital Outlay on Defence Services | 381.00 | 193.04 |

The supplementary grants obtained under Grant Nos. 20 & 21 remained unutilised to the extent of 30 *per cent* and 51 *per cent* respectively. Thus, supplementary grants were not assessed properly in these cases.

## 4. Unspent provisions in grant(s) exceeding Rs. 100 crore

Large unspent provision in a grant or appropriation indicate that the expenditure could not be incurred as estimated and planned. These are indicative of deficient budgeting or shortfall in performance.

Unspent budget provision exceeding Rs 100 crore in the voted section of three grants during 1997-98 as under would call for explanatory note to the Public Accounts Committee in terms of PAC branch O.M. No.20/1/1/95/PAC dated 15 May 1995.

**(Rs in crore)**

| Grant No. | Sanctioned Grant/ appropriation (voted) | Actual expenditure | Unspent provision | Reasons |
|---|---|---|---|---|
| 17- Defence Services-Army | 19504.15 | 18348.03 | 1156.12 | Lower outgo on local allowances and belated issue of revised orders for TA/DA, LTC bonus etc. |
| 20- Defence Ordnance Factories | 1309.97 | 1207.41 | 102.56 | Less expenditure on pay and allowances, non-revision of overtime rates, lower outgo on electricity and water charges etc. |
| 21- Capital Outlay on Defence Services | 9281.64 | 9088.60 | 193.04 | Non-materialisation of certain contracts, delay in issue of revised sanction for works etc. |

## 5. Injudicious re-appropriation

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

**(Rs. in Crore)**

| Grant No. Minor Head | Sanctioned grant | Re-appro-priation | Final grant | Actual Expend-iture | Excess(+) Unspent provision(-) with reference to provision after re-appropriation |
|---|---|---|---|---|---|
| **17-Army** | | | | | |
| 101-Pay and allowances of Army | 9973.51 | (-) 2037.71 | 7935.80 | 7613.43 | (-) 322.37 |
| 104-Pay and allowances of Civilians | 831.90 | (+) 164.12 | 996.02 | 981.37 | (-) 14.65 |
| 106-Military Farms | 90.86 | (+) 12.00 | 102.86 | 110.76 | (+) 7.90 |
| 108-Research and Development Organisation | 984.55 | (+) 310.44 | 1294.99 | 1284.51 | (-) 10.48 |
| 109-Inspection Organisation | 217.21 | (+) 25.73 | 242.94 | 252.97 | (+) 10.03 |
| 110-Stores | 5229.05 | (+) 369.04 | 5598.09 | 5650.94 | (+) 52.85 |
| 111-Works | 1052.86 | (+) 175.70 | 1228.56 | 1251.16 | (+) 22.60 |
| 800 -Other Expenditure | 305.75 | (+) 27.00 | 332.75 | 324.95 | (-) 7.80 |
| **18-Navy** | | | | | |
| 110-Stores | 990.00 | (-) 25.00 | 965.00 | 971.75 | (+) 6.75 |
| 800-Other expenditure | 351.66 | (-) 25.00 | 326.66 | 315.74 | (-) 10.92 |
| **19-Air Force** | | | | | |
| 110-Stores | 3253.18 | (+) 10.68 | 3263.86 | 3254.97 | (-) 8.89 |
| **20-Defence Ordnance Factories** | | | | | |
| 054-Manufacture | 1400.00 (Original + supple-mentary) | (-) 45.00 | 1355.00 | 1331.36 | (-) 23.64 |
| 800-Other Expenditure | 278.90 | (+) 11.10 | 290.00 | 283.16 | (-) 6.84 |

| Grant No. Minor Head | Sanctioned grant | Re-appro-priation | Final grant | Actual Expend-iture | Excess(+) Unspent provision(-) with reference to provision after re-appropriation |
|---|---|---|---|---|---|
| **21**-01-( Army) | | | | | |
| 101-Aircraft and Aero-engines | 77.68 | (+) 25.02 | 102.70 | 122.97 | (+) 20.27 |
| 102-Heavy and Medium Vehicles | 120.35 | (-) 9.80 | 110.55 | 79.44 | (-) 31.11 |
| 103-Other Equipments | 1510.85 | (+) 28.08 | 1538.93 | 1431.76 | (-) 107.17 |
| 202-Construction Works | 401.00 | (-) 35.00 | 366.00 | 344.71 | (-) 21.29 |
| 02-(Navy) | | | | | |
| 101-Aircraft and Aero-engines | 224.97 | (-) 2.97 | 222.00 | 213.79 | (-) 8.21 |
| 205-Naval Dockyards | 191.90 | (-) 22.21 | 169.69 | 163.44 | (-) 6.25 |
| 04-(Defence Ordnance Factories) | | | | | |
| 111-Works | 45.00 | (-) 1.35 | 43.65 | 34.83 | (-) 8.82 |
| 05-(Research and Development Organisation) | | | | | |
| 111- Works | 697.92 | (-) 7.85 | 690.07 | 673.53 | (-) 16.54 |

## 6. Persistent unspent provisions

Despite mention made in Para 5 and 7 of Report No. 7 of 1997 and No.7 of 1998 of the Comptroller and Auditor General of India, Union Government, Defence Services (Army and Ordnance Factories) respectively regarding persistent unspent provision, large amount of unspent provision exceeding

Rs 5 crore in a number of cases persisted during 1997-98, for the reasons shown against each grant, as under.

**(Rs in crore)**

| **Grant No. Minor Head** | **1995-96** | **1996-97** | **1997-98** | **Reasons for Unspent amount given in Appropriation Accounts** |
|---|---|---|---|---|
| **17-Army** | | | | |
| 101-Pay & Allowances | 21.29 | 51.32 | 322.37 | Lower outgo on local allowances and belated issue of revised orders on TA/DA and L.T.C. |
| **19-Air Force** | | | | |
| 110-Stores | 18.29 | 2.17 | 8.89 | Delay in booking of expenditure for the supplies received at the end of the year |
| **20-Ordnance Factories** | | | | |
| 800-Other Expenditure | 4.18 | 12.00 | 6.84 | Lower outgo on electricity and water charges |
| **21-Capital outlay on Defence Services** | | | | |
| **02-Navy** | | | | |
| 101-Aircraft and Aero-engines | 6.06 | 4.54 | 8.21 | Non-materialisation of certain supplies of stores and deferment of payments |
| **03-Air Force** | | | | |
| 202-Construction Works | 12.05 | 10.48 | 9.27 | Slow progress of works, non-materialisation of supplies and delay in release of certain works |
| **04-Defence Ordnance Factories** | | | | |
| 111-Works | 4.06 | 4.56 | 8.82 | Less utilisation against MES Works |
| **05-Research and Development Organisation** | | | | |
| 111-Works | 12.02 | 15.92 | 16.54 | Non-materialisation of certain foreign supplies |

## 7. Persistent excess

During the last three years there were persistent excesses with reference to approved provisions. The large amount of excesses exceeding Rs 5 crore in two cases persisted during 1997-98, for the reason shown against each, as per details given below :-

**(Rs. in crore)**

| Grant No. Minor Head | 1995-96 | 1996-97 | 1997-98 | Reason for excess given in Appropriation Accounts |
|---|---|---|---|---|
| **17-Army** | | | | |
| 110-Stores | 2.24 | 3.08 | 52.85 | Higher materialisation of stores than anticipated |
| 111-Works | 10.70 | 55.12 | 22.60 | Clearance of backlog payments to Cantonment Boards, Local bodies and increase in tariff for water & electricity |

## 8. Outstanding claims/dues

Mention was made every year in the Controller General of Defence Accounts' certificate regarding outstanding dues against Central Civil Departments, State Governments, private individuals and institutions etc. on account of stores supplied and services rendered on payment by the Defence Services. A review of the position reflects an increasing trend as mentioned below:

(i) The outstanding dues for the services rendered and stores supplied by the Defence Services (other than Ordnance Factories) to others including Central Civil Departments and State Governments increased from Rs 60.13 crore as on 30 June 1997 to Rs 65.40 crore as on 30 June 1998 showing an increase of 9 *per cent.*

(ii) Dues outstanding against private individuals and institutions in respect of work done and stores supplied by the Defence Services increased from Rs 29.96 crore as on 30 June 1997 to Rs 41.02 crore as on 30 June 1998 constituting an increase of 37 *per cent*. The oldest item relates to the year 1963-64.

## 9. Non-verification of credits

The verification of credits for stores/imported stores and equipment involving a large amount could not be verified in the ledgers of consignees/stores depots by internal audit due to non-availability of certified receipt vouchers in the following cases :-

(a) The credit of 24177 vouchers amounting to Rs 2208.18 crore pertaining to Army, Navy, Air Force and Ordnance Factories which related to the period ending March 1998 but were outstanding as on 30 June 1998 could not be verified in the consignees' ledger in the absence of vouchers. The oldest of these items, pertains to 1961-62.

(b) The credit for imported stores and equipment amounting Rs1678.03 crore could not be verified in the ledger of some store depots of Army, Navy and Air Force as the certified receipt vouchers and corresponding invoices were not made available to internal audit. The oldest item pertains to the year 1968-69.

Action for verification of the outstanding credits needs be taken.

## 10. Outstanding dues on account of licence fee

Mention was made every year in the certificate of Controller General of Defence Accounts regarding outstanding dues on account of Licence Fee & allied charges due for recovery from Union ministries and state governments, private bodies, messes, clubs and individual officers etc. A review of outstanding dues reflects no substantial progress towards recovery and increasing accumulation of outstanding arrears as shown below.

**(Rs in crore)**

| Position as on 30 June of the year | Amount due | Percentage increase over amount of 1994 |
|---|---|---|
| 1994 | 6.34 | -- |
| 1995 | 7.61 | 20.03% |
| 1996 | 9.62 | 51.73% |
| 1997 | 10.63 | 67.66% |
| 1998 | 16.41 | 158.83% |

The oldest outstanding item pertains to the year 1956-57.

## 11. Cash losses

The increase in total amount of cash losses attributable to losses due to other causes as compared to the previous year were as under.

**(In thousand of Rupees)**

| Year | Total amount of cash losses | Percentage increase | Amount of loss attributed to other causes | Percentage increase |
|---|---|---|---|---|
| 1996-97 | 4328 | --- | 3226 | --- |
| 1997-98 | 7425 | 71.5 | 6524 | 102 |

# CHAPTER II : MINISTRY OF DEFENCE

## 12. Presumptive fraud in import of ammunition

**A foreign firm drew payment of Rs 11.84 crore against a doubtful certificate of inspection of ammunition which was subsequently rejected as it failed in proof.**

Test check of records in Central Ammunition Depot, Pulgaon and in the Ministry disclosed a case of import of ammunition through a trading firm, which was declared unfit for use. The circumstances relating to the inspection of the ammunition and release of payment are suggestive of collusion.

Ministry concluded a contract with Pitcare Ltd. Hongkong in January 1993 for supply of 10000 rounds of 130mm and 6700 rounds of 122mm illuminating ammunition at a total cost of US $6.12 million*, equivalent to Rs 16.54 crore.

**Ammunition was to be inspected within 60 days of receipt at site by the purchaser**

As per the amended terms of contract, the ammunition was to be finally inspected by a team appointed by the purchaser and acceptance certificate was to be issued within 60 days of receipt of goods at site. However, there was no evidence to establish that bank was informed of the amendment in the condition for inspection.

The contract stipulated that the cost of ammunition was to be paid through a letter of credit against presentation of sales invoice, bill of lading, packing list and most importantly, inspection and acceptance certificate.

**Inspection certificate was issued even before the despatch of ammunition**

**Inspection certificate did not carry name and designation of inspectors**

Scrutiny disclosed that the consignment was despatched on 30 May 1993. While as per this amendment to the contract the inspection was to be carried out by the purchaser within 60 days of receipt of ammunition at site, strangely a certificate dated 30 May 1993 was issued conveying the inspection and acceptance of the ammunition even before the ammunition had left the originating station. The inspection certificate did not carry the name and designation of the Chairman and member of so stated inspection team, nor the authority under which they had inspected the consignment.

**Proof test was carried out after two years of receipt of the entire quantity**

The consignment was received in Central Ammunition Depot in August 1993. The proof test was to be carried out within 60 days of receipt of the ammunition at site. However, Controller of Quality Assurance carried out the proof test in September and December 1995, i.e. more than two years after receipt of the ammunition. The delay in proof test was attributed to non-receipt of technical documents, which were supplied by the firm in October 1994. The delay of one more year even after receipt of technical documents

* 1 US $ = Rs 27.0270

**Ammunition valuing Rs 11.84 crore was rejected in proof test**

remains unexplained. The entire consignment of 10000 rounds of 130mm illuminating ammunition for which US $3.76 million[♦] equivalent to Rs 11.84 crore was claimed by the firm through letter of credit with the help of the inspection certificate of suspected genuineness, was rejected after proof test.

**By the time quality claim was lodged, the firm had wound up**

**Ministry has not taken effective action to fix responsibility**

When the Ministry made efforts through the Indian High Commission, Singapore to locate the firm, one Mr.Peter Lim who had signed the contract as Managing Director of Pitcare disowned any responsibility stating that Pitcare Hongkong had been wound up and the Singapore office had acted only as a forwarding agent. Despite evidence of suspicious dealings in the matter, Ministry has not conducted any inquiry to fix the accountability in the matter as of December 1998.

It is recommended that the matter should be investigated through an independent agency to fix responsibility for not ensuring that the amended inspection clause of contract was got noted by the bank and for issue of suspected inspection certificate, delay in carrying out proof test, besides failure of the Ministry to investigate the matter.

The matter was referred to the Ministry in June 1998; their reply was awaited as of January 1999.

## 13. Defective training ammunition supplied by Bofors

**The imported Bofors training ammunition valuing Rs 26.29 crore was lying defective in store for the last ten years and the Ministry failed to resolve the issue of their repair or replacement.**

**Exudation was detected in the shells in storage**

Under a contract concluded with A B Bofors in March 1986 for purchase and licence production of 155 mm towed gun system and ammunition, 86000 rounds of a shell were procured in January 1988 for the purpose of training. The ammunition stored in Ammunition Depots had shown exudation of TNT in storage in 1989.

**Large scale repair was allowed despite 500 repaired shells found defective**

Mention was made in paragraph 9 of Report of the Comptroller and Auditor General of India for the year ended 31 March 1989 (No. 12 of 1990) regarding not carrying out check proof of a fuze with this shell due to its rejection. At that time, the Ministry had stated that the supplier was asked in January 1990 to replace the entire defective quantity. Despite an unsuccessful attempt to repair 500 shells in 1991, the supplier was allowed to repair 70998 shells between May 1993 and April 1994. The Director General of Quality Assurance did not accept the repaired shells as its sealing was not adequate, and exudation could take place in future as well. He treated the defects as being critical. Use of these shells was risky and could result in premature burst

[♦] 1 US $ = Rs 31.49

leading to endangering of human life and cause serious damage to the equipment. Since it was not possible to accept the ammunition due to high risk involved, Army HQ requested the Ministry in January 1994 to resolve the issue with the supplier.

**More than ten years had expired against the shelf life of 15 years**

A team of the suppliers inspected the ammunition in April 1997 in the ammunition depot and found that the shells were exuding even at temperatures below 32°C. Despite a series of meetings between April 1997 and February 1998 with the supplier, the Ministry failed to resolve the issue as of March 1998, even after more than ten years of supply of shells. Meanwhile, Army could not train their personnel due to defects in ammunition. As the shelf-life of the ammunition is only 15 years, the Army had not been able to derive any value for the money for the Rs 26.29 crore spent in the late eighties.

The matter was referred to the Ministry in October 1998; their reply was awaited as of January 1999.

## 14. Delay in renewal of lease agreement

**Delay in finalising the rent to be charged and in renewal of lease for over seven years resulted in under recovery of even arbitrarily reduced rent of Rs 22.93 crore from Royal Calcutta Turf Club.**

**153.4 acres of land was leased to Royal Calcutta Turf club for 60 years from December 1933 for annual rental of Rs 20,000**

Defence land measuring approximately 153.416 acres at Calcutta was leased to Royal Calcutta Turf Club in December 1933 at an annual rental of Rs 20,000 for a period of 30 years. The club was using over 56 acres of land for conducting horse racing and the balance area of 97 acres was used as polo ground, riding area etc. Even before expiry of the lease, the Ministry accorded sanction in March 1954 for further lease effective from 1 January 1962. The Defence Estate Officer Calcutta renewed the lease in December 1954 for a period of 30 years effective from 1 January 1962 on the same terms and conditions of rental with no clause in the agreement for further renewal. As the second lease of 30 years, i.e, from January 1962 to December 1991 was due for expiry, the Ministry impressed upon the Controller of Defence Accounts in July 1991 the urgency of revising the rental with reference to normal and fair rent especially as assets created on the leased land by the club were sublet for commercial purposes. They desired suitable action to be initiated in this regard. Subsequently the Ministry of Finance in October 1991 issued instructions to the Financial Advisor, Ministry of Defence to review all cases where scales of fees/charges in vogue had remained unrevised notwithstanding substantial increase in cost and desired their upward revision. The matter regarding fixation of revised rent for the land remained under correspondence between the concerned Defence Authorities from December 1991 onwards till August 1994 .

Meanwhile, the Defence Estates Officer Calcutta informed the Club in September 1991 itself, that the lease would stand expired on 31 December

1991. Consequently, the Club requested for fresh lease for another period of 30 years with effect from 1 January 1992 on such terms and conditions determined by the Ministry. The issue regarding revised rental and subsequent renewal of lease remained unresolved till June 1994. In the intervening time, the club continued to pay the rent at the old rates.

**Defence Estates Officer, Calcutta assessed the commercial rent at Rs 23.20 lakh per acre in 1994**

The Director General Defence Estates advised in June 1994 the Director of Defence Estates to fix rentals in association with an officer of the Defence Accounts Department. Defence Estate Officer and Joint Controller of Defence Accounts, Calcutta jointly assessed in August 1994 the commercial rent at Rs 23.20 lakh per acre after considering the market value of land at Rs 1.16 crore per acre, normal rent at 5 *per cent* of land value and commercial rent at four times the normal rent for the land used for racing purpose and Rs 100 per acre for land used as polo ground etc. The Ministry's approval in principle for the revised rent was conveyed by the Director General Defence Estates in February 1995 to the concerned Director of Defence Estates. Accordingly, Defence Estates Officer intimated to the club in February 1995 that the Ministry had agreed in principle to lease the land at the revised rentals and requested them to take a decision in this regard. The club in March 1995 expressed their inability to accept the revised rent because of financial constraints and requested for reconsideration. Director General Defence Estates forwarded the request of the club to the Ministry in May 1995.

**The rent refixed by the Ministry at a reduced quantum to the advantage of the private party was yet to be communicated to them**

The Ministry in a meeting held in September 1998 after a lapse of two and half years arbitrarily decided to charge commercial rent at Rs 5.83 lakh per acre for 56.41 acre of land as against Rs 23.20 lakh jointly assessed by the representative of the Defence Accounts Department and the Defence Estate authority in 1994 by considering the market value of land at Rs 1.16 crore, 2 ½ *per cent* against 5 *per cent* earlier decided of land value as normal rent and twice the normal rent against four times adopted earlier as commercial rent. Ministry's file did not contain the rationale for adopting 2 ½ *per cent* of the land value for normal rent and only twice the normal rent for arriving at the commercial rent. The total rent recoverable even at the arbitrarily revised rates worked out to Rs 22.94 crore for the period from January 1992 to December 1998 of which only Rs 1.05 lakh was recovered provisionally at old rates upto March 1997.

Despite the need for revising the rentals being emphasised by both the Ministry of Finance in general and by the Ministry of Defence in particular way back in 1991, the revision of rental was decided only in 1998. Even at the reduced scales of rentals adopted, the rent of Rs 22.93 crore remained outstanding. In addition there was loss of considerable amount of interest that would have accrued to the State during the intervening period. The Ministry failed to lay down any uniform formula for adoption in computing normal and commercial rate of rents based on market value of land, leaving scope for authorities at various levels to adopt their own formula as evident from the instant case.

The Ministry had intimated in October 1998 that no loss as such had taken place as the arrears of rent will be recovered once the revised rate of rent was fixed. However, the fact remains that the club was yet to be informed of the revised rent and lease agreement had not yet been entered into with them.

## 15. Premature deterioration of imported ammunition

**Army HQ/Ministry failed to investigate reasons for premature deterioration of 8233 rounds of 122 mm HE ammunition costing Rs 4.36 crore. Besides, ammunition valuing Rs 2.92 crore was treated as repairable.**

**Ammunition valuing Rs 4.36 crore deteriorated prematurely in five Depots**

The normal shelf life of imported HE ammunition for 122 mm gun is 20 years. Inspections carried out in a Central Ordnance Depot, four Ammunition Depots and investigation of defects by Director General Quality Assurance during 1994 to 1995 disclosed premature deterioration of 8233 rounds of ammunition valuing Rs 4.36 crore with their propellant bags and igniter bags in torn condition.

Apart from above, 5510 rounds costing Rs 2.92 crore was held in repairable condition in Central Ordnance Depot Jabalpur. Courts of inquiries constituted by the Commandant of an Ammunition Depot revealed that the deterioration was not attributable to defective storage condition. The courts of inquiries did not reach any conclusion about the reasons for deterioration. The Commandant of Ammunition Depot guesstimated that the deterioration could be due to manufacturing defects.

**Army HQ failed to pin point reasons for deterioration**

Thus, while 8233 rounds ammunition valuing Rs 4.36 crore deteriorated prematurely and 5510 rounds were categorised as repairable, the Army HQ/Ministry failed to pin point the reasons for deterioration and take remedial measures to avoid recurrence of similar deterioration in future.

The matter was referred to the Ministry in July 1998; their reply was awaited as of January 1999.

## 16. Mishandling of Missiles

**Careless loading and unloading and unsuitable storage of missiles rendered 35 of them imported at Rs 9.50 crore unserviceable during 1995-97.**

Despite being aware of the damage to missiles imported from a foreign government in 1995 due to improper loading/unloading and storage, no remedial action for proper loading/unloading was taken for another import in

1997. Careless loading/unloading of the second lot rendered 31 out of 200 missiles damaged.

**Four out of 150 missiles were found unserviceable during receipt inspection**

An Ammunition Depot received a consignment of 150 missiles imported from a foreign country in September 1995 through Naval Armament Depot Alwaye. A Board of Officers carried out receipt inspection in October 1995 and observed that in one missile the ceramic cutter was broken while three missiles failed in parameter tests. Controller of Quality Assurance (Systems) preferred a quality claim on the supplier in October 1995 for replacement of the four defective missiles.

**Supplier rejected claim for one missile and suggested retest of remaining three**

The supplier while rejecting the claim in May 1996, attributed the damage to the missile with broken ceramic cutter to the fall during loading/unloading and grease and dirt deposits on the contact surface as the possible reason for failure of the other three missiles. The ceramic cutter had not been replaced as of November 1998, nor had the three others been repaired.

**31 more missiles were found unserviceable due to damages caused by careless handling**

Another consignment of 200 missiles under the contracts of September 1995 and March 1996 was received in the same ammunition depot in March 1997 through Naval Armament Depot Alwaye. In the receipt inspection carried out between 13 and 16 March 1997, the Board of Officers found 21 missiles with broken IRHH glass, seven missiles with ceramic cutter broken and three failing in parameter tests. The Board declared all the 31 missiles as unserviceable. Controller of Quality Assurance (Systems) preferred a quality claim on the supplier on 22 April 1997. The claim was rejected by the supplier in February 1998 again on the grounds that damage to the missiles were caused by direct violation of loading/unloading procedures of these goods during transportation from Cochin to the ultimate consignee.

Thus, carelessness in loading and unloading, inappropriate storage led to 35 missiles imported at a cost of Rs 9.50 crore being rendered unserviceable.

The matter was referred to the Ministry in July 1998; their reply was awaited as of January 1999.

## 17. Procurement of defective sleeping bags

**Various acts of commissions and omissions by Director General Quality Assurance and Ministry led to procurement of 8588 sub-standard sleeping bags valuing Rs 7.65 crore, which could not be used for troops at Siachen due to their inferior quality.**

Against a contract for supply of 8588 sleeping bags costing FF 11.86 million♠, equivalent to Rs 7.65 crore for use by Army in Siachen Glacier, concluded by the Ministry with Moncler of France, the firm supplied sleeping bags which

♠ Re 1 = FF 0.155

did not conform to the sample submitted by it. The Ministry concluded the contract with this firm for the first time. Earlier procurements were made from a different source. The Ministry also received a specific complaint against the quality of sleeping bags of this firm before the first lot was inspected. Senior Quality Assurance Officer, New Delhi, however, cleared the first four lots of 6855 sub-standard sleeping bags in inspection. Since the bags were unfit for use in Siachen, 6543 of them were issued for severely restricted use at lower altitudes.

Scrutiny of documents in Embassy of India in Paris and Ministry of Defence disclosed the following acts of omission and commission.

***Negligence in quality inspection***

**Ministry failed to alert inspecting staff despite receipt of complaint about quality of sleeping bags**

**Inspectors certified the quality without sample and failed to notice the defects in first four inspections**

(i) Ministry received a complaint against the quality of the sleeping bags on 10 September 1992, immediately before supply of 979 bags in the first lot. Yet they did not alert the inspecting staff to be careful in inspection. Senior Quality Assurance Officer, New Delhi, cleared 979, 1016, 1602 and 3258 sleeping bags in inspection on 29 September 1992, 19 October 1992, 13 November 1992 and 22 March 1993 respectively. They pointed out shortage of three sleeping bags. While the first three lots were inspected without the sample against which the quality was to be certified, the fourth lot was cleared by the inspectors even though the sample was made available to them. The inspectors failed to notice the presence of central stitching on outer bags. Senior Quality Assurance Officer rejected further two lots of 1736 sleeping bags later in May-June 1993.

(ii) Master General of Ordnance intimated the Ministry in May and June 1993 that the sleeping bags were of inferior specification, having stitching in the centre at the back of outer bag which was not acceptable to them. Ministry, however, failed to promptly communicate the rejection of stores to suppliers even after rejection of the last two lots in May and June 1993.

***Extension of letter of credit***

**Ministry extended the letter of credit despite being aware of sub standard sleeping bags**

(iii) The letter of credit opened by the Ministry had expired on 24 May 1993, after the supplier had been paid only FF 5.78 million against the contract amount of FF 11.86 million. Even though the Army HQ and the Ministry were aware of the inferior quality of the sleeping bags, the letter of credit was renewed on the basis of decision taken in a meeting taken by Joint Secretary (O) on 21 May 1993, the minutes of which recorded that the User Directorate was agreeable to renewal of the letter of credit, provided the supplier was told to avoid such stitching in future supplies. This condition was meaningless as the entire quantity had been supplied by the supplier by that time. The User Directorate, however, contested the acceptance of the consignment attributed to them in the minutes of the meeting, on 01 June 1993 when they stated that the defective sleeping bags were not acceptable to them. Despite this, the Ministry extended the letter of credit facilitating encashment of the amount towards supply of defective sleeping bags by the firm.

***Enquiry***

(iv) The Ministry appointed the Deputy Secretary (Q) to enquire into the acceptance of defective bags in September 1994. The findings of the enquiry blamed the inspectors who cleared the first three lots without the sample and the team which failed to reject the fourth lot despite availability of sample with them. The enquiry also blamed the concerned official in the Master General of Ordnance Branch for not authenticating the sample. Secretary, Department of Defence Production and Supplies, under whose control the Director General Quality Assurance functions, did not agree to the finding of the enquiry officer that inspection staff was primarily responsible for accepting the defective stores.

***Performance bank guarantee***

**Ministry did not challenge the jurisdiction of French Court when it stayed encashment of bank guarantee**

(v) The Ministry advised the Banque Rivaud on 24 September 1993 to encash bank guarantee of FF 2.37 million equivalent to Rs 1.52 crore representing only 20 *per cent* of the cost of the defective sleeping bags. The supplier obtained stay order from court in Paris. The matter was subjudice as of March 1998. Scrutiny of contract Purchase Order disclosed that as per clause 3 the contract was governed by or construed in accordance with Indian Law. Therefore, failure to challenge the jurisdiction of French Court of Law in the matter is not clear.

***Appointment of arbitrator***

**Ministry appointed arbitrator after five years of defective supplies**

(vi) Although clause 17 (b) of the "standard conditions of the contract" stipulated that all the rights and liabilities embodied in the contract shall be determined by referring to Arbitration of the nominee of the Secretary of Ministry under the Laws of India, yet Ministry appointed an arbitrator only in April 1998, i.e after five years of defective supplies.

***Liquidated damages***

**Ministry did not claim liquidated damages of Rs 1.80 crore**

(vii) According to clause 10 of the purchase order, for non-delivery of the bags by the date specified in the contract, the purchaser could levy, liquidated damages of 5 *per cent* of the contract price of the undelivered goods for each month of delay or part of a month. Although the delays in delivering the bags ranged from one to nine months and liquidated damages of FF 2790311 equivalent to

Rs 1.80 crore* could be levied on the supplier, no claim was, however, preferred by the Ministry.

Thus, serious lapses on the part of inspectors and the Ministry in clearing the stores in inspection and not rejecting stores despite knowledge of defects in supplies respectively, resulted in payment of Rs. 7.65 crore for procurement of 8588 sub-standard sleeping bags which has been largely unfruitful, as the entire supply was unfit for use at high altitudes for which these were purchased.

The matter was referred to the Ministry in June 1998; their reply was awaited as of January 1999.

## 18. Loss of revenue

**Defence Estates Officer Chennai did not comply with orders of the Ministry to revise the rent of a defence property for seven years. He raised demand for rent of Rs 56.87 lakh upon being pointed out by Audit.**

In terms of Rule 31(1) of the Cantonment Land Administration Rules 1937, Defence land measuring 23901 sq. ft. at Chennai was leased out on a non-renewal basis in March 1961 for 30 years to Thomas Educational and Charitable Trust (Trust) at annual rent of Rs 1867.70. In September 1963, much in advance of the expiry of the lease period and in contravention of Rule 31(1), the non-renewal lease was converted into a renewable lease. Accordingly, in March 1991 on expiry of the 30 years period, sanction for renewal of the lease for a further period of 30 years with annual rent at Rs 7.11 lakh was issued.

This sanction, however, was not implemented by the Defence Estates Officer, Chennai Circle who put forward in May 1997 the plea that the Trust have sublet the property on rent and hence sanction cannot be implemented. It was noticed in audit that despite an opinion of the Ministry of Law in September 1970 that there was no breach of the terms on such sub-letting/renting, no action was taken by the Director General Defence Estates to direct the Defence Estates Officer to implement the sanction for the renewal of the lease for over seven years. This resulted in revenue of Rs 56.87 lakh not being claimed from the Trust towards rent for the period April 1991 to March 1999.

On being pointed out in Audit, the Defence Estates Officer, Chennai Circle issued a demand for Rs 56.87 lakh on the Trust in September 1998.

