



REPORT OF THE
COMPTROLLER AND AUDITOR GENERAL
OF INDIA

FOR THE YEAR ENDED 31 MARCH 1988

NO. 2 OF 1989

UNION GOVERNMENT--DEFENCE SERVICES
(ARMY AND ORDNANCE FACTORIES)

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PREFATORY REMARKS

This Report has been prepared for submission to the President under Article 151 of the Constitution. It relates mainly to matters arising from the Appropriation Accounts of the Defence Services for the year 1987-88 and other points arising from audit of the financial transactions under various provisions of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971. Points pertaining to the Air Force and the Navy have been incorporated separately in Report No. 3 of 1989.

2. The Report includes the following reviews:

- (a) Purchase and licence production of 155 mm towed gun system and ammunition
- (b) Working of Embarkation Headquarters

- (c) Design and development of Main Battle Tank—Arjun
- (d) Delay in indigenisation of a weapon and the related ammunition
- (e) Development of a cantonment
- (f) Utilisation of equipments in Defence Research and Development Organisation.

3. The cases mentioned in the Report are among those which came to notice in the course of test audit during the year 1987-88 as well as those which had come to notice in earlier years but could not be dealt with in previous Reports; matters relating to the period subsequent to 1987-88 have also been included, wherever considered necessary.

OVERVIEW

The Audit Report for the year ended 31 March 1988 contains 84 paragraphs including six reviews. The points highlighted in the Report are summarised below :

I Budgetary control

The total voted grant for the Defence Services—Army, Navy, Air Force, Defence Ordnance Factories and Capital Outlay on Defence Services for the year 1987-88 was Rs. 13,293.62 crores. The actual expenditure was Rs. 12,378.75 crores. An unique feature of the year 1987-88 has been the reduction in Defence expenditure to the extent of Rs. 914.87 crores despite excess expenditure under two grants *viz.* Army: Rs. 2.05 crores and Navy: Rs. 21.92 crores. While explaining this phenomenon in the Defence Services Estimates 1988-89, Ministry of Defence claimed that savings were achieved on account of various economy measures taken to off-set the additional requirement arising under 'Revenue expenditure'. However, it was seen that the savings were due to non-finalisation of contracts, non-receipt of supplies, slippages in deliveries, etc., and not entirely due to economy measures as claimed by the Ministry.

In response to an appeal made in August 1987 by the Cabinet Secretary to Government employees to contribute at least one day's pay to the Prime Minister's National Relief Fund, the Chiefs of the three services decided in October 1987 that the three services would contribute 12 days of their ration by foregoing a day's ration each month for 12 months. Since the scheme visualised only contribution in cash, Ministry of Defence sanctioned in February-March 1988 payment of Rs. 2.50 crores to the Prime Minister's National Relief Fund out of the Defence Services Estimates without any budgetary support or prior approval of the Parliament.

(Chapter I)

ARMY

II Purchase and licence production of 155 mm towed gun system and ammunition

The Audit review comments on the evaluation of the 155 mm gun systems, the financial aspects relating to the contracts and certain aspects of contract performance including licence production. The files relating to the project were called for by Audit from the Ministry of Defence as early as July 1986; they were made available to Audit from June 1988.

The technical evaluation of gun system suffered from deficiencies. The gun system was selected without preparing the General Staff Qualitative Requirements and matrix. In view of the limited evaluation trials, Defence Research and Development Organisation had recommended fresh user trials with the equipment from Bofors, Sofma and Voest Alpine. These recommendations were not pursued. Army Headquarters indicated their preference for Sofma gun system on six occasions between December 1982 and October 1985. In February 1986 Army Headquarters, however, reversed its preference and recommended Bofors.

The deliberations of the Negotiating Committee also suffered from certain constraints. Notwithstanding these constraints it recommended on 12th March 1986 the issue of a letter of intent on Bofors without satisfying itself on all aspects of the purchase, licence production, credit and other arrangements. The letter of intent was issued to Bofors on 14th March 1986 before settling all aspects. There was no follow up action by the Negotiating Committee of its own recommendation.

The assessment of costs leading to the award of contract to Bofors was flawed in several respects. The additional cost of improved maintenance coverage required for the Bofors gun which is more

prone to defects and the advantage of operating Bofors gun through a smaller crew were not assessed. For obtaining technology for licence production from Bofors a liability of Rs. 42.73 crores was ignored. Ammunition worth Rs. 328.98 crores was ordered after diluting the minimum acceptable parameters.

An exception was made to the Government's general policy of paying for imports in the currency of the country from where imports are made by agreeing to repay 58 per cent of the credit in Deutsche Mark. While the lender (Svensk Export-Kredit) has the right to terminate the credit agreement under certain contingencies, the borrower (Government of India) has no such right.

Despite Government's decision to eliminate agents in import of weapons and equipment, no categorical written assurance was obtained from Bofors in regard to employment of agents. In the absence of a suitable provision in the contract to exclude agents, whether Indian or foreign, irrespective of domicile, no reduction in cost to the extent of payment made to agents could be sought by the Ministry from Bofors.

The Prime Minister's office conveyed the approval to sign the agreement with Bofors on 24th March 1986 and stated that some directions regarding the methodology of evaluation would be communicated separately. The Government signed the agreements on 24th March 1986 for the purchase of 155 mm towed gun system including ammunition, its manufacture under licence in India and credit therefor. On 25th March 1986 the Prime Minister's office conveyed *inter-alia* that evaluation procedure was not thorough and alternative techniques should be outlined for evaluation. These directions were neither complied with at that point of time as it was held to be of general nature nor new methodology of evaluation worked out till January 1989.

The equipment issued to the Army till October 1988 was inadequate for even a single regiment being equipped with the full complement of the gun system. The acceptance of a less advantageous time frame for delivery of ammunition than the one offered earlier by Bofors would result in delay of 38 months in equipping certain regiments.

Claims for liquidated damages worth Rs. 1.28 crores due to slippages in deliveries in respect of certain essential items were raised by the Ministry at the instance of Audit. Due to delay in making certain contractual payments the Ministry paid in foreign exchange Rs. 14.45 lakhs as penal interest and a further sum of Rs. 18.88 lakhs had become payable to the lender (Svensk Export-Kredit).

Sealed cannisters stated to be containing two types of ammunition were found abnormally light. When opened these were found empty. The inspection of the goods on the basis of being 'abnormally light' may lead not only to short/doubtful supplies but may also have serious repercussions as the supplies are normally opened only at the time of actual use. Two train loads of ammunition were wrongly despatched in April 1988 to various stations in an Army Command and were finally received in May 1988 at stations for which they were not originally destined. The planning and coordination aspects for the receipt and storage of ammunition appears to require investigation.

The decision on licence manufacture of gun system and ammunition was taken without comprehensive assessment of the financial and economic cost involved. The work on licence production has not commenced so far and no part of the credit for this has been utilised. This delay would have far reaching effect on defence preparedness as bulk of the gun system and ammunition is to be manufactured in India. The credit agreement for licence manufacture was concluded far ahead of the credit requirements. As a result, Rs. 1.66 crores in foreign exchange had been paid by the Ministry to the lender by way of fees, etc. upto December 1988. (Paragraph 11)

III Payment of commission to Indian agents

Ministry of Defence had, in 1977, prescribed certain norms for payment of commission to Indian agents of foreign suppliers. The rates were increased in 1982 and instructions reiterated in 1987. These rates of commission have not been made applicable so far to Defence purchases made through Director General of Supplies and Disposals and Supply Wings abroad despite their awareness that the rates paid by them were

higher. The excess over the norms ranged from 3.15 to 23 *per cent*. The amount so paid during 1984-87 was Rs. 52.54 lakhs.

(Paragraph 12)

IV Over-payment of allowances

According to Government regulations the hourly rate of over-time allowance applicable to Defence civilians was 1/200 of the monthly wages. In February 1973, Ministry of Defence changed it to 1/240 or 1/248 of the monthly wages depending upon a month of 30 or 31 days. Notwithstanding these instructions over-time allowance continued to be paid on the same old basis *i.e.*, 1/200 of the monthly wages resulting in over-payment of Rs. 102.76 crores upto March 1988.

(Paragraph 13)

For Defence civilians, excluding those on static units/formations deployed in connection with operations, 'Blue Star' and 'Wood Rose' ration allowance was sanctioned. On representations that certain static units/formations were actually deployed in the operations, the ration allowance was sanctioned also to those serving in static formations. The payment meant to benefit only certain static units/formations, was, in fact, made to all the Defence civilians on the rolls of the Zonal Chiefs of Jullunder, Chandigarh and Bhatinda including some units outside Punjab on the basis of certificates issued about their deployment. Rs. 5.04 crores were disbursed on this account. There had been no record in those offices to identify the names of persons actually deployed for the purpose or the precise nature of duties assigned to them in the deployment.

(Paragraph 14)

V Working of Embarkation Headquarters

The deficiencies pointed out in the past by Audit persist despite recommendations by the Public Accounts Committee. There were delays in the clearance of sea and air cargo resulting in avoidable payment of Rs. 43.22 lakhs and Rs. 40.06 lakhs on account of wharfage charges and warehousing charges respectively. Claims for short landed/damaged cargo totalling Rs. 12.68 crores were pending settlement with various agencies besides losing claims of Rs. 84.55 lakhs

due to delay in marine survey and defective preparation of documents by suppliers, etc. Refund claims amounting to Rs. 44.20 crores preferred on the customs authorities were pending settlement. Besides, the amount of claims rejected by customs authorities was Rs. 12.44 crores. Provisional deposit bonds for Rs. 4.30 crores furnished towards payment of customs duty remained to be redeemed for want of shipping documents, priced invoices, requisite certificates, etc. Rebate of Rs. 1.50 crores on sea freight paid at destination was not availed of from the carriers.

(Paragraph 15)

VI Weaponary and allied equipment

To meet an inescapable requirement of the Army in operationally priority areas, 1100 sight instruments for a weapon were imported by air between April 1985 and September 1986, at a cost of Rs. 4.60 crores. Out of these, 896 instruments were defective and subsequently were repaired by the firm. However, 296 instruments costing Rs. 1.14 crores have not been collected/inspected so far. 633 instruments costing Rs. 2.74 crores are still held in stock in the depot.

(Paragraph 17)

A particular type of gun was being indigenously manufactured since 1973. Defects had been noticed in them in 1975 itself. The modifications in its design which were required to overcome the defects were identified in 1979 and were technically approved in 1982. Meanwhile production continued till March 1983. The modification kits needed therefor; ordered on an ordnance factory in July 1983, at a cost of Rs. 3.62 crores, due in March 1986, have not yet been supplied (April 1988). As a result, the guns continued to be defective.

(Paragraph 18)

Supply of track links needed for the manufacture of tanks was entrusted to private firms. The suppliers had quoted two rates-fixed price and price with escalation clause. By accepting the rate with escalation clause without any ceiling, Government ultimately paid a rate higher than the fixed price quoted by the same suppliers. The avoidable expenditure on this account was Rs. 44.39 lakhs.

(Paragraph 19)

Army Headquarters imported 739 Xenon arc lamps costing Rs. 92.32 lakhs and they were transported by air between November 1986 and October 1987, but were inspected after a delay of 3 to 14 months. Out of these, 309 were found defective and one deficient, costing in all Rs. 38.73 lakhs. For want of demand, 426 serviceable lamps costing Rs. 53.22 lakhs were held in stock.

(Paragraph 20)

Between November 1982 and January 1984, 97 amplifiers were imported at a cost of Rs. 17.31 lakhs and transported on grounds of urgency by air. Only four of them were in use; 93 others were lying unutilised, 34 of them in defective condition with the Indian agent who had been paid commission in excess of the permissible norms.

(Paragraph 21)

One and half years after expiry of the shelf life of an imported weapon, 178 pieces were sought to be refurbished in November 1980 through the original supplier. The rate quoted therefor in April 1981 was not availed of till the last day of its validity, 30th November 1981. On retender, Rs. 13 lakhs more had to be paid besides incurring additional expenditure of Rs. 0.34 lakh on one way transportation by air instead of by sea.

(Paragraph 22)

VII Logistics and transport

Cracks in the aluminium girders had rendered 10 assault floating bridges, both imported and indigenous, ineffective. In addition, there was a shortfall of 14 bridges in Army's operational requirement, affecting adversely defence preparedness. The quality of aluminium alloy used in the girders was not suitable for use in tropical climate. The extrusion of hollow profile could not be set up at the ordnance factory because of limitation of press facilities. The inevitable result was to import the girders, which due to over-reliance on indigenous capacity, had been piece-meal. The replacement cost of cracked girders would be more than Rs. 9.54 crores.

(Paragraph 23)

Operational necessity for manually launched assault bridges was felt as early as 1964 and Defence Research and Development Organisation

undertook its development for indigenous production. In 1977, the project was foreclosed after spending Rs. 24.72 lakhs as the bridge could not be developed despite the liberalisation of specifications/parameters in July 1970. The shortfall in the operational requirement of the Army then was 10 bridges of 75 metre span. In August 1980 it was known that indigenous production would not materialise till 1988-89. Thereafter four bridges of 49 metre span (equivalent to two bridges of 75 metre) were sought to be imported. The tendered rate was valid till December 1980 but Ministry of Defence failed to take a decision by that time. On retender, the cost went up by Rs. 62 lakhs on the purchase approved in December 1981. Though Ministry of Defence was aware that the indigenous capability was inadequate and more number of bridges were required yet no provision was made in the above contract for option clause. Supply of 16 more bridges of 49 metre span was ordered, in January 1984, on the same supplier at a further enhanced rate; the additionality being Rs. 2.41 crores.

(Paragraph 24)

For spare engines needed for Shaktiman vehicles, the lowest bid was not availed of. The highest bid was accepted on the plea that test had not been conducted on the lowest priced engine and it would take eight to nine months to do that. Hence, on grounds of urgency, the highest priced engine, already tested, was preferred. In actual terms, however, the finalisation of the supply order for 2500 engines (in favour of the highest bidder) itself took more than nine months. Worse still, was the delay in supplies, with further cost escalation. Despite the high rates and delay in supplies, a repeat order for 1148 engines, had been placed on the same supplier without calling for fresh tenders/evaluation of engines of other manufacturers. The resultant extra expenditure, in terms of the lowest bid on the 3648 engines purchased, was Rs. 6.16 crores. When compared to the rates of next lowest bidder whose engine was evaluated and found to be generally suitable, the extra expenditure worked out to Rs. 1.96 crores.

(Paragraph 25)

The purchase of the right type of tyres (20 ply nylon rating), for certain type of vehicles, took about 34 months resulting in cost escalation by Rs. 15.80 lakhs besides vehicles remaining off road or out of action.

(Paragraph 27)

A shunter procured, in March 1985, for shunting jobs inside an ammunition depot at a cost of Rs. 14.95 lakhs, to eliminate fire hazard, to secure better security standards and self-reliance and to achieve saving in shunting charges, had practically been lying idle. Thus, the objectives intended to be achieved, had not been realised so far.

(Paragraph 28)

As against the maximum annual demand of 740 wooden oars in 1981, Army proposed in 1982 and 1983, purchase of 13,130 oars, stated to be four years' requirements. The demand projected was totally un-realistic as, in fact, during 1982 to 1987 the actual user's requirement was limited to only 4930 oars. Further, out of 13,060 oars procured after necessary inspection, 10,663 oars costing Rs. 13.69 lakhs were found to be sub-standard.

(Paragraph 29)

Unserviceable tanks were used for storing diesel. Heavy leakage in one of those tanks occurred in 1981 resulting in a loss of Rs. 2.71 lakhs. The Court of Inquiry, ordered in 1981, against the officer held responsible for the loss, was not finalised till he retired in 1986. Subsequently, no action was taken against the officer on the plea that the officer had retired. However, he was re-employed in the same rank in 1986 and was still in service.

(Paragraph 30)

VIII Non-utilisation of forging machine hammers

Three forging machine hammers acquired at a cost of Rs. 76.93 lakhs in 1984 and 1987, for use in Army Base Workshops were lying un-utilised rendering investment thereon un-productive. Meanwhile, the requirements of workshops continued to be met through un-economical and un-reliable existing arrangements.

(Paragraph 32)

IX Ration articles

Canteen Stores Department entrusted with the task of supply of rum for the troops, was asked to procure the cheapest brand, taking note of excise duty exemptions and concessions allowed by some State Governments. It failed to conclude separate contracts for the supply of the cheapest brand of rum and it supplied the brand available in the depots. During the period 1981 to 1985, this resulted in an extra expenditure of Rs. 85.38 lakhs.

(Paragraph 33)

Canteen Stores Department called for tender for supply of tinned meat from four firms. Three of them were registered with Army Purchase Organisation. The fourth bidder, a State public sector undertaking had applied for registration but had otherwise been supplying meat products to Southern Naval Command. It had quoted the lowest rate of Rs. 48 per kg. but was not awarded any part of supply contract on the grounds that hygiene inspection of its factory had not been carried out whereas order for supply of tinned meat was placed on another State public sector undertaking in relaxation of such hygiene inspection. The urgent requirement for 245 tonnes of tinned meat was met by placing orders on three other firms at Rs. 49.40 per kg. involving an additional expenditure of Rs. 8.18 lakhs.

Another State public sector undertaking entrusted with the supply of 240 tonnes of tinned meat in September 1985 was to have completed it by July 1986. Till May 1988, it had supplied only 81 tonnes. It had been paid an advance of Rs. 56.70 lakhs, 50 per cent of the value of the order, interest free, recoverable in the value of supplies; yet another State public sector undertaking, entrusted with the supply of the same commodity, in June 1985, was paid an advance of Rs. 153.09 lakhs, 96 per cent of the value of the order, free of interest. The supply (due by September 1986) actually made till May 1988 was less than half the quantity ordered. The advance outstanding from the former was Rs. 37.71 lakhs and from the latter Rs. 68.48 lakhs. Sanction of substantial interest free advance resulted in poor incentive in completing the supplies in time and the interest gained by these

two undertakings through default on Defence supplies was Rs. 69.94 lakhs.

(Paragraph 34)

Urd dal costing Rs. 20.56 lakhs purchased after inspection was subsequently found to be unfit not only for human consumption but also as animal feed.

(Paragraph 35)

A contractor, both in terms of quoted tender as well as the agreement signed subsequently was to supply egg powder at the all inclusive rate of Rs. 190 per kg. Representation for payment of sales tax in addition, turned down thrice as not due in terms of contract, was reconsidered and payment ordered. The extra contractual payment was Rs. 4.86 lakhs.

(Paragraph 37)

X Uneconomic purchase of cotton vests

Cotton vests of olive green colour were procured through Director General of Supplies and Disposals in 1982, 1987 and 1988 at rates ranging from Rs. 10.33 to 11.84 per piece. For procurement of the vests in 1985 through Department of Defence Production and Supplies, the rate accepted was Rs. 15.67 per piece. Compared to the highest rate paid in 1988 the extra expenditure was Rs. 1.66 crores on 46.13 lakh vests procured through the Department of Defence Production and Supplies.

(Paragraph 38)

XI Inspection

In a Central Ordnance Depot stock of paints, soap, etc. costing Rs. 46.69 lakhs accepted by the inspecting officer before despatch was subsequently found sub-standard. Out of this, stocks worth Rs. 21.51 lakhs were still lying unreplaced by the suppliers. The urgent requirement of some of the articles was met by resorting to local purchase, incurring an extra expenditure of Rs. 4.05 lakhs.

(Paragraph 39)

Multivitamin capsules, supplied by a private firm in 1986-87 costing Rs. 13.44 lakhs, accepted after inspection, were, on subsequent inspection, found to be sub-standard. On issue of instructions

to suspend its use and report the quantum of the defective capsules (for replacement by the seller), only Rs. 3.41 lakhs worth sub-standard stock was found to be held by the users. The defective supply was yet to be replaced (September 1988), despite a delay of about two years from the date of supply.

(Paragraph 40)

XII Over-payment to Army personnel

Payments to Army personnel are made by the Regimental officers on the basis of their net monthly entitlements intimated in advance by the Pay Accounts officers who maintain the necessary accounts. Regimental officers made the advance payment to Army personnel in excess of their entitlement without adjusting the outstanding recoveries. As a result, an over-payment of Rs. 2.29 crores had been made which was yet to be recovered. Out of this, recoveries to the extent of Rs. 81 lakhs had become difficult or doubtful.

(Paragraph 41)

ORDNANCE AND CLOTHING FACTORIES

XIII General

The Ordnance Factory Organisation, a departmental undertaking under the Department of Defence Production and Supplies consists of 38 factories. These factories produce a wide range of products required by the Armed Forces. A test check of the working of the selected factories disclosed the following:

- The installed capacity was utilised to the extent of less than 60 per cent in three factories.
- Out of 61 special items of weapons and ammunition, in 10 items less than 50 per cent of the production target could only be achieved due to delay in manufacture of components, failure in accuracy proof, design deficiencies, etc.
- At the end of 1986-87, 181 indents pertaining to the period 1966-67 to 1980-81 were outstanding.

- As on 1st April 1987, 21915 manufacturing warrants valuing Rs. 104.22 crores issued from 1960-61 to 1985-86 were outstanding.
- Results of stock verification showed a declining trend in surpluses and deficiencies but the number of items for which stock was not verified during 1986-87 was 1,66,346 in seven factories.

(Paragraph 42)

XIV Design and development of Main Battle Tank—Arjun

A project was sanctioned in 1974 at an estimated cost of Rs. 15.50 crores for indigenous design and development of Main Battle Tank—Arjun by Defence Research and Development Organisation. The project envisaged manufacture of 12 prototypes to be offered for trials by April 1982. However, the time frame was not adhered to as till August 1988, eleven prototypes had been built with imported engines and transmission and with imported/indigenous sub-systems and components. A fully integrated prototype has not yet been given to the users for their full-fledged evaluation.

Due to various delays bulk production of tanks scheduled to commence from 1984 is expected to commence from 1991 only with imported engine and transmission unit.

Even after 14 years of research/work with an expenditure of Rs. 118.22 crores upto March 1988, a complete redesign of the engine has been thought of. The revised project estimate is Rs. 280.80 crores, as assessed in 1987. The foreign exchange component which was Rs. 2.32 crores in the original estimates now stands at Rs. 102.32 crores.

A major factor contributing to the delay in the development of Main Battle Tank was an over-estimation of the competence to develop a tank on a totally indigenous design. However, the project was too complex to achieve the task. Foreign consultancy and technology transfer could be availed of only at a late stage. Major systems like engine, transmission, gun-control,

fire-control and sighting-systems were stated to be still under development and involve a number of Indian and foreign agencies. Even after productionisation, dependence on import of foreign components/sub-systems involving foreign exchange would be significant.

Though the monitoring of the project by three committees was envisaged, meetings were not held regularly and the monitoring was not comprehensive.

Such a long and interminable delay in indigenisation can seriously affect the defence preparedness.

(Paragraph 43)

XV Delay in indigenisation of a weapon and the related ammunition

A project for the production of a weapon and the related ammunition sanctioned in 1978 and scheduled to commence production in 1982-83 was established in 1984-85. Two types of fuzes were still to be indigenised. The delay in completion of the project resulted in the import of the weapon and ammunition costing Rs. 16.25 crores to meet the requirements of the Army during 1982—84. During the years 1984-85 and 1985-86, imported components constituted 35 per cent of the total cost of production against the estimated five per cent. The value of imports during the subsequent years up to 1987-88 increased substantially. Thus, the object of indigenisation in the interest of strategic necessity and self-reliance could not be fully realised.

(Paragraph 44)

XVI Production

A project was sanctioned in 1982 at a cost of Rs. 8.48 crores for augmenting the facilities for production of vehicles. It was scheduled to be completed by March 1985 but it is expected to be completed only by July 1989. The delays in completion of the project resulted in the Army purchasing 1000 vehicles from trade at an extra cost of Rs. 10.27 crores.

(Paragraph 45)

Production of a fuze for an ammunition was not in accordance with the drawing stipulation resulting in the rejection of filled fuzes valuing

Rs. 146.60 lakhs and warranting rectification, etc. of empty fuzes valuing Rs. 107.70 lakhs. This also became one of the causes of low production of the ammunition resulting in heavy imports to the tune of Rs. 2575 lakhs by the Army.

(Paragraph 46)

Use of a fuze in different ammunition without basic investigation in regard to its suitability resulted in the failure of the ammunitions leading to rejection and banning of fuzes valuing Rs. 38.88 lakhs and Rs. 32.40 lakhs respectively.

(Paragraph 47)

Bulk production of a gun without conforming to the quality requirements and without establishing design parameters resulted in the wasteful production of guns valuing Rs. 83.36 lakhs.

(Paragraph 48)

Manufacture of fin assemblies on the basis of defective design and non-availability of rocket launchers for undertaking flight trials at the appropriate time resulted in the unrestrained production of defective fin assemblies and consequential extra expenditure of Rs. 39.30 lakhs on their replacement and modification.

(Paragraph 49)

Procurement of large quantity of annealed aluminium alloy strips without proper production planning resulted in blockage of funds amounting to Rs. 19.96 lakhs.

(Paragraph 50)

Development and productionisation of an ammunition of a faulty design caused loss of human lives and destruction of Government property. The eventual abandonment of the scheme after 15 years of its commencement rendered semi-finished components (Rs. 12.64 lakhs) and raw materials (Rs. 1.63 lakhs) wasteful.

(Paragraph 51)

Defective manufacture of another ammunition resulted in a loss of Rs. 5.07 lakhs and an extra expenditure of Rs. 3.62 lakhs on their rectification.

(Paragraph 52)

XVII Provisioning

Non-specification of a condition of the material in the indent and contract resulted in the rejection

of 150 tonnes of imported aluminium alloy bars valuing Rs. 63.61 lakhs. Alternative use was also ruled out due to its unsuitability.

(Paragraph 53)

XVIII Plant and Machinery

Procurement of two imported gas plants for the production of steel cases without sufficient technology and know-how resulted in an infructuous expenditure of Rs. 50.11 lakhs.

(Paragraph 57)

Procurement of a furnace without assessing the prospect of its actual use in a factory resulted in an infructuous expenditure of Rs. 13 lakhs.

(Paragraph 59)

WORKS AND MILITARY ENGINEER SERVICES

XIX Development of a cantonment

On grounds of operational necessity, Ministry of Defence decided in April 1969 to develop a cantonment at Barapani at an estimated cost of Rs. 28.51 crores for completion by 1979-80. The works sanctioned for execution in 1970 could be commenced only in 1977-78 due to delay in acquisition of land and lack of certainty on the extent of land required. In the meantime cost of the project had escalated to Rs. 55 crores in 1978. An expenditure of Rs. 23.93 lakhs incurred on the pay and allowances of construction staff, watch and ward and on transportation of stores which were rendered surplus and transferred out of the project was unfruitful as no worth-while construction work had been done till March 1977.

Administration of contracts had been poor especially on the department's responsibility to hand over sites in time and supply of key construction materials to the contractors in terms of agreements. On the resultant arbitration cases, an extra expenditure of Rs. 17.53 lakhs had already been incurred on adverse arbitration awards.

The physical progress of the project till June 1988 did not match the financial outlays thereon and indicated further time and cost overrun on the project.

(Paragraph 63)

XX Works

A golf course at Cochin had been constructed at a cost of Rs. 9.20 lakhs under a false cover of sanitation improvement work.

(Paragraph 64)

Except for a few months, swimming pool built, in 1980, for training of troops at a cost of Rs. 24.45 lakhs remained non-functional due to leakage of water. It could not be put to use till completion of repairs costing Rs. 5.93 lakhs in 1987.

(Paragraph 65)

Government had been put to an extra liability of Rs. 24.31 lakhs in six cases in arbitration awards on account of non-adherence of contractual provisions, delay in issue of cement, steel, bitumen, etc. and anomalies in contracts besides incurring expenditure incidental to litigation.

(Paragraph 67)

Out of three overhead tanks, one collapsed in January 1983 soon after its completion while testing and the remaining two developed cracks. As a result, Government had to incur an additional expenditure of Rs. 15.92 lakhs on reconstruction of one tank and repair to other two tanks.

(Paragraph 68)

A central sewage system executed between 1977 and 1985 at a cost of Rs. 98.78 lakhs collapsed due to faulty construction, laxity in supervision of works during execution and poor maintenance. The defects in the system came to notice as early as 1985 itself. The restoration of collapsed system was expected to cost Rs. 44 lakhs. The rectification of defects and pumping of sewage resorted to as an interim arrangement have already cost Rs. 8.37 lakhs.

(Paragraph 70)

Some portions of a perimeter security wall, constructed around an ordnance factory, collapsed in 1987 three years after its construction. Reconstruction of the collapsed portions had been completed on a modified design at a cost of Rs. 5.05 lakhs. The soundness of the remaining portions of the wall was in doubt.

(Paragraph 73)

Lack of agreed procedure on advance payment for construction of bulk petroleum installations by Indian Oil Corporation and lack of co-ordination between the Air Force and the Army on land use led to delay of nine years in augmentation of petroleum reserves for the Air Force and cost escalation to the ex-chequer to the extent of Rs. 40.04 lakhs. Bulk petroleum installations constructed in November 1987 have not yet been taken over by the Air Force (September 1988).

(Paragraph 74)

Despite Government orders of May 1983 to revise all-India flat rates for water supply after every three years, the rate due for revision from April 1984 were revised only from November 1987. The rate so fixed was less than the all-India average cost resulting in a loss of revenue of over Rs. 9 crores during three years ending 1986-87.

(Paragraph 80)

RESEARCH AND DEVELOPMENT ORGANISATION

XXI Utilisation of equipments in Defence Research and Development Organisation

Over the years, Research and Development laboratories have been purchasing a large number of equipment for use not only for approved projects but also to serve for general purpose. They are not maintaining log books showing the extent of utilisation of equipment with the result that the benefit of qualitative/quantitative service rendered by them was not known. While purchase of equipment for specific projects are included in the project costs and approved, there are no known guidelines on the purchase of equipment for 'build up'.

Fifteen laboratories held 33 equipments costing Rs. 461.75 lakhs without utilisation for periods varying upto nine years. Most of them, 24 equipments worth Rs. 444.40 lakhs were imported. The case studies of some of the equipments relating to specific projects revealed delays in checking the equipments received for defects/deficiencies; delayed action to procure essential items to make the equipments functional; delayed or poor response on the part of the suppliers/Indian agents in attending to repairs; non-fulfilment of erection/commissioning obligation by

Indian agents; and non-synchronisation of receipt of equipments with connected civil works and *vice versa*. Besides, such delays have the normal fallout of delay in the completion of projects, if the equipments itself was an essential one.

Stores imported by air were not cleared promptly resulting in avoidable payment of Rs. 12.28 lakhs as warehousing charges. Exemption from payment of customs duty had not been availed of but refunds were attempted subsequently. Such refunds, due at the end of September 1987 accounted for Rs. 2.80 crores. Similar refunds on duty-free imported consumables amounting Rs. 14.74 lakhs had not even been applied for.

(Paragraph 81)

XXII Irregular financing of tungsten ore concentrate project

A sum of Rs. 195.50 lakhs was withdrawn from Government in March 1984, the last month of the financial year, although there was no need for its immediate disbursement. The amount was passed on to a State Public Sector undertaking producing tungsten ore concentrate, and retained by the latter in fixed deposit. Out of that amount Rs. 117.50 lakhs were to finance a project prepared by Defence Research and Development Organisation but the project failed to take off. The money had been subsequently diverted to

bail out the State Public Sector undertaking. Further these operations on mineral development were also outside the charter of duties of Defence Research and Development Organisation.

(Paragraph 82)

XXIII Other topics of interest

Acquisition of land for field firing range :

Although the land required for field firing range, was acquired under urgency clause of Rajasthan Land Acquisition Act, 1953, the department decided to pay additional reliefs under Central Land Acquisition Act, 1894, as amended, over and above the compensation payable under the Rajasthan Land Acquisition Act. As a result, Ministry of Defence paid a total amount of interest amounting Rs. 9.39 crores. This included Rs. 1.73 crores on interest for the period covered by a stay order given by a High Court. The payment of Rs. 1.73 crores was not covered either under Central Land Acquisition Act or Rajasthan Land Acquisition Act. No action was taken to get the Court order amended.

(Paragraph 83)

Inordinate delay in demarcation of Defence

land : Land measuring 4016 acres purchased by Ministry of Defence from a State Government at a cost of Rs. 28.81 lakhs in 1966 was awaiting final demarcation/mutation after a lapse of 22 years.

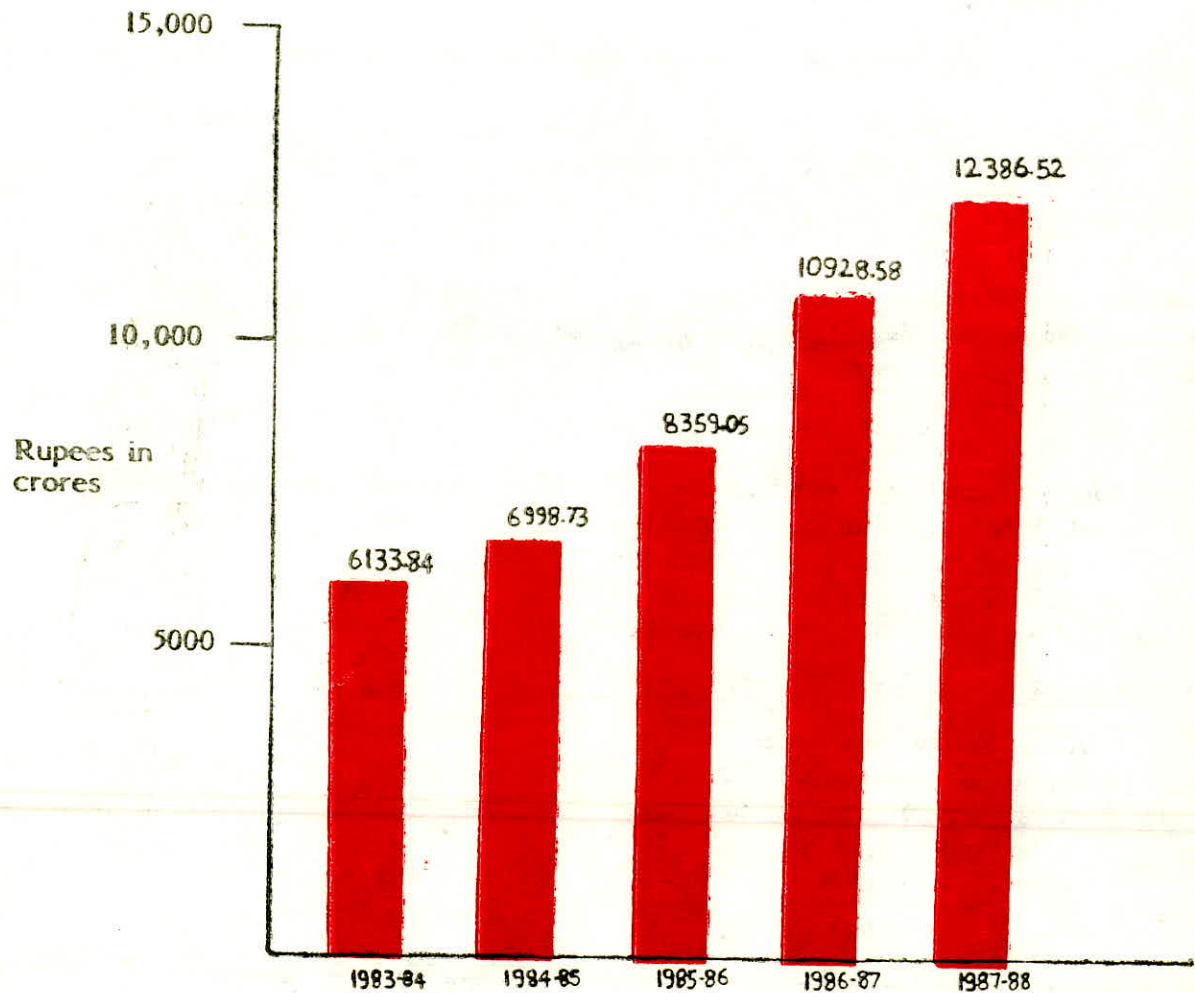
(Paragraph 84)

CHAPTER I
BUDGETARY CONTROL

1. General

(a) Ensuring defence of the country is a cardinal responsibility of Government. This responsibility is discharged taking note of the changes in security environment and the emerging technolo-

gies in Defence efforts, through modernisation of weapon system, greater self-reliance, etc. The Defence spending has more than doubled over a period of five years from Rs. 6133.84 crores in the year 1983-84 to Rs. 12,386.52 crores in 1987-88 excluding pensions as shown below:



(b) The table below compares the expenditure incurred by the Defence Services in the year ended 31st March 1988 with the amounts of original and supplementary appropriations and grants for the year:

(i) *Charged Appropriations*

	(Rs. in crores)
Original	8.36
Supplementary	0.82
Total	9.18
Actual expenditure	7.77
Saving	1.41
	(per cent)
Saving as a percentage of the total provision	15.36

There were overall savings in the preceding 12 years also. The percentages of savings as compared to the total provision during the years 1982-83 to 1986-87 ranged between 14.41 and 62.40.

(ii) *Voted Grants*

	(Rs. in crores)
Original	12,932.18
Supplementary	361.44
Total	13,293.62
Actual expenditure	12,378.75
Saving	914.87

The shortfall in the utilisation of the voted grants worked out to 6.88 per cent.

2. *Supplementary grants*

There are, in all, five grants for Defence Services. Supplementary grants (voted), aggregating to Rs. 361.44 crores, were obtained in four out of the five grants during March 1988 as indicated below:

Grant No.	Amount of Grant			Actual expenditure	Excess(+) Saving(-)
	Original	Supplementary	Total		
13-DS-Army	6607.26	127.84	6735.10	6737.15	(+)2.05
14-DS-Navy	615.48	93.22	708.70	730.62	(+)21.92
15-DS -Air Force	1647.94	75.56	1723.50	1656.09	(-)67.41
15A -Defence Ordnance Factories	90.98	64.82	155.80	153.76	(-)2.04
16 -Capital Outlay on Defence Services	3970.52	Nil	3970.52	3101.13	(-)869.39
Total	12932.18	361.44	13293.62	12378.75	(-)914.87

The Supplementary grant obtained for the Navy proved to be inadequate to the actual requirement whereof for the Air Force it turned out to be a surplus. The original grant on Capital Outlay on Defence Services also proved excessive.

3. *Excess over voted grants*

In the revenue section there was excess in two grants. The excess, aggregating to Rs. 23,97,00,734, as shown below, requires regularisation under Article 115 of the Constitution:

Grant No.	Total grant	Actual expenditure	Excess
	Rs.	Rs.	Rs.
13-DS-Army	6735,10,00,000	6737,15,44,052	2,05,44,052
14-DS-Navy	708,70,00,000	730,61,56,682	21,91,56,682
Total	7443,80,00,000	7467,77,00,734	23,97,00,734

The excess expenditure on Army was mainly under:

- (i) 'Pay and Allowances', due to heavy increase in the number of personnel drawing ration allowance, train journey ration allowance and upward increase in their *per diem* rates;
- (ii) 'Transportation', due to higher expenditure on travelling and outstation allowance and greater movement of troops and stores for operational reasons;
- (iii) 'Military Farms', due to increased price of fodder and milk products caused by continuous draught and abnormal increase in the cost of transportation of fodder, etc.

(iv) 'Research and Development', due to payment of heavy customs duty and higher booking under Stores; and

(v) 'Works', due to higher expenditure on maintenance of buildings, communications, operation of installations and rent, rates, etc.

freight charges, pilotage and towing and hiring of vessels in connection with operation 'Pawan';

(iii) 'Stores', due to additional expenditure on Naval stores, provisions and water, aviation stores and customs duty in connection with operation 'Pawan'; and

The excess under Navy was mainly under:

(i) 'Pay and Allowances', due to more expenditure on additional dearness allowance/bonus and payment of arrears on account of Fourth Pay Commission's recommendations which could not be accurately assessed;

(ii) 'Transportation', due to increased payment on passage and conveyance, as a result of Fourth Pay Commission's recommendations and more expenditure on

(iv) 'Works', due to more expenditure on maintenance of buildings, communications, maintenance of operation of installations and departmental charges.

4. Control over expenditure

The following are some instances where budgetary control was defective:

(a) In the following instances, the supplementary grant was wholly unutilised:

(Rs. in crores)

Grant No. Sub-Head	Original grant	Supple- mentary grant	Amount re-appro- priated	Final grant	Actual expenditure	Saving
13—DS—Army						
A.3—Pay and Allowances of Civilians	352.25	9.96	*	362.21	343.02	19.19

*Actual amount re-appropriated was Rs. 15,000

(b) In the following instances, re-appropriations made were wholly or partially unnecessary:

(Rs. in crores)

Grant No. Sub-Head	Sanctioned grant	Amount re-appro- priated	Final grant	Actual expenditure	Excess(+) Saving(-)
13—DS—Army					
A.2—Pay and Allowances and Miscellaneous Expenses of Auxiliary Forces	25.76	(-) 0.95	24.81	29.14	(+) 4.33
A.7—Research and Development Organisation	554.94	(-) 94.14	460.80	481.45	(+) 20.65
14—DS—Navy					
A.5—Stores	367.70	(-) 21.84	345.86	353.76	(+) 7.90
A.7—Other Expenditure	35.00	(+) 2.19	37.19	36.11	(-) 1.08
15—DS—Air Force					
A.3—Pay and Allowances of Civilians	59.69	(-) 1.37	58.32	58.92	(+) 0.60
A.6—Works	116.00	(+) 14.00	130.00	125.98	(-) 4.02
A.8—Other Expenditure	25.90	(+) 6.99	32.89	28.73	(-) 4.16
15A—Defence Ordnance Factories					
A.2—Manufacture	469.98	(-) 0.05	469.93	478.26	(+) 8.33
A.4—Machinery and Equipment	Nil	(+) 1.30	1.30	0.90	(-) 0.40
A.8—Other Expenditure	50.00	(+) 52.96	102.96	93.46	(-) 9.50
16—Capital Outlay on Defence Services					
A.1—Army					
A.1(5)—Aircraft and Aero-Engines	Nil	(+) 0.10	0.10	Nil	(-) 0.10
A.2—Navy					
A.2(6)—Heavy and Medium Vehicles	2.00	(+) 2.00	4.00	2.95	(-) 1.05
A.3—Air Force					
A.3(2)—Construction Works	72.70	(+) 10.60	83.30	77.84	(-) 5.46
A.3(3)—Special Projects	14.00	(+) 4.00	18.00	17.27	(-) 0.73

5. Defective budgeting

The budget provision under Grant No. 15A-Defence Ordnance Factories represents the net anticipated expenditure after deducting the 'Recoveries' for supplies to the three services, etc. In the original grant, the net expenditure in the voted portion of the grant was estimated to be Rs. 90.98 crores on anticipated 'Recoveries' amounting Rs. 1262 crores. In March 1988, a supplementary grant was obtained for Rs. 64.82 crores to meet the additional expenditure under 'works'. On scrutiny, it was, however, noticed that the additional amount required for works was only Rs. 2 crores. The supplementary provision was, in fact, meant to compensate the increase in the net expenditure caused by reduced 'recoveries' on supplies made to the Defence formations.

6. Surrender of funds

(a) On 16th February 1988, Audit pointed out to the Ministry that the expenditure on 'Grant No. 16-Capital Outlay on Defence Services', was far less than the proportionate appropriation for the first nine months of the year. The Ministry was requested to review the position and surrender funds, if not required. Thereafter, on 22nd February 1988, the Ministry surrendered a sum of Rs. 871.31 crores out of a total budget provision of Rs. 3970.52 crores *i.e.* about 22 per cent under that head of account. Out of that surrender of funds, the major part related to Ordnance Factories *viz.* Rs. 426.05 crores out of a provision of Rs. 679.90 crores. While explaining this phenomenon in the Defence Services Estimates 1988-89,

the Ministry claimed that the savings were achieved on account of various economy measures taken to off-set the additional requirement arising under 'Revenue'. This claim of savings achieved through economy measures does not fit in with the following reasons furnished (in the Appropriation Accounts) by the Ministry for shortfalls in expenditure as per details given below:

Sub-head under Capital Outlay on Defence Services	Amount (Rs. in crores)	Reasons
Ordnance Factories		
Plant and machinery	374.00	--Imposition of restrictions regarding Indian agents for foreign suppliers and change of Inspection agencies for imported machines.
Air Force		
Aircraft and aero-engines	74.91	--Non-finalisation of contracts and slippages in delivery.
Heavy and medium vehicles	5.48	--Non-materialisation of supplies as per contract.
Other equipment	14.52	--Non-finalisation of contracts and slippages in delivery.

(b) After the notification of surrender of funds, the Ministry realised that the surrender of funds was not realistic. As a result, on 30th March 1988, the Ministry had to transfer funds to/from 13 sub-heads. Despite this, the actual expenditure under 11 sub-heads, as shown below, exceeded the final grants:

Sub-head	Original grant	Surrender	Re-appropriation	Final grant	(Rs. in crores)	
					Actual expenditure	Excess
A.1—Army						
A.1(2)—Construction works	264.30	5.28	(+) 0.17	259.19	269.17	9.98
A.1(4)—Military farms	1.00	0.02	—	0.98	1.19	0.21
A.1(6)—Heavy and medium vehicles	52.91	13.01	(+) 85.10	125.00	127.20	2.20
A.2—Navy						
A.2(2)—Construction works	109.90	9.95	(+) 9.10	109.05	111.17	2.12
A.2(4)—Naval Dockyards	72.30	19.10	(+) 0.28	53.48	55.12	1.64
A.2(5)—Aircraft and aero-engines	318.00	56.40	(—) 61.60	200.00	213.26	13.26
A.2(7)—Other equipment	8.00	4.50	(+) 0.10	3.60	6.11	2.51
A.3—Air Force						
A.3(4)—Aircraft and aero-engines	995.39	74.91	(+) 27.81	948.29	1031.03	82.74
A.3(6)—Other equipment	89.15	14.52	(—) 39.49	35.14	38.19	3.05
A.4—Ordnance factories						
A.4(1)—Works	199.90	52.05	—	147.85	150.00	2.15
A.6—Inspection organisation	8.70	1.63	(—) 0.17	6.90	7.09	0.19

The above position indicates that the requirement of funds was not assessed on a realistic basis and the surrender of funds was injudicious.

7. Persistent savings

Mention was made in paragraph 6 of the Report of the Comptroller and Auditor

General of India, Union Government (Defence Services) for the year ended 31 March 1987 about the persistent saving under Army sub-head A. 3-Pay and Allowances of Civilians since 1984-85. During 1987-88 also, the saving persisted under this sub-head as shown below:

Year	(Rs. in crores)					
	Original grant	Supplementary grant	Re-appropriation	Final grant	Actual expenditure	Saving
1984-85	191.43	32.61	(-)2.06	221.98	218.89	3.09
1985-86	229.83	Nil	(+)23.62	253.45	244.42	9.03
1986-87	269.69	65.01	(-)13.93	320.77	290.12	30.65
1987-88	352.25	9.96	*	362.21	343.02	19.19

*Actual amount re-appropriated was Rs. 15,000.

8. Persistent excess under 'Stores' and 'Works'

In pursuance of the recommendations of the Public Accounts Committee (PAC) contained in the paragraph 2.8 of their 166th Report (1983-84) a high level official committee was set up in March 1984 to review the financial systems in depth to avoid such large scale excess expenditure.

In regard to excesses relating to 'Stores' and 'Works', the committee recommended :

- (i) to maintain liability registers in the prescribed form, update them from time to time and monitor the progress of supplies/payments periodically; and

- (ii) to review the progress of execution of works periodically, as required, and modify the budget suitably taking into account the quantum of work already executed during the year and that expected during the rest of the year. The PAC in paragraph 2.25 of their seventeenth Report (1985-86) had recommended to take concrete steps to set right the deficiencies.

In spite of the fact that the above recommendations of the high level committee were circulated to all concerned in April 1985, excess under 'Stores' and/or 'Works' persisted during the years 1985-86 to 1987-88 as per details given below :

Grant	(Rs. in crores)								
	1985-86			1986-87			1987-88		
Sub-head	Final grant	Actual expenditure	Excess	Final grant	Actual expenditure	Excess	Final grant	Actual expenditure	Excess
<i>Army (Revenue)</i>									
Works	309.99	322.79	12.80	332.00	367.76	35.76	394.37	410.12	15.75
<i>Navy (Revenue)</i>									
Stores	339.35	350.58	11.23	405.74	436.54	30.80	345.86	353.76	7.90
Works	45.65	47.23	1.58	48.00	57.32	9.32	57.00	61.28	4.28
<i>Capital Outlay on Defence Services</i>									
<i>(Construction Works)</i>									
Army	214.20	227.66	13.46	220.45	240.50	20.05	259.19	269.17	9.98
Navy	97.20	101.26	4.06	102.00	113.78	11.78	109.05	111.17	2.12
Ordnance Factories	79.85	88.38	8.53	118.95	119.21	0.26	147.85	150.00	2.15

9. Expenditure on 'New Service/New Instrument of Service'

An appeal was made in August 1987 by the Cabinet Secretary to Government employees to contribute atleast one day's pay to the Prime Minister's National Relief Fund in view of the unprecedented drought in 1987. Consequently, the Defence Secretary, in September 1987 requested the Chiefs of the three Services to issue an appeal to all the Service Officers for contributing atleast one day's pay to the Relief Fund. The Chiefs of the three Services decided, in October 1987, that the three Services would, instead, contribute 12 days of their ration by foregoing a day's ration each month for 12 months although the scheme visualised only contribution in cash. The quantity of such contribution was assessed as 9242 tonnes of atta, rice and dals worth Rs. 2.50 crores. The Ministry of Defence sanctioned on 24th February 1988/15th March 1988 payment of Rs. 2,50,04,604 to the Prime Minister's National Relief Fund by withdrawing the amount from the Defence Services Estimates. The payment to the Relief Fund was made on 17th March 1988. This payment had no budgetary support from the Defence Estimates. Since this involved 'New Service/New Instrument of Service', prior approval of Parliament should have been taken.

10. Wasteful expenditure

There has been instances of wasteful expenditure which have not been taken serious notice of and have been explained away. Few lakhs of rupees may look insignificant for a Ministry which has a huge budget outlay but it should not be forgotten that it was at the cost of other developmental projects. Some instances noticed, as a result of test audit, are as under:

- (i) Manufacture of a fuze for ammunition not being in accordance with the drawing stipulation resulting in rejection of filled fuzes valued at Rs. 146.60 lakhs and rectification of empty fuzes valued at Rs. 107.70 lakhs.
- (ii) Application of a particular fuze without basic investigation in regard to its suitability resulting in the failure of ammunition and leading to rejection of fuzes valued at Rs. 38.88 lakhs and banning of fuzes valued at Rs. 32.40 lakhs.
- (iii) Manufacture of fin assemblies on the basis of a defective design and inordinate delay in flight trials resulting in extra expenditure of Rs. 39.30 lakhs.
- (iv) Development and productionisation of an ammunition of faulty design causing loss of human lives and Government property and eventual abandonment of the project resulting in loss of over Rs. 12.64 lakhs.
- (v) Due to not specifying the condition of material in the indent/contract, rejection of imported aluminium alloy bars valuing Rs. 63.61 lakhs.
- (vi) Non-utilisation of imported gas generating plants for want of technology resulting in wasteful expenditure of Rs. 50.11 lakhs.
- (vii) Non-utilisation of a furnace resulting in an infructuous expenditure of Rs. 13 lakhs.
- (viii) Defective construction of a swimming pool resulting in additional expenditure of Rs. 5.93 lakhs to make it purposive.

CHAPTER II

MINISTRY OF DEFENCE

11. Purchase and licence production of 155 mm towed gun system and ammunition

11.1 Introduction

11.1.01 The Ministry of Defence (Ministry) approved in August 1980 a paper prepared by Army Headquarters (HQ) which recommended, *inter-alia*, the introduction of 155 mm calibre medium gun both towed and self-propelled. The contract for supplying the gun package (towed), including ammunition, was concluded in March 1986 with Bofors of Sweden.

11.1.02 The files relating to the purchase of the gun system and ammunition as well as licence production were called for from the Ministry as early as July 1986; they were made available to Audit from June 1988 and only after repeated reminders. The Ministry informed in June 1987 that the files were required to settle certain post-contractual matters and in connection with the proceedings of the Joint Committee constituted by Parliament to enquire into the Bofors contract. The Ministry further clarified that "in view of the ongoing debates in the Parliament these papers were being referred to (by them) on daily basis."

11.1.03 The Ministry stated in February 1989 that the Raksha Mantri had informed the Comptroller and Auditor General of India (CAG) in June 1987 that instructions had been issued to make available all files required for audit and if for any reason it was not possible to furnish any specific file, Audit Officers at the appropriate levels could visit the Defence Ministry where all facilities could be provided for the scrutiny of the related files. The Ministry added, "Audit, however, did not avail of the offer". To put the matter in its correct perspective, it needs to be stated that the CAG in his letter dated 18th September 1987 to the Defence Secretary made it clear that "the files whether deemed sensitive or not, should be made available to the Directors of Audit at their offices for scrutiny and return. If necessary, the files

asked for by Audit could be sent to the Directors of Audit by name and they could be relied upon to be discreet in handling such files and papers".

According to Section 18(1) of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971, the CAG has the authority "to require that any accounts, books, papers and other documents which deal with or form the basis of or are otherwise relevant to the transaction to which his duties in respect of audit extend, shall be sent to such place as he may appoint for his inspection".

11.2 Scope of Audit

11.2.01 The review is based on records as were made available to Audit by the Ministry. The Ministry while replying to Audit queries in November 1988, sent an "overview" and also drew attention of Audit to some of the conclusions of the "Joint Parliamentary Committee."

11.2.02 The position of Audit under the Constitution was made clear to the Ministry in August 1987 at the time when a request was made by the Government to the Comptroller and Auditor General of India to make available necessary assistance to the Joint Parliamentary Committee. The Comptroller and Auditor General of India while formally replying to the Defence Secretary on 6th August 1987, stated "I need hardly emphasise that this (assisting Joint Parliamentary Committee) does not circumscribe our authority to go into this or any other connected transactions in the usual manner separately or later on, if considered necessary".

11.2.03 Due notice was taken of all the material furnished by the Ministry from time to time including the "overview" furnished in November 1988 and the complete draft Audit review was thereafter sent to the Ministry on 1st February 1989. The Ministry communicated on 21st February 1989 its detailed comments on the draft review.

11.2.04 The Ministry, while refuting the findings of Audit on many points in the draft review, drew again (February 1989) the attention of Audit to the conclusion of the Joint Committee and observed as follows :

“It seems necessary to also invite attention to JPC’s Report on issues relating to the Bofors contract. As you are aware, besides examining/studying the entire records of the case, the JPC had recorded the sworn testimony of a number of senior officers, both retired and serving, including General Sunderji, the then COAS. It will be recalled that General Sunderji as Deputy Chief had, in 1982, preferred the French system, while ranking the Swedish system second. As Chief of the Army Staff in 1986, he reversed this *inter-se* priority. His personal statement on the subject is contained in the JPC’s Report at pages 65—67. Based on its examination of the entire matter, the JPC concluded that all the procedures were duly followed (para 4.47 of the Report) and that the decision taken in February 1986 to place the Bofors gun over the French gun was intrinsically sound. Indeed, the Army Chief would have failed in his duty had he ignored the change in the security environment (para 5.81 of the Report).”

“Similarly, on the aspect of financial and commercial evaluation, the JPC came to the conclusion that the strategy adopted by the Negotiating Committee generated intense competition as a result of which it became possible to achieve reduction of more than 15 *per cent* during the final stages of the negotiations which led to a saving of approximately Rs. 192.5 crores (para 6.77 of the Report). The JPC concluded that the Negotiating Committee was eminently successful in the tasks assigned to it (para 6.78 of the Report).”

11.2.05 The Ministry while sending their comments (21st February 1989) offered to discuss for further clarifications, as may be needed. Accordingly, the review was discussed between the Principal Director of Audit and the Additional

Secretary to Government of India, Ministry of Defence on 29th March 1989. After duly taking note of the clarifications offered during the discussion, the review was finalised and sent for printing. A copy of the finalised review was also sent to the Ministry on 31st March 1989. This finalised review was discussed by the Defence Secretary, on his request, with the Comptroller and Auditor General of India on 6th April 1989; some more points were again discussed by him with the Comptroller and Auditor General of India on 8th April 1989. The Ministry followed it up with the written comments on 10th April 1989. These comments have been considered fully and taking into account the records, documents and papers, as were before audit, necessary modifications/additions have further been made as far as possible and considered necessary in the review to incorporate/reflect the view point of the Ministry. While Audit has taken due note of the terms of reference of the Joint Parliamentary Committee and its findings with all regard and consideration, this review has been conducted in discharge of the obligations under the provisions of the Constitution (as envisaged in Articles 148—151) and in terms of the Comptroller and Auditor General’s (Duties, Powers and Conditions of Service) Act, 1971.

11.2.06 From a perusal of certain records and documents during the course of audit, it appeared that various alternatives about scrutiny of the Bofors transactions at different times and different levels were considered. The Defence Minister informed the Lok Sabha, on 29th April 1987, about the decision of the Swedish Government, in the light of the approach by the Government of India, to ask the (Swedish) ‘National Audit Board’ to undertake “auditing review” of the Bofors Indian contract. The Swedish Embassy in India submitted the report of the ‘Swedish National Audit Board’ on 4th June 1987, to the Ministry of External Affairs, Government of India. On 29th July 1987, the Defence Minister moved a motion in Lok Sabha for appointment of Joint Parliamentary Committee. In July 1987, the Indian Mission in Sweden suggested various courses of action including the possibility of the Bofors submitting the entire gamut of transactions for audit by Indian audit authorities. The Government of India did not appear to have pursued any of the suggested courses

of action. While the Swedish Government entrusted the Swedish 'National Audit Board' with the enquiry into the Bofors Indian Contract i.e. the transactions of a Non-Government 'Company in Sweden', the reasons for not asking for a "full audit" by the Comptroller and Auditor General of India as suggested by the Indian Mission in Sweden, for a contract involving an outgo, from the public exchequer, of over Rs. 2000 crores were not clear.

11.2.07 The review examines and comments on the sequence of events from the acceptance of the need of the Army for a 155 mm calibre gun system to the conclusion of the contracts. It also includes the evaluation of competing gun systems, the financial aspects relating to the contracts and certain aspects of contract performance including licence production.

11.3 Technical evaluation

11.3.01 Army HQ had been exploring the possible sources of supply of 155 mm guns from September 1980, and carried out an initial paper evaluation followed by actual trial evaluation in India. Out of the 11 gun systems initially identified by Army HQ, only eight gun systems were selected for trial evaluation.

11.3.02 For the evaluation of the 155 mm gun system, no General Staff Qualitative Requirement (GSQR) was prepared. The Ministry contended in February 1989 that as per the orders of December 1961 (which were reiterated in February 1983) no General Staff Qualitative Requirement was required to be prepared for equipment of foreign manufacture/design which were found suitable for introduction in service. The representative of Army HQ had informed the Negotiating Committee in August 1984 that no minimum performance parameters had been finalised when the trial evaluations were conducted. Thus, the gun systems had been found suitable without either a General Staff Qualitative Requirement or minimum performance parameters before the trial evaluations.

11.3.03 Normally, the several parameters of a General Staff Qualitative Requirement are assigned their *inter-se* importance through a matrix

of marks. This exercise is necessary for balanced appreciation of the different characteristics and sub-characteristics of the minimum acceptable parameters. But no matrix had at any time been prepared with the result that the benefit of the assignment of *inter-se* importance of the different characteristics and the levels of satisfaction of those characteristics of the various gun systems were not secured.

11.3.04 The absence of a General Staff Qualitative Requirement (GSQR) was noted by the Negotiating Committee. According to a note of the Ministry dated 29th August 1984, the Defence Secretary had himself stated at an 'in-house' meeting of the Negotiating Committee on 28th August 1984 "that since no GSQR had been indicated by the Army HQs it would be very difficult to have a complete view in this regard". He (Defence Secretary), in fact, quoted the example of purchase of submarines where Naval HQs, had given a complete matrix giving 8 points along with marks for each point so that offers could be scientifically evaluated. He added, "so far as the present recommendation of the Army HQs is concerned, the performance parameters have not been firmed up and GSQR not decided. In the absence of these two, it would be very difficult for the Committee to take a decision". However, the Ministry still maintained in February 1989 that "no GSQR was required to be prepared for an equipment of foreign manufacture and hence no GSQR was prepared in this case". The Ministry added in April 1989 that "it was true that, based on a misconception, the question of GSQR was raised in the initial meetings of the Negotiating Committee (NC) but, subsequently, the NC decided to view the evaluation with reference to the Minimum Acceptable Parameters furnished by the Army Hqs".

11.3.05 Two high level delegations visited abroad during 1982-83 to have a further look at the guns. All the claims made by the manufacturers were not fully verified through trials during those visits. For example, no trials were witnessed on fire control instruments during 1982-83. Also, trials conducted in June 1982 were not for an adequate number of rounds. Further, Army HQ felt in September 1985 that the trials conducted by the suppliers in the countries of their

manufacture could be "manipulated". The Ministry stated in February 1989, in reply to the draft Audit review, that "time and cost penalties of further trials in India would have been incommensurate with the marginal gains which might have accrued." It did not, however, indicate the quantum and nature of time and cost penalties and what were the likely countervailing gains for not insisting on trials in India despite the apprehensions of Army HQ about the manipulations of trials abroad.

11.3.06 Trials were conducted on the gun systems offered by six firms in 1980—82 on "normal plains", "in desert" and at "high altitudes". On the basis of these trials, the recommendations and observations made by the trial taking authorities indicated the need for further trials and certain modifications in all the gun systems.

11.3.07 Based on the trials conducted, Army HQ prepared a General Staff Evaluation Report in December 1982. It brought out that the gun selected should have the best technology, high rate of fire including burst fire capability, long range, a fair degree of automation and capability of firing various types of ammunition. The report indicated the levels of performance of these guns during the trials in India and as observed abroad by the Defence delegations.

The Ministry stated in April 1989, that the report prepared by Army HQ "did not advise any further trial, of the guns in India".

11.3.08 Based on the trial reports Army HQ shortlisted, in December 1982, four gun systems as indicated below :

Order of priority	Country of origin	Supplier
I	France	Sofma
II	Sweden	Bofors
III	United Kingdom	International Military Services
IV	Austria	Voest Alpine

The Austrian gun was not recommended by Army HQ for licence production in India.

11.3.09 On the basis of a directive given by the Raksha Mantri in August 1983, the Defence Research and Development Organisation (DRDO) prepared an Appreciation Report and submitted it to the Ministry in October 1984. The Appreciation Report indicated, *inter alia*,

"About 300 rounds have been fired during evaluation trials from each of the four equipments. Very few rounds were fired with top charges and in extreme temperature conditions. The evaluation trials have failed to provide conclusive data to decide on the suitability of a particular weapon system. It is pertinent to point out that indigenous equipments are subjected to much more stringent and rigorous trials e.g. about 3500 rounds were fired from each of the two field guns

The Appreciation Report recommended "in view of the limited evaluation trials, it is not fair to decide upon a weapon system involving huge financial commitments. It is, therefore, recommended that fresh user trials be conducted with the equipment from Bofors, Sofma and Voest Alpine. The trials should preferably start this winter and finish by June 1985 so that complete environmental aspects can be studied and reliability of the equipments under the worst service condition be assessed. A decision on particular weapon system will only then be objective and realistic."

The recommendations contained in the Appreciation Report of the Defence Research and Development Organisation (DRDO) for a thorough evaluation of any of the equipment offered for sale were not pursued. The Ministry, however, stated in November 1988, in this context, that the evaluation made by DRDO was considered by the Negotiating Committee of which the Scientific Adviser to Raksha Mantri was one of the members. The Ministry further stated in April 1989 that "it was doubtful whether the contending parties would agree to send the equipment for fresh trials in India on a 'no cost no commitment' basis which would have taken

another 1—2 years, thus further delaying the acquisition of 155 mm Gun system.”

11.3.10 In January 1984, the Ministry decided to delink the procurement of the self-propelled gun from the towed gun due to budgetary constraints and to encourage indigenous production.

11.3.11 In April 1984, the Cabinet Committee on Political Affairs (CCPA) accorded approval for

- (i) the procurement of towed guns along-with their accessories, spares, vehicles and ammunition (400 gun systems) and the subsequent licence manufacture of guns in India for additional regiments in the Seventh Plan and thereafter,
- (ii) entering into licence agreement with the selected manufacturer for indigenous production of 155 mm gun ammunition in India, and
- (iii) the constitution of a Negotiating Committee for carrying out negotiations.

11.3.12 The Negotiating Committee, consisting of seven members, was set up in May 1984. It commenced its work in June 1984.

11.3.13 In August 1984, Army HQ forwarded to the Ministry a comparative assessment of the gun systems offered by the four firms alongwith the consequent grading indicating that the Sofma gun system met “most of all” the Army’s requirements and Bofors was the “second best”. An analysis of the chart indicated :

Firm	Number of characteristics	Number of characteristics of which		
		minimum acceptable parameters were met	minimum acceptable parameters were not met	information was not available
Sofma . . .	25	18	2	5
Bofors . . .	25	11	8	6

11.3.14 In November 1984, Army HQ sent another assessment which included the evaluation of certain claims made by the manufacturers during negotiations (over and above the performance of guns noticed during trials). An analysis of this assessment indicated :

Firm	Number of characteristics	Number of characteristics on which		
		minimum acceptable parameters were met	minimum acceptable parameters were not met	full information was not available —minimum acceptable parameters not verified
Sofma . . .	25	21	2	2
Bofors . . .	25	16	2	7

11.3.15 In March 1985, Army HQ stated that the Sofma gun system met “almost all the parameters” laid down, it substantiated all its claims during trials in India and the minimum modifications had to be suggested to it. As regards the Bofors gun system, Army HQ stated that it met “most of the essential parameters” laid down except that it had lesser range and a high silhouette. Army HQ also added that there was no change in their recommendation of August 1984 in favour of the Sofma gun system and pleaded for finalisation of selection of the gun “at the earliest so that our operational preparedness does not continue to remain adverse”.

11.3.16 Based on the discussions with the Raksha Mantri on 13th September 1985, Army HQ forwarded on 14th September 1985 to the Raksha Mantri a comparative performance statement of the gun systems in respect of 12 characteristics, treating them as critical aspects. Army HQ then emphasised that the highest credibility had been given to features specially demonstrated and tried during trials in India since data could be manipulated during controlled demonstrations organised by the manufacturers in their own countries. In this statement, the relative rating of the Sofma gun system was better on $7\frac{1}{3}$ (seven and one-third) characteristics and the Bofors gun system on $4\frac{2}{3}$ (four and two thirds) characteristics. In regard to the above-said comparative performance statement of Army

HQ the Ministry, however, opined in November 1988 in reply to Audit query "that the relative evaluation of the two system was not merely a matter of arithmetic. It is also to be kept in view that if merely on such an arithmetical basis Sofma were the clear cut choice in September 1985, there would then have been no other contender left in the field. Consequently, without any competition, there would have been no means of securing the significant price reductions actually achieved."

11.3.17 In the meeting of the Negotiating Committee held in October 1985, the representative of Army HQ reiterated the Army's opinion that the Sofma gun should be considered for introduction and the firm should be invited for negotiations. The order of preference of Army HQ was again indicated as Sofma first and Bofors, second. The Negotiating Committee had, however, recommended short listing of Sofma and Bofors for negotiations with a stipulation that the choice between the two was open and would depend upon a combination of technical and financial considerations.

11.3.18 In November 1985, the two firms, Sofma and Bofors, were shortlisted for negotiations and the Ministry set up in December 1985 three working groups to discuss the commercial, technical and licence production aspects with the two shortlisted firms.

11.3.19 On 20th January 1986, a note was submitted to the Prime Minister by his office that both the guns were technically acceptable and that the price of the guns and ammunition as well as credit terms would be crucial factors in the final decision. According to the clarification given by the Ministry in November 1988 "the aforesaid note was a brief submitted by his office to the PM as it was envisaged that the Swedish PM would understandably enquire about the prospects of the Bofors gun." The Ministry added in April 1989 that the contents of the note were factually correct.

11.3.20 On 17th February 1986, Army HQ sent to the Ministry another technical evaluation, declared "final", comparing the "important features" of the two gun systems. The evaluation statement consisted of the findings of Army

HQ on 20 characteristics where 2 characteristics consisted of 7 sub-characteristics. An analysis of this evaluation by Audit indicated that out of 20 characteristics, 10 characteristics and 5 sub-characteristics were already assessed in the evaluation of September 1985. The remaining 8 characteristics and 2 sub-characteristics were added for the first time to the September 1985 evaluation. In this new addition, Bofors was found better in 7 characteristics and 2 sub-characteristics. According to the Ministry (November 1988) the new characteristics/sub-characteristics were really "not new" but were derived from the minimum acceptable parameters of the August and November 1984 evaluations (wherein Sofma was preferred). Thus, for the first time, in February 1986 Bofors was categorised as having an edge over the Sofma gun by laying emphasis on the various characteristics and sub-characteristics.

11.3.21 Forwarding that statement, Army HQ stated in February 1986 that both the guns essentially met the "minimum acceptable parameters", but, for coming to a final conclusion, all issues could not be given equal weightage as some features were more critical than others. In conclusion, the following points were brought out by Army HQ :

- (i) The rating of the Bofors gun with regard to burst fire capability, an essential feature of shoot and scoot tactics, was better than the Sofma gun. "Shoot and scoot" tactics would have to be followed by artillery in the interest of survivability when enemy counter bombardment capabilities are enhanced by the acquisition of a particular type of radar.

It was noticed by Audit from the records that Army HQ were aware of this enhanced capability in September 1985 when it had adjudged Sofma as the best gun. Even otherwise, an internationally well known journal on Defence matters had stated in 1984 that the moratorium on the sale of this particular type of radar to the allies of the country manufacturing it had been lifted as far back as 1983. Against this background, it is not

clear why the "essential features" of shoot and scoot tactics, equally relevant and known in defence circles in 1984-85, had not been given greater priority initially and assumed significance only in February 1986. The Ministry, however, stated in February 1989, in reply to draft Audit review, that "reported magazine/statements were neither reliable nor relevant to the issue". The Ministry further added in April 1989 "that in view of developments regarding availability of fire locating radar by one of the neighbouring countries, which was confirmed only in early February 1986, the Army Hqrs has considered that a fresh assessment of the two gun systems was necessary", taking into account, shoot and scoot, burst fire capability and stretch potential of the proposed gun system. It will, however, be evident that the Ministry was aware of the developments even prior to February 1986.

- (ii) On another count, namely, range, which continued to be of foremost importance, the Sofma gun was superior. Army HQ stated in February 1986 that this factor may not be attached as much importance as the burst fire capability since the extra range of Sofma had been achieved through development in ammunition rather than the gun.
- (iii) Under the attribute, "proneness to defects", it was mentioned by Army HQ that Sofma had negligible defects, whereas Bofors had a few major and minor defects. The "proneness to defects" in the Bofors gun was attributed to higher automation.
- (iv) Army HQ contended that the Bofors gun had a clear edge over that of Sofma gun taking into account its capability to meet current and future operational requirements, such as burst fire capability and high degree of automation.

11.3.22 After receipt of the technical evaluation report of February 1986 from Army HQ, the Negotiating Committee in its meeting held

on 12th March 1986 noted that keeping in view the technical, contractual and financial aspects, the offer of Bofors was the better of the two and recommended that, "pending the finishing touches to the contracts, a letter may be issued to them to the effect that we would be willing to award the contracts to them subject to their satisfying us on all aspects of purchase, licence production, credit and other arrangements." The letter of intent was accordingly issued to Bofors on 14th March 1986.

11.3.23 The contract for supplying the gun package including ammunition was signed on 24th March 1986.

11.3.24 The following points were noticed on the basis of records made available to Audit :

- (i) Army HQ on the basis of trials conducted in India and abroad during 1980-82, had, on as many as six occasions (December 1982, August and November 1984, March, September and October 1985) reiterated their order of preference, that is, Sofma first and Bofors next. The Ministry, however, stated in February 1989 that this was "factually incorrect". It contended that "Army HQrs had on these occasions merely ranked Sofma first and Bofors second" and "this reflected at best a marginal preference from the purely technical angle". It is difficult to appreciate the aforesaid contention of the Ministry as the order of preference of Army HQ was clearly Sofma first and Bofors second.
- (ii) Neither the need nor the reason for the fresh evaluation of February 1986 is clear. If this evaluation had been made as a result of a potential adversary acquiring enhanced counter bombardment capabilities, it is seen that none of the newly added characteristics hinged on the burst fire capability considered an essential feature of shoot and scoot tactics.
- (iii) The Ministry confirmed in November 1988, that one of the main reasons for preferring Sofma to Bofors from December 1982 onwards was that the Sofma

system "fulfilled all the requirements of the Army for the towed and self propelled versions". In July 1985, though, the question of indigenous manufacture of a self-propelled gun using the Sofma system was given up by the Ministry as unfeasible, yet, Army HQ reiterated its preference for Sofma in September and October 1985.

(iv) The Bofors gun was preferred due to a better burst fire capability. However, it also had a negative aspect, namely, "proneness to defects" due to higher automation. This aspect, too, does not appear to have been examined in depth. Further it was seen that both Bofors and Sofma met the Army's minimum acceptable parameter of burst fire (three rounds in 15—20 seconds). The margin of difference in favour of Bofors was two seconds (three rounds in 15 seconds for Sofma and three rounds in 13 seconds for Bofors).

(v) The deliberations of the Negotiating Committee which advised the issue of the letter of intent suffered from certain constraints. Some of these were as mentioned below :

(a) Although the Negotiating Committee asked for a copy of the General Staff Qualitative Requirement in July, August and September 1984, it was not made available despite Army HQ having agreed to do so. In its absence, the Negotiating Committee placed reliance simply on the "minimum acceptable parameters" presented by Army HQ.

(b) On 14th September 1984, Army HQ were requested by the Negotiating Committee to furnish the matrix for their proposal and unit level trial reports. These, for reasons not explained, were never furnished to the Negotiating Committee.

(c) The Negotiating Committee further felt that it would not be correct to take a decision on the trial evaluations conducted in 1980—82 in the

light of the considerable technological improvements that had taken place since then. But in fact, no further trial evaluations were conducted at all. The recommendations of Army HQ were based on trials conducted in 1980—82 and the improvements claimed to have been made thereafter by the manufacturers were accepted without conducting field trials in India.

(d) Even on 29th October 1985, the Negotiating Committee "did not have the benefit of going through unit level and technical trial reports of various gun systems. They were, however, handed over a statement by General Staff which they vouched were quintessence of trial reports, as suitably modified by them".

(e) The Negotiating Committee was also aware of the inadequate number of rounds fired in the trial evaluation of the guns.

(vi) In reply to above observations, the Ministry in April 1989 denied that the Negotiating Committee were "handicapped in its deliberations".

11.3.25 Notwithstanding the doubts, the Negotiating Committee itself, had and being "solely guided" by the findings of Army HQ on its preference of two, out of the four guns, with Sofma first and Bofors next, the Committee decided to short list the two guns. On 12th March 1986, the Negotiating Committee after the receipt of changed recommendations of Army HQ in February 1986 indicating its preference for Bofors, felt that keeping in view the technical, contractual and financial aspects, the offer of Bofors was the better of the two and recommended that, "pending the finishing touches to the contracts, a letter may be issued to them to the effect that we would be willing to award the contracts to them subject to their satisfying us on all aspects of the purchase, licence production, credit and other arrangements".

11.3.26 The recommendation of the Negotiating Committee in favour of Bofors was, therefore, not on the basis of an evaluation

against General Staff Qualitative Requirement or a matrix but on the basis of "final" recommendation of Army HQ made in February 1986 which preferred Bofors. Though the letter of intent was issued to Bofors on 14th March 1986, there was no follow up action by the Committee of its own recommendation to satisfy itself on all aspects of the purchase, licence production, credit and other arrangements.

11.4 Evaluation of ammunition

11.4.01 For one of the important ammunitions on order with Bofors, the required range was 'P' kms in terms of the minimum acceptable parameters. Sofma had offered its ammunition with a range of 'P+2.5' kms whereas the offer of Bofors was for 'P-0.5' kms. This resulted in a dilution of the stipulated "minimum" standard. The value of this ammunition on order with Bofors was as much as Rs. 212.45 crores. The Ministry stated in February 1989 that the aforesaid ammunition fired during demonstration before the Consultative Committee and JPC achieved the "stipulated range and above."

11.4.02 On two other items of ammunition, 'X' and 'Y', the range requirement was indicated as 'Q' Kms. Both Sofma and Bofors had offered these items of ammunition for a shorter range. In August 1985, Army HQ, after evaluating them, held that they did not meet their operational requirements. However, an order for the supply of shorter range ammunition which had earlier been rejected, was placed though Bofors had offered to develop and supply the ammunition with the range of 'Q' Kms. This was worth Rs. 25.93 crores. The Ministry justified this purchase in their reply (November 1988) on the ground that targets of varying ranges were to be engaged and that the ammunition was "cheaper". If this was so, Army HQ were obviously aware of these factors in August 1985 when it had rejected the shorter range ammunition.

11.4.03 The minimum acceptable parameter for another ammunition, 'Z', as confirmed by the Ministry in November 1988, was 'R' kms. The minimum standard on this ammunition, too, was finally compromised in favour of shorter range ammunition offered by Bofors. The cost of this ammunition was Rs. 90.60 crores. In February

1989, the Ministry contended that the "minimum acceptable parameter" for this ammunition was below the range ordered on Bofors. It did not, however, indicate the factors which necessitated the alteration of the initially stipulated parameters.

11.5. Financial evaluation

11.5.01 The four firms shortlisted for the supply of the gun systems were asked in July 1984 to submit their quotations on price. As the tenders received from them were found incomplete by the Negotiating Committee, fresh offers were obtained in September 1984. These offers, too, were incomplete. Fresh offers submitted in May 1985 were valid upto December 1985. In November 1985, two firms, Bofors and Sofma, were shortlisted. From 1st January 1986 to 12th March 1986, seven offers were made by Sofma and nine by Bofors with varying composition in the number of guns, quantity of ammunition and in different currencies.

11.5.02 On 12th March 1986, the Ministry concluded that the latest offer of Bofors was cheaper. The letter of intent in favour of that firm was issued on 14th March 1986. On 21st March 1986, Sofma made a further reduction in price by "5.6 per cent of their earlier offer".

11.5.03 In a Note dated 22nd March 1986 submitted to the Prime Minister by the Defence Secretary, the latter stated that he had tried to get further reduction from Bofors as advised by the Prime Minister. According to this note Bofors was "most averse" to making any further concessions since it had made several concessions and had even received a letter of intent from Government on 14th March 1986. The note further mentioned that "with great difficulty it has been possible to obtain from Bofors a further concession in as much as they would now give 10 guns free over and above 400 gun systems paid for".

11.5.04 The value of the two competing bids as contained in the note dated 22nd March 1986 from the Defence Secretary submitted to the Prime Minister, was Rs. 1436.75 crores for Sofma and Rs. 1427.02 crores for Bofors. The value of in respect of Bofors was arrived at after taking into account the concession of 10 free guns at "approximately Rs. 10.5 crores". (Rs. 1437.72 crores—Rs. 10.5 crores = Rs. 1427.22 crores).

11.5.05 The offer of Bofors was valid only till 21st March 1986 and that of Sofma till 31st March 1986. However, the Defence Secretary in his aforesaid note of 22nd March 1986 to the Prime Minister stated as follows:

“It is now requested that permission may kindly be accorded to sign the agreement with Bofors. I had discussed this matter with the Raksha Rajya Mantri (A) at the airport before he left for Bhutan on 21st morning and he gave his blessings that if Bofors eventually agreed to give 10 guns free of cost, we should go ahead and clinch this deal.”

11.5.06 The Prime Minister's office conveyed the approval on 24th March 1986 and further stated that the Prime Minister had “given some further directions regarding the methodology of evaluation” and “these will be communicated separately”. However, without waiting for further directions the contract was signed with Bofors on the same day i.e. 24th March 1986 for SEK. 8,410.66 million (Rs. 1437.72 crores).

11.5.07 The Prime Minister's office conveyed the following directions on 25th March 1986 regarding the methodology of evaluation:

“PM has observed that the evaluation procedure is not thorough. This should be discussed. He also noted that the BOFORS gun needs a crew of six whereas the SOFMA gun needs a crew of seven and enquired whether this factor had not been taken into account when evaluating the cost. He has enquired whether the evaluation does not include the direct operating costs of the guns. As regards methodology of evaluation, I would submit that a detailed paper setting out the present criteria may be prepared in consultation with the Department of Economic Affairs. Difficulties have arisen in the recent past because of rapid fluctuations in exchange rates. The Department of Economic Affairs may be aware of alternative techniques for taking this factor into account in calculating the net present value. Such alternatives could be outlined for discussion with PM.”

11.5.08 In reply to the draft audit review, the Ministry stated in February 1989 as follows:

“PM's Office conveyed the approval of the Prime Minister as Raksha Mantri to the award of the contracts for supply and licence production of 155 mm Gun system to M/s Bofors. There was no stipulation that the Contracts were to be concluded after getting further directions regarding the methodology of evaluation. The directions of the PM as RM regarding the methodology of evaluation were meant for general application in future and did not mean that fresh evaluation of the two offers was to be done. The directions of the PM as RM had arisen out of the evaluation of Bofors offer, but did not have a direct bearing on its evaluation.”

In regard to the Prime Minister's directions of 25th March 1986, the Ministry's contention is not understood since the directions had, in fact, a direct bearing on the evaluation of the offer of Bofors. A plain reading of the directions dated 25th March 1986 from the office of the Prime Minister does not give the impression that the present procurement was to be exempted from the operation of the directions. Assuming it was so and the approval of the Prime Minister on 24th March 1986 was deemed final by the Ministry, it is not on record if any clarification, in this regard, written or oral, was sought by the Ministry from the Prime Minister's office. If the directions were intended for future guidance or application, as clarified now by the Ministry, there was no indication of the Ministry having worked out till January 1989 alternative techniques as per the directions of the Prime Minister. It appears, however, from the reply of the Ministry that a distinction is also now sought to be made by the Ministry between the Prime Minister and the Prime Minister as Raksha Mantri.

11.5.09 The contract with Bofors was signed for Rs. 1,437.72 crores for 400 gun systems and 10 guns without taking into account the foreign exchange liability created on account of the purchase of associated systems, towing vehicles and ammunition for the 10 “free” guns.

11.5.10 The Ministry had done a Net Present Value (NPV) analysis of the offers made by the two firms. It stated in February 1989 that the net present value of the offer of Bofors worked out to Rs. 1140.30 crores and that of Sofma Rs. 1126.37 crores. It said that "though the NPV in the case of Bofors was slightly higher, it was considered that this would not make a significant difference considering the total values involved, the technological advantages, quicker indigenous production schedule etc. in the case of Bofors." The costs of two bids indicated by the Ministry in their note of 22nd March 1986 at the time of seeking the permission of the Prime Minister to sign the agreement with Bofors showed the value of the quotation as Rs. 1436.75 crores for Sofma and Rs. 1427.02 crores for Bofors. This evaluation suffered from certain inadequacies as mentioned below:

- (i) Bofors and Sofma had sought an advance payment amounting to 20 per cent of the value of the contract. While Bofors wanted that payment in one lumpsum, which was made in May 1986, Sofma wanted it in two instalments of 10 per cent each, the second instalment, to be paid eight months after the disbursement of the first. The consequent benefit of interest for eight months on the offer of Sofma worked out to Rs. 9.58 crores (approximately) at 10 per cent. The Ministry stated in February 1989, in response to draft Audit review, that this benefit was duly taken into consideration while calculating the net present value.
- (ii) The credit agreement envisaged, *inter alia*, payment of management fee (0.0625 per cent), commitment fee (0.25 per cent of the undisbursed credit), agency fee (0.0625 per cent on the loan undisbursed), guarantee premium (2 per cent) and legal and out of pocket expenses. Payments on these accounts were not required to be made on the credit offered by Sofma. The additional liability on these charges was Rs. 35.43 crores. The Ministry stated in February 1989 that this liability had been taken into account while calculating the net present value.

- (iii) When asked by Audit to intimate whether any contract involving similar payments was concluded in the recent past, the Ministry stated in November 1988, that it did not conclude any contract during the period 1984-87 involving the payment of all of the various banking charges like agency fee, guarantee premium, commitment fee and management fee that were allowed to Bofors.

- (iv) While the lender (Svensk Export Kredit) has the right to terminate the credit agreement under certain contingencies, the borrower (Government of India) has no right to cancel the agreement and worse, the borrower has to keep paying the commitment fee on the unavailed portion of the loan facility. For instance, on delays in supplies by Bofors, or any set back on the supply contract, the commitment fee liability will have to be continuously borne by Government.

- (v) The Ministry had stated in 1985 to Sofma that it was the policy of the Government to pay in the currency of the country from where imports are made. During January-February 1986, Sofma offered to quote in Deutsche Mark (DM) in which case their prices in Rupees would be approximately five per cent lower. The French Government on behalf of Sofma, offered, on 19th March 1986, to denominate the contract and credit in DM instead of French Francs. Both offers were, however, rejected on the ground that implications at the time of repayment could be considerable and also obtaining the quotation and credit in DM would be speculative and was not recommended by the Department of Economic Affairs considering the strength of the DM. However, in the credit agreement entered into with Svensk Export Kredit for SEK. 6.73 billion in March 1986, the DM component was equal to SEK. 3.93 billion (which was 58 per cent of the credit facility). Earlier in January 1986, Svensk Export Kredit had offered a credit package of SEK. 7128 million of which the DM component was 51 per cent (SEK. 3474.40 million).

Hence a liability of making repayments in a currency which the Department of Economic Affairs had termed as strong and highly speculative was not only accepted but also increased from 51 to 58 *per cent*. In response to an Audit query, the Ministry stated in November 1988 that the change in the DM component was due to "changes in the packages involving goods of Swedish and non-Swedish origin". It added that it "agreed to repay in DM because the Swedish Export Kredit Corporation had taken the position that they could not provide credit for more than 2798.45 million in SEK because of the obtaining conditions in the credit market". In February 1989, however, the Ministry still denied that any "exception has been made in the policy of Government to pay for imports in the currency of the country from where the imports are being made".

- (vi) The list of items proposed to be covered for licence manufacture alongwith the minimum purchase quantity for transfer of technology, in terms of the contract dated 24th March 1986 with Bofors revealed that the cost of extra ammunition (for two types) over and above Army's requirement, worked out to Rs. 42.73 crores. This extra ammunition over and above Army's requirements would have to be purchased in case the technology for two types of ammunition has to be transferred by Bofors for licence production in India. The Ministry stated in February 1989 that no extra ammunition had been purchased to meet the commitment given in the licence production agreement. However, this liability of purchase of extra ammunition was not considered at any stage.
- (vii) The trial report had indicated about Bofors gun that "this equipment will require sophisticated and heavy EME cover which is possible to provide with adequate organisational and conceptual advance planning". The "proneness to defects" attribute was repeatedly mentioned by Army HQ in its evaluations upto February 1986. The Ministry, in response to draft

Audit review, stated in February 1989 that it was "not necessary to assess the additional cost of improved maintenance coverage for the Bofors gun" as the "gun was reliable and easy to maintain and no problems were visualised in providing engineering backup for maintenance purposes". However, Ministry did not clarify as to what would be the additional manpower/equipment necessary in course of time for strengthening the existing maintenance structure.

- (viii) While the gun system of Sofma required an operating manpower of seven persons, the gun system of Bofors required a crew of six. This advantage for Bofors had not been brought out in the cost evaluation. The Ministry stated in this regard in February 1989 that "while it is true that quantification in financial terms of this advantage of Bofors gun was not done and included in the comparative financial evaluation, it may be mentioned that this factor was duly kept in view by Government". However, the fact remains that this factor was not quantified in the cost evaluation.
- (ix) According to Sofma's offer of 21st March 1986, the price for the entire package was FF 8037.76 million. However, the Ministry's evaluation of the offer was FF 8096.23 million. The additionality of FF 58.47 million was based on an assumption that the price quoted excluded the cost of the printed circuit board repair module. This assumption was based on past offers and not on any firm confirmation from Sofma though its offer dated 21st March 1986 clearly stated "new total contract price FF 8037.76 million". Consequently, the additional cost assumed was not based on a categorical confirmation from Sofma. The Ministry stated in February 1989 that it did not consider it necessary to obtain such a confirmation since the earlier offers of Sofma on 23rd February 1986 and 11th March 1986 quoted the price of the printed circuit board repair module separately. It would

have only been administratively and financially prudent to check with Sofma whether the offer of 21st March 1986 included or not the cost of printed circuit board repair module.

11.5.11 To sum up, the assessment of costs projected on 21st March 1986 by the Ministry, on the basis of which the final approval was secured for placement of the order on Bofors, was flawed. Consequently, the conclusion based on that evaluation that the offer of Bofors was lower, had doubtful validity. However, the Ministry still maintained in April 1989 that "the record clearly established that the evaluation was meticulously undertaken". This stand of the Ministry is untenable and even the office of the P.M. in its note of March 1986 sent to Ministry had itself expressed doubts about the evaluation procedure not being thorough.

11.6 Engagement of agents

11.6.01 The Government informed the representatives of the manufacturers in May 1985 that if any firm had Indian agents, its services should be dispensed with. It warned that if it came to notice that any Indian agent or consultant had been appointed by any firm, it would stand disqualified. Further, the firms were asked to make suitable reductions in their offers in case these offers took commissions payable to Indian agents into account. The objective of Government's warning was clearly to avail the advantage of direct dealing with the manufacturer and to reap the benefit of reduced prices consequent on elimination of agents and payments made to them by the manufacturers. This could be achieved fully only by eliminating all the agents, whether Indian or others. However, the Government's warning was limited to "Indian agents" only. No information relating to agents located in other countries but may be operating for this contract in India was sought by the Government nor any confirmation/clarification obtained from the manufacturers. The formal contract eventually signed with Bofors did not somehow contain at all any provision relating to the elimination of any type of agents.

11.6.02 Sofma wrote to the Ministry in May 1985 that it had dispensed with the services of their Indian agent. The Ministry had not considered

it necessary to obtain similar written confirmation from the other bidder, viz. Bofors.

11.6.03 In July 1985, the High Commission of India, London informed the Ministry that Bofors had a representative (Anatronic General Corporation, New Delhi) in India. No action was taken on this communication in terms of the warning and disqualification conveyed to the manufacturers in May 1985. The Ministry stated in November 1988 that the information provided by the Mission was "not new". No action on this information, even if "not new" and was already in the possession of the Ministry seemed to have been initiated or possibly considered necessary. The Ministry added, in February 1989, that since Bofors, along with other bidders, had been warned (orally) in the matter in May 1985, no further action was called for on the information provided by the Mission.

11.6.04 On 10th March 1986, Bofors, in response to a verbal direction, informed the Ministry that they did not have any representative or agent especially employed in India for the gun project. However, for administrative services, e.g. hotel booking, transportation, forwarding of letters, telexes, etc. they were using a firm (M/s. Anatronic General Corporation, New Delhi) as specified by the Indian Mission. The letter from Bofors was, at that time, accepted as constituting adequate compliance of the warning served by the Ministry on the competing firms. No notice was evidently taken of the ambiguous nature of the phrase "especially employed in India" despite the intimation provided by our High Commission in London and, therefore, no categorical written assurance obtained. Also no effort was made to verify the veracity of the statement of Bofors as regards the specific nature and role of their agent in India.

11.6.05 According to the Swedish National Audit Bureau Report of 1st June 1987 (reproduced at Appendix I to the Report of the Joint Committee to enquire into the Bofors contract, published by the Lok Sabha Secretariat in April 1988) Bofors and an unnamed party had agreed to the settlement of commission subsequent to the gun deal and that considerable amounts had been paid to, amongst others, Bofors previous agent in India. According to the Joint Parliamentary Committee, Bofors made a payment of

EK. 319.4 million to three companies not domiciled in India. The Ministry in their reply, in February 1989, in response to the draft Audit review, stated that the Joint Parliamentary Committee had also concluded that "there is no evidence to establish that the Bofors payment totalling SEK. 319.4 million involved a violation of any Indian law". The Ministry further stated in April 1989 that "the Negotiating Committee dealt directly with the foreign suppliers, and not through agents, throughout the negotiations".

11.6.06 In view of the foregoing observations, it is the natural and inescapable conclusion that in the absence of a suitable provision in the contract to exclude agents, whether Indian or foreign, irrespective of domicile, no reduction in cost to the extent of payment made to agents could be sought by the Ministry from Bofors.

11.7 *Contracts and performance*

11.7.01 After the approval of the proposal on 24th March 1986, four contracts were signed on the same date. There were six consequential agreements, three with Bofors, two others for credit, with Svensk ExportKredit (the lender) and an agreement with the Government of Sweden (Memorandum of Understanding). The CCPA had earlier approved (April 1984) the proposal to procure guns and ammunition upto an estimated cost of Rs. 1600 crores and the constitution of a Negotiating Committee. The result of the Committee's efforts and its recommendations were not remitted to CCPA for directions, particularly as the total financial implications of the deal, as worked out by the Ministry after taking into account the cost of transportation, interest on credit and other charges, amounted to Rs. 2138 crores. It was also noticed that the executive decision was not covered by a sanction to be issued in the name of the President, as required under Article 77 of the Constitution. However, the Ministry stated in February 1989 that "It was also not necessary to issue a formal Government sanction in the name of the President, as the contracting action was being taken by the Government in the Ministry of Defence, not by a subordinate organisation". In this connection it may be pointed out that the ministry had issued sanctions in similar other cases. Absence of such sanctions, could hamper audit in the discharge of its constitutional obligations.

11.7.02 The supply contract envisaged the delivery by Bofors of 400 guns and related equipment valued at SEK. 8,410.661 million (Rs. 1,437.72 crores) from August 1986 to August 1990. The related credit agreement provided for Government borrowing SEK. 2,798.45 million and the DM equivalent of SEK. 3,930.08 million with 8 per cent interest on the SEK component and 7.55 per cent on the DM component. The licence production contract envisaged supplies, development and production of guns in India under licence of Bofors, the vehicles, connected and support equipment and ammunition as well as the transfer of technology, know-how, technical data and information and exchange of experience in connection therewith. A related credit agreement provided for credit worth SEK. 575 million and DM equivalent of SEK. 425 million at an interest rate of 8 and 7.55 per cent on the SEK and DM component respectively.

11.7.03 By October 1988, certain number of regiments were expected to be equipped with the 155 mm gun system. It was noticed that till October 1988 the equipment issued to the Army did not provide even a single regiment with the full complement of the gun system thereby affecting the operational preparedness as held by Army HQ in March 1985 and which was the principal consideration for signing the contract with Bofors with speed.

11.7.04 On the delivery schedule of the different items of ammunition, Bofors had offered a certain time frame in May 1985 and had confirmed and improved on it in October 1985. This time frame would have ensured a suitable package of ammunition of various types to have a certain number of fully equipped regiments. However, Bofors, on 10th February 1986, offered another delivery schedule, on the basis of which the contract was finalised on 24th March 1986. This schedule was at considerable variance with that offered earlier. It is not clear as to why the revised delivery schedule was accepted by the Ministry thereby affecting the operational preparedness. The variations in the time frame involved delay in the availability of ammunition ranging from 11 to 44 months. Consequently, the equipping of certain regiments with the full package of ammunition will be delayed in the very nature of things by 38 months.

11.7.05 There have been serious slippages in actual deliveries. To illustrate, the supply of 5000 pieces of ammunition 'Y' which was due between January and March 1988 had not materialised even to the extent of a single piece till October 1988.

11.7.06 Clause 7 of the supply contract with Bofors provides for arrangements in regard to inspection of various items covered under it. It was noticed that, inspite of detailed procedures for inspection for which Bofors was primarily responsible, two cannisters stated to be containing two types of ammunition, were found less in weight on receipt in India. As they were abnormally light they were opened by the Ammunition Depot authorities and were found empty. The Ministry stated that the matter had been taken up with the supplier in January 1989 and that he had agreed to make good the deficiencies. The Ministry clarified in March 1989 that "the sealed cannisters are opened only when charges are to be removed for use; otherwise the charges are kept stocked in sealed containers". The inspection of the goods on the basis of being "abnormally light" may lead not only to short/doubtful supplies but may also have grave repercussions as the cannisters of ammunition are to be opened only at the time of actual use. It was not known as to what steps the Ministry had taken to ensure that cannisters already received contained the required ammunition. If it is found at the time of use that the ammunition contained in cannisters is missing/sub-standard, it may be too late from the angle of defence preparedness and for the Ministry to lodge claim for replacement/compensation from Bofors.