The Ministry while accepting the facts of the case stated in December 1998 that the Trust had represented that the annual lease rent fixed by the

* Re 1=FF 0.155

Government was very exorbitant and the lease rent may be reduced as per expired lease or the old annual lease rent may be enhanced not exceeding 50 *per cent*. The case was pending with Ministry for a decision. The Ministry, however, did not offer any comment on the act of commission of the Defence Estates Officer, Chennai Circle, who did not implement the orders of the Ministry.

## 19. Recovery at the instance of Audit

**Deficient internal control in the offices of Controllers of Defence Accounts, Canteen Stores Department and five Pay and Accounts Offices resulted in overpayment of Rs 2.02 crore.**

Sample checks of payments admitted in the offices of Controller of Defence Accounts (Officers), five Pay and Accounts offices and Controller of Defence Accounts (Canteen Stores Department) disclosed overpayment/short recovery of Rs 2.02 crore. Upon being pointed out by Audit, the lapses have been accepted and recovery effected.

**Audit of personal claims disclosed overpayment of Rs 71.85 lakh in CDA (Officers)/five PAOs**

Test check of the Pay Accounts from April 1997 to March 1998, maintained by Controller of Defence Accounts (Officers) and five Pay and Accounts Officers viz. Pay and Accounts Officer (Other Ranks – Guards), Kamptee, Pay and Accounts Officer (Other Ranks – Artillery), Nasik, Pay and Accounts Officer (Other Ranks – EME), Secunderabad, Pay and Accounts Officer (General Reserve Engineering Force), Pune and Pay and Accounts Officer (Other Ranks), Bombay Engineering Group, Kirkee revealed overpayments and short recoveries aggregating to Rs 71.85 lakh. The overpayments and short recoveries related to pay and allowances, interest on House Building Advance and other advances, Licence Fee, furniture charges, Travelling Allowance, Daily Allowances, Field Allowances etc. Controller of Defence Accounts (Officers) and the respective Pay and Accounts Officers accepted the recovery of the entire amount.

**Audit of CSD accounts revealed overpayment of Rs 1.31 crore in purchases**

In another case, test check of the accounts maintained by Controller of Defence Accounts, Canteen Stores Department revealed an overpayment of Rs 1.31 crore on account of payment of Sales Tax, non recovery of liquidated damages, Excise duty and non-implementation of price revision. On being pointed out by Audit, Controller of Defence Accounts recovered the entire amount between March 1997 and November 1997.

**Inadequate scrutiny and supervisory failure contributed to overpayment of Rs 2.02 crore**

Overpayments in above cases took place due to inadequate scrutiny at the time of preparation of bills and supervisory failure at the time of passing of the bills for payment. Stringent measures need to be taken to avoid such failure in future.

The matter was referred to the Ministry in July 1998; their reply was awaited as of January 1999.

## 20. Failure to computerise Ammunition Depots

**Failure to operationalise the computer system for ammunition inventory management functions before its obsolescence led to waste of Rs 21.88 lakh spent on its procurement. In addition, Central Ammunition Depot Pulgaon made an overpayment of Rs 9.25 lakh to the firm.**

Time is the essence of the contract in any electronic data processing system due to fast obsolescence of the hardware and, therefore, of the software. If that time is spent in setting up the facilities, test run, etc the money spent is a waste. Maximising the period of use of computer system by simultaneously procuring hardware and software is of paramount importance. Failure of the Ministry in not doing so and paying 20 *per cent* advance of the contract cost for all four ammunition formations, although the system was to be installed initially in only one Depot, resulted in waste of the entire amount of Rs 21.88 lakh spent on purchase of computers besides overpayment of Rs 9.25 lakh.

For computerisation of inventory holding functions in Ordnance/Ammunition Depots, the Ministry sanctioned in February 1989 procurement of computer systems for four ammunition formations including Central Ammunition Depot Pulgaon at a cost of Rs 68.60 lakh amended to Rs 72.42 lakh in August 1990. The Ministry concluded an agreement in August 1989 with Uptron India Ltd for hardware, system software, application software and site preparation at the four formations at a cost of Rs 73.81 lakh. The firm was to submit all bills for payment to Deputy Director General Ordnance Services at Army HQ, who was to forward it to Central Ammunition Depot.

**CAD Pulgaon paid advance of Rs 9.25 lakh even for three formations where computerisation did not take place**

Initially, the electronic data processing system was to be set up in Central Ammunition Depot, Pulgaon only. Yet, it paid advance at 20 *per cent* of the total contract value, which included the cost of computerisation in other three formations, which were planned for computerisation later. Eventually, the computerisation in three formations was not taken up at all. Thus, Central Ammunition Depot made overpayment of Rs 9.25 lakh to Uptron, being 20 *per cent* of the cost of computerisation in them, which was never taken up. Central Ammunition Depot made further payment to Uptron for computer systems supplied to them, but did not adjust the excess advance paid for other formations.

**The firm failed to make the computer functional and develop software**

The computer system was installed by the firm at Central Ammunition Depot in January 1991. Central Ammunition Depot made a payment of Rs 21.88 lakh including advance for the systems supplied to them and site preparation, etc. The system has, however, remained non-operational since installation due to defects. Director General (systems) who is responsible for computerisation in the Army, had recommended to waive pre-delivery factory inspection of computers, although it was provided in the agreement. The firm failed to make the computer system functional. Further, against nine application software modules which were to be developed, the firm developed only two. The

**The computer became obsolete in June 1996, even before it could be used**

application software too were non-operational. Central Ammunition Depot informed Army Headquarters in June 1996 that the system had become obsolete.

Thus, the computer system purchased in 1991 at Rs 21.88 lakh became obsolete even before it could be put to use rendering the entire expenditure as waste. Besides, negligence by Central Ammunition Depot resulted in overpayment of Rs 9.25 lakh.

**The objective of computerisation of inventory management was not achieved**

The Ministry, while accepting the facts, stated in January 1999 that the system became useless for the intended purpose of inventory functions of Central Ammunition Depot.

## 21. Response of the ministries/departments to Draft Audit Paragraphs

On the recommendations of the Public Accounts Committee, Ministry of Finance (Department of Expenditure) 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 Comptroller and Auditor General 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. It was brought to their personal notice that since the issues were likely to be included in the Audit Report of the Comptroller and Auditor General of India, which are placed before Parliament, it would be desirable to include their comments in the matter.

Draft paragraphs proposed for inclusion in the Report of the Comptroller and Auditor General of India for the year ended March 1998 : Union Government (Defence Services), Army and Ordnance Factories : No. 7 of 1999 were forwarded to the Secretary, Ministry of Defence between June 1998 and December 1998 through Demi Official letters.

The Secretary of the Ministry of Defence did not send replies to 25 Draft Paragraphs out of 47 Paragraphs in compliance to above instructions of the Ministry of Finance issued at the instance of the Public Accounts Committee. Thus, the response of the Secretary of the Ministry could not be included in them.

| *Ministry/ Department* | *Total No. of Paragraphs on Ministry/ Department included in Audit Report* | *No. of Paragraphs on which reply not received from Secretary* | *Paragraph Number* |
|---|---|---|---|
| **Ministry of Defence** | **47** | **25 (excluding Paragraph 1 to 11 of Chapter I)** | **12, 13, 15, 16, 17, 19, 22, 23, 24, 25, 26, 28, 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 46, 47 and 48** |

## 22. Follow up on Audit Reports

**Despite repeated instructions/recommendations of the Public Accounts Committee, the Ministry did not submit remedial Action Taken Notes on 187 Audit Paragraphs.**

**Action Taken Notes are to be submitted within four months of placing the Report on the Table**

In their Ninth Report (Eleventh Lok Sabha) presented to the Parliament on 22 April 1997, the Public Accounts Committee recommended that Action Taken Notes 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. Meetings were also held in August and December 1998 under the Chairmanship of Secretary, (Expenditure) to ensure timely submission of Action Taken Notes and to review the position of pending Action Taken Notes.

**The Ministry failed to submit Action Taken Notes on 187 paragraphs**

Review of outstanding Action Taken Notes relating to Army as of December 1998 revealed that the Ministry failed to submit Action Taken Notes in respect of 187 Paragraphs included in the Audit Reports upto and for the year ended March 1997 as per Annexure I. Of these, 60 paragraphs pertained to the Audit Reports upto and for the year ended March 1993.

The matter was referred to the Ministry on 08 January 1999; their reply was awaited as of 18 February 1999.

# CHAPTER III : ARMY

## 23. Development of Multi Barrel Rocket Launcher System (Pinaka)

### *Highlights*

- **Multi Barrel Rocket Launcher named "Pinaka" with adequate range and speed of operation is an essential requirement in modern artillery warfare. Ministry's plan of 1981 to induct regiments equipped with this launcher from 1994 remains only a distant possibility even as late as 1998. Far from reaching the production stage, DRDO was yet to develop the various critical components of the system despite an expenditure of Rs 42.45 crore against the original sanction of Rs 26.47 crore and revised sanction of Rs 44.51 crore. The re-revised expected date of completion of development is end 2000 with re-revised cost of around Rs 80 crore.**

- **Only seven out of the 29 General Staff Qualitative Requirements had been met in the trials. Some of the Qualitative Requirements, which had not been fully met, viz range, area that can be neutralised, fire power, loading time of salvo and deployment time are crucial for the desired level of performance of "Pinaka". Of all parameters, targets in depth are likely to be beyond reach because of lower range and the system is likely to be vulnerable.**

- **Development and selection of the launcher vehicle was yet to be completed. The loader-cum-replenishment vehicle, which is used for loading the launcher with two salvos within four-five minutes, was yet to be proved despite splitting it into two separate vehicles for loading and replenishment respectively. The combined vehicle took up to 40 minutes to load one salvo in place of the designed four-five minutes.**

- **Further, the development of command-post vehicle also got delayed due to selection of an inappropriate chassis, which did not match the mobility of the launcher vehicle. Thus, all the three important vehicles, necessary for launching the rockets, loading and replenishment and command had not been developed even after more than 11 years of sanction by the Ministry.**

- **Against the requirement of eight types of warheads for the rockets, Armament Research and Development Establishment and High Energy Material Laboratory had developed only three types. Even out of these, one was not acceptable to Army.**

### *23.1 Introduction*

Multi Barrel Rocket Launcher System, is a state of the art weapon for destroying/neutralising enemy troop concentration areas, communication centres air terminal complexes, gun/rocket locations and for laying mines by firing rockets with several warheads from launcher vehicle. High operational mobility, flexibility and accuracy are the major characteristics, which give Multi Barrel Rocket Launcher System an edge in modern artillery warfare.

Army felt the need for a weapon system which could soften or defeat targets between a certain range. The Ministry sanctioned two competence build up projects in 1981 for Rs 1.94 crore. Army formulated their General Staff Qualitative Requirement for the system in July 1983. They planned to induct certain number of regiments into service at the rate of one regiment per annum, equipped with the system, from 1994 onwards so that the existing system which had range limitation of 20 km could be replaced with the latest state of the art system. The Ministry issued sanction in December 1986 to develop the system at Rs 26.47 crore excluding cost of manpower. The development was to be completed in December 1992.

### *23.2 Scope of Audit*

A review was conducted by Audit during June and July 1998 covering various activities relating to the development of Pinaka through a test check of records in the Project Implementing Agency.

### *23.3 Organisational set up*

The Ministry nominated Armament Research and Development Establishment as System Coordinator for execution of the project in association with seven other laboratories of Defence Research and Development Organisation, of which, Vehicle Research and Development Establishment, High Energy Material Research Laboratory and Electronics and Radar Development Establishment were major participants.

The Ministry entrusted the monitoring of the project to a two tier management system viz,

- Steering Committee with Scientific Advisor to Raksha Mantri as Chairman and

- Project Management Committee with Director Armament Research and Development Establishment as Chairman.

The Steering Committee had representatives from the Ministry of Defence, including Defence Finance, Ordnance Factory Board, Defence Research and Development Organisation and the Army. The Project Management

Committee included representatives from the participating laboratories, the Army, Ordnance Factory Board and Defence Finance. While no periodicity was fixed for the Steering Committee to meet, the Project Management Committee was required to meet once in every six months.

### *23.4 Scope of project*

As part of the development, Defence Research and Development Organisation was to fabricate:

(i) Seven launcher vehicles for launch of rockets, of which six were to be supplied to the Army for user trials and subsequent use.

(ii) Three replenishment-cum-loader vehicles including two for the Army's user trials.

(iii) One command post vehicle for command and control.

(iv) 500 complete rockets with different warheads including 200 for user trials to meet the General Staff Qualitative Requirement.

The General Staff Qualitative Requirement prescribed that the system should attain a certain maximum range and the circular error probability should not exceed 1 to 2 *per cent* of range. The system was to incorporate a twelve tube cluster configuration capable of firing a salvo in five to six seconds and neutralise the specified area by a salvo from six launchers. The entire operation of loading of one salvo from the replenishment vehicle to the launcher was required to be completed within four to five minutes. Eight types of warhead for different target effects were to be developed. The fabrication and delivery of different components of the system were to match User Trials to be conducted in two phases to be concluded by December 1993.

### *23.5 Development of launcher System*

**Despite the advice to concentrate on a chosen route, ARDE procured three different types of launchers**

Launcher vehicle formed part of the complete system, for launching the rockets from launcher pods. The Project Management Committee decided in April 1987 to configure the launchers on Kolos-Tatra chassis. Armament Research and Development Establishment entered into three development contracts, one each with M/s Larsen and Toubro Limited, M/s Tata Electric Company and M/s Marshall & Sons Company (Marshall) during March/May 1989 for fabrication and supply of three different types of launchers on Kolos Tatra chassis involving different technologies as under:

- With Larsen & Toubro Limited for fixed price of Rs 1.95 crore for two launchers consisting of all electric servo drive with pulse width modulated controller,

- With Tata Electric Company for two launchers with all electric servo drive with thyristor based controller at a fixed price of Rs 1.89 crore,

- With Marshall for one launcher with electro hydraulic servo drive at fixed price of Rs 58.07 lakh.

### *23.5.1 Contract with Larsen & Toubro*

**Failure to provide exchange rate variation in the contract delayed the development of launcher**

Under the contract of March 1989, Larsen & Toubro Limited was to deliver the first prototype by March 1991, and the second prototype within 18 months after clearance of the first prototype. Larsen & Toubro Limited prior to signing of the contract had asked for inclusion of a clause for reimbursement of foreign exchange rate variation, which Armament Research and Development Establishment did not include despite assuring the firm to include it at a later date. Subsequently, Defence Research and Development Organisation Headquarters refused to agree to its inclusion and ordered short closure of contract with Larsen & Toubro Limited in February 1992. Consequent to the firm filing a suit, Defence Research and Development Organisation reversed its decision in January 1993 and enhanced the cost to Rs 2.24 crore to cater to the foreign exchange rate variation. The first prototype was delivered by the firm in October 1996. Thus, reluctance of Armament Research and Development Establishment to provide for permissible variation due to exchange rate fluctuation led to a situation whereby the development was delayed by over five years.

### *23.5.2 Delivery of launchers*

**ARDE's indecision on clearance of first launcher supplied in October 1996 stalled the production of the second launcher**

The first prototype launcher delivered by M/s Larsen and Toubro Limited in October 1996 met only 85 *per cent* of the functional requirement due to problems with elevation accuracy, jamming of drives and documentation. Armament Research and Development Establishment paid proportionate amount of Rs 90 lakh in March 1997 to the firm. The firm expressed inability to rectify the problem of elevation accuracy but rectified the remaining problems. The second prototype for which Rs 29.25 lakh was advanced in May 1989 and the chassis costing Rs 20 lakh for which was issued in February 1994, has not been delivered as of June 1998, since Armament Research and Development Establishment had not given the approval for its production. Armament Research and Development Establishment stated, in July 1998 that a committee was examining the matter regarding its clearance.

**The launcher developed through TEC did not fully meet the requirements**

M/s Tata Electric Company delivered the first prototype launcher in March 1994 and second in July 1995. Both the prototypes failed to meet users requirement. Further modifications were carried out under a separate contract in February 1996 for Rs 22.83 lakh with the same firm. Even then requirements of racks for fire arms, protection of rockets from exhaust fumes, two way audio communication and standby power were still not met.

**Marshall failed to develop the launcher and the semi-finished launcher was accepted by ARDE**

Marshall failed to deliver the prototype. In March 1997, Armament Research and Development Establishment accepted the launcher in a semi-finished state with ex-post facto approval of the Ministry. The semi-finished launcher was lying idle with Armament Research and Development Establishment. This has resulted in an infructuous expenditure of Rs 75.78 lakh which included Rs 18 lakh towards the cost of the chassis.

### *23.5.3 Selection of launcher type*

**The type of launcher to be adopted had not been decided as of June 1998**

While development of launcher with the help of three firms with a view to adopt the most suitable technology was considered desirable by ARDE, they were yet to decide on the prototype and technology to be adopted as of June 1998, i.e., eleven years after the appropriate chassis was selected. Scientific Adviser to Raksha Mantri constituted a committee in 1997 for deciding the launcher for Phase II user trials. The committee had not taken decision as of June 1998.

### *23.6 Development of warheads*

**Only two out of the eight types of warheads required by the Army were successfully developed**

The Army in its General Staff Qualitative Requirement had specified the requirement of eight types of warheads for the rockets to be supplied in batches for the Phase I and Phase II trials. Armament Research and Development Establishment in association with High Energy Material Research Laboratory developed and tested three types of warheads. Of these, incendiary warhead developed at a cost of Rs 19.50 lakh was unacceptable to users due to its composition, leaving only conventional blast cum fragmentation warhead and dummy warhead for use. Even out of the two warheads successfully tried, one is only a dummy. The development of warheads was, therefore, way behind the schedule. Armament Research and Development Establishment stated in July 1998 that the remaining warheads were planned for Phase II of the project.

### *23.7 Loader-cum-replenishment vehicle*

**Incorrect assessment of parameters by ARDE at design stage led to redundancy of LCR costing Rs 34.15 lakh**

The scope of the project included development and fabrication of loader-cum-replenishment vehicle to enable the transportation of four pods of six rockets each and replenish the stock in the launcher within four to five minutes. Vehicle Research and Development Establishment designed the Loader-cum-Replenishment Vehicle and fabricated it through a private firm in August 1993 on a Tatra chassis supplied to the firm. The total cost of the Loader-cum-Replenishment Vehicle including cost of chassis and subsequent modifications were Rs 34.15 lakh.

In the trials conducted in June 1996 the users found that it did not meet the baseline requirements, such as ability to replenish two salvos within 4 to 5 minutes. Loader-cum-Replenishment Vehicle could carry only one salvo and the loading time extended up to 40 minutes due to the low lifting capacity of the crane, which was attributable to change in the weight of the rocket pod from 2.5 tonne to 2.8 tonne. The Army agreed to a proposal made by Armament Research and Development Establishment in September 1996 to develop a loader vehicle with 3.5 tonne crane capable of carrying two pods and another replenishment vehicle with four pods as against a single loader-cum-replenishment vehicle which can carry four pods.

Vehicle Research Development Establishment designed the new vehicle and fabricated two loader vehicles in September 1997 at a cost of Rs 61.59 lakh on Tatra chassis procured in December 1996 at a cost of Rs 41 lakh. The suitability of the newly fabricated loader vehicle was yet to be proved.

Thus, one of the most important components of the system remains to be developed even as of June 1998.

### *23.8 Command post vehicle*

**Selection of unsuitable chassis led to avoidable expenditure of Rs 9.36 lakh and delay in the development of Command Post vehicle**

The General Staff Qualitative Requirement stipulated requirement of a command post vehicle of equal mobility as the launcher with good cross-country performance including sandy terrain for providing logistic support. The Project Management Committee selected Tata 4 ton chassis in August 1989. The Tata chassis was procured in October 1994 at a cost of Rs 5.77 lakh by the Vehicle Research and Development Establishment and superstructure fabricated on it at a cost of Rs 3.59 lakh in April 1996.

It, however, failed to achieve equal mobility with the launcher vehicle configured on Tatra chassis and it was therefore decided in September 1996 to develop another command post vehicle on a Tatra chassis. Accordingly, Vehicle Research and Development Establishment procured a chassis for Rs 41 lakh in December 1996 and placed it with Electronic Research and Development Establishment for fabrication at an estimated cost of Rs 80 lakh. Thus, injudicious decision of fabricating the command post vehicle on a Tata chassis while the launcher was fabricated on "Tatra" chassis led to delay in development of the command post vehicle.

### *23.9 Trials and evaluation of Pinaka*

**Only seven out of 29 parameters were met in trials of June 1997**

Armament Research and Development Establishment in association with the participating laboratories conducted 32 flight trials between September 1988 and May 1998, initially with a single tube launcher developed under competence build-up projects and later with the launchers developed under this project. First 12 trials were conducted for propulsion unit evaluation and performance. After proving launcher prototypes, performance of launcher and salvo firing capability was demonstrated to users in June 1996. Phase-I user trial was conducted in June 1997. In all 279 rockets were fired during these trials. In the user trials conducted in June 1997, only seven of the 29 parameters, indicated in the General Staff Qualitative Requirement were achieved fully. Defence Research and Development Organisation was not yet sure about achieving some of the important parameters, like range, area of neutralisation, fire power, loading time of salvo and deployment time. Some of the parameters like traverse, hand operated traverse and elevation of the launcher, gradability of vehicles, pneumatic locking of traverse and elevation, were below the Qualitative Requirement. Defence Research and Development Organisation ruled out further improvement on technical grounds. Thus, the system developed after a delay of over four years from the scheduled date did not meet the users' requirement formulated in 1983. Fresh user trials were expected in December 1998.

### *23.10 Range*

**Army made an operational compromise by diluting range parameter**

The rocket developed by Armament Research and Development Establishment could achieve only 82 *per cent* in terms of range. For achieving the desired range the configuration of rocket will have to be changed from 214 mm calibre to 240 mm. The Army had stipulated that the calibre of rocket could be anywhere between 210 and 250 mm. Armament Research and Development Establishment erred in the decision to design the system around 214 mm calibre. The Army agreed to accept the system by reducing the range to ensure early availability of the system. Armament Research and Development Establishment, however, could not deliver the system even with the reduced range as of December 1998. With a lower range, the survivability of the system would be lowered and targets in depth would be beyond reach.

### *23.11 Development of propellant sets*

**HEMRL accepted substandard propellants worth Rs 82 lakh from Ordnance Factory Itarsi**

The propellant sets developed by High Energy Material Research Laboratory for rockets were produced at Ordnance Factory Itarsi which invested Rs 29.34 lakh to create necessary infrastructure for undertaking their production. 500 sets were produced by the Ordnance Factory until May 1998. Of these 336 were received, while 43 sets costing approximately Rs 82 lakh were rejected in acceptance tests by High Energy Material Research Laboratory. High Energy Material Research Laboratory stated, in June 1998, that the rejected sets, though unsuitable for flight trials, would be used for various other activities like evaluation of nozzles, ignitors, fuzes etc.

### *23.12 Expenditure*

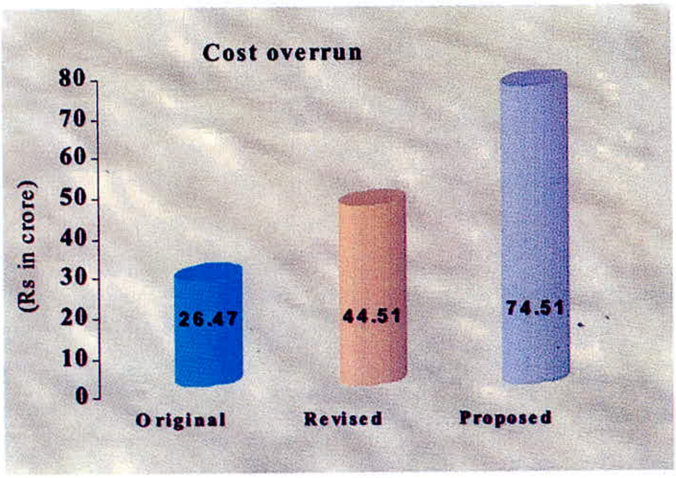
The total expenditure booked by the various laboratories on this project till end of March 1998 was Rs 36.82 crore against revised sanction of Rs 44.51 crore which consisted primarily of expenditure on material and equipment. The total expenditure did not include Rs 5.63 crore spent by High Energy Material Research Laboratory on procurement of propellants.

### *23.13 Time/cost overrun*

**The project was expected to be completed by December 2000 at Rs 74.51 crore representing an increase of Rs 48.05 crore**

Despite the fact that the staff project was preceded by competence build up projects, Armament Research and Development Establishment sought periodical extensions. It admitted in October 1997, that it was due to incorrect estimation of all critical and technological issues during competence build up stage. As per its latest proposal additional fund of Rs 30 crore would be required to complete the project by December 2000.

As the proposed additional funds would have effect of raising the cost of the project to Rs 74.51 crore thereby necessitating approval of Cabinet Committee on Political Affairs, the Ministry decided in December 1997 to grant provisional extension up to December 1998, pending demonstration of the range and accuracy for which additional funds were not required.




### *23.14 Ineffective monitoring*

The Steering Committee met only on six occasions during October 1987 to June 1995 and did not meet thereafter. Although the Project Management Committee was to meet atleast once in six months, it met only on ten occasions against 23 half yearly meetings during April 1987 to May 1998.

### *23.15 Idling of Tatra chassis*

Vehicle Research and Development Establishment procured 12 Tatra chassis from Bharat Earth-Movers Limited for fabrication of launcher, loader-cum-replenishment and command post vehicles under four supply orders placed between February 1988 and December 1996 at a total cost of Rs 3.03 crore. Of these, two chassis were held in Vehicle Research and Development Establishment ever since their procurement for periods ranging up to seven years. The procurement of four chassis in December 1996 without taking note of the availability of two chassis which were already lying idle was unjustified and resulted in avoidable procurement of chassis at a cost of Rs 82 lakh. Further these would undergo deterioration in storage affecting their operational life. Vehicle Research and Development Establishment stated in July 1998 that, in future, procurement would be made in such a way that chassis are used within one or two years of their receipt.

### *23.16 Questionable expenditure against sanction for fire control computer*

Armament Research and Development Establishment had developed a Fire Control Computer and tested them in November 1994. It obtained sanction of the Ministry in May 1995 to develop another Fire Control Computer at a cost of Rs 85 lakh. The project consisted of development of five prototypes of rugged computer, hardware for link etc. The entire money sanctioned in May 1995 was spent on procurement of aluminium pod, dummy warhead, launcher tubes, nozzle, assembly, wooden bates for rocket, transportation and such other activities which were not related to development of Fire Control Computer. Armament Research and Development Establishment closed the project in January 1997. The expenditure against the sanction of May 1995 is therefore questionable since the entire amount sanctioned in May 1995 was actually used for purposes other than development of Fire Control Computer.

### *23.17 Effect on operational preparedness*

The Army had planned to raise certain number of regiments at the rate of one regiment per annum from 1994 onwards, with Multi Barrel Rocket Launcher System. With the slippage in the development of the system by Defence Research and Development Organisation, the Army was yet to accomplish the goal of induction of this system into service which was stated to be an essential requirement in operation. The year in which the first regiment would be raised is nowhere in sight.

The matter was referred to the Ministry in November 1998; their reply was awaited as of January 1999.

## 24. Negligence in framing terms of supply orders

**One sided terms in supply orders for timber, where all controls were left with the supplier coupled with failure of Directorate General of Ordnance Services to follow up the supplies resulted in the supplier claiming to have disposed of timber at half the price for which Rs 2.23 crore was paid in advance. Even the proceeds of disposal were retained by the supplier.**

Test check of accounts in a Corps HQ disclosed a report from the Deputy Director Ordnance Services to Master General of Ordnance in June 1996, about unilateral disposal of timber meant for supply to Army Ordnance Depots by Nagaland Industrial Raw Material and Supply Corporation Dimapur and retention of the proceeds.

Further scrutiny of documents relating to supply orders in Director General Ordnance Services disclosed that he placed an indent for purchase and supply of Khasipine timber on Directorate General of Supplies and Disposals, who in turn placed two supply orders for 11,240 cubic metre timber at Rs 6.78 crore on the Corporation in May and June 1991.

Examination of the terms of supply orders placed by Directorate General of Supplies and Disposals disclosed that they did not provide for any control by either the Directorate General of Supplies and Disposals or the Directorate General of Ordnance Services as under:

- The supply orders provided for release of 90 *per cent* of the value of the timber on proof of inspection and balance 10 *per cent* on proof of despatch or on the 121st day after inspection whichever was earlier, even if the timber was not despatched.

**Inspection and despatch of timber was left entirely on chief conservator of Forests and supplier respectively**

- Directorate General of Supplies and Disposals and Directorate General of Ordnance Services did not have any control over inspection, since the inspection was to be carried out and certified by an officer from Chief Conservator of Forests, Nagaland.
- The Corporation was responsible for managing railway wagons and despatch of timber to the consignees.
- The Corporation was not responsible for deterioration of timber beyond four months from inspection, if the timber was not despatched due to circumstances beyond their control.

**The State Corporation did not despatch 3650 cubic metre timber**

**They sold the timber without permission and retained the proceeds**

The Corporation did not despatch 3650 cubic metre timber valued at Rs 2.23 crore, for which the payment was already made during August 1991 to November 1992 in terms of the contract, until 1996. One of the Corps Headquarters despatched an officer for liaison in May/June 1996. He reported that the Corporation did not cooperate. Perusal of documents of the Corporation by him disclosed that they had statedly disposed of the timber at 50 *per cent* of the value due to purported deterioration of the stock without permission of the Directorate General of Ordnance Services. The Corporation did not deposit the proceeds with the indentors. Besides, 21 military credit notes for wagons were also not returned by the Corporation and their misuse cannot be ruled out.

Thus, one sided contract where all controls of inspection, arrangement for wagons, despatch etc. were left with the supplier as also payment of the entire amount even before despatch and failure of Directorate General of Ordnance Services to follow up the despatch of timber led to unverifiable unauthorised disposal by the supplier due to the so called deterioration in condition besides improper retention of the proceeds.

The entire sequence of events highlights non transparent transactions, all of which are not susceptible to verification, besides loss of Rs 2.23 crore of the Union Government funds out of which Rs 1.12 crore has been unauthorisedly retained by the Corporation because of negligence by Directorate General of Supplies and Disposals in framing the terms of supply order and failure of Directorate General of Ordnance Services to follow it up in time.

The matter needs investigation by an independent agency to verify the correctness of facts about inspection, disposal and use of military credit notes. Besides, Ministry should take immediate steps to obtain the sale proceeds from the Corporation alongwith interest at the prevailing rate.

The matter was referred to the Ministry in June 1998; their reply was awaited as of January 1999.

## 25. Unauthorised transfer of defence land

**Defence land measuring 15000 square metres valued at Rs 9.30 crore was unauthorisedly transferred to Mumbai Municipal Corporation by local Naval authorities without Government sanction.**

Defence land cannot be transferred to any other agency by any subordinate authority without sanction of the Ministry. It is the responsibility of Naval Dockyard authorities at Mumbai to maintain and safeguard defence land at Naval Civilian Housing Colony, Powai, Mumbai.