11.7.07 According to the supply contract, delays in the supply of goods beyond four weeks attract liquidated damages. These are leviable at the rate of 0.25 per cent of the contract price of the goods for each completed week subject to a maximum of five per cent of contract price. The amount of liquidated damages notified by the buyer are to be paid by the seller within 30 days from the receipt of notification from the buyer. The liquidated damages for delays in the delivery of ammunition 'Y' upto June 1988 worked out to SEK. 17.36 lakhs (Rs. 42.97 lakhs). Similarly, in respect of certain other important items, such as

ammunition, vehicles, computers, muzzle velocity indicators, land navigation systems, etc., there had been delays in delivery upto 72 weeks as on 30th June 1988. This involved liquidated damages worth SEK. 34.46 lakhs (Rs. 85.30 lakhs approximately).

11.7.08 That these delays called for the levy of liquidated damages had not been noticed by the Ministry. On the matter being taken up with the Ministry by Audit in August 1988, the Ministry lodged claims for liquidated damages on Bofors in October and December 1988. Bofors had sent a cheque for SEK. 17.36 lakhs against a claim for this amount preferred in October 1988. The recovery of the balance was awaited (January 1989).

11.7.09 It was noticed that certain consignments of ammunition were wrongly despatched in April 1988 to various stations in a particular Army Command and were finally received in May 1988 at stations for which they were not originally destined. The planning and co-ordination aspects for the receipt and storage of ammunition appear to require investigation. The Ministry, however, stated in February 1989 in response to the draft Audit review that Army HQ had confirmed that there had been no instance of wrong despatch of any consignment. The information as ascertained by Audit on scrutiny of records does not support the Ministry's contention; two train loads of ammunition on receipt at a port station were despatched to a depot other than the ultimate consignee, wherefrom it was again despatched to yet another depot due to non-availability of requisite storage accommodation.

11.7.10 The credit agreement requires that all payments due on bank charges are to be made on the due date by the Government. In case of default, penal interest is payable on over-due amounts. It was noticed that the Ministry had delayed payment of amounts due to the lender on account of commitment fee, guarantee premium, interest and agency fee. Consequently, the lender was paid penal interest amounting to SEK 3.40 lakhs (Rs. 7.53 lakhs) and DM 0.88 lakh (Rs.6.92 lakhs). The Ministry attributed (December 1988) the delays "to put pressure on M/S Bofors to furnish full information called for by the Ministry

in the wake of certain press reports which appeared in April 1987". Audit is unable to appreciate either the nature or the efficacy of the pressure when the withheld payments related to the lender (Svensk ExportKredit) and not to the supplier (Bofors) and when the Ministry was in any case, contractually bound to pay penal interest on delayed payments to the lender. It was not clear what was the nature of full information sought to be obtained and whether the Ministry succeeded in obtaining the same since the delay in payment has only resulted in avoidable expenditure of Rs. 14.45 lakhs in foreign exchange.

11.7.11 The Ministry also delayed certain subsequent payments. Against these, the lender lodged claims to the extent of SEK 4.98 lakhs and DM 0.76 lakh. These claims had not been discharged till December 1988. The Ministry stated in November 1988 that remedial measures were being instituted and hoped that there would be no delays in making future payments.

11.8 *Licence production*

11.8.01 In August 1980, the scope of indigenous production of the 155 mm gun system and ammunition was discussed by the Defence Planning and Co-ordination Committee. The Committee felt that it was premature to plan such production as the gun had not been selected. Subsequently, in September 1982, Army HQ estimated that it would require a certain number of gun systems to be indigenously produced during 1980—85. In April 1984, the Cabinet Committee on Political Affairs approved the indigenous production of gun systems and ammunition under licence for the Seventh Plan (1985—90) and thereafter.

11.8.02 It was noticed that the licence production aspect had not been dealt with comprehensively and methodically before taking a decision to award the contract to Bofors in March 1986. The Department of Defence Production and Supplies had stated on 12th March 1986 that it was not possible to arrive at any firm conclusion as to which of the two offers would be cheaper. It suggested that a gun system be selected for purchase which would automatically be the one chosen for production. Alternatively, the total cost

involved in the purchase and licence production could be evaluated and the financial implications assessed. However, since cost estimates on licence production had not been assessed at that stage, the Department of Defence Production and Supplies recommended the selection of a gun for purchase to be followed by its manufacture under licence.

11.8.03 The Ministry stated that the Department of Defence Production and Supplies could not conclude as to which of the two packages for licence production was financially cheaper for the reason that it would involve computation of total investment costs as well as the total cost of procurement of components and other technical details which was possible only after the Detailed Project Report was available. It did not, however, indicate as to why a Detailed Project Report could not have been obtained and the financial and economic costs of licence production assessed before taking a decision on the award of contract. The result of such assessment would have been a critical input in the selection of the gun system. The magnitude of this weakness is best reflected in the fact that while 400 gun systems and ammunition were to be imported, a greater number were required to be manufactured under licence.

11.8.04 According to the licence production agreement of March 1986, Bofors was to submit a Feasibility Study Report in May 1986 and a Detailed Project Report in July 1986. Sanction for the establishment of facilities for licence production was to be issued on approval of the Detailed Project Report. The Ministry stated in February 1989 that "the proposal to set up facilities for licenced production of 155 mm Gun system is under active consideration and decision regarding the production agency (agencies) is expected to be taken soon".

11.8.05 Although the Feasibility Study Report was submitted in May 1986, the Detailed Project Report was provided by Bofors only in April 1987 *i.e.* after a delay of nine months. It had not, however, been approved by the Ministry till January 1989. Consequently, preliminary work on licence production of gun system and ammunition has not commenced. This delay would

have far reaching effect on defence preparedness as bulk of the gun system and ammunition is to be manufactured in India. Also, no part of the one billion SEK credit obtained for licence production has been utilised. The credit agreement was entered into far ahead of the credit requirements. The Ministry stated in February 1989 that the finalisation of the credit agreement "could not be postponed as otherwise there could be no guarantee that credit would be available later".

11.8.06 Government had paid to the lender Rs. 1.66 crores in foreign exchange towards management fee, commitment fee, etc. as of December 1988. In reply to an Audit query, the Ministry clarified in November 1988 that it "did not conclude any contract during the period 1984-85 to 1986-87 involving payment of all the various banking charges like agency fee, quarantine premium, commitment fee and management fee".

11.9 Highlights

- The technical evaluations of the gun system and ammunition suffered from deficiencies. No General Staff Qualitative Requirement was prepared. Also, no matrix was prepared in the absence of which it was difficult to assess the *inter-se* importance of the various characteristics of the gun systems expressed as minimum acceptable parameters. It was felt in August 1984, that in the absence of these two, it would be very difficult for the Negotiating Committee to take a decision. The claims made by the manufacturers from time to time were not fully verified through trials. Further Army HQ had reservations since data could be manipulated during controlled demonstrations organised by the manufacturers in their own countries. Defence Research and Development Organisation opined that the evaluation trials have failed to provide conclusive data

to decide on the suitability of a particular weapon system. Although it had recommended the conduct of fresh trials under "worst service conditions", this was not done.

- Army HQ had indicated on as many as six occasions between December 1982 and October 1985, their preference for the Sofma gun system. However, Army HQ reversed its preference in February 1986 and recommended Bofors. A contract with Bofors was signed in March 1986.
- The deliberations of the Negotiating Committee suffered from certain constraints. Notwithstanding these constraints the Committee recommended on 12th March 1986 the issue of a letter of intent on Bofors subject to the latter satisfying the Committee on all aspects of the purchase, licence production, credit and other arrangements. The letter of intent was issued to Bofors on 14th March 1986. There was no follow up action by the Committee of its own recommendation to satisfy itself on all aspects of the purchase, licence production, credit and other arrangements.
- Ammunition worth Rs. 328.98 crores was ordered after diluting the "minimum acceptable parameters" specified by Army HQ.
- The assessment of costs leading to the award of contract to Bofors was also flawed in several respects. An exception was made to the general policy of the Government to pay for imports in the currency of the country from where the imports are being made by agreeing

to repay 58 per cent of the credit facility (SEK 6.73 billion) in Deutsche Mark. The additional cost of improved maintenance coverage required for the Bofors gun which is more prone to defects was not assessed. The advantage of operating the Bofors gun through a smaller crew was also not assessed. A liability in regard to purchase of ammunition in excess of Army's requirement (value : Rs. 42.73 crores) for obtaining technology for licence production was also not taken into account.

- While the lender (Svensk Export-Kredit) has the right to terminate the credit agreement under certain contingencies, the borrower (Government of India) has no such right.
- The Prime Minister's directions of 25th March 1986 regarding the methodology of evaluation was not complied with at that point of time as it was held to be of general nature. However, no new methodology of evaluation has been worked out by the Government in contravention of the directions of the Prime Minister.
- The issue of letter of intent on 14th March 1986 before settling all aspects involved resulted in Bofors being "most averse" to make any further concession as they had received the letter of intent. However, with "great difficulty" a further concession of 10 guns free was obtained.
- Although the Ministry had decided in May 1985 that procurement of imported weapons and equipment would be made directly from the manufacturers

and agents eliminated, it did not obtain a categorical written assurance from Bofors in regard to the engagement of agents. According to the findings of the Joint Committee of Parliament, Bofors paid SEK 319.4 million to three companies not domiciled in India. In the absence of a suitable provision in the contract to exclude agents, no reduction in cost to the extent of payments made to the agents could be sought by the Ministry from Bofors.

- Contrary to plans, the equipment issued to the Army till October 1988 was inadequate for even a single regiment being equipped with the full complement of the gun system.
- The Ministry accepted a time frame for the delivery of ammunition which was less advantageous than the one offered earlier by Bofors. This will, as a result, lead to a delay of 38 months in equipping certain regiments.
- There have been slippages in deliveries in respect of certain essential items upto 72 weeks. Claims for liquidated damages was approximately SEK 34.46 lakhs (Rs. 85.30 lakhs) have been raised in December 1988 by the Ministry on Bofors at the instance of Audit. An amount of SEK 17.36 lakhs (Rs. 42.97 lakhs) has been recovered from Bofors.
- There were delays in making certain contractual payments by the Ministry. As a result, it has paid SEK 3.40 lakhs (Rs. 7.53 lakhs) and DM 0.88 lakh (Rs. 6.92 lakhs) as penal interest and is liable to pay a further sum of SEK 4.98 lakhs (Rs. 12.34 lakhs) and DM 0.76 lakh (Rs. 6.54 lakhs).

- The decision to undertake the manufacture of the Bofors gun system and ammunition under licence was taken without a comprehensive assessment of the financial and economic costs involved. The Detailed Project Report submitted by Bofors in April 1987, nine months after it was due, had not been approved by Government till January 1989. This delay would have far reaching effect on defence preparedness as bulk of the gun system and ammunition is to be manufactured in India.
- Since no work on licence production commenced, no part of the one billion SEK credit could be utilised. The credit agreement was entered into far ahead of the credit requirements. As a result, Rs. 1.66 crores in foreign exchange had been paid by the Ministry to the lender (Svensk Export-Kredit) by way of fees, etc., as of December 1988.

12. Payment of commission to Indian agents

In September 1976, a Committee was set up by Ministry of Defence (Ministry) to advise on the regulation of the remuneration of Indian agents of foreign manufacturers supplying Defence equipments. The Committee in its report of January 1977 made the following observations and recommendations :

- (i) The rates of commission received by the agents were high compared to the services rendered by them to the purchaser.
- (ii) Very few agents were equipped to provide the after sales service or technical assistance.
- (iii) The services rendered by the agents are mainly to the suppliers.

- (iv) The services of Indian agents should be dispensed with to the extent possible.
- (v) Where it was not possible to eliminate the agents altogether, the percentage of commission should be nominal, say, between half and two *per cent* depending upon the value of the contract.
- (vi) The commission should be paid in Indian Rupees.
- (vii) Wherever the agent rendered assistance in the installation and commissioning and/or technical advice and after sales-service in the shape of warranty assistance a graded scale of commission viz., 2 to 7.5 *per cent* may be adopted depending upon the value of the contracts.
- (viii) On contracts placed through Director General of Supplies and Disposals (DGSD) and the India Supply Missions (ISM) London and Washington, the percentage of commission was quite high. The Department of Supply should be asked to look into these aspects and take suitable measures necessary to reduce the commission to the lowest possible. Considerable difficulties were experienced in bringing down the commission in respect of Defence equipments because of the high rate allowed by DGSD and ISM in contracts involving the same suppliers and agents.

On 1st September 1977, Ministry of Finance (Defence) circulated the recommendations of the Committee mentioned at (iv) to (vii) for adoption with a provision that deviation from those norms in exceptional cases should have the approval of an authority, one level higher than the normal competent authority. It was also then envisaged that a review of the guidelines could be had when a decision applicable to all the Ministries was received.

On the ground that difficulties were encountered in implementing those guidelines, especially in those organisations where the purchases were large in number but small in value, the matter was re-examined and in March 1982 revised

guidelines were issued increasing the rates of commission as under :

Value of contract (in Rupees.)	Maximum rate of commission (in percentage)	
	Earlier rate	Revised rate
Upto 5 lakhs	7.5	10
5 to 10 lakhs	5	7.5
10 to 25 lakhs	3	5
Over 25 lakhs	2	2

These orders were circulated by the Headquarters of the Defence Research and Development Organisation to all the laboratories in May 1982.

Despite the above liberalisation in the rates, on 31 equipments imported during 1984—87 by seven Research and Development (R&D) laboratories, Indian agents commission paid was in excess of the enhanced 1982 norms. On 11 other equipments imported by Director General Armed Forces Medical Services (DGAFMS), during 1985—87, similar excess over the enhanced norms was observed. The excess over the norms ranged from 3.15 to 23 per cent. The total amount so paid by the seven R&D laboratories and DGAFMS was Rs. 52.54 lakhs.

One equipment, costing Rs. 9.15 lakhs, imported by air in June 1986 and collected by a R&D Laboratory in June 1987, had not been commissioned (February 1988). The scope of service by the agent included 'after sales' service. As a result, the object for which the commission was paid had not been fulfilled.

Six of the equipments imported by DGAFMS costing Rs. 37.05 lakhs, were received in the Medical Stores Depot, Bombay in September 1985 and reached the ultimate consignees between 3rd May 1986 and 1st July 1986. These were installed during June 1986 to August 1987 i.e. 9 to 24 months after receipt.

All those purchases were made through either the DGSD or the Supply Wing abroad. According to the DGSD, the maximum ceiling limits

indicated by the Ministry do not hold good for purchases made by them. According to Supply Wing, London, the Ministry's instructions prescribing the norms had not reached them and have, in August 1987, sought for a copy of the relevant orders. In May 1987, Ministry have issued orders to the effect that ".....as a symbol of Government's disapproval all communication or contracts with the Indian agents should be stopped immediately". The position that emerges is that neither the three communications of 1977, 1982 and 1987 were endorsed to Supply Wings nor was the principle underlying those decisions impressed on the DGSD to ensure compliance of the guidelines on Defence purchases made through these agencies. As a result, the January 1988 position remained as it was in 1977 with all the attendant deficiencies pointed out by the Committee.

The Ministry in August/October 1988 stated that the instructions issued by them, cannot be taken to modify the guidelines/instructions issued by the Departments under whose control the DGSD and Supply Wings function. Further, the Department of Supply, had, in pursuance of the recommendations of the Public Accounts Committee (PAC), replied to the PAC that it would not be practicable to adopt a uniform policy in regard to the quantum of agency commission since varied range of products made it impossible for determining in advance the agency commission. Ministry further stated that modern medical equipments have complicated computerised electronic devices and know-how on such equipment in our country is restricted to the service engineers of Indian agents who are involved in the installation and maintenance of equipments, after sale service and on the job training of paramedical staff and it was not possible to restrict the agency commission to the limit laid down by the Ministry.

The contention of the Ministry only confirms the lack of consistency in regulating commissions on Defence imports and its guidelines, expressed emphatically, stand contravened, although through another department of Government.

The Ministry of Defence pointed out in March 1989 that audit criticism of the Ministry of

Defence is "misconceived and that the procurement policy followed by DGSD and ISMs is not laid down by the Ministry of Defence, but by the Department of Supply (DOS) and the MEA. No contravention of MEA/DOS policy has been made out in the RDPs. The criticism of MOD is, therefore, unjustified". Apart from loss to public exchequer this view point obviously runs counter to the concept of cohesive working in the Government.

13. Overpayment of Overtime allowance to civilian employees in Defence establishments

According to Government Regulations of 1923, as amplified in August 1949 and October 1962, the hourly rate of overtime allowance (OTA), applicable to Defence civilian employees, was 1/200th of the monthly wages. That was based on eight hours of work per day for 25 working days in a month. In February 1973,

Ministry of Defence (Ministry) changed the hourly rate of OTA to the monthly wages divided by the product of the number of days in the month and daily hours of work. Thus, the hourly rate would be 1/240 or 1/248 of the monthly wages, depending upon a month of 30 or 31 days. In November 1974, the Ministry further clarified that the formula prescribed in February 1973 superseded the earlier orders.

Notwithstanding the instructions issued by the Ministry in February 1973 and reiterated in November 1974, OTA continued to be paid to the Defence civilian employees of the Navy, 23 Army establishments and ordnance factories on the basis of old orders. Audit noticed that during the period, March 1973 to March 1988, due to failure to comply with the revised orders of February 1973, there was an overpayment of Rs. 102.76 crores made to Defence civilian employees in the above establishments as detailed below :

(Rs. in lakhs)

Establishment	Year					Total
	1973-74 to 1977-78	1978-79 to 1982-83	1983-84 to 1984-85	1985-86 to 1986-87	1987-88	
<i>Army Command</i>						
Western	0.04	1.15	Nil	50.38	41.92	93.49
Eastern	Nil	Nil	0.13	Nil	16.02	16.15
Central	5.01	12.10	32.15	53.11	31.12	133.49
Southern	0.29	2.09	7.93	12.24	8.40	30.95
Navy	Nil	Nil	148.50	727.00	244.00	1119.50
Ordnance factories	1283.40	2339.20	1617.70	2132.80	1509.50	8882.60
Total	1288.74	2354.54	1806.41	2975.53	1850.96	10,276.18

In October 1985, the Ministry stated that :

‘It is true that in February 1973 certain clarifications were issued as to how the rate of monthly pay should be worked out in the case of industrial employees covered under the Factories Act where there was a change in the rate of pay due to promotion or demotion. It was, however, not intended to introduce any change in the concept of daily wages as enunciated in the Ministry of Defence OM dated 3rd October 1962. As the ordnance factories establishments were agitated over the change in the method of calculation for OTA, the matter was under examination and after much thought in consultation with the Ministries of Law and Labour, Ministry of Finance (Defence) decided (July 1977) that the existing formula which has been in vogue since 1923 will be allowed to be operated but as and when there was any upward revision of the rate of OTA in future, the revised formula will be taken in use’.

In September 1986, the Ministry promised to issue clarificatory orders in respect of their letter dated 6th February 1973. In November 1987, the Ministry stated that the matter was being referred again to the Department of Expenditure and formulation of views would take a little time. In June 1988, the Ministry stated that the issues involved were under examination in consultation with the Ministry of Law and that decision taken would be communicated.

In December 1988, the Ministry stated that a decision had been taken in consultation with Ministry of Finance and Department of Personnel and Training to continue the formula for calculating hourly rate of wages by dividing the emoluments by a factor of 200 and formal orders would be issued only when a decision is taken on a future formula.

In the meantime, a review of the position revealed that payment of OTA continued to be made on the same old basis, i.e. 1/200th of the monthly wages, even after the revision of pay scales ordered on the recommendations of the IV Pay Commission.

It is felt in Audit that whatever be the decision of Government, it should be backed by clearcut orders so that the expenditure does not remain unauthorised.

14. Irregular payment of ration allowance to Defence civilians for operations ‘Blue Star’ and ‘Wood Rose’

In December 1985, Ministry of Defence (Ministry) decided that ration allowance would be payable to Defence civilian employees deployed in connection with operations ‘Blue Star’ and ‘Wood Rose’ conducted during the years 1984 to 1985. That payment was not admissible to static units and formations like Military Farms, Military Engineer Services (MES), etc.

Subsequently, on representations that Defence civilians in certain static units and formations were actually deployed in the operations, the Ministry, in December 1987, decided to extend the admissibility of payment of ration allowance (in lieu of free rations) to Defence civilians serving in static units and formations who were actually deployed in connection with the operations. The names of the eligible static units/formations had not, however, been specified by the Ministry.

To regulate the payments arising from the Ministry’s sanction, Controller of Defence Accounts (CDA) Western Command in January 1988 addressed the Headquarters (HQ) Western Command and the Command Chief Engineer (CE) to direct eligible units/formations to submit their ration money claims duly accompanied with supporting documents including the certificate of deployment.

In the certificates of deployment issued by the Zonal CEs Jullunder, Chandigarh and Bhatinda, a wide interpretation of Government orders had been adopted. Whereas in the representations made to Government, ‘certain’ static units/formations were stated to have been actually deployed in the operations, all the static units/formations of MES under the aforementioned Zonal CEs were certified to have been actually deployed in connection with the two operations. Consequently, all the persons on the rolls of all the static units/formations under those three

Zonal CEs were paid the ration allowance. As a result, payment of the allowance was made not only to all static units in Punjab but also to such static units which were located in Haryana and Rajasthan. Similarly, this payment was extended to non-MES units/formations like Military Farms, Station HQ, Ammunition Depots, Military Hospitals, Station Workshops, Ordnance Depots, Horse and Mule Breeding unit, Defence Estates Office, Supply Depots, NCC Directorate, Civilian General Transport Company and Movement Control Organisation, etc.

Rupees 5.04 crores were found to have been paid on this account; *i.e.* Rs. 3.58 crores to MES and Rs. 1.46 crores to non-MES units/formations. There had been, incidentally, no records in those offices to identify the names of persons actually deployed for the purpose or to indicate the precise nature of duties entrusted to them in the course of such deployment to support the correctness of the certificates of deployment furnished two and a half years after the operations. In May 1988, the above payment was found to have been further extended to the members of Defence Accounts Department working in sub-offices which were attached to or

associated with the Army units deployed or those actually assisting the operations.

As a result, the benefit of the December 1987 dispensation, meant to cover certain static units/formations, got extended, on an universal basis, to all the Defence civilians on the rolls of the Zonal Chiefs of Jullunder, Chandigarh and Bhatinda including some units outside Punjab.

In September and November 1988, the Ministry stated that since the whole area was under operation, all civilian employees had to contribute in some way or the other towards successful completion of the operations. The concession of ration allowance had to be paid to the civilian employees serving in the area because their combatant counterparts got full field service concessions. The Ministry's contention is not tenable as the concession was admissible only to those civilians who were actually deployed in connection with the operations and not to those, some way or the other connected with the operations and no records had been kept to identify the names of persons actually deployed for the purpose or the precise nature of duties assigned to them in the deployment.

CHAPTER III

ARMY

15. Review on working of Embarkation Headquarters

15.01 Introduction

Embarkation Headquarters (EHQs) located at Bombay, Madras and Calcutta are responsible for handling the import and export of Defence consignments by sea and air. They are also responsible for despatch of the imported consignments to the ultimate consignee by road, rail or air.

15.02 Scope of Audit

A review on the working of all the three EHQs was conducted by Audit covering the three calendar years, 1985, 1986 and 1987.

15.03 Mechanism

EHQs function under the control of Army Headquarters (HQ). The duties of EHQs, for competent management of Defence cargo, comprise of

- (a) securing prompt and economic clearances with port and customs authorities and prompt despatch of the imported consignments to the ultimate consignees;
- (b) lodging claims and realising the value of goods shortlanded or damaged; and
- (c) preferring claims on customs authorities for refund of excess customs duty paid and speedy recovery/finalisation of refund claims.

15.04 Highlights

- The deficiencies pointed out in the past by Audit persist despite recommendations of Public Accounts Committee and action taken by the Ministry although with some improvement in overall performance.
- Delay in the clearance of sea cargo resulted in avoidable payment of extra wharfage

charges amounting to Rs. 43.22 lakhs during 1985—1987.

- There were delays in the clearance of cargo, imported by air, too. Avoidable payment of warehousing charges on this score, amounted to Rs. 40.06 lakhs.
- Claims for shortlanded/damaged cargo totalling Rs. 12.68 crores were pending settlement with the various agencies. Claims for shortlanded/damaged cargo amounting to Rs. 84.55 lakhs were lost on grounds of delay in marine survey, limited liability of carriers and defective preparation of documents by suppliers. etc.
- Refund claims amounting to Rs. 44.20 crores, preferred on the customs authorities, were pending settlement. The amount of claims rejected by customs authorities was Rs. 12.44 crores.
- Provisional deposit bonds for Rs. 4.30 crores furnished by the EHQ Madras towards payment of customs duty remained to be redeemed for want of shipping documents, priced invoices and requisite certificates, etc.
- Provisional advances amounting to Rs. 1.58 crores for payment of airway bills remained unadjusted for want of *post-facto* sanction for the consignments airlifted.
- There had been considerable delay in despatch of consignments of sea/air cargo to the ultimate consignees.
- Rebate not availed of from the carriers on sea freight payable at destination was to the tune of Rs. 1.50 crores.
- Rebate admissible on pre-paid sea freight charges on Government cargo emanating from UK and continental countries had not been availed of due to non-receipt of copies of bill of lading from the consignees.

15.05 *Recommendations of the Public Accounts Committee*

Mention was made in paragraph 39 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1981-82 regarding the working of EHQs. The Public Accounts Committee (PAC) 1984-85 in their 226th Report (Seventh Lok Sabha) recommended streamlining of the procedures/working to overcome, *inter alia*, the following deficiencies:

- Timely and effective steps were not taken to clear the sea and air cargo within the prescribed time limit which resulted in payment of extra wharfage/warehousing charges.
- Non-production of required documents by the consignees and defective preparation of documents by the suppliers, resulting in the claim for short-landed/damaged cargo getting rejected by the carriers, insurance companies.
- Non-production of documents and submission of incomplete documents resulting in rejection of customs refund claims.
- Lack of proper coordination with Railways/consignees resulting in delay in despatch of consignments to the ultimate consignees.

The PAC also recommended reiteration and proper compliance of instructions issued in July 1982 by Ministry of Defence (Ministry) to (a) ensure receipt of shipping documents 14 days before the arrival of the vessel (b) make the suppliers responsible to bear the extra wharfage charges caused by delay on account of wrong and obliterated markings on the packages.

Pursuant to those recommendations, the Ministry took the following steps:

- Instructions of July 1982 regarding incorporation of clause in future contracts were reiterated in January 1984.
- Freight Forwarder at India-Supply Mission, London was appointed.

- Instructions were issued in October 1983 as amended in March 1984 either to insure the Defence stores or to declare its nature and value on bill of lading for claiming full compensation in case of loss/damage of stores.
- EHQs were instructed to render monthly progress report on pending customs refund claims, process of clearance of cargo and the despatch to ultimate consignees.
- Instructions were issued in February 1985 for obtaining prior sanction for airlifting of stores and in case of urgency, *post facto* sanction within four weeks from the date of instructions for air-lift.

15.06 *Delay in clearance of sea-cargo and payment of extra wharfage charges*

On stores shipped from abroad and landed at the ports, wharfage charges are payable to the Port Trusts at ordinary rates if cleared from the docks before the last free date and any delay thereafter attracts payment of extra wharfage charges at rates higher than the ordinary rates. According to the instructions contained in the Defence Services Regulations (Army), payment of extra wharfage is viewed as wasteful expenditure and every possible effort should be made for effective clearance of cargo from the docks within the last free date. Notwithstanding those instructions, there were delays in the clearance of cargo (beyond the last free date) by all the three EHQs resulting in payment of extra wharfage charges amounting to Rs. 43.22 lakhs during 1985-87, which constituted avoidable wasteful expenditure.

The reasons for delay in clearance of cargo were on account of late receipt of shipping documents, wrong or obliterated marking on the packages, packages landed in damaged condition, delay in placing of railway wagons and non-availability of loading facility near the wharf.

In October 1980, the Ministry suggested insertion in the relevant contracts a stipulation that the suppliers must intimate the consignee/landing officer about the shipment of the stores so as to reach them one month in advance and in any case not less than two weeks in advance of the arrival of the vessel. Despite this, delays continued to

occur and in July 1982, the Ministry reiterated the instructions. However, delays in the receipt of shipping documents persisted, *vide* details below:

EHQ	Total number of bills of lading	Number of bills of lading received prior to berthing of ship	Number of bills of lading received within 10 days of berthing of ship	Number of bills of lading received after 10 days
1985				
Bombay . . .	6418	262	5956	200
Madras . . .	255	144	38	73
Calcutta . . .	180	178	1	1
1986				
Bombay . . .	4971	371	2218	2382
Madras . . .	227	216	7	4
Calcutta . . .	199	192	2	5
1987				
Bombay . . .	4504	452	544	3508
Madras . . .	365	351	13	1
Calcutta . . .	150	146	3	1
Total	17,269	2312	8782	6175

The Ministry's instructions of July 1982 also provided for incorporation of a clause in future contracts for making the suppliers to bear the cost of extra wharfage for wrong/obliterated markings on the packages. Extra wharfage was paid on this account but reimbursement had not been claimed from the suppliers due to non-receipt, by EHQ Bombay, of those instructions and non-existence of such a clause in the contracts; *vide* the following instances:

- (a) A cargo in 'full container load', which landed in June 1985, could be cleared only in February 1986 as the shipping documents indicated it as in 'less container load'. Extra wharfage paid was Rs. 0.15 lakh.
- (b) A cargo, landed in September 1984, was cleared in February 1985 due to non-mention of contract number and the name of the consignee in the manifest. Extra wharfage paid was Rs. 3.94 lakhs.
- (c) Extra wharfage of Rs. 0.38 lakh was paid in another case on account of delayed clearance of cargo landed in October 1986 and cleared in January 1987. The reasons for delay in clearance were on account of 'no marking on package' and showing

the case in local manifest instead of "Government manifest".

In October 1988, the Ministry stated that instructions had been issued in September 1987 for taking measures to avoid payment of extra wharfage and to cut-short the delays in settlement of claims. Imports from USSR had been containerised. The extra wharfage paid in all the three cases had been regularised.

15.07 Delay in clearance of air cargo and payment of warehousing charges

On consignments brought by air, not cleared within three to seven days from the date of landing, warehousing charges are required to be paid. The more expensive air transport of consignments is mainly on the ground of urgency. In May 1985, the Ministry stated that the reasons for delay in clearance of imported aircargo had been identified and all consignee HQ had been requested to ensure special attention for prompt follow-up action (right from the time of supply orders) to avoid payment of warehousing charges. Despite this, clearance of 16,638 out of 22,918 consignments received during 1985 to 1987 got delayed and warehousing charges paid on account of the delays amounted to Rs. 40.06 lakhs.

The main reasons attributed to the delay were late receipt of documents from carrier agents, consolidators and consignees, air way bills did not show EHQ as port consignee in some cases and delay in receipt of bank endorsements, non-indication of ultimate consignee and consignments awaiting specialists for survey or customs clarifications.

Some specific cases of avoidable payment of warehousing charges pertaining to EHQ Madras are as under:

- (a) Due to delay of about eight months in producing the purchase order and technical write up by a Research and Development (R&D) Laboratory, Bangalore, six packages containing 'Roller trolley' landed in December 1985 could not be cleared till August 1986 which involved payment of warehousing charges of Rs. 0.48 lakh.
- (b) Nine packages containing electronic equipments consigned to three R&D laboratories landed in January 1986. However,

the EHQ could get the packages cleared only in September 1986 due to delay (seven months) by the consignees in deputing their representatives for identification of the items with invoice as required by customs authorities. This resulted in payment of Rs. 0.32 lakh as warehousing charges.

- (c) In two cases where cargo consigned to two R&D laboratories had arrived during April 1985 to November 1986, the EHQ could not get the cargo cleared till October 1985 and March 1987 due to delay (three to four months) in receipt of bank endorsements from the consignees. This resulted in payment of warehousing charges of Rs. 0.48 lakh.

In October 1988, the Ministry stated that the instructions issued earlier were being reiterated and its impact ascertained and also cases were being investigated.

15.08 Short-landed and damaged imported stores

EHQs are responsible for lodging claims on cargo, short-landed or landed in damaged condition and realising the claims on that account. The claims were to be lodged on the carriers, Port trust authorities and also insurance companies.

Details of such claims have been brought out in the following table:

	Claims lodged during the year		Claims rejected during the year	
	No. of claims	Value (Rs. in lakhs)	No. of claims	Value (Rs. in lakhs)
EHQ Bombay				
1985	244	234.75	44	23.14
1986	190	173.15	28	4.09
1987	314	204.16	16	7.71
	748	612.06	88	34.94
EHQ Madras				
1985	38	8.50	14	2.26
1986	51	36.02	7	0.33
1987	45	70.14	1	0.13
	134	114.66	22	2.72
EHQ Calcutta				
1985	13	2.52	46	22.12
1986	14	0.35	11	2.12
1987	8	30.74	9	22.65
	35	33.61	66	46.89*

*Includes those lodged in the preceding years too.

As would be seen from the above table, realisation of the value of short-landed and damaged goods had failed to the extent of Rs. 84.55 lakhs despite safeguards on insurance, etc.

The total value of such claims pending settlement at the end of September 1988 is a staggering Rs. 12.68 crores in 1145 claims; the major part of which related to EHQ Bombay, Rs. 11.03 crores (979 claims). The oldest pending claim related to 1973 in Bombay.

The rejection of refund claims was mainly attributed to full value of the cargo not being insured, liability of the carriers being limited, delay in marine survey, defective preparation of the documents by the suppliers, delay in making log entry and non-submission of documents to port trust authorities/carriers/Insurance company.

Some specific cases of omissions of the above nature are as below:

- (a) Two claims for short-landed/damaged cargo amounting to Rs. 2.24 lakhs and Rs. 1.44 lakhs were preferred in October 1984 and February 1985 by EHQ Bombay against the carriers. The latter claim was rejected by the carrier as the stores were neither insured nor value declared on the bill of lading. The carrier settled the former claim for their maximum liability £ 100 per package *i.e.* Rs. 1560 per package.
- (b) On destuffing of a consignment of 88 packages at Calcutta Port in May 1987, two packages were found broken. In the survey conducted in May 1987, 61 items were found short though the seal of the container was found intact. Accordingly, a claim for Rs. 10.04 lakhs was initiated by EHQ Calcutta in September 1987. In November 1987 the carrier company repudiated the claim on the plea that cargo was shipped in full container load and seals of the container were also intact. Legal cell advised to settle the matter through arbitration. The carrier company agreed to pay only Rs. 6455 as partial settlement as a special case.

(c) A consignment landed in February 1984, was not traceable and the log entries were made only in March 1984. On account of this delay, claim for Rs. 0.99 lakh preferred by EHQ Bombay was rejected in July 1987 by the Port Trust. The matter had again been taken up in April 1988 with the Port Trust.

In October 1988, the Ministry stated that the various rules such as Gold Clause agreement, Hague visby Rules, etc. were followed in determining the extent of claim and timely settlement thereof. The existing procedure was being examined further.

15.09 *Levy of customs duty*

Imported stores are required to be assessed for customs duty prior to their clearance from port trust/customs. Stores meant for R&D and certain other objects are exempt from levy of customs duty. In the absence of all relevant documents duty is assessed provisionally. Refund claims are lodged subsequently. Out of the refund claims for Rs. 91.57 crores preferred during 1985 to 1987, claims for Rs. 12.44 crores had been rejected on account of non-production of requisite documents. Claims settled amounted to Rs. 13.16 crores, leaving claims worth Rs. 65.97 crores (EHQ Bombay: Rs. 13.08 crores; EHQ Madras: Rs. 52.86 crores; and EHQ Calcutta: Rs. 0.03 crore) outstanding at the end of December 1987.

In addition 393 claims amounting to Rs. 8.53 crores preferred by EHQ Bombay and 84 claims amounting to Rs. 0.67 crore preferred by EHQ Madras for refund of excess duty paid for the period December 1977 to 1984 were also outstanding at the end of December 1987.

The reasons for delay in settlement of claims and rejection of claims by customs were on account of non-production of required documents in time, production of incomplete documents, non-linking of documents by customs authorities, not specifically covered by rules for exemption of customs duty; and delay on the part of customs authorities.

In October 1988, the Ministry stated that 1,092 claims amounting to Rs. 30.97 crores had been settled by EHQ Madras during March 1988 to July 1988 leaving balance of 618 claims amounting

to Rs. 21.89 crores. The levy of customs duty and obtaining refund thereof did not involve any additional financial effect as the settlement of claim was between two departments of Central Government. (This contention is not tenable as it will inflate the revenue of one department at the expense of another and constitutes an easy excuse for the failure to avail of legitimate concessions to Defence imports).

15.10 *Delay in redemption of provisional deposit bonds*

With effect from June 1976, payment of customs duty on consignments received from foreign countries was based on the bills of entry and where requisite information/documents were not produced at the time of assessment of duty, payments were made to the customs authorities on provisional deposit bonds. These bonds were later required to be redeemed by production of necessary documents required for assessment of customs duty. 139 bonds (value : Rs. 4.30 crores) furnished by EHQ Madras during 1977 and 1987 were yet to be redeemed at the end of July 1988.

The delay in redemption of bonds was attributed to non-availability of shipping documents, Duty Exemption Certificate (DEC)/Not Manufactured in India (NMI) certificate, priced invoice catalogue, technical write up, etc.

In October 1988, the Ministry stated that periodical instructions were being issued to all the controlling sections of Service HQ.

15.11 *Delay in issue of sanction for airlifting of imported consignments*

In the case of imported stores airlifted, subject to *post-facto* sanction for airlifting, air freight is paid by the EHQs out of provisional advance drawn for this purpose. Ministry's instructions of May 1985 stipulated that all the indenting authorities should obtain prior sanction for airlifting the stores. However, on considerations of urgency, airlifting of stores resorted was to be covered by *post-facto* sanction, and the same was to be conveyed to the EHQs within a period of four weeks from the date of their instructions/receipt of stores by the EHQs. Despite this, the position regarding non-adjustment of provisional

advance made, for want of *ex-post-facto* sanction for airlifting of stores, during the period 1985 to 1987 were as under :

Year	Number of consignments (air cargo) involved at EHQ			Unadjusted amount of provisional advances for air freight at EHQ (Rs. in lakhs)		
	Bom-bay	Mad-ras	Cal-cutta	Bom-bay	Mad-ras	Cal-cutta
1985	107	39	19	17.49	1.21	0.91
1986	126	32	41	25.73	1.05	9.15
1987	135	435	26	28.87	41.94	2.55
Total	368	506	86	72.09	44.20	12.61

114 cases of provisional advance drawn prior to 1985 by EHQ Bombay involving Rs. 28.49 lakhs remained un-adjusted for want of airlift sanction. Rupees 0.15 lakh drawn by EHQ Madras in 12 cases pertaining to 1984 was also to be adjusted.

In October 1988, the Ministry stated that the causes leading to this situation were being investigated and necessary remedial action would be taken accordingly. Efforts were being made to settle all outstanding cases prior to 1985 in consultation with consignees/controlling HQ.

15.12 Delay in despatch of consignments (sea cargo) to ultimate consignees

The responsibility for the prompt despatch of imported cargo to the ultimate consignees rests on EHQs. The number of cases where there was delay of over three months in the despatch of consignments cleared during 1985 to 1987 are given below :

Year	Total number of consignments cleared by EHQ		Number of cases where there was delay of over three months	
	Bombay	Madras	Bombay	Madras
1985	9250	93	65	9
1986	6895	111	222	8
1987	8744	126	433	16
Total	24,889	330	720	33

The delay in despatch of packages to ultimate consignees was attributed to delay in knowing the ultimate consignee, getting wagons for oversized consignments, collection by local consignees, destuffing of the container by the agents, awaiting full wagon load, securing consignees' escort and re-packing after customs examinations/survey.

A few cases of the nature are as under :

EHQ Bombay

- (a) Two packages received in January 1984 were initially despatched to Naval Store Depot Bombay in March/April 1984. The packages were received back in June 1985 and sent to the correct consignee, Central Ordnance Depot Dehu Road, in January 1987 after receipt of bill of lading from Army HQ.
- (b) In the absence of the name of the ultimate consignee in the bill of lading, three packages received in July 1985 could be despatched to the correct consignee, (by air) only on 17th January 1986 after getting the information from Air HQ.

EHQ Madras

- (a) An over-sized consignment, received in January 1986, could not be despatched by rail as the 136 cm wide door of the Railway wagon was not wide enough to take in the package of 156 cm dimension. The package was subsequently carried by road in August 1986. The rail constraint ought to have been planned and provided for in advance.
- (b) A consignment consisting of two beams, which arrived in March 1986, could be despatched only in September 1986 as there was no response from the consignee to a telegram sent in June 1986 for collection of the consignment.

In October 1988, the Ministry stated that orders had been issued in April 1988 authorising the EHQs to despatch stores by road to the ultimate consignee upto a limit of Rs. 10,000 per consignment thereby reducing delays in despatch of consignments.

15.13 *Delay in despatch of air cargo to ultimate consignees*

An analysis of the extent of delays in forwarding air cargo, after their landing, to the

consignees during the period 1985 to 1987 revealed considerable delays as shown below :

	Number of consignments (Air cargo) cleared by EHQs.								
	1985			1986			1987		
	Bombay	Madras	Calcutta	Bombay	Madras	Calcutta	Bombay	Madras	Calcutta
Forwarded									
—within 10 days of landing	879	165	8	936	88	41	1617	142	86
— within 11– 30 days of landing	482	1262	82	673	1170	106	494	1262	117
— within 31–90 days of landing	54	1103	18	41	1505	10	44	1073	5
—Over 90 days of landing	6	59	1	7	105	—	7	32	—
Total	1421	2589	109	1657	2868	157	2162	2509	208

One of the important grounds justifying transport by air, viz. urgency, had thus been nullified by delays in despatch.

Some specific cases of abnormal delay pertaining to EHQ Bombay are as under :

- (a) One package containing imported ammunition meant for trials was received in December 1985. As the ultimate consignee was not known, EHQ approached the Ministry which directed, in December 1986, to destroy the package. However, in February 1987, Army HQ directed the EHQ to hand-over the package to an R&D laboratory at Pune. The package was handed over in May 1987.
- (b) As the name of the consignee was not known, one package received in January 1984 could be despatched to consignee, Naval Stores Depot, Bombay, only in February 1985 after ascertaining the details of the consignee from the Director General, Ordnance Factories.
- (c) One package was received in August 1987 without the name of ultimate consignee. The package had to be opened to ascertain the exact consignee. The documents inside the package showed the consignee to be one of the Naval units. As such the package was collected in August 1988 by Naval Stores Depot, Bombay.

In October 1988, the Ministry stated that delay in despatch of air cargo was on account of non-availability of full wagon load, late receipt of sanction from Railways for carrying over-sized air-cargo and re-packing of stores in wooden boxes/crates for rail transportation. The delays in despatch would be curtailed to a great extent by sending the consignment by road under the enhanced powers delegated to EHQs in April 1988.

15.14 *Non-receipt of returnable copies of packing accounts*

According to the procedure for receipt and disposal of packing accounts, the packing accounts on receipt in India by the EHQs are to be forwarded to the consignees who after noting the particulars of receipts and discrepancies, if any, on the packing Accounts would return the landing officer's copy to the former through the Controller of Defence Accounts concerned. The return of the packing accounts constitutes proof of receipt of the consignment by the consignee. The position of non-receipt of returnable copy of packing accounts was as under :

Year	Total number of packing accounts despatched to ultimate consignees by EHQ		Number of cases where returnable copies were not received back at EHQ	
	Bombay	Madras	Bombay	Madras
1985	557	117	323	22
1986	146	19	82	5
1987	—	2	—	—
Total	703	138	405	27

Besides, in EHQ Bombay, 3175 returnable copies of packing accounts pertaining to the period 1977 to 1984 had also not been received back (December 1987). As a result, proof of receipt of these consignments by the ultimate consignees did not exist and the extent of arrears went back to 1977.

In October 1988, the Ministry stated that copies of invoices, bills of entry, gate passes, etc. duly received by the consignees were held which was adequate confirmation of receipt of stores. Non-receipt of copies of packing accounts from consignee might not affect the correctness of transactions. The feasibility of revising the procedure would be examined.

15.15 *Non-availing of rebate on sea freight payable at destination*

According to the orders issued by Ministry of Shipping and Transport and the Ministry in May 1969 and April 1977, Government cargo emanating from ports in UK and continental countries are entitled to 15 per cent rebate on sea freight (when paid at the destination port) if shipments are arranged through Government accredited forwarding agents and the bills of lading are drawn up showing "Government of India" as "Shipper". The revised rate of rebate as seen from bills of lading of June 1986 was 17.5 per cent. Though there is a Government accredited forwarding agent in UK, in many cases, "Government of India" was not shown as "Shipper" resulting in non-availing of the rebate. On this being pointed out by Audit, the EHQ Bombay had taken up, in January 1988, the matter with Army HQ for issue of suitable instructions.

The amount of such rebate, which could not be availed of by EHQ Bombay from the carriers due to the reason that bills of lading did not show "Government of India" as "Shipper", was Rs. 149.54 lakhs for 1985-1987.

In October 1988, the Ministry stated that the matter had been taken up in July 1988, with Ministry of Shipping and Transport. Further action would be taken on receipt of reply.

15.16 *Non-availing of rebate on prepaid sea freight*

According to the instructions of Army HQ of May and November 1985, ten per cent rebate

on prepaid sea freight charges is admissible on Government cargo emanating from UK and continental countries. The rebate is to be claimed from carriers within one year from the date of bill of lading. On receipt of bills of lading, duly countersigned by Secretary, Shipping Co-ordination Committee from the consignees, the EHQs are to prefer the claim on carriers.

In the absence of non-maintenance of documents by EHQ Bombay to show the cases in which freight was prepaid, Audit could not verify whether rebate on all such cases had been availed of. On an analysis of 25 such cases where claims for Rs. 0.98 lakh arose, claims in respect of only four cases for Rs. 700 had been preferred on carriers by EHQ Bombay during 1985 to 1987. The EHQ Bombay stated that as the indentors/consignees had not forwarded the bills of lading, duly countersigned, the claims could not be preferred on carriers.

In October 1988, the Ministry stated that the instructions of May and November 1985 were again reiterated in November 1986 and subsequently clarified in April 1987. Ample opportunities were afforded by inviting copies of all such bills of lading which were likely to become time-barred within 10-20 days, but, not a single bill was forwarded by any consignee to the EHQ.

WEAPONARY AND ALLIED EQUIPMENT

16. *Delay in modernisation of an equipment*

Acquisition of an equipment, as part of the modernisation scheme, had been approved under Army Plan 1980-85. To meet that immediate requirement, Ministry of Defence (Ministry) decided to import 23 units and to get 46 others manufactured indigenously.

(A) *Indigenous production*

On an earlier requirement of the equipment projected in 1976 (another Directorate of the Army), a Defence Research and Development Laboratory took up the development of the equipment. On the model developed by the laboratory, trials were carried out in October-November 1981, which indicated that the equipment required some improvements and reduction

in size and weight, the equipment was primitive and had technology prevalent a decade ago, etc.

The Ministry, in January 1985, placed an order on a Public Sector Undertaking (PSU) for supply of 46 units at a cost of Rs. 3.58 crores, at Rs. 7.8 lakhs each. The indigenous production was based on the earlier development by Defence Research and Development. The terms for delivery of the equipment by the PSU were as follows :

- (a) delivery of two models for technical evaluation, six months after receipt of the supply order and payment of 20 per cent advance;
- (b) ten units within 12 months of bulk production clearance after successful technical evaluation of the models; and
- (c) six units per month thereafter.

Payment of Rs. 71.76 lakhs representing 20 per cent advance was made to the PSU in January 1985.

On the first model delivered by the PSU, the user pointed out in March 1987 that the equipment did not meet their requirements.

The PSU, however, contended that the equipment met the qualitative requirements (QRs) and pleaded that since action had already been taken by it to procure material for 20 units, it be allowed to supply 20 out of 46 units ordered. The following decisions were thereupon taken:

- (i) Users will accept 10 units in the existing form.
- (ii) A decision will be taken in regard to 10 more units after re-examining the requirement.
- (iii) The PSU would also insert a specific feature in the equipment.