**Board of Officers unauthorisedly decided transfer of defence land measuring 15000 sq. metres to Mumbai Municipal Corporation**

However, under orders from HQ, Western Naval Command of November 1989, Naval Civilian Housing Colony convened a Board of Officers in November 1989, under chairmanship of Commander Y.S.Kulkarni, which was attended by representative of Garrison Engineer Bhandup, Mumbai Municipal Corporation and Estate Officer Naval Civilian Housing Colony, Powai. The Board unauthorisedly decided to transfer defence land measuring 15x1000 sq. metres along Adi Shankaracharya Road to Mumbai Municipal Corporation for widening of the road. The board, *interalia*, also decided that the Corporation would be permitted to demolish the existing wall of 100 feet length for fanning the road and that the Corporation in lieu of the land transferred would permit additional Floor Space Index to Navy. The Garrison Engineer excluded this area while constructing the boundary wall of Naval Civilian Housing Colony, Powai.

**DEO Mumbai Circle questioned the regularity and wisdom of transfer of land without Government sanction**

Defence Estates Officer, Mumbai circle brought to the notice of Western Naval Command in August 1995, the fact that this piece of land had been left out of the boundary wall constructed by Garrison Engineer and that some construction activities were taking place on this land. He advised them to take immediate steps for safeguarding the defence land and followed it up with another demi official letter to Command Works Officer. He brought to the notice of Command Works Officer of HQ Western Naval Command that the Corporation was adopting a commercial approach with Defence Services and was insisting on payment of rather huge amount of over Rs 37 crore for only 3503 sq. metres of land and they always charged 10 *per cent* of the cost of acquisition of defence land as their fees. In view of this, he questioned the regularity and wisdom of transfer of prime land without Government sanction free of cost to them.

Instead of taking steps to stop the unauthorised transfer, Flag Officer Commanding-in-Chief, Western Naval Command, Mumbai adopted a rather defensive stand and wrote to the Defence Estates Officer Mumbai in December 1995 that the land had not been formally handed over to the Mumbai Municipal Corporation and that the Corporation had encroached upon the defence land. Thereafter, the Defence Estates Officer wrote twice to the Western Naval Command in January 1996 and June 1998 on the subject.

The sequence of events disclosed that the officers in Navy and Military Engineer Services, in effect, facilitated the unauthorised appropriation of defence land by the Corporation as under :

(i) The board of officers instead of recommending to the Western Naval Command unauthorisedly gave authority to the Corporation in November 1989 to appropriate the land.

(ii) HQ, Western Naval Command, to whom the proceedings of the board was endorsed, did not take any action to supersede the unauthorised decision by the board for nine years, thereby providing legitimacy to the patently unauthorised action of the board.

(iii) Garrison Engineer, Bhandup facilitated the unauthorised appropriation by leaving out the piece of land in question while constructing the boundary wall in November 1995 by excluding that area from the boundary of the land.

(iv) Defence Estates Officer, Mumbai circle did not inspect the site for six years since the decision of the board in November 1989 despite being aware of the irregular decision of the board in December 1989 itself.

This calls for high level inquiry for fixing the responsibility.

The matter was referred to the Ministry in August 1998; their reply was awaited as of January 1999.

## 26. Excess manning by attachment of service personnel

**Deployment of Junior Commissioned Officers/Other Ranks by Director General of Electrical and Mechanical Engineering in his office against unsanctioned posts resulted in inadmissible expenditure of Rs 3.21 crore during 1995-97.**

Director General of Electrical and Mechanical Engineering, New Delhi has been consistently carrying staff much in excess of the sanctioned strength of

Junior Commissioned Officers/Other Ranks in his office by transferring them from other units as under :-

| | Clerks | | Drivers | | Technical | | Others PA/Steno/Librarian/ Daftry | |
|---|---|---|---|---|---|---|---|---|
| | Sanctioned | Posted over and above the sanctioned strength | Sanctioned | Posted over and above the sanctioned strength | Sanctioned | Posted over and above the sanctioned strength | Sanctioned | Posted over and above the sanctioned strength |
| 1995 | 81 | 26 | - | 28 | 18 | 49 | 33 | 4 |
| 1996 | 81 | 29 | - | 26 | 18 | 37 | 33 | 4 |
| 1997 | 81 | 27 | - | 18 | 18 | 42 | 33 | 4 |

**DGEME transferred large number of JCOs/ORs from field units to his office against unsanctioned posts**

The above table would disclose that not only Director General of Electrical and Mechanical Engineering engaged between 26 to 29 clerks over and above the sanctioned strength of 81 by regular re-deployment from other units, but also engaged between 18 to 28 drivers during 1995-97 though sanction for even a single post of driver at New Delhi did not exist. Similarly, the number of persons in technical category posted during this period exceeded the sanctioned strength of 18 by 37 to 49 every year.

The excess improper deployment from other units led to excess manpower in the office of Director General of Electrical and Mechanical Engineering, even after adjustment for shortage of non-gazetted civilian staff in other categories, the excess was between 91 to 107 during 1995-97.

Thus, on one hand the decision of Director General of Electrical and Mechanical Engineering to deploy service personnel from other units deprived those units of the sanctioned strength of personnel and on the other, the Director General of Electrical and Mechanical Engineering incurred unauthorised expenditure on the pay and allowances of the persons working against un-sanctioned posts.

Director General of Electrical and Mechanical Engineering stated in February 1998 that the civilian staff provided by the Chief Administrative Officer were not technically qualified and were not conversant with technical language and terminologies used in the Corps.

The contention of Director General of Electrical and Mechanical Engineering is not acceptable as it was incumbent upon the Chief Administrative Officer and Director General of Electrical and Mechanical Engineering to provide adequate training to the civilian staff to enable them to understand the technical terminology. Rather than providing training to civilian staff, Director General of Electrical and Mechanical Engineering increased the strength of Junior Commissioned Officers/Other Ranks through regular attachment from the field units and kept large number of non-gazetted civilian posts consistently vacant.

**Improper deployment resulted in expenditure of Rs 3.21 crore over and above authorisation**

The improper deployment of the Junior Commissioned Officers/Other Ranks from the field units against unsanctioned posts resulted in inadmissible expenditure of Rs 3.21 crore during 1995-97.

The matter was referred to the Ministry in July 1998; their reply was awaited as of January 1999.

## 27. Procurement of radars without vital part

**Radars valuing Rs 94.92 crore were received without a vital equipment, which impaired the accuracy of the system. One radar valued at Rs 7.91 crore found defective within warranty was yet to be repaired.**

Director General Ordnance Services did not procure muzzle velocity units along with radars in 1996-97 which had greatly impaired the accuracy of the weapon system. Muzzle velocity unit calculates the velocity of the shell to be fired with the gun with the help of the radar and computer attached to it. These were yet to be provided as of June 1998. As a result high value procurement of Rs 94.92 crore has not yielded the desired result.

Director General Ordnance Services placed an indent for 28 fly catcher radars on Bharat Electronics Ltd in January 1995 for delivery during 1996-98. The latter supplied 12 radars costing Rs 94.92 crore to an Air Defence Regiment between October 1996 and May 1997 and commissioned them during the same period. The warranty period of these radars was one year from their date of commissioning.

**One radar is defective even after expiry of warranty period**

Seven out of 12 radars commissioned in October 1996 were found to be defect prone since commissioning, which adversely affected training on them. Out of these, six radars could be repaired by Bharat Electronics Limited in July and November 1997 and one radar valued at Rs 7.91 crore was still defective as of June 1998.

**Radars were procured without its vital part thereby the accuracy of the system was affected**

The user reported that muzzle velocity unit used for calculating the muzzle velocity of the shell to be fired with the guns was not acquired along with the radars. In the absence of muzzle velocity unit, velocity of the shell to be fired cannot be determined accurately with reference to the position of the target in the air. Its absence had greatly impaired the accuracy of the weapon system.

Army HQ stated in June 1998 that the muzzle velocity unit was not procured ex-import since indigenous production of the unit was to be resorted to. They added that indigenisation of muzzle velocity measuring unit could not materialise over the years and decision would be taken for procurement of a suitable equipment.

The Ministry stated in November 1998 that one defective radar was not considered as commissioned and non-provisioning of the muzzle velocity equipment did not have a very major adverse impact on the performance of the radar. Ministry's contention was not tenable as the defective radar was commissioned in October 1996 itself and the user unit had reported that non-provision of the muzzle velocity equipment indeed impaired the accuracy of the weapon system.

## 28. Non-recovery of advance

**Delay in conclusion of risk purchase contract by Director General Ordnance Services resulted in non-recovery of extra expenditure of Rs 5.53 crore from the defaulting firm besides non-recovery of advance of Rs 1.42 crore for eight years benefiting the firm by Rs 2.04 crore towards interest thereon.**

**Risk purchase contracts are required to be concluded within one year of the breach of contract**

General conditions of contracts for procurement of stores *inter-alia* stipulate timely determination of the date of breach which is crucial for making valid risk purchase, since the risk purchase clause is valid for only 12 months after the date of breach. Failure to cancel the orders in time so that risk purchase contracts could be entered into within the validity period resulted in non-recovery of extra expenditure of Rs 5.53 crore from the defaulting firm. Besides, advance of Rs 1.42 crore was also outstanding against the firm.

**Orders placed for supply of jackets and trousers in 1990**

Director General Ordnance Services placed orders for supply of 6.85 lakh combat jacket at Rs 84.00 each and 3.57 lakh combat trousers at Rs 104.35 each on Rehabilitation Industries Corporation Limited, Calcutta, in July 1990 and August 1990. An interest free advance of Rs two crore was paid to them during 1990-91.

The Director General Ordnance Services extended the scheduled date of delivery by one year from March 1991 to March 1992. Even after extension the firm supplied only 18973 jackets. Trousers were not supplied at all. Rs 1.42 crore remained outstanding against the firm as of January 1999. The firm neither supplied the items nor refunded the outstanding advance. Even though no further supplies were received till March 1992, Director General Ordnance Services neither cancelled the orders nor extended delivery period further. The risk and cost purchases ought to be made within one year of cancellation of orders or the last date of the delivery period. Director General Ordnance Services did not place risk and cost order within 12 months of the extended delivery period.

**The firm failed to supply but risk and expense contracts were concluded at an extra cost of Rs 5.53 crore after validity period.**

Director General Ordnance Services cancelled half of outstanding quantities i.e. 3.33 lakh jackets and 1.88 lakh trousers only in September 1993, 18 months after the end of the extended delivery period at the risk and cost of the defaulting firm. The validity of the risk purchase had already expired in March 1993. He placed risk and cost purchase orders in January 1994 for 3.33 lakh jacket and 1.88 lakh trousers at a total cost of Rs 10.30 crore involving an extra expenditure of Rs 5.53 crore. The recovery of risk and cost extra expenditure is, however, doubtful in view of limitation of time. Besides, Director General of Ordnance Services has foreclosed the option for risk and cost purchase of the balance quantity.

The supplier has been holding the advance of Rs 1.42 crore for the last eight years. Director General of Ordnance Services has not obtained the refund of the outstanding advance. The interest benefit to the supplier during the last eight years at 18 *per cent* has been a minimum of Rs 2.04 crore. Thus, not only the supplier has caused extra expenditure due to their failure to supply, they have enjoyed unintended interest benefit of Rs 2.04 crore.

The matter was referred to Ministry in June 1998; their reply was awaited as of January 1999.

## 29. Injudicious acquisition of land under urgency clause

**Land acquired invoking urgency clause at a cost of Rs 2.84 crore remained unutilised for the intended purpose. Air Force wing utilised it for cultivation and diverted 75 *per cent* proceeds to non-Government account.**

Pursuant to requirement projected by the Air Force for technical/ administrative and married accommodation, Defence Estates Officer Delhi Cantonment acquired 368 acres of land under the urgency clause of the Land Acquisition Act at a cost of Rs 2.84 crore. The entire land remained unutilised for over seven years of acquisition. In contravention of Government orders, Station Commander utilised the land for cultivation and diverted major portion of the proceeds to a non-government account, to be used at the discretion of the Station Commander.

**Air Force acquired 368 acre land for Rs 2.84 crore under urgency clause in June 1990**

**Assets valued at Rs 53.63 lakh on this land remained unaccounted**

The Ministry sanctioned acquisition of 315 acres and 53 acres of land in March/September 1989 at a cost of Rs 2.06 crore and Rs 39.03 lakh respectively at a station for the construction of technical/administrative and married accommodation. The Defence Estates Officer paid Rs 2.84 crore for acquisition of land which included Rs 53.63 lakh for cost of assets on it, whose possession was taken over by the Air Force in June 1990. The assets, however, remained unaccounted as of September 1998.

The Station Commander used this land for cultivation with the help of security cleared private labour since acquisition and utilised 75 *per cent* of proceeds for crediting to the non-government account in accordance with Government orders of May 1976. This order, thus, benefitted the unit with substantial funds appropriated to non-government account through agricultural operations on a land which was acquired under urgency clause.

The Ministry superseded its earlier orders of May 1976 about cultivation of defence land in December 1995 making it mandatory to place all such land on which cultivation was intended under the control of the concerned Defence Estates Officer, who was to credit the proceeds to the government account.

In contravention of these orders, the Station Commander unauthorisedly continued cultivation of the land and credited 75 *per cent* of proceeds to the non-government account. The amount unauthorisedly appropriated to the non-government account during January 1996 to December 1997 was Rs 26 lakh.

The Ministry stated in January 1999 that while work on married accommodation project was in progress, the Board of Officers was also in progress to bring the assets on record. Regarding cultivation of the land, the Ministry added that the land was not surplus and cultivation was resorted to provide indepth security and keep the area free from thick wild vegetation paving way for the bird habitat. The Ministry's reply is not tenable as indepth security could have been achieved even by clearing the wild vegetation. The reply did not indicate as to whether Rs 26 lakh unauthorisedly credited to non-government account has been withdrawn and credited to Public Funds.

## 30 Failure to meet operational requirement

**Central Ordnance Depot Delhi failed to provide modification kits for augmentation of water carriage capacity of a formation required to operate in desert even after three years of sanction of modification.**

Commandant Central Ordnance Depot Delhi failed to procure and supply modification kits for fitting water tanks on Shaktiman vehicles used by a formation as of October 1998, even after three years of sanction by Army HQ. While supply of one out of 11 items required for modification was still awaited, another item was procured at the rate of one per unit against requirement of four.

**Army HQ sanctioned augmentation of water carriage capacity of a formation in November 1995**

On the recommendation of General Officer Commanding of a formation, Army HQ sanctioned, in November 1995 augmentation of water carriage capacity of the formation which had operational role in desert terrain. 11 types of equipment were required for fitting on the vehicles to augment the water carriage capacity. Commandant Central Ordnance Depot placed orders for only nine out of 11 items for all 3352 vehicles during June 1996 and June 1997. In addition, Director General Ordnance Services placed orders for front and rear water tanks in February 1997 for 2626 vehicles only.

**COD Delhi and DGOS placed orders for 11 items**

**One of the items had not been supplied as of October 1998**

**COD procured an item at one per kit instead of four per kit**

Supplies of 10 items of stores worth Rs 2.38 crore had materialised as of January 1998. Eleventh item viz. Assembly strap required for modification was still to be supplied as of October 1998. Even out of the 10 items supplied 'packing balata' an item required for the modification, was procured at the rate of one per kit only in place of requirement of four per kit. Sanction for procurement of additional quantity of 8872 was issued as late as August 1998.

**Ministry asked COD in July 1998 to issue the available items to the formation**

Upon being pointed out by Audit, the Ministry stated in October 1998 that Central Ordnance Depot had been asked in July 1998 to issue available items for modification to the formation followed by balance items, on materialisation of supply.

Thus, augmentation of water carriage capacity of the formation having operational role in desert terrain had not been carried out due to lackadaisical management by Central Ordnance Depot and Director General of Ordnance Services even after three years of sanction for modification.

## 31 Under recovery of training charges

**Non-application of the correct rate of recovery in respect of removed/withdrawn cadets resulted in under recovery of Rs 60.95 lakh.**

Admission to Armed Forces Medical College, Pune implies compulsory permanent service liability. Removal or withdrawal from service liability entails refund of cost of training, for which the parent or guardian of the student executes a bond. Failure to revise instructions consequent to extension of free ration facility to pre 1989 entrants resulted in under recovery of Rs 60.95 lakh from 21 cadets.

**Cost of training at AFMC went up to Rs 180 per day from January 1989**

Per capita cost of training of the stipendary students undergoing MBBS course at Armed Forces Medical College was revised to Rs 214 per week from November 1984 plus rent and allied charges, messing etc. All existing students with service liability on the rolls of Armed Forces Medical College were authorised by Government in January 1989 to free rations, free accommodation, allied charges, travelling allowance, uniform, haircutting, washing etc, allowances as prescribed for cadets of National Defence Academy. With the extension of free ration and other allowances the cost of training went up to Rs 180 per day.

Refund clause for removal or withdrawal of students from service liability stipulated in the bond executed by pre-1989 entrants was actual cost of training plus stipend paid to them with interest calculated at the rate in force at the time of removal/withdrawal and for post-1989 cadets it was Rs 180 per day not exceeding Rs 3 lakh.

**Non application of correct rate of recovery from removed/withdrawn cadets resulted in under recovery of Rs 60.95 lakh**

As the benefits of free ration etc. were also extended to pre-1989 entrants continuing on the rolls of the College in January 1989, it was necessary to revise the cost of training in respect of pre-1989 entrants to Rs 180 per day from January 1989 for the purpose of recovery. Failure of the Ministry to issue orders resulted in under recovery of Rs 60.95 lakh from 21 cadets who were removed from or who withdrew from the service liability during the period September 1991 to November 1995.

The matter was referred to the Ministry in July 1998; their reply was awaited as of January 1999.

## 32. Non-utilisation of friction drop hammers

**Two friction drop hammers procured at Rs 48 lakh were not put to intended use. While one hammer remained under utilised due to delay in provision of crane, there was no requirement for another one in the workshop where it was received.**

Two friction drop hammers procured at a cost of Rs 48 lakh remained under utilised/unutilised for 11 years as of December 1998. While one Hammer was lying under utilised with Army Base Workshop, Bangalore due to non provision of crane, another remained idle with Army Base Workshop, Meerut.

Mention was made in Audit paragraph 32 of Report No. 2 of 1989 of the Comptroller and Auditor General of India about non-installation of two friction drop hammers procured for Army Base Workshops at Bangalore and Meerut. In the Action Taken Note Ministry had indicated that instructions had been issued in September 1990 to ensure that necessary civil works connected with installation and commissioning of the friction drop hammer in Army Base Workshop Bangalore would be completed without delay and the Hammer procured for Army Base Workshop Meerut would be disposed of as there was no possibility of its utilisation in that workshop.

**One hammer remained under utilised for lack of essential facility in the workshop**

Further examination of the case revealed that one Hammer was installed in the open in Army Base Workshop Bangalore and work relating to its covered accommodation sanctioned at a cost of Rs 8.25 lakh was completed in April 1993. For handling heavy raw material, finished parts, ensuring safety of heavy jobs, prompt repair/maintenance and optimum utilisation of hammer, Army Headquarters sanctioned 5 ton crane in July 1996. The contract for provision of crane was concluded in June 1998 at a cost of Rs 6.86 lakh with the date of completion scheduled as January 1999. In absence of the crane, the Commandant of workshop stated in June 1997 that the Hammer was being used for small jobs. Thus, even after 11 years of procurement, the facility of forge and foundary was not complete.

The second Hammer received in Army Base Workshop Meerut could not be installed as there was no requirement of the same in that workshop. Presently a proposal to transfer the hammer to Gun Carriage Factory Jabalpur was under consideration as of October 1998.

**The second hammer was awaiting disposal action since its receipt**

The matter was referred to the Ministry in August 1998; their reply was awaited as of January 1999.

## 33. Failure to observe proper issue procedure for batteries

**An Advance Base Ordnance Depot failed to observe first in first out procedure while issuing batteries which rendered batteries costing Rs 38.92 lakh defective.**

Scrutiny of stock account of an Advance Base Ordnance Depot disclosed that a total of 2944 batteries valued at Rs 38.92 lakh received by it, were found defective and were consequently never used. Of these, 1946 were of 1993 make and 998 of 1995 make.

An Advance Base Ordnance Depot received 2672 mechanical transport batteries of 1993 manufacture from Central Ordnance Depot Delhi in 1994 and 998 batteries directly from Nicco Batteries in February 1995.

**Depot did not ensure issue of batteries according to their date of manufacture**

Examination of the documents in Advance Base Ordnance Depot disclosed that it did not establish means to ensure that the batteries of earlier manufacturing year are issued first before issue of batteries of later years of manufacture. Due to absence of the system of marking the dates of issue and dates when these were first put to use, the Depot was not in a position to ascertain whether the batteries developed defect in the period of two years kept without charge or thereafter. It is noteworthy, that the defective condition of batteries kept without charge was attributable to manufacturers up to two years from the date of manufacture.

**Manufacturer did not accept manufacturing defects in batteries**

Large number of defective batteries issued by the Advance Base Ordnance Depot were returned by the units to whom these were issued by it. Many turned defective while in stock with the Advance Base Ordnance Depot. The manufacturers did not accept that the defects were attributable to manufacturing defect. They attributed the defects to long storage.

**Cause of defect was not investigated**

However, defects in 73 *per cent* of 2672 batteries supplied in the first lot and 100 *per cent* of the second lot underscores either overstocking of batteries in Advance Base Ordnance Depot, which resulted in batteries being kept without charge for more than two years from the date of manufacture or serious manufacturing defect in the batteries supplied by this firm, which needs detailed investigation.

The matter was referred to the Ministry in July 1998; their reply was awaited as of January 1999.

## 34. Procurement of substandard electronic teleprinters

**Despite failure of prototype of the teleprinters, Director General Ordnance Services accepted the bulk supply compromising on quality. The teleprinters procured at Rs 36.75 lakh had limited role and a number of them were rendered defective/unserviceable.**

Director General of Ordnance Services did not cancel supply order for electronic teleprinters despite failure of prototype produced by the supplier and accepted 75 teleprinters compromising on quality. The substandard teleprinters procured at a cost of Rs 36.75 lakh had limited role and a number of them became defective/unserviceable.

Teleprinters were inducted in Army in 1986. Director General of Ordnance Services placed a developmental supply order in January 1994 on Goa Telematics Ltd. for supply of 75 electronic teleprinters at a total cost of Rs 36.75 lakh. Another order was placed on Webel Telematik Ltd.on 14 January 1994 for 525 teleprinters. The teleprinters were to be supplied as per firm's specification approved by the Director General Quality Assurance. As per the terms of the supply order, prototypes of the teleprinters were to be submitted to inspecting officer within one month of placement of the supply order subject to confirmation from Director General of Quality Assurance. Supply was to be completed within three months from the date of bulk production clearance.

**Prototype of teleprinter failed in test**

The Controller of Quality Assurance, Bangalore informed Director General Quality Assurance in August 1994 that the prototype had failed in test and the supplier had expressed their inability to carry out further modification.

General Staff Branch stated in September 1994 that there were no plans for further procurement of this equipment and bulk production clearance was not to be given. They added that in case the equipment was not meeting the specification, the supply order be cancelled.

The firm offered 75 teleprinters for inspection in November 1994 and requested Director General of Ordnance Services to ask Controller of Quality Assurance, Bangalore to inspect the units.

**Despite deficient performance of the prototype, the teleprinters were accepted**

During a meeting of the Advisory Committee of Technical Competent Authority chaired by Brig. S.K. Khanna, Deputy Director General (CP) held in March 1995 it was, however, decided to accept the teleprinters for Army for use only in the limited environment of static formations and installations, which would not be affected by a closely located VHF radio set. The Advisory Committee also decided to go for price reduction as considered appropriate by

**Committee's recommendation for price reduction owing to limited capability of teleprinters was not implemented**

Master General of Ordnance, since the teleprinter was meeting the reduced test specification. Yet Master General of Ordnance did not obtain any price reduction.

**17 teleprinters found defective**

The firm supplied all 75 teleprinters to Central Ordnance Depot Agra in August 1995. Out of this, 17 teleprinters were found defective during receipt inspection and on utilisation by the users. These were repaired in August 1996. A Command Headquarters reported in October 1997 that a number of teleprinters supplied by the firm became defective. One field formation reported unserviceability of five teleprinters in July 1997 for want of spares. There were no problems with teleprinters supplied by Webel Telematik Ltd.

The Ministry, while accepting the facts stated in January 1999 that no modification/design change was required to be carried out in the prototype as it had cleared the required tests/evaluation. The contention of the Ministry is not acceptable as the prototypes were accepted on reduced test specification curbing the optimum functional efficiency of the teleprinters.

## 35. Improper sanction and execution of work

**Special repairs at a cost of Rs 30.69 lakh was carried out under urgency clause of a married accommodation for exclusive use of GOC-in-C Western Command at Shimla during his visits, despite availability of suitable accommodation in inspection bungalows and officers messes.**

For providing accommodation to General Officer Commanding-in-Chief Western Command during his visits to Shimla Rs 30.69 lakh was spent on special repairs of a married accommodation at Shimla, despite availability of inspection bungalows and officers messes. In this context, the station commander and sub-area commander issued sanctions for special repairs in disregard of the limits of their financial powers. Ultimately, a covering sanction was issued by General Officer Commanding-in-Chief himself to regularise their unauthorised sanction. Audit scrutiny disclosed the following.

**Station Commander accorded go-ahead sanction, for special repairs to 'Holcomb' beyond limit on his powers**

**Sub Area Commander split the work as it was not within his powers**

(i) A Board of Officers which assembled from 20 October 1995 recommended special repairs at an estimated cost of Rs 14.85 lakh to the building named 'Holcomb' on the ground that Army Commander would use it during his visits to Shimla. Station Commander, Shimla issued go-ahead sanction for special repairs of 'Holcomb' at a cost of Rs 19.00 lakh within four days on 24 October 1995, much in excess of the limit of Rs 2.00 lakh on his financial powers. The work of special repairs was started in November 1995. The Sub Area Commander issued two formal sanctions in January 1996 at Rs 14.85 lakh and Rs 6.88 lakh aggregating Rs 21.73 lakh. The sanction were split to bring them within his financial power of Rs 15 lakh only in each case. This was against the spirit of delegation of financial powers imposing limitations on financial powers of subordinate authorities.

(ii) When the work was nearing completion, a Board of Officers, which assembled on the orders of Station Commander Shimla recommended in November 1996 that the building may be re-appropriated as Station Officers mess, though there were three officers' messes in the Station and the need was never felt before.

**Covering sanction was accorded by GOC-in-C for Rs 30.69 lakh after completion of the work**

(iii) The work of special repairs was completed in January 1997 at a cost of Rs 30.69 lakh and covering sanction was issued by General Officer Commanding-in-Chief in March 1997 as the completion cost exceeded the sanctions by the Sub Area Commander, which were beyond his delegated powers, as brought out in the preceding paragraph.

(iv) The break up of expenditure incurred on special repairs was as follows.

**(Rs in lakh)**

**While renovation etc. were carried out at exorbitant cost, Rs 2.83 lakh was spent on works as directed by Army Commander**

| | |
|---|---|
| Renovation of toilets, kitchen, wood work, flooring, etc | 13.34 |
| Construction of garages, sentry post, etc. | 5.76 |
| Works as directed by Army Commander | 2.83 |
| Repairs to basement | 1.20 |
| Repairs to outhouses, retaining walls and railings | 5.84 |
| Compound light | 0.97 |
| Other works | 0.75 |

It would be obvious from the amount of expenditure that the repairs and renovations were carried out in extravagant manner without consideration of economy in expenditure. Expenditure of Rs 13.34 lakh on renovation of toilets, kitchen etc, Rs 5.76 lakh on garages and sentry post, Rs 5.84 lakh on outhouses and retaining walls, Rs 97,000 on compound lights were all questionable and calls for an investigation. Expenditure of Rs 2.83 lakh on items as directed by Army Commander was not clear.

**The expenditure infringed upon the norms of financial propriety**

(v) After completion of work in January 1997, the Army Commander occupied the building only in December 1997. An expenditure of Rs 30.69 lakh on special repairs incurred by invoking urgency clause was a clear infringement of the norm of financial propriety and was entirely avoidable.

The matter was referred to the Ministry on 3 December 1998; their reply was awaited as of January 1999.

## 36. Non-recovery/overpayment of electricity charges

**Failure to intimate recoveries on account of excess consumption of electricity and payment of electricity charges at commercial rate by Station Commander resulted in loss of revenue/overpayment to the tune of Rs 20.15 lakh.**

Failure of Station Commander to intimate recoveries to Pay and Accounts Officer for units consumed in excess of authorisation and payment of bills at commercial rate instead of at domestic rate for electricity consumed in residential accommodation resulted in under recovery/overpayment as brought out below.

*Payment at commercial rate for domestic consumption*

Himachal Pradesh State Electricity Board tariff stipulates different rates of electricity charges for domestic/non-domestic consumption. The domestic rate continued to be 50 paise per unit since 1993.

**Station HQ paid electricity bills at commercial rate instead of domestic rate**

Test check of electricity bills of residential accommodation for Junior commissioned Officers/Other Ranks, sent by Central Public Works Department to Station HQ, Shimla revealed that Electricity Board charged commercial rate of Rs 1.50 per unit for domestic consumption. This resulted in an overpayment of Rs 16.05 lakh for the period from February 1993 to March 1997. The details for five months namely March, May, June, July and August 1993 were not available. Station Commander paid the bills at commercial rate without verifying the correctness of tariff.

On being pointed out by Audit, the Station HQ stated in November 1997 that action would be taken to obtain refund from the Electricity Board.

*Non-recovery of electricity consumption above the norms*

Married accommodation at Shimla occupied by Army belongs to Ministry of Housing and Urban Development and is maintained by Central Public Works Department. Himachal Pradesh State Electricity Board has provided separate meters in each building/quarter and electricity consumed by Junior Commissioned Officers/Other Ranks is billed and paid to electricity board through Central Public Works Department. Officers and civilians pay their bills direct to the electricity board.

With effect from January 1981, free scales of electricity for Junior Commissioned Officers and Other Ranks living in married accommodation at Shimla were approved by the Station Board of Officers separately for summer and winter seasons. Recovery for consumption of electricity in excess of the scales was to be made from the Individual Running Ledger Accounts of Junior

Commissioned Officers/Other Ranks maintained by the Pay and Accounts Officer concerned.

**Recovery was not effected for consumption in excess of the authorised scales**

The Station Commander failed to intimate recoveries for excess units for 54 months excluding three months during the period February 1993 to October 1997 to the Pay and Accounts Officer resulting in non recovery of Rs 4.10 lakh. Station Commander stated that the return of recoveries for excess consumption could not be floated due to omission and added that action would be taken to effect recovery.

The matter was referred to Ministry in July 1998; their reply was awaited as of January 1999.