Subsequently, in the same month, *i.e.* March 1987, the Ministry informed the PSU that 16 of those units with facility for monitoring digital communication added to them would be acceptable to the users. Consequent on the reduction of the number of units from 46 to 16 in September 1987, the PSU quoted Rs. 10 lakhs per unit against the

original cost of Rs. 7.8 lakhs per unit. Amendment to the supply order reducing the quantity was issued in July 1988.

The Ministry informed Audit in January 1988 that the decision to accept the 16 units with shortcomings was taken primarily because material for 20 units had already been "generated" by the PSU.

In August 1988, the Ministry stated that the shortcoming observed in the equipment during user trials in 1981, except reduction in weight, had been removed in the production models. The model offered by the PSU when evaluated by the users against their changed operational requirements was not found suitable. The inadequacies noticed therein would be overcome by its further development. Decision to reduce the supply to 16 units was taken after re-examining the operational requirement projected by the users in December 1986 since the equipment was suitable only for a specific role. Two units had been supplied in April 1988 by the PSU for user evaluation.

(B) Import

The Ministry concluded, on 24th May 1985, a contract with a foreign firm for supply of 23 units at a cost of £1,696,215 (Rs. 2.41 crores approximately).

Some of the features of the contract were as under :

- (i) During the production phase, the buyer had the right to inspect or otherwise evaluate the work performed or being performed.
- (ii) The equipment shall conform to the Qualitative Requirements (QRs) specified in the contract.
- (iii) If the equipment failed to meet the technical specifications, the buyer had the right to terminate the contract totally or partially.
- (iv) Eleven units were to be sent within seven to eight months and the remaining 12 units within 9 to 10 months of signing the contract.

(v) If for any reason any seller's obligation in accordance with the contract had not been performed within the specified time, the buyer was entitled to be paid liquidated damages.

(vi) Six engineers were to undergo training for three weeks at the seller's plant.

Inspection

(a) The first lot of five units, manufactured, not by the principals, but by another manufacturer in a different country, claimed to be the former's subsidiary, was made available in April 1986 for inspection. The trainee deputed by the buyer undergoing training abroad where the seller had its quality control unit, conducted the inspection of those five units and made certain observations.

(b) None of these units were inspected while under manufacture, as provided for in the contract and the inspection done was not complete. The remaining 18 units were proposed to be manufactured by the principals but there was no inspection while they were under manufacture. They were inspected in November-December 1986 before despatch.

Supply time-frame

According to the contract, the supply was to be completed in two lots, 11 units by January 1986 and 12 units by March 1986. The time frames were extended, through a supplementary contract entered into in August 1986, to five units by June 1986 and 18 units by July 1986. There was slippage on the revised delivery schedule too and the 23 units reached India in January 1987. No liquidated damages were levied for the delay in supply in terms of the contract.

Deficiency

All the 23 units, on receipt, were found to lack an important feature, although it was specifically mentioned as one of the essential qualitative requirements in the supply contract. The Ministry brought the deficiency to the notice of the supplier in May 1987 and the latter had, in 1987 agreed to make good the deficiency. Meanwhile, some of these units had been issued to the Army and the deficiency had not been set right so far (March 1988).

In September 1988, the Ministry stated that inspection done during April 1986 could not be completed due to time constraints and lack of test facilities. The deficiency in the equipment was detected during user exploitation. Levy of liquidated damages would be considered in due course.

To conclude,

- For modernisation of an equipment under Army Plan for 1980-85 acquisition of 69 units was decided upon, 46 through indigenous production and 23 others, through import.
- On the indigenous effort, the model produced by the PSU, entrusted with its production was good enough for use only in a specific role. The supply order was consequently reduced to 16 such units, primarily on the ground that the PSU had already generated material for production of 20 units. The PSU had sought for an enhanced rate of Rs. 10 lakhs per unit as against original cost of Rs. 7.8 lakhs per unit.
- Although an advance payment of Rs. 71.76 lakhs was made to the PSU as early as in January 1985, only two units had been supplied in April 1988 for users evaluation.
- The import, initiated at a cost of Rs. 2.41 crores, suffered from inadequate inspection, time over-run by six to seven months and a deficiency in one of the essential qualitative requirements of the supply contract.
- The Army continues to be deficient in the equipment and the modernisation sought for through introduction of this equipment has not been fully accomplished.

17. Import of defective sight instruments

To meet Army's requirement for an additional capability for a weapon, described as "inescapable" in operationally priority areas, Ministry of Defence (Ministry) concluded contracts with two foreign firms in March 1984 and September 1985

for supply of 500 and 600 instruments with accessories at a cost of \$18.77 lakhs and \$21.54 lakhs respectively. The instruments were transported by air.

According to the first contract with firm 'X', 500 instruments were to be supplied in lots. The first lot was to be inspected at the premises of the firm. The subsequent lots were to be inspected on receipt of consignment in India by the Controllorate of Inspection of Instruments (CII). The first lot of 50 instruments, duly pre-inspected, was received in April 1985 and issued to user units. The remaining 450 instruments, received in four lots between June 1985 and June 1986, were collected by a Central Ordnance Depot (COD) between July 1985 and August 1986. On inspection carried out by the CII during February 1986 to January 1987, 296 instruments were found defective. After further correspondence, all the 296 defective instruments costing \$10.77 lakhs (Rs. 1.14 crores) were back-loaded in August 1987 to firm 'X' for repairs. They had been received back after repairs only in June 1988 and were lying at Embarkation Headquarters (HQ), Bombay and awaiting collection/inspection (August 1988). Of the remaining 154 instruments, 121 were issued to user units and 33 costing \$1.2 lakhs (Rs. 12.72 lakhs) were lying in the COD (September 1988).

According to the second contract with firm 'Y', instruments were to be supplied duly inspected and supported by a Standard Certificate of inspection from the Quality Assurance Department of the country of origin. The buyer, however, had the right to inspect each item through his inspectors for each delivery during any stage of manufacture. Further the instruments, after arrival, were to be inspected and discrepancies/defects, if any, found were to be communicated to firm 'Y', within two months after arrival of the consignment.

When the first consignment was ready for inspection, firm 'Y' enquired, from the Ministry in March 1986, about the intention of the latter to inspect the consignment. The Ministry informed firm 'Y' to despatch the consignment immediately as they did not propose to send inspectors. However, the Director General of Inspection recommended in May 1986 that the inspection of first consignment be carried out at the premises of firm 'Y' to avoid such problems as were faced earlier in supply of the instruments by firm 'X'.

Firm 'Y' despatched, in June 1986, the first consignment of 250 instruments by air. On receipt of the consignment, the COD, in July 1986, suggested to the Army HQ issue of the instruments direct to the user units as adequate air-conditioned storage facilities were not available in the COD. The Army HQ promptly turned down the suggestion as the user units had no air-conditioned accommodation with them and the instruments would be prone to more damage in the units than in the depot. Ultimately, all the 600 instruments received between June and September 1986, were collected by the COD during August to October 1986. For the delay in clearing the consignments from the Airport, warehousing charges amounting to Rs. 2.10 lakhs were paid to the airport authorities.

In May 1987, on inspection of a sample of 80 representing the lot of 600 instruments, the CII found that the instruments did not conform to the stipulations of the contract and held the entire supply of 600 instruments as unacceptable. The defects/discrepancies were brought to the notice of firm 'Y' in August 1987.

In September 1987, firm 'Y' sought from the Ministry security clearance for the visit of two of their engineers to settle the matter in India in the best possible manner. The firm's engineers visited Army Base Workshop only in February 1988 and repaired the 600 defective instruments.

In September 1988, the Ministry stated that Army HQ were being asked to explain the reasons for the delay in the issue of serviceable instruments to the units and the delay in getting the defective instruments repaired by the firm.

To conclude,

- Sight instruments of a weapon, an inescapable requirement of Army in operationally priority areas, numbering 1100 were imported by air between April 1985 and September 1986 at a cost of \$ 40.31 lakhs (Rs. 4.60 crores). Of those instruments, 896 were found defective.
- Out of 896 instruments repaired by the firm, 296 costing Rs. 1.14 crores were awaiting collection/inspection (September 1988).

—An amount of Rs. 2.10 lakhs was paid to airport authorities as warehousing charges for late collection of 600 instruments.

—633 instruments costing Rs. 2.74 crores were held in stock (September 1988).

18. Undue delay in rectification of defects in guns

Consequent on the development of a particular type of gun (with carriage) for indigenous production and creation of facilities for its production in a Defence ordnance factory, a certain number of guns were ordered for supply to the Army. The guns were to be delivered between 1973-74 and 1985-86.

The supply commenced in 1973-74 and the issue of guns to the users began in 1975. Since 1975, a number of structural defects in the form of cracking/breaking of major sub-assemblies and components had been noticed and pointed out by the users. A team, after going into the complaints, attributed, in April/May 1979, the defects to the inherent weakness of design and recommended, (a) for future manufacture, design changes and (b) for the guns supplied, welding of cracked/broken components by field units/ordnance factory. Four guns in which the suggested modifications were carried out were tried out between December 1981 and January 1982 and found suitable. Technical memorandum on modification was finalised by Director General of Inspection (DGI) in April 1982. By then, 561 guns had already been manufactured and supplied to Army. Nine more months elapsed when Army Headquarters, in January 1983, issued instructions to (a) incorporate from April 1983 designs change in the guns to be manufactured by the ordnance factory and (b) for the guns already in service, modifications were to be carried out by an Army workshop for which a set of three modification kits (for each gun), costing Rs. 0.48 lakh per set was to be supplied by the ordnance factory. Meanwhile, 201 more guns had also been supplied by the ordnance factory.

Out of the 762 guns thus supplied with design defects, upto March 1983, seven guns had been issued to the DGI for proof checking and the balance 755 guns (710 with users and 45 with the depot), required modification. In July 1983, an indent was placed on the ordnance factory for

supply of 755 sets of the three kits, at a total cost of Rs. 3.62 crores, for supply by March 1986. The full supply had not materialised till April 1988. Only 744 kits No. 1, 273 Kits No. II and 40 Kits No. III had been supplied till then. As a result, the guns could not be made fully operational (April 1988).

Thus,

—the guns indigenously manufactured and supplied to the Army, since 1975, suffered from design defects;

—the identification of the cause of the defect and the measures to rectify it were completed only in May 1979, technically approved in April 1982 and formally approved in January 1983 for incorporation from April 1983 onwards. In the meantime, 762 guns with the same defects had been supplied; and

—rectification of defects in 755 guns at an extra expenditure of over Rs. 3.62 crores, had not been completed as the supply of modification kits by ordnance factory, due by March 1986, was yet to be completed (April 1988).

The case was referred to Ministry of Defence in August 1988 and their reply has not been received (November 1988).

19. Avoidable expenditure on purchase of track links for tanks

In November 1979, an ordnance factory placed an indent on Department of Defence Production and Supplies (DDPS) for the supply of 58,885 track links required for the manufacture of tanks.

DDPS had, in the past, secured the supply of track links from two private firms 'C' and 'B' at Rs. 320 and Rs. 338 respectively in terms of contracts placed in October 1977 and May 1978. Those rates were firm and fixed without price escalation.

On the demand for 58,885 track links DDPS held discussions in November 1979 with the above suppliers on prices and delivery schedules. Thereafter, the two firms gave their quotations as under:

Name of the firm	Date of quotation	Rates per track link Rs.
'B'	8th December 1979	475 -firm
		425 -variable with price escalation.
'C'	10th January 1980	475 -firm
		415 -variable with price escalation.

At this stage, firm 'B' had indicated that the minimum wages for its workmen could get increased with effect from March 1981.

DDPS held in March 1980 one more round of discussions with them and the resultant revised quotations were as under:

Name of the firm	Date of quotation	Rate per track link Rs.
'B'	19th May 1980	450—firm
		400—variable with price escalation
'C'	16th May 1980	400—variable with price escalation

After further negotiations in June 1980, the rates were settled at Rs. 390 for firm 'B' and Rs. 385 for firm 'C' with provision for escalation in wages and material with the base date as 1st April 1980. The quantity and value of the supplies assigned to 'B' were 20,000 track links costing Rs. 78 lakhs plus and the same to firm 'C' were 38,885 track links costing Rs. 149.70 lakhs plus. Formal supply orders to that effect were placed in December 1980.

Soon after the issue of supply orders, both the firms represented against certain provisions of the contracts relating to price variation for wages, materials, etc. Consequently DDPS amended the supply orders, enlarging the area of escalation coverage and issued revised orders relating to firm 'B' on 19th October 1981 and firm 'C' on 16th May 1983. Through these amendments, delivery periods were also extended without any stipulation for denial of escalation benefit for supplies made

during the extended delivery period. Details of delivery schedules were as under:

Firm	Delivery periods as per original orders	Delivery period as per amendments
'B'	December 1980 to December 1981	February 1982 to March 1983
'C'	January 1981 to December 1981	May 1983 to April 1984

In the context of availability of two sets of rates, one without escalation and the other with escalation, there was a major omission on the part of DDPS in not having indicated a ceiling on the rates with escalation agreed upon for the supplies. This was all the more serious, insofar as firm 'B' had, in December 1979 itself, indicated the upward wage revision, due for its employees, with effect from March 1981. The position was aggravated by the extension of time granted for the supplies further enhancing the liability on escalation payments.

Ultimately escalation payments made amounted to Rs. 81.80 lakhs vide details below:

Firm	(Rs. in lakhs)		
	Wages	Material	Total
'B'	36.22	6.39	42.61
'C'	18.45	20.74	39.19
Total	54.67	27.13	81.80

This resulted in enhancing the unit rate of Rs. 390 and Rs. 385 of firm 'B' and 'C' to Rs. 600.76 and Rs. 485.78 respectively. The rates ultimately paid to both the suppliers compare unfavourably with the rate without escalation Rs. 450, quoted on this very tender by firm 'B'. Based on the firm rate of Rs. 450 quoted by firm 'B', the extra expenditure incurred on the purchase of 59,101 track links amounted to Rs. 44.39 lakhs. Further the rate of Rs. 600.76 paid to firm 'B' was far higher than the rates paid to that very firm on the subsequent supply orders of January 1984, Rs. 535 firm, May 1985, Rs. 510 firm and October 1986, Rs. 570 firm without escalation.

DDPS stated in January 1988 that the difference between the price with escalation clause and the firm and fixed rate worked out to 15 per cent and as supply was intended to be made within a period of 12-13 months they had not thought

that the escalation would be to that extent. In regard to non-stipulation of ceiling price in the contracts, DDPS stated that the same was not provided as the firms had not quoted the price with ceiling.

In August 1988, Ministry of Defence (Ministry) stated that according to normal commercial terms, the orders with escalation clause and subject to verification are finalised without any ceiling; price escalation had to be given according to escalation formula. No ceiling on such escalation could be fixed; nor such ceilings would be acceptable to the suppliers; firms might not have performed the contract in the changed circumstances had the order been placed at Rs. 450 firm and fixed and ordnance factory was also expressing urgency of the stores for production requirements due to critical stock position. Ministry's contentions are not tenable as nothing prevented Government in fixing a ceiling especially when firm rates were available, and such a stipulation would have safeguarded Government against the actual payment of a rate higher than the firm rate quoted by the same suppliers. Further, the same suppliers had performed the earlier and subsequent contracts at firm and fixed rates.

To conclude,

- The suppliers had quoted two rates; one with escalation and the other, firm. By accepting the former, Government ultimately paid a rate higher than the firm rate quoted by the same suppliers. This had resulted in an avoidable expenditure of Rs. 44.39 lakhs.

20. Procurement of defective Xenon arc lamps

In August 1985, Army Headquarters (HQ) placed an order on a foreign firm for supply of 739 Xenon arc lamps at a total cost of £ 512,866 (Rs. 92.32 lakhs).

The consignments, transported by air, were received in Delhi between November 1986 and October 1987. They were collected by the consignee Central Ordnance Depot (COD) between March and December 1987. There were further delays in getting the lamps inspected by the Controllerate of Inspection (Instruments) Dehradun,

which was attended to between July 1987 and April 1988. The extent of delay ranged from 3 to 14 months after receipt of the consignments.

On inspection, 309 lamps were found defective and one deficient. The repair of the defective lamps and free replacement of the deficient lamp were taken up, in August 1987, with the supplier. The supplier declined to repair/replace the lamps on the ground that the notification of damage and shortage was made quite late.

426 serviceable lamps were lying in stock in the COD for want of demand from users (September 1988).

In September 1988, Ministry of Defence stated that the delay in inspection was primarily because of location of Inspection authority at a different station, viz. Dehradun, the Army HQ had been addressed to investigate why the defective lamps could not be got replaced/repared in time and why procurement of 739 lamps was done in 1985 and why the serviceable lamps had not been issued to the units and the supplier was being informed to refund the cost due on the 310 defective lamps (including one lamp deficient).

To conclude,

- Of the 739 lamps ordered for supply, transported by air between November 1986 and October 1987 and inspected after a delay of 3 to 14 months, 309 were found defective and one deficient; costing in all Rs. 38.73 lakhs.
- Neither the defects have been got rectified nor the shortage made good by the supplier.
- 426 serviceable lamps costing Rs. 53.22 lakhs were held in stock for want of demand from the users (September 1988). As a result, practically the whole lot of the import remained unutilised.

21. Non-utilisation of amplifiers

In May 1981, Army Headquarters (HQ) placed an indent on the Supply Wing of an Indian Mission abroad (SW) for procurement of 97 amplifiers. The supply was required to be made "as early as possible" and transported by airways. The SW placed an order, in November 1981, on a foreign

firm for supply of 97 amplifiers at the unit rate of US \$ 2,100 at a total cost of \$ 203,700 (including the Indian agent's commission of \$ 30,555 at 15 per cent of the cost).

The amplifiers were received by a Central Ordnance Depot (Depot) between November 1982 and January 1984 and inspection of these amplifiers was carried out after a delay ranging from 2 to 8 months from the date of their receipt. During inspection, 39 amplifiers were found defective.

Thereafter, the Indian agent M/S Toshnival Brothers, Private Limited, Bombay repaired five of the defective amplifiers, found it difficult to repair the remaining pieces and informed, in April 1985, that their principals had suggested backloading of the 34 defective amplifiers to them for repairs.

The conditions governing such backloading were under correspondence till November 1985, when Army HQ informed the Indian agent that the foreign firm should determine the number of defective amplifiers to be backloaded to the country of origin; bear the freight charges both ways and also furnish financial guarantee for the goods taken out of the country.

After further correspondence, the Army HQ, on the advice of Ministry of Defence (Ministry), sought, in May 1987, confirmation from the foreign firm that there would not be any financial involvement for the Indian Government in the proposed backloading. No reply had been received till June 1987, when Army HQ sent a reminder.

As a result, 34 amplifiers remained in defective condition and in the custody of the Indian agent, without any financial security.

Of the 63 amplifiers in stock with the depot, only four were issued for use in an Army Base Workshop in November 1983. The remaining stock of 59 amplifiers was lying unutilised (August 1988).

In August 1988, the Ministry stated:

—Indian agent had been asked to backload the 34 defective amplifiers to the depot.

—59 amplifiers were being issued to the user units.

—The Army HQ were being asked to investigate reasons for the delay in issue of serviceable amplifiers to the units, not getting the defective pieces repaired within warranty period and for keeping them in the custody of Indian agent without any financial guarantee.

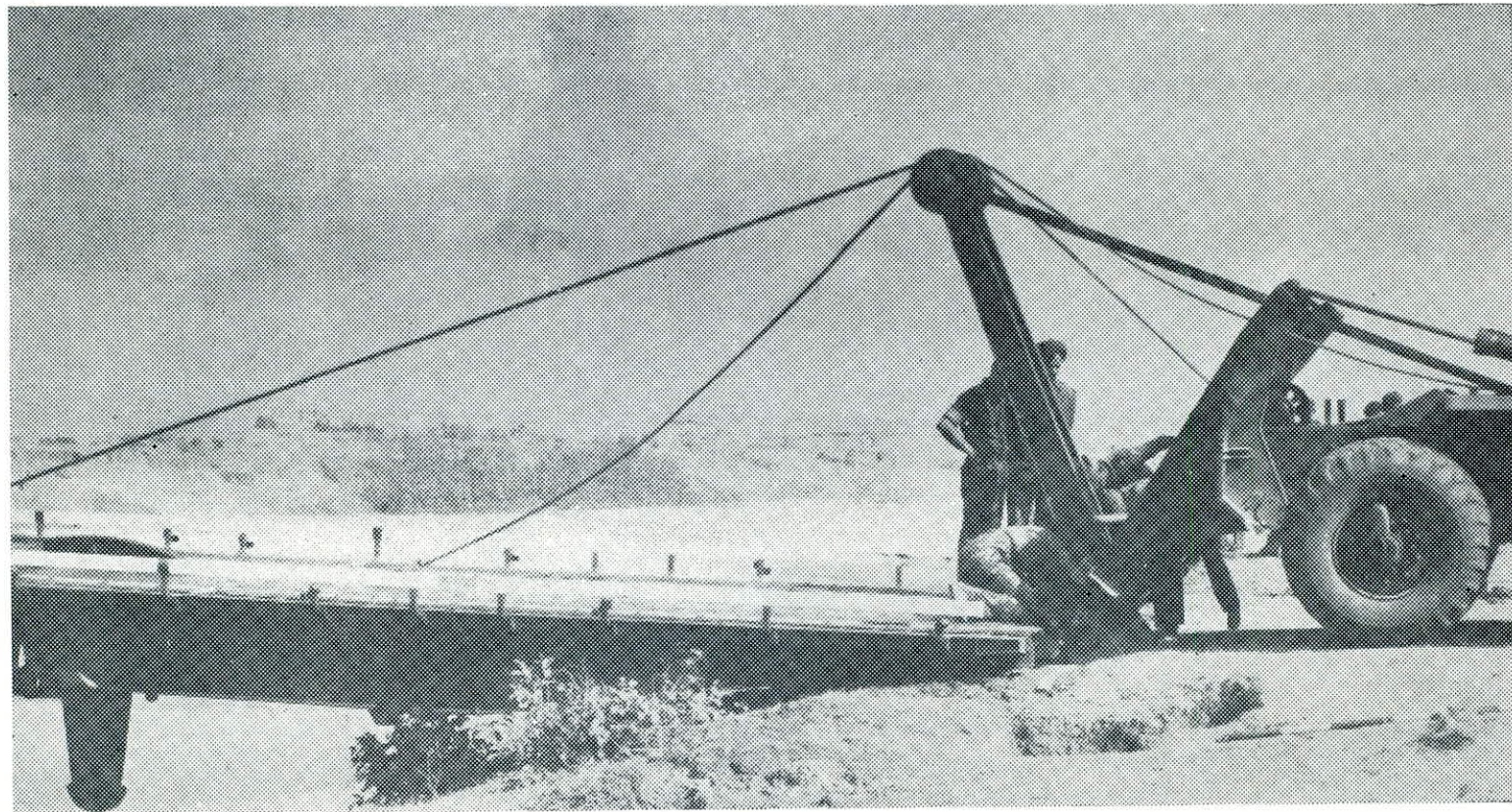
—The reasons for payment of commission in excess of the prescribed norms were being ascertained from the SW.

To Sum up, 97 amplifiers were imported between November 1982 and January 1984 at a cost of \$ 2.04 lakhs (Rs. 17.31 lakhs), and transported on grounds of urgency by airways. Only four of them were issued for use; 93 others were lying unutilised, 34 of them in a defective condition with the Indian agent (August 1988) who had been paid commission in excess of the permissible norms.

22. Avoidable expenditure on renovation of a weapon

The shelf life of an important weapon, imported between March 1972 and May 1973, was six years. In November 1980, that is 1½ years after the expiry of the shelf life, Army Headquarters (HQ) decided to retain the weapon in service upto 1986 by refurbishing two of its components.

Naval HQ too had a similar requirement for refurbishment of the same weapon procured from the same foreign supplier in 1971 and 1972. Naval HQ had secured the quotation for refurbishing from the foreign supplier in April 1981 and passed it in July 1981 to Army HQ. The rates quoted by the foreign firm on 1st April 1981, initially valid upto 31st May 1981 were subsequently extended upto 30th November 1981. Only on 13th October 1981, Army HQ approached the Ministry of Defence (Ministry) for necessary sanction. Government did not clear the proposal till the extended validity date was over. Neither the Government requested for extension nor the firm on its own extended the validity period beyond 30th November 1981. As a result, fresh quotations had to be obtained from the firm. After negotiations, a contract was concluded with the firm in July 1982 at rates which were higher than the rates quoted in April 1981. The cost difference on the purchase, £ 289,713 as per tender



ASSAULT FLOATING BRIDGE

valid till November 1981 and £ 366,790 as per the subsequent negotiated rate, amounted to an avoidable expenditure of £ 77,077 (Rs. 13 lakhs) for both Army and Navy.

According to the contract, delivery was to commence 9-12 months after receipt of components by the firm in its country. The components had not been sent to the firm abroad for ten months. Army HQ sought sanction of the Ministry for airlifting the components both ways on consideration of 'urgency'. The Ministry authorised (May 1983) airlifting to the foreign country but ordered that the components be brought back by sea. The additional expenditure on airlift, one way was Rs. 0.34 lakh.

The components were airlifted in July 1983 and brought back by sea except one consignment by air in January 1985 duly refurbished.

In September 1988, the Ministry admitted that some avoidable expenditure was incurred but stated that the weapon could have been discarded in 1977-78 and the refurbishing cost was negligible when compared to the cost of replacement by a new system. (To discard the weapon would not have been a responsible act as the manufacturer had indicated that the shelf-life of the weapon could be enhanced by such refurbishing).

Thus, delay in taking decision to refurbish the weapon resulted in an avoidable expenditure of Rs. 13 lakhs besides incurring additional expenditure of Rs. 0.34 lakh on one way transportation by air instead of by sea.

LOGISTICS AND TRANSPORT

23. Defects in assault floating bridges

In 1967, indigenous capability for manufacture of assault floating bridges in a Defence Ordnance Factory (ordnance factory) was organised with foreign collaboration. A few bridges were also purchased from that foreign firm.

Mention was made in the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1971-72 about delay in the indigenous manufacture of those bridges by the ordnance factory followed by mention again in the Audit Report for 1978-79 about the development of cracks in the main and

ramp girders (girders) used in those bridges. The status, as in March 1988, on the supply of bridges, the replacement of defective girders and the events leading to the deficiencies have been narrated in the subsequent paragraphs.

On Army's requirement for 58 bridges, placed between 1969 and 1983, the ordnance factory had been able to supply only 44 bridges till end of March 1988; 38 bridges upto March 1983 and six bridges during the last two years, 1986-88. The resultant shortage in supply was 14 bridges.

Not all the bridges already in possession of the Army were in a fit condition. This had been the result of progressive development of cracks in the (aluminium) girders of the bridges, both imported and those supplied by the ordnance factory as per the design of the collaborators. On Army's request in 1979 for replacement of cracked girders, indigenous manufacture of girders made out of hollow profiles in place of welded ones through the ordnance factory on an alloy developed by the Defence Research and Development Organisation (DRDO) was explored. The production of bridges by the ordnance factory also suffered as extrusion of hollow profile could not be established because of limitation of the press. Army had identified 3756 girders with cracks of serious nature till December 1987 requiring immediate replacement. Those defective girders worked out to a shortage of 10 bridges costing approximately Rs. 5.27 crores. Thus, the shortage in the Army had been further aggravated to 24 bridges. There were in addition 5001 girders with minor cracks which could be used only along with the fit ones.

Taking all the needs together, Ordnance Factory Board (OFB) proposed import of 7333 girders for 20 bridges in December 1983. In March 1984, Army again stressed the urgency for the outstanding demands as large deficiencies adversely affected its operational preparedness. The import of eight bridges requirement of 3467 girders alone was approved in August 1984 in the hope that indigenous supply in the near future would meet the balance demand. The import order was placed in December 1985 and the supply secured at a cost of Rs. 3.92 crores in December 1986. That

contract did not also have a clause for repeat orders/increase in quantity. In the absence of any prospect of indigenous supply matching the demand, OFB again proposed import of girders for 16 more bridges in April 1986. Approval was accorded by the Ministry of Defence (Ministry) in February 1988 for import of girders for eight more bridges. The supply order was yet to be finalised (October 1988).

In January 1987, DRDO also agreed to the import of girders on the grounds that the effort in design etc. of the process did not justify the small number of bridges required and on account of the easy availability of material in world market. However, the DRDO in November 1983 itself, opined that the bridge was purchased without properly conducting trials in tropical environment and suggested that the quality of aluminium alloy used in the girders was not suitable for use in such climate.

In October 1988, the Ministry stated that the resultant shortage of 14 bridges could have been wiped out had the profiles for 20 bridges been imported but the Engineer-in-Chief's branch decided to wait for supply of bridges with indigenous material from 1986-87 onwards. Import of hollow profiles was as per advice of the collaborators to avoid failure which had taken place in their earlier design and there was no source for producing them indigenously.

To conclude,

- Serious cracks in the aluminium girders had rendered 10 assault floating bridges, both imported and indigenous, in-effective. In addition, there was a shortfall of 14 bridges in Army's operational requirement, affecting adversely Defence preparedness.
- The quality of aluminium alloy used in the girders was not suitable for use in tropical climate. The extrusion of hollow profile could not be set up at the ordnance factory because of limitation of the press facilities. The inevitable result was to import the girders, which due to over reliance on indigenous capability, had been piecemeal.
- The replacement cost of cracked girders would be more than Rs. 9.54 crores.

—On a proposal made in December 1983 to import girders for 20 bridges, import of only eight bridges was approved/materialised in December 1985/December 1986 at a cost of Rs. 3.92 crores. Import of girders for eight more bridges had been approved in February 1988 but the supply order had not been issued till October 1988.

24. Avoidable expenditure on acquisition of manually launched assault bridges

Army issued a General Staff Qualitative Requirement (GSQR) in 1964 for manually launched assault bridges. Indigenous development of the bridge as per that GSQR was entrusted to Defence Research and Development Organisation (DRDO). In the absence of tangible progress in that effort, in July 1970, Army revised the GSQR, liberalising the specification/parameters. In 1975, DRDO made ready a prototype on which trials were conducted during March-December 1976. The prototype had limitations and did not satisfy even the liberalised parameters. Based on the result of the trials and review of the requirement of the bridge, Army, in September 1977, intimated DRDO that the bridge in its present form was not suitable and the project be closed. The development project was, therefore, stage closed in December 1977 after incurring an expenditure of Rs. 24.72 lakhs.

On exploring the availability of suitable bridges in the world market, it was found that two bridges, one of 49 metre span and the other of 59.6 metres were available. Since no suitable and viable indigenous bridge was available or was likely to be made available within the next ten years or so, quotations were called for from the manufacturers of those two bridges. Details of the quotations received in May/June 1980 were as under:

Firm	Total cost (for four sets with initial spares)	Validity upto
'A'	£4,832,690 (Rs. 8.55 crores)	15th September 1980
'B'	DM 23,680,000 (Rs. 8.34 crores)	30th September 1980

The bridge offered by firm 'A' having certain distinct advantages over the bridge of firm 'B', was found to meet fully the operational requirements. Army's operational requirements for a bridge of 75 metre span, it was felt, could be met by two bridges of 49 metre span. Taking note of the then financial constraints, Army, against its operational requirement of eight bridges of 75 metre span, proposed in August 1980, procurement of four bridges of 49 metre span with accessories at a total cost of £ 4,832,690 (Rs. 8.55 crores). This would have met two out of the requirement of eight bridges of 75 metre span. While the proposal was being considered at different levels, the validity of the offers expired. The offers were got extended from both the firms upto end of December 1980 without any cost escalation.

After consulting DRDO, Ministry of Defence (Ministry) cleared the proposal in January 1981 for import of the four bridges and to meet the balance requirement of the Army for six bridges of 75 metre span through indigenous development and production by December 1988. By then, the extended validity of the offers had expired. The offers were got extended but with cost escalation of 15 *per cent* upto March 1981 and 10 to 12 *per cent* upto October 1981 in respect of offer of firm 'A' and 14.63 *per cent* from June 1981 of firm 'B'. In December 1981, the proposal for import was cleared finally and the contract was concluded in February 1982 at a total negotiated cost of £5,235,103 (Rs. 9.17 crores) as against the initial offer of £ 4,832,690 (Rs. 8.55 crores). The cost escalation over 1980 rate was about eight *per cent*. The delay in finalising the purchase resulted in an avoidable expenditure of £ 402,213 (Rs. 0.62 crore).

The Army Plan for 1980-85 catered for the acquisition of 10 bridges of 75 metre span (10x75 metre). Having procured through the above import four bridges of 49 metres (4x49 metre) in 1982, equivalent to 2x75 metre bridges the balance requirement was 8x75 metre bridges. Work on the indigenous development of those bridges was entrusted, in April 1982, to DRDO with the operational specifications conforming to the imported bridge. In May 1982, DRDO indicated the time frame for free flow of production

as late as June 1989. Hence Army decided to meet their immediate operational requirement for the remaining bridges through import. As no option clause for procurement of additional sets of bridge was kept in the contract of 1982, fresh quotations were obtained in November-December 1982 from the same firm. The offer of the firm for 1x49 metre bridge with spares was £ 2,280,938 which was valid upto June 1983. The firm also offered a discount of 16 *per cent* on an order for 16 bridges or more.

The proposal initiated in June 1983, was approved in January 1984 with the stipulation that future requirements would be met by ensuring indigenous manufacture. In January 1984, a contract for supply of 16x49 metre sets of bridge was concluded with the firm at a total negotiated cost of £ 18,260,000 (Rs. 28.05 crores). The cost comparison of the bridge from the same firm in 1982 and 1984 revealed that the cost escalation per bridge with accessories and spares during those two years was £ 355,440 i.e. 24.78 *per cent*. Compared to 1982 contract rates, the contract value was in excess by £3,627,730 (Rs. 2.41 crores) and by applying the eight *per cent* cost escalation over the 1982 contract cost the 1984 contract value was in excess by £ 24,57,149 (Rs. 0.36 crore).

In October 1988, the Ministry stated that the offer of May/June 1980 could not be availed of within its validity period, 31st December 1980 due to time taken in taking the necessary approval for the heavy financial outlay. The purchase in 1982 was limited to four sets on the specific advice of the DRDO and the balance requirement was to be met through indigenous development and production with in the next eight years. However, in the meantime, Army required additional bridge sets on operational basis and since there was no possibility of indigenous development and production taking place within the acceptable time frame, it was decided to import the balance quantity as well on the basis of best available commercial terms. (The contention of the Ministry is not tenable as Army's overall operational requirement of bridges was known in August 1980 itself and also included in the Army Plan for 1980-85. Further, it was also known in August 1980 itself that indigenous bridge would not become available till at least 1988).

To conclude,

—Operational necessity for the bridge was felt as early as 1964 and GSQR issued immediately for indigenous production, was revised in 1970 (after six years). The bridge could not be developed indigenously and the project had to be stage closed in December 1977 after incurring an expenditure of Rs. 24.72 lakhs.

—Failure to avail of the offer of May/June 1980 within the period of its validity, end of December 1980, resulted in an avoidable expenditure of £ 402,213 (Rs. 0.62 crore).

—When it was known in December 1980 that DRDO would be able to meet the Army's operational requirement of bridges only by 1988 indigenously, contract for total requirement could have been concluded in February 1982 or alternatively an option clause for balance requirement could have been included in the contract of February 1982. By not doing so, Government had to incur an avoidable expenditure of £3,627,730 (Rs. 2.41 crores).

25. Uneconomic purchase of engines for Shaktiman vehicles

Demand for spare engines used on 3 tonne Shaktiman vehicles could not be met in full by the Government Vehicle Factory responsible for its production. Hence, in January 1982, it was decided to find an alternate private source of supply of indigenous engine for the vehicle. After preliminary technical evaluation of the particulars furnished by seven private manufacturers, engines offered by two firms, 'A' and 'B', were shortlisted for conducting trials. The performance parameters of the engines of both the firms were considered comparable. User trials gave an edge to the engine of firm 'B' and the test-bed trials favoured that of firm 'A'. The engine of firm 'A' was approved by Army Headquarters (HQ) in December 1983 for use on Shaktiman vehicles and it was also decided to procure the engines through the Department of Defence Production and Supplies (DDPS). While doing so, it was suggested that an alternate

engine should also be specified for getting a competitive price. The number to be procured from trade, for the next four years from April 1984, was identified as 4061 engines.

The DDPS issued tender enquiries to five Indian firms in April 1984. After technical evaluation of the performance parameters claimed by tenderers, the ranking points allotted by the technical authorities to the products of three firms and the rates quoted by them were as under :

Sl. No.	Firm	Model	Rank- ing	Points allotted	Unit Rate in Rs.	Remarks
1.	'C'	'M'	I	34	34,309	Rates are inclusive of cost of installation kit and commercial packing.
2.	'C'	'N'	II	33	35,002 (with a discount of 5 percent for full quantity on order).	
3.	'B'	'O'	III	22	37,000 to 39,500 (for different quantities on order).	-do-
4.	'A'	'P'	IV	18	37,950 plus 1266 for installation kit.	Cost of packing extra.

The technical authorities considered that the offer of firm 'C' for their models 'M' and 'N' had an edge over other engines. They suggested physical verification of the claims made for those models by carrying out limited technical-cum-user trials which, it was felt, could be completed within a period of two months. DDPS also felt that the Army HQ had not followed the correct procedure in projecting their demand for the engine of a particular supplier. They felt that the correct procedure in such a case was to float an indent indicating the qualitative requirements, drawing up of specifications based on the qualitative requirement and issue of tender enquiry and placement of order based on the offers received. Further they felt that the orders should take a firm shape only after the engines offered are tried out and found successful. Moreover they felt that there was every possibility that the only firm whose engine was found suitable on the basis of the earlier trials, could dictate its own terms and conditions leaving a very little scope for a meaningful negotiations.

The Army HQ did not favour fresh trials of the engines of other firms as their requirements were stated as very urgent and the trials would take eight to nine months. As a result, the lowest offer of firm 'C' was ignored because of the time required for conducting trials on their engines and DDPS decided to negotiate with three firms, 'A', 'B' and 'D' (firm 'D' was included as their vehicles were already in service with Army). During negotiations in September 1984, DDPS asked the three firms to quote their best reduced rates. All the three firms stuck to their original prices except that the firm 'A' asked for increase in prices for any quantity on order less than 3500 engines. The increase varied from Rs. 375 to Rs. 1500 per engine.

DDPS felt that they had no option but to accept the higher price of firm 'A' for the following considerations :

- (i) The Army HQ had already selected engine of firm 'A' as the alternate engine for Shaktiman vehicles based on evaluation/trials which had taken them two years.
- (ii) Switching over to any other engine would take another two years with no certainty whether it would be superior to the engine offered by firm 'A' (as per Army HQ the time required would be eight to nine months only).
- (iii) The Army could not afford any further delay, as already about 1000 Shaktiman vehicles were off road.

In February 1985, DDPS placed the order on firm 'A' for supply of 2500 engines at a total cost of Rs. 11.02 crores (Rs. 44077 per engine). It was firm for the first 1400 engines and for the balance, the supplier was entitled to price escalation.

The supply order contemplated submission of four pilot samples by 20th February 1985 and supply to commence four weeks after bulk production clearance (BPC) was given, at 200 engines in the first month, 300 in the second month and at the rate of 400 engines per month thereafter. The pilot samples were submitted late, in April 1985 and the BPC was granted in May

1985. Accordingly, the bulk supply was to commence in July 1985 and was to be completed before end of January 1986. The firm did not supply any engine upto August 1985. It had supplied only 50 engines in September 1985 against the total of 900 engines due by then as per the delivery schedule. Total quantity supplied upto 29th July 1986 was 1350 engines. The balance 1150 engines were supplied during August to November 1986. Though there has been a delay in supply of engines and the total liable liquidated damages as per the contract worked out to Rs. 22.71 lakhs, DDPS levied only Rs. 2.27 lakhs as token liquidated damages. Thus, the department failed to recover the liquidated damages in full from the firm. But price escalation (upto July 1986) admitted for 1100 engines amounted to Rs. 87.51 lakhs. This worked out to 20 per cent of the cost of the engine and its installation kit.

The contract provided for 25 per cent option clause for placement of additional order upto 625 engines during the currency of the contract on the same terms and conditions. Review of demand/supply for the year 1987-88, revealed a deficiency of 1,359 engines. No advance action had been taken to check availability of and test engines of other manufacturers. DDPS decided to place the order on firm 'A' by updating their earlier rate as on November 1986 with reference to the escalation formula provided in the February 1985 contract. Accordingly, DDPS in December 1987, placed an order for 1,148 engines at Rs. 52,629 each on firm 'A' at a total cost of Rs. 6.04 crores. This contract also provided for escalation for increase in prices for labour and material as per the formula given in the earlier contract of February 1985.

In October 1988, the Ministry of Defence stated that there was a departure from the standard practice by not raising the indent first. No effective comparison of prices of one engine with another could be made since they were according to maker's own specification. This contention is not tenable as comparison between rates of these firms whose engine can serve the purpose, is to be made. In this case, the rates of firm 'C' were the lowest but its engine was not tested in 1984/1985.

Thus, for spare engines needed for 3-tonne vehicles, the lowest bid was not availed of and the highest bid accepted on the plea that tests, not conducted on the lowest priced engine, would take eight to nine months. Hence, on grounds of urgency, the highest priced engine, already tested, was preferred. In actual terms, however, the finalisation of the supply order for 2500 engines (in favour of the highest bidder) itself took more than nine months. Worse still, was the delay in supplies, with further cost escalations. Despite the high rates and delay in supplies, a repeat order for 1148 engines had been placed on the same supplier without calling for fresh tenders/evaluation of engines of other manufacturers. The resultant extra expenditure involved in procurement of 3648 engines when compared with the rate of firm 'C' was Rs. 6.16 crores. When compared with the rates quoted by firm 'B' whose engine was evaluated and found to be generally suitable, the extra cost worked out to Rs. 1.96 crores.

26. Avoidable cost escalation on modification of coaching under-frames

During 1974-75, the Ministry of Defence (Ministry) reviewed the availability of Railway wagons meant for transport of Army vehicles and decided to make good the shortage of 250 wagons. For this purpose, modification of an existing version of coaching under-frames (frames) at one-fourth of the cost of new wagons, was considered to be adequate. In October 1975, the Ministry decided to secure 180 wagons by conversion of old frames. In March 1976, the Railways agreed to modify 180 frames at the rate of six frames per month and at a cost of Rs. 26,000 per frame to be borne by the Defence. In April 1976, the Ministry sanctioned the modification of 180 old frames at a cost of Rs. 26,000 per frame and the Railways completed the job by the end of 1979.

In July 1978, the Ministry informed the Railway Board that 60 to 70 more modified frames would be required. In April 1980, the Board intimated that the present day cost of conversion would be Rs. 58,176 per frame. In May 1980, the Ministry sanctioned modification of 30 frames at a cost of Rs. 17.45 lakhs i.e. at Rs. 58,176 per frame but no delivery schedule was prescribed. Railways commenced work on

modification of the 30 frames in March 1981 and completed it in September 1984. Thus, in the absence of any indication of time frame by the Ministry, Railways took about 42 months to convert 30 frames *i.e.* at less than one frame per month.

As a result, in May 1985, the Railways revised the cost of modification of the 30 frames to Rs. 1,49,674 per frame (total cost : Rs. 44.90 lakhs) as against the cost of Rs. 58,176 per frame (*i.e.* 257 per cent increase) intimated in April 1980 on account of price escalation of raw material and cost of labour. The Ministry had agreed to it and in September 1985 sanctioned payment of Rs. 44.90 lakhs for modification of the 30 frames.

In October 1988, the Ministry stated that the Railways had already agreed to modify six frames per month and followed this schedule for 180 frames even though no supply schedule was specified in the sanction. As the project for 30 frames was in continuation of earlier sanction it was anticipated that the same rate of modification of frames would be adhered to. Generally in orders placed with the Railways by the Ministry, time schedule was not specifically indicated. However, the requirement of specific delivery schedule would be kept in view.

Failure to indicate a firm time frame to the Railways resulted in avoidable cost escalation by Rs. 27.45 lakhs.

27. Avoidable expenditure on procurement of tyres

Central Ordnance Depot (Depot) Bombay placed two indents on the Director General of Supplies and Disposals (DGSD) in January and August 1983 for procurement, in all, of 759 tyres in 18 ply rating (PR). DGSD, after tender enquiry, intimated in August 1983 that none of the manufacturers, including past suppliers, quoted for the tyres in 18 PR and if tyres in 20 or 22 PR nylon were acceptable, a direct order could be placed as rate contract existed with a private firm. DGSD also added that another firm would be able to manufacture 18 PR tyres around December 1983 when their new mould was expected to be commissioned and requested the Depot to raise a fresh indent after December 1983 in case the tyre in 20 PR/22 PR was not

acceptable. The tyre in 20 PR or 22 PR was not acceptable to the Inspectorate and in September 1983, DGSD was requested to keep the indent alive and approach the firm which supplied the tyres in 18 PR rayon earlier. No reply was received from DGSD and the depot also placed no fresh indent. In September 1985 the depot placed another indent, duly vetted by the Inspectorate, for 260 tyres in 18 PR. The indent did not specify whether tyres were required in rayon or nylon. DGSD, after trade enquiry, informed the Inspectorate in February 1986 that two firms quoted for the 18 PR tyres in nylon and that if the tyres in 20 PR nylon were acceptable, the demand could be met through direct order by the indenter from a private firm with which a rate contract existed. It is only at this stage, the Inspectorate contacted the manufacturer of the trailer, Bharat Earth Movers Limited, in May 1986 and got to know that the manufacturers were themselves using only the 20 PR nylon tyres. The acceptance of tyres in 20 PR nylon was communicated by Inspectorate and a supply order placed in June 1986. The delay in the procurement of 1019 tyres, earlier indented, received upto 17th February, 1988, resulted in an avoidable expenditure of Rs. 15.80 lakhs due to increase in rate besides imported vehicles and indigenous trailers, remaining off road/out of action.

The Ministry of Defence stated in August 1988 that no necessity arose during 1983 to ask confirmation from any manufacturer as DGSD was asked to contact the earlier suppliers of tyres of 18 PR in rayon and the delay of 34 months in the procurement of tyres was inevitable. It was further stated that most of the vehicles/equipment did not remain off road as retreaded tyres were used in the absence of new tyres. This contention is not tenable as the very justification for this purchase was on the ground that retreaded tyres met only a meagre percentage of requirements.

To conclude,

- (i) There was a delay of about 34 months in ascertaining correctly the appropriate type of tyre for certain vehicles/trailers.
- (ii) The delay resulted in an avoidable expenditure of Rs. 15.80 lakhs in the

procurement of the tyres, besides imported vehicles and indigenous trailers remaining off road/out of action.

28. Non-utilisation of a diesel hydraulic locomotive shunter

In January 1979, an ammunition depot (depot) proposed procurement of diesel hydraulic locomotive shunter (Shunter) for hauling of railway wagons inside the depot area on the grounds that :

- (a) the steam engine deployed by the Railways on the defence siding posed fire-hazard;
- (b) dependence on Railways for shunting can be eliminated; and
- (c) there will be considerable saving in shunting charges and improvement on security standards. It was also claimed that within a period of 2 years, the cost of the shunter could be recouped by this arrangement.

In May 1982, Ministry of Defence (Ministry) sanctioned the purchase of the shunter at a cost of Rs. 10.90 lakhs. The depot procured and commissioned the shunter in March 1985 at a cost of Rs. 14.95 lakhs which included cost of spare parts.

Two of the existing depot personnel were trained by the supplying firm as drivers to operate the shunter. The depot realised, in June 1985, the necessity of trained personnel like pointsmen, shunting master, etc. to operate the shunter and requested the Railways to provide the operating staff and also to continue to deploy the Railway engine in conjunction with the depot shunter. The Railway authorities could not agree to that proposal as the simultaneous running of Railway engine as well as the shunter, owned by the depot, was not conducive to safe-working and was fraught with danger. That decision was conveyed in July 1985.

The shunter was utilised only for 37 hours during April 1985 to June 1985. Thereafter, it had not been used at all. It was transferred to another depot in September 1987 and was utilised

there only for 13 hours upto March 1988. Shunting jobs within the depot area continued to be done by the Railways on payment therefor.

The Ministry, in August 1988, stated that the shunter was not being fully used and once the civil works at the other Depot are completed it would be fully utilised for placement of wagons. In future, before initiation of such cases more meticulous scrutiny would be conducted and all connected agencies would be consulted as to the feasibility of the proposal.

The case reveals that the shunter procured, in March 1985, for shunting jobs inside the depot area at a cost of Rs. 14.95 lakhs, to eliminate fire hazard, to secure better security standards and self-reliance and to achieve saving in shunting charges payable to the Railways, had practically been lying idle and the objectives, intended to be achieved, had not been realised so far (August 1988).

29. Procurement of sub-standard oars

Wooden oars 3.05 metres long (oars) are an essential accessory for boats assault, used by the Army. Director General of Ordnance Factories (DGOF) was supplying them as an accessory alongwith the supply of boats and there was no separate provisioning for oars.

During the three years, 1979, 1980 and 1981, the number of oars issued for use was 340, 450 and 740 respectively. Against the average issue of 510 oars *per annum* or the peak demand of 740 in 1981, Army Headquarters (HQ), in March 1982, placed an indent on the DGOF for 12,670 oars. Although, the quantity was stated to be the requirement for three years, upto March 1985, there was no proper computation therefor. The DGOF expressed inability to supply (only) the oars and advised the Army HQ to procure them directly from trade. In May 1983, the Army HQ raised yet another indent for 460 oars for meeting their requirements upto March 1986. In March 1983 and May 1983, the Army HQ requested the Department of Defence Production and Supplies (DDPS) for procurement of 13,130 oars at an estimated cost of Rs. 4.86 lakhs.

In the indent, the Army HQ had shown the estimated cost of each oar as Rs. 37. The rates obtained by the DDPS in November 1983, however, varied from Rs. 123.47 to Rs. 560 per piece. According to standing orders, the indenter's acceptance was required when the tendered rates exceeded the rate shown in the indent by 50 *per cent* or the tendered cost exceeded the indent amount by Rs. 5 lakhs. The DDPS, without obtaining the acceptance of the indenter for procurement at the increased cost and checking on the availability of additional funds, concluded a contract with a private firm in February 1984. The value of the contract was Rs. 16.22 lakhs for the supply of oars at Rs. 123.47 each, against the indent value of Rs. 4.86 lakhs whereas prior approval of the indenter for procurement of the item at increased cost could have provided an opportunity to a fresh review of the requirements and possible reduction in the quantity on order.

The firm had supplied in all 13,060 oars in 11 lots, between September 1984 and December 1986 and had been paid Rs. 16 lakhs, representing 95 *per cent* of the value of Rs. 16.77 lakhs for the supply. The same was cleared in inspection before despatch. Despite that inspection, 10,663 oars valuing Rs. 13.69 lakhs which was 82 *per cent* of the supply, were declared sub-standard on account of the following deficiencies:

- (i) the length, width and thickness of the oars were less;
- (ii) the quality of wood used was inferior and there were cracks; and
- (iii) the workmanship and finish were poor.

In May 1987, the consignee depot reported the matter to the Army HQ for investigation. As a result, a Staff Court of Inquiry was ordered in January 1988 to investigate the facts and to pinpoint the responsibility; its outcome was awaited (May 1988).

The actual issue of oars during the period of six years, from 1982 to 1987, numbered only 4930 pieces. This included 1380 oars received from the DGOF as an accessory to the new boats supplied. The trend of issues, thus, indicated that the demands projected by the Army HQ were unrealistic.

To sum up,

- Procurement of 13,060 oars was far in excess of requirements.
- The DDPS concluded the contract at the rate of Rs. 123.47 per oar against the estimated indent cost of Rs. 37 each without obtaining approval of the indenter for additional funds.
- The stock, which was accepted in inspection before despatch, had been declared as below standard. The quantity so declared constituted 82 per cent of the supply. The value of the sub-standard stock (10,663 oars) was Rs. 13.69 lakhs. Responsibility for acceptance of sub-standard stores was yet to be fixed (May 1988).

The case was referred to the Ministry of Defence in June 1988 and their reply has not been received (November 1988).

30. Leakage in a petroleum depot

As part of operational exigencies, petroleum products were stored in a station. The bulk petroleum tanks in that station were not in good condition and the disbandment of that depot was under consideration. Due to operational necessity, in April 1979, the disbandment of that depot was held in abeyance.

On 16th September 1981, there was heavy leakage of diesel from one of the unserviceable tanks resulting in a loss of 77,430 litres costing Rs. 2.71 lakhs. A Staff Court of Inquiry (CI) was ordered by the Sub Area Headquarters (HQ) in November 1981, to investigate into the loss and to submit its findings within 10 days. But further progress on the CI proceedings was very slow.

The CI proceedings were signed by the Station Commander in October 1984. They were lying with the Sub Area HQ without any action till March 1987. Meanwhile, the Officer Commanding (OC) retired from service in May 1986. In June 1987, after taking note of the CI findings, the Sub Area Commander opined that the OC of the depot, was to be fully blamed for the loss and since he had retired from service

in May 1986, the loss was recommended to be borne by the State. While agreeing with those recommendations, the Area Commander directed that administrative action be taken against two subordinate officers for negligence on their part. Surprisingly, the retired OC, held fully responsible for the loss, against whom the CI had not been proceeded with on the plea that he had retired, was re-employed again from June 1986 and is still in service (September 1988).

In November 1983, the Command HQ accorded sanction for repair of two of the unserviceable tanks of the same depot at a cost of Rs. 33.84 lakhs. It included Rs. 10.53 lakhs for epicoating of the tanks. In July 1984, Army HQ had imposed restrictions on epicoating of tanks. In February 1985, the work was entrusted for execution to Indian Oil Corporation (IOC) to whom the full value of the work, including the cost of epicoating, was paid as advance before the end of March 1985. When questioned by Audit on the correctness of the payment, Military Engineer Services approached the IOC, in June 1986, for the refund and secured Rs. 8 lakhs in March 1988.

In October 1988, Ministry of Defence stated that since the CI proceedings were kept pending, administrative authorities obviously were unaware of the fact of such blame devolving on the retired officer. The Army HQ had asked the Command HQ to initiate administrative action against the re-employed officer. Administrative action against staff responsible for delaying CI proceedings was being initiated. Standard operating procedure for limiting schedule of finalisation of such CI had been finalised and promulgated to all concerned. Instructions issued for not undertaking epicoating of un-serviceable tanks appeared to have been lost sight of.

To conclude,

- (i) Action on a Court of Inquiry ordered in November 1981, against an officer held mainly responsible for the loss of Rs. 2.71 lakhs, was not finalised till he retired in May 1986 and no action was taken against him on the plea that he had retired. But the same officer was re-employed again

in the same rank from June 1986 and was still in service (September 1988). The Court of Inquiry proceedings were lying with the Sub Area HQ without being acted upon for three years.

- (ii) Despite a decision of July 1984 that no epicoating was to be done, advance payment of Rs. 33 lakhs (including Rs. 10.53 lakhs for epicoating) was made in March 1985. At the instance of Audit, a refund of Rs. 8 lakhs was secured after a lapse of three years from the date of payment of the advance.

31. Infructuous expenditure on modification of trailers

To set up field repair facilities, Ministry of Defence accorded sanction, in October 1976, for modification of 29 trailers for mounting on them lathes and accessories. Army Headquarters (HQ) placed, in January 1978, an indent on Director General, Supplies and Disposals (DGSD) for procurement of lathes and accessories.

29 trailers were issued by Central Vehicle Depot (CVD) between November 1978 and November 1979 to an Army Base Workshop (ABW) for carrying out the necessary modification. The trailers, after modification, were back-loaded to the CVD from March 1980 onwards for installing on them the lathes and accessories.

In April 1980, the DGSD placed the order for the supply of 29 lathes and accessories at a cost of Rs. 8.36 lakhs and the same were received in September 1981 by the CVD. One modified trailer was mounted with lathe and other accessories in the CVD and collected by the ABW for trials. The trailers were not found successful on account of the excess weight factor.

In September 1983, HQ Technical Group EME sought for a decision from Army HQ as to the type of trailer on which the lathe and other accessories were to be fitted. In August 1987, it was decided that all the 29 trailers modified at a cost of Rs. 1.52 lakhs, should be reconverted into general service trailers and to transfer the surplus lathes and accessories to a Central Ordnance Depot.

In August 1988, Ministry of Defence stated that although the weight of lathe was within the laid down specifications, the overall weight increased on account of other fitments like machine grinding, machine drilling, tool post grinder, etc. and the surplus lathes would be utilised against other commitments. It was further stated that after re-organisation of Electrical and Mechanical Engineer Battalions in 1984, there was no requirement for these field repair trailers.

Thus, field repair facilities by modification of trailers, sanctioned in 1976, were yet to be set up and lathes and accessories, procured at a cost of Rs. 8.36 lakhs, could not be put to any use so far (August 1988). 29 trailers, modified for field repair facilities, were again reconverted for their normal use. The conversion cost of Rs. 1.52 lakhs was infructuous.

WORKSHOP EQUIPMENT

32. Non-utilisation of forging machine hammers

In April 1982, Army Headquarters (HQ) proposed the procurement of one pneumatic power hammer 1500 kg. for use in workshop 'A'. It was meant to facilitate forging of thicker sections of steel which were being procured through local purchase, which, apart from being unreliable were also considered un-economical. The hammer, costing Rs. 29.08 lakhs, was received by the workshop in June 1984. It had not been installed (July 1988).

The existing arrangements for meeting the requirements of the workshop through local purchase, considered un-economical and unreliable, continued, despite an outlay of over Rs. 29 lakhs, remaining un-productive for over four years.

In another case, the Army HQ proposed, in July 1983, procurement of two friction drop hammers 1500 kg. for use in workshops 'A' and 'B'. Sanction for the purchase was sought for on the grounds that the existing forging facilities were grossly inadequate in workshop 'A' and manufacture of components of accurate finish in workshop 'B' was not possible through the existing hammer.

In May 1985, Technical Group HQ of the workshops advised withholding the supply of the friction drop hammer to workshop 'A' as suitable accommodation was not available with them. The Army HQ, however, proceeded with the procurement and a contract therefor was concluded in August 1985 for Rs. 47.85 lakhs. The two hammers were received in workshop 'A' in March 1987 and in workshop 'B' in June 1987. These hammers had not been installed so far (July 1988).

In July 1988, Ministry of Defence (Ministry) stated that it was decided to instal two hammers permanently in a new project building expected to be ready by December 1988. One hammer would be installed in workshop 'B' by October 1988 as the funds had been released in April 1988 by local administrative authorities for execution of work services. The Ministry further stated that the Army HQ had also been requested for constitution of a Court of Inquiry and fixation of responsibility alongwith framing guidelines for avoiding recurrence of such cases.

To conclude,

- Three forging machine hammers, proposed for procurement in 1982 and 1983, acquired at a cost of Rs. 76.93 lakhs in June 1984, March 1987 and June 1987, were lying unutilised rendering the investment thereon un-productive (July 1988).
- The requirements of the workshops, in the meantime, continued to be met through existing arrangements which were considered un-economical and un-reliable. The workshops were handicapped in producing components of accurate finish and in adequate quantities (July 1988).

RATION ARTICLES

33. Extra expenditure on purchase of rum

Prior to October 1981, the responsibility for procurement of rum to Army Service Corps (ASC) (for authorised free issue to troops at high altitude, etc), rested with the Army Purchase Organisation, Ministry of Food. In October 1981, the procurement function was transferred to the Canteen Stores Department (CSD). Detailed instructions governing that function were issued

by the Board of Control, Canteen Services, in December 1981. Those instructions *interalia*,

- (a) stipulated the quality control requirements at the distillery level;
- (b) indicated the excise duty exemptions/concessions allowed by some State Governments; and
- (c) required procurement of the cheapest brands of rum offered by trade after taking note of the all inclusive price including the excise duty parameters.

The CSD did not, however, conclude separate contracts for this purchase. The rum requirements of the ASC were clubbed with CSD's own other requirements. No stocks of the cheapest brand were kept reserved separately. Instead, the CSD issued the cheapest of the brands available in its depots.

During the four years, 1981-82 to 1984-85, issue of brands other than the cheapest led to an extra expenditure to Government of Rs. 85.38 lakhs as per details below:

Year	(Rs. in lakhs)		
	Value of supplies	Value based on cheapest brand of rum	Extra expenditure
1981-82	228.25	198.33	29.92
1982-83	208.41	197.26	11.15
1983-84	338.62	322.87	15.75
1984-85	378.87	350.31	28.56
Total	1154.15	1068.77	85.38

While agreeing with the contention that, with the supply of the cheapest brand, Government would have saved a huge amount, the CSD pleaded that there was no specific directive to the effect that only the cheapest brand of rum should be stocked or reserved for this supply and that the transaction was after all from one Government Department to another. The contention of the CSD is not acceptable as it did not take note of the important consideration of economy in the use of public funds.

In September 1988, Ministry of Defence stated that the obligation on the supply of the ration item had to be met and that such a situation was not likely to recur as the issue of free rum had been stopped after 1984-85.

To conclude, the CSD entrusted with the supply of rum, asked to procure the cheapest brand, taking note of excise duty exemptions/concessions allowed by some State Governments, failed to conclude separate contracts. It supplied the cheapest of the brands available in its depots which, between 1981 and 1985, led to an extra expenditure of Rs. 85.38 lakhs.

34. Additional expenditure on purchase of tinned meat

Between 1982-83 and October 1987, the procurement of certain ration articles, including tinned meat, was made through the Canteen Stores Department (CSD). An analysis of three cases, brought out in the succeeding paragraphs, indicated

- (a) lack of consistency in the selection of suppliers in terms of hygienic standards/inspection ; and
- (b) payment of interest free advances to suppliers, resulting in lack of motivation for effecting the supplies on time.

Case I

In July 1983, the CSD called for tenders for supply of tinned meat from four firms. All of them responded and gave their quotations. Three of them were registered with Army Purchase Organisation (APO). The fourth bidder, M/S. Meat Products of India Limited, Kerala, a State public sector undertaking (PSU) had applied for registration in January 1983 but had otherwise been supplying meat products to the Southern Naval Command. It had quoted the lowest rate of Rs. 48 per kg. inclusive of taxes etc. but was not awarded any part of the supply contract on the ground that hygiene inspection of its factory had not been carried out. The urgent requirement for 245 tonnes of tinned meat was met by placing orders on the three other firms during September/October 1983 at the negotiated rate of Rs. 49.40 per kg. exclusive of sales tax. The cost difference was Rs. 8.18 lakhs.

On the State PSU's application for registration, made in January 1983, CSD approached the Army authorities for hygiene inspection only in September 1983, Army Headquarters, after completing the inspection in November 1983. issued the fitness certificate in December 1983, Placement of supply orders in relaxation of hygiene inspection, had however, been noticed in

- (a) an order for supply of tinned meat by another State PSU, in September 1985 at an estimated cost of Rs. 1.13 crores and
- (b) in another order for Supply of Soyabean chunk by a private firm, in August 1986, at a cost of Rs. 1.50 lakhs.

There had, thus, been lack of consistency in the selection of supply agencies in terms of hygiene inspection.

The Ministry of Defence (Ministry) stated in October 1988 that the supply order on two firms at (a) and (b) *ante*, were placed subject to hygiene inspection and that in the case of the PSU, besides hygiene inspection, non-completion of registration formalities and certain technical snags also existed. (The contention is not convincing as despite the technical snags, supplies to the Navy were being secured from the PSU and no valid reasons have been advanced either for the delay in its registration or for the lack of consistency in the selection of suppliers in terms of hygiene inspection).

Case II

Government sanctioned, in September 1985, procurement of 240 tonnes of tinned meat from the Punjab Poultry Development Corporation Limited Chandigarh, another State PSU at the rate of Rs. 47.25 per kg. (value : Rs. 113.40 lakhs). The supply schedule was 40 tonnes per month, commencing from September 1985 to be completed before March 1986. Soon thereafter, in the same month the supplier's request for an advance of Rs. 56.70 lakhs (to be adjusted against the supply bills) alongwith an offer for rate reduction to Rs. 45.10 per kg. (value : Rs. 108.24 lakhs) was accepted on the ground that the interest that would be derived by the supplier and that foregone by Government on Rs. 56.70 lakhs at 18.5 per cent for six months, namely Rs. 5.25 lakhs alongwith the reduced value of the supply

order was about equal to the value of the order at the earlier quoted rate. Based on the above, the advance was paid and a contract for the supply was entered into with the supplier in November 1985. The delivery was to commence from December 1985 and completed by July 1986 at the rate of 30 tonnes per month.

Actual supplies failed to materialise till end of February 1986. Till May 1988, only 81 tonnes, about one-third of the quantity ordered, had been supplied and the balance amount of Rs. 37.71 lakhs remained unrecovered from the supplier. It carried no interest. It was not secured by any Bank guarantee. The cost assumptions on the supply had gone away. As the advance did not carry any interest, the supplier had, in terms of the contract, little incentive to complete the supply.

The CSD, the agency administering this contract, stated in January 1987 that the cancellation of the contract alongwith risk and cost purchase at the expense of the supplier was proposed in December 1986 and January 1987, but the Ministry's orders thereon had not been received.

Case III

Government sanctioned, in June 1985, procurement of 360 tonnes of tinned meat from Central Dairy Farm, Aligarh, yet another State PSU, at Rs. 47.25 per kg. (value: Rs. 170.10 lakhs). The request of the firm for payment of an advance of 90 per cent of the value (Rs. 153.09 lakhs) coupled with an offer to reduce the rate to Rs. 44 per kg., was agreed to by Government. The advance was paid in June 1985 (before conclusion of contract). The amount of advance paid, Rs. 153.09 lakhs, constituted 96.64 per cent of the revised value of the order. The schedule of supply as per contract with the firm executed in July 1985 was at the rate of 30 tonnes per month, commencing from October 1985 upto September 1986.

Upto September 1986, the firm had supplied only 148 tonnes. Till May 1988, the firm had supplied only 173 tonnes, less than half the quantity ordered. Till then, only Rs. 84.61 lakhs, out of Rs. 153.09 lakhs paid as advance, had been recovered, leaving a balance of Rs. 68.48 lakhs with the State PSU with all the adverse features mentioned in the preceding case, further aggra-

vated by the unusually large percentage of the advance amount.

The reaction of the CSD was the same as in the previous case, viz. decision of the Ministry, on the proposal for risk and cost purchase, made in December 1986 and January 1987 was awaited (February 1987).

Apart from the inconvenience suffered on account of the poor supplies by the two State PSUs, the interest derived by them, through default on Defence supplies, and that forgone by the Ministry (at 13 per cent, the current rate of Central public sector bonds) worked out to Rs. 16.86 lakhs on case No. II and Rs. 52.98 lakhs on case No. III. The formulation of those two contracts was defective leading to such poor results.

The Ministry, in October 1988, stated that the advances were paid with a view to facilitating the PSUs in meeting their working capital requirements and ensuring prompt supplies. Unfortunately, the firms failed to complete the supplies resulting in non-adjustment of advances paid to them. The matter had been taken up with the State Governments concerned and efforts were being made to liquidate the advances paid and recover interest thereon.

35. Purchase of dal, unfit for human consumption

In September 1986, Army Purchase Organisation (APO) concluded a contract with West Bengal State Consumers Cooperative Federation, Limited (federation) for supply of 1650 tonnes urd whole (dal) at a cost of Rs. 87 lakhs.

Two Composite Food Laboratories (CFL) pre-inspected and accepted 1727 tonnes of dal, costing Rs. 81.84 lakhs (at 95 per cent value released on proof of despatch), supplied by the federation between November 1986 and July 1987. Out of the 1633 tonnes, 716 tonnes of dal, which was inspected and accepted by the CFL Delhi during December 1986 to August 1987 was despatched to various supply depots (depot).

Out of 716 tonnes, 390 tonnes of dal were supplied by the federation in July 1987. There were complaints from the depots that the dal was of inferior quality and the same had gone

bad within the estimated storage life. On these complaints, control samples were analysed in August 1987 by the Appellate Laboratory and found that the stocks were infested and fumigated. In September 1987, Army Headquarters (HQ) asked the CFL Delhi to send the triplicate samples along with the original samples. After analysis of these samples, the entire quantity of 390 tonnes was declared, in October 1987, as unfit for human consumption. In November 1987, the Central Military Veterinary Laboratory, Meerut considered the stock as unfit for animal feeding also.

In November 1987, a Court of Inquiry (CI) was ordered to investigate into the circumstances leading to acceptance of sub-standard dal by the CFL Delhi and to pinpoint the responsibility for administrative and technical lapses and submit its proceedings by 15th December 1987 positively. The CI proceedings were finalised in September 1988. Administrative/departmental action against those found responsible had been ordered.

To conclude,

- 390 tonnes dal costing Rs. 20.56 lakhs which was pre-inspected and accepted by CFL Delhi was subsequently found unfit for human consumption or even as animal feed.

In November 1988, Ministry of Defence stated that no warranty clause was incorporated in the contract as Army Service Corps specifications did not prescribe the same. In the APO contracts, once the despatches were completed and stores accepted by the CFL, consignee did not enjoy the right for rejection. The depots had been asked to auction the bad stock.

36. Extra expenditure on purchase of vegetables

In the following two cases, retendering resulted in acceptance of contract at higher rates involving an extra expenditure of Rs. 15.05 lakhs.

Case I

Headquarters Northern Command, had invited tenders five times during December 1985 to April 1986 to finalise the agency and rates for supply of potatoes, onions and garlic at two stations during 1986-87. In response to the first tender, no bids were received. The rates obtained on the second tender on the 27th February 1986 were not accept-

ed as the same were considered high by the Panel of Officers (PO) although the quoted rates were within the average wholesale market rates for 1985-86 (except for a negligible increase in the rate of potatoes for one station). There was no response to the third tender. On the fourth occasion, the rates for supply, quoted only for one station, were also considered high. Finally the rates obtained on the fifth occasion on the 25th April 1986 were recommended by the PO and accepted by the competent authority in May 1986. Except for the variation in the rate for onion at one station by a very small amount, the rates were higher than those secured in the second tender call. The resultant additional expenditure was Rs. 11.34 lakhs.

Case II

Based on the tenders invited by Eastern Command, in January 1986 for the supply of potatoes, onion and garlic at two stations during 1986-87, the lowest bids received on 30th January 1986 were not considered reasonable by the PO. Despite their apprehension that whenever retendering had been resorted to for items like vegetables, the rates had invariably gone high, the PO recommended retendering. Subsequently, tenders were re-issued four times during February 1986 and May 1986.

The lowest rates offered and accepted in June 1986 were far higher than those secured on the first tender call. The resultant additional expenditure was Rs. 3.71 lakhs.

Ministry of Defence stated in August 1988 that retendering was resorted to in the expectation of getting lower rates.

Thus, repetitive retendering, despite rates being found reasonable or with little prospects of getting reduced rates, resulted in vegetables being bought at an additional cost of Rs. 15.05 lakhs in two Army commands.

37. Extra contractual payment in purchase of egg powder

Government sanctioned on 18th July 1985, procurement of 65 tonnes of egg powder at a cost of Rs. 123.50 lakhs from a private firm at the

firm's quoted rate of Rs. 190 per kg. inclusive of all taxes. On the 25th July 1985, Canteen Stores Department(CSD) which was to arrange supply, informed the firm by a telex message that the offer was accepted at Rs. 190 per kg. "exclusive of sales tax". The CSD, while issuing the acceptance of tender (AT) dated 24th July 1985 and in the contract agreement signed by both the parties (CSD and supply contractor) on 1st August 1985 rectified the mistake by incorporating the correct supply rate, namely Rs. 190 per kg. inclusive of taxes.

Despite this provision in the AT and the contract, the payments for supplies were made till March 1986 at Rs. 190 plus sales tax. The CSD, without any representation from the supplier, *suomoto* pleaded with the Ministry of Defence (Ministry), on 2nd August 1985 and again on 21st December 1985 to make the rate of Rs. 190 to be exclusive of sales tax on the ground that sales tax would have to be paid extra over and above the rate quoted by the firm according to the tender enquiry form and the earlier purchase rate of September 1984 was Rs. 190 exclusive of sales tax. The Ministry turned down the request on both the occasions.

On 19th February 1986, the supplier approached the Ministry seeking payment of sales tax as extra mainly on the plea that they had committed an error in the tender document in not asking specifically for payment of taxes as extra and that error should not result in denying them the rate actually paid in the preceding year. The Ministry did not agree to the change in the tendered rate and rejected the representation.

The contractor completed the supplies in May 1986. In June 1986, a sum of Rs. 2.52 lakhs representing the sales tax paid in excess to the firm on the first 11 bills was recovered.

On the supplier's further representation of 9th September 1986, on the same grounds as before, the Ministry reversed its earlier decisions and allowed payment of sales tax amounting to Rs. 4.86 lakhs on the grounds that sales tax was paid extra on the two previous contracts and to deny the same on the ground that the firm had made an error in its tender was iniquitous especially when

the amount to Government was small. The above decision failed to take note of the fact the contractor had in fact signed the agreement on 1st August 1985, that is subsequent to filing his tender, to effect the supply at the rate of Rs. 190 inclusive of taxes. Payment of sales tax in addition constituted an extra contractual payment.

In October 1988, the Ministry stated that the column meant for sales tax in the tender form was, however, not properly filled in by the firm. (This contention is not valid as the firm, had, on a subsequent date, signed the agreement). An error appeared to have crept in the draft Government sanction showing the rate as inclusive of sales tax whereas previous contract rate was exclusive of sales tax. (This contention is not correct as each sanction is based on the relevant quotation and not on precedents). The rate inclusive of sales tax would have meant a reduction in price over the last contract which appeared un-realistic. (This contention too is not correct as the rate inclusive of sales tax was accepted, sanctioned and included in the agreement signed by both the parties). Additional payment of sales tax, not specifically covered by the agreement, was allowed as an iniquity had been caused purely inadvertently. (The plea of inadvertence cannot hold good for the two stage formulation of the supply order with the contractor, *viz.* at the tender stage and the subsequent agreement stage. The contention of iniquity is, thus, not established).

Thus, the payment of Rs. 4.86 lakhs made to the supplier, not obligatory in terms of agreement, constituted a failure to safeguard the financial interest of Government.

CLOTHING

38. Uneconomic purchase of cotton vests

Army Headquarters (HQ) decided to introduce olive green colour cotton vests (vests), in place of white vests, with effect from 1983-84. The supplies from private firms were arranged through two agencies; Director General of Supplies and Disposals (DGSD) and the Department of Defence Production and Supplies (DDPS). The quantities ordered, the agencies deployed therefor and the weighted average rates at which supplies were

secured, for various sizes ranging from 80 cms to 115 cms, were as under:

Procurement agency	Period of placement of orders	Quantity ordered (pieces in lakh)	Number of suppliers	Weighted average rate per piece (Rs)	Total value of orders (Rs. in crores)	Colour fastness to washing rating required	Type of dye specified
DGSD	June—September 1982	26.41	28	10.33	2.73	4	Dye not specified
DDPS	January—October 1985	48.04	26	15.67	7.47	3	Vat dye
DGSD	July 1987	39.21	22	11.83	4.64	3	Vat dye
DGSD	January 1988	30.61	21	11.84	3.62	3	Vat dye

As will be seen from the above table, supplies ordered through the DDPS during 1985 were at a rate conspicuously higher than the rates at which supplies were secured not only prior to but also subsequent to the 1985 orders. That rate was higher by 52 per cent over the preceding rate and 32 per cent on the subsequent ones.

A scrutiny of the procurement made through the DDPS revealed the following features:

A. Supply against the 1982 orders for 26.41 lakh vests materialised only to the extent of 6.93 lakh pieces as the firms faced difficulties in attaining the high standard of colour fastness to the washing rate of four. Further there was no stipulation about the type of dying (vat, reactive, direct or acid) which could give colour fastness to the washing rate of four. In the context of the resultant inadequate supplies, the demands were subsequently diverted to the DDPS by treating the item as a developmental one. While doing so, the Army HQ specified vat dying as the process for achieving colour fastness, but reduced the washing rating from four to three so as to make the specifications achievable by the suppliers.

B. In August 1984, the DDPS issued tender forms to 53 firms. 41 firms responded. Though the tender enquiry had stipulated that an 'uniform rate' (a single rate) applicable for all the eight sizes (80 cms to 115 cms) should be quoted, only 12 firms quoted uniform rates, which were in the range of Rs. 14.50 to Rs. 21 per piece.

The lowest uniform rate quoted was Rs. 14.50. The second lowest uniform rate was Rs. 15.67. The DDPS decided to counter-offer an uniform rate to the bidders. In that effort, after ignoring the lowest uniform rate of Rs. 14.50 on the ground that the bidder could not be located, the second lowest tendered rate of Rs. 15.67 was offered to the bidders and on that basis, orders on 26 suppliers were placed for Rs. 7.47 crores for a quantity of 48.04 lakh vests. Incidentally, in the tenders called for, two firms had quoted (not uniform rates) lower rates for three smaller sized vests, *vide* details below:

Sizes	Rate per piece (in Rs.)	
	Firm 'A'	Firm 'B'
80 cms	11.25	12.50
85 cms	12.00	13.50
90 cms	12.75	14.50

They were assigned the supply of 1.26 lakh smaller sized vests at those rates.

C. The rate of Rs. 15.67 counter-offered, was high as would be evident from the following facts:

(i) When vests of olive green colour were proposed to be introduced, the cost thereof was computed by Defence Research and Development Organisation as between Rs. 9 and Rs. 13.

(ii) The rate secured by the DGSD on the earlier tender, for a higher colour washing rating of four, averaged only to Rs. 10.33.

(iii) The lowest rates secured in this very tender for smaller sizes varied between only Rs. 11.25 to Rs. 12.75.

(iv) The rates secured in the subsequent tenders of 1987 and 1988 through the DGSD were only Rs. 11.83 and Rs. 11.84 respectively.

D. As against 49.30 lakh vests initially ordered, the DDPS finally procured 46.13 lakh vests. On the basis of the highest rate paid by the DGSD to private suppliers, namely, Rs. 11.84 per vest in January 1988, the additional expenditure incurred on the procurement of 46.13 lakh vests through the DDPS worked out to Rs. 1.66 crores.

The DDPS, in reply to an audit observation, stated in June 1988 that since the firms had to learn the new techniques/methods to achieve the desired specification, the price quoted by them "might have" provided higher percentage of wastage, apart from amortisation of developmental cost. It was also added that once the sources were established by the DDPS and keen competition got generated, it might have become possible for the suppliers to take the subsequent orders at lower rates.

The above views do not meet fully, the points brought out on the conspicuously high rates of the 1985 order and did not conform with the fact that out of the 22 firms on whom the DGSD had placed orders in 1987, six firms were new, who got orders for 1202 lakh vests.

Ministry of Defence stated in August 1988 that as the suppliers failed to achieve the required ratings, the Army HQ was compelled to reduce the washing rating from four to three. Six new firms "might have" been able to get orders at low rates on account of reduction of wastage elements, etc. and they might have quoted low price with marginal/no profit to establish themselves as supplier for Defence stores. (This contention is not tenable as the difference due to these factors after two to three years could not be as much as 32 per cent. Further the firms would have been more keen to establish themselves as suppliers of Defence stores in 1985 when development orders were placed).

To conclude,

— Cotton vests of olive green colour were procured through the DGSD in 1982, 1987 and 1988 at rates ranging from Rs. 10.33 to Rs. 11.84 per piece. On the procurement of the vests in 1985 through the DDPS, the rate offered by the department was Rs. 15.67 per piece. Compared to the highest rate paid in 1988, the extra expenditure was Rs. 1.66 crores on the 46.13 lakh vests procured through the DDPS.

INSPECTION

39. Procurement of sub-standard goods

Against indents placed by Army Headquarters, Director General, Supplies and Disposals (DGSD) had been concluding contracts with various firms for supply of Defence stores. According to the general conditions of the "Acceptance of Tenders" (ATs), the stores were to be inspected and passed for acceptance by inspecting officers before despatch. The suppliers were paid 95 per cent of the cost of stores on production of proof of despatch. After receipt of the consignments by Central Ordnance Depots (COD), on goods found defective on visual observation, samples are drawn and sent to Defence inspecting authorities for "standard check". Articles found sub-standard/unacceptable through "standard check" are segregated and correspondence is initiated to secure replacement by standard goods.

In COD, Chheoki, holding stock of paints, soap laundry, etc., sub-standard goods procured between April 1983 and August 1987 amounted to Rs. 46.69 lakhs as on 1st March, 1988. Replacement by good articles, despite the passage of time had not materialised.

The following factors contributed to the unsatisfactory state of affairs:

- (i) Inadequacies in the inspection conducted prior to despatch of goods.
- (ii) Delay in the inspection after receipt of goods in the COD.

- (iii) Disinclination on the part of the suppliers to replace the rejected goods as 95 per cent of the value had already been paid.

In this context, two specific cases merit mention :

- (a) Two consignments of soap laundry received in October 1984 were, on standard check, conducted in February 1985, found sub-standard. Despite that observation, the next two consignments of the same supplier, received in the subsequent month, March 1985 were also found bad in August 1985. The last two consignments received in March 1986 were also found bad.
- (b) Out of six consignments of paint, received in September 1986, three consignments were, on standard check conducted in December 1986, found sub-standard. On a personal representation by the firm in April 1987 to the Director of Inspection, two of those consignments on re-examination of the same sample, were declared serviceable in July 1987.

Worse still was a case in which the whole consignment of phosphor bronze round rods, for which over Rs. 3 lakhs had been paid, despatched from Calcutta in May 1985 had not reached the COD (September 1988).

Pending replacement of the stores, urgent requirement of some of those articles was met by resorting to local purchase at higher rates resulting in extra expenditure of Rs. 4.05 lakhs.

In September 1988, Ministry of Defence stated that in most of the cases, the suppliers had pushed through un-inspected/unstamped stores to the consignee. Stores worth Rs. 25.18 lakhs had been replaced/rectified or money recovered. Efforts were being made either to get the balance quantity replaced by standard goods or to recover the cost thereof. A committee had been set up to review inspection procedure and to fix responsibility for the losses caused to the State and suggest remedial measures.

To conclude, stores worth Rs. 46.69 lakhs accepted by the inspecting officers before despatch were subsequently found sub-standard during 'standard check', out of which stores worth Rs. 21.51 lakhs were still lying in the COD for replacement (September 1988). As a result, urgent requirement of some of those articles was met by resorting to local purchase at higher rates, incurring an extra expenditure of Rs. 4.05 lakhs. A consignment costing over Rs. 3 lakhs despatched in May 1985 had not been received in the consignee COD (September 1988).

40. Supply of defective multivitamin capsules

Director General of Supplies and Disposals concluded a contract in May 1986 with a private firm for the supply of 1.58 crores of multivitamin capsules at a cost of Rs. 44.71 lakhs to Armed Forces Medical Stores Depots (depot).

According to the contract, the inspecting officer for supplies to Bombay depot was the Inspectorate of General Stores (WI), Vikhroli. 47.48 lakh capsules (cost : Rs. 13.44 lakhs) to be supplied to Bombay depot were accordingly inspected and accepted in October 1986 and February 1987. The control samples from these batches were sent by the Inspectorate of General Stores (WI), Vikhroli to the Chief Inspectorate of Material (CIM), Kanpur who was the inspecting authority. In August 1987, CIM, Kanpur, after examining the control samples, declared the entire supplies as sub-standard.

Action was taken in October 1987 to withhold payment for the quantity requiring replacement; but the same was ineffective as by then 95 per cent of the value of the supplies had already been made. In November-December 1987, the Director General Armed Forces Medical Services (DGAFMS) requested the three Services Headquarters, Director General Border Roads and Director General Ordnance Factories to instruct the units under their command to suspend the use and the issue of the concerned batches and send a consolidated list of defective stock held by the units by the end of January 1988. In February 1988, the firm agreed to replace the defective stocks, provided the same were returned to them, as per terms and conditions of the contract.

The reports of defective stocks furnished to the DGAFMS till June 1988 indicated that defective stocks worth Rs. 3.41 lakhs only were held by various units against the stock worth Rs. 13.44 lakhs declared sub-standard. The sub-standard stock was yet (September 1988) to be replaced, despite a delay of about two years from the date of supply.

In September 1988, Ministry of Defence stated that instructions have been issued to units, in August 1988, to return the stocks held by them for replacement by the firm. The delay in replacement had no adverse effect since the firm had agreed to take back the un-utilised stock and to provide free replacement. (This contention is not convincing as the sub-standard material, secured in October 1986—February 1987 still remains to be replaced and the prospect of replacement of over Rs. 10 lakhs worth supply is in doubt as only Rs. 3.41 lakhs worth supplies have been located for replacement).

Multivitamin capsules, supplied by a private firm, costing Rs. 13.44 lakhs, inspected and accepted, were on subsequent inspection found to be sub-standard. On instructions to suspend its use and report the quantum of the defective capsules (for replacement by the seller), only Rs. 3.41 lakhs worth sub-standard stock was found to be held by the users. The defective supply was yet (September 1988) to be got replaced despite a delay of about two years from the date of supply.

PAY AND ALLOWANCES

41. Overpayment to Army personnel

Payments to Junior Commissioned Officers (JCOs) and Other Ranks (ORs) of the Army are made by the Regimental Officers. For this purpose, the Pay and Accounts Officers (PAO) remit, in advance, the net monthly entitlements to the Regimental Officers. The PAOs maintain an Individual Running Ledger Account (IRLA) for each JCO and OR. The IRLA is credited with the pay and allowances due and debited with the advance pay drawn and regular deductions on account of provident fund etc. A debit balance would represent amounts due for recovery.

Mention was made in paragraph 44 of Audit Report, Defence Services for the year 1967, regarding debit balances of Rs. 30.74 lakhs due

to payment of excessive advance of pay and allowances. Subsequently, instructions were issued by the Army Headquarters from time to time for elimination of debit balances in the IRLAs of JCOs and ORs. Despite this, IRLAs continued to show debit balances.

Test check of IRLAs maintained by 20 PAOs revealed that:

- (i) Out of 4,55,762 IRLAs maintained by 15 PAOs 2,000 IRLAs showed debit balances of Rs. 60 lakhs in February 1988. Out of this, in 1733 IRLAs the recovery of payments to the extent of Rs. 11.30 lakhs had become difficult/doubtful. An amount of Rs. 0.28 lakh had been written off, in August 1987, as irrecoverable.
- (ii) Out of 3,16,571 accounts maintained by 5 other PAOs 6537 IRLAs showed a debit balance of Rs. 169 lakhs in February 1988. Out of this, in 2370 IRLAs, recovery of Rs. 69.98 lakhs had become difficult/doubtful.

The debit balances were on account of

- payment of advances before adjustment of previous advances;
- non-restriction of advances to one-third of entitlement, when IRLAs already exhibited debit balances; and
- payment of advance upto full monthly entitlement without taking into account recoveries on account of advance of pay, scooter, cycle, festival and provident fund, etc.

In September 1988, Ministry of Defence stated that various reasons like delay in the adjustment of debits/posting of credits in IRLAs and transit delay resulted in debit balances. Extra care was taken to ensure that all recoveries due to Government were made from the final dues at the time of final settlement of accounts. Instructions had been issued for close monitoring of the debit balance cases and all efforts would be made to minimise them.

To conclude, Rs. 2.29 crores were due to be recovered from JCOs and ORs, of which recovery of Rs. 0.81 crore had become difficult/doubtful (September 1988). This only reveals the lack of effective internal audit.

CHAPTER IV

ORDNANCE AND CLOTHING FACTORIES

42. General

42.1 Introduction

The ordnance factories establishment is one of the oldest manufacturing establishments in the country. The ordnance factories function as departmental undertakings under the Department of Defence Production and Supplies and are maintained mainly for manufacturing arms, ammunition, fighting and transport vehicles, clothing and equipments to meet the needs of the Armed Forces, para—military forces, civil police, etc. Spare capacity is utilised for producing items for Civil departments, Railways and private bodies. The number of factories has increased from 16 in 1947 to 38 in 1988. Groupwise classification of the factories is metallurgical—6, engineering—14, filling—5, chemical—4, ordnance equipment—5, armoured vehicles—3 and miscellaneous—1. Two factories under armoured vehicle group and one factory each under engineering group and miscellaneous group of factories have not yet started production.

42.2 Organisational set up

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

The objectives behind the reorganisation of the ordnance factories and setting up of the OFB were to improve fulfilment of production targets, utilisation of capacities, maintenance of quality standard, product development and technology transfer, indigenisation and project implementation, etc.

42.3 Working of the Ordnance Factory Board

In February 1985, Government constituted a Working group (Group) to review the working

of the OFB and to evaluate *inter-alia* the extent to which the objectives laid down at the time of setting up of the OFB were achieved. The Group in its report (March 1986) observed *inter-alia* that:

- (a) no assessment of capacity had been carried out by the OFB and capacity estimation continued to be *ad-hoc* and subjective. Derating of installed capacity of plants of World War II vintage and even of newer plants was somewhat arbitrary and was often influenced by factors governing labour utilisation and was not based on capacity of the machines or production lines. The real installed capacity had not been assessed and the concept of achievable capacity was not based on any scientific evaluation of capacity, it merely reflected the production figure that had actually been achieved under the constraints of labour management and labour productivity. In the absence of systematic and scientific determination of capacity for production, the capacity utilisation was not amenable to management control;
- (b) although the Committee appointed by the Government to enquire into the working of the Ordnance Factories had suggested (May 1980) that after identification of surplus capacity, systematic planning should be done to utilise the capacity for producing goods for the civil market as also for exports, data about available surplus capacity had not been compiled by the OFB till 31st March 1986; and
- (c) though the OFB had full powers for monitoring the implementation of projects, there had been no effective monitoring contributing to timely completion of projects.

Action taken by the OFB on the recommendations, had not been reported, but a broad review

of trends in regard to capacity utilisation, production performance, coverage of indents, and project implementation brought out the following:

(a) *Capacity utilisation*

The project capacity and installed capacity of the old established factories are not known. However, as per the latest Management Information System (MIS) followed by the OFB, capacity utilisation in terms of Standard Man Hours (SMH) in respect of 34 Ordnance Factories was found to be 100 per cent and above in 18 factories, 90 to 100 per cent in five factories, 80 to 90 per cent in three factories, 60 to 80 per cent in five factories, 40 to 60 per cent in one factory, 20 to 40 per cent in two factories. The OFB, however, have not furnished the MIS parameters and therefore, the figures of capacity utilisation were not susceptible to verification in Audit.

(b) *Production performance*

An analysis of the production performance in the manufacture of 61 special items of weapons and ammunition for the Services during 1986-87 revealed that the achievements with reference to production programme was 100 per cent and above in case of 41 items, 75 to 100 per cent in case of two items, 50 to 75 per cent in case of six items and below 50 per cent in case of 10 items. Production of the remaining two items was deferred to 1987-88.

The shortfall in the production of 16 items where achievement was below 75 per cent was on account of manufacture of product or its component (three items);

- failure in accuracy proof (three items);
- design deficiencies in components or change in design (two items);
- non-receipt of empties and components (seven items); and
- upward revision of the programme by the indenter (one item).

(c) *Coverage of Indents*

Analysis of coverage of indents showed that 181 old indents placed by the Services on the DGOF/OFB during 1966-67 to 1980-81 were lying outstanding at the end of 1986-87. The yearwise break up of these outstanding indents and the position of supplies made against them were as shown below:

Period of placing of the indent	Number of indents outstanding	Supplies made less than 25 per cent	Indent	
			25 per cent and above but less than 50 per cent	50 per cent and above
1966-67	20	8	2	10
1971-75	89	39	12	38
1976-81	72	45	8	19
Total	181	92	22	67

(d) *Project implementation*

In a test check of the projects sanctioned during 1981 to 1984, the delay in completion of the projects vis-a-vis the planned date of completion ranged between 9 and 73 months.

42.4 *Budgeting*

Budget grant and actual expenditure for 1984-85 to 1986-87 in respect of Revenue and Capital for Ordnance and Clothing Factories were as under:

(In crores of Rupees)

Year	Revenue		Capital	
	Budget grant	Actual	Budget grant	Actual
1984-85	889.47	853.34	103.80	87.30
1985-86	954.58	1007.02	120.85	133.55
1986-87	1202.22	1192.15	198.75	181.04

The saving of Rs. 10.07 crores in the final grant under revenue was stated to be mainly due to non-revision of pay scales of gazetted officers, non-payment of arrears of overtime allowance, etc. to industrial employees recommended by IV Pay Commission; and the saving of Rs. 17.71 crores under capital was mainly due to lower pace of expenditure for the procurement of plant and machinery and credits on account of withdrawal of stock-piles.

42.5 Cost Control

(a) Warrants

The production of an item in Ordnance Factories is controlled through warrants which are floated by factory management to represent a batch of production during a specified period, so that after the end of this period, the cost of the production batch can be ascertained for control.

The Regulations provide that warrants should normally be issued on a short term basis, i.e. for such quantities as could be produced within three months. In exceptional cases longer duration for warrants may be allowed upto six months but such cases are to be limited to the minimum. However, a number of warrants are allowed to run concurrently for same items of production mainly on the consideration that the production in different stages is to be kept even and continuous and the time taken for manufacturing, testing and proving is more than three months. The proliferation of the number of warrants at the same time for the production of a single item leaves scope for utilising the material drawn against one warrant in adjustment of the excess rejection arising out of the manufacture in the previous warrants. This also leads to booking of erroneous expenditure, thus defeating the basic purpose of the warrant serving as an important tool for production and cost control.

(b) Cost of Orders in hand

The cost of outstanding orders in hand of the ordnance factories at the end of the year was not worked out though the accounting procedure provides that at the end of each year a list of all outstanding extracts will be prepared and the values will be worked out for budgetary purposes. Although the Controller of Accounts (Factories) stated in October 1987 that necessary instructions had been issued to all Accounts Officers of the ordnance factories to comply with the provisions laid down in the accounting procedure the same was not, however, being followed (October 1988).

42.6 Work-in-progress

As on 1st April 1986, 47,625 manufacturing warrants valuing Rs. 366.52 crores issued upto 1985-86 were outstanding. Of them, about 54 per cent (25,710 warrants) were cleared during 1986-87 and the balance (21,915 warrants valuing

Rs. 104.22 crores) were awaiting completion at the end of March 1987. Together with the fresh manufacturing warrants issued during 1986-87 but not completed, 45,201 manufacturing warrants (valued at Rs. 378.61 crores) were outstanding at the end of the year (March 1987). The age of the work-in-progress and the manufacturing warrants against which the works remained incomplete on 31st March 1987 were as under:

Year in which works started	Number of manufacturing warrants (in crores of Rs.)	Work-in-progress (in crores of Rs.)
1960-61 to 1974-75	81	1.18
1975-76 to 1979-80	1,186	2.33
1980-81 to 1985-86	20,648	100.71
1986-87	23,286	274.39
Total	45,201	378.61

The Public Accounts Committee in their two hundred fourteenth Report (Seventh Lok Sabha, 1983-84) desired Government to devise measures to wipe out the old warrants so that the items under production do not become obsolete by the time they are completed and the expenditure rendered infructuous. The old arrears, however, still continued to exist. In test check it was found that a warrant valued Rs. 33.18 lakhs for manufacture of an ammunition issued in April 1981 could not be completed (March 1988) due to non-availability of proved empty fuzes.

42.7 Stock Verification

Annual stock verification carried out by an OFB/Ordnance group under the control of the deficiencies headquarters revealed the following surpluses in the factories:

Year	(In lakhs of Rupees)
1984-85	Surpluses
1985-86	Surpluses
1986-87	Surpluses

The total number of items for which was not verified during 1986-87 was 48.24 (value not indicated) in seven factories again 33,559 numbers in five factories during 1985-86.

Action taken to regularise the deficiencies/surpluses revealed in stock verification called for (February 1988) was awaited in Audit (November 1988).