## 37. Avoidable extra expenditure in the purchase of leather cloth

**Failure of Director General Ordnance Services to obtain financial concurrence within validity period of the offers for purchase of leather cloth led to retendering and avoidable extra expenditure of Rs 16.94 lakh.**

**Case for financial concurrence was initiated after two months of opening tenders**

**The validity of original tenders lapsed but sanction was not obtained**

In response to tender enquiry for procurement of leather cloth in June 1994 Central Ordnance Depot Kanpur got an offer of all inclusive rate of Rs 79 per metre from Polynova Industries Ltd. Bombay and Rs 58.50 per metre with 35 *per cent* Excise Duty was quoted by Rado Rexine Company Faridabad. The offers were valid upto 27 September 1994 and December 1994 respectively. Central Ordnance Depot requested Director General Ordnance Services on 4 August 1994 to obtain financial concurrence for acceptance of these offers at a cost of Rs 38.46 lakh. The Director General Ordnance Services took up the case with the Ministry for additional funds only on 27 September 1994, when validity of the offer of Polynova had already expired. The firm subsequently extended the validity of the offer up to 31 October 1994. Director General Ordnance Services again failed to obtain financial concurrence before the extended validity period. The Ministry accorded sanction in February 1995. By this time, the validity of both the offers lapsed.

**Delay in obtaining sanction resulted in extra expenditure of Rs 16.94 lakh**

Fresh tenders were invited in August 1995. Director General Ordnance Services procured 48700 metres leather cloth under two supply orders placed in July 1996 on Jyoti Leather Cloth Industries Private Ltd. Bombay and Rado Rexine Company Faridabad at a total cost of Rs 55.40 lakh at Rs 91 per metre plus 25 *per cent* excise duty. This purchase entailed an extra expenditure of Rs 16.94 lakh compared to the rates received in June 1994.

The matter was referred to the Ministry in August 1998; their reply was awaited as of January 1999.

## 38. Failure to administer a risk and expense contract

**Failure to conclude a risk and cost contract in stipulated time resulted in extra expenditure of Rs 15.78 lakh since it could not be recovered from the defaulting contractor.**

**Commandant took four months to cancel a contract after expiry of extended delivery period**

Commandant, Central Ordnance Depot Kanpur concluded a contract in July 1993 with a firm for supply of 28500 metres of cloth duck cotton at Rs 30.70 per metre for supply by August 1993. Since the firm failed to commence supply, the Commandant granted extension of time up to January 1994 on the request of the firm. He granted another extension of time up to 15 July 1994. In the meantime, Commandant placed another order for 7125 metres cloth on this firm in June 1994 under option clause for delivery by September 1994. As the firm failed to supply the entire quantity contracted for even after the second extended date of December 1994 the Commandant cancelled the contract in May 1995 at the risk and expense of the defaulting firm, after four months of extended date of delivery.

**Director General took seven months to accord financial concurrence for risk and expense purchase**

Tenders invited in June 1995 for risk purchase attracted the lowest rate of Rs 75 as against original contracted price of Rs 30.70 per metre. The Commandant approached Director General Ordnance Services in August 1995 for sanction of additional funds. Director General Ordnance Services took more than seven months to decide the case and conveyed his approval in March 1996 directing him to make all efforts to claim extra expenditure/general damages from the defaulting contractor. Director General Ordnance Services, however, overlooked the fact that any risk and expense contract had to be concluded within twelve months from the date of failure/scheduled delivery.

**Extra expenditure of Rs 15.78 lakh became unrealisable due to failure to conclude risk and expense contract in time**

The commandant concluded risk purchase contract in April 1996 with another firm for supply of 35625 metres of cloth at Rs 26.72 lakh. The second firm completed the supply in December 1996, resulting in additional expenditure of Rs 15.78 lakh .

Thus, due to failure of the Commandant and Director General of Ordnance Services to conclude the risk and cost contract within the stipulated time, the extra expenditure of Rs 15.78 lakh due to default of the first contractor became unrecoverable.

The matter was referred to the Ministry in June 1998; their reply was awaited as of January 1999.

# CHAPTER IV – WORKS AND MILITARY ENGINEER SERVICES

## 39. Delay in missile storage accommodation

**Ineffective and negligent works management by a Zonal Chief Engineer of Military Engineer Services frustrate Army's plan for storage of missiles at two field ammunition depots. Military Engineer Services delayed construction of civil works for storage of missiles at both locations by five and seven years respectively. In one case the poor quality leading to seepage has rendered it unfit.**

Zonal Chief Engineer, Military Engineer Services responsible for civil works of Strategic Sector failed to rectify defects in buildings and complete the works of generating set and crane in storage accommodation for missiles at two stations. The civil constructions required to be completed at one station by 1993 were actually completed in 1996 at Rs 3.03 crore without completing the works of generating set and crane, which are essential to use them for storage of the missiles. Army could not utilise accommodation at the other station for storage of missiles due for completion in 1991, but completed in 1996 at Rs 2.63 crore due to seepage from the roof, dampness in the walls and floor and other defects.

***Station I***

**The Ministry sanctioned storage accommodation at Rs 4 crore for completion in 1993**

**The work of generating set and crane were still incomplete**

The Ministry sanctioned in July 1988 accommodation for storage of missiles at a station at Rs 4 crore which was released in March 1989. The work was to be completed by March 1993. Zonal Chief Engineer concluded contracts for buildings, air conditioning, crane and generating sets in July 1991, August 1992, February 1995 and March 1995 respectively. Thus, the Zonal Chief Engineer took 2¼ years to award the first contract. While the buildings and air conditioning work were completed in July 1996 at Rs 3.03 crore, the work relating to generating set and crane, due for completion in October 1995 and March 1996 respectively, were not completed as of October 1998. Zonal Chief Engineer had not taken effective measures for completion of these works. He filed caveats in civil court in December 1997 and May 1998 for cancellation of these contracts. The contract was yet to be cancelled.

***Station II***

**The Ministry Sanctioned storage and other technical accommodation in May 1988 for Rs 2.02 crore**

Army planned to stock various types of missiles at a field ammunition depot by March 1992. The Ministry sanctioned 2273 square metre storage and other technical accommodation and related buildings of plinth area of 293 square metre in May 1988 at an estimated cost of Rs 2.02 crore. The work was due to be completed by June 1991.

Zonal Chief Engineer, concluded five contracts for storage accommodation, technical accommodation, airconditioning, generating set/voltage stabilizer and crane, between April 1991 and October 1993 and Commander Works Engineer concluded another contract for provision of rubber coated rollers in June 1996. Thus, the Zonal Chief Engineer took about three years to award the first contract, by which time the complex was originally due for completion. The building work and allied services were completed between July 1994 and September 1996 and Garrison Engineer took them over from the contractors. Provision of crane at Rs 15.05 lakh was, however, completed only in July 1997. The completion cost of the project was Rs 2.63 crore.

The Sub-Area Commander inspected the buildings in August 1997 and the Commander of the Depot pointed out in August 1997 that the building was unfit for storage of missile due to seepage from the roof, dampness in walls and floor, brick masonary drainage was not provided on the sides of traverse, earth work was not properly done and supporting walls were not provided to prevent erosion of earth. The Depot Commander asked the Garrison Engineer to rectify the defects and inform completion to the Sub-Area Commander.

**Newly constructed building could not be put to use as of November 1998**

The remedial measures taken by the Garrison Engineer were not sufficient due to inherent defects in the roof slab. He sought the advice of Commander Works Engineer in August 1998 for further course of action. Remedial work, to arrest the seepage, was yet to be carried out as of November 1998.

The matter was referred to the Ministry in June 1998; their reply in respect of Station II was awaited as of January 1999.

## 40. Delay in setting up of repair facilities for helicopters

**Inadequate soil investigation and subsequent change in design has resulted in the hangar for repair and maintenance of the Coast Guard's helicopter remaining incomplete over the last seven years, compelling the coast guard to send them for maintenance to HAL.**

Coast Guard Organisation uses Hindustan Aeronautics Ltd. for repair and maintenance of Chetak helicopters. The Ministry sanctioned Air Electrical Department/Air Electronics Department Hangars at Goa at an estimated cost of Rs 1.74 crore in May 1991 to provide second line support services for the helicopters. The duration of work was two years. Garrison Engineer (Project) entrusted soil investigation to Engineer Combine, Goa which was not an approved agency for this purpose. The firm submitted their report in October 1991.

**Soil condition encountered during execution of work, necessitated design revalidation**

Chief Engineer (Navy) concluded a contract for construction of hangars in December 1993 with Shah Builders Pune at Rs 1.64 crore after obtaining financial concurrence from the Ministry in October 1993. The contractor commenced the work in February 1994. During excavation for hangar column foundation, it was found that on account of low lying and undulating area and partial filling, the column footings were at different levels necessitating structural design revalidation. The Coast Guard HQ modified their segment in April 1994 with the need for electrically operated travelling (EOT) crane having both longitudinal and traversing movement capacity in the entire hangar in place of the two ton EOT crane on one bay. The Chief Engineer (Navy) referred both the requirements to Chief Engineer (Design and Consultancy) in May 1994 and kept the contract under suspension for 55 days in August 1994. Thus, incorrect soil investigation and change in type of crane led to redesigning of structure and revision of the estimates.

**Users also projected requirement for different type of crane**

Revised drawing received from Chief Engineer (Design and Consultancy) in September 1994, projected additional strengthening measures such as plinth beams, additional columns, ground beams and suspended floor for the entire hangar and an epoxy coating to reinforcement up to the first floor level. The additional work and provision of EOT crane suiting to the need of the user needed additional fund of Rs 1.35 crore. Chief Engineer (Navy) approached Chief Engineer Southern Command to accord go-ahead sanction in October 1994 for proceeding with the work as per the revised drawings pending issue of revised administrative approval.

**The contract was foreclosed in December 1994**

**In absence of repair facility Coast Guard had to depend on HAL for repair of chetak helicopters**

On account of radical change in scope of work, Chief Engineer Southern Command directed Chief Engineer (Navy) to foreclose the contract. The latter foreclosed the contract in December 1994. The contractor made an offer to restart the work in January 1995 as per the original contract rate if the foreclosure was revoked by April 1995 which was then extended upto July 1995. In absence of repair facility the Chetak helicopters had to be sent to Hindustan Aeronautics Ltd. for repair and maintenance at an annual expenditure of Rs 3.39 crore.

**Revised estimates had not been approved for four years**

The Ministry accorded 'go-ahead' sanction in October 1995 for revival of the foreclosed contract, but the contractor expressed inability to commence the work. Chief Engineer (Navy) forwarded a revised estimate for Rs 4.35 crore as per revised drawing to Engineer-in-Chief in March 1996. No sanction for the revised project cost had been issued as of October 1998. As of April 1998 Rs 46.50 lakh was spent on the project.

The matter was referred to the Ministry in July 1998; their reply was awaited as of January 1999.

## 41. Avoidable payment of water charges

**Six Garrison Engineers paid in excess Rs 88.95 lakh towards water charges for domestic use without verifying that the municipality had billed at non-domestic rate. Two other GEs did not avail the concessional tariff extended by the Municipal Corporation and paid an extra Rs 2.12 crore.**

Garrison Engineers in six Military Engineer Services Divisions failed to verify the accuracy of the rates taken into account in water bills by the Municipal Corporations which led to overpayment of over Rs 3 crore.

**Acceptance of non-domestic tariff for domestic supply caused overpayment of Rs 88.95 lakh**

Domestic and non-domestic water supply for Defence Services are being met through local bodies, payment for which is made by the concerned Garrison Engineers. Local bodies levy two types of tariffs – domestic and non-domestic, the former being lower. Examination of the bills for water supply in six Garrison Engineers at three stations revealed that due to payment at non-domestic tariff for domestic supply overpayment of Rs 88.95 lakh was made between April 1991 and March 1998.

On overpayments being pointed out by Audit, Garrison Engineer (Army) Vadodra, Garrison Engineer (Air Force) Vadodara and Garrison Engineer (I) R&D Kanchanbagh took up the matter relating to overpayment of Rs 5.74 lakh, Rs 16.25 lakh and Rs 11.12 lakh respectively with the Corporations. Garrison Engineer (I) R&D Chandrayangutta stated that overpayment of Rs 0.70 lakh would be taken up with the Corporation; Garrison Engineer (South), Pune adjusted an amount of Rs 31.94 lakh in the water bill during February 1998 and Garrison Engineer (Central) Kirkee stated that they would adjust the overpayment of Rs 23.19 lakh against future bills, yet no progress had been made.

**Avoidable expenditure of Rs 2.12 crore incurred as MES failed to obtain concessional rates**

In another case, Hyderabad Metropolitan Water Supply & Sewerage Board, in April 1993, introduced reduced water tariff applicable for Military Engineer Service. While other Military Engineer Service Divisions in Hyderabad/Secunderabad were availing this tariff, Garrison Engineer (I) R&D Chandrayangutta and Garrison Engineer (I) R&D Kanchanbagh failed to avail of this concessional rate. As a result, an avoidable expenditure of Rs 2.12 crore had been incurred during April 1993 to September 1997. Upon being pointed out by Audit the Garrison Engineer (I) Research and Development Kanchanbagh and Chandrayangutta took up the matter with Hyderabad Metro Water Supply and Sewerage Board during March 1997 and September 1998 respectively.

The matter was referred to the Ministry in August 1998; their reply was awaited as of January 1999.

## 42. Non-utilisation of a bulk petroleum installation

**Failure of a Garrison Engineer to get the defects in a bulk petroleum installation constructed at Rs 1.11 crore by IOC rectified, deprived Indian Air Force of the facility for over four years.**

A Garrison Engineer failed to get the defects in a bulk petroleum installation for supply of turbine fuel to aircraft constructed by Indian Oil Corporation, remedied by them for over four years, resulting in no value for money on an investment of Rs 1.11 crore as of April 1998 as discussed below.

**Air HQ sanctioned construction of BPI at a cost of Rs 95.56 lakh in December 1989**

Air HQ sanctioned construction of additional bulk petroleum installation on an Island at a cost of Rs 95.56 lakh revised to Rs 1.22 crore in July 1992. Major portion of work comprising fuel tanks, decantation sheds etc was entrusted to Indian Oil Corporation and the related civil works were to be executed by Garrison Engineer. The Garrison Engineer completed the civil works in December 1992 at Rs 34 lakh.

**IOC was paid an advance of Rs 64.80 lakh**

Garrison Engineer paid advance totalling Rs 64.80 lakh to the Station Manager Indian Oil Corporation in two instalments in March 1990 and February 1993. Indian Oil Corporation completed their portion of work in September 1994. However, the Garrison Engineer did not take over the installation from the Indian Oil Corporation due to some defects which rendered the installation non-functional. He requested Indian Oil Corporation to remedy the defects in September 1994, March 1995 and May 1997 but they failed to do so.

**IOC completed the work in September 1994 but failed to rectify defects therein as of April 1998**

While the Garrison Engineer handed over the civil works completed by him to the Air Force after two years of completion in December 1994, he failed to get the defects in the work executed by the Indian Oil Corporation rectified as of April 1998. It was incumbent upon the Chief Engineer and Air Force to bring this matter to the notice of the Ministry, who could have used their good offices with the Ministry of Petroleum.

It is recommended that the Ministry of Petroleum should fix responsibility on the Indian Oil Corporation for negligent attitude towards a vital defence installation, which has deprived the Indian Air Force of bulk storage of petroleum for four years.

The Ministry stated in September 1998 that bulk petroleum installation was not utilised due to failure of Indian Oil Corporation to rectify and make their system functional. The reply merely stated the reason why this installation could not be used but did not indicate action taken by the Ministry, if any, to expedite action.

## 43. Avoidable procurement of stores

**Failure of the Garrison Engineer Trivandrum to assess demand before purchase of stores worth Rs 81.32 lakh centrally resulted stores valuing Rs 65.20 lakh remaining unutilised.**

**GE placed 22 supply orders worth Rs 75.44 lakh without establishing the requirement**

Garrison Engineer (Air Force) Trivandrum placed 22 supply orders between April and August 1995 for procurement of various electrical stores like lamps, light fittings, switches, exhaust fans, etc valuing Rs 75.44 lakh against the rate contract of Director General of Supplies and Disposals without any demand from sub-divisions. Against those supply orders, the Garrison Engineer received the stores valuing Rs 81.32 lakh between February and August 1996.

**GE could utilise stores valuing Rs 3.70 lakh only in a span of two years**

As of September 1998, stores valued Rs 3.70 lakh could only be consumed locally on maintenance. Stores worth Rs 12.42 lakh had to be transferred to other formations based on their projected requirement between May 1996 and August 1997. Remaining stores worth Rs 65.20 lakh had been lying in the stock as of September 1998 with no immediate prospects of further utilisation.

The Ministry stated in September 1998 that the Court of Inquiry ordered had completed its work and summary evidence in respect of one service officer was in progress.

## 44. Extra expenditure due to substandard work

**Acceptance of substandard work by engineers led to need for special repairs at a cost of Rs 57.72 lakh.**

Acceptance of substandard work by Garrison Engineer, Clement Town Dehradun, led to leakage/seepage in the building constructed for accommodation of Air Force Selection Board. Special repairs to roof is to cost upwards of Rs 58 lakh. No action has been taken against the officers responsible for accepting substandard works as of October 1998.

**Severe leakages existed since inception in building constructed at a cost of Rs 64.97 lakh in June 1986**

A single storey building with sloping roof was constructed for permanent accommodation of Air Force Selection Board by a contractor in June 1986 under supervision of Garrison Engineer Clement Town Dehradun at a cost of Rs 64.97 lakh. Some of the buildings were having serious problems of leakage from roof right from the beginning. A Board of Officers observed in August 1989 that as the buildings were not provided with necessary water proofing treatment widespread seepage took place. Roof treatment provided at a cost of Rs 4.92 lakh in 1990 was not found effective and the leakage continued.

Chief Engineer, Bareilley Zone asked a technical Board of Officers in August 1995 to investigate the causes of leakage and recommend remedial measures but the Board failed to give a viable solution.

**Steel bars for reinforcement were not as per Engineering norms**

On carrying out experimental roof treatment by Garrison Engineer at the instance of Chief Engineer, huge cracks were noticed in the concrete slabs and it was observed that the position of steel bars for reinforcement was not as per engineering norms. This was attributed as the primary cause of leakage/seepage in the buildings.

**Professor of Civil Engineering recommended false roof of AC sheets of Rs 55.35 lakh over existing roof**

A professor of Civil Engineering, University of Roorkee examined the affected buildings in June 1996 at the request of Garrison Engineer and observed serious defects in the construction of buildings. In view of poor quality of concrete, he recommended false roof of AC sheets to be laid over the existing roof. Air Force Selection Board sanctioned special repairs in November 1997 at an estimated cost of Rs 55.35 lakh and Commander Works Engineer concluded a contract in April 1998 at a cost of Rs 57.72 lakh to be completed in October 1998.

The Ministry while accepting the facts stated in January 1999 that the report of Director General of Works and Design of Engineer-in-Chief's Branch has clearly brought out the ineffectiveness of supervision by Chief Engineer and action was on hand to fix the responsibility.

## 45. Avoidable expenditure due to excess construction

**Incorrect computation of deficiency of married accommodation led to sanction and construction of excess accommodation and consequent extra expenditure of Rs 27.43 lakh.**

Married accommodation for Master Warrant Officers, Warrant Officers and Junior Warrant Officers was constructed in excess due to failure of Board of Officers to adhere to approved norms/policy of the Ministry. Incorrect computation of deficiency of married accommodation led to construction of 11 quarters in excess of authorisation leading to avoidable expenditure of Rs 27.43 lakh.

The Ministry sanctioned construction of 62 married quarters for Master Warrant Officers, Warrant Officers and Junior Warrant Officers and 101 married quarters for Non-Commissioned Officers at Air Force Station, Hakimpet at an estimated cost of Rs 4.38 crore in May 1994. The Ministry revised the sanction to Rs 4.43 crore in August 1996 and the work under the sanction was completed.

**Incorrect calculation by Board of Officers led to construction of 11 married quarters at a cost of Rs 27.43 lakh in excess of norms**

Under the existing policy, the married accommodation is to be calculated on the basis of 80 *per cent* of authorisation worked out under the scales of accommodation for Defence Services. The Board of Officers consisting of two Air Force Officers and five Engineers from Military Engineer Services, while working out the deficiency, applied the cut of 20 *per cent* on the net deficiency of accommodation instead of on authorised accommodation as per scales.

Resultantly, 11 married quarters were estimated in excess of norms. An expenditure of Rs 27.43 lakh was incurred on their construction.

The Ministry stated in October 1998 that due to calculation error, accommodation in excess of norms was constructed.

## 46. Negligence in deciding the area of building

**Negligence by the Ministry and much more by Engineer-in-Chief, MES led to construction of excess accommodation valued at Rs 38.56 lakh at Armed Forces Medical College Pune.**

Accommodation other than married accommodation like educational institutions, hospitals etc., are authorised in terms of floor area. In such cases, the floor area is converted into plinth area by applying different conversion factors depending on the type of building as laid down by the Ministry in May 1991. The floor area in respect of educational institutions is to be converted into plinth area by increasing it by 70 *per cent.*

**Prescribed conversion factor for technical accommodation for AFMC was 70**

The Ministry accorded sanction for construction of technical accommodation for Armed Forces Medical College Pune adopting 120 *per cent* conversion factor as against the prescribed 70 *per cent.*

**Ministry directed E-in-C to prepare estimates adopting 70 *per cent* conversion factor**

The approximate estimates for 6426 square meters of plinth area for the technical accommodation, at 120 *per cent* conversion factor against the prescribed 70 *per cent*, was forwarded by the Chief Engineer Pune Zone in June 1994 to E-in-C for obtaining the Ministry's sanction. The Ministry, pointed out the discrepancy and directed him to prepare correct estimates.

**Ministry sanctioned estimates based on 120 *per cent* conversion factor**

The Chief Engineer Pune Zone forwarded the revised estimates for 4916 square meters plinth area, adopting 70 *per cent* conversion factor. However, the Ministry sanctioned plinth area of 6426 square meters for the accommodation besides 1101 square meters for cycle shed and garage in March 1995.

**E-in-C did not act on Chief Engineer's request for reduction of area**

The Chief Engineer Pune Zone pointed this to the E-in-C in April 1995, forwarding draft corrigendum to get the sanction revised. E-in-C did not respond to the aforesaid communication of the Chief Engineer. The contract was concluded by the Chief Engineer Pune Zone for the total plinth area of 7521 sq. meters as per the sanction. This led to construction of excess accommodation of 1460 sq. meters valued at Rs 38.56 lakh on pro-rata basis.

This calls for investigation and fixing of responsibility for the negligence.

The matter was referred to the Ministry in November 1998; their reply was awaited as of January 1999.

## 47. Additional expenditure due to non adherence of instructions

**Chief Engineer, Bhatinda constructed overhead tanks of identical capacity at the same locations during the same period at widely varying rates ignoring E-in-C's orders and caused an entirely avoidable extra expenditure of Rs 35.20 lakh.**

**E-in-C asked Chief Engineer to float tenders on contractor's design in addition to department's design**

Chief Engineer, Bhatinda Zone invited tenders for construction of five overhead reservoirs at Bikaner on two designs. Analysis of the designs by Engineer-in-Chief disclosed that department's design was not economical as compared to contractor's design. Engineer-in-Chief asked the Chief Engineer in November 1995 to economise the department's design and refloat the tenders on contractor's design in addition to department's design.

**Chief Engineer invited one tender only on department's design in February 1996**

**The tender received for contractor's design in April 1996 was cheaper**

In contravention of instructions of Engineer-in-Chief, Chief Engineer invited tenders in February 1996 on department's own design and concluded contract in February 1996 for construction of two overhead reservoirs of 2 lakh gallons each at Rs 80.72 lakh. The tenders for three overhead reservoirs were again received in April 1996 on both the designs of which contractor's design was cheaper and Chief Engineer concluded another contract for construction of three overhead reservoirs of 2 lakh gallons each at Rs 68.29 lakh in July 1996.

Negligence of Chief Engineer in inviting tenders based on department's design only in February 1996 and concluding contract based on that design without receiving tenders based on contractor's design, resulted in avoidable expenditure of Rs 35.20 lakh with reference to rates of contractor's design. This calls for investigation and fixing of responsibility.

The matter was referred to the Ministry in November 1998; their reply was awaited as of January 1999.

# CHAPTER V : Border Roads Organisation

## 48. Foreclosure of a bridge work due to defective design

**Incorrect assessment of the soil bearing capacity and adoption of incorrect design resulted in foreclosure of a project after an expenditure of Rs 1.45 crore.**

**Chief Engineer concluded contract for bridge with piers**

Border Roads Development Board sanctioned construction of a permanent bridge with a 105 metre span at a location in July 1989 for Rs 99.60 lakh. The tenders were floated after incorporating the initial subsoil investigation report by Geological Survey of India as well as the design of the bridge comprising two spans of 60 metre and 30 metre each with intermediate pier. The Chief Engineer concluded the contract in September 1993 for Rs 2.17 crore based on an alternate design proposed by the lowest tenderer and approved by Director General Border Roads, with single span of 90 metres supported on both end abutment.

**During excavation soil strata varied with that mentioned in the contract**

During excavation of the foundation, soil bearing capacity of one side abutment was found to be lower than that specified in the contract. Due to this variation, the contractor proposed in August 1994 slight change in the design of the bridge and Project Chief Engineer recommended it to Director General Border Roads in September 1994 for construction of steel super structure bridge with 90 metres span.

**DGBR did not accept contractor's proposal for change in design and design as per original tender was accepted**

Director General Border Roads did not accept the recommendation of Project Chief Engineer. Instead, Director General suggested some changes in the first proposal of the contractor to Project Chief Engineer in January 1995 and asked him to construct the bridge with an intermediate pier, as per the original tender documents. The contractor submitted the design of the bridge in February 1995 as per the original tender, which was accepted by Bridging Directorate of Director General, Border Roads in February 1995.

**Providing piers was not found feasible**

**The project was foreclosed after eight years**

In July 1995, the executing agency pointed out that during flash floods, water level touched both abutment and informed that providing intermediate pier in this bridge was not feasible as possibility of non erodable rocky strata for pier was doubtful. Besides, big size rolling boulders could damage the pier during floods. Since lower soil bearing capacity of one side abutment had come to notice in August 1994 and flood proneness of rivers in the region was well known, the continuance of work with piers was injudicious. The Project Chief Engineer proposed in October 1995 to review the design of the bridge without intermediate pier. As the design of the bridge could not be finalised, the contract was foreclosed in February 1997 after an expenditure of Rs 1.45 crore. Fresh tender received for completing the left over work was awaiting finalisation as of July 1998.

The matter was referred to the Ministry in July 1998; their reply was awaited as of January 1999.

# Chapter VI : Ordnance Factory Organisation

## 49. Performance of Ordnance Factory Organisation

### *49.1 Introduction*

Thirty nine ordnance factories, with a manpower of 1.54 lakh are engaged in production of 1210 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 is the ex-officio chairman of the Ordnance Factory Board. He is assisted by nine Members/Addl Director Generals of Ordnance Factories, 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) | 9 |
| (ii) | Weapons, Vehicles and Equipment (WV&E) | 10 |
| (iii) | Ammunition and Explosives ( A&E) | 10 |
| (iv) | Armoured Vehicle ( AV) | 5 |
| (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), and ordnance equipment (6).

### *49.2 Revenue expenditure*

The expenditure under revenue head during 1993-94 to 1997-98 is given in the table below :

**(Rs in crore)**

| Year | Total expenditure incurred by ordnance factories | Receipts against products supplied to Armed Forces | Other receipts and recoveries | Total receipts | Net expenditure of ordnance factories |
|---|---|---|---|---|---|
| 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 |
| 1997-98 | 3256.63 | 2396.56 | 464.07 | 2860.63 | (+)396.00 |

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

### *49.3 Analysis of performance of OFB*

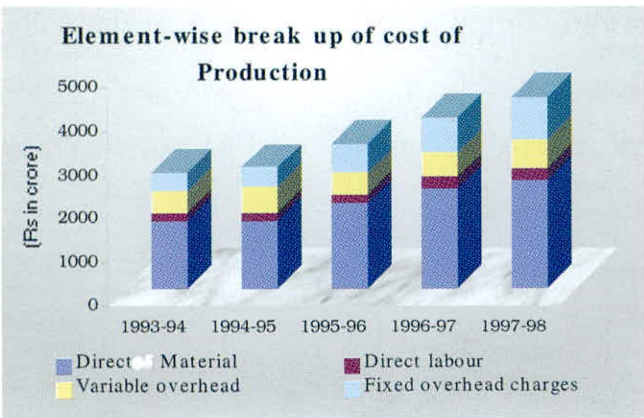
### *49.3.1 General*

In 1997-98, turnover of Ordnance Factory Chanda was highest at Rs 452.00 crore with 86 *per cent* material components while that of Ordnance Factory Bolangir was the lowest at Rs 16.87 crore with material components at 23.4 *per cent*.

**49.3.1.1** The following table indicates element-wise value of production during the last five years :

| Element | Value of production (Rs in crore) | | | | |
|---|---|---|---|---|---|
| | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
| (a) Direct Material | 1584.11 (59.24) | 1580.79 (56.30) | 1962.48 (58.77) | 2299.79 (58.53) | 2502.08 (57.07) |
| (b)Direct labour | 164.18 (6.14) | 168.16 (5.99) | 213.26 (6.39) | 272.48 (6.94) | 264.94 (6.04) |
| (c)Variable overhead | 527.83 (19.74) | 607.85 (21.65) | 488.78 (14.64) | 548.21 (13.95) | 651.47 (14.86) |
| (d)Fixed overhead charges | 397.76 (14.88) | 450.99 (16.06) | 674.46 (20.20) | 808.56 (20.58) | 966.09 (22.03) |
| Total | 2673.88 | 2807.79 | 3338.98 | 3929.04 | 4384.58† |

*Figures in bracket are percentages to the total cost of out turn.*




Whereas share of direct labour in the cost of production has been varying between 5.99 and 6.94 *per cent*, that of fixed overhead has shown consistent upward trend increasing from 14.88 *per cent* in 1993-9s4 to 22.03 *per cent* in 1997-98. Element of fixed and variable overheads in the total cost of production varied widely from factory to factory during 1997-98 being 78.25 *per cent* in Opto Electronic Factory Dehra Dun and 9.82 *per cent* in Ordnance Factory Varangaon.

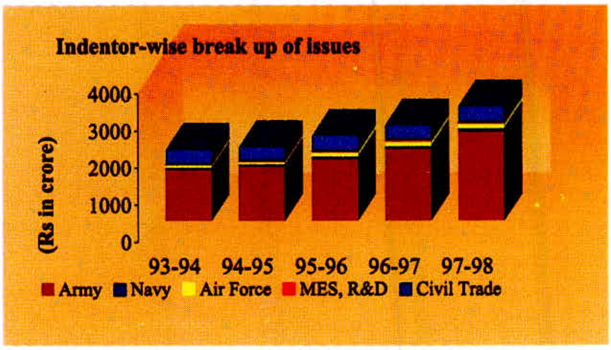
† includes value of work in progress/intermediate productions

### *49.3.2 Issue to users*

The indentor wise value of issues during the last five years was as under:

( Rupees in crore)

| | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|
| Army | 1406.40 | 1492.58 | 1690.97 | 1964.99 | 2427.02 |
| Navy | 28.80 | 28.02 | 37.41 | 46.56 | 60.39 |
| Air Force | 58.70 | 54.12 | 98.89 | 107.47 | 106.12 |
| MES, Research and Development (Other Defence Department ) | 28.95 | 39.55 | 54.16 | 65.31 | 59.23 |
| Total Defence | 1522.85 | 1614.27 | 1881.43 | 2184.33 | 2652.76 |
| Civil Trade | 392.83 | 371.88 | 404.33 | 381.55 | 417.96 |




### *49.3.3 Production planning and performance*

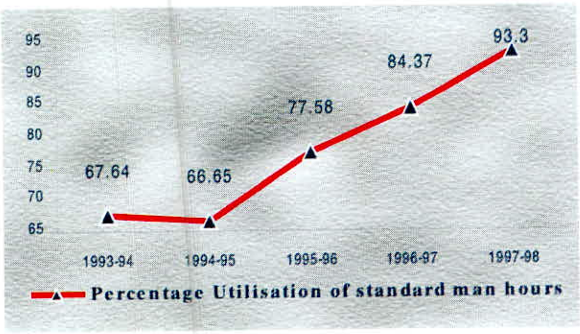
#### *49.3.3.1 Production programme vis-a-vis progress*

Production of several items for which targets had been fixed by Ordnance Factory Board was behind schedule. During 1997-98, though orders existed for 284 items, Ordnance Factory Board did not fix targets for 50 items. Out of the remaining 234 items for which targets were fixed, 73 were behind schedule.