42.8 Overall statistical data

The overall statistical data on the activities of the ordnance factories for the period 1984-85 to 1986-87 is shown as below :

	1984-85	1985-86	1986-87
1. Average value of fixed capital assets (Rs. in crores)	506.75	546.07	584.62
2. Man-power (number in lakhs)	1.83	1.85	1.81
3. Net cost of production (excluding inter-factory demands) (Rs. in crores)	913.34	1006.65	1224.89
4. Capital output ratio	1: 1.80	1: 1.84	1: 2.10
5. Factory cost analysis in terms of percentage of gross value of production:			
Material	65.90	66.16	64.76
Labour	6.75	6.83	6.94
Others	27.35	27.01	28.30
6. Gross contributed value (Value of production less materials and outside supplies and services) (Rs. in crores)	396.93	459.95	567.06
7. Wages (Rs. in crores)	78.60	92.83	111.60
8. Net contributed value (gross contributed value less wages) (Rs. in crores)	318.33	367.12	455.46
9. Net contributed value per Rs. 1 crore of fixed capital assets (Rs. in crores)	0.63	0.67	0.78
10. Average earnings per employee (Rs.)	16,110	17,982	23,225
11. Net contributed value per employee (Rs.)	17,420	19,861	25,133
12. Value of abnormal rejection (Rs. in crores)	5.68	5.17	4.51
13. Percentage of abnormal rejection on gross value of production	0.49	0.38	0.28
14. Customer composition (percentage of total issues net of Inter-Factory Demands):			
(i) Army	90.07	91.10	90.08
(ii) Navy, Air Force and others	3.05	2.96	4.15
(iii) Civil trades	4.38	4.06	3.67
(iv) Own stock and capital works	2.50	1.88	2.10
15. Extent of requirement of stores (armament, ordnance clothing, mechanical transport) met by ordnance factories in terms of percentage:			
(i) Army	54.80	54.54	42.44
(ii) Navy, Air Force and others	22.51	22.19	30.25
16. Value of inventories (Rs. in crores)	740.67	730.62	772.36
17. Surplus, obsolete, slow moving and non-moving inventories (Rs. in crores)	97.89	114.46	92.49
18. Norms of general inventory holdings in terms of months requirement	6 months	6 months	6 months
19. Inventories in terms of months consumption	10.43 months	8.56 months	8.05 months
20. No. of Warrants pendency:			
(i) Total No. of Warrants pendency as on 31st March 1985/1986/1987	42,334	47,625	45,201
(ii) No. of Warrants more than one year old onwards on 31st March 1985/1986/1987	21,138	23,465	21,915
21. Normal manufacturing cycle/normal life of manufacturing warrants	6 months	6 months	6 months
22. Value of components and products in stock (Rs. in crores)	193.45	178.82	144.90
23. Components and products holding in terms of months production	2 months	1.58 months	1.08 months

The case was referred to the Ministry of Defence in August 1988 and their reply has not been received (October 1988).

REVIEWS

43. Design and development of Main Battle Tank—Arjun.

43.01 Introduction

In May 1974, Government sanctioned a project for design and development of Main Battle Tank (MBT) by Defence Research and Development Organisation (DRDO) at a total cost of Rs. 15.50 crores. The tanks were to be in service during 1985 to 2000 AD and in replacement of existing tanks which were expected to be out-dated beyond 1985. The project envisaged manufacture of four prototypes by April 1980 and eight by April 1982 and bulk production within 10 years (April 1984).

The benefits of the project as envisaged were (i) to eliminate dependence on foreign countries for design and manufacture of armoured fighting vehicles, (ii) placing the country on par with super powers with regard to quality of tanks and (iii) complete elimination of the requirement of foreign exchange (FE) in production of the tank on total indigenous design after development of the engine.

In paragraph 8 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for 1981-82, it was mentioned that prototypes were yet to be completed (March 1982) and if the modern tank was not introduced from 1985 as planned, the Army would continue with outdated tanks even beyond 1985, or depend on imports. The Ministry of Defence informed the Public Accounts Committee (PAC) in January 1984 that the projection made in 1974 was obviously unrealistic and very ambitious one and between phasing out of the existing tanks and the production of the modern tank an imported *interim* tank was being used. The PAC observed in February 1984 that the modern version of the tank was nowhere in sight and the production facilities for the imported version had not been set up. They expressed their serious displeasure at the tendency of the authorities to make such an unrealistic estimate in the case of vital equipment for the defence of the country and hoped Government would take appropriate action to expedite the development of modern version of the tank.

43.02 Scope of Audit

A review was carried out in Audit on the development of the MBT. The overall task *vis-a-vis* the results of indigenous efforts in development of the various systems of the tank, namely, engine, transmission assembly, suspension system, hull and turret, gun control system, vision and sighting system, armament and ammunition, electrical system, armour, etc. consequences on account of delays in commencement of production and cost escalation were also examined in Audit.

43.03 Implementing agency

The programme was entrusted to the Combat Vehicle Research and Development Establishment and its Director/Project Co-ordinator was authorised to allot sub-projects to other Defence Research and Development Laboratories/Establishments for development/manufacture of materials, components and sub-assemblies required for the project. In all 10 laboratories/establishments are involved in the project.

43.04 Highlights

- A project for production of Main Battle Tank sanctioned in 1974 envisaged manufacture of twelve prototypes to be offered for trials by April 1982. However, the time frame was not adhered to as till August 1988, eleven prototypes only had been built with imported engines and transmission and with imported/indigenous sub-systems and components. A fully integrated prototype has not yet been given to the users for their full-fledged evaluation.
- Due to various delays bulk production scheduled to commence from 1984 is expected to commence from 1991 only with imported engine and transmission unit and from 1995 with indigenous engine and transmission unit.
- The initial cost of the project was estimated Rs. 15.50 crores in 1974 and even after 14 years of research work with an expenditure of Rs. 118.22 crores upto March 1988, a complete redesign of the engine has been thought of. The revised estimated expenditure on the project was Rs. 280.80 crores, as assessed in 1987.



MAIN BATTLE TANK—ARJUN

— According to initial assessment, the Defence Research and Development Organisation was stated to possess the competence to develop a tank on a totally indigenous design after development of engine which was considered as a grey area. However, the project was too complex to achieve the task of assembling an indigenous unit. To provide total cover in the field of design, development, evaluation and establishment of testing facilities in the field of armoured fighting vehicles, a consultancy agreement was entered into in November 1983 with a foreign firm for a period of two years at a cost of Rs. 89.50 lakhs. Another foreign firm was also associated in May 1988 for manufacture and supply of gunner's main sight and consultancy at a cost of Rs. 77 lakhs. As the indigenous design was likely to take some more time, a public sector undertaking was entrusted in February 1988 with the manufacture of a foreign gun control equipment for which licence is yet to be obtained. Moreover consultancy agreement might be entered into to bring in design refinements in suspension and running gear items and chassis structure. Further, consultancy services for transmission system was stated to be not available. For engine, a consultancy agreement involving Rs. 71.50 lakhs was entered into with a foreign firm for six months from September 1987 and another consultancy offered was under active consideration (October 1988). Thus, major systems like engine, transmission, gun control, fire control and sighting systems are still under development and involve a number of Indian and foreign agencies.

- Hull and turret, armament and ammunition, electrical system and Kanchan armour have been developed by the Defence Research and Development Organisation.
- For completion of the project the requirement of foreign exchange was raised from Rs. 2.32 crores in 1974 to Rs. 102.32 crores in 1987 constituting 47 per cent of total expenditure upto March 1988. This indicates that even after productionisation, dependence on import of foreign compo-

nents/sub-system involving foreign exchange would be significant. According to the assessment in August 1988 import content of the tank would be about 45 per cent and would come down to 35 per cent as the production picked up.

- Although the monitoring of the project by three committees was envisaged, but meetings were not held regularly and the monitoring of the project was not comprehensive. Deficiencies in monitoring procedures were also in evidence.
- Such a long and interminable delay in indigenisation can seriously affect the defence preparedness.

43.05 *Scope of the project*

The project was sanctioned in May 1974 after DRDO made an assessment of the task *vis-a-vis* the competence available in the design and production fields. They were of the view that it was possible to develop the tank according to the qualitative requirement (QR) approved by Army Headquarters in August 1972. It was also decided that QR would be continuously updated based on lessons of war and developments in technology elsewhere. The indigenous development of an engine with an estimated output of 1000-1200 Horse Power (HP) was a part of the programme. But as it would take a minimum of 10 years to develop the engine it was decided to choose a proven engine from abroad in order to commence development and introduce the MBT within 10 years.

43.06 *Development of prototypes*

The project sanctioned in May 1974 envisaged manufacture of 12 prototypes at a total cost of Rs. 5.65 crores (FE : Rs. 0.67 crore). As per the time schedule four mild steel prototypes were to be offered for trials within six years (April 1980) and another eight armoured prototypes within eight years (April 1982). It was planned in July 1979 that six prototypes would be given to the Army for trials from 1983. The first prototype fitted with imported engine, transmission and suspension systems was handed over in March 1984 to users for limited tests. A total number of 96 observations were made by the team whose preliminary evaluation

revealed deficiencies in respect of width of the tank and the sighting systems as also lack of integration between different systems.

The prototype plans and availability of sub-systems were reviewed in August 1984. In order to try out individually the various components and sub-systems, to have them integrated with the major system and to evaluate their performance before finalising the design the number of prototypes was increased from 12 to 22 (revised to 19 in May 1987). In addition, 20 (revised to 23) pre-production series tanks were to be manufactured by December 1988. As development was yet to be carried out on engine and transmission it was decided in August 1984 to complete the remaining development work under two distinct streams-in the first stream 15 prototypes (revised to 12 in May 1987) with imported power units and in the second stream seven prototypes with indigenous power units. This led to a revision of estimated cost to Rs. 187.55 crores (Rs. 69.00 crores in FE) for 19 prototypes and included Rs. 92 crores for 23 pre-production series tanks.

Out of these 19 prototypes, six were to be offered for user's evaluation. User's evaluation was due to be completed by December 1986 and manufacture of pre-production series tanks by December 1988. The re-fixed planned date of completion (PDC) had undergone further revision from time to time. This was due to (i) lack of machining capacity for hull and turret, (ii) delay in finalisation of turret design as a result of revision of QR with regard to sighting system, (iii) non-availability of some other major sub-systems like gun control, fire control, etc., (iv) delay in delivery of imported power packs (engine and transmission) and (v) delay in execution of orders by two Public Sector Undertakings (PSUs). The latest PDC (October 1988) for the 12 prototypes under the first stream was December 1988, seven prototypes under the second stream by September 1991 and 23 pre-production series tanks by December 1989.

Till August 1988 eleven prototypes were built with imported engines and transmission systems. Imported suspension units were fitted on three prototypes and two prototypes were fitted with imported gun control system. Besides,

imported components were also used in development of the various other sub-systems.

A dedicated user's evaluation team was first constituted in November 1986. Examination of two prototypes was carried out by them between November 1986 and February 1987. Both the prototypes were fitted with imported powerpack and one of them with imported gun control system.

The various deficiencies noticed by the team were examined by five Task Forces constituted for optimising the prototypes built and their recommendations were considered in December 1987. In the meantime in May 1987, for completing evaluation the Army reduced their requirement of prototypes from six to four for two mobility trials and two for fighting system evaluation. It was planned in May 1987 that two prototypes for automotive evaluation fitted with imported powerpack would be made available by December 1987 and two prototypes for evaluation of fighting system by March 1988. The time schedule was changed to March 1988 and July 1988 respectively due to late receipt of powerpack from abroad, delays in fabrication of hulls by the PSUs, delay in finalising the configuration of turret and availability of only two imported gun control systems.

However, till October 1988 only one prototype was offered for user's automotive evaluation and another was being handed over. The schedule for delivery of two fighting system prototypes was revised as December 1988. Thus in spite of repeated assurances the users had not got the fully integrated prototype as a whole even by October 1988. The Ministry stated in October 1988 that the same was likely to be made available by December 1988.

43.07 Development of engine

Before the project was sanctioned it was decided in July 1973 that the development work on proposed MBT engine should be taken on priority basis to avoid foreign collaboration.

At the time of undertaking the project (1974) the engine of the existing tank was considered as underpowered for the MBT. Due to design

limitations it could not be uprated to the required power output level. So the development of a suitable indigenous engine with an estimated output of 1000—1200 HP was a part of the project. It was assessed that a minimum of 10 years would be required to develop the engine. In May 1974, it was considered that the proposed Indian design, incorporating novel features, might not be available readily on any of the engines from abroad and a chosen engine or a derated version thereof or a similar engine of the same family developing less horse power should be tried on the existing tank and a decision taken to manufacture that engine.

Efforts to locate a suitable engine continued from imported sources with emphasis on its indigenous development from the very beginning. Though a 1000-1200 HP engine would have sufficed for the purpose of the QR the basic indigenous engine was designed to have potential to develop 1500 HP. At the design stage (1974-75) the development of engine in three phases to achieve different HP output level was visualised.

The development of indigenous engine was taken up by end 1974 around an engine of foreign origin available in the country. Thereafter, during June 1976 to June 1978 three engines were imported at a total cost of Rs. 25.03 lakhs. After study, one of them was discarded and design concepts and ideas were taken from the remaining two engines which were incorporated in the indigenous engine. In October 1979, the first indigenous engine was assembled. In May 1980, a positive result was reported to have been achieved in the development of 1500 HP engine by the DRDO. Import of engines was not envisaged even in October 1980.

Till August 1984 the indigenous engine could only develop for a short period near about the power targetted for the first phase of development. So a proposal for technical consultancy in five different phases within a time frame of 24-26 months costing Rs. 233 lakhs was obtained in October 1984 from a foreign firm. In February 1985, the DRDO proposed for a complete design review of the indigenous engine and further guidance by this firm. However, in view of the high cost involved and for assessing the

benefits of foreign consultancy it was decided to go in, at the first instance, for the first phase of consultancy viz. concept and design analysis of the engine, presentation of the modifications required to be carried out for the turbocharge phase and the development. Ministry's sanction for such an agreement with the foreign firm at a cost of Rs. 71 lakhs was obtained in February 1987. A set of engines and other systems needed for the analysis was sent in August 1987 to the foreign firm. The indigenous engine, after carrying out modification attained (March 1988) a certain HP on the foreign consultant's test bed. Thus, development work on optimisation remained (October 1988) to be carried out further.

The first phase of consultancy was completed with the presentation of recommendation by the firm during May 1988 requiring some major changes to be made on detailed design of major component. For the second phase of development work offers received were under study by a technical review committee (October 1988).

Expenditure including commitment on development of engine till March 1988 was Rs. 241.82 lakhs (FE : Rs. 42.29 lakhs).

43.08. *Import of engine*

In July 1980, the Army had proposed to plan for a viable alternative engine to meet any situation arising out of difficulties with indigenous efforts. The need was repeated in May 1981, September 1981 and February 1982. But the DRDO held that taking on an alternative engine at that stage would only divert their attention and was likely to cause a set back to the indigenous development efforts. In the meantime, offers to supply engines were received from different sources. In November 1981, the DRDO stated that by and large the problem areas had been identified and they expected to develop the engine by June 1982 which would meet the QR. So it was decided that the primary thrust should be towards development of indigenous engine only. Till February 1982 the indigenous engine could not be developed. However, the DRDO recommended postponement of a decision on alternative powerpack till August 1982 as adoption of any of the alternatives would call

for total redesign of hull and would thereby cause delay in tendering the prototypes. This was agreed to. As indigenous efforts were beset with problems 42 engines with transmission units at a total cost of Rs. 23.66 crores were imported from November 1983 onwards for use on the prototypes and the pre-production series tanks.

In January 1986, the DRDO expected to complete the development of the engine by 1989. On this basis it was estimated that a fully proven engine would be available in required number only by 1995. On the basis of the PDC for production of the tank by 1990 the requirement of engines which would need to be imported along with transmission units was assessed in July 1986. The latest (October 1988) PDC for manufacture of seven tank prototypes with indigenous engine and transmission unit is from September 1991 but as yet (October 1988) there has been no re-assessment of the requirement of imported powerpack nor any decision taken about the import of these units. The Ministry stated in October 1988 that re-assessment of the requirement of imported powerpack for bulk production of tanks would be done at appropriate time.

The above facts reveal that after study of the imported engines and indigenous efforts for 14 years an engine could not be developed to the planned output level, thus leading to foreign consultancy for a complete design review and guidance and import of engine was also delayed which in turn delayed completion of the tank prototypes.

43.09 *Transmission system*

Before the project was sanctioned in 1974, the DRDO assessed that they had the competence to develop a transmission system. In June 1973 it was decided that the DRDO would undertake the development work on a higher priority. This was reiterated in February 1975. In March 1979 it was estimated that transmission set less hydraulic pumps and motors used for steering would be ready for test by May 1980. The hydraulics when tested developed problems requiring design improvements for which technology was reported in July 1980 to be not available in the country. In view of this six units of hydrostatic steering units were imported at a total cost of Rs. 17.33 lakhs. The incorporation of the imported

units called for extensive changes to the transmission casting design. The first prototype transmission, without hydrostatic steering system was load tested in October 1982.

Thereafter, transmission set was being imported along with 42 engines for fitment on the tank prototypes and pre-production series tanks. The Ministry stated in October 1988 that this import became a technical necessity to obtain them matched as powerpacks.

In March 1988, the DRDO observed that indigenous transmission to match with higher HP imported engine would not be available for bulk production till 1995. Accordingly, it was decided in March 1988 that whatever decisions for the fall back options of engine were taken would be *mutatis-mutandis* applicable to the transmission also.

Thus, the development of indigenous transmission system was lagging far behind and the problem of its integration with imported engine was yet to be sorted out (October 1988).

Expenditure incurred and committed upto March 1988 on development of transmission system was Rs. 412.40 lakhs (FE: Rs. 82.40 lakhs).

A tentative proposal for a detailed study and appropriate design, manufacture and supply of complete cooling package for higher HP imported engine indigenous transmission combination was forwarded in May 1987 to three firms abroad against which only one proposal was received and was under study (October 1988).

43.10 *Suspension and running gear*

The QR called for concurrent development of two types of suspension. Development of first type was not taken up initially and subsequently in August 1984 it progressed on a lower priority. The second type was considered as a high technology area and in spite of lack of know-how in some critical areas DRDO undertook its development. The first prototype suspension revealed (November 1981) weaknesses in design. Therefore, a total redesign of the suspension system was undertaken on the lines of a system imported at a cost of Rs. 6.71 lakhs and a new design was evolved in January 1982. Besides, as an interim measure,

three sets (48 numbers) of suspension units were imported during 1982-84 at a cost of Rs. 149.95 lakhs and utilised for tank prototype trials and development of other running gear systems. Thereafter, suspension units were procured from indigenous trade sources. The reliability of the indigenous units was not, however, established till August 1988.

For the running gear system the development of rim wheel was taken up as a part of the project. To meet urgent requirement of aluminium forged rim wheels and to establish know-how 93 wheels were imported at a cost of Rs. 3.20 lakhs during 1985-86. The developed running gear items were fitted on eight prototype tanks and certain deficiencies were noticed during running of the prototypes. The track life obtained till August 1988 was totally inadequate and considering the stage of development, it was decided to import tracks for completing the trials on the prototypes. The Ministry stated in October 1988 that foreign consultancy agreement might be entered into if required to bring in design refinements in suspension and running gear items. Total expenditure on development of this system as on 31st March 1988 was Rs. 1405.22 lakhs (FE: Rs. 245.70 lakhs).

43.11 *Hull and turret*

The DRDO claimed that they have successfully developed hull and turret and desired to freeze the design. In December 1987 the user stated that it need not be frozen till the mobility evaluation was successfully completed.

Expenditure on development and manufacture of hulls and turrets as on 31st March 1988 was Rs. 714.00 lakhs (FE: Rs. 34.88 lakhs) and Rs. 708.10 lakhs (FE: Rs. 77.70 lakhs) respectively.

43.12 *Gun control system*

The QR issued in August 1972 provided for gun control equipment of higher capabilities and reliability and no difficulty was anticipated in its development. The indigenously developed gun control equipment installed on the first prototype tank was under evaluation since 1983. Adequate consultancy and assistance from a foreign firm in the selection of components and designing of sub-systems for the gun control system was obtained under an agreement entered into in November

1983. Two sets of gun control system and a test equipment at a total cost of Rs. 63.79 lakhs were imported during 1985. Till October 1987 gun control systems were fitted on five prototypes. During evaluation trials design changes were found necessary to improve the performance. The imported system was installed on two prototype tanks and exercise on integration of fire control and gun control systems was continuing (October 1988).

In the meantime, in February 1988 an agreement was executed with a PSU for the licence manufacture of the same imported gun control equipment, under their own arrangement and supply them to the DRDO as their indigenous design was likely to take some more time.

Total expenditure for development of this system as on 31st March 1988 was Rs. 288.37 lakhs (FE: Rs. 222.11 lakhs).

43.13 *Vision and sighting system*

As per the QR (1972) an integrated fire control system with range finder, computer, gun control equipment and night vision instruments were required to be designed. It was estimated that the DRDO and PSUs had the competence and infrastructure for design and manufacture of these sub-systems. The DRDO undertook the design and development of various vision equipment, integrated fire control system (IFCS), range finder, thermal imaging, low light television (LLTV) system for night sights and computer.

In June 1977, a decision was taken that IFCS based on two different systems would be developed simultaneously. In March 1979, it was decided to develop only one system. The indigenous know-how available in development of IFCS and thermal image system was considered to be very limited. Therefore, search for a fire control system from abroad continued (July 1978). At this stage the DRDO confirmed that for *ab-initio* development of IFCS competence for the required computer of IFCS and the sighting systems was available. Major difficulty was in the field of interfacing of the computer with the gun control system and different accessories and for the computer difficulties mainly arose in the area of software. The computers procured from indigenous source were undergoing tests (June 1988).

Regarding night sight, it was apprehended (March 1979) that it might take sometime to be developed. In this context development of LLTV system was undertaken as a first step. However, work on thermal image system continued concurrently. In July 1980, the DRDO confirmed that all sub-systems on vision and sighting instruments and fire control system except for the computer and thermal imager would be available by June 1981. The thermal imager which was in laboratory scale could be expected only by 1983-84. Technical trials conducted in November 1981 revealed that maximum range for night vision instruments was limited with LLTV. Though higher ranges were necessary it was agreed in February 1982 to accept this range with LLTV as a starting point as higher ranges would be available once the thermal image night sights were developed. In January 1983, the DRDO insisted on early finalisation of the QR for thermal imager. They were told that there was no need to wait for the QR and to go ahead with the development of the system. In May 1983 DRDO identified three major items where indigenous technology was not available, out of which they were obtaining technology for two items. The revised QR on vision and sighting system was issued in October 1985 necessitating *de novo* design. The fire control system elements during day and night situations were tried out in May 1987 by the user which revealed many deficiencies. The DRDO stated in October 1988 that they had analysed the problems and would achieve an acceptable performance.

In May 1988, a foreign firm was associated for manufacture and supply of gunner's main sight (cost: Rs. 13.46 crores) and their consultancy (cost: Rs. 0.77 crore) in its integration.

The indigenous gunner's primary sight without the thermal imager was put to trial in August 1988 and it revealed that the sight head needed further improvements and modifications.

Total expenditure on these systems as on 31st March 1988 was Rs. 608.87 lakhs (FE: Rs. 367.81 lakhs).

43.14 *Armament and ammunition*

The QR (1972) called for a new tank gun and connected ammunition. There were subsequent changes in the QR in 1979, 1982 and 1985.

The DRDO stated in October 1987 that development of the gun had been completed and production thereof was being established in ordnance factories. The Ministry stated in October 1988 that the development of armament and ammunition systems were in advanced stage and was undergoing reliability tests.

Expenditure on development and manufacture of gun and its related ammunition as on 31st March 1988 was Rs. 938.27 lakhs (FE: Rs. 145.22 lakhs). The expenditure in foreign exchange included one item (cost: Rs. 39.76 lakhs) which was yet to be indigenised (April 1988).

43.15 *Other major systems*

(i) *Electrical systems*

The electrical/electronic units required for automotive and other functional systems had been developed before October 1983 and were being installed from the first prototype. Total expenditure as on 31st March 1988 was Rs. 191.77 lakhs (FE: Rs. 64.05 lakhs). The Ministry stated in October 1988 that these units as installed in prototypes were found satisfactory during trials.

(ii) *Kanchan armour*

To provide immunity against all types of projectiles development of composite armour known as 'Kanchan' armour was undertaken by the DRDO. It was completed and the system was undergoing reliability tests (October 1988). Total expenditure on its development as on 31st March 1988 was Rs. 146.57 lakhs.

43.16 *Plan for pre-production series tanks and bulk production*

In June 1986, two PSUs were designated as the prime agencies for pre-production series tanks. It was estimated in December 1987 that a lead time of about three years would be required by these agencies for bulk production. Ordnance factories and other public and private undertakings would also require a lead time for manufacture of sub-systems. The present PDC (October 1988) for manufacture of pre-production series tanks is December 1989 and commencement of bulk production with imported power pack from 1991. Development of the various

sub-systems and user's full-fledged evaluation of the prototypes was, however, still incomplete. The Ministry stated (October 1988) that the transmission and the fire control systems were undergoing development testing and the development of other systems like hull, turret, armament and ammunition systems and Kanchan armour were in advanced stage. One prototype was expected for user's full fledged evaluation by December 1988.

In May 1987, the unit cost of pre-production series tanks with imported power pack and with indigenous power pack was assessed by the Ministry as under:

	(Rs. in lakhs)	
	With imported power packs	With indigenous power packs
With indigenous gun control system	395.98 (FE 171.58)	385.18 (FE 98.14)
With imported gun control system	402.07 (FE 186.51)	391.27 (FE 113.07)

However, import content of the tanks was assessed in August 1988 to be 45 per cent which would be brought down to 35 per cent as the production picks up.

43.17 Foreign consultancy

To provide total cover in the field of design, development, evaluation and establishment of testing facilities in the field of armoured fighting vehicle, a consultancy agreement was entered into in November 1983 with a foreign firm, for a period of two years in the first instance with option to extend the agreement for another three years, at a cost of Rs. 89.50 lakhs. The consultancy was sought as it came to light that the DRDO lacked infrastructure needed for tank development particularly in the field of test facilities. The firm also gave opportunity to the DRDO officials to see various sub-systems of a tank of their country. The agreement expired in November 1985 and was not renewed though proposed initially.

In February 1987, Government sanction was accorded for another consultancy contract with another foreign firm for developing indigenous engine at a cost of Rs. 71.50 lakhs.

The provision of Rs. 5 crores in the revised project estimate sanctioned in May 1987 was, besides the above two agreements also for consultancy on design and development of critical transmission systems. In May 1988, a foreign firm was associated for manufacture and supply of Gunner's main sight and consultancy (cost: Rs. 77 lakhs).

The Ministry stated in October 1988 that consultancy services for transmission system were not available and a fresh consultancy for engine development was under active consideration and consultancy agreement might be entered into if required to bring in design refinements in suspension and running gear items and chassis structure.

43.18 Financial progress

The total expenditure on the project including commitments as on 31st March 1988 was Rs. 11,822.47 lakhs (FE : Rs. 5607.99 lakhs). The FE element constituted 47 per cent of the total expenditure.

43.19 Revision of project cost

The project was sanctioned in May 1974 at a cost of Rs. 15.50 crores (FE: Rs. 2.32 crores). Consequent on revision of QR, escalation of prices, design of the indigenous engine, creation of additional infrastructure facilities, expenditure on civil works, etc. the project cost was revised to Rs.56.55 crores (FE: Rs. 12.96 crores) in October 1980. As a result of the need for increased number of prototypes and pre-production series tanks, import of power packs, establishment of armour fighting vehicle centre, augmentation of infrastructural facilities, price escalation, consultancy charges, etc. the project cost was further revised to Rs. 280.80 crores (FE: Rs. 102.32 crores) and sanctioned by the Ministry in May 1987.

The extent of revisions in the project estimate subsequently indicates lack of adequacy in project planning. The assessment of the task *vis-a-vis* the competence available in the design and production fields was unrealistic.

The Ministry, however, stated in October 1988 that the revision of project estimate was due to deliberate project planning. It became a necessity consequent on changes in QR and the need for

work in newer development areas besides catering for genuine developmental problems and colossal magnitude of technology transfer.

43.20 *Revision of time frame*

As per the time schedule fixed in 1974 trickle production was due to commence by April 1983 and bulk production by April 1984. This schedule was revised from time to time. The latest PDC (October 1988) is pre-production series tanks by December 1989, bulk production with imported power pack from 1991 and with indigenous power packs from 1995. With the present state of development/manufacture of the tank this PDC is bound to undergo further change.

The Ministry stated in October 1988 that assessment of competence and infrastructure had to undergo change consequent to revisions in QR and technological demands thereof.

43.21 *Monitoring*

Monitoring of the project was being done by the following three committees:

- (a) Working Group under the chairmanship of Vice Chief of Army Staff consisting of representatives of Inspection, Production, DRDO and Army Headquarters to discuss, review and progress design, development and production of the proposed tank and to draw up a time bound programme for expeditious completion of the task. The working Group reports to the Steering Committee.
- (b) Steering Committee under the Chairmanship of Secretary, Department of Defence Production and Supplies, represented by Army, Ministry of Defence, DRDO, Production and Inspection agencies with the objective of monitoring the entire project.
- (c) Combat Vehicle Advisory Committee under the Chairmanship of Scientific Advisor to Raksha Mantri. This committee is represented by the DRDO establishments concerned with an object to review the progress of the project and to coordinate and discuss in-house problems to ensure speedy developments. This Committee also discusses various technology options and problem areas.

The Working Group was required to meet once in every quarter. Till October 1988 the Working Group met only 14 times—once each in 1973 to 1977, 1980, 1981, 1983, 1985 and 1987. The Group met twice in 1982 and 1986 and no meeting was held in 1978 and 1979.

The Steering Committee was required to meet once in every six months. The time schedule was not observed by the Steering Committee also. They met twice before the project was sanctioned and thereafter 17 times from 18th May 1974 to 17th March 1988 at an interval of 6 to 19 months.

The Combat Vehicle Advisory Committee was required to meet as often as needed. The Committee met four times from December 1980 to April 1982 and thereafter once in February 1987 and again in August 1988.

Though the project was taken up in 1974 the desirability of using performance evaluation and review technique (PERT) for progressing the project was stressed only in July 1980. A PERT chart upto offering of the first prototype for user's evaluation by December 1983 was prepared in September 1981. At that time it was decided to prepare a Master Control Network Chart to cover the development of subsequent prototypes, user's evaluation and commencement of trickle production of MBT. In May 1987 the user presented a PERT chart showing various activities of the project upto introduction of the tank into service and DRDO was asked to analyse the chart made by the user and prepare their own PERT chart. The chart prepared was awaiting finalisation (April 1988).

44. Delay in indigenisation of a weapon and the related ammunition

44.1 Introduction

The introduction in Services of a weapon system of foreign origin was approved by Government in February 1974. Agreements were concluded in April 1976 with a foreign supplier for the purchase and also supply of technical documents and knowhow for indigenous manufacture of the weapon with its accessories and ammunition items on payment of a licence fee of Rs. 1.53 crores in foreign exchange.

The project at a sanctioned cost of Rs. 14.37 crores was scheduled to be completed by 1981-82 and the production was to commence by 1982-83. The delay in completion of the project was mentioned in sub-paragraph 7(iv) of paragraph 6 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1982-83. According to Ordnance Factory Board (OFB), production of all items of weapon and ammunition excepting two types of fuzes had been established by 1984-85.

44.2 Scope of audit

A further review was carried out in Audit to assess the present position of indigenisation of the weapon and ammunition.

44.3 Organisational set up

Nine ordnance factories under the control of the OFB were involved in the indigenous production of the weapon and the related ammunition.

44.4 Highlights

- **The production of the weapon and its ammunitions sanctioned in August 1978 involving an expenditure of Rs. 14.37 crores scheduled to commence production in 1982-83 was established in 1984-85 excepting two types of fuzes which were still (October 1988) to be indigenised.**
- **Due to delay in completion of the project the ordnance factories had to resort to the import of weapon and ammunition and complete knocked down weapon and ammunition amounting to Rs. 16.25 crores to meet the requirements of the Army during 1982-83 to 1983-84.**
- **Although the project was sanctioned to indigenise the production of the weapon and the ammunition in the interest of strategic necessity and self-reliance, even after a decade of sanction of the project (August 1978) the production of neither the weapon nor the ammunition had been fully indigenised.**
- **The total cost (Rs. 7.08 crores) of different hardware, components, etc. imported for production of the weapon and ammunition (Rs. 20.33 crores) during the period 1984-85 to 1985-86 in ordnance factories constituted**

35 per cent of the total cost of production, though at the time of sanctioning the project it was envisaged that the value of the components to be imported was not likely to be more than 5 per cent of the total cost of weapon and ammunition. Value of import during 1986-87 and 1987-88 was Rs. 23.38 crores.

- **Also Army had resorted to the import of ammunition costing Rs. 4.98 crores during the year 1985-86.**

44.5 Production planning

During 1980-82, the weapon and the ammunition were to be produced mainly with imported semis, components and complete knocked down (CKD) packs to be assembled in ordnance factories. Indigenisation in production of the weapon and the ammunition was to be achieved from 1982-83. It was also envisaged at the time of sanctioning the project in August 1978 that certain components might have to be imported on permanent basis, but the value of such components was not to be more than five per cent of the total cost of weapon and ammunition.

44.6 Execution

44.6.1 The project was scheduled to be completed by 1981-82. According to the OFB, production of all items of weapon and ammunition excepting two types of fuzes was established by 1984-85 and the delay in completion of the project was due to (i) delay in completion of civil works by the Military Engineer Services (MES), (ii) the delay in supply and commissioning of some critical machines and (iii) delay in finalisation of specification of the machines due to delay in change in design of an ammunition fuze. The change in design of the fuze was intimated by the firm in June 1981 and accepted by Government in March 1984.

44.6.2 331 machines costing Rs. 7.98 crores were required for the project. An analysis of the pattern of ordering, receipt, erection and commissioning of 321 machines (112 numbers for the weapon and 209 numbers for the ammunition costing Rs. 7.54 crores revealed that there were wide time gaps (i) between placement of orders and receipt of machines, (ii) between receipt of

machines and their erection and (iii) between erection and commissioning of the machines. By the time (March 1982) the project was scheduled to be completed, 297 machines were ordered, 254 numbers were received, 152 numbers were erected and only 107 numbers were commissioned. Thus, in terms of operational readiness of machines barely 33 per cent was achieved.

44.6.3 The position of sanctioning and completion of the civil works was as under:

Sl. No.	Nature of works and amount	Year of sanction	Planned date of completion	Actual date of completion
(i)	Building by new construction (Rs. 27.93 lakhs)	May 1979	November 1980	September 1981
(ii)	External electrification (Rs. 23.70 lakhs)	September 1980		
(iii)	Modification/alteration to a building (Rs. 7.65 lakhs)	July 1979	January 1982	June 1983
(iv)	Provision of airconditioning plant with standby unit (Rs. 6.11 lakhs)	February 1981		
(v)	Building by new construction (Rs. 106.67 lakhs)	March 1979 as amended in May 1981	March 1981	October 1982
(vi)	Extension/modification to a building (Rs. 4.30 lakhs)	October 1979	April 1981	October 1981

The delay in completion of the works ranged from 6 to 19 months.

44.6.4 During the period 1982-83 to 1983-84 weapon and ammunition costing Rs. 25.40 crores were issued to the Army by the ordnance factories by resorting to import of weapon and ammunition as also CKDs amounting to Rs. 16.25 crores.

44.7 Production

Although the production of the weapon and the ammunition was stated to have been established by 1984-85, the production of neither the weapon nor the ammunition had been fully indigenised (October 1988) and issues to the Army by the ordnance factories were made by procurement of considerable amount of hardware and components from the foreign supplier.

During 1984-85 to 1985-86, against the production programme of 1000 numbers of the weapon, 820 numbers costing Rs. 2.91 crores were issued by ordnance factories. The shortfall occurring in 1985-86 was stated to be due to delay in receipt of hardware items from the foreign firm. The value of the imported hardware utilised in production of the weapon during these two years was Rs. 0.76 crore representing 26 per cent of the total cost of production. Forgings constituting 18 per cent of the cost of the weapon were imported though at the time of sanction of the project it was assured by the OFB that there would be no difficulty in getting supplies of the forgings indigenously. During 1986-87 to 1987-88, 1064 number of weapons were issued against production target of 1000. The value of the hardware components, etc. imported to achieve the production of these two years called for (September 1987/April 1988) were awaited (October 1988) from the OFB. However, it was noticed that Government sanction for import of forgings costing Rs. 0.52 crore was issued in April 1987.

Upto 1985-86 sub-calibre adapters were issued as per programme. The production during 1986-87 was, however, 63 numbers against the target of 220. The OFB stated that the adapters manufactured were tested for the first time with the indigenous ammunition during 1986-87 and were not accepted by the inspectorate due to erratic results in accuracy tests. The adapters were, however, found acceptable when tested with imported ammunition. During 1987-88, 200 adapters were produced and issued after testing with imported ammunition.

The value of the imported components utilised in the production of 693 adapters costing Rs. 26.88 lakhs during 1984-85 to 1987-88 was Rs. 3.77 lakhs representing 14 per cent of the total cost.

Production of all ammunition save ammunition 'T' fell short of the numbers programmed in 1984-85, and there was shortfall in production of ammunition 'R' in 1985-86 and ammunitions 'Q' and 'R' in 1986-87. The shortfall in production of ammunition was stated to be mainly due to non-availability of hardware ex-import. The shortfall in production of ammunitions 'P' and 'Q' during 1987-88 was also due to non-availability of

filled fuzes ex-import. The production of both the fuzes was still (October 1988) to be indigenised. The total value of the import of different hardware and components by ordnance factories for achieving the production of ammunition during the years 1984-85 to 1985-86 was Rs. 6.30 crores representing 36 per cent of the total cost (Rs. 17.28 crores). Value of import on this account during 1986-87 was Rs. 9.66 crores and during 1987-88 sanctions were accorded for further import costing Rs. 13.18 crores.

Besides, the Army had also imported ammunition valued Rs. 4.98 crores in 1985-86 to meet its requirements.

The case was referred to Ministry in July 1988 and their reply has not been received (December 1988).

PRODUCTION

45. Delay in the implementation of a project for production of vehicles

Mention was made in paragraph 10 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1976-77 about the shortfall in production in a factory set up for annual production of 13,200 vehicles.

The Public Accounts Committee (PAC) in their hundred and ninth report (Sixth Lok Sabha) made comments about the slippage in production from the estimates made in the Project Report and the failure to meet fully the requirements of the Army for the vehicles. The Ministry of Defence informed the PAC in the Action Taken Note of 23rd April 1983 that, due to certain constraints experienced in production stage, the capacity actually achievable at the factory was not more than 8000 vehicles *per annum* and on a technical assessment of the plant and equipment, it was found that if certain balancing plant and equipment were provided the production level could be increased to 9000 vehicles (on shift working of 54 hours per week) and to 10,000 vehicles (on shift working of 60 hours per week) *per annum*.

Sanction for provision of balancing plant and equipment and civil works to augment the existing capacity (8000 vehicles *per annum*) to 10,000

vehicles *per annum* was accorded in January 1982 at a cost of Rs. 8.48 crores (increased to Rs. 9.92 crores in February 1984). According to Ordnance Factory Board (OFB) the increase in the cost was necessary as, during the period between the formulation of the project estimate in 1977-78 and issue of the sanction in 1982, the prices of all plant and machinery as well as civil works increased considerably due to inflation and other factors.

The anticipated cost of the project has further gone up to Rs. 12.53 crores for which action to obtain Government sanction was under progress (October 1988).

The project scheduled to be completed by March 1985 was expected to be completed by July 1989. The delay in completion of the project, according to the OFB, was mainly due to :

- (a) time taken in obtaining the revised sanction for the project. The proposal for increase in the cost of the project (sanctioned in January 1982) and also for deletion of certain plant and machinery (cost : Rs. 219.91 lakhs) and civil works (cost : Rs. 40 lakhs) from the scope of the project to restrict the cost over-run to minimum was initiated by the OFB in December 1983 and sanctioned by Government in February 1984;
- (b) delay in the decision of technical acceptance relating to a few imported machines; and
- (c) the delay in completion of civil works.

Sixty-one plant and machines costing Rs. 7.30 crores were provided for in the revised sanction (February 1984) of the project, of which sixty machines were ordered for Rs. 8.57 crores during June 1982 to September 1987. No order for the remaining one cylindrical grinding machine (Rs. 39.65 lakhs) was placed. Of the sixty machines ordered, fifty-eight machines costing Rs. 6.07 crores were received during October 1982 to December 1987 of which fifty-six machines (Rs. 5.75 crores) were commissioned during January 1983 to August 1988 and the remaining two (Rs. 32.05 lakhs) were awaiting commissioning (October 1988). The other two machines (Rs.

2.50 crores) viz. crank pin grinding machine and the induction hardening machine were yet to be received (October 1988).

Board proceedings for the civil works were finalised between September 1976 and July 1985. Eight administrative approvals aggregating Rs. 3.09 crores for construction of storage accommodation, test track, test house, parking bond for vehicles under test and awaiting collection were issued during July 1982 to October 1986.

According to Ministry of Defence delay in completion of civil works in seven cases ranging from 9 months to over 30 months was due to revision of time schedule by Military Engineer Services and the remaining work, 'construction of test house' (Rs. 95.39 lakhs), was kept pending till receipt of revised Government sanction. Committed expenditure on all civil works (March 1988) was Rs. 3.09 crores against Rs. 2.62 crores sanctioned.

The augmented facilities sanctioned in February 1982 were to be available for production of 10,000 vehicles *per annum* from 1984-85 onwards. The production of the vehicles in the factory during the year 1985-86 to 1987-88 was 7451, 8503 and 8758 numbers respectively.

As on 1st April 1988, orders for 32,177 vehicles and chassis placed during the period 1979-80 to 1987-88 to be supplied to the Services were outstanding.

Meanwhile, due to capacity constraints of the factory and huge existing uncovered demands for the vehicles, the Army had to resort to the purchase of 1000 number of 1-Ton vehicles from a private firm in 1986-87. The extra expenditure involved in trade procurement compared to factory's cost of production was Rs. 10.27 crores.

Thus,

- (i) The project sanctioned in January 1982 at a cost of Rs. 8.48 crores (revised to Rs. 12.53 crores in March 1988) scheduled to be completed by March 1985 had not yet been completed and was expected to be completed by July 1989.

- (ii) Due to the delay in completion of the project, Army had to resort to the procurement of 1000 vehicles from trade at an extra cost of Rs. 10.27 crores.

46. Unsatisfactory progress in the manufacture of an ammunition

In paragraph 9 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1980-81 the delay in the establishment of manufacture of an ammunition and its components in the ordnance factories was *interalia* commented upon. The Ministry of Defence (Ministry) intimated the Public Accounts Committee (PAC) in January 1984 that the factories were geared up to meet the annual requirements of the Army.

A review of the production of the ammunition and its components for the period 1984-85 to 1987-88 brought out that the factories were in fact not geared up to meet the requirements of the Army on a full and regular basis. Against the Army's indented quantity of 4.87 lakh numbers of the type-I ammunition placed during January 1974 to March 1986, the total supply made till March 1988 was 2.11 lakh numbers. Against the Army's indented quantity of 2.39 lakh numbers of the type-II ammunition placed during October 1977 to April 1985, the total supplies were only 19,223 numbers. Due to considerable shortfall in production of the ammunitions (of both types) the Army had to meet the requirement by importing 20,000 numbers of type-I (value : Rs. 834.25 lakhs) and 40,000 numbers of type-II (value : Rs. 1741.08 lakhs) during 1984 to 1987.

An analysis of the reasons for shortfall in the fulfilment of the Army's demand revealed the following :

- (a) The annual targets fixed for the production of the type-I ammunition were below the required level for discharging the indents within a time frame.
- (b) In respect of the type-II ammunition the highest target (25,000 numbers) was set in 1984-85 but the target was fixed as 'nil' during 1985-86. This goes to show that utilisation of the production capa-

city was erratic. The shortfall in the production of type-II ammunition was mainly due to the delay in developing the propellant indigenously and excessive rejection of fuzes due to blinds. Scrutiny by Audit into the reasons of delay revealed the following :

- (i) The Explosive Research and Development Laboratory was developing the propellant with the assistance of factory 'D' for the last two decades. The Ordnance Factory Board (OFB) stated in February 1988 that the propellant was still under development.
- (ii) Empty fuzes manufactured by factory 'A' were being supplied to factory 'C' for filling. The supply of empty fuzes by factory 'A' was affected from 1985-86 due to erratic results as the fuzes encountered blinds. Controller of Quality Assurance, after investigation observed certain dimensional and feature deficiencies to be the probable causes of blinds and advised OFB in March 1988 for strict conformity of the features to drawing stipulations. Meanwhile, out of 149 lots of empty fuzes produced upto March 1988, 130 lots were finally passed and the remaining 19 lots valuing Rs. 107.70 lakhs were not passed and were awaiting re-assembly/rectification, etc. (December 1988). 28 lots of filled fuzes valuing Rs. 205.23 lakhs had been rejected in proof. The OFB stated in December 1988 that 8 out of these 28 lots, were subsequently sentenced as serviceable. Thus, 20 lots of filled fuzes valuing Rs. 146.60 lakhs stood rejected.
- (c) Facilities were created in Factory 'B' for the production of 60,000 cartridge cases per year on the basis of single shift of eight hours per day. Against this, during 1984-85 to 1987-88 factory 'B' could supply the maximum quantity of 61,261 numbers of cartridge cases in 1987-88

only after engaging double shifts daily during the period. This showed that the operational capacity was significantly lower than the installed capacity. The OFB explained in October 1986 that the installed capacity was not achievable due to change of design of the primer hole, change of material specification from silicon brass to 70/30 brass and the change in the manufacturing process. This showed that in deciding the installed capacity of the factory, the material and design changes based on actual field requirements were not kept in view.

To sum up,

- (i) Despite the intimation given by the Ministry to the PAC in January 1984, the factories have not been geared up to meet the annual requirements of the Army in respect of this ammunition. For one type (type-I) the production target was far below the demand level and for the other type (type-II) production was negligible in relation to the demand, resulting in heavy imports (Rs. 2575.33 lakhs) of both the items.
- (ii) Even in component manufacture, instances of non-adherence to technical norms and instances of heavy extra expenditure were noticed. Manufacture of fuzes for the ammunition was not in accordance with the drawing stipulations resulting in rejection of filled fuzes valuing Rs. 146.60 lakhs and warranting rectification, etc. of empty fuzes valuing Rs. 107.70 lakhs.

The case was referred to the Ministry in July 1988 and their reply has not been received (December 1988).

47. Heavy rejection of fuze

In October-November 1986, Army rejected 10,000 fuzes of a particular specification (Fuze 'K') produced by ordnance factories, valuing Rs. 16.20 lakhs as these were affected by copperazide and banned (February 1987) the use of another 79,000 fuzes valuing Rs. 128 lakhs held in the depots due to suspected copperazide formation.

A scrutiny of records by Audit brought out the following :

- (i) Fuze 'K' was an established item of manufacture in the ordnance factories. The use of this fuze was extended to ammunitions 'X' and 'Y' in 1981-82 and 1974-75 respectively, on the basis of the results of limited scale firing, by the Defence Research and Development Organisation (DRDO) without establishing its suitability conclusively.
- (ii) Ammunitions fitted with fuze 'K' failed to perform after 1978. Local investigation (1978-79) and investigation by a high level committee (1982) identified formation of copperazide in the fuze as one of the possible reasons of failure of the ammunitions. The committee recommended change of one of the components of the fuze from copper to aluminium (March 1982).
- (iii) Despite change of the component, the ammunitions fitted with fuze 'K' continued to fail and the high level committee, on re-examination of the matter, in June 1986, recommended filling of the detonator under controlled conditions.
- (iv) In July 1986, the Controllerate of Inspection (Ammunition) stressed on stricter inspection during the manufacture of the fuze.
- (v) In August 1987, the Department of Defence Production constituted a Joint Investigation Committee to make an in-depth study of the weapon—ammunition system and to locate causes of failure.

Thus, extension of the application of fuze 'K' to different ammunitions without basic investigation in regard to its suitability resulted in failure of ammunitions leading to rejection and banning of fuzes valuing Rs. 16.20 lakhs and Rs. 128 lakhs respectively. Since these fuzes have formed copperazide the prospect of their use as fuzes is remote and may lead to a loss due to final rejection.

The Ministry of Defence stated in December 1988 that in all 109 lots (numbering 1,09,000 fuzes) were initially declared unserviceable, but after these were re-examined by the technical authorities as per new technique only 14 lots (numbering 14,000 fuzes) valuing Rs. 22.68 lakhs were sentenced as unserviceable. The remaining lots (numbering 95,000 fuzes) have been assigned shelf-life ranging from 2 to 13 years. Another 20 lots (20,000 fuzes) of 1983-84 manufacture, valuing Rs. 32.40 lakhs, however, continued to be banned from use.

Thus, extension of application of fuze 'K' to different ammunitions without basic investigation in regard to its suitability, resulted in the failure of ammunitions leading to rejection of 24,000 fuzes valuing Rs. 38.88 lakhs, and banning of 20,000 fuzes valuing Rs. 32.40 lakhs.