### *49.3.4 Capacity utilisation*

The capacity utilisation of a factory is assessed 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:

(Capacity utilisation in terms of SMH)

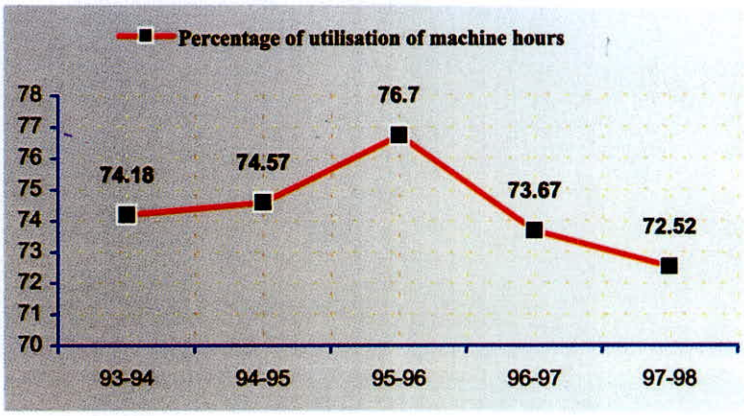



| *Year* | *Capacity in SMH* | *Utilisation in SMH* | *Percentage of capacity utilisation* |
|---|---|---|---|
| 1993-94 | 2051 | 1387 | 67.64 |
| 1994-95 | 2040 | 1359 | 66.65 |
| 1995-96 | 1914 | 1485 | 77.58 |
| 1996-97 | 1847.73 | 1558.97 | 84.37 |
| 1997-98 | 1650.00 | 1539.36 | 93.30 |

**Capacity utilisation in terms of machine hours**

| Year | Machine hours available | Machine hours utilised | Percentage utilisation |
|---|---|---|---|
| *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 |
| 1997-98 | 1340.60 | 972.26 | 72.52 |

Ordnance Factory Board attributed the declining trend of machine hour capacity utilisation over the years to ban on recruitment.



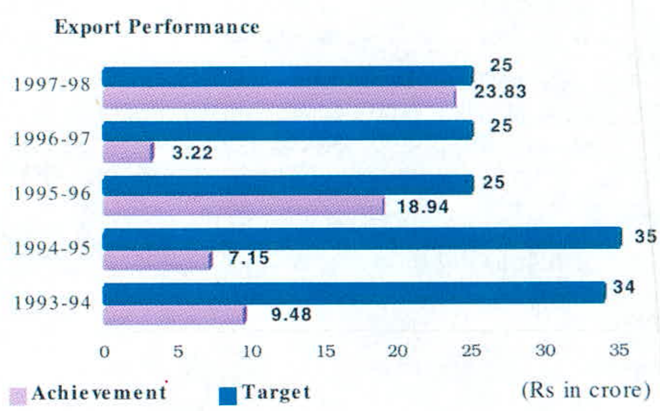

### *49.3.5 Export and civil trade*

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.

#### *49.3.5.1 Export*

The following table shows the achievement with reference to target in export from 1993-94 to 1997-98.

| Year | Number of factories involved | Target (Rs in crore) | Achievement (Rs in crore) | Percentage of achievement |
|---|---|---|---|---|
| ***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 |
| ***1997-98*** | 13 | 25.00 | 23.83 | 95.32 |



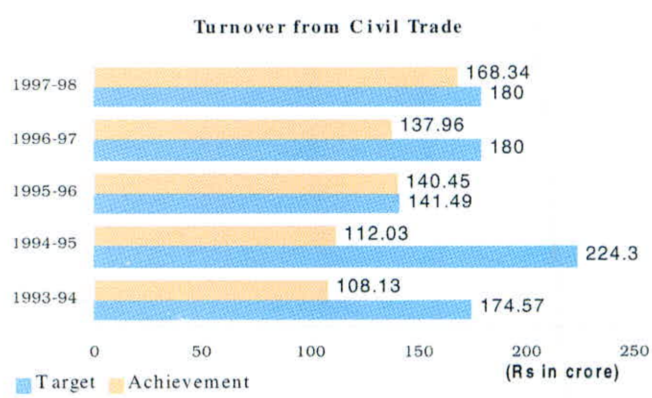

It would be seen that barring 1994-95 and 1996-97, the performance of Ordnance Factories on export front has been showing upward trend. However, no significant breakthrough has been achieved in the value of exports.

### *49.3.5.2 Civil trade*

The turnover from civil trade other than supplies to Ministry of Home Affairs and State Government Police Departments during 1993-94 to 1997-98 was as under:

| Year | Number of factories involved | Target (Rs in crore) | Achievement (Rs in crore) | Percentage of achievement |
|---|---|---|---|---|
| ***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 |
| **1997-98** | 38 | 180.00 | 168.34 | 93.52 |

The realisation from civil trade in absolute terms showed upward trend except during 1996-97.



### *49.3.5.3 Non-realisation of amount towards civil trade*

According to policy directive issued by Ordnance Factory Board in June 1985 all civil indentors are required to pay in cash or through demand draft in advance with the order in full or irrevocable letter of credit.

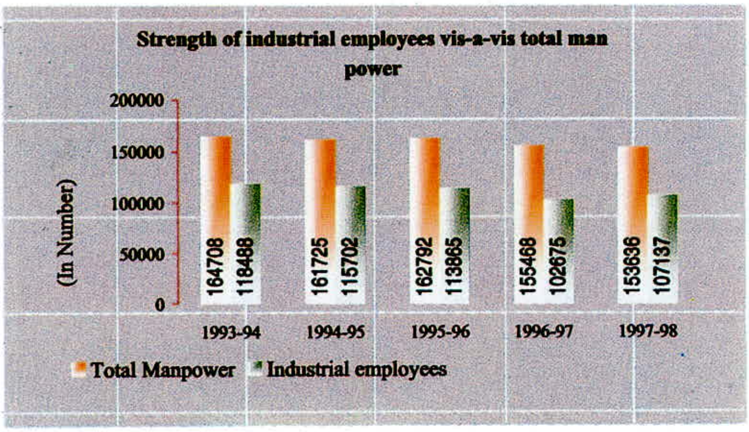
As on 31 March 1998 Rs 29.73 crore was outstanding against civil indentors for supply of different items to them. Out of this, Rs 4.61 crore pertained to supplies made prior to 1997-98.

### *49.3.6 Utilisation of manpower*

**49.3.6.1** 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 & 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 are given in the table below which reveals that the strength of the officers as percentage to total manpower as well as in absolute terms has been showing an increasing trend and has more than doubled from 1672 in 1993-94 to 3579 in 1997-98.

(In number)

| Category of employees | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|
| **Officers** | 1672 | 2856 | 3286 | 3331 | 3579 |
| **Percentage of officers to total manpower** | 1.01 | 1.76 | 2.01 | 2.14 | 2.33 |
| **NGO/NIEs** | 44548 | 43167 | 45641 | 49462 | 42920 |
| **Percentage of NGO/NIEs to total manpower** | 27.04 | 26.69 | 28.03 | 31.81 | 27.94 |
| **IEs** | 118488 | 115702 | 113865 | 102675 | 107137 |
| **Percentage of IEs to total manpower** | 71.93 | 71.54 | 69.94 | 66.03 | 69.73 |
| **Total** | 164708 | 161725 | 162792 | 155468 | 153636 |

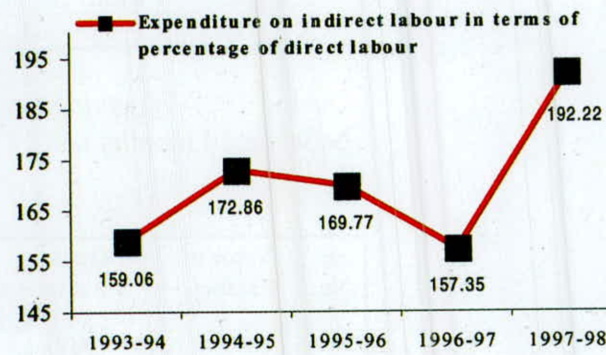


**49.3.6.2** The expenditure on labour is charged to production in two ways - 'direct labour' representing expenditure on labour relating directly to production and 'indirect labour' representing other expenditure on labour like maintenance etc. The expenditure on direct and indirect labour for the last five years is shown below :

**(Rupees in crore)**

| | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|
| (a) Total indirect labour | 286.40 | 316.73 | 387.29 | 410.52 | 557.34 |
| (b) Total direct labour | 180.06 | 183.23 | 228.13 | 260.89 | 289.94 |
| (c)Percentage of indirect labour to direct labour | 159.06 | 172.86 | 169.77 | 157.35 | 192.22 |

Percentage of indirect labour to direct labour varied between 157.35 *per cent* and 192.22 *per cent* during the years 1993-94 to 1997-98. It was all time high at 192.22 *per cent* in 1997-98.




49.3.6.3 In Ordnance Factories, there are two types of industrial workers namely; "piece workers" who are engaged for production and paid for the work turned out by them and "day workers" who are paid for the actual number of days and hours they work without reference to their output. Day workers are also called General Shop Labour.

The total number of industrial employees and the average number of piece workers during the last five years is as under:

| Year | Total number of industrial employees | Average number of piece workers | Percentage of piece workers to the total strength of Industrial Employees |
|---|---|---|---|
| 1993-94 | 118488 | 67500 | 57 |
| 1994-95 | 115702 | 64815 | 56 |
| 1995-96 | 113865 | 63069 | 55 |
| 1996-97 | 102675 | 62944 | 61 |
| 1997-98 | 107137 | 59209 | 55 |

The average number of piece workers in absolute terms as well as in terms of percentage to total number of industrial employees declined significantly in the year 1997-98.

### *49.3.7 Inventory management*

#### *49.3.7.1 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 1997-98 average stock holdings in six factories, as given below ranged between 10 months and 13 months' requirements which exceeded the existing norms.

(Rupees in crore)

| Sl. No. | Name of Factory | Opening Balance as on 01 April 1997 | Closing Balance as on 31 March 1998 | Average holding of stock | Average monthly consumption | Holding of stores in terms of months |
|---|---|---|---|---|---|---|
| 1. | Ammunition Factory, Kirkee | 80.37 | 100.09 | 90.23 | 9.19 | 10 |
| 2. | Ordnance Factory Khamaria | 191.84 | 216.84 | 204.34 | 17.95 | 11 |
| 3. | Opto Electronics Factory Dehra Dun | 12.09 | 13.42 | 12.75 | 1.09 | 12 |
| 4. | Ordnance Factory Kanpur | 55.88 | 50.22 | 53.05 | 4.19 | 13 |
| 5. | Heavy Vehicle Factory, Avadi | 273.93 | 378.30 | 326.12 | 24.79 | 13 |
| 6. | Ordnance Factory Medak | 218.39 | 184.67 | 201.53 | 15.90 | 13 |

#### *49.3.7.2 Stores found surplus on stock-taking*

Stores valued at Rs 4.43 crore was shown as surplus during stock-taking in 1997-98, out of which stores valued at Rs 3.50 crore were found surplus at the two factories as shown below :

**(Rupees in crore)**

| Sl.No. | Factory | Surplus at stock taking |
|---|---|---|
| 1 | Ordnance Factory Ambernath | 1.25 |
| 2. | Vehicle Factory Jabalpur | 2.25 |

This is a reflection on the quality of maintenance of stores records as surpluses could occur due to understatement of receipts of stores or overstatement of issues.

**49.3.7.3** The average stock holdings in terms of number of days' consumption showed downward trend, yet it was more than the prescribed norm of 180 days.

(Rupees in crore)

| *Sl. No.* | *Particulars* | *1993-94* | *1994-95* | *1995-96* | *1996-97* | *1997-98* |
|---|---|---|---|---|---|---|
| **1.** | Working stock | | | | | |
| **a.** | Active | 702.65 | 736.51 | 1020.59 | 1245.90 | 1462.38 |
| **b.** | Non-moving | 81.26 | 103.75 | 109.21 | 77.93 | 109.69 |
| **c.** | Slow moving | 138.10 | 126.08 | 122.10 | 148.39 | 133.56 |
| | Total Working Stock | 922.01 | 966.34 | 1251.90 | 1472.22 | 1705.63 |
| **2** | Waste & Obsolete | 16.44 | 13.12 | 8.47 | 8.09 | 10.56 |
| **3.** | Surplus/ Scrap | 38.40 | 35.29 | 33.34 | 41.21 | 39.87 |
| **4.** | Maintenance stores | 99.13 | 93.84 | 76.00 | 72.82 | 79.80 |
| | **Total** | **1075.98** | **1108.59** | **1369.71** | **1594.34** | **1835.86** |
| **5.** | Average holdings in terms of number of days' consumption | 254 | 247 | 214 | 209 | 232 |
| **6.** | Percentage of total slow-moving and non-moving stock to total working stock | 23.79 | 23.78 | 18.47 | 15.37 | 14.26 |

### *49.3.7.4 Finished stock*

There was steady increase in the total holdings of finished components since 1993-94 as indicated below :

(Rupees in crore)

| | **1993-94** | **1994-95** | **1995-96** | **1996-97** | **1997-98** |
|---|---|---|---|---|---|
| Finished Stock holding (comp. articles) | 55.42 | 73.27 | 95.19 | 182.58 | 112.72 |
| Total value of out turn | 2673.88 | 2807.79 | 3338.98 | 3929.04 | 4384.58 |
| Holding of finished stock in terms number of days' issues | 8 | 10 | 10 | 17 | 9 |
| Holding in terms of percentage of total value of out turn | 2.07 | 2.60 | 2.85 | 4.65 | 2.57 |
| Finished component holding | 195.13 | 197.85 | 247.51 | 303.83 | 439.60 |
| Holding of finished components in terms of number of days consumption | 123 | 96 | 90 | 99 | 123 |

### *49.3.7.5 Work in progress*

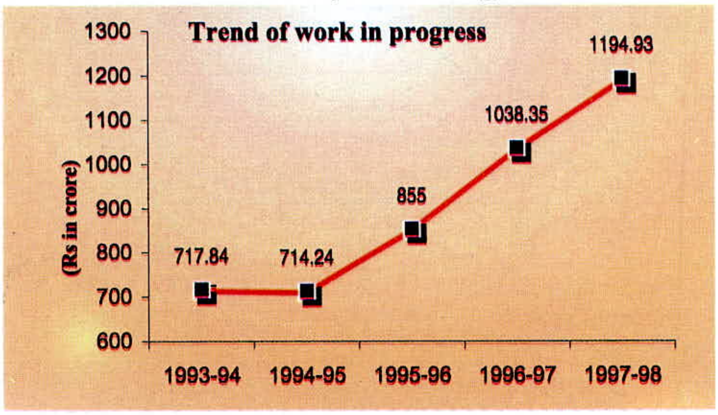
The General Manager of an ordnance factory authorises a production shop to manufacture an item in certain quantity by issue of warrant whose normal life is six months. Unfinished items pertaining to different warrants lying at the shop floors constitute work-in-progress.

There was a steady increase in the value of work-in-progress from 1995-96 onwards as shown in the table below :

(Rupees in crore)

| As on 31 March | Value of work in progress |
|---|---|
| 1994 | 717.84 |
| 1995 | 714.24 |
| 1996 | 855.00 |
| 1997 | 1038.35 |
| 1998 | 1194.27 |

As on 31 March 1998, 12586 warrants with value of Rs 374.10 crore were more than one to 13 years old against the normal life of six months. Old warrants need to be reviewed at regular intervals so that the items under production may not become obsolete by the time they are completed and the expenditure rendered infructuous.




### *49.3.8 Rejections in manufacturing process*

Total value of production, including permissible rejections vis-à-vis value of rejections beyond permissible limits, excluded from the total value of production during the last five years was as under :

(Rupees in crore)

| Year | Total value of production (including permissible rejection) | Value of rejection (beyond permissible limit) |
|---|---|---|
| 1993-94 | 2673.88 | 9.41 |
| 1994-95 | 2807.79 | 11.41 |
| 1995-96 | 3338.99 | 7.63 |
| 1996-97 | 3929.04 | 12.50 |
| 1997-98 | 4384.58 | 19.83 |

**49.3.8.1** It may be seen from above table that abnormal rejections have increased by more than 50 *per cent* during 1997-98 as compared to the previous year.

**49.3.8.2** The amount kept out of production being abnormal losses which occurred during manufacture is over and above the permissible limits of rejection. Such losses above Rupees one crore during 1997-98 were noticed in respect of the following factories:

| | *(Rs in crore)* |
|---|---|
| M.S.F. Ishapore | 1.67 |
| V.F. Jabalpur | 1.66 |
| A.F. Kirkee | 2.70 |
| OF Varangaon | 10.07 |
| OF Chanda | 1.40 |

**49.3.8.3** It was observed that rejections in excess of permissible limits continued over the years in two factories viz. Ammunition Factory Kirkee and Vehicle Factory Jabalpur as given below :

( Rupees in lakh)

| Name of the factory | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|
| Ammunition Factory, Kirkee | 341.63 | 307.80 | 251.85 | 281.61 | 269.88 |
| Vehicle Factory. Jabalpur | 166.14 | 416.30 | 114.02 | - | 166.40 |

### *49.3.9 Losses written off*

The table below depicts losses written off by competent financial authorities.

(Rupees in lakh)

| Sl. No. | Particulars | 1993-94 | 1994-95 | 1995-96 | 1996-97 | 1997-98 |
|---|---|---|---|---|---|---|
| 1 | Over issues of pay and allowances and claims abandoned | 7.74 | 12.66 | 3.45 | 2.44 | 2.38 |
| 2. | Losses due to theft, fraud or neglect | 0.92 | 0.20 | 0.52 | 0.92 | 1.29 |
| 3. | Losses due to deficiencies in actual balance not caused by theft, fraud or neglect | 7.91 | 0.40 | 3.97 | 18.73 | 4.16 |
| 4. | Losses in transit | 11.81 | 16.80 | 21.18 | 15.82 | 13.99 |
| 5. | Other causes (e.g conditioning of stores not caused by defective storage, stores, scrapped due to Obsolescence etc.) | 14.26 | 19.75 | 17.01 | 22.70 | 10.43 |
| 6 | Defective storage loss | - | - | - | - | 2.36 |
| 7. | Manufacturing Losses | 739.10 | 377.77 | 394.07 | 527.64 | 893.97 |
| 8. | Losses not pertaining to stock | - | - | 7.85 | 5.48 | |
| | **Total** | **781.74** | **427.58** | **448.05** | **593.73** | **928.58** |

## 49.4 Advances Outstanding

An amount of Rs 3.93 crore representing outstanding advances on tour/transfer and LTC granted to employees of Ordnance Factory Organisation during 1980 to 1996-97 was lying unadjusted as on April 1998.

The matter was referred to the Ministry in December 1998; their reply was awaited as of January 1999.

## Reviews

### 50. Overhaul of T-72 tanks and engines

*Highlights*

- **Serious mismatch between the demand and capacity set up for overhaul would render large number of tanks unserviceable before they are overhauled. This coupled with tardy performance of Heavy Vehicles Factory Avadi in indigenous production of tanks has led to a situation where neither new nor overhauled tanks were made available in planned numbers, which has already affected the operational preparedness.**

- **The Ministry, Army Headquarters and Ordnance Factory Board between them delayed sanction and execution of the project for overhaul of T-72 main battle tank and their engines, creating a serious situation of mismatch between the demand for overhaul and the capacity. Dismal performance of Heavy Vehicles Factory and Engine Factory Avadi has further aggravated the mismatch.**

- **The Heavy Vehicles Factory overhauled only 70 tanks in four years up to 1997-98 against envisaged capacity of 228. Similarly, engine Factory had been able to overhaul only 287 engines against the envisaged capacity of 553. Ministry's failure to take timely action for setting up the facilities for overhaul of the tanks and engines, coupled with poor performance of the two factories resulted in as many as 698 tanks and 781 engines becoming overdue for overhaul at the end of March 1998.**

- **Even at the optimum capacity utilisation, the ordnance factories are likely to take at least 10 years to cover the tanks due for overhaul at the end of March 1998. The time required for overhaul of the engines already due for overhaul would be four and half years. During this period, large number of tanks and engines would further become due for overhaul.**

- **The General Managers of the two factories delayed procurement of machinery and further delayed their installation and commissioning due to tardy progress of civil works by Military Engineer Services. They also delayed positioning of the manpower for the overhaul project. Later, they themselves attributed their poor performance to these two factors, for which only they were**

**responsible. The failure of the steering committee set up to pilot the project as per schedule deprived the project of the much needed multi disciplinary guidance especially in view of the slippages that had occurred.**

### *50.1 Introduction*

Army introduced T-72 tank as an interim main battle tank in 1979. The tanks are due for overhaul after 12/10 years. While these tanks were imported since 1979, majority of the present fleet was imported during 1982-86. It is incumbent upon the Ministry of Defence to set up the overhaul facilities for equipment soon after their induction, so that the facilities are available by the time the first overhaul is due.

Ministry sanctioned a project called `Red Rose' in April 1986 for overhaul and maintenance of tanks. Short closure of this project after 1989 was mentioned in Paragraph 15 of Audit Report No. 8 of 1993. Keeping in view the available facilities at Ordnance Factories, Ministry decided in July 1991 to entrust the responsibility of overhaul to Ordnance Factory Board.

### *50.2 Organisational set up*

Heavy Vehicles Factory Avadi and Engine Factory Avadi were entrusted with the task to overhaul tank and engine respectively. The overall co-ordination and control was exercised by Armoured Vehicle Headquarters Avadi.

### *50.3 Scope of Audit*

A review of overhaul project was conducted during January to March 1998 through test check of records and documents at Heavy Vehicles Factory, Engine Factory and Armoured Vehicle Headquarters Avadi.

### *50.4 Project outlines*

**Ministry sanctioned the project in September 1993 at Rs 18.50 crore for completion by December 1995.**

Ministry accorded sanction in September 1993 i.e. four years after the closure of Project `Red Rose', for setting up of facilities to overhaul 70 tanks per annum at Heavy Vehicles Factory Avadi at a cost of Rs 12 crore and 170 tank engines per annum at Engine Factory Avadi at a cost of Rs 6.50 crore with planned date of completion as December 1995. Equipment valuing Rs 4.69 crore already imported under the earlier project 'Red Rose' were to be transferred to Heavy Vehicles Factory/Engine Factory Avadi. By this time, 368 tanks imported during 1979 to 1982 had become due for overhaul. In addition to the engines fitted with tanks, pooled engines were also due for overhaul.

The sanction envisaged creation of capacity for overhaul of 12 tanks by March 1995, 40 cumulative by June 1995, 70 cumulative by December 1995 and thereafter 70 per annum. Similarly, 25 engines were to be overhauled by

September 1994, 40 cumulative by March 1995, 170 cumulative by December 1995 and 170 per annum thereafter.

The sanction also provided for manpower strength of 614, including 484 industrial employees for Heavy Vehicles Factory Avadi and 188 including 141 industrial employees for Engine Factory Avadi. This manpower was to be met through redeployment of the available sanctioned manpower of these factories/sister factories.

The identification of manpower suitable for requirement of work at Heavy Vehicles Factory and Engine Factory Avadi was not undertaken while sanctioning the project.

### *50.5 Delay in civil works*

**Civil works were not executed in time**

Full sanctioned capacity for overhaul was to be achieved by December 1995 both at Heavy Vehicles Factory and Engine Factory Avadi. But General Manager Heavy Vehicles Factory and Additional Director General of Ordnance Factories Armoured Vehicle Headquarters Avadi issued administrative approvals/concluded contracts during March 1994 to December 1997 for different civil works viz. strengthening of gantry girders to operate EOT crane, addition/alteration to existing building, air-conditioning, washing ramp, foundation for equipment and stands etc. at Heavy Vehicles Factory Avadi. At Engine Factory Avadi major civil works worth Rs 20 lakh related to strengthening of gantry girders for two EOT cranes. These civil works were completed only by August 1998. Major works involving delay are discussed below :

#### *(i) Heavy Vehicles Factory Avadi*

As per activity chart for the project, civil works for strengthening of gantry girders for two EOT cranes at Heavy Vehicles Factory Avadi were to be completed by June 1995. However, Additional Director General Ordnance Factories Armoured Vehicle Headquarters Avadi issued administrative approval for this work only in July 1995 at a cost of Rs 25.20 lakh with planned date of completion as September 1996. Garrison Engineer Avadi opened tender for this work in December 1995 and concluded contract in January 1996 i.e. after six months of issue of administrative approval. These led to more than one and half years delay in completion of the work beyond planned date of completion. The work was completed only in December 1996 after the cranes were received in August-September 1996. The delayed completion of strengthening work resulted in delayed commissioning of two EOT cranes valuing Rs 76.22 lakh in February 1997.

#### *(ii) Engine Factory Avadi*

The civil works at Engine Factory, Avadi were to be completed by September 1994. However, General Manager Engine Factory Avadi issued administrative approval for strengthening of gantry girders required for two EOT cranes only in September 1995, subsequently revised in February 1996 with stipulated date of completion as January 1997. Engine Factory Avadi further revised the administrative approval in January 1997. The work was actually completed only in August 1998. The delayed completion of work resulted in delayed commissioning of two EOT cranes valuing Rs 21 lakh received in October 1997. The cranes had not been commissioned as of September 1998.

### *50.6 Delay in installing and commissioning of plant and machinery*

#### *50.6.1 Delay at Heavy Vehicles Factory Avadi*

**Positioning of plant and machinery was delayed beyond the scheduled date of completion of the project**

Heavy Vehicles Factory Avadi spent Rs 8.58 crore as of April 1998 on procurement of 49 machines, equipment and tools ordered at a cost of Rs 10.21 crore. The plant and machinery required for this project excepting one shot blasting machine were commissioned between February 1996 and March 1997, though the project was envisaged to go full steam from January 1996 onwards. The delays were due to delayed placement of order and incomplete submission of documents/technical clarifications by the suppliers in respect of 36 machines. The shot blasting machine required for washing, cleaning and removal of paint of tank was yet to be commissioned.

**Non-commissioning of shot blasting machine adversely affected overhauling of tank**

As per activity chart the order for machines was to be placed by December 1994. But Heavy Vehicles Factory Avadi took decision for procurement of shot blasting machine only in May 1995 in lieu of basin type washing machine. The factory issued tender enquiry for the machine in October 1995 and placed order in July 1996 at a cost of Rs 98.50 lakh i.e. nearly one and half years after scheduled date for placement of order in the activity chart. Heavy Vehicles Factory received the machine in February 1998 against the scheduled delivery period of March 1997. The machine had not been commissioned as of August 1998. The delay of 11 months in receipt and commissioning of the machine was due to certain modifications in the layout drawings as Heavy Vehicles Factory changed the location for erection/commissioning from the originally decided site. The result was that the shot blasting machine was yet to be commissioned, about three years after the period by which full capacity for overhaul was to be realised.

#### *50.6.2 Delay in transfer of equipment*

**Army delayed transfer of `Red Rose' equipment by more than two years**

**Heavy Vehicles Factory delayed assessment of additional equipment**

The sanction envisaged transfer of 169 equipment valuing Rs 4.69 crore to be imported under the project 'Red Rose' to Heavy Vehicles Factory/Engine Factory Avadi. Army had received only 76 items valuing Rs 2.54 crore from the collaborator up to January 1992. The Army, however, delayed their transfer to Heavy Vehicles Factory until April 1994. Heavy Vehicles Factory Avadi reviewed the requirement of remaining equipment and placed supply order on the foreign collaborator, after two years in May 1996, for 11 test equipment; the remaining test equipment were not considered necessary and were dropped from the project. Out of the 11, one test equipment was yet to be received from the collaborator as of September 1998.

General Manager Heavy Vehicles Factory stated in May 1998 that in the absence of adequate testing equipment, the test facilities available at tank shops were being utilised for overhauling work which imposed constraints on the tank production programme. Additional Director General Avadi, however, contradicted this statement and stated in September 1998 that test facilities were availed of without disturbing production programme of tank.

Hence, need for import of 11 test equipment valuing Rs 1.70 crore is questionable due to spare capacity in Heavy Vehicles Factory in view of production of only 48 and 92 tanks during 1995-97 and 1997-98 respectively against available capacity of 200 per year.

### *50.6.3 Delay at Engine Factory Avadi*

General Manager Engine Factory Avadi placed orders for 24 machines valuing Rs 2.31 crore up to March 1998 against requirement of 29 machines valuing Rs 4.95 crore. Only 22 machines were received and 16 of them were commissioned as of September 1998.

**Delayed procurement of dynamometer by Engine Factory Avadi constrained testing of overhauled engines**

General Manager Engine Factory Avadi failed to include the requirement of an additional dynamometer for testing of engines in the proposal for sanction issued in 1993. Three dynamometers already available in Engine Factory Avadi were sufficient for testing only 300 engines against at least 379 required to be tested on setting up of overhaul facilities. He sent a proposal only in October 1995 to Ordnance Factory Board for procurement of one more dynamometer. Ordnance Factory Board submitted the proposal to Ministry in March 1996 and Ministry accorded sanction in July 1996 for procurement of the same. General Manager Engine Factory Avadi placed supply order in November 1996 on a firm for supply of the dynamometer at Rs 60.62 lakh with the scheduled delivery by August 1997. The factory received the dynamometer in November 1997. Thus, General Manager's delay of two years in taking decision led to delayed procurement of such a vital machine. Besides, non-commissioning of the machine as of July 1998 badly affected testing of engines as the factory tested only 185 and 268 engines out of 225 and 383 engines assembled/overhauled during 1996-97 and 1997-98 respectively.

### *50.6.4 Issue of surplus items from Red Rose project*

Out of 76 items received from project 'Red Rose' in April 1994, 23 test stands costing Rs 2.03 crore were meant for overhauling of stabilizers of tanks. These were to be transferred to Bharat Electronics Limited Chennai, the agency for overhauling of stabilizers. Heavy Vehicles Factory Avadi sent five test stands to Bharat Electronics Limited Chennai in September 1994 on loan basis for their immediate use. But they declined in June 1995 to accept these test stands as they were already having highly proven test stands.