48. Un-productive manufacture of a gun

In 1979, the Army decided to have a new type of gun to augment its fire power. Accordingly, in November 1981, the Ordnance Factory Board (OFB) placed a development order on an ordnance factory (factory) for manufacture of 10 guns (increased to 30 guns in November 1982). The factory developed the guns during 1981 to 1984 from indigenously manufactured components with 'chrome plated' barrels against 'stellite lined' barrels stipulated in the General Staff Qualitative Requirements (GSQR), as infrastructure for producing 'stellite lined' barrels was not available.

In a series of users-cum-technical trials conducted during April to November 1983 the gun was found to be meeting the firing rate and other operational requirements as per the GSQR. Based on these trial reports, the Army gave clearance for its bulk manufacture in January 1984.

The factory supplied 141 guns valuing Rs. 54.67 lakhs during January 1984 to June 1985 duly accepted by the inspectorate. In July 1985, however, the guns failed when put to intensive firing trials and the Army recommended in September 1985 that further production of the gun should be stopped till the barrel was improved to meet the revised GSQR which was to be finalised. However, in response to the OFB's

enquiries for import of 'stellite lined' barrels none of the prospective suppliers could match the specification. The orders for the gun and spares were cancelled in July 1987.

Besides, 141 guns supplied to the Army, eight guns were supplied by the factory to other formations and 66 guns were lying with the factory (November 1988). The total cost of 215 guns was Rs. 83.36 lakhs. Cancellation of the orders led to raw materials, semi-finished components, etc. becoming surplus at the factory (value is under computation by the OFB) (November 1988).

A proposal to convert the guns already produced into training/drill models was under contemplation (November 1985).

Thus,

- (i) Clearance of the gun for bulk production with chromium plated barrels against the GSQR of 'stellite lined' barrels and reverting back to the GSQR of 'stellite lined' barrels after productionisation, resulted in rendering Rs. 83.36 lakhs being the cost of 215 guns infructuous.
- (ii) Testing parameters were not uniform, thus, guns found acceptable on the basis of users-cum-technical trials were found unacceptable on intensive trial.
- (iii) Short-closure of production order resulted in raw materials and semi-finished components becoming surplus (value under compilation by the Ordnance Factory Board).

49. Extra expenditure due to defective design of fin assemblies

During the year 1982-83 to 1985-86 an ordnance factory (factory 'A') received the supply of 5252 fin assemblies (a rocket component) from another ordnance factory (Factory 'C'). The fin assemblies were designed by Armament Research and Development Establishment (ARDE). Factory 'C' had manufactured 3864 numbers and had procured from trade 1388

numbers. The factory manufacture as well as the trade manufacture had been inspected and passed by the authorised inspectorate and thereafter despatched to factory 'A'.

During 1982-86 factory 'A' despatched 3164 numbers of fin assemblies after assembling these with the rockets to another ordnance factory (factory 'B') responsible for final assembly of the rockets and their proving. Due to non-availability of a serviceable launcher, flight trials by factory 'B' could not be conducted prior to January 1986. Flight trials conducted in January 1986 showed short-ranging and wide-dispersion of the rockets. After a series of trials in 1985-86 the erratic behaviour of the rockets was attributed

to the design shortcomings of the fin assemblies. In April 1987, the ARDE modified the design of the fin assemblies. This resulted in rendering 5252 fin assemblies of earlier design valuing Rs. 58.57 lakhs (including those already assembled with the rockets) unserviceable. Out of the unserviceable fin assemblies, 3000 numbers were made serviceable till November 1988, by replacement and modification at a total cost of Rs. 39.30 lakhs.

Thus, manufacture of fin assemblies on the basis of a defective design and inordinate delay in proving resulted in extra expenditure of Rs. 39.30 lakhs.

50. Lack of production planning leading to non-utilisation of materials

An ordnance equipment factory (factory) has been procuring eyelets of various types from trade. In 1981-82, it was decided to manufacture two types of eyelets in the factory itself. In pursuance of this decision, the factory procured 46,096 kgs. of annealed aluminium alloy strips of various dimensions in January 1983 (45,817 kgs.) and March 1985 (279 kgs.) at a cost of Rs. 19.96 lakhs.

Scrutiny of the stock position of the item by Audit disclosed that the entire stock of material excepting 8.78 kgs. (used for maintenance purpose) was lying unutilised (November 1988). In reply, the Additional Director General Ordnance Factories, Ordnance Equipment Group (DGOF) stated in September 1988 that the

materials could not be utilised due to non-availability of manpower owing to the ban on recruitment and enhanced demands of the Army. The contention of the Additional DGOF is not acceptable as (i) more than 99 per cent of the supplies had been received in the factory a year before the imposition of the ban and (ii) the proposal envisaged creation of additional capacity and enhanced demands of the Army related to existing capacity. The Additional DGOF further stated in October 1988 that the possibility of using the material by conversion or transfer to sister factories was being considered.

Thus, procurement of the material without proper production planning resulted in blockage of funds amounting to Rs. 19.96 lakhs.

The case was referred to the Ministry of Defence in May 1988 and their reply has not been received (December 1988).

51. Loss due to productionisation of an ammunition of defective design

Against an indent of May 1972 of the Director of Ordnance Services (DOS), the Director General Ordnance Factories (DGOF) placed a development order on an ordnance factory in August 1972 for production of 5000 numbers of a new ammunition designed by the Armament Research and Development Establishment (ARDE). However, at no time could the factory attain the full production stage of the ammunition due to difficulties in acquiring the components of the new ammunition from the trade and problems relating to safety parameters of the design. The problems of design safety were discussed but no concrete measures were taken to rectify the design defects. In February 1987, an explosion occurred in the factory due to the fall of one of the fuze packages (a component of the ammunition based on the ARDE design) causing loss of three lives, injuries to two employees and loss of Government property (Rs. 1.36 lakhs). A Board of Enquiry constituted by the Ordnance Factory Board (OFB) in February 1987 concluded that the design of the fuze had certain critical defects and that the design of the package of the fuze was vulnerable from the safety angle. Further efforts at productionisation of the ammunition was abandoned

thereafter; thereby rendering semi-finished components (Rs. 12.64 lakhs) and raw materials (Rs. 1.63 lakhs) surplus.

The OFB stated in October 1988 that the ARDE did not supply the trial reports and "a lethal deviation" in drawing was made by the ARDE after users' trial without intimating the factory. It was for these reasons that the OFB, according to its statement, could not examine the design/drawing and specification of the fuze and the package in depth.

Thus, development and productionisation of an ammunition of faulty design caused loss of human lives and destruction of Government property (Rs. 1.36 lakhs) and its eventual abandonment after 15 years of its commencement rendered semi-finished components (Rs. 12.64 lakhs) and raw materials (Rs. 1.63 lakhs) wasteful.

The case was referred to the Ministry of Defence in July 1988 and their reply has not been received (November 1988).

52. Loss due to manufacture of a defective ammunition

The manufacturing process of an ammunition in an ordnance factory involved procurement of empty bodies (empties) from the open market and the filling up of the empties and final assembly of the ammunition in the factory. The empties were required to be taken to charge after clearance by Inspection. There were no rejection allowances admissible for filling and assembly. During July 1982 to March 1986 the factory showed a production of 3,25,394 numbers of the ammunition of which 62,956 numbers valuing Rs. 23.33 lakhs were rejected as failed in proof. The rejected ammunition included around 32,500 numbers approximately (36 lots) of failed ammunition carried over from the period 1976-77 to 1981-82 and merged in the production figure of the period July 1982 to March 1986. The factory, on preliminary investigation (July 1984) established the cause of failure as due to defects in the empties procured from open market and deficiencies in the method of proof. The Ordnance Factory Board (OFB), identified the causes of failure as

(i) incorrect positioning of striker pin, (ii) the pin not snapping at specified load (iii) uneven pressure on surface of pressure plate, etc.

Since all the empties procured from the open market had been taken on charge after inspection and since the method of proof, according to the OFB, was not deficient, the rejections occurred due to manufacturing defects during filling and assembly stages in the factory.

In July 1987, the factory undertook to retrieve the rejected ammunition and rectified 52,443 numbers at a cost of Rs. 3.62 lakhs, leaving 10,513 numbers valuing Rs. 5.07 lakhs which were finally rejected. The OFB stated in September 1988 that a Board of Enquiry had been constituted to go into details of rejection. The outcome of the enquiry is not known.

Thus, defective manufacture of ammunition resulted in a loss of Rs. 5.07 lakhs by way of rejection and extra expenditure of Rs. 3.62 lakhs for the retrieval of the defective ammunition.

Ministry of Defence, however, stated in February 1989, that the failure of ammunition was due to its design and drawing deficiencies.

PROVISIONING

53. Import of stores without required specifications

To meet the production requirements of an ammunition, the Ordnance Factory Board (OFB) in March and August, 1986, placed two indents on a Supply Wing of an Indian Mission abroad (SW) for supply of 150 tonnes of aluminium alloy bars. The SW concluded a contract (July/August 1986) with a foreign firm for supply of 150 tonnes at U.S. \$ 3.148 per kg. The indent/contract did not specify the condition of material (*viz.* 'controlled' or 'non-controlled stretched' condition), an important criterion for materials undergoing machining operation. The firm supplied 150 tonnes (cost: Rs. 63.61 lakhs) in January and June 1987 of which 60 tonnes were cleared by the SW on firm's warranty/guarantee certificate without prior inspection and the balance 90 tonnes by Metallurgical and Engineering Consultant (MECON)

appointed for inspection of the material. However, the entire quantity was rejected while machining, due to excessive grain growth and internal stress. In November 1987, the MECON intimated to the OFB, that their inspection was as per the specification indicated in the contract and as the contract did not specify the condition of supply of the material, the supplier did not supply material in 'controlled stretched condition' necessary for machining. The replacement of the rejected materials was discussed (February 1988) by the OFB with the foreign firm. The firm, however, held (April 1988) that the supplies were as per contracted specification and declined to replace the rejected material free of cost.

Thus, due to not specifying the condition of material in the indent/contract, 150 tonnes of imported aluminium alloy bars valuing Rs. 63.61 lakhs were rejected. Alternative use of the material involving machine process was ruled out due to its unsuitability.

The case was referred to the Ministry of Defence in July 1988 and their reply has not been received (December 1988).

54. Extra expenditure on provisioning of plywood

Plywood box is a regular item of production of the Gun Carriage Factory (factory). Plywood sheets (sheets) required for manufacturing the boxes are procured through the Director General of Supplies and Disposals (DGSD) in accordance with the procedure for purchase of stores through Central Purchasing Agency.

In February 1985 the factory placed an urgent indent on the DGSD for supply of 37,014 sheets stipulating that the supply should commence from April 1985. The factory decided (April 1985) to reduce the indented quantity to 18,000. The DGSD concluded a contract with a private firm in September 1985 for 18,000 sheets at Rs. 178 per sheet and the supply commenced from January 1986.

In the meantime, the stock depleted to nil level in the factory in April 1985 necessitating local purchase at higher rates (Rs. 309.80 to Rs. 325 per sheet against Rs. 178 of DGSD contract) in order to maintain the continuity of

production. In all, 6500 sheets from two private firms were purchased between June 1985 and February 1986, resulting in extra expenditure of Rs. 7.47 lakhs.

Scrutiny of the indenting pattern of the factory showed as follows:

- (i) As per the procedure for purchase of stores through the Central Purchasing Agency the factory was required to place indents 24 months in advance of the period of utilisation. Thus, for the utilisation in April 1985 the indents were required to be placed sometime in April 1983 and so on. The indenting pattern of the factory, however, showed that the factory had not placed any indents from January 1983 to January 1985.
- (ii) An investigation into the reasons for not placing the indents in accordance with the established indenting procedure brought out that the book balance during the period showed an inflated figure on account of non-posting of some of the issues and this resulted in misleading the factory in regard to the actual availability of physical balance for utilisation. This in turn resulted in not reflecting the actual requirement in the provisioning programme of the period. The annual stock verification done in March 1984 did not show any discrepancy between physical balance and book balance.

Thus, non-accounting of issues in stock resulted in incorrect provisioning action and this led to a stage when local purchase of plywood sheets had to be resorted to at an extra expenditure of Rs. 7.47 lakhs.

The case was referred to the Ministry of Defence (March 1988) and their reply has not been received (October 1988).

55. Extra expenditure due to concessions given to a contractor

Ordnance Factory Board (OFB) placed an order on a firm in April 1985 for supply of 2500 tonnes of alloy shell bars to an ordnance factory at Rs. 9030 per tonne, subject to price variation

(PV) with the base date of February 1985 as offered by the firm. The material was to be supplied between June and September 1985 after inspection by Inspector of Armaments (IA) and the PV was applicable to supplies made during the period June to September 1985. The Controller of Inspection Metals (CIM) was the authority holding sealed particulars.

After the placing of the supply order, the firm, however, represented in May 1985 that the PV clause as offered by it and as accepted by the OFB was incorrect as it offered the firm no real advantage and on this ground sought a revision of the PV clause incorporated in the supply order. This was acceded to by the OFB in July 1985 on the ground that the Tender Purchase Committee (TPC) had recommended application of the standard PV clause and this recommendation was ignored while accepting the PV clause offered by the firm as it was more beneficial to the Government. A scrutiny of the minutes of the TPC meeting of April 1985, however, showed that the TPC had recommended application of the standard PV clause with the base month being February 1985. The PV clause offered by the firm conformed to this and there was no variation which could lead to a discriminatory treatment to the firm. Thus, by allowing a change in the PV clause after the award of contract the OFB allowed the firm to take the benefit of rates prevailing before inspection of the goods.

The firm made the following supplies :

Period of supply	Quantity supplied (in tonnes)
August 1985	566.340
November 1985	315.195
December 1985	824.555
January 1986	528.745
February 1986	174.920
Total	2409.755 say 2410

It would be seen from the above table that 77 per cent of supplies were made after September 1985 i.e. after the last date of supply indicated in the supply order. The ground for this as stated by the firm in August 1985, was imposition of quantitative standards by the CIM at the time of inspection. The OFB allowed the extension of time till 25th November 1985 and finally

till 6th February 1986 on the impression that imposition of quantitative standard amounted to a revision of specification while the inspecting authority clarified in October 1985 that it did not involve a revision of specification. This resulted in a revision of price applicable till 25th November 1985 under the PV clause.

Thus, subsequent alteration of the price variation clause and grant of extension to regularise the delay in supply instead of imposition of liquidated damages resulted in an extra expenditure of Rs. 4.46 lakhs.

The case was referred to the Ministry of Defence in October 1988 and their reply has not been received (December 1988).

56. Avoidable expenditure on airlifting of magnesium powder

In coverage of an Ordnance Factory Board (OFB) indent of August 1985, a Supply Wing of an Indian Mission abroad (SW) contracted with a firm, in January 1986, for supply of 68 tonnes of magnesium powder to a factory, by November 1986 or earlier. The firm shipped the first lot of eight tonnes in April 1986. In May 1986, the SW asked for the OFB's decision for airlifting the store as the firm could not arrange for further shipment. The factory also, in June 1986 and again in July 1986 requested the OFB to consider airlifting of 20 tonnes of the store, as it had stock for only four months. The OFB, however, advised (July 1986) the SW that airlifting of the store would be decided after knowing the shipment position. On 27th September 1986, the SW intimated the factory directly that the firm had shipped another lot of eight tonnes of the store on 5th September 1986. The SW did not send a copy of the intimation to OFB. The factory despatched a telex message to the OFB on 6th October 1986 proposing reduction in the quantity of airlift to 10 tonnes for the present in view of this shipment by which time the OFB had already instructed the SW to advise the firm for airlifting 20 tonnes of the store. It transpired from records that the factory did not intimate their proposal for reduction in quantity for airlift to the SW. This telex message was, however, not received by the OFB, the post copy in confirmation was though received on 14th

October but diarised on 28th October 1986. The OFB instructed the SW on 28th October 1986 to arrange for airlift of 10 tonnes instead of 20 tonnes of the store for the present. By the date of instruction, eight tonnes had already been airlifted (cost of freight : Rs. 3.22 lakhs) and another 12 tonnes were airlifted in November 1986 (cost of freight : Rs. 4.98 lakhs) after receipt of the instruction. It transpired from the verification of records of the SW that although the instructions for reduction in the quantity for airlifting was received by the SW on 29th October 1986, no action was taken by it. The SW, however, stated (August 1988), that the OFB's cable of 28th October 1986, indicated only for arranging airlift of 10 tonnes of the store instead of 20 tonnes and did not indicate that the balance 10 tonnes were not to be airlifted. According to them, the OFB also did not issue any amendment letter, restricting the quantity of airlift to 10 tonnes only.

Thus, due to the absence of timely action in preventing needless airlifting of stores avoidable extra expenditure of Rs. 4.31 lakhs in airlifting 10 tonnes of the store was incurred.

PLANT AND MACHINERY

57. Non-utilisation of imported gas generating plants for want of technology

Orders for importing two electrically heated annealing furnaces costing Rs. 46.94 lakhs along with two gas generating plants (gas plants) costing Rs. 45.68 lakhs were placed on a firm in August 1972 to develop the production of steel cartridge cases (steel cases). The plants were received in factory 'A' in different consignments between September 1973 and May 1975 and taken on charge in the factory in June 1975. The gas plants meant for production of high purity exothermic protective atmosphere from Propane, required for producing steel cases, were housed in a building specially constructed for the purpose at a cost of Rs. 4.43 lakhs. The gas plants could be treated as accessories to the furnaces only for the purpose of manufacturing steel cases, but the furnaces could be used independently with or without the gas plants for annealing other components. The production of steel cases could not be developed for want of required

technology and technical know-how. Nor could any licence agreement be concluded to develop and manufacture the steel cases. As a result, the gas plants could not be utilised since their receipt in the factory. The furnaces were, however, in use for annealing other components. When pointed out by Audit, the factory approached the Ordnance Factory Board (OFB) in August 1986 for sanction to dispose of the gas plants. The OFB stated in September 1988 that the alternative utilisation or disposal of the gas plants was being examined by a Committee. No decision had yet been taken (September 1988).

Thus, the gas plants were procured for the production of steel cases without the availability of the technology and know-how and due to the non-utilisation of the plants since June 1975 for this reason and in the absence of any plan for their alternative use, an expenditure of Rs. 50.11 lakhs (including an expenditure of Rs. 4.43 lakhs on the construction of a building to accommodate the plants) became infructuous.

The case was referred to the Ministry of Defence in April 1988 and their reply has not been received (November 1988).

58. Loss due to delay in clearing a consignment

The Director General of Supplies and Disposals (DGSD) placed an order in February 1982 on a Bombay firm for the import of one Internal Grinding Machine (machine) valuing Rs. 9.15 lakhs required by the Vehicle Factory, Jabalpur (factory). The supply order placed on the firm stipulated direct despatch of the machine by the foreign manufacturer to the port of destination in India. The consignment as per the usual procedure was to be cleared by the Embarkation Commandant (EC).

The foreign manufacturer despatched the machine in March 1983 and forwarded the copies of the shipping documents to the EC in April 1983. The local firm also forwarded the shipping documents to the EC and the factory in April 1983. The imported machine was unloaded at Bombay port in May 1983 with its packing damaged. The consignment was required to be surveyed within seven days from the date of unloading before clearance. The clearance was, however, done on 21st November 1983 without

carrying out the survey. The survey was carried out on 2nd December 1983 which disclosed that the machine-case was broken and damaged and some parts/components of the machine as well as additional accessories and spare parts as per the contract were missing. The local firm informed the factory immediately after the survey that since the machine-consignment was lying in the open uncleared since its arrival in Bombay port in May 1983 the suppliers could not be held responsible for the shortages. The survey report, however, did not indicate any shortages on the plea that no proper assessment of shortages could be done without installation/commissioning of the machine. This was incorrect as the shortages were identifiable even without commissioning the machine. However, after attempting installation/commissioning of the machine in May 1984 the factory sent a list of missing parts to EC in August 1984 who preferred a claim for Rs. 1.78 lakhs in November 1984 against the port. The port refused to entertain the claim on the ground that the consignment was not surveyed within the specified time and charged Rs. 0.70 lakh from the consignee as wharfage for delay in clearing the machine. Since no claim could be made on the supplier, the factory placed an indent on Supply Wing of an Indian Mission abroad (SW) in March 1987 for the procurement of the missing parts and accessories. The SW concluded a contract in December 1987 with a foreign firm for supply of those items at a cost of Rs. 3.75 lakhs.

It was noticed in Audit that the EC who was entrusted with the responsibility of clearance intimated the DGSD on 9th June 1983 that the machine was not traceable while the DGSD confirmed through its own source on 10th June 1983 about the arrival of the consignment. The manifest particulars were in the name of the DGSD although the interim and ultimate consignees were the EC and the factory respectively. The shipping documents were held by the EC and therefore, the DGSD could not clear the consignment even when it was not the DGSD's responsibility under the contract. The consignment was finally cleared under the orders of the Ministry of Defence (Ministry) by the EC in November 1983, without first surveying the damaged material before clearance.

Thus, delay in the clearance of the imported consignment resulted in additional wharfage payment of Rs. 0.70 lakh and extra expenditure of Rs. 3.75 lakhs while rendering the machine (value : Rs. 9.15 lakhs) idle since May 1983.

59. Non-utilisation of a costly furnace

Director General of Ordnance Factories placed an indent in September 1973 on the Director General Supplies and Disposals (DGSD) for one coreless type aluminium induction melting furnace required for production of carriage of a gun and other aluminium castings in an ordnance factory. The decision to procure this type of furnace instead of an oil-fired furnace in common use in the factory was taken based on justification furnished by the factory (May 1973) that this type of furnace would *interalia* result in achieving metal homogeneity thereby reducing rejection, no switching off would be necessary and its working would be cheaper. The factory had also proposed to establish a separate foundry with this furnace for aluminium castings only for the gun and other projects also.

The DGSD placed an order in February 1975 on a firm for the furnace with spares for two years at a total cost of Rs. 10.14 lakhs to be supplied and commissioned by December 1975 (extended upto July 1976). The furnace was received in knocked down condition during May-September 1976 and was taken on charge in July 1979 after completion of the foundation work. The performance of the furnace was found to be satisfactory during joint inspection conducted in April 1980 by the representatives of the factory, the DGSD's inspectorate and the supplier. The total cost of the furnace including the cost of erection and spares etc. came to Rs. 13 lakhs. The furnace, since its commissioning, has not been utilised (September 1988). The Ordnance Factory Board (OFB) stated in September 1988 that the furnace was sparingly used hence not treated as active, owing to the gradual tapering of demand of aluminium based metal. The contention of the OFB is not acceptable as justification for the purchase was based on its advantages over the oil-fired furnace and not on the demand for aluminium based metal. Further, there is no alternative use for the furnace.

Thus, due to non-utilisation of the furnace Rs. 13 lakhs being the cost of its acquisition, was rendered infructuous.

The case was referred to the Ministry of Defence in May 1988 and their reply has not been received (December 1988).

60. Loss of an imported equipment

Against an indent (October 1980) of a Defence Research and Development Establishment, Dehra Dun, Supply Wing of an Indian Mission abroad (SW) concluded a contract in April 1981 with a French firm for supply of one monochromator (value : Rs. 1.50 lakhs). The equipment was to be airlifted. As per the indent, the Embarkation Commandant, Bombay (EC) was the consignee.

As per practice, the SW, after conclusion of any contract against an indent, would send a copy thereof to the indenter. It could not be ascertained from the records whether the SW sent a copy of the contract of April 1981 to the indenter. The indenter, however, requested the SW in February 1982 and again in December 1982 to finalise the contract. In July 1983, the indenter again requested the SW for a copy of the contract, and also for the despatch particulars of the equipment. The SW furnished incorrect despatch particulars in August 1983. However, as per correct despatch particulars subsequently furnished by the SW in November 1983, the equipment had already been airlifted in December 1981 by Air India. The indenter furnished, in February 1984, the despatch particulars to the EC, to clear the equipment. When contacted by the EC, the Air India authorities stated in December 1984 that they were unable to investigate the matter as their records for 1981 had already been destroyed. They closed the case from their side. The equipment is still not traceable (October 1988). However, a scrutiny of the contract revealed that in the contract as landing officer, instead of EC, the name of the airport was indicated. This mistake could not be detected due to non-receipt of the contract copy by the indenter. The Ministry of Defence, (Ministry), however, attributed (August 1988) the loss of the equipment to non-receipt of contract copy from the SW and also to wrong shipping details furnished by them. The fact, however, is that the indenter also, after placing

the indent in October 1980, did not properly pursue with the SW for conclusion of the contract and despatch of the equipment.

Thus, lack of proper monitoring and promptness by the indenter and the SW led to the loss of the equipment valuing Rs. 1.60 lakhs (including bank and agency commission). According to the Ministry, the airfreight involved was not known due to non-receipt of shipping documents.

OTHER CASES

61. Extra expenditure due to incorrect estimation of labour rate

Tent 80 kg. MK 3, an established item of production, was being manufactured on piece-rate basis in three ordnance factories, when one of these factories (factory 'A') unilaterally revised its piece-rate from Rs. 53.19 to Rs. 68.28 per tent on the ground that the profit margin for the piece-rate workers was low on account of lower manhour figure taken as the basis of computation of the piece-rate. The revised rate was made applicable from August 1982 upto April 1985. During the same time, the other two factories continued to administer the old piece-rate (upto January 1985). A fresh time and motion study was undertaken at the instance of Ordnance and Equipment Factories Headquarters (OEF) in May 1984 and the manhour figure for computing the piece-rate was fixed at 45 instead of 53.26 adopted by factory 'A'. The piece rate in accordance with this fresh recommendation was revised for all the three factories and fixed at Rs. 57.69 per tent. Factory 'A', however, adopted the revised rate from May 1985 although the rate was approved for application in January 1985 by the OEF.

Thus, due to unilateral revision of the piece-rate by factory 'A' Rs. 2.91 lakhs of excess expenditure was incurred by way of payment of higher piece-rate in tents produced during 1982-83 to 1984-85.

62. Irrecoverable advances paid to a private agency for supply of journals

(a) In November 1985, M/S. Central Subscription Agency, a private agency (agency) offered their services to Armament Research and Development Establishment (ARDE) for regular supply

of Indian/foreign technical journals and periodicals. The ARDE concluded two agreements in January and July 1986 with the agency and placed three orders in 1986 for supply of 79 technical journals etc. during 1986-87. The ARDE advanced Rs. 0.97 lakh in March and August 1986 to the agency as subscription for the journals without bank guarantee though the agency offered the same. As per the agreements, the agency was to remit immediately the amount of subscription to the publishers concerned and confirm to the ARDE of such remittances within six weeks of the receipt of the advance and also that, they would refund within 30 days, any amount not remitted to any publisher, failing which, interest at double the prevailing bank rate was chargeable on such non-refunded amount. Further, the agency was to refund the full amount of subscription for such journals of which the ARDE did not receive any copy within the contracted period. During May 1986, to March 1987, the ARDE received only 79 issues of 10 journals (cost : Rs. 0.09 lakh) out of 79 journals, etc. ordered. Despite reminders and personal contacts, the agency did not arrange for further supply nor refund the amount advanced. They also failed to furnish proofs of their remittances of the subscription to the publishers. The ARDE lodged a complaint with the police in November 1987 the final outcome of which was not known. Subsequently as advised (November 1987), by the Law Department of the Central Government the ARDE issued a notice to the agency in December 1987 for refund of the amount of Rs. 0.97 lakh by 18th December 1987. The agency, however, did not refund the amount (October 1988).

(b) In another case, the Armed Forces Medical College, Pune selected the same agency for supply of newspapers, periodicals, magazines and foreign journals during 1987. The party was selected on the ground that it had entered into a contract for a similar purpose with the ARDE. The actual performance and reliability of the agency was, however, not verified by the college with the ARDE.

The college presented a bill on 12th January 1987 to the Controller of Defence Accounts (CDA) for payment of an advance of Rs. 3.16 lakhs to the agency. Although, on 25th February

1987 the college came to know from the ARDE about unsatisfactory supply of journals by the agency and asked them on 28th February 1987 to furnish proof of placing order on publishers by 10th March 1987 failing which the contract would be cancelled, but the copy of this communication was not endorsed to the CDA in order to safeguard Government interest. Unaware of this, the CDA issued a cheque of Rs. 3.16 lakhs to the private agency on 19th March 1987. The college requested the CDA on 21st March 1987 to stop payment of the advance. The CDA, after a lapse of six days *i.e.* 27th March 1987 requested State Bank of India to stop payment, although the cheque was issued in favour of Reserve Bank of India. Meanwhile the agency encashed the cheque on 26th March 1987.

The college rescinded the contract with the agency on 27th March 1987 and blacklisted agency in November 1987. The Command Headquarters stated in March 1988 that the college was being directed to initiate action for filing a civil suit for recovering the amount.

(c) Similarly, the supply of periodicals by the same agency to yet another Defence establish-

ment—Vehicle Research Development Establishment, Ahmednagar (VRDE), had also not been satisfactory. The agency had supplied periodicals worth Rs. 0.08 lakh to the VRDE against advance payment of Rs. 0.36 lakh made during October 1986 and February 1987. The advance amounting to Rs. 0.28 lakh paid by the VRDE was yet (September 1988) to be recovered.

Ministry of Defence stated, in September 1988, in respect of (b) and (c), that steps were being taken to enquire into the lapses on the part of authorities of the college and the CDA for fixing responsibility and taking disciplinary action against the erring officials. Initiation of proceedings against the firm on criminal charges was also stated to be under examination in consultation with Legal adviser.

Thus, granting advance to a private agency by three Defence establishments without satisfying the latter's reliability and without taking a security resulted in payment of advance of Rs. 4.49 lakhs. On failure of the firm to supply the journals, the Defence establishment could not recover the balance amount of Rs. 4.32 lakhs (September 1988).

CHAPTER V

WORKS AND MILITARY ENGINEER SERVICES

63. Review on development of a cantonment

63.1 Introduction

On grounds of operational necessity, Ministry of Defence (Ministry) decided in April 1969 to develop a cantonment at Barapani near Shillong in Meghalaya. The scope of the project provided for construction of 225 "married accommodation" of officers (residential quarters for families) and "other accommodation" for the units. The land requirement was assessed as 3937 acres. The cost of the project was estimated at Rs. 28.51 crores and the project was planned to be completed by 1979-80.

63.2 Scope of Audit

The review covers the slow moving project, the delays in acquisition of land, utilisation of personnel posted for its implementation, procurement of stores and their utilisation and the execution of works under some contracts.

63.3 Organisational set-up

Considering the nature and magnitude of the project, the Ministry decided to locate one Commander Works Engineer (CWE) and two temporary Garrison Engineers (GE) and a permanent GE to execute the works at the project site. As per Army Headquarters sanction of May 1970 the establishment of the CWE and one GE started functioning from July 1970. Land acquisition was delayed. Consequently, the office of the CWE was closed in July 1972 and the GE's office was downgraded in August 1973 to that of an Assistant GE. The office of Assistant GE was upgraded as GE (Project) in February 1977.

63.4 Highlights

- The works under the project, sanctioned for execution in 1970 and planned to be

completed by 1979-80, could be commenced only in 1977-78. There were delays in acquisition of land and lack of certainty on the extent of land required for the project.

- Escalation in the cost of the project was from Rs. 28.51 crores in 1969 to Rs. 55 crores in 1978, an increase by 93 per cent over the original estimated cost.
- An expenditure of Rs. 23.93 lakhs incurred on the pay and allowances of construction staff, watch and ward and on transportation of stores, rendered surplus, transferred out of the project was unfruitful as no worthwhile construction work had been done till March 1977.
- The actual physical progress on the different components of the project till the end of June 1988 did not match either with the dates of their completion or the financial outlays thereon and indicated further cost escalation on the project.
- Administration of contracts had been poor especially on the department's responsibility to hand over the sites in time and supply of key construction materials to the contractors in terms of the agreements. On the resultant arbitration cases, an extra expenditure of Rs. 17.53 lakhs had already been incurred on adverse arbitration awards.

63.5 Acquisition of land

The requirement of land for the project was assessed as 3937 acres, but the sanctions issued between August 1967 and July 1976 were only for 3107 acres at a cost of Rs. 48 lakhs. Finally 3102 acres were acquired at a cost of Rs. 47 lakhs and possession thereof taken between

December 1971 and March 1977. Requirement of land for the project was re-assessed in April 1988 as 4682 acres. Of the additional land requirement of 1580 acres projected, the Ministry accepted acquisition of only 836 acres which was yet to be acquired (September 1988). There had, thus, been delays in the acquisition of land and lack of certainty on the basic requirement of land needed for the project.

The Ministry, in September 1988, stated that the land requirement underwent changes because of revision of zonal plans of the station. (The contention of the Ministry is not tenable as the earlier zonal plan was itself drawn on the basis of a khasra map and not on a more accurate survey map).

63.6 *Administrative approval*

63.6.1 The entire project was to be completed by 1979-80 at a cost of Rs. 28.51 crores as planned initially. Sanctions for the construction of residential family accommodation at an estimated cost of Rs. 674.33 lakhs and phase-I of other (other than residential family) accommodation at an estimated cost of Rs. 905.51 lakhs were issued in April 1970 and May 1970 respectively. Construction of residential family accommodation was released for execution from the date of issue of sanction but work could not commence due to non-acquisition of land in time.

63.6.2 A fresh Board of Officers, assembled in January 1978, that is after acquisition of the land in March 1977, re-assessed the entire cost of the project at Rs. 55 crores.

63.6.3 Sanctions for residential family accommodation and phase-I of other accommodation were revised to Rs. 765.60 lakhs and Rs. 1704.37 lakhs respectively in December 1977 and June 1978. In addition, fresh sanctions for further provision of family accommodation as well as other accommodation were accorded by different competent financial authorities for Rs. 1606.23 lakhs taking the total amount of sanctions to Rs. 4076.20 lakhs between May 1971 and January 1988.

63.6.4 The delays largely led to an escalation in cost of the project by Rs. 26.49 crores i.e., 93 per cent over the original estimated cost.

63.7 *Performance appraisal*

63.7.1 Due to delay in acquisition of land, the services of the establishments of the CWE and the GEs set up for the project, were utilised only for the construction of four sheds at a cost of Rs. 0.95 lakh and handling of stores worth Rs. 123 lakhs. Stores worth Rs. 91 lakhs (out of Rs. 123 lakhs) which could not be utilised on the project were transferred out. Such transfers till end of March 1977 resulted in an extra expenditure of Rs. 5.49 lakhs. In addition, Rs. 1.23 lakhs were spent on the pay and allowances of chowkidars for care and maintenance of the stores. The expenditure on account of pay and allowances of the establishment till end of March 1977 worked out to Rs. 17.21 lakhs. Thus, the expenditure, in all, of Rs. 23.93 lakhs was largely unfruitful as no worthwhile construction work had been done till March 1977.

The Ministry stated in September 1988 that the services of the staff were utilised for administrative planning and sorting out the problem of land acquisition. Stores procured were transferred to other formations to avoid hold up of work in those formations. Stores had to be procured well in advance of commencement of work for such big projects and hence amount spent for care and custody of stores was unavoidable. (This only confirms that no worthwhile construction work was done till March 1977).

63.7.2. The cost estimate of the project, as approved in March 1978 was Rs. 55 crores. The total value of the different components of the project sanctioned till January 1988 was only Rs. 40.76 crores. This constitutes about 74 per cent of the works programme. Sanctions for the remaining 26 per cent cost of the project had not been issued (September 1988). The progress, physical and financial, on the various components of the project, as on 30th June 1988 was as under :

Name of the project component	Amount of sanction in lakhs of Rupees and month of sanction/revision	Time schedule for completion	Physical progress in percentage	Financial progress	
				Rupees in lakhs	Percentage
1. Married accommodation for all Army units.	765.60 December 1977	1979-80	38	415.81	54.31
2. Other than married accommodation phase-I	1704.37 June 1978	1994	37	904.01	53.04
3. Driving tracks for training of drivers	17.53 December 1980	—	—	2.17	12.38
4. Other than married accommodation phase-II	289.10 November 1983	2001 to 2002	80	311.89	107.88
5. Other than married accommodation for EME	222.13 March 1983	2001 to 2002	62	258.69	116.46
6. Other than married accommodation	204.58 July 1982	250 weeks from release of work	70	195.29	95.46
7. Married accommodation for JCOs and ORs	105.82 June 1984	166 weeks from release of work	40	77.29	73.03
8. Married accommodation for officers	40.74 August 1983	140 weeks from issue of administrative approval	44	29.01	71.21
9. Other than married accommodation for ASC	140.54 March 1982	208 weeks from release of work	90	188.17	133.89
10. Shopping centre	14.72 October 1983	—	90	10.49	71.25
11. Geysers in officers' mess	2.54 February 1972	—	100	—	—
12. Geysers in inspection bungalow	0.05 October 1971	—	100	—	—

As would be seen from the table above the actual physical progress does not match with the completion dates and the financial progress is much more than the physical progress indicative of further cost escalation on the project and the need for yet another revised cost assessment of the project.

The Ministry stated in September 1988 that cases for financial concurrence for independent projects were initiated as and when required and cost revision of the job of cantonment as a whole was not initiated.

63.8 Administration of contracts

63.8.1 The over-all progress of works under various contracts was slow mainly due to delay in issue of schedule 'B' stores (construction materials like steel, cement, etc.) and handing over of sites to the contractors. Consequently, claims for

compensation had arisen on 15 contracts which had been referred to arbitration. The awards in eight cases have since been given, all of them adverse to Government and the liability to be borne by Government was Rs. 15.18 lakhs. The outcome on seven more cases was awaited (September 1988).

The Ministry stated in September 1988 that all efforts were made to procure schedule 'B' stores but due to poor communications, etc., procurement action got delayed. (The contention of the Ministry is not tenable as the constraints pointed out were not unknown and ought to have been planned and provided for to meet the contractual obligations).

63.8.2 The Zonal Chief Engineer concluded, in June 1983, a contract for the construction of Military Engineer Services key personnel quarters for

Rs. 64.78 lakhs. The work was scheduled to be completed in December 1984. Due to non-acquisition of land, the site for construction could not be handed over and therefore, the date of completion was extended to October 1986. The work was completed by the extended date. The contractor was paid Rs. 4.70 lakhs on account of escalation (for variation in cost of materials, labour and fuel) of which Rs. 1.84 lakhs represented the escalation payment for the period beyond the scheduled date of completion. As a result, conclusion of the contract without acquiring the land resulted in an avoidable payment of Rs. 1.84 lakhs.

63.8.3 The project GE concluded, in December 1979, a contract for external electrification of the GE's office for Rs. 1.49 lakhs. The contractor did not commence the work. Another contract was concluded in April 1981 at the risk and cost of the defaulting contractor for Rs. 3.04 lakhs. The work was completed in October 1981 at a cost of Rs. 3.26 lakhs. The defaulting contractor was asked to deposit the difference between the value of two contracts. In arbitration, resorted to adjudicate the dispute, the department claimed Rs. 2.50 lakhs on account of extra cost incurred in executing the work, compensation and superintending charges. The contractor pleaded before the arbitrator that the letter of acceptance of the contract was backdated and therefore, there was no legal agreement between the parties. The department was asked to produce their document to establish the legality of the agreement but the department could not produce the document. The arbitrator, in February 1983, awarded in Government's favour Rs. 0.15 lakh on account of compensation but did not award payment of extra cost incurred by the Department and superintending charges (Rs. 2.35 lakhs). Failure of the department in producing their document before the arbitrator resulted in non-recovery of extra expenditure incurred by the department on the work and superintending charges (Rs. 2.35 lakhs).

WORKS

64. Misuse of Government funds on construction of a golf course

In February 1985, Southern Naval Command accorded administrative approval for a work on

soil conservation, environmental developments and area drainage to improve sanitation, at Katari Bagh in Willington Island, Cochin at an estimated cost of Rs. 8.72 lakhs. The work commenced in October 1985 and was completed in February 1986, at a cost of Rs. 6.93 lakhs.

The Southern Naval Command accorded another administrative approval, in October 1986 for water supply to the same location at a cost of Rs. 1.42 lakhs. In February 1987, the consequential contract, was concluded for Rs. 2.31 lakhs. It provided for three overhead tanks, rubber hose pipes and sprinklers in addition to laying of pipelines. The work was completed on 20th June 1987 at a cost of Rs. 2.27 lakhs.

When Audit came across a letter about a golf course in the same location, the sanction for it was sought for. There was no sanction for construction of a golf course. In reply, the Garrison Engineer (GE) stated in April 1987 that the area where soil conservation was carried out was being used for playing golf although no golf course as such was constructed. That statement is not borne out by the following facts:

- (a) While the work was in progress, in June 1986, Southern Naval Command entrusted to the Commanding Officer concerned the maintenance and upkeep of the newly constructed golf course.
- (b) According to a letter of March 1987 on the subject, "Improvement to water supply to Hangar and South Katari Bagh at Naval Base Cochin", the Commander Works Engineer had directed the Assistant GE that the "work at golf ground at Katari Bagh" should be completed by 15th April 1987.

In November 1988, Ministry of Defence stated that a specific directive had been issued to take urgent necessary action against officers responsible for establishing the golf course under a false cover.

There had, thus, been concealment of the end-use and the construction of golf course at Cochin, at a cost of Rs. 9.20 lakhs had been camouflaged

as a sanitation improvement work. The observation is not aimed at depriving a facility if considered worthwhile for the morale and motivation of officers but if the object is desirable, the means to achieve it within Government should be straight and correct.

65. Defective construction of a swimming pool

On a sanction accorded by the Ministry of Defence (Ministry) in December 1970 for Rs. 9.99 lakhs, a swimming pool for training of troops was constructed at Golconda at a cost of Rs. 24.45 lakhs. The work was completed in August 1980. The swimming pool though not fully operational, was taken over by the users in August 1980 subject to rectification of defects and deficiencies. Seepage of water, noticed in November 1980, showed an increasing trend. Rectification work undertaken by the contractor did not stop the leakage and users were put to inconvenience. It was handed over by the users to the Military Engineer Services (MES) in December 1980 for carrying out major repairs.

A Technical Board set up in October 1982 to investigate the causes of the leakage and check whether remedial measures taken by the Garrison Engineer were adequate, observed that no records were made available on the quantity of accoproof water proofing compound brought to site, approval of filter material and sealing compound, the mix design and preliminary test results of controlled concrete, continuous quality control in respect of controlled concrete work and the leakage tests; and opined that:

- the possibility of development of cracks in the swimming pool due to time lag in filling it with water could not be ruled out;
- the joints in the glazed tiles were thick and tiles were unevenly laid;
- the various piping system inter-connecting the swimming pool and the balancing tank could have developed cracks or loose joints resulting in leakage of water;
- the denseness of the concrete might not have been properly ensured in the balancing tank, walls, floor, etc.

A Court of Inquiry (CI) was ordered in July 1982 to investigate into the defective construction of swimming pool leading to leakage of water and pin point responsibility and submit its proceedings by 20th July 1982. In October 1982, withholding of the CI proceedings was ordered till a decision on the Technical Board's recommendations was taken. The CI proceedings were not, however, progressed.

Based on the recommendations of the Technical Board, special repairs (water proofing, dismantling, relaying of glazed tiles, etc.) to the swimming pool were sanctioned in July 1983 and October 1984 at a cost of Rs. 5.36 lakhs. The work was completed in January 1987 at a total cost of Rs. 5.93 lakhs. The swimming pool was handed over back to the users in May 1987 after repairs and is in use since then.

In July 1988, the Ministry stated:

- Special repairs were carried out as a permanent solution to the problems of seepage/leakage.
- Technical Board had not opined on defective workmanship or inferior specifications. The CI was not progressed keeping in view the findings on the possible causes of leakage and the recommendations on rectification.
- Based on the experience gained in the construction of this swimming pool, revised technical instructions on construction of swimming pools were under issue.

The case revealed that the swimming pool sanctioned in December 1970 for training of troops and built in August 1980 was not fully functional due to leakage of water and was handed over to the MES for major repairs in December 1980. It was not available for use till completion of repairs in May 1987. An additional expenditure of Rs. 5.93 lakhs was incurred on special repairs to make the swimming pool functional. No responsibility was fixed despite defects in construction resulting in leakage in the swimming pool, rectified at additional cost.

66. Construction of an Inspection bungalow

Construction of an Inspection bungalow (IB) at Jaisalmer was sanctioned in April 1980, at an estimated cost of Rs. 3.69 lakhs, amended to Rs. 6.24 lakhs in May 1981. Work thereon was commenced in May 1981 and completed in March 1982 at a cost of Rs. 6.24 lakhs.

While the above work was in progress, an Air Force Command also wanted, in December 1981, an IB to be constructed at the same station.

In order to overcome an objection from Audit, the Engineer-in-Chief's (E-in-C) branch advised the Chief Engineer concerned "to suggest separate names of locations for the two IBs" and sought information on the distance between the two locations. In reply, the Air Force Command suggested that the new IB be named as Air Force IB for Jayai-airfield instead of Jaisalmer (although no airfield known as Jayai-airfield was existing) and informed that the site selected was 16 kms away from the site for the earlier approved IB. Thereafter, approval for the second IB was accorded in March 1982 by the E-in-C and the work completed in January 1986 at a cost of Rs. 7.67 lakhs.

Both the IBs, as would be clear from the above, are at Jaisalmer and the actual distance between the two IBs, had also been concealed; it is only 5 kms, as now confirmed by the Military Engineer Services.

To conclude, the correct location of and the distance between the two IBs were concealed for justifying the construction of a second IB at a cost of Rs. 7.67 lakhs.

Ministry of Defence stated in October 1988 that there was no concealment about the provision of second IB at any time. (The contention is not correct in the light of deliberate suggestion to give "separate names of locations for the two IBs"). The facts as brought out by Audit speak for themselves.

67. Avoidable expenditure in execution of works-arbitration

On works executed through contracts, the department has to discharge certain obligations. Delays on that account, such as in the issue of

Schedule 'B' stores (cement, steel, etc.), tools and plant, handing over of work sites and discrepancies in contract and drawings, etc. led to prolongation of works. Such contingencies, in the following cases, led to arbitration, involving avoidable expenditure as awarded. In addition, the department incurred expenditure incidental to litigation also.

Case I

In September 1978, Military Engineer Services (MES) concluded a contract for the provision of additional administrative, technical and storage buildings for ordnance factory, Itarsi at a cost of Rs. 92.45 lakhs. The work, scheduled to be completed in March 1980, was completed in September 1981. According to the terms of the contract, the buildings on completion, except flooring and finishing, were required to be handed over to the MES for erection of machineries and handed over again to the contractor within two months, for completion of the left over work. However, the buildings could not be handed over to the contractor within the stipulated period of two months as the ordnance factory took about 10 months for the erection of machineries.

The contractor sought for arbitration and claimed compensation for delay in handing over the buildings and incorrect preparation of deviation orders. In March 1986, the arbitrator awarded payment of a sum of Rs. 2.69 lakhs to the contractor with 12 per cent interest thereon if the amount of award was not paid within 60 days from the date of award. Based on the legal advice, it was decided in July 1986 to implement the award. The award was made rule of the court in December 1986. Accordingly, an amount of Rs. 2.84 lakhs was paid to the contractor in July 1988.

Case II

In November 1979, the MES concluded a contract for provision of finishes to main roads at ordnance factory, Itarsi, at a cost of Rs. 53.71 lakhs. The work, scheduled for completion in June 1980, could be completed only in April 1981 due to abnormal rains, power failure, delay by the MES in issue of tools and plant to the contractor in terms of the contract.

In July 1981, the contractor signed the final bill with reservations in regard to their further claim of Rs. 7.70 lakhs on account of increase in prices of materials, labour wages, extra expenditure incurred due to prolongation of contract, etc. The contractor sought for arbitration. In June 1983, the arbitrator awarded in favour of contractor a sum of Rs. 3.26 lakhs plus interest at nine *per cent*; if the payment was delayed beyond September 1983. The award was made rule of the court in December 1984, after rejection of the objections filed by the MES. An amount of Rs. 3.75 lakhs including Rs. 0.49 lakh towards interest, deposited in the Court was paid to the contractor in January 1985.