As a result, five test stands valuing Rs 10.68 lakh issued to Bharat Electronics Limited Chennai did not serve any purpose and were lying unutilised.

General Manager Heavy Vehicles Factory Avadi issued the balance 18 test stands valuing Rs 1.92 crore to Bharat Electronics Limited Taloja in October 1997 but the cost of the test stands amounting to Rs 1.92 crore was yet to be realised from Bharat Electronics Limited Taloja as of March 1998.

### *50.7 Delay in provision of manpower*

**Manpower positioning was not synchronized with the scheduled time frame for completion of the project**

As per the sanction of the Ministry of 1993, Heavy Vehicles Factory Avadi was to provide 614 personnel for this project through redeployment, out of which 484 were to be industrial employees. Engine Factory Avadi was to redeploy 188 persons on the engine overhaul project, out of which 141 were to be industrial employees.

Detailed Project Report prescribed that overhaul schedule can be maintained only if one-third manpower was positioned within six months of sanction and remaining two-third during thirteenth to eighteenth month. Thus, entire manpower was to be positioned by March 1995. Heavy Vehicles Factory redeployed only 259 industrial employees against the requirement of 484 upto May 1995 and Engine Factory Avadi failed to locate any suitable industrial employee for redeployment to this project. Ministry sanctioned 225 and 287 including 141 for overhaul, additional posts of industrial employees in June 1995 in Heavy Vehicles Factory and Engine Factory respectively, subject to the condition that 512 posts were surrendered from other ordnance factories.

Both the factories delayed re-deployment and recruitment of personnel. Even as of March 1998, Heavy Vehicles Factory had positioned only 418 industrial employees for the overhaul project, while engine Factory Avadi had positioned only 60 against the requirement of 141.

While both factories attributed deficient manpower as one of the reasons for poor performance, their approach to positioning of manpower did not betray any sense of urgency. Moreover, almost negligible performance of Heavy Vehicles Factory Avadi during 1995-96 and 1996-97, when they could achieve overhaul of only four and three tanks respectively, despite availability of 259 industrial employees against their maximum demand of 484 remains unexplained. Ordnance Factory Board did not intimate whether 512 posts from other ordnance factories were surrendered in compliance to Ministry's directions.

### *50.8 Monitoring*

Sanction of the project envisaged overhaul of 12 tanks by March 1995. Taking note of slow progress of work, Ministry constituted high level steering committee comprising Chairman, Ordnance Factory Board, representatives from Ministry, Army Headquarters, Director General of Quality Assurances, General Managers of two factories and Additional Director General Avadi as late as in July 1995 to monitor the progress in establishing overhaul facilities for tanks and engines. The committee was to (i) ensure close follow up and speedy establishment of overhaul facilities at Heavy Vehicles Factory and Engine Factory Avadi, (ii) review every quarter the progress of work and to ensure its completion within time and (iii) lay down guidelines and ensure steps for removal of bottlenecks in the implementation of the project.

The committee met only three times in December 1995, March 1997 and February 1998 against the required eleven times till March 1998. Additional Director General Avadi stated in September 1998 that committee meetings could not be arranged as members were from various formations. Failure of the Chairman Ordnance Factory Board as Chairman of this committee either to remedy this and/or to hold the monitoring meetings, as per design, deprived the project of a multi-disciplinary guidance, much needed in the face of slippage on all components.

### *50.9 Shortfall in performance*

The delay in initiating the tank overhaul facility had led to accumulation of 368 tanks by the time the tanks were taken up for overhaul. By the time the envisaged capacity of overhaul of 70 tanks per annum could be achieved even as per the project schedule 200 tanks per annum were being added to the tanks due for overhaul every year. Similar situation prevailed in respect of overhaul of engines at Engine Factory Avadi, though the mismatch was a little less than those for the tanks. Thus, even with reference to the designed capacity of overhaul, there was a serious mismatch between the requirement and the capacity.

This mismatch has been further aggravated by dismal performance of the two factories, which is likely to render large number of tanks and engines unserviceable for a very long time. Large number of tanks and engines becoming due for overhaul at a time is attributable to their induction in bulk particularly during 1982-86. Ministry ought to have taken advance action to meet the requirement of overhaul, so that the Army is not saddled with such a large number of tanks needing overhauling.

The poor performance of both factories is all the more striking in the background of low capacity utilisation of production of T-72 tanks. Against the annual capacity of 200 tanks, the Heavy Vehicles Factory has been producing only between 48 and 92 tanks during the last three years.

#### *50.9.1 Shortfall of tank overhaul at Heavy Vehicles Factory Avadi*

The target and achievement in respect of overhaul of tanks up to 1997-98 is given in the table below:

| Year | Tanks to be overhauled Cumulative | | Target | | Performance | | Issue to Army | |
|---|---|---|---|---|---|---|---|---|
| | Due for overhaul | Sent to HVF | Year-wise | Cumulative | Year-wise | Cumulative | Year-wise | Cumulative |
| By March 1995 | 368 | 41 | 12 | 12 | 13 | 13 | Nil | Nil |
| 1995-96 | 368 | 65 | 76 | 88 | 4 | 17 | 4 | 4 |
| 1996-97 | 568 | 74 | 70 | 158 | 3 | 20 | 8 | 12 |
| 1997-98 | 768 | 109 | 70 | 228 | 50 | 70 | 35 | 47 |

It would be seen that at the optimum capacity utilisation also, the overhaul was in arrears by over five years even before the first overhauls were taken up. The arrears at the end of March 1998 has gone up to 698, which can be overhauled in not less than 10 years, even if the factory, works at the maximum capacity of overhaul of 70 tanks, every year. In between large number of tanks due for overhaul will be also added, particularly since large number of indigenously produced tanks will also be due for overhaul.

**Heavy Vehicles Factory overhauled and issued only 47 tanks to Army against target of 228.**

General Manager Heavy Vehicles Factory Avadi attributed the shortfall in planned overhaul of tanks to deficient manpower and erratic feeding pattern of tanks by Army. This contention is without basis since the factory overhauled only 70 tanks and issued only 47 out of them to Army upto March 1998 against handing over of 109 tanks by Army. Supply of more tanks would have only blocked space in the factory. The contention about deficient manpower being the reason for poor performance ignores the glaring inefficiency of overhaul of a mere four and three tanks during 1995-96 and 1996-97 despite availability of at least 259 industrial staff for overhaul project.

**Engine Factory Avadi issued only 244 overhauled engines to Army against target of 553.**

### *50.9.2 Shortfall at Engine Factory Avadi*

The target and achievement in respect of overhaul of engines at Engine Factory Avadi up to 1997-98 is given in the table below :

| Year | Engines due for overhaul | Target | | Performance | | Issue to Army | |
|---|---|---|---|---|---|---|---|
| | Cumulative | Yearwise | Cumulative | Yearwise | Cumulative | Yearwise | Cumulative |
| By March 1995 | 368 | 40 | 40 | 15 | 15 | 7 | 7 |
| 1995-96 | 468 | 173 | 213 | 45 | 60 | 53 | 60 |
| 1996-97 | 768 | 170 | 383 | 96 | 156 | 84 | 144 |
| 1997-98 | 1068 | 170 | 553 | 131 | 287 | 100 | 244 |

Against targeted overhaul of 553 engines, Engine Factory Avadi overhauled 287 and issued only 244 to Army up to 1997-98. Shortfall in overhauling of engines was attributed to non-availability of testing facilities and insufficient manpower. It is noteworthy that Engine Factory Avadi placed order for dynamometer as late as in November 1996 i.e. three years after the sanction of the project. Besides, Ordnance Factory Board /Engine Factory Avadi also failed to synchronise redeployment/fresh recruitment of manpower with the schedule of the project.

Even at the optimum performance the Engine Factory will require at least four and half years to clear the backlog. During this time further engines will become due for overhaul.

### *50.10 Impact of shortfall*

**Overhaul cycle of tanks stands disrupted besides slippages in production**

Master General of Ordnance Army Headquarters pointed out in October 1996 that complete cycle of overhaul of tank had been disrupted and slippage in manufacture of tank led to a situation where neither new nor overhauled tanks were being made available in planned numbers. In January 1997, Master General of Ordnance again pointed out to General Manager Heavy Vehicles Factory that only nine tanks were overhauled so far and Army was unable to do any effective planning for armoured fighting vehicle with such slippages. He added that users' confidence in Heavy Vehicles Factory was waning.

This situation where the production of tanks is consistently much below the capacity coupled with progressively increasing number of tanks due for overhaul is a serious constraint to the operational preparedness and warrants an urgent remedial action by the Ministry.

The matter was referred to the Ministry in November 1998; their comments were awaited as of January 1999.

## 51 Augmentation of brass melting and strip making capacity

***Highlights***

- **The Ordnance Factories Ambernath and Katni have failed to complete the project for augmentation of the production capacity of brass ingot and brass strips, required for cups and cartridges of small arms and quick firing ammunition for over 15 years since the sanction by the Ministry in 1983, while Rs 53 crore has been spent on this project. As per the original approval by the CCPA in February 1983, the project was to be completed by 1987.**

- **The procurement of machinery was delayed by up to four years by the two Ordnance Factories, Ordnance Factory Board and Director General of Supplies and Disposals due to various problems. The Ordnance Factory Board delayed sanction of civil works and Military Engineer Services on their part, further delayed the completion of the civil works. When finally installed, most of the major plant and machinery either did not perform or were not utilised.**

- **Two rolling mills purchased at Rs 21 crore in October 1995 for Ordnance Factory Ambernath were not commissioned as of August 1998. Continuous Casting Plant and Coil Transfer System purchased at Rs 11.96 crore for Ordnance Factory Katni have remained unutilised since their commissioning in September 1994 and July 1997 respectively due to absence of down the line facility and low load.**

- **The capacity for ingots and strip in the two factories was to be increased from 25560 tonnes to 52289 tonnes and 19170 tonnes to 41547 tonnes respectively. The requirement of the ingots and strips has come down during the long time taken to execute the project. The requirement over the last five years since 1993 has been consistently much below even the pre-augmented capacity of the two factories. The production of ingot has been at 68 to 82 *per cent* of the pre-augmented capacity. The augmentation project has not improved their performance despite an expenditure of Rs 53 crore.**

- **The objective of self-sufficiency in production of brass ingot and brass strip has remained thwarted. The ordnance factories have been compelled to depend on the trade and import for their requirement. The extra expenditure on procurement from trade noticed by audit was Rs 2.66 crore over 1993-98.**

- **Practically no value for money has been realised from an investment of Rs 53 crore on capacity augmentation. The management of the project betrayed lack of concern for value for money.**

### *51.1 Introduction*

Ordnance Factory Ambernath and Ordnance Factory Katni produce strips required for cups and cartridge cases of small arms and quick firing ammunition. The process of manufacture of strip is as under.

Small size ingot are cast in the book type ingot/moulds in the melting platform, hot rolled in hot rolling mill and processed further through cold rolling mill in straight length of strip for manufacture of cartridge cases and cups. In addition, strips are also produced through continuous casting line in coil form and processed further through milling, cold rolling, annealing and finally set to process for blanking and cupping.

Ministry of Defence sanctioned a project in February 1983 at an estimated cost of Rs 33.83 crore which included Rs 28.19 crore for machinery and Rs 5.64 crore for civil works with planned date of completion as February 1987. The scope of work included facilities like melting, hot and cold rolling, annealing and cupping of strips. Ministry revised the estimated cost of project to Rs 53.66 crore in September 1987 with planned date of completion as March 1990 on account of earlier estimation being inaccurate, adoption of advanced technology, increase in customs duty and exchange rate and escalation. The quantum of augmentation of capacity and revised estimated cost in Ordnance Factory Ambernath and Ordnance Factory Katni were as under :

| Name of factory | Existing capacity (tonnes per annum) | | Augmented capacity (tonnes per annum) | | Revised estimated cost ( Rs in crore) | | | |
|---|---|---|---|---|---|---|---|---|
| | Ingot | Strip | Ingot | Strip | Plant and machinery | Civil works | Deferred revenue | Total |
| | | | | | | | | |
| OF Ambernath | 19560 | 14670 | 33024 | 27510 | 29.33 | 2.83 | | 32.16 |
| OF Katni | 6000 | 4500 | 19,265 | 14037 | 17.26 | 4.11 | | 21.37 |
| Total | 25560 | 19170 | 52289 | 41547 | 46.59 | 6.94 | 0.13 | 53.66 |

The delay in completion of project resulting in cost overrun, import and trade purchase were commented in paragraph 65 of the Audit Report No.12 of 1990. Ministry in their action taken note had stated in August 1990 that the project would be completed in about two years after the placement of order for rolling mills. Though the supply order for rolling mills was placed in August 1991, the project was yet to be completed as of April 1998.

### *51.2 Organisational set up*

Ordnance Factory Board is responsible for policy formulation and overall supervision and control of Ordnance Factories. In the individual ordnance factories, the General Managers were responsible for planning and execution of the projects. Military Engineer Services (MES) was responsible for civil works.

### *51.3 Scope of Audit*

A follow-up review of the execution of the project was conducted through a test check of documents in Ordnance Factories Ambernath and Katni and Ordnance Factory Board during February -March 1998.

### *51.4 Delay in civil works*

**There was inordinate delay in completion of civil works.**

As per activity chart of the project, administrative approvals for civil works were to be issued by July 1984 and all works were to be completed by February 1988. Ordnance Factory Board issued five administrative approvals for civil works, namely construction of new rolling mill shop and external/internal services and foundation work at Ordnance Factory Ambernath and extension of rolling mill shop, construction of new melting shop, residential quarters and conversion of 11 KV to 33 KV electricity at Ordnance Factory Katni at a total cost of Rs 6.94 crore during June 1984 to October 1987. There was delay of six to 40 months in issue of the five administrative approvals. The Chief Engineers Military Engineer Services Mumbai/Pune and Jabalpur were to execute civil works through Garrison Engineers Ambernath and Jabalpur respectively. The Administrative Approvals stipulated completion of civil works between May 1985 and November 1988. However, only one work relating to new rolling mill shop at Ordnance Factory Ambernath was completed in July 1987. Garrison Engineers completed all other works during June 1989 to February 1996 after a delay of nine to 88 months. Total expenditure on civil works was Rs 8.19 crore.

**MES delayed completion of civil works by nine to 88 months**

The slippages in civil works contributed towards delay in the erection and commissioning of two rolling mills at Ordnance Factory Ambernath and coil transfer system at Ordnance Factory Katni as discussed in succeeding paragraphs.

### *51.5 Delay in installation and commissioning of plant and machinery*

**Delay in civil works delayed installation and commissioning of plant and machinery**

As per activity chart conclusion of contract for procurement of plant and machinery was to be completed by May 1987 and commissioning was to be completed within 20 months of completion of civil works i.e. by October 1989. Ordnance Factory Board finalised specifications of all major items of plant and machinery and placed indents by May 1984 and concluded contracts up to August 1991. Since completion of most of the civil works was delayed even beyond the date of completion of entire project i.e. March

1990, commissioning of three machines started after a delay of four to 49 months. Two rolling mills valuing Rs 21 crore at Ambernath were still under final acceptance trial as of August 1998. Cases of delay in commissioning are given below :

***i) Non-commissioning of two rolling mills at Ordnance Factory Ambernath***

Rolling mill rolls strips and coils coming from casting lines which are used for production of cups of small arms and quick firing ammunition.

**Rolling mills costing Rs 21 crore which were due to be commissioned by March 1990 are yet to commence regular production**

Ordnance Factory Board placed indent for two rolling mills for Ordnance Factory Ambernath in March 1984. Ordnance Factory Board placed order on `Mecon' in August 1991 at Rs 21 crore with scheduled delivery as February 1993. Ministry and Ordnance Factory Board, thus, took seven years to place the supply order for the rolling mills. Part of the delay was attributable to the reluctance of Garden Reach Shipbuilders and Engineers to supply it at their quoted price and to the delay in determining the technical -cum- financial bids. However, 'Mecon' supplied the two mills in October 1995, after more than two years of scheduled delivery due to embargo of a foreign government on a foreign firm on whom rolls and other systems of the mill had been ordered by `Mecon'.

Erection of the mills was held up by four months as Garrison Engineer Ambernath completed the foundation work only in February 1996. Although erection and commissioning of the mills was to be completed within six months after completion of the foundation work, `Mecon' conducted performance trial between February 1997 and March 1997. They were, however, unable to rectify defects in mechanical/hydraulic system and to increase the rolling speed in the mills from 80 to 200 metres per minute as per the specification provided in the contract. As a result, regular production had not yet commenced as of July 1998 and the mills valuing Rs 21 crore were lying idle since October 1995. Ordnance Factory Board did not levy any penalty for delay in supply and erection of the mills.

**Delayed commissioning of rolling mills resulted in loss of higher yield valuing Rs 21.30 crore**

Non-commissioning of the rolling mills resulted in the loss of higher yield of seven *per cent*, which was expected from processing of material in heavy coil resulting in notional loss of yield of Rs 21.30 crore during 1990-91 to 1996-97 because new rolling mills could have produced 21166 tonnes cups out of same input material instead of 19781 tonnes by conventional process.

***(ii) Non-functioning of Coil transfer system at Ordnance Factory Katni***

Coil transfer system is fitted with rolling mills for production of strip in coil form. Ordnance Factory Board placed an indent for coil transfer system on Director General of Supplies and Disposals in October 1987, four years after finalisation of its specifications in November 1983, for Ordnance Factory Katni, to be supplied by August 1988. Director General of Supplies and

Disposals placed supply order in June 1991 on Global Engineers New Delhi at a cost of Rs 3.27 crore.

Ordnance Factory Katni received the system in September 1992, but erection work could not start as Garrison Engineer Jabalpur completed foundation work only in October 1996 i.e. 49 months after receipt of machine due to the following:

- Garrison Engineer Jabalpur got the estimates for foundation work approved by Ordnance Factory Board only in May 1993 i.e. eight months after receipt of the equipment. He concluded contract for construction of foundation in February 1994.

- Failure of Garrison Engineer to tackle seepage of water at several points in the foundation delayed the completion of the work.

As a result of the delay the supplier firm commissioned the machine only in July 1997 i.e. about five years after its receipt. Even after commissioning of the system the factory could get output of 25 tonnes only, that too from trial run during the period of July 1997 to April 1998. The General Manager Ordnance Factory Katni stated in April 1998 that capacity of the plant could not be utilised to the full extent even when it functions normally due to absence of downline facilities like rolling mills, slitting line and bright annealing furnaces.

**Rs 3.27 crore incurred for procurement of coil transfer system became infructuous**

Thus, the coil transfer system valuing Rs 3.27 crore would remain largely unutilised and no value for money is likely to be realised from the expenditure on procurement of the system.

### *iii) Insufficient load for Continuous casting plant at Katni*

**Unjustified procurement of a machine valuing Rs 8.69 crore due to non-provisioning of down stream facilities**

Continuous casting plant is used for melting, casting and surface milling of strips. Against indent of Ordnance Factory Board placed in March 1984, Director General of Supplies and Disposals placed an order in May 1987 on a firm which went into liquidation in June 1987. They placed another order in November 1989 on a foreign firm at a cost of Rs 8.69 crore. Ordnance Factory Katni received the plant after three years in December 1992. Erection and commissioning of the plant was completed in September 1994, due to change in ownership of the firm. The total production from the plant in three and half years since its commissioning was only 442 tonnes as of April 1998 against the rated capacity of 6600 tonnes per annum. The General Manager stated in April 1998 that the load since March 1995 was not sufficient to run the plant at the rated capacity and existing requirement could be fulfilled through conventional route of melting and rolling. Hence, the plant procured at Rs 8.69 crore remained largely unutilised due to reduction in load over the long time the Ordnance Factory Board took to procure and install it.

### *51.6 Production*

**Heavy investment of Rs 53.08 crore did not increase the productivity of ingot and strip at Ordnance Factory Katni and Ambernath**

**51.6.1** While emphasising that the need for augmenting the combined capacity for ingot and strips in the two factories continued to exist, the Cabinet Committee on Political Affairs decided in August 1987 to increase the capacity to 52289 and 41547 tonnes for ingot and strip respectively. Yearwise total requirement and production of ingot and strip in the two factories are shown below :

| Year | Requirement (in tonnes) | | Production (in tonnes) | |
|---|---|---|---|---|
| | Ingot | Strip | Ingot | Strip |
| 1993-94 | 19094 | 13235 | 18520 | Not available |
| 1994-95 | 17235 | 11950 | 17318 | -do- |
| 1995-96 | 17874 | 12507 | 20944 | 12944 |
| 1996-97 | 17552 | 12172 | 20192 | 12415 |
| 1997-98 | 20546 | 14505 | 18491 | 9917 |
| Average | 18460 | 12873 | 19093 | 11758 |

The maximum annual production of ingot and strip were 20944 and 12944 tonnes respectively during 1995-96 against unaugmented existing capacity of 25560 and 19170 tonnes. Average annual requirement of ingot and strip was only 18460 and 12873 tonnes which could be produced within the pre-augmented capacity of 25560 tonnes and 19170 tonnes respectively.

**Since the existing capacity was adequate to meet the requirement there was no need for augmentation at Rs 53 crore.**

Thus, inaccurate assessment of annual requirement while sanctioning the project led to creation of additional capacity. As a result, practically no value for money could be derived from investment of Rs 53.08 crore.

#### *51.6.2 Ordnance Factory Ambernath*

On augmentation, the capacity of ingots and strips at Ordnance Factory Ambernath was to go up by 70 and 87 *per cent* to 33024 and 27510 tonnes per annum respectively but the factory could not establish the capacity even after significant investment of Rs 31.67 crore upto March 1998

The requirement and production of ingot and strip during 1993-98 are shown below :

| Year | Requirement (in tonne) | | Production (in tonne) | |
|---|---|---|---|---|
| | Ingot | Strip | Ingot | Strip |
| 1993-94 | 16594 | 11557 | 16514 | Not available |
| 1994-95 | 13459 | 9423 | 14958 | -do- |
| 1995-96 | 14272 | 10051 | 18190 | 11072 |
| 1996-97 | 14367 | 10022 | 17897 | 10841 |
| 1997-98 | 14695 | 10204 | 15320 | 7738 |

The augmented capacity is yet to make any difference to the ingot production at Ambernath. The maximum production of 11072 tonnes of strips has also remained within the capacity of 14670 tonnes that existed prior to augmentation, as the two rolling mills were yet to commence regular production.

Thus, expenditure of Rs 31.67 crore incurred on the project as of March 1998 against revised cost of Rs 32.16 crore is yet to start bearing fruit.

### *51.6.3 Ordnance Factory Katni*

The capacity at Ordnance Factory Katni was to go up to 19265 tonnes from 6000 tonnes for ingot and to 14037 tonnes from 4500 tonnes for strip after completion of the project. As brought out in the preceding paragraph 51.5, the full targeted capacity for strip making could not be achieved due to exclusion of high rolling mills, slitting line and bright annealing furnaces from the scope of project due to shortage of funds.

The requirement and production of ingot and strip during 1992-98 are shown below :

| Year | Requirement ( in tonnes ) | | Production ( in tonnes ) | |
|---|---|---|---|---|
| | Ingot | Strip | Ingot | Strip |
| 1992-93 | 3615 | 2415 | 2741 | 2120 |
| 1993-94 | 2500 | 1678 | 2006 | 1761 |
| 1994-95 | 3776 | 2527 | 2360 | 1765 |
| 1995-96 | 3602 | 2456 | 2754 | 1872 |
| 1996-97 | 3185 | 2150 | 2295 | 1574 |
| 1997-98 | 5851 | 4301 | 3171 | 2179 |

Thus, despite investment of Rs 21.41 crore in the augmentation project, the factory failed to meet the existing requirement in full which itself was much lower than the pre-augmented capacity.

The ordnance factory produced ingot at less than 16 *per cent* and strips at 15 *per cent* of the augmented capacity. Thus, no value for money from an investment of Rs 21.41 crore was realised.

Ordnance Factory Board stated in March 1997 and November 1997 that the huge shortfall in production with reference to sanctioned capacity of ingot and strip at Katni was due to old plant and machinery and non-availability of manpower, scrap (input material) and coil transfer system

This contention is not tenable as: (i) the factory had average manpower (industrial employee) of 81 *per cent* of sanctioned strength during 1993-94 to

1997-98. Moreover, new plants and machinery like continuous casting plant, coil transfer system and other material handling equipment like crane, tractors etc. are expected to be operated by comparatively smaller manpower; (ii) even after commissioning of coil transfer system in July 1997, there was no significant impact on the output and (iii) the factory got converted its own scrap into strip of 3461 tonnes at a cost of Rs 8.65 crore from trade during 1992-93 to 1996-97.

### *51.7 Dependence on trade/import*

While the augmented capacity at an expenditure of Rs 53 crore remained to be realised ordnance factories continued to remain dependent on import/trade procurement. In the cases test checked in audit the total extra expenditure on procurement from trade/import as compared to the cost of production in the factories was Rs 2.66 crore. A few major instances are given below :

#### *(i) Ordnance Factory Ambernath*

**Ordnance Factory Ambernath imported brass strip valuing Rs 9.95 crore due to shortfall in production**

a) General Manager Ordnance Factory Ambernath imported 587 tonnes of strip at a cost of Rs 9.95 crore during 1995-97. The foreign exchange outgo would have been avoided had the enhanced strip making capacity become operational timely.

Ordnance Factory Board stated in November 1997 that the strips were imported for commissioning trial of presses.

This contention is not tenable because the factory actually required only 10 tonnes of strip for commissioning trial. Besides, the import of this quantity was necessitated because enhanced strip making capacity had not become operational.

**Extra expenditure of Rs 1.06 crore was incurred on procurement of brass strip from trade**

b) General Manager Ordnance Factory Ambernath procured 280 tonnes of strip for quick firing ammunition from trade at a cost of Rs 5.20 crore during 1995-96. As the trade cost of Rs 1.79 lakh per tonne was higher than its own manufacturing cost of Rs 1.41 lakh per tonne, the factory spent an extra Rs 1.06 crore.

Ordnance Factory Board stated in November 1997 that the strips procured for quick firing ammunition under different circumstances had no relation with this project. This contention is not tenable in view of the fact that project provided for production of 15377 tonnes of strips for quick firing ammunition at Ordnance Factory Ambernath.

(ii) Ammunition Factory Kirkee and Ordnance Factory Varangaon which source strips or cups from Ordnance Factories Ambernath and Katni had to depend on trade sources. Ammunition Factory Kirkee procured brass strips and cups valuing Rs 29.11 crore during 1992-93 to 1997-98 from trade.

Ordnance Factory Varangaon also procured brass strips valuing Rs 10.39 crore during the same period.

Two instances where Ammunition Factory Kirkee incurred extra-expenditure are given below :

**AF Kirkee incurred an extra expenditure of Rs 1.60 crore on procurement of brass cup from trade**

a) Ammunition Factory Kirkee procured 81 tonnes of 9 mm brass cup at a cost of Rs 1.82 crore in October 1996 to cover the deficiencies on account of inadequate supply from Ordnance Factory Ambernath. As the cost of procurement from trade was Rs 2.25 lakh per tonne against manufacturing cost of Rs 1.72 lakh per tonne at Ambernath, Ammunition Factory Kirkee incurred an extra expenditure of Rs 42.93 lakh.

b) Further, Ammunition Factory Kirkee procured 300 tonnes of 5.56 mm brass cup from trade at a cost of Rs 6.33 crore in August 1997 and February 1998 to cover the deficiencies on account of short supply from Ordnance Factory Ambernath. The cost of procurement from trade was Rs 2.11 lakh per tonne against Ordnance Factory Ambernath's manufacturing cost of Rs 1.72 lakh per tonne resulting in an extra expenditure of Rs 1.17 crore.

The matter was referred to the Ministry in November 1998; their comments were awaited as of January 1999.

## 52. Avoidable manufacture of steel ingots

**While Metal and Steel Factory Ishapore could not utilise the stock of 634 tonne steel ingot held at the end of March 1990 during the next seven years, it continued to produce further 508 tonne ingot at Rs 1.46 crore during this period.**

Despite holding closing stock of steel ingots of 634 tonne at the end of 1989-90 and average annual utilisation of only 76 tonne, Metal and Steel Factory Ishapore manufactured another 508 tonne steel ingots valuing Rs 1.46 crore during 1990-97.

**MSF manufactured and consumed 508 tonne and 532 tonne steel ingot respectively during 1990-97**

The annual consumption of steel ingot in Metal and Steel Factory Ishapore during 1989-90 was nil. During the subsequent seven years 1990-97, it consumed a total of 532 tonne ingot at an average of 76 tonne per annum. Yet, the General Manager Metal and Steel Factory continued to manufacture steel ingot during 1990-97 and produced another 508 tonne at a cost of Rs 1.46 crore.

**Ministry stated that lack of proper identification of chemical composition resulted in non-utilisation of old ingots**

Ministry of Defence stated in September 1998 that 634 tonne of steel ingot, accumulated since inception of the factory, could not be utilised for lack of identification of its chemical composition, cast number etc. which could have helped in identification of the composition since these had been washed out due to stocking of ingots in open. They added that Metal and Steel Factory constituted a committee in July 1997 for ascertaining the chemical composition/feasibility of gainful utilisation of old ingots ; findings of the committee were awaited as of September 1998.

This contention of the Ministry is a reflection of the poor quality of store management by successive General Managers of Metal and Steel Factory. Besides, rather than making efforts to find out the chemical composition of the ingots, the General Manager preferred to undertake manufacture of fresh stock for seven years at a stretch, until it was pointed out by Audit.

## 53. Over provisioning of forms

**Negligent requisition of semi statement forms by Vehicle Factory Jabalpur has resulted in accumulation of 2.82 lakh forms valued at Rs 17.14 lakh, which can last for 15 years at the current rate of consumption.**

Vehicle Factory Jabalpur uses printed forms to prepare statement of semi finished material during manufacture. It places the indent for these forms on

Metal and Steel Factory Ishapore who, in turn, is responsible for bulk manufacture/ printing and supply.

Careless assessment of requirement of these forms by stores section of Vehicle Factory Jabalpur has resulted in the factory holding excessive stock of 2.82 lakh forms valued at Rs 17.14 lakh at the end of July 1998 which, on the basis of their present consumption, is likely to last for about 15 years. This situation has developed due to a series of repeated negligence by stores section while processing indents over the past six-seven years as under :-

**General Manager Vehicle Factory Jabalpur placed indent despite holding stock for 12 years.**

(i) General Manager Vehicle Factory Jabalpur needlessly placed a demand for 69438 forms in February 1991, when it was already holding a stock of over 67000 forms, sufficient for more than six years at the then rate of consumption at 10,000 forms per annum. At this time 52000 forms had also been received earlier for Vehicle Factory at Ordnance Factory Khamaria under economy wagon scheme making the stock as 119000 sufficient for 12 years consumption. Besides, two old indents for two lakh forms were also outstanding since 1987 and 1989.

(ii) While assessing the requirement of forms, the General Manager negligently assumed consumption of 10000 forms per month in place of 10000 per annum.

**General Manager needlessly renewed two old indents in July 1992**

(iii) The General Manager renewed two old indents for two lakh forms of April 1987 and March 1989 in July 1992, without caring to examine the stock and consumption. In the assessment of July 1992 the stock position was shown as nil, while 1.28 lakh forms were in stock.

The General Manager ordered a Board of Inquiry in April 1997, who in their findings of April 1998, observed that annual consumption figures of one lakh taken for calculating the requirement of forms in 1989-90 and 1990-91 was based on some fictitious data. The Board of Inquiry also held responsible the Store Holder and the Store Officer for over provisioning of the forms.

Ministry of Defence stated in August 1998 that sister factories were again requested to intimate their requirements so that over provisioning of forms valuing Rs 17.14 lakh is liquidated and added that further procurement of these forms has since been stopped and requirement of forms for all factories would be met by Vehicle Factory Jabalpur.

## 54. Loss due to defective manufacture of brass cups

**Metal and Steel Factory Ishapore manufactured and supplied 7253 brass cups to Ordnance Factory Khamaria of which 6253 cups were rejected at the latter's end due to various defects resulting in a loss of Rs 26.14 lakh.**

Defective manufacture of brass cups required for 30 mm Naval ammunition at Metal and Steel Factory Ishapore and their acceptance by Senior Quality Assurance Officer at the factory led to rejection of 6253 out of 7253 cups by Ordnance Factory Khamaria resulting in a loss of Rs 26.14 lakh as brought out below :-

**Metal and Steel Factory, Ishapore manufactured and supplied 7253 Brass cups to Ordnance Factory Khamaria**

Metal and Steel Factory Ishapore manufactured 7253 brass cups required for 30 mm Naval ammunition during November 1991 to April 1994 at a cost of Rs 30.32 lakh and supplied them to Ordnance Factory Khamaria in four consignments of 1000, 1942, 3000 and 1311 in November 1991, April 1992, July 1993 and May 1994 respectively duly inspected by Senior Quality Assurance Officer at Metal and Steel Factory.

**Inspectors rejected 6253 cups valuing Rs 26.14 lakh due to defects**

Though the first consignment of 1000 cups issued to Ordnance Factory Khamaria in November 1991 was accepted/utilised by them the remaining 6253 cups issued in three consignments were rejected by Senior Inspector Naval Armaments Jabalpur due to pin holes, copper strain, heavy scoring, blister scaling etc. which were noticed on visual examination.

In view of such heavy rejections, Ordnance Factory Board asked Metal and Steel Factory Ishapore in January 1995 to stop further manufacture of cups.

Ordnance Factory Board stated in November 1998 that they issued 7253 cups to Ordnance Factory Khamaria maintaining all quality standard in its manufacture and duly inspected by the inspectorates, as such, it was incorrect to conclude that the cups were rejected due to defective manufacture by Metal and Steel Factory. This contention is not tenable since brass cups were rejected by Senior Inspector Naval Armaments, Jabalpur due to manufacturing defects. Clearance of defective cups by Senior Quality Assurance Officer only establishes the lapses in inspection and does not diminish the responsibility of those who failed to manufacture defect free cups.

The Ministry stated in December 1998 that factory had been advised by Ordnance Factory Board to institute a Board of Inquiry to go into reasons for rejection, regularise the loss and suggest remedial measures. Ministry further stated that audit will be apprised of the progress in the matter.

## 55. Loss due to defective manufacture of steel blooms

**Manufacture of steel blooms by Field Gun Factory Kanpur with help of defective equipment led to rejection of 142.70 tonne blooms valued at Rs 26.74 lakh by the indenting ordnance factory.**

Failure of the Field Gun Factory Kanpur to manufacture defect free steel blooms and to adhere to delivery schedule against a supply order of Wheel and Axle Plant Bangalore led to rejection of 142.70 tonne blooms costing Rs 26.74 lakh by the latter and short closure of the order resulting in loss of Rs 26.74 lakh on account of rejections besides loss of goodwill of the factory as given below.

**FGK supplied 2063 tonne till January 1997 of which 142.70 tonne were rejected by purchaser**

Field Gun Factory Kanpur received an order from Wheel and Axle Plant Bangalore in July 1993 for supply of 4000 tonne steel blooms valuing Rs 7.89 crore for manufacture of axles, to be delivered by June 1994. Field Gun Factory Kanpur could not supply any blooms within the delivery deadline of June 1994. The factory supplied 2063 tonne by January 1997, of which 142.70 tonne blooms valuing Rs 26.74 lakh were rejected by Wheel and Axle Plant. They short closed the order at the supplied quantity of 2063 tonne since the blooms supplied by Field Gun Factory Kanpur were not up to the desired quality and led to heavy rejection of axles manufactured out of these blooms.

The Ministry attributed non-adherence to delivery schedule to the problems in the forging press and manipulator. The Ministry further added in January 1999 that as per the purchase order, blooms were to be manufactured from vacuum degassed ingots but since this facility was not available some blooms got rejected at Wheel and Axle Plant.

Since the forging press and manipulator were giving problems in October 1993, the fact that the problem persisted in March 1997 points towards the failure of the General Manager to take effective action to set them right. Besides manufacture of blooms from other than vacuum degassed ingots reflects lower concern towards quality of the products.

## 56. Non-commissioning of machines

**Four capping, ringing in, gauging and varnishing machines procured by Ammunition Factory, Kirkee from Hindustan Machine Tools Limited in August 1994 at a cost of Rs 1.44 crore were yet to be commissioned.**

Four out of five machines used for capping, ringing in, gauging and varnishing (CRV) procured by Ammunition Factory at a cost of Rs 1.80 crore, received in August 1994 were yet to be commissioned as of October 1998. Audit scrutiny brought out that General Manager Ammunition Factory had accepted these machines without satisfactory pre-despatch inspection as brought out below.

In order to replace the existing CRV machines which were beyond economical repairs, General Manager Ammunition Factory procured from Hindustan Machine Tools Limited Hyderabad five machines for Rs 1.80 crore required in the manufacture of cartridge cases of 9 mm ammunition, in August 1994.

On Hindustan Machine Tools Limited's request Ordnance Factory Board instructed the General Manager Ammunition Factory to make provision in the supply order for pre-despatch trial at firm's premises for two weeks on double shift basis of five days a week on all the machines. General Manager Ammunition Factory, however, could not comply with these instructions of Ordnance Factory Board stating that it would involve despatch of 8.64 lakh components for pre-despatch trial of each machine, which could not be re-used for other production purposes.

**Ammunition Factory Kirkee supplied insufficient components for pre-despatch trials**

Ordnance Factory Board agreed with the contention of Ammunition Factory Kirkee and accordingly it was included in the supply order placed in March 1992 that the firm shall carry out its own trial as well as pre-despatch inspection trials in presence of Ammunition Factory's representative with 2.75 lakh components supplied by the factory and despatch the machines to the consignee only after successful pre-despatch trials. The General Manager Ammunition Factory Kirkee at the insistence of Hindustan Machine Tools Limited further supplied 3.74 lakh components in February 1994.

**Ammunition Factory Kirkee accepted machines at relaxed inspection standards**

**Four Machines received in 1994 were yet to be commissioned**

The representative of Ammunition Factory conducted pre-despatch trials at Hindustan Machine Tools Limited only for one hour each for three machines and half an hour each for two machines for want of sufficient components as against the originally planned schedule of two weeks trials on double shift basis. Moreover, during initial inspection on three CRV machines carried out by the factory's representative at firm's premises various defects were noticed and these were declared unacceptable. Subsequently the machines were accepted during pre-despatch trials between November 1993 and March 1994 at relaxed inspection standards. All the five machines were received by the factory in August 1994, but only one machine could be commissioned in July 1998 and the remaining four machines were yet to be commissioned as of October 1998.

The Ministry stated that the remaining four machines were expected to be commissioned shortly.

## 57. Procurement of Zinc plating plant from an inexperienced firm

**Deficient judgement of Ordnance Factory Board in selection of supplier of Zinc plating plant led to the plant procured at Rs 1.05 crore not being used since its commissioning in November 1995.**

Ordnance Factory Board's recommendation for acceptance of the offer of zinc plating plant of a firm whose past performance was unsatisfactory coupled with their inability to carry out crimping test in inspection resulted in procurement of a zinc plating plant at a cost of Rs 1.05 crore, which had not been used for bulk production even after three years of its commissioning.

Audit scrutiny disclosed the following :

**Technical evaluation committee did not recommend procurement of zinc plating plant from Global Engineers New Delhi**

**Ordnance Factory Board ignored the advice of technical committee of Ordnance Factory Ambernath**

(i) On evaluating the offers received from seven firms, the technical evaluation committee of Ordnance Factory Ambernath under the Chairmanship of the General Manager, initially found the offers of Global Engineers New Delhi and Grauer Wail (India) Ltd. Bombay technically acceptable. But on further deliberation, the committee categorically recommended for placement of order on Grauer Wail (India) Ltd. on the ground that Global Engineers, whose offer was cheaper, was novice in supply of zinc plating plant and their performance in respect of supply of various plants to other ordnance factories had been unsatisfactory. Ordnance Factory Board, however, intimated Director General of Supplies and Disposals New Delhi that offers of both Global Engineers and Grauer Wail were technically acceptable. Director General of Supplies and Disposals concluded a contract in August 1993 with Global Engineers, being lowest tenderer for supply, erection and commissioning of the plant at a total cost of Rs 1.05 crore.

**Cartridge cases zinc plated in plant failed in crimping* test**

(ii) The plant received in 1994 was commissioned in Ordnance Factory Ambernath by Global Engineers in November 1995. However, 7000 cartridge cases, zinc plated in the plant in September 1996, failed during crimping operation at Ordnance Factory Khamaria. Ordnance Factory Ambernath had to get these 7000 cartridge cases plated through trade at a cost of Rs 0.98 lakh. Subsequently also it depended for zinc plating of cartridge cases through trade. 2.7 lakh cartridge cases were got zinc plated through trade till January 1998 at Rs 39.69 lakh. The plant had not been used for regular production so far.

**Specifications of plant did not include crimping operation**

(iii) Scrutiny of documents disclosed that the plant was accepted by the inspection committee at Ordnance Factory Ambernath and

* Crimping operation is "folding of the mouth of the cartridge case over the projectile body so that the projectile is held tightly".

subsequently by Director General of Supplies and Disposals' inspector in November 1995, without crimping test, which is carried out after shell assembly. Specification of the plant did not include a condition of clearing the crimping test.

The Ministry stated in August 1998 that Ordnance Factory Board recommended acceptance of both offers making provision of pre-despatch inspection trials to ensure and ascertain that quality of plating and achievement of cycle time fully met the end users' requirements. It added that zinc plating of cartridge cases from trade became essential due to initial problems faced with a totally new technology. The Ministry's reply is silent about why the fact that this supplier was a new entrant and it's track record not being good was ignored by the Ordnance Factory Board. The reply also ignores the fact as to how despite pre-despatch inspection of the equipment bulk production could not start even after three years of commissioning of plant.

## 58. Rejection of bombs due to inspection lapses

**17808 mortar bombs assembled and filled by Ammunition Factory Kirkee using empty bodies procured from trade after inspection and clearance by the Area Inspector were rejected due to defects in bodies resulting in a loss of Rs 1.19 crore.**

Failure of the Area Inspector to identify and reject empty bodies of a bomb procured from trade resulted in rejection of 17808 bombs valuing Rs 1.19 crore by the user as brought out below.

Ammunition Factory Kirkee manufactures Mortar Bomb 51HE1A using empty bodies procured from trade. These empty bodies are inspected before despatch to Ammunition Factory by the Area Inspector, who functions directly under the control of Directorate of Quality Assurance (Armaments), New Delhi. The bombs manufactured by the factory using these empty bodies are issued to the Army Depots after inspection and clearance by the Senior Quality Assurance Officer (Armaments) Kirkee who works under the Controller of Quality Assurance (Ammunition), Kirkee who, in turn, reports to the Director of Quality Assurance (Armaments), New Delhi.

**21 lots of mortar bombs produced by Ammunition Factory, Kirkee were rejected due to defects in the bomb bodies**

Senior Quality Assurance Officer (Armament) Kirkee observed defects of shearing off of collar portion with the fuze in flight due to encroachment of threads on the grooved portion and very low wall thickness at the groove in the empty bodies of nine lots of bombs filled at Ammunition Factory between October 1993 and October 1994. Since part quantity of empty body lots from which these nine lots were filled, had been used in 12 other filled lots, in all 21 lot, of 39211 bombs valuing Rs 2.66 crore were rejected by Controller of Quality Assurance (Ammunition) Kirkee in December 1994 who termed the defects noticed as critical. In order to salvage the acceptable quantity, Controller of Quality Assurance (Ammunition), Kirkee carried out investigational firing, based on which, 17808 bombs valuing Rs 1.19 crore were finally rejected.

**After investigational firing 17808 bombs valuing Rs 1.19 crore were rejected**

Senior Quality Assurance Officer Kirkee approached the Ammunition Factory in November 1996 for replacement of the rejected bombs. Ordnance Factory Board, while declining the request for replacement, stated in January 1997, that the bombs were filled and assembled using empty bodies which had been inspected and cleared by Area Inspector and requested the Controller of Quality Assurance to review the request for replacement.

The Ministry stated in September 1998 that wall thickness below the groove proved to be critical which was not indicated by the designer in the drawings nor was the gauge mentioned. The reply of the Ministry is, however, silent about failure of Area Inspectors in noticing the deficiency in the empty bodies while inspecting them before acceptance. The Directorate of Quality Assurance (Armaments), New Delhi had, however, observed that 51mm Mortar Bomb body was a simple engineering store item having no complicated/ intricate feature and observance of defects on such a store after clearance at various tiers of inspection reflected poorly on the standard of inspection.

Thus, clearance of defective empty bodies procured from trade by the Area Inspectors led to rejection of 17808 mortar bombs of Rs 1.19 crore.

## 59. Extra expenditure due to unworkable rates

**Imprudent decision of Ordnance Factory Board in placing order for import of fuzes on a foreign trading firm who was not in possession of a valid export licence from the manufacturers led to retendering and procurement from another foreign firm at an extra cost of Rs 44.28 lakh.**

Tender Purchase Committee of the Ordnance Factory Board approved import of fuzes used in production of ammunition for armoured fighting Vehicle BMP at negotiated unit rate of US $ 3.70 from a foreign trading firm. A foreign state commercial firm who had also quoted and had supplied fuzes in the past agreed to supply the fuzes at US $ 5.98 each as against the last paid

**Ordnance Factory Khamaria placed order for 1.25 lakh fuzes on a firm who had no export licence**

rate of US $ 5.85 each. Ultimately, General Manager Ordnance Factory Khamaria placed supply order in November 1993 for 1.25 lakh fuzes on the foreign trading firm at the negotiated rate of US $ 3.70 each. The firm, however, failed to supply the fuzes. Another order of 1.20 lakh fuzes had to be placed in December 1994 on the latter foreign state commercial firm after retendering at US $ 7.15 each, resulting in extra expenditure of Rs 44.28 lakh as compared to the unit rate of US $ 5.98 negotiated with it on the earlier occasion.

Audit scrutiny revealed the following :

**The foreign firm did not have export licence from the manufacturers and the Government of that country**

(i) The contract was entered into with the foreign trading firm who was not a principal source and who had not supplied the item earlier and without insisting on the production of a valid export licence from the Government of the country of origin of the fuzes and based only on an assurance that a certificate will be produced from their principal authorising them for sale of the subject stores. Incidentally, while in their offer the foreign firm had indicated the source as country 'A', they eventually expressed their inability to supply due to refusal of another country 'B' to provide export licence to the manufacturer.

**The Government of country 'B' did not permit export licence to the manufacturers**

(ii) Although Ordnance Factory Khamaria had opened letter of credit on 23 December 1993, the foreign trading firm entered into an agreement with the state commercial firm of the country of origin of fuzes only on 16 March 1994 i.e. after expiry of scheduled delivery period. This agreement was, however, subsequently not ratified by the Government of the country of origin of the fuzes.

**Failure of the firm to supply compelled procurement from another at an extra cost of Rs 44.28 lakh**

(iii) In the absence of ratification of the agreement by the Government of the country 'B' of origin of the fuzes and consequent non-issue of an export licence, the foreign trading firm was unable to supply the fuzes resulting in the Ordnance Factory Board having no alternative but to retender. An order was placed on the same foreign state commercial firm at the rate of US $ 7.15 each in December 1994 / March 1995 against the rate of US $ 5.98 each quoted earlier in first call, resulting in extra expenditure of Rs 44.28 lakh. Due to negligence of the Ministry in not obtaining any performance bond, no penal action could be taken against the firm.

Ordnance Factory Board stated, in December 1997, that since rate of US $ 3.70 each of the foreign trading firm was considerably lower, tender purchase committee found it reasonable to decide on placing the order on this firm. While price is certainly an important criteria, decision to place the order without taking into account the status of the firm, the country of origin of the fuzes, the prior need for being in possession of a valid export licence etc., was imprudent.

The Ministry in December 1998 only reiterated what had been stated by the Ordnance Factory Board.

## 60. Theft and damage to buildings

**Failure of Ministry to ensure utilisation of Reserve Supply Depot taken over from the Army by Ordnance Clothing Factory Shahjahanpur against a project resulted in loss of assets due to theft and damage to buildings and assets remaining neglected for over 13 years.**

The Ministry failed to ensure utilisation of Reserve Supply Depot buildings of Army comprising eight sheds and allied buildings in an area of 24 acres since its taking over in July 1985 by Ordnance Clothing Factory Shahjahanpur for augmentation of accommodation for manufacture of socks, durries etc. Even though the project sanctioned at this site never took off and was finally closed in September 1986, the General Manager Ordnance Clothing Factory Shahjahanpur continued to retain the buildings as of August 1998 for over 13 years. The disuse coupled with absence of security resulted in theft of fittings and damage to the property, which was assessed at Rs 1.65 crore in November 1996. Scrutiny disclosed the following :

**Ordnance Clothing Factory Shahjahanpur took over sheds from the Military Engineer Services in July 1985 against a Project**

i) The Ministry sanctioned augmentation of capacity for manufacture of socks, durries etc at Ordnance Clothing Factory Shahjahanpur in October 1983. Major part of augmentation was to be carried out in the accommodation of the Reserve Supply Depot site. General Manager Ordnance Clothing Factory Shahjahanpur took over the Reserve Supply Depot buildings in July 1985 from Military Engineer Services. But additional manpower needed for augmentation of production was not sanctioned. Finally the Ministry ordered closure of the portion of the project at Reserve Supply Depot in September 1986. The Ministry, however, took four years to decide in June 1990 that Additional Director General Ordnance Factory Kanpur should surrender the buildings to Army and submit completion report. Additional Director General failed to take effective action as of August 1998.

**Ministry decided to close the project at the site of sheds**

ii) General Manager Ordnance Clothing Factory Shahjahanpur had intimated Additional Director General in December 1986 that a minimum of 39 persons were needed to provide security cover to the buildings. However, only 6 durwans were deployed by the factory to provide security cover to the buildings.

iii) Prior to taking over by Factory, the buildings had been rented out by the Army to the Food Corporation of India (FCI) at a monthly rent of Rs 0.59 lakh. After closure of the project, the General Manager proposed in December 1986 to approach FCI again to ascertain their requirement but Additional Director General did not approve this proposal since the Ministry decided in June 1990 to hand over the sheds to the Army

**Ministry decided to hand over the sheds to Army**

iv) General Manager Ordnance Clothing Factory approached Station Commander, Station Headquarters Shahjahanpur in August 1990 to detail their representative to take over the buildings. The latter intimated in January 1991 that they had no such instruction from their higher authorities. Even after issue of instruction by Army Headquarter in April 1992, Station Headquarter contended in August 1992 that they had no manpower to take over the buildings and that these were in bad state. The Ministry was apprised of this position in November 1992 by Ordnance Clothing Factory but there was no response from it regarding taking over of buildings by Army.

v) General Manager Ordnance Clothing Factory Shahjahanpur approached Quarter Master General in October 1995 for nominating an agency to take over the buildings but there was no response from him as of March 1996 despite reminders issued in February 1996/March 1996.

**Board of officers constituted by Area Headquarter observed loss of assets worth Rs 1.65 crore due to inadequate safe - guarding of buildings**

vi) A Board of officers convened by the HQ Uttar Pradesh Area in March 1996 to assess the state of the buildings concluded in November 1996 that AC sheets, roofing, doors, windows, electric fittings and other fixtures fitted in the buildings were either missing or damaged beyond recovery and a canteen building and one cycle stand were not traceable. The Board assessed that the loss of Rs 1.65 crore was caused due to theft and damage.

Even after Ministry's decision of June 1990 for surrender of assets to Army Headquarter, Station Headquarter and Headquarter Uttar Pradesh Area have been engaging themselves in assessing the loss due to damage and theft and General Manager Ordnance Clothing Factory has been contesting the amount of loss. The main issue of handing over of sheds to Army and their utilisation still remains to be addressed as of August 1998. Ministry has failed to act decisively.

The Ministry stated in August 1998 that sheds could not be again rented out to FCI after 1986 as they decided to surrender the sheds to Army who have not yet taken them over despite carrying out certain repairs by Ordnance Clothing Factory. This reply establishes that Army had no requirement for these buildings and Ministry failed to implement their own decision for transfer of buildings to Army resulting in their remaining neglected causing further deterioration and damage.

## 61. Extra expenditure due to non-inclusion of option clause

**Failure to incorporate option clause by Ordnance Factory Medak in their supply order of August 1995 resulted in an extra expenditure of Rs 36 lakh on account of subsequent procurement at higher rate.**

General Manager Ordnance Factory Medak did not incorporate option clause for 30 sets of filtering and ventilation system for BMP-IIK vehicles in their supply order of August 1995 despite approval of Ministry and later procured the same at higher rates against another order resulting in extra expenditure of Rs 36 lakh as brought out below.

**The Ministry sanctioned, in February 1995, import of 50 sets of a system and exercising option for 30 more sets by Ordnance Factory Medak**

Anticipating delay in supply of indigenously manufactured filtering and ventilation system for BMP-IIK vehicles Ministry approved in February 1995 import of 50 sets of the system with an option clause for another 30 sets to cover the production requirement of 1995-96. The supply order for indigenously produced set was placed at Rs 72000 per set.

**General Manager placed an import order in August 1995 for only 50 sets at unit price of US $ 6138**

The General Manager Ordnance Factory Medak placed an import order in August 1995 on a foreign firm for 50 sets at a price of US $ 6138 per set. He, however, did not incorporate option clause for 30 sets in the order. The factory received the 50 sets of the system in April 1996.

Anticipating further delay in supply of the indigenously manufactured system the General Manager placed another import order in June 1996 on the same foreign firm for 100 sets at a higher unit price of US $ 9500 with an option clause for additional 30 sets. The factory received 100 sets during October - December 1996. Had the General Manager included the option clause in the first import order as per the approval of the Ministry, at least 30 sets could have been purchased at a lower price of US $ 6138 per set.

**30 sets sanctioned in February 1995 was imported at an additional cost of Rs 36 lakh through another order of June 1996**

Thus, failure of General Manager Ordnance Factory Medak to incorporate the option clause resulted in an extra-expenditure of Rs 36 lakh.

Ordnance Factory Board stated, in May and August 1998 that since Ordnance Factory Medak anticipated indigenous supplies to be received in time, option clause for procurement of additional 30 sets against the first import order of August 1995 was not considered necessary. This reply ignores the basic fact that the option clause would only have provided an option without binding the Government to place order for further quantity at the same rate.

The matter was referred to the Ministry in June 1998; their reply was awaited as of January 1999.

## 62. Avoidable expenditure on airlifting of stores

**General Manager Ordnance Factory Chanda spent an extra Rs 49.42 lakh on airlifting 27.5 tonne propellant pyro powder which was entirely avoidable.**

Failure of General Manager Ordnance Factory Chanda to ask Thunder Bird Industries Inc USA not to act on its earlier instruction of airlifting 27.5 tonne propellant pyro powder despite availability of ship resulted in avoidable extra expenditure of Rs 49.42 lakh.

**Ordnance Factory Chanda placed an order for importation of 80 tonne of two types of propellant**

In order to meet the production target of 40000 rounds of 125 mm HE and HEAT ammunition during 1995-96 General Manager of Ordnance Factory Chanda placed an import order on Thunder Bird Industries Inc USA in December 1994 for supply of 80 tonne of two types of propellant pyro powder at a cost of US $ 746,000 equivalent to Rs 2.35 crore[‡] to be sent by February 1995 on FOB Europort basis.

Although the entire quantity of 80 tonne propellant was ready for despatch in February 1995, Thunder Bird Industries, anticipating delay in the availability of the ship, asked Ordnance Factory Chanda to confirm whether stores could be despatched by air.

**Ministry accorded sanction for airlift of 27 tonne propellant**

Based on Ordnance Factory Board's proposal of April 1995 the Ministry accorded sanction for airlifting of 27 tonne propellant at a cost of Rs 56.81 lakh in August 1995. General Manager Ordnance Factory Chanda instructed the foreign firm on 21 September 1995 to airlift 27 tonne propellant and remaining quantity by ship.

**SCI intimated foreign firm in September 1995 about nomination of a ship**

In the meantime, Shipping Corporation of India intimated Thunder Bird Industries on 19 September 1995 regarding nomination of the ship "State of Gujarat" for shipment of propellants which was expected at Europort on 26 September 1995.

Despite being aware on 22 September 1995 of immediate availability of ship, General Manager Ordnance Factory Chanda did not cancel his direction to the foreign firm for airlift and to ask them despatch entire quantity of 80 tonne by ship.

**The airlift took place 15 days after the shipping of the remaining quantity**

The firm loaded 52.5 tonne propellant on 5 October 1995 and airlifted the remaining 27.5 tonne costing Rs 80.78 lakh at Rs 69.83 lakh which arrived at Bombay on 20 October 1995. The factory received both airlifted and shipped consignment in November 1995. Yet the propellant was taken on stock after four months in March 1996 due to delayed receipt of invoice and connected documents at Ordnance Factory Chanda. This would prove that the urgency to airlift the propellant did not exist.

**Negligence by General Manager for not cancelling airlift led to extra expenditure of Rs 49.42 lakh**

Thus, failure of General Manager Ordnance Factory Chanda to cancel order for airlifting resulted in extra expenditure of Rs 49.42 lakh towards airlifting of 27.5 tonne propellant which was entirely avoidable.

The Ministry stated in August 1998 that decision to airlift part quantity of propellant was taken due to urgency of store in the production and uncertainty in placement of vessel. They added that since the part quantity was already shifted for airlifting, it was not possible for the firm to load full consignment in the ship.

[‡] 1 US$ = Rs 31-50

The contention of Ministry is not tenable as the 27.5 tonne propellants could have been shipped at later date after the first consignment of 52.5 tonne propellant had already been loaded in ship on 5 October 1995. Further there was no real urgency of the propellants since Ordnance Factory Chanda actually utilised imported propellant only in March 1996. This calls for investigation and fixing of responsibility.

## 63. Shortclosure of civil trade order

**Short closure of order for supply of pressure plates due to failure of Ordnance Factory Medak to adhere to the time schedule resulted in accumulation of steel plates and pressure plates valuing Rs 35.67 lakh.**

Failure of Ordnance Factory Medak to adhere to the time schedule in executing the order of Bharat Earth Movers Limited, for supply of pressure plates and consequent short closure of the order by the latter resulted in blocked inventory of steel plates valued at Rs 30.67 lakh besides 449 pressure plates worth Rs 5 lakh lying in shop as work in progress at the factory.

**Ordnance Factory Medak received an order from BEML for 3950 pressure plates**

Ordnance Factory Medak received an order, in August 1993, from Bharat Earth Movers Limited for supply of 3950 pressure plates at Rs 49.93 lakh with the stipulation that the supply was to be completed by October 1994.

**Ordnance Factory Medak procured steel plates to execute the order**

To execute the order General Manager Ordnance Factory Medak procured 102.314 tonne steel plates of three sizes at a cost of Rs 37.32 lakh from Steel Authority of India Limited between November 1993 and January 1994. The factory manufactured and issued 255 pressure plates up to October 1994. As the factory could not meet the delivery schedule, Bharat Earth Movers Limited scaled down the supply order to 1975 plates in November 1994 with January 1995 as revised date for completion of supply. The factory could supply only 416 plates up to February 1995, out of which only 375 were accepted by Bharat Earth Movers Limited. Another 175 plates valued at Rs 2.20 lakh were rejected during production.

**Shortclosure of order by BEML led to inventory holding of Rs 35.67 lakh**

Bharat Earth Movers Limited shortclosed the order finally, in August 1995, at the accepted quantity of 375 pressure plates on the ground of non-adherence of time schedule by factory. As a result, factory was holding 83.22 tonnes steel plates worth Rs 30.67 lakh in stock besides 449 pressure plates valuing Rs 5 lakh in the shop as work-in progress as of July 1998.

The Ministry stated in August 1998 that order was expected to be revived by September/October 1998. They added that even if Bharat Earth Movers Limited does not revive orders, sheets could be consumed in regular production for Army or disposed of in the market. Ministry, however, did not make it clear as to why these sheets could not be used in regular production even after three years of short closure of order.

Thus, inability of Ordnance Factory to adhere to the supply schedule led to short closure of the purchase order by the Bharat Earth Movers Limited resulting in the inventory of Rs 35.67 lakh being held.

## 64. Avoidable payment of sales tax

**Ordnance Factory Badmal did not register itself with the local Sales Tax authorities and paid higher rate of sales tax for purchase of goods from Orissa instead of concessional rate of four *per cent*, resulting in avoidable extra payment of Rs 21.78 lakh.**

Failure of General Manager Ordnance Factory Badmal in getting the factory registered with the Orissa Sales Tax authorities led to payment of higher Sales Tax instead of concessional rate of four percent against Form-IV, resulting in excess payment of Rs 21.78 lakh during April 1992 to March 1998.

**General Manager Ordnance Factory Badmal did not register with local Sales Tax authorities and paid extra sales tax of Rs 21.78 lakh**

For paying Sales Tax at a concessional rate of four percent against Form-IV for goods purchased for use in the manufacture, Ordnance Factory Badmal was required to register itself with the local Sales Tax department. As the General Manager of the factory failed to do so, the factory had to pay State Sales Tax at the rate of 12 to 18 percent for the goods purchased in Orissa since April 1992 as against concessional rate of four percent on Form-IV. The factory thus incurred an avoidable expenditure of Rs 21.78 lakh towards payment of Sales Tax at higher rates during April 1992 to March 1998.

The Ministry stated in September 1998 that the extra expenditure paid by way of Sales Tax was about Rs 4.74 lakh.

The figure of extra payment towards Sales Tax worked out by the Ministry was not correct as they computed the amount based only on those cases wherein the suppliers had quoted/claimed the Orissa Sales Tax separately but ignored the cases where the firm quoted the rate as "inclusive of all taxes". Ministry added in November 1998 that factory had been registered with Orissa Sales Tax authorities on 25 July 1998.

Thus, extra expenditure of Rs 21.78 lakh incurred towards payment of excess Sales Tax during April 1992 to March 1998 was entirely avoidable had the General Manager registered the factory with the Orissa Sales Tax authorities and made purchases against Form-IV.

## 65. Extra expenditure due to loading of excessive overheads

**Loading of excessive overheads in the manufacture of 13103 packing boxes at Gun Carriage Factory Jabalpur led to additional expenditure of Rs 88.97 lakh vis-a-vis trade cost.**

Excessive loading of overheads in the manufacture of packing boxes at Gun Carriage Factory Jabalpur resulted in cost of manufacture working out more than 3 times of the cost of procurement of packing boxes from trade. As a result, ordnance factories organisation booked an additional expenditure of Rs 88.97 lakh in respect of 13103 packing boxes of explosive, manufactured by Gun Carriage Factory Jabalpur, which were supplied to Ordnance Factory Bhandara as brought out below.

**General Manager, Ordnance Factory Bhandara procured packing boxes from Gun Carriage Factory Jabalpur as also from trade**

General Manager Ordnance Factory Bhandara, procured 13103 packing boxes of explosives from Gun Carriage Factory Jabalpur during 1993-96 at the rate of Rs 1003 per box. Analysis of the per unit cost of manufacture of these boxes at Gun Carriage Factory Jabalpur is given below.

| | |
|---|---|
| Material : | Rs 262.04 |
| Labour : | Rs 112.41 |
| Variable Overhead : | Rs 343.50 |
| Fixed Overhead : | Rs 285.40 |

**Cost of manufacture of packing boxes at GCF Jabalpur was much higher than trade cost due to inefficient processing and loading of excessive overheads**

General Manager Ordnance Factory Bhandara had also procured 9400 packing boxes for the same purpose from two private firms between March 1996 and May 1997 at the rate of Rs 324 per box. The comparison of trade cost vis-a-vis the cost of manufacture at Gun Carriage Factory Jabalpur clearly indicates that there was excessive loading of variable and fixed overheads. As a matter of fact overheads amounted to as much as more than five times of the labour charges, indicating a very high cost of supervision. This calls into question the efficiency of operation in Gun Carriage Factory Jabalpur for as simple a job as manufacture of packing boxes. Since the cost of material plus 50 *per cent* of Labour cost and 30 *per cent* of variable overheads in Gun Carriage Factory worked out to Rs 421, the procurement should have been made from trade. Failure to do so resulted in additional expenditure of Rs 88.97 lakh.

The Ministry stated that the comparison of cost of Gun Carriage Factory with trade cost was not tenable since the boxes manufactured by the factory were of high quality timber and reinforced with strip lining keeping in view the defence requirement whereas the boxes supplied by trade were of poor quality. This contention is not tenable as the high cost of production is mainly due to charging of excessive overheads rather than the cost of high quality material.

## 66. Engagement of private clearing agents

**Instead of getting the imported stores cleared through Embarkation Headquarters, General Managers of Ordnance Factory Ambernath and Ordnance Factory Ambajhari engaged a private clearing agent resulting in avoidable payment of Rs 17.89 lakh.**

General Managers of Ordnance Factory Ambernath and Ordnance Factory Ambajhari engaged a private agent instead of Embarkation Headquarters for clearing and forwarding defence stores from Mumbai Port, in violation of instruction of the Ministry in December 1990. This resulted in avoidable expenditure of Rs 17.89 lakh towards payment of clearing charges as follows.

**Embarkation Headquarters are responsible for clearance of imported defence stores**

Embarkation Headquarters located in Mumbai, Chennai and Calcutta are responsible for clearance of imported defence stores including those procured by Public Sector Undertakings involved in production of defence items.

**Ordnance Factory Ambernath and Ordnance Factory Ambajhari engaged a private party for clearing defence stores**

**General Managers of two factories paid clearance charges of Rs 17.89 lakh which was avoidable**

General Managers of Ordnance Factory Ambernath and Ordnance Factory Ambajhari procured Copper, Zinc and Aluminium ingots from Minerals and Metals Trading Corporation during 1995-96 to 1997-98 on high sea sales basis against six supply orders placed between April 1995 and July 1997. Instead of getting these imported stores cleared through Embarkation HQ Mumbai both of them agreed for the material to be cleared through the private clearing agent of Minerals and Metals Trading Corporation as per the terms of purchase orders. Accordingly a Private Party Kamat & Company Mumbai cleared these stores from Mumbai Port and was paid Rs 17.89 lakh as clearing charges which was avoidable, had Embarkation Headquarters cleared them.

Ordnance Factory Board stated in September 1998 that the General Managers engaged private clearing agent as it was functionally easier for the same agency to arrange importing the material in large quantity and getting it cleared through the port to avoid demurrage/detention charges. They added that since the purchase was on high sea sales basis it required close liaisoning between the factories, Mumbai Port, Minerals and Metals Trading Corporation and the transporter.

This contention is not tenable since Embarkation Headquarters was responsible for clearance and despatch of all imported defence stores to ultimate consignee. Further, another sister factory at Kirkee while procuring Antimony from the Minerals & Metals Trading Corporation in June 1996 and August 1997 on high sea sales basis had utilised the services of Embarkation Headquarters Mumbai for clearance and forwarding of the stores to the consignee, even though the corporation while quoting their rates had offered their services for the same at an extra cost.

The Ministry, however, stated in January 1999, that engagement of agents other than Embarkation HQ by Ordnance Factory Ambernath and Ordnance Factory Ambajhari was beyond their powers and irregular. Ministry added that

Ordnance Factory Board have been advised to take necessary action to regularise the extra expenditure.

## 67. Loss in Civil Trade Order

**Lower quote for civil trade by General Manager Vehicle Factory Jabalpur, for which he was not competent led to a loss of Rs 2.48 crore in one civil trade.**

Vehicle Factory Jabalpur sustained a loss of Rs 2.48 crore due to quoting low rates by the General Manager for supply of 200 tipper trucks to Municipal Corporation of Delhi. He did not have authority to quote lower than the price arrived at in accordance with guidelines.

As per Ordnance Factory Board's instructions of December 1992, the General Managers of ordnance factories can quote for civil trade to recover at least the estimated cost of material, labour and 30 *per cent* of variable overheads.

**General Manager Vehicle Factory Jabalpur quoted lower than the minimum power authorised to him**

General Manager of the factory quoted a net rate of Rs 4.29 lakh per tipper truck plus excise duty, sales tax, etc of Rs 0.96 lakh to Municipal Corporation of Delhi against Rs 5.53 lakh arrived at as per above guidelines. As a result, Vehicle Factory Jabalpur suffered a loss of Rs 2.48 crore in supply of 200 tipper trucks during November 1995 to March 1996 as shown under:

| | Per unit (Actual) Rs in lakh | | | Rs in lakh | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **No. of trucks** | **Labour cost** | **Material cost** | **30 *per cent* variable overhead** | **Price as per OFB's guideline** | **Realisation based on rates quoted per unit** | **Loss per unit** | **Total loss** | **Loss with reference to Material cost per unit** | **Under recovery of Material cost** |
| 200 | .33 | 5.07 | .13 | 5.53 | 4.29 | 1.24 | 248 | .78 | 156 |

**Cost of trucks supplied fell short of even material cost by Rs 1.56 crore**

It would be seen from the above that even material cost to the extent of Rs 1.56 crore remained uncovered.

The Ministry stated, in September 1998, that the General Manager quoted the price comparable to the rate contract prices of leading automobile manufacturers with a view to enter into the civil market consequent on rapidly dwindling orders for Shaktiman Vehicles and Nissan trucks from Army.

The reply of the Ministry is an attempt to ignore two basic facts, which it ought to have looked into. Firstly, the Ministry has not taken cognizance of the action by the General Manager in disregard of instructions of the Ordnance Factory Board about lowest price that could be quoted for civil trade. The General Manager was not competent to quote lower than the minimum arrived at as per the guidelines. Secondly, the purchase system and manufacturing process in this Ordnance Factory also warrants an investigation in view of their material cost of Rs 5.07 lakh alone being so close to the quote of Rs 5.53 lakh for the finished product including all duties and taxes by private manufacturer.

## 68. Lax control on issue of sulphur

**Failure of Ordnance Factory Itarsi to enter actual quantity of sulphur stated to be used in stock records led to questionable deficiency of 497 tonne sulphur valued at Rs 19.78 lakh.**

Ordnance Factory Itarsi produces oleum and sulphuric acid, for which it utilises sulphur as the basic raw material. Prior to May 1994 norm of 362 Kg per tonne of oleum/sulphuric acid was followed in producing oleum.

**Deficiency of 298 tonne sulphur detected by stock verification group at OFI in March 1992**

Consequent upon deficiency of 298 tonne of sulphur being noticed by the stock verifier of Ordnance Factory Board in March 1992, the General Manager revised the norm for utilisation of sulphur per tonne of oleum from 362 to 435 Kg on the presumption that actual consumption of sulphur was more than what was recorded in the books. But, despite upward revision in the norm for consumption of sulphur per tonne of oleum, discrepancy in the quantity of sulphur in Ordnance Factory Itarsi continued and the stock verifiers again found a deficiency of 497 tonne valued at Rs 19.78 lakh in March 1996.

**Deficiency was due to drawal of sulphur on as required basis and subsequently raising demand notes based on estimated quantity**

Examination by audit disclosed that the General Manager Ordnance Factory Itarsi, instead of finding out the standard norm for conversion of sulphur to oleum/sulphuric acid, revised the norm upwards on the basis of quantity presumed to have been actually utilised. The discrepancy in the stock of sulphur in March 1992 was traced to the deficient procedure of charging of the stock account on the basis of norm after producing the final product rather than on the basis of actual issue from the stores. The action of the General Manager in revising the norm on the basis of quantity presumed as consumed was imprudent, since it camouflaged possible leakage of sulphur from the stock.

**Further shortage of 497 tonne sulphur valuing Rs 19.78 lakh was detected at OFI**

What is worse, that even after revision of the norms on the basis of the actual quantity stated to have been issued in the past, the practice of adhoc issues without reference to the quantity of sulphur required as per the norm continued even after May 1994. The stock verifiers found another discrepancy of 497 tonne in March 1996 in stock of sulphur even with reference to 20 *per cent* higher quantity of sulphur per tonne of oleum fixed by the General Manager in May 1994.

Thus, rather than correcting the deficient method of issue of sulphur from the stock, the General Manager continued with old practice of issue of sulphur from the stock on ad-hoc basis. Subsequent charging of the stock account on the basis of the norm per tonne of the finished product resulted in questionable shortage of 497 tonne valued at Rs 19.78 lakh in March 1996. This raises a doubt about the actual utilisation of sulphur in the production of oleum in the factory and calls for an independent investigation.

The Ministry stated, in October 1998, that final view on the actual reasons for the shortage would be possible only after Ordnance Factory Board finalised their action on the reports of Board of Enquiries and audit would be apprised of the same.

## 69. Follow up on Audit Reports

**Despite repeated instructions/ recommendations of the PAC, the Ministry did not submit remedial Action Taken Note on 68 Audit Paragraphs.**

**ATNs are to be submitted within four months of placing the Report on the Table of Parliament**

In their Ninth Report (Eleventh Lok Sabha) presented to the Parliament on 22 April 1997, the PAC 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 Ordnance Factories as of December 1998 revealed that the Ministry failed to submit ATNs in respect of 68 paragraphs included in the Audit Reports upto and for the year ended March 1997, details of which are in Annexure II.

**Ministry failed to submit ATNs to PAC on 68 paragraphs of and upto the Reports for the year ended March 1997**

The matter was referred to the Ministry in August 1998; their reply was awaited as of January 1999.

## 70. Response of the ministries/departments to Draft Audit Paragraphs

On the recommendations of the Public Accounts Committee, Ministry of Finance (Department of Expenditure) 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. It was brought to their personal notice that since the issues were likely to be included in the Audit Report of the CAG, which are placed before Parliament, it would be desirable to include their comments in the matter.

Draft Paragraphs proposed for inclusion in the Ordnance Factory section of the Report of the C&AG of India for the year ended March 1998 : Union Government (Defence Services) : No. 7 of 1999 were forwarded to the Secretary Department of Defence Production and Supplies, Ministry of Defence between May 1998 and December 1998 through Demi Official letters.

The Secretary Department of Defence Production and Supplies did not send replies to five Draft Paragraphs out of 21 paragraphs in compliance to above instructions of the Ministry of Finance issued at the instance of the Public Accounts Committee. Thus, the response of the Secretary of the Ministry could not be included in them.

| **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 Ordnance Factory Board | 21 | 5 | 49,50, 51, 61 and 69 |

(*) No.F 32(9) EG.I/60 dated 3 June 1960.

Sudha Rajagopalan

**( SUDHA RAJAGOPALAN )**
**Director General of Audit**
**Defence Services**

**New Delhi**
**Dated:** 06 APR 1999

**Countersigned**

V. K. Shunglu

**New Delhi**
**Dated:** 26 APR 1999

**( V.K.SHUNGLU )**
**Comptroller and Auditor General of India**

## ANNEXURE - I

**Position of outstanding ATNs** *(Referred to in paragraph 22)*

| 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 155mm 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. | No. 8 of 1991 | 1.7* | Non-verification of credits for stores. |
| 15. | | 5* | Delay in modernisation of tank. |
| 16. | | 10* | Procurement of stores in excess of requirement. |
| 17. | | 13* | Central Ordnance Depot, Agra. |
| 18. | | 15* | Extra expenditure due to wrong termination of meat contract. |
| 19. | | 17* | Infructuous expenditure on procurement of dal chana. |
| 20. | | 90* | Faulty construction of overhead tanks. |
| 21. | No. 8 of 1992 | 7* | Extra expenditure on the procurement of sheet ground light weight OG. |
| 22. | | 12 | Procurement of computer. |
| 23. | | 18* | Supply of sub-standard timber softwood. |

| Sl.No. | Report No. and Year | Para No. | Subject |
|---|---|---|---|
| 24. | | 20* | Procurement of sub-standard goods in an Ordnance Depot. |
| 25. | | 28* | Avoidable payment of maintenance charges for Defence tracks not in use. |
| 26. | | 58 | Procurement of stores in excess of requirement. |
| 27. | | 72* | Delay in construction of storage accommodation |
| 28. | | 81* | Redundant payment of service charges to a Cantonment Board |
| 29. | | 91* | Delay in investigation into untraceable/missing items of furniture |
| 30. | No. 13 of 1992 | Part I* | Recruitment of Other Ranks |
| 31. | | Part II | Training of Other Ranks |
| 32. | No. 14 of 1992 | Entire Report | Army Base Workshops |
| 33. | No. 8 of 1993 | 7 | Extra expenditure due to delay in issue of allotment letters |
| 34. | | 13* | Infructuous expenditure on development of radar |
| 35. | | 16* | Procurement of rubber bushes |
| 36. | | 19* | Court of Inquiry proceedings |
| 37. | | 25* | Holding of surplus target sleeves |
| 38. | | 29* | Import of mountaineering equipment and sports items |
| 39. | | 31* | Avoidable payment of detention charges |
| 40. | | 33* | Additional expenditure due to rental of an exchange |
| 41. | | 68* | Civil works for a Naval Air Station. |
| 42. | | 69 | Non-utilisation of assets created for a computer centre |
| 43. | | 74 (Case II) | Provision of training sheds |
| 44. | | 75* | Extra expenditure due to delay in according financial concurrence |
| 45. | No. 8 of 1994 | 10* | Establishment of a National War Museum |
| 46. | | 17* | Import of defective equipment |
| 47. | | 18* | Non-commissioning of a plant |
| 48. | | 23* | Avoidable payment of customs duty. |
| 49. | | 64* | Infructuous expenditure due to inadequacies in design and execution of works |
| 50. | | 65* | Non-utilisation of assets due to improper planning and their substandard execution |

| Sl.No. | Report No. and Year | Para No. | Subject |
|---|---|---|---|
| 51. | | 66* | Unfruitful expenditure on swimming pool |
| 52. | | 67* | Construction of married accommodation and its re-appropriation |
| 53. | | 68* | Extra expenditure due to delay in finalisation of a water supply scheme |
| 54. | | 72* | Procurement of an item at higher rate |
| 55. | | 73* | Extra expenditure due to failure in timely submission of revised estimates |
| 56. | | 76* | Establishment of an Army Public School |
| 57. | | 78* | Short recovery of electricity charges |
| 58. | | 80* | Non-utilisation of assets due to defective construction |
| 59. | | 82* | Loss of revenue due to non-completion of works of external electrification and water supply |
| 60. | | 85* | Provision of defective gravent ventilation system |
| 61. | No. 8 of 1995 | 12* | Working of the Department of Defence Supplies |
| 62. | | 13* | Delay in repair of defective imported ammunition |
| 63. | | 17* | Import of radar |
| 64. | | 18* | Loss on account of non-permissible wastage of wheat in grinding |
| 65. | | 22* (Case II) | Recovery at the instance of Audit |
| 66. | | 29 | Manufacture of defective parachutes |
| 67. | | 30 | Non-utilisation of parachutes |
| 68. | | 34* | Avoidable extra expenditure on procurement roof trough |
| 69. | | 36* | Blocking of funds |
| 70. | | 80* | Execution and payment for defective work |
| 71. | | 81* | Under-utilisation of assets |
| 72. | | 84* | Avoidable extra expenditure due to defective construction |
| 73. | | 85* | Avoidable hiring of accommodation due to delay in completion of married accommodation |
| 74. | | 86* | Non-commissioning of automatic fire fighting system |
| 75. | | 87* | Collapse of an overhead water tank |
| 76. | | 88* | Review on equipment, manpower and material management in six Research and Development Establishments |

| Sl.No. | Report No. and Year | Para No. | Subject |
|---|---|---|---|
| 77. | No. 8 of 1996 | 11* | Delay in procurement of simulators |
| 78. | | 12 | Inordinate delay in repair of imported ammunition |
| 79. | | 18* | Extra expenditure due to delay in placing orders |
| 80. | | 21* | Recruitment and Training of Army Officers |
| 81. | | 22* | Hiring of vehicles |
| 82. | | 24* | Wasteful expenditure on injudicious procurement of tyres |
| 83. | | 25* | Avoidable procurement of mounting tripods |
| 84. | | 26* | Loss on account of procedural lapse |
| 85. | | 28* | Loss from life expired oil |
| 86. | | 29* | Non-utilisation of an imported equipment |
| 87. | | 63* | Nugatory expenditure due to lack of planning |
| 88. | | 67* | Savings at the instance of audit |
| 89. | | 68* | Delay in construction of married accommodation for sailors |
| 90. | | 69* | Irregular expenditure on a public School |
| 91. | | 70* | Supply of sub-standard high strength cement |
| 92. | | 73* | Overpayment to a firm |
| 93. | | 74* | Avoidable expenditure due to excess provision of single accommodation |
| 94. | | 75* | Unauthorised construction of squash courts |
| 95. | | 76* | Infructuous expenditure on design and development of half track multirole vehicle |
| 96. | No. 7 of 1997 | 7 | Losses awaiting regularisation |
| 97. | | 8 | Outstanding claims/dues |
| 98. | | 9* | Non-utilisation of Armoured recovery vehicles for want of spares |
| 99. | | 10* | Non-recovery of general damages from defaulting firms |
| 100. | | 11* | Unnecessary procurement of engines |
| 101. | | 12* | Excess provisioning of steel cases |
| 102. | | 13* | Delay in moving newly raised platoons |
| 103. | | 14* | Loss due to improper despatch of imported equipment |
| 104. | | 15 | Over provisioning of seats and cushions for vehicles |
| 105. | | 17* | Procurement and utilisation of medical stores and equipment |

| Sl.No. | Report No. and Year | Para No. | Subject |
|---|---|---|---|
| 106. | | 18* | Management of Defence Land |
| 107. | | 19 | Defective mines |
| 108. | | 20* | Irregular payment to Indian Oil Corporation to avoid lapse of fund |
| 109. | | 21 | Loss due to formation copper azide in fuzes |
| 110. | | 23* | Avoidable expenditure on Demurrage charges |
| 111. | | 24* | Undue favour to a firm |
| 112. | | 25* | Injudicious procurement of forklifts |
| 113. | | 26 | Procurement of defective steering assembly |
| 114. | | 27* | Non-realisation of claims from the Railways |
| 115. | | 28* | Under-utilisation of manpower in an Army Base Workshop |
| 116. | | 29* | Delay in procurement of bin steel portable |
| 117. | | 30* | Infructuous expenditure on re-rubberisation of road wheels |
| 118. | | 31* | Non-utilisation of an imported machine |
| 119. | | 32 | Irregular payment of charges |
| 120. | | 33* | Infructuous expenditure due to erroneous despatch of vehicles |
| 121. | | 69* | Defective construction of blast pens and taxi track |
| 122. | | 70* | Unfruitful expenditure due to delay in completion of work |
| 123. | | 72 | Escalation in cost due to delay in according Financial Concurrence |
| 124. | | 73* | Extra expenditure due to abnormal delay |
| 125. | | 74* | Avoidable construction of perimeter wall |
| 126. | | 75* | Unauthorised expenditure on procurement of cast iron pipes of higher specification |
| 127. | | 76* | Non-recovery of excess issue of department stores from contractors |
| 128. | | 77* | Non-utilisation of swimming pool |
| 129. | | 78* | Non-recovery of extra expenditure from a defaulting contractor |
| 130. | | 79* | Non-utilisation of assets due to faulty planning |
| 131. | | 80* | Avoidable payment of load violation charges |
| 132. | | 81* | Execution of sub-standard work |
| 133. | | 83* | Avoidable expenditure on acquisition of land |
| 134. | No. 7 of 1998 | 9 | Loss of stores |

| Sl.No. | Report No. and Year | Para No. | Subject |
|---|---|---|---|
| 135. | | 10 | Losses awaiting regularisation |
| 136. | | 11* | Non-recovery of the amount on account of Special flights/Air lifts |
| 137. | | 12 | Authorisation and Expenditure |
| 138. | | 14 | Extra expenditure on modification of radar |
| 139. | | 17 | Procurement of defective radars |
| 140. | | 19 | Import of defective parachutes |
| 141. | | 20 | Excess procurement of barrels |
| 142. | | 21 | Extra expenditure due to non-adherence of contract provision |
| 143. | | 22* | Import of defective missiles |
| 144. | | 23* | Non-utilisation of imported testing equipment |
| 145. | | 24 | Recovery at the instance of audit |
| 146. | | 25 | Follow up on Audit Reports |
| 147. | | 27* | Development of mini remotely piloted vehicle |
| 148. | | 28 | Working of Military Farms |
| 149. | | 30 | Avoidable payment of container detention charges |
| 150. | | 31* | Procurement of incomplete equipment |
| 151. | | 32 | Infructuous expenditure on procurement of substandard cylinders |
| 152. | | 33 | Unauthorised payment of special duty allowance to non-entitled persons |
| 153. | | 34 | Unauthorised issue of free rations |
| 154. | | 35* | Non-recovery of sale value |
| 155. | | 36* | Procurement of batteries at higher rates |
| 156. | | 37* | Avoidable expenditure on manufacturing of head percussion |
| 157. | | 38 | Extra expenditure on the procurement of charging sets |
| 158. | | 39 | Extra expenditure due to inordinate delay in the execution of a married accommodation project |
| 159. | | 40* | Avoidable expenditure due to inadequate design |
| 160. | | 41 | Premature failure of tubewells |
| 161. | | 42 | Extra expenditure due to indecision in selecting site |
| 162. | | 43 | Non-utilisation of a building due to defective workmanship |
| 163. | | 44 | Avoidable expenditure due to delay in completion of a contract |

| Sl.No. | Report No. and Year | Para No. | Subject |
|---|---|---|---|
| 164. | | 45 | Inordinate delay in construction of indoor gymnasium |
| 165. | | 46 | Avoidable expenditure due to improper construction of a boundary wall |
| 166. | | 47 | Non-occupation of married officers quarters due to faulty planning |
| 167. | | 48 | Non-utilisation of residential accommodation |
| 168. | | 49 | Avoidable payment due to delay in availing of concessional tariff |
| 169. | | 50 | Avoidable payment of electricity charges |
| 170. | | 51 | Excess payment of electricity charges |
| 171. | | 52 | Loss of revenue |
| 172. | | 53 | Payment of conservancy charges |
| 173. | | 54 | Avoidable expenditure on construction of single officers accommodation |
| 174. | | 55 | Extra expenditure due to acceptance of higher rates |
| 175. | | 56 | Extra expenditure due to wrong preparation of tender |
| 176. | | 57 | Unauthorised use of air-conditioners |
| 177. | | 58 | Extra expenditure due to revocation of tender |
| 178. | | 59 | Extra expenditure due to delay in according financial concurrence |
| 179. | | 60 | Non-utilisation of newly constructed quarters |
| 180. | | 61 | Infructuous expenditure on a non-functional laboratory |
| 181. | | 62* | Infructuous expenditure on import of high speed video recording system |
| 182. | | 63* | Avoidable payment of customs duty |
| 183. | | 64* | Unfruitful expenditure on procurement of substandard hot mix plants |
| 184. | | 65 | Infructuous expenditure on development of a machine |
| 185. | | 66* | Non-utilisation of a bridge |
| 186. | | 67* | Infructuous expenditure on re-alignment of a road |
| 187. | | 68 | Injudicious procurement of stores |

*** Action Taken Note awaiting final settlement**
**Without * marks - Action Taken Notes not received even for the first time**

## ANNEXURE - II

### Showing Details of Paragraphs on which ATN/ Final ATNs were awaited as of 31-12-98

*(Referred to in paragraph 69)*

| Audit Report No. and Year | Sl. No. | Paragrah No. | Subject | Remarks |
|---|---|---|---|---|
| Report 12 of 1990 | 1 | 50 | General Performance of Ordnance & Clothing Factory | Final ATN awaited |
| -do- | 2 | 51 | Material Management in Ordnance & Ordnance Equipment Factories | ATN not at all received |
| Report 8 of 1991 | 1 | 24 | Indigenous production of an ammunition | Final ATN awaited |
| -do- | 2 | 51 | Purchase at inflated price | -do- |
| -do- | 3 | 53 | Purchase without buyer's option clause and consequent loss of rate advantage. | -do- |
| -do- | 4 | 59 | Violation of operating instructions | -do- |
| -do- | 5 | 65 | Premature failure of acid storage tanks | -do- |
| -do- | 6 | 68 | Loss due to condemnation | -do- |
| -do- | 7 | 72 | Loss of revenue | -do- |
| Report 8 of 1994 | 1 | 49 | Procurement of a robotic welding station | Final ATN awaited |
| Report 8 of 1995 | 1 | 46 | Loss due to failure in production of a rifle. | Final ATN awaited |
| -do- | 2 | 47 | Blocking of capital due to short-closure of orders. | -do- |
| -do- | 3 | 61 | Defective equipment lying without any use. | -do- |
| -do- | 4 | 62 | Unproductive investment on commissioning of a machine. | -do- |
| -do- | 5 | 66 | Loss of stores due to fire. | -do- |
| Report 8 of 1996 | 1 | 30 | Performance of Ordnance Factory Organisation. | ATN not received even for the first time |
| -do- | 2 | 31 | Production of artillery training ammunition. | -do- |
| -do- | 3 | 32 | Computerisation in Ordnance Factory Organisation. | -do- |

| Audit Report No. and Year | Sl. No. | Paragrah No. | Subject | Remarks |
|---|---|---|---|---|
| -do- | 4 | 34 | Questionable expenditure | -do- |
| -do- | 5 | 35 | Financial repercussion due to change in user's requirement | -do- |
| -do- | 6 | 36 | Loss due to use of indigenous steel sheet | -do- |
| -do- | 7 | 43 | Defective production of grenades | -do- |
| -do- | 8 | 44 | Avoidable rejection | -do- |
| -do- | 9 | 48 | Extra expenditure on rectification of defects | -do- |
| -do- | 10 | 50 | Unproductive investment | -do- |
| -do- | 11 | 54 | Rejection of empty shots | -do- |
| -do- | 12 | 55 | Loss of stores in stock | -do- |
| -do- | 13 | 56 | Excess consumption of an ammunition in proof | -do- |
| -do- | 14 | 57 | Shortage of pig iron | -do- |
| -do- | 15 | 62 | Follow up on Audit Report | -do- |
| 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 Vehicle | Selected by PAC for discussion |
| Report 7 of 1997 | 3 | 36 | Surplus inventory | ATN not received even for the first time |
| -do- | 4 | 38 | Unproductive expenditure on production of fuze | -do- |
| -do- | 5 | 41 | Premature clearance for bulk production of 5.56 mm rifle | -do- |
| -do- | 6 | 45 | Abnormal rejection of casting | -do- |
| -do- | 7 | 47 | Unwarranted procurement of tachometers | -do- |
| -do- | 8 | 48 | Surplus inventory due to non-finalisation of specification | -do- |

| Audit Report No. and Year | Sl. No. | Paragraph No. | Subject | Remarks |
|---|---|---|---|---|
| -do- | 9 | 49 | Avoidable expenditure due to delay in placement of order | ATN not even received for the first time . |
| -do- | 10 | 54 | Injudicious procurement of annealing and pickling plant | -do- |
| -do- | 11 | 59 | Shortage of brass blanks | -do- |
| -do- | 12 | 60 | Avoidable expenditure on pigging of aluminium alloy | -do- |
| -do- | 13 | 61 | Loss in export order | -do- |
| -do- | 14 | 64 | Loss in Civil Trade | -do- |
| -do- | 15 | 65 | Non-recovery of arbitrator's award | -do- |
| -do- | 16 | 66 | Questionable regularisation of loss of stores | -do- |
| -do- | 17 | 68 | Follow up on Audit Report | -do- |
| Report No.7 of 1998 | 1 | 70 | Performance of the Ordnance Factory Organisation | -do- |
| -do- | 2 | 72 | Wasteful expenditure | -do- |
| -do- | 3 | 73 | Foreclosure of indent resulting in avoidable expenditure | -do- |
| -do- | 4 | 74 | Defective manufacture of shells | -do- |
| -do- | 5 | 75 | Abnormal rejection | -do- |
| -do- | 6 | 76 | Abnormal rejection of bomb bodies | -do- |
| -do- | 7 | 77 | Abnormal rejection in manufacture of steel bars | -do- |
| -do- | 8 | 78 | Costly material lying as surplus | -do- |
| -do- | 9 | 79 | Defective processing leading to rejection of bases | -do- |
| -do- | 10 | 80 | Procurement of stores at higher rate | -do- |
| -do- | 11 | 81 | Excess provisioning of additive liners | -do- |
| -do- | 12 | 82 | Waste due to rejection of imported delay element | -do- |
| -do- | 13 | 83 | Extra expenditure on wooden chests | -do- |
| -do- | 14 | 85 | Infructuous expenditure | -do- |
| -do- | 15 | 86 | Unauthorised expenditure by General Manager, Field Gun Factory | -do- |
| -do- | 16 | 87 | Deficiency of grenade components | -do- |
| -do- | 17 | 88 | Loss in export order | -do- |

| Audit Report No. and Year | Sl. No. | Paragrah No. | Subject | Remarks |
|---|---|---|---|---|
| -do- | 18 | 89 | Loss in civil trade order | -do- |
| -do- | 19 | 90 | Surplus stores lying unutilised | -do- |
| -do- | 20 | 91 | Follow up on Audit Reports | -do- |
| -do- | 21 | 92 | Response of Ministries/deptts to Draft Audit Paragraphs | -do- |