Case III

In August 1977, the MES concluded a contract for the construction of a school building at Khanapara near Guwahati at a cost of Rs. 41.83 lakhs. The work scheduled to be completed in September 1978 was completed only in January 1980 due to delay in (i) handing over of site to the contractor as work relating to raising of ground level of the site by earth filling was under progress by another contractor and (ii) issue of steel and cement, etc. The contractor signed the final bill "under protest" and in September 1980 requested for appointment of an arbitrator to adjudicate his dispute. The arbitrator, appointed in November 1980, awarded in July 1981, Rs. 2.18 lakhs in favour of the contractor. Based on the legal advice rendered by Ministry of Law, objections against the award were filed in December 1981 in the Court. The Court rejected the objections and decreed the amount with 12.5 *per cent* interest in favour of the contractor. An appeal filed by the MES in May 1982 in the High Court, was also rejected in February 1983, legal opinion was again sought for from Ministry of Law, which advised in July 1983, to implement the award in order to avoid further fruitless litigation. Accordingly, in September 1983, an amount of Rs. 2.45 lakhs (including Rs. 0.27 lakh towards interest) was paid to the contractor.

Case IV

In October 1978, the MES concluded a contract for provision of quality concrete pavement to an airport runway and allied works at a cost of

Rs. 27.73 lakhs. The work, commenced in October 1978, was to be completed in July 1979. The date of completion of the work was extended mainly due to delay in handing over of site and issue of bitumen and cement. The work was completed in November 1981.

On the contractor's request made in November 1980, for appointment of an arbitrator to go into his claims arising from prolongation of contract due to delayed issue of cement and bitumen, an arbitrator was appointed in January 1982. Submission of claims by both the parties took time. The arbitrator on his posting to a new station, resigned in May 1983. In February 1984, another arbitrator was appointed. In June 1985, the arbitrator awarded payment of Rs. 4.81 lakhs (including interest of Rs. 0.44 lakh) to the contractor.

In July 1985, the MES referred the case to Ministry of Law for legal opinion which advised implementation of the award. Accordingly, of the sum awarded, an amount of Rs. 4.15 lakhs was paid in November 1985 and the balance amount of Rs. 0.66 lakh was paid in May 1986.

Case V

In February 1979, the MES concluded lumpsum contract for construction of residential accommodation for airmen at Bagdogra at a cost of Rs. 66.56 lakhs. The work, commenced in March 1979, was to be completed in April 1981. However, due to delay in issue of schedule 'B' stores to the contractor, the work was completed in August 1982.

During execution of work, discrepancies in drawings and contract were noticed for which clarifications from the contract accepting authority were sought. After clarifications, 27 deviation orders with financial implications were placed on the contractor. Some other discrepancies were clarified without any financial effect as covered in the contract, but the contractor asked for extra payment for the items of work done beyond the scope of contract. The dispute remained unresolved.

However, on the contractor's request, Engineer-in-Chief appointed an arbitrator in May 1983. The arbitrator awarded in favour of the

contractor payment of Rs. 7.47 lakhs including Rs. 0.22 lakh towards interest upto February 1985 with direction to pay 7.5 per cent interest in the awarded amount if the payment was not made by 15th May 1985.

Based on the advice of Ministry of Law, objections against the award were filed in the High Court. In September 1986, the Court rejected the objections and decreed the amount with nine per cent interest from the date of judgement and also cost of suit. An appeal filed, was also rejected by the High Court on 5th April 1988. Accordingly an amount of Rs. 9.54 lakhs including interest of Rs. 2.29 lakhs was paid in August 1988.

Case VI

In December 1983, the MES concluded a contract for construction of centralised heat treatment shop at an ordnance factory at a cost of Rs. 22.84 lakhs. The work, commenced in January 1984, was to be completed in July 1985.

According to the Board of Officers, consisting of representatives from the MES and the factory, the work site was to be declared as "unrestricted area" to facilitate unrestricted free movement of the contractor's men and materials. However, before commencement of the work, temporary fencing was required to be done to ensure the security standards of the factory. Accordingly, these provisions were made in the contract. On completion of the fencing work, the factory authorities, were, in February 1984, approached to declare the work site as unrestricted area.

The factory failed to declare the work site as unrestricted area despite being made aware of the contractual consequences. On completion of the work, the contractor claimed on this account, a compensation of Rs. 3.50 lakhs and the arbitrator, in July 1987, awarded a compensation of Rs. 0.80 lakh in favour of the contractor with 12.5 per cent interest, if payment was not made within two months. Accordingly a payment of Rs. 0.92 lakh including interest was made to the contractor in September 1988.

In September 1988, Ministry of Defence stated that certain delays were beyond the control of the department. Procurement and movement of stores posed occasional difficulties and caused

delays particularly in the north eastern region. The awards related mostly to price escalation for delays and success in challenge of non-speaking awards was also difficult. Orders of Government, issued in September 1986, requiring arbitrators to give reasons if the value of the claims exceeded Rs. 1 lakh, would improve the situation. Government had approved a panel of three arbitrators for expeditious settlement of disputes through arbitration which would reduce expenditure incidental to litigation.

To sum up,

- Due to non-adherence of the time schedule provided for in the contract and incorrect preparation of deviation orders, an additional payment of Rs. 2.84 lakhs had to be made in terms of the arbitration award to the contractor.
- Failure on the part of the MES to issue tools and plant in time resulted in avoidable extra burden of Rs. 3.75 lakhs on public exchequer.
- Delay in handing over of site and issue of cement, steel, etc. to the contractor resulted in avoidable extra expenditure of Rs. 2.45 lakhs.
- Delay in issue of bitumen and cement and handing over of site to the contractor resulted in avoidable extra liability of Rs. 4.81 lakhs to Government.
- Delay in issue of schedule 'B' stores and anomalies in contract drawings resulted in avoidable extra liability to Government of Rs. 9.54 lakhs.
- Failure to declare a work site as unrestricted area, in contravention of the contract, resulted in an adverse arbitration award costing Government Rs. 0.92 lakhs.
- In addition, department also incurred expenditure incidental to litigation.

68. Defective construction of overhead tanks

In April 1981, Military Engineer Services (MES) entrusted on contract the construction of three re-inforced concrete cement overhead tanks

of 2 lakhs, 1 lakh and 0.5 lakh gallons capacity at Hissar for a lump sum of Rs. 8.19 lakhs.

On completion, the 2 lakh gallons capacity overhead tank was subjected to water tightening tests. During the test, the tank collapsed on 28th January 1983. A Technical Board of Officers ordered in February 1983 to investigate the collapse, observed that:

- (a) the staging of the overhead tank being in the form of a cylindrical shaft, totally disintegrated under the full load of water tank;
- (b) the concrete in the shaft had a low crushing strength; and
- (c) there was lack of proper precautions in the use of different materials, supervision and workmanship, etc.

The contractor who was asked to reconstruct the overhead tank, did not agree to do so without payment of compensation. The contract was cancelled with effect from 31st August 1983.

In September 1983, the contractor refuted the cancellation on several grounds and alleged that the department had cancelled the contract after completion of work to cover up its own default. The contractor made a formal request for appointment of arbitrator in December 1983.

Cracks also developed in the other two overhead tanks. A Technical Board of Officers convened to examine the reasons for the development of the cracks of those tanks advised re-checking of certain data, determination of the strength of the concrete in the overhead tanks and suggested that the tanks should be kept only half filled.

At the risk and cost of the defaulting contractor, construction of the 2 lakh gallons capacity overhead tank had, in February 1985, been entrusted to another contractor for Rs. 11.02 lakhs. The work was completed in December 1986. MES had concluded, in September 1986, another contract for strengthening the other two smaller capacity overhead tanks too for Rs. 4.90 lakhs. The work was commenced in October 1986 and completed in December 1987.

In November 1986, an arbitrator for the adjudication of the disputes pertaining to the first contract was appointed. There had been a delay of over three years in appointing the arbitrator. As that arbitrator resigned in May 1987, another arbitrator had been appointed in June 1987. The arbitration award was awaited (August 1988).

Ministry of Defence (Ministry) stated in August 1988 that the bearing capacity of soil, on which the design of the foundation was based, seemed to have been incorrectly determined by the private firm. Regarding lack of proper precautions in the use of different materials, supervision and workmanship, the onus of the soundness of construction and workmanship, was the sole responsibility of the contractor.

The above contentions of the Ministry are, however, not tenable. Accepting the tender, based on contractor's design and specifications without thorough technical examination of the design and the data supporting it to safeguard the structural soundness of the overhead tanks, indicated the lack of adequate technical control by the competent engineer authority. There had also been inadequacies in the supervision of the work.

To conclude,

—Collapse of an overhead tank, while testing, soon after its completion and development of cracks in two other overhead tanks resulted in Government having to incur an additional expenditure of Rs. 15.92 lakhs apart from the delay in making available that facility to the users.

—There had been a delay of over three years in the appointment of the arbitrator. The arbitration award was still awaited (August 1988).

69. Delay in execution of a water supply work

The requirement of drinking water for the troops at a location was being met by bringing water by porters/ponies from a source approximately three kilometres away from the location. As this arrangement was unsatisfactory and expensive, the tapping of water from another source was considered. In the "outline justification" for the alternate arrangement prepared

in August 1976, it was brought out that a sum of Rs. 0.77 lakh was being spent annually for bringing water by porters/ponies and the cost of the project, Rs. 18.50 lakhs would be recovered completely in twenty/twenty-five years. Accordingly sanction was accorded for provision of water supply at an estimated cost of Rs. 14.19 lakhs in February 1977 and the work was released for execution in November 1978. The main work could not commence for five years, till April 1984 due to the following reasons :

- (a) The State authorities were approached for 'No Objection Certificate' (NOC) only in March 1980 which was issued only in April 1982.
- (b) The required land was acquired and handed over to Military Engineer Services only in June 1982.
- (c) The tenders for the main work, *i.e.* installation of water treatment plant, opened in May 1983 were accepted only in March 1984 *i.e.* after about one year.

With the passage of time caused by the delays, the earlier cost frame of Rs. 14.19 lakhs was no longer valid and in February 1984, the revised cost of the work was sanctioned at Rs. 24.97 lakhs. The work had not been completed (September 1988).

The Zonal Chief Engineer, in June 1988, stated that the total expenditure on the existing arrangement for bringing water during 1976 to 1980 was only Rs. 0.40 lakh. This statement, reducing the recurring cost to Rs. 0.08 lakh per year, takes away the very justification for the alternate arrangement which sought to prevent a recurring annual expenditure of Rs. 0.77 lakh and assumed recovery of the cost of the scheme in 20/25 years.

In September 1988, Ministry of Defence stated that time taken in obtaining the NOC and finalisation of land acquisition was considered quite reasonable. The cost over-run was also due to "unforeseen circumstances such as change over to electrical system for pumping purposes and non-availability of approach roads". (This contention is not correct in-so-far as the board proceedings of June 1976 had suggested the installation of electricity driven pumping

sets in case power supply got extended to that area. That proper approach roads did not exist was also a known contingency).

To conclude, there had been an inordinate delay of over 11 years in the execution of the water supply scheme which had also resulted in pushing up the cost of the work from Rs. 14.19 lakhs to Rs. 24.97 lakhs *i.e.* by 76 per cent. The investment decision on the scheme had also turned out to be wrong.

70. Collapse of a central sewage system

Phase-I of a central sewage system at military station, Bhatinda, was executed at a cost of Rs. 98.78 lakhs between January 1977 and November 1985. Certain distress in the system were noticed in April 1985 itself, in the form of sinking of soil and oozing out of sewage due to the damage of pipe lines. Thereafter, failures were reported in October 1985. After some time, some manholes also started sinking resulting in further deterioration of the sewage system. Attempts at rectification of the damage to the system, at a cost of Rs. 2.05 lakhs, failed and as short-term measures, manhole-to-manhole pumping and diversification of sewer lines were resorted to.

In April 1987, the Command Chief Engineer (CE) ordered a Technical Board of Officers (Board) to examine the causes of the failure of sewage lines, its design and specifications, the quality of work executed with regard to contract provisions and to suggest remedial measures. The Board observed that part of the system had collapsed at a number of places and was non-functional for more than one year and attributed, in its report of August 1987, the causes of the failure/distress in the system as under :

- (a) non-compaction of earthwork at the time of construction and not ensuring a compacted bed before laying pipe line;
- (b) non-provision of concrete encasement of pipes as stipulated in the contract;
- (c) poor maintenance of the system;
- (d) ineffective execution of design parameters to meet the anticipated rise in water table; and

(c) lack of adequate supervision of work during execution.

One of the three remedial measures suggested by the Board for the restoration/rectification of the collapsed system approved by the Engineer-in-Chief, envisaged work in two phases; the first one in the nature of special repairs to the existing system and the second, for laying of new sewer lines for meeting long-term requirements.

Thereafter, till April 1988, the matter remained under correspondence for the sanction of the work costing Rs. 44 lakhs under the emergency procedure and Rs. 31 lakhs under normal procedure and convening of a Court of Inquiry (CI) to pin-point responsibility for the distress of the system. The works proposed for the restoration/rectification of the system were still to be sanctioned and the CI was in progress (September 1988).

Interim arrangements for manhole to manhole pumping of sewage, was being done since January 1986. The recurring expenditure incurred till September 1988 on that account was Rs. 10.66 lakhs. The Ministry of Defence (Ministry), however, claimed the additional expenditure to be only Rs. 2.41 lakhs more than the average maintenance expenditure incurred in 1984-85. Further, an expenditure of Rs. 3.91 lakhs was also incurred on procurement of additional pumps/pipeline and accessories, between February 1988 and May 1988.

In September 1988, the Ministry stated that a separate Board had been convened in April 1988 for the purpose of restoration/augmentation of the sewage system which among others, entailed the relaying of the sewage pipes at shallow depth. The restoration work was to cost Rs. 44 lakhs and the balance of Rs. 31 lakhs was for new works to co-relate the system with phase-II of the scheme.

Thus, a central sewage system executed between 1977 and 1985, at a cost of Rs. 98.78 lakhs, collapsed due to faulty construction, laxity in supervision of works during execution and poor maintenance. The restoration of the collapsed system, yet to be approved, was expected to cost Rs. 44 lakhs. The rectification of defects and pumping of sewage resorted to as an

interim arrangement, already costs Rs. 8.37 lakhs. The CI proceedings were in progress (September 1988).

71. Ineffective expenditure on underground electricity cables

Military Engineer Services (MES) concluded three contracts for special repairs/replacement of underground cables at Ambala for a total sum of Rs. 2.84 lakhs. The works against the first and third contracts were stated to have been completed satisfactorily and taken over by the MES in March 1979 and March 1983 respectively. The work on the second contract, scheduled to be completed on 30th November 1980, was completed only to the extent of 92.35 per cent. The contractor failed to complete the balance work despite several notices. Rs. 2.15 lakhs were paid to the contractors whose contracts were completed. Running on account payments amounting to Rs. 1.04 lakhs were made to the contractor who had not yet completed the work and no action had been taken either to terminate the contract or to get the work done at the risk and cost of the defaulting contractor (August 1988).

The cables laid under these contracts were not functioning properly. In December 1985, a Board of officers (Board) was convened to enquire into the mal-functioning of the cables. The Board which assembled between February and April 1986, observed that :

- 1122 metres of cables, laid under the first contract, were not energised and about 572 metres of cable were unserviceable;
- 250 metres of cable, laid under the second contract, were not energised and were not traceable; and
- 630 metres of cable, laid under the third contract became unserviceable as the cable ends were left unsealed.

In October 1986, on the first two contracts, a Technical Board was appointed to advise on ways and means to make the system operational and to fix the responsibility for the lapses and to

submit its report duly completed by 1st November 1986. In supercession of this, another Technical Board of Officers convened in April 1987 for the same purpose, the proceedings of the Board, due in May 1987, were still awaited (August 1988).

In August 1988, the Ministry of Defence stated that it was difficult to explain at this belated stage as to why the second contract could not be terminated and the balance work executed at the risk and cost and rectification of defects and disciplinary action would be decided on finalisation of the Technical Board proceedings.

To conclude,

- Cables laid between 1979 and 1983 under the three contracts have either not been energised or faulty and hence non-functional.
- Out of 2002 metres of cable laid under the three contracts, 1202 metres became unserviceable and 250 metres were not traceable rendering the entire expenditure of Rs. 3.19 lakhs ineffective.
- Responsibility for the lapses was yet to be fixed (August 1988).

72. Excess payment of electricity charges

Two cases of excess payment of electricity charges have been noticed as detailed below :

Case I

Military Engineer Services (MES) entered into an agreement in January 1984 with Karnataka State Electricity Board for bulk supply of electricity to certain Research and Development Establishments at Bangalore for a contract demand of 3250 KVA. The agreement remained in force upto December 1985. Through a subsequent agreement, concluded in June 1985, the contracted demand was increased to 4500 KVA with effect from January 1986 and to 5750 KVA from January 1987.

The Electricity Board was to be paid either the recorded maximum demand for the month concerned or 75 per cent of the contracted demand, whichever was higher.

During the period from April 1984 to March 1987, the actual demand for power was much less than the contracted quantity. The actual demand upto December 1985, ranged from 960 KVA to 1500 KVA, that is 30 to 46 per cent of the relevant contracted demand of 3250 KVA. During 1986, the actual demand ranged between 1170 KVA and 2438 KVA, that is between 26 and 54 per cent of the enhanced 4500 KVA contracted quantity and not exceeding 75 per cent of the contract for the earlier period. In January 1987, the contracted quantity stood enhanced to 5750 KVA when the actual demand for power that month was only 2640 KVA, that is 46 per cent. There had, thus, been a failure to properly assess the requirements of power resulting in payment for 75 per cent of the contracted demands as provided in the agreement. This resulted in excess payment of Rs. 14.96 lakhs during the above period.

Case II

In March 1982, an Air Force Establishment at Bangalore concluded an agreement with the same Electricity Board for bulk supply of 500 KVA for a period of five years on similar terms.

The payments made for the period from May 1982 to August 1985 revealed that the maximum demand during this period ranged between 4 and 80 KVA but payments had to be made for 375 KVA, being 75 per cent of 500 KVA, the contracted quantity. This resulted in excess payment of Rs. 3.83 lakhs. For the period, September 1985 to March 1987, the meter was out of order and payments continued at 75 per cent of the contracted demand for Rs. 1.83 lakhs.

Ministry of Defence (Ministry) in July 1988, stated, as regards case I, that the requirement of electricity was projected by Research and Development Establishments. The minimum contracted demand could not be utilised due to constraints faced by users in completion of necessary infrastructure. As regards case II, the Ministry stated that the agreement of March 1982 should have been concluded in consultation with the MES. The Electricity Board did not agree to reduce the contracted demand on the plea that the agreement was for five years.

To conclude,

- Un-realistic assessment of power requirements resulted in avoidable excess payment of Rs. 18.79 lakhs.

73. Premature collapse of perimeter security wall

Against a contract concluded by Military Engineer Services (MES) in June 1982, a perimeter wall of three metres height was constructed around an ordnance factory in December 1983 at a cost of Rs. 23.92 lakhs. It was taken over by the factory in May 1985.

Within two years of taking over, 18 metres of the wall collapsed in February 1987 and cracks were noticed in 60 metres of the adjacent portion of the wall. The factory reported the matter to the MES immediately and authorised them to commence the work of reconstruction of the damaged portion on top priority. The work of reconstruction was ordered on a contractor in May 1987 at a cost of Rs. 0.79 lakh.

Subsequently, 118 metres of the wall collapsed in May 1987 and adjoining portion of 30 metres showed signs of instability. In June 1987, yet another portion of 25 metres of the wall collapsed.

Under directions from Ordnance Factory Board, the General Manager of the factory in April and June 1987 ordered convening of Boards of Inquiry to investigate into the collapse of perimeter wall. The Boards of Inquiry, assembled during April and July 1987, observed that:

- the depth of foundation provided for the wall was inadequate;
- thickness of concrete layer actually laid varied from 10 cms to 18 cms as against 15 cms specified in the contract;
- the back filling around foundation was done with black cotton soil in place of approved earth/murram, specified in the contract;
- expansion joints were defectively done;
- storm water disposal arrangements suggested by a sitting Board had not been done;

- the new construction of wall should be based on modified design; and
- further fall of portions of perimeter wall could not be ruled out, etc.

On 17th July 1987 the Zonal Chief Engineer (CE) advised the factory that the proceedings of the Board of Inquiry should not be processed till the verdict of Technical Board was made known. However, on 20th July 1987, the Command CE instructed the Zonal CE either to obtain expert advice regarding design of foundation and other constructional details before undertaking reconstruction of collapsed wall or to wait for the findings of the Technical Board. The work of reconstruction of the wall, contracted in May 1987, was held up (August 1987) for want of revised design from the Zonal CE.

A Technical Board of Officers ordered in June 1987 by Headquarters Southern Command, Pune observed that no maintenance was carried out on the perimeter wall after construction by the users, documents/records had not been maintained effectively, relevant pages from the register for recording test results were missing and work site order book could not be produced by the MES and attributed the collapse to,

- use of sub-standard mortar (major cause);
- slackness in supervision of works; and
- inadequacies in design and specifications and blamed the departmental staff and contractor for their lapses.

Meanwhile, the work of reconstruction of collapsed portions was carried out in March 1988 at a cost of Rs. 5.05 lakhs.

Ministry of Defence stated in July 1988 that the formal handing over of the wall was delayed due to certain defects which were rectified by April 1985 and the wall was taken over by the users in May 1985. Disciplinary action was being taken by the MES against three officers and the defaulting contractor. Temporary fencing was erected immediately at collapsed portions of the wall. Further fall of portions of perimeter wall could not be confirmed.

To sum up,

- Certain portions of a perimeter wall constructed around an ordnance factory in December 1983 where security is of great importance, collapsed on three occasions during 1987 entailing an avoidable expenditure of Rs. 5.05 lakhs on re-construction.
- Further collapses in the perimeter wall are not ruled out.

74. Construction of bulk petroleum installations

Construction of some bulk petroleum installations (BPI), required by the Air Force on an immediate basis, got delayed considerably and with consequential cost escalations in the two cases mentioned below.

Case I

In February 1978, Air Headquarters (HQ) sanctioned the augmentation of BPI facility to an Air Force unit at an estimated cost of Rs. 6.92 lakhs. The work was required to be commenced immediately and completed as soon as possible. Bulk of the work was to be executed by the Indian Oil Corporation (IOC). Although, on an earlier occasion, advance payment had been sanctioned to the IOC for construction of BPI, the sanction issued in February 1978, was silent on this point. In April 1978, the IOC refused to carry out the work unless 75 per cent cost of the work was paid to them in advance. In November 1980, the Air HQ sanctioned the advance payment. Meanwhile, in February 1980, the IOC enhanced the cost estimate of the work to Rs. 8.94 lakhs and insisted on 100 per cent advance payment. In November 1980, the cost estimates were further revised to Rs. 10.61 lakhs. Consequently the sanction had to be revised in January 1981 from Rs. 6.92 lakhs to Rs. 12.38 lakhs. The revised sanction also included a clause for 75 per cent advance payment to the IOC. In January 1982, Rs. 8.875 lakhs were paid to the IOC. The work was completed and the BPI taken over by Air Force in February 1987, that is, nine years after its construction was sanctioned.

Case II

In March 1979, the Air HQ sanctioned the augmentation of BPI facility for another Air Force unit at an estimated cost of Rs. 30.20 lakhs. The work was required to be commenced immediately and completed as soon as possible. The work was to be executed by the IOC. Before commencing the work, the IOC demanded 100 per cent advance payment in May 1979. Sanction was issued in November 1980 for 75 per cent advance payment.

The scope of the work involved construction of 10 BPIs, eight of them on land belonging to the Army. Although the Army had, in 1975, issued a no objection certificate for the construction, they, in June 1981, objected to it on account of serious fire risk to living accommodation nearby. As a result, the construction could not be taken up. The delay in execution of the work resulted in cost escalation. The revised sanction, issued in November 1981, for the work pushed up the cost to Rs. 64.78 lakhs.

Army's permission for the construction was secured in January 1982 and the land was transferred to the Air Force in March 1982. Advance payment amounting to Rs. 48.59 lakhs was made to the IOC in March 1982 and the work completed in November 1987. The BPI had not been taken over by the Air Force (September 1988).

In September 1988, Ministry of Defence stated that all out efforts were made to persuade Ministry of Finance (Defence) to permit 75 per cent advance payment and delay was mainly as to who should bear the cost of additional tankage.

To conclude,

- Lack of an agreed procedure on advance payment for construction of BPIs by the IOC and lack of coordination between the Air Force and the Army on the land use led to delays of nine years in augmentation of petroleum reserves for the Air Force and cost escalation to the exchequer to the extent of Rs. 40.04 lakhs.

- BPI constructed in November 1987 had not yet been taken over by the Air Force (September 1988).

75. Non-realisation of revenue for bulk petroleum installations

Mention was made in paragraph 49 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1976-77 regarding non-recovery of hire/rentals for bulk petroleum installations (BPI) at airfields from Indian Oil Corporation (IOC).

Three BPIs consisting of 28 underground tanks of 45 K.L capacity each together with land measuring 12.674 acres at station 'Z' were handed over to the IOC in January 1972. The BPIs were built in 1958 at a cost of Rs. 7.04 lakhs by the Air Force. Later on, an expenditure of Rs. 2.60 lakhs was incurred on the modifications of the BPIs. The above modification work was carried out through the IOC and completed in October 1973.

In 1978, a Board of Officers, convened to determine the rental liability of the IOC in respect of the site and structures, recommended recovery of annual rental of Rs. 1185 for land and Rs. 31,834 for structures from the IOC with effect from 1972. The rental liability was brought to the notice of the IOC in 1977. No formal claim was preferred by Military Engineer Services (MES). In October 1985 the MES authorities informed Audit that Defence Accounts authorities have been asked to bill the IOC for recovery of rentals. The Controller of Defence Accounts informed Audit in March 1987 that licence fee bill had been floated in February 1987.

The outstanding dues upto December 1986 were Rs. 4.95 lakhs. The delay in recovery during the past 15 years had resulted in loss of interest also.

As regards the utilisation of the BPIs, the IOC stated in May 1977 that they did not operate the BPIs even for a single day and the fixing of monthly rental was unreasonable and that they had their own BPIs also at this station which were being used by them. Even subsequently, the BPIs were not used by the IOC. The IOC had not, however, handed over the site or the structures at two BPIs (October 1987).

Ministry of Defence (Ministry), in October-November 1987, stated that no formal claim for rental was preferred by the MES as the Board proceedings of 1978 could not be progressed by the Air Force. One BPI taken back from the IOC had been in continuous use. A Board of Officers was in progress to assess arrears to be recovered from the IOC and the case would be negotiated with them on receipt of Board proceedings. All Command Headquarters had been advised to assess all requirements of works services carefully before sanctioning the same. Part/full recovery of rentals for BPIs at eight air fields was under negotiation with the IOC.

In November 1988, the Ministry further stated that the IOC were not willing to accept any rental liability as they had not utilised any of the three BPIs. As a result, the Board of Officers for assessing the arrears of rent was not progressed.

Thus, of the three BPIs built at a cost of Rs. 7.04 lakhs, further modified in 1973 at a cost of Rs. 2.60 lakhs, two remain unutilised even now (November 1988). There was a failure to recover the rent during the past 15 years which had accumulated to Rs. 4.95 lakhs as at the end of December 1986. The issue regarding taking over of two BPIs and recovery of rentals remained un-resolved (November 1988).

76. Avoidable cost escalation on repair to a railway siding

The Railway siding in a station, handling defence consignments of ordnance and ammunition stores, had outlived its life and was, after a few derailments, declared unfit for use. The stores were hence unloaded at shunting tracks, making unloading and carriage of acid and combustible materials on headloads, a laborious and dangerous job. During the rainy season, the ammunition also got wet. In view of the above factors and with the object of ensuring round the clock logistical support a Board of Officers recommended, in June 1983, special repairs to the Railway siding on an immediate undertaking. In August 1983, the repair work was sanctioned by debit to Defence Services estimates at a cost of Rs. 6.53 lakhs and the

Railway authorities were requested to execute the work on over-riding priority. The work was released for execution in October 1983.

According to the existing procedure, laid down in February 1972, no advance payment for the work entrusted to Railways, was to be made. However, Railways, after taking the work in hand, asked for in June 1984, advance payment. No advance was paid. Railways completed the repairs on one track by January 1985 and did not proceed with it further as the advance on this deposit work had not been paid by Defence. The payment was made in March 1985. By then, the cost had escalated and the Railways revised the cost estimates in March 1985 to Rs. 8.40 lakhs. Further escalations pushed up the cost to Rs. 10.05 lakhs in August 1987 when the revised estimate was sanctioned. The balance amount of Rs. 3.52 lakhs was deposited with the Railways in November 1987. The work had not yet been completed (September 1988).

In September 1988, Ministry of Defence stated that no work order was placed till March 1985 as sufficient funds were not available to entrust the work on Railways. It was then expected that the Railways would float bills on completion of work in terms of existing procedure of 1972. Railways should have asked for advance initially. These contentions are not tenable as the work was released in October 1983 and Railways had asked for advance payment in June 1984 after taking up the work which was completed on one track by January 1985. Further the existing procedure for payment was not brought to the notice of Railways.

Thus, a relatively small repair job of substantial use to Defence, entrusted to the Railways in 1983, could not be got completed for over five years and in the meantime, the costs had escalated by over 50 per cent from Rs. 6.53 lakhs to Rs. 10.05 lakhs.

77. Delay in utilisation of buildings

Construction of buildings is approved and taken up only after the necessity therefor is clearly established. As a result, there should be very little delay in utilising them. Delays constitute not only non-realisation of income from

the assets created, liability for payment of rent on hired buildings etc. but also denial in time of the facility to the users. Some cases of delay in utilisation of buildings have been brought out in the following paragraphs.

Case I

Office and technical accommodation for Controllerate of Inspection (Military Explosives) at Pune was sanctioned in June 1982 at an estimated cost of Rs. 175.72 lakhs. Work on the building was completed in May 1986 and that on external services—water supply and electricity, in August 1986 and September 1987 at a total cost of Rs. 204 lakhs. The buildings could be handed over to the users in November 1987 as electricity and water connections were secured only in September 1987 and November 1987.

Case II

Family quarters at Amritsar was sanctioned and constructed as under :

- (a) Sanction for construction of 24 quarters for officers was accorded in December 1981 at an estimated cost of Rs. 29.42 lakhs. Contract for the construction of those quarters was concluded in September 1982. The work was completed on 15th September 1984 at a cost of Rs. 37.19 lakhs. However, these quarters were occupied only on 6th September 1985 that is one year after their construction.
- (b) Sanction for construction of 103 quarters for Junior Commissioned Officers (JCOs) and Other Ranks (ORs) was accorded in February 1982 at an estimated cost of Rs. 47.96 lakhs. Construction of these quarters was completed on 28th March 1985 at a cost of Rs. 55.14 lakhs. However, these quarters were, occupied only on 24th December 1985, that is after a gap of nearly nine months.

The delay is attributable to the work on external electrification getting completed on 30th March 1985 and that for external water supply, on 30th September 1985. The delays resulted in avoidable extra expenditure to the State to the tune of Rs. 5.70 lakhs on account of hiring of

accommodation for officers and payment of compensation in lieu of quarters to the JCOs/ORs.

Case III

Family quarters (78 numbers) for Defence civilians at Bangalore was sanctioned in May 1983 at an estimated cost of Rs. 75.98 lakhs. The construction of these quarters was completed on 30th August 1986 at a cost of Rs. 81.18 lakhs. A Board, assembled in January 1987, recommended taking over of the quarters after rectification of defects pointed out by them. Defects noticed by the Board were rectified in March 1987 and allotment orders were issued in June 1987.

Failure to allot the quarters soon after completion of construction resulted in avoidable expenditure of Rs. 1.92 lakhs by way of payment of house rent allowance from September 1986 to June 1987 besides loss of revenue to the extent of Rs. 0.51 lakh on account of licence fee.

Case IV

In November 1977 and May 1978, 1½ platoons of Defence Security Corps (DSC) were sanctioned for providing security to two Defence Research and Development (R&D) establishments at Bangalore. In March 1982, Ministry of Defence (Ministry) sanctioned construction of 14 family quarters and 70 "single accommodation" at an estimated cost of Rs. 24.43 lakhs.

The Military Engineer Services (MES) concluded three contracts for construction of the sanctioned accommodation. Construction of the entire single accommodation was completed in August 1984 and the family quarters in January 1986. But the platoons authorised had not yet (October 1988) been positioned due to their diversion in May 1985 to other locations.

The family quarters were vacant from February 1986 till October 1986 and were under occupation since November 1986 by personnel of MES and R&D establishments. The single accommodation, numbering 70 quarters, was partly under occupation by eight service personnel from September 1986 and balance as MES storage accommodation.

In September-October 1988 the Ministry stated that as far as possible contracts for external services would be concluded alongwith the main contract. Command Headquarters were being advised to ensure synchronisation of completion of external services alongwith completion of quarters. Instructions were being issued for taking over quarters without delay and not to keep them vacant.

To conclude,

- Buildings constructed at Pune at a cost of Rs. 204 lakhs were lying idle (May 1986 to November 1987) due to delay in provision of essential services like water and electricity supply.
- Similar delay in family quarters constructed at Amritsar resulted in assets created at a cost of Rs. 92.33 lakhs remaining unutilised for 9 to 12 months, resulting in avoidable expenditure of Rs. 5.70 lakhs on hiring of accommodation and payment of compensation in lieu of quarters to JCOs and ORs.
- Failure to allot promptly the family quarters at Bangalore resulted in avoidable expenditure of Rs. 1.92 lakhs by way of payment of house rent allowance from September 1986 to June 1987 and loss of revenue to the extent of Rs. 0.51 lakh on account of licence fee.
- DSC platoons sanctioned for two R&D establishments in November 1977 and May 1978 had not yet been positioned and the family quarters built for them remained largely vacant. Single accommodation, numbering 70 quarters, constructed in August 1984, except for eight quarters in occupation since September 1986, had been used as storage accommodation. The family quarters remained unoccupied from February 1986 to October 1986.

78. Delay in completion and handing over of residential quarters

In the following two cases, there was delay in completion of residential quarters and handing over the completed quarters to the users resulting in loss of revenue and avoidable expenditure by way of hiring of private accommodation.

Case I

In the context of the shortage of residential family accommodation for officers of the rank of Major and above in the Army and of equivalent ranks in the Navy and the Air Force, at Delhi/New Delhi, a board assembled, in July 1979, recommended the construction of 508 quarters against a deficiency of 849 quarters.

The Ministry of Defence (Ministry) accepted the recommendation and approved the construction in three phases, of 167 quarters in phase-I, 176 in phase-II and 165 in the last one, in terms of sanctions accorded in May 1981, November 1981 and May 1982.

321 quarters were constructed before the stipulated date of completion in the contracts. In 99 quarters there were delays ranging from three to eight months. On the balance 88 quarters, the contractors failed to proceed with the construction resulting in cancellation of the contracts in July 1986. The finalisation of the alternate risk and cost contract got delayed due to a Court stay order. Out of 88 quarters, 33 were completed in January 1988, 22 in March 1988 and 33 were expected to be completed by October 1988. The department has claimed about Rs. 105 lakhs from the defaulting contractor on account of risk and cost construction.

The Ministry, in August 1988, stated that after completion of contracts, handing over required a period of four to six months. This contention is not tenable as the quarters are taken over from the contractor by the Military Engineer Services (MES) complete in all respects and their allotment and handing over should not take four to six months.

Thus, due to abnormal delay in handing over of 420 residential quarters an avoidable expenditure of Rs. 8.20 lakhs had been incurred upto February 1988, by way of hiring of private accommodation by the officers.

Case II

A Recce-cum-siting-cum-costing Board was held in March-April 1978 to consider the necessity for 1500 additional residential quarters for a Vehicle Factory, Jabalpur. The factory authorities confirmed in the meeting that water supply was available to meet the requirement of the additional 1500 quarters from existing sources.

In July and September 1980, the Ministry accorded two sanctions for construction of 100 quarters and 750 quarters at a cost of Rs. 29.11 lakhs revised to Rs. 31.90 lakhs in February 1981 and Rs. 361.47 lakhs respectively. The sanction of September 1980 *inter-alia* included provision for two overhead tanks of 75,000 gallons each.

The MES concluded, in all, twelve contracts for different items of work provided in the sanctions. The works relating to construction of 850 quarters under six different contracts were to be commenced between April 1981 and September 1982 and completed between July 1982 and September 1984. However, with the exception of one contract for 100 (type—III quarters) which was completed by the stipulated date of 25th February 1984, construction of the remaining 750 quarters, under five other contracts, got delayed by 4 to 14 months and was completed between October 1982 and March 1985.

The MES attributed the delay mainly to untimely and prolonged monsoon, erratic power supply and delay in issuing of stores to the contractors. The MES took over 524 quarters during October 1982 to September 1984 and 326 quarters in March 1985 from the contractors.

Although construction of 850 quarters was completed in phases during October 1982 to March 1985, essential services like electricity and water supply, which were to be completed through other contracts between May 1983 and February 1984, could be completed only between March 1984 and December 1985.

The main reasons for time overrun in the completion of external electrification were due to delay in handing over of site for laying underground cable/sub-station and non-provision of main switch by the contractors. In the case of

overhead tanks, delay in completion was attributed, mainly to change in foundation design, shortage of specialised local labour during festival and harvesting seasons, local disturbances, labour unrest and additional work for electric connection. Commissioning of the overhead tanks was delayed due to non-availability of water from the existing source. Notwithstanding the assurance given in March-April 1978 by the factory authorities about the availability of water to meet the requirements of proposed additional quarters, water for testing was made available in September 1985 and the tank was commissioned in December 1985.

Besides failure to match availability of essential requirements by about the date of completion of the quarters, there were various construction defects like leakage of roofs, seepages through walls and stagnation of water on the floors of balconies as pointed out by the factory authorities in August 1985 and by the Ordnance Factory Board in February 1986.

The factory authorities took over 793 quarters between August 1984 and June 1987.

The Ministry stated in January/June 1987 that the possession of quarters could not be taken over due to delay in rectification and provisioning of external services and water supply.

The MES accepted that there was delay in completion of overhead tanks but held that 763 quarters could have been occupied earlier without the overhead tank as water supply by direct pumping had been offered by it.

Thus, failure to provide essential requirements by about the date of completion of the quarters and delays in rectification of the defects and consequent delay in taking over the quarters by the factory authorities resulted in loss of Rs. 17.81 lakhs approximately on account of non-realisation of licence fee from and payment of house rent allowance to the employees (June 1987).

The case was referred to the Ministry in July 1988 and their reply has not been received (December 1988).

79. Under-recovery of rent for Chinar cinema

In June 1987, Ministry of Defence (Ministry) authorised recovery of concessional rent from 12 specified auditoriums and cinema-cum-lecture halls which were being used on a part time basis for screening entertainment films. "Lecture-cum-Sand model room" at Udhampur was one of these 12 buildings. It was constructed in 1952 on temporary specifications at a cost of Rs. 0.63 lakh. The building was demolished in July 1972 and a lecture-cum-cinema hall called Chinar cinema with a seating capacity for 1200 persons was constructed in November 1971 at a cost of Rs. 13 lakhs at Government expense. Rent for this new building was being recovered at the rate of Rs. 25 per show, fixed provisionally in December 1971.

The details of departmental use for conducting lecture sessions and exhibition of training films *vis-a-vis* the number of entertainment films exhibited, amounts of entry fee collected thereon and of entertainment tax paid to the State Government during 1985, 1986 and 1987 were as follows :

Year	Training film/lectures	Number of entertainment shows	(Rs. in lakhs)	
			Entry fee collected	Entertainment tax paid
1985	80	1178	9.26	0.86
1986	90	1199	9.82	1.76
1987	95	1190	8.77	1.58

The number of entertainment shows held worked out to more than three per day, all through the year whereas Government building was used for intended purposes only once in four days on an average.

The rent charged was far less in terms of the higher investment on the new building. The preponderance of the use of the building for exhibition of entertainment films, the proceeds from which are credited to non-Government funds, (Chinar cinema management) and the fact that the film shows are open to non-Defence civilians too are additional factors against collection of rent at the old provisional rate of Rs. 25 per show. The difference between the full assessed rent to be charged in terms of Quartering

Regulations and the rent provisionally paid during November 1971 to December 1986 amounted to Rs. 11.96 lakhs.

In September 1988, the Ministry stated that under the existing Government orders of June 1967 as amended in May 1970, the auditorium was to be charged at 1/240 of the monthly assessed rent (excluding departmental charges) of the building for each show and not the full assessed rent. Directions were being issued to pay difference between the provisional rent and rent as calculated under existing orders of June 1967. The cinema is run without any profit motive for entertainment of troops, Defence civilians and local population of the Cantonment and only a nominal rate was charged for entertainment films. (The contentions of the Ministry are not tenable. The statistics shown in the table indicate that the building was mainly used for screening regularly entertainment films, on the average over three shows per day. The cinema was open to non-Defence personnel. The proceeds (profits) were being credited to Command general fund, a non-Government fund).

Thus, in replacement of 'lecture-cum-sand model room' meant for imparting training to troops, a lecture-cum-cinema hall with a seating capacity of 1200 persons was constructed in November 1971 at a cost of Rs. 13 lakhs. It was being used for exhibition of entertainment films on commercial basis by paying provisional rent of Rs. 25 per show and proceeds credited to non-Government fund. As such full assessed rent in terms of Quartering Regulations, is to be charged instead of the concessional rent under Government orders of June 1967. The difference between the full assessed rent and rent provisionally paid during November 1971 to December 1986 resulted in non-recovery of Rs. 11.96 lakhs.

80. Delay in revision of water supply rates

Supply of water to the Armed Forces and to certain other private consumers is arranged by the Military Engineer Services (MES) either from their own installations or through bulk purchase from other sources. Consumers are charged at an all-India flat rate fixed from time to time (Armed Forces officers are charged at half the

rate and Defence personnel below that level are supplied free of cost). The all-India rate is worked out by the Engineer-in-Chief's (E-in-C) Branch on a 'no profit, no loss' basis with reference to the all-India average all-in-cost obtained from the cost accounts of installations, which are collected and consolidated annually.

The delay in revising the all-India flat rate of recovery for water and the consequent loss of revenue amounting to Rs. 73.98 lakhs during 1963-64 to 1976-77 was commented upon in paragraph 22 of the Report of the Comptroller and Auditor General of India, Union Government (Defence Services) for the year 1978-79. As a result, the all-India flat rate was revised to 80 paise per kilo-litre (KL) with effect from 1st April 1981.

In January 1982, it was decided in a meeting to freeze the recovery rate for both electricity and water for a period of five years from 1st April 1981. However, the Ministry of Defence (Ministry) issued, in May 1983, orders laying down the periodicity for revision of recovery rates for electricity and water as once in every three years. Accordingly, the recovery rate for water became due for revision from 1st April 1984. But no action was taken to revise the rate despite progressive increase of the all-India average cost on the ground that the revision has to be done only after five years, in terms of the decision taken in the meeting held in January 1982.

The all-India recovery rate for water was revised only in September 1987 and made effective from 1st November 1987. The rate was fixed as 100 paise per KL as against the all-India average cost of 151 paise per KL during 1984-85 resulting in a loss of revenue amounting to Rs. 3.09 crores for 1984-85. The loss for the next two years, on that basis, will be over Rs. 6.18 crores more. The computation of all-India average cost for 1985-86 (based on the audited cost accounts of the installations due to be received by end of April 1987) had not been done so far (September 1988).

In September 1988, the Ministry stated that it was not practicable to adopt the criteria of "no

profit, no loss" basis because of the fact that consumption of water by paying consumers constituted only about two *per cent* of the total water supplied by the MES. The periodicity of three years for revision of rates prescribed, in May 1983, by the Ministry was deemed to apply to subsequent revision after expiry of the freeze period of five years from 1st April 1981. The contentions of the Ministry are not tenable as all-India flat recovery rate is based on average all-India unit cost irrespective of the category of consumers. The decision taken in a meeting for freezing the rate, for which no orders were issued, became null and void consequent on prescribing

the periodicity of three years for revision of rates in May 1983 by Government.

Thus, despite Government orders of May 1983 to revise all-India flat rates for water supply after every three years, the rates for recovery, due for revision from 1st April 1984 were revised only from 1st November 1987. The rate so fixed was much less than all-India average cost resulting in loss of revenue of over Rs. 9 crores during three years—1984-85 to 1986-87. There was inordinate delay in computing the all-India unit cost for 1985-86 which should have formed the basis for the rate revision with effect from April 1987.

CHAPTER VI

RESEARCH AND DEVELOPMENT ORGANISATION

81. Review on utilisation of equipments in Defence Research and Development Organisation

81.01 Introduction

Defence Research and Development Organisation (DRDO) was established in 1958 with a network of nine major laboratories/establishments, by amalgamating the Defence Science Organisation created in 1948 and the then existing Technical Development Establishments. The DRDO serves as the focal point for all scientific research and development (R&D) aspects relating to Defence matters. The mandate of the Department is accomplished through a network of 45 laboratories administered by the DRDO.

81.02 Scope of Audit

In the context of the increasing investments on Defence R&D, a review in Audit was conducted on the utilisation of equipment, imported and indigenous, the extent of equipment lying idle at the end of September 1987 with an analysis of the reasons therefor through case studies. Delays in the clearance of imported equipment at airports and the availment of customs duty exemption on imported equipment and consumables have also been covered in this review. The review covers test check of 19 laboratories.

81.03 Mechanism

The scope of research, design and development activity of the organisation covers armaments, electronics, aeronautics, structural/civil engineering, vehicles, general stores and basic sciences. The activities of the DRDO are organised through specific projects. The projects, emerging from expressed, anticipated and futuristic needs, are of two categories:

- (i) Staff projects taken up at the instance of the Services against specific qualitative requirements and
- (ii) Competence building projects undertaken for building up expertise in specific disciplines.

81.04 Highlights

- The laboratories had been purchasing a number of equipments over the years for use not only on approved projects but also to serve as general purpose equipments called 'build up'. None of the 19 laboratories maintained log books showing the extent of their utilisation with the result, the DRDO did not have the benefit of the exact quantitative/qualitative services rendered by these equipments. Audit too could not, therefore, evaluate the extent of use of the equipments.
- As a result, study by Audit had to be confined largely to such of those equipments which had not been commissioned. It revealed that as on 30th September 1987, 15 laboratories held 33 equipments costing Rs. 461.75 lakhs without utilisation for periods varying upto nine years. Most of them, 24 equipments worth Rs. 444.40 lakhs, were imported.
- The case studies of some of the equipments relating to specific projects revealed (i) delay in checking the equipments received for defects/deficiencies, (ii) delayed action to procure essential items to make the equipments functional, (iii) delayed or poor response on the part of the suppliers/Indian agents in attending to repairs, (iv) non-fulfilment of erection/commissioning obligation by Indian agents and (v) non-synchronisation of receipt of equipments with connected civil works and *vice versa*. Besides, such delays have the normal fall out of delay in the completion of projects, if the equipment itself was an essential one.
- As regards procurement of equipments for 'build up' the perceptions by the laboratories indicated lack of well known and established policy guidelines for such purchases.

This had led to several irregularities, the more important being:

- (a) procurement of equipment for 'build up' without identifying them against specific competence building projects;
- (b) procurement of equipment for 'build up' not being need based or their delayed/non-commissioning resulting in a leisurely pace at which they were put to use vitiating their very essentiality;
- (c) shifting the expenditure burden on projects to 'build up' due to late accounting/late receipt of the equipments ordered for projects or due to early closure of the projects or due to elapse of considerable time before project PDC was further extended; and
- (d) changing the concept of need for 'build up' to some other need after arrival of the equipment.

— Although duty free import of R&D equipments and consumables was available, the same was not availed of at the time of import. The laboratories instead resorted to the easy option of paying the customs duty first and taking action thereafter to secure refunds. As a result, the laboratories were pursuing a large number of refund claims, pending for long periods. The number of such claims on imported equipments for the three years, 1984-85 to 1986-87, outstanding as on 30th September 1987 amounted to Rs. 2.80 crores. Similar refund on duty free imported consumables for Rs. 14.74 lakhs had not even been applied for.

— On the stores imported by air, there had been delays in clearing the consignments at the airports resulting in payment of Rs. 12.28 lakhs as warehousing charges.

— Despite the laboratories having procured a large number of equipments specific to project and otherwise, over the years, there was neither a system of reviewing the equipments

held nor a policy to weed out the substantial surplus equipments held.

81.05 *Utilisation of equipment*

The laboratories had been purchasing a number of equipments every year for use on the approved projects. In addition, equipments were purchased under the category called 'build up' which serve as general purpose equipments. None of the 19 laboratories maintained log books to show the extent of the utilisation of the equipments in their possession. As a result, the DRDO did not have the benefit of the exact quantitative/qualitative service rendered by these equipments acquired from Government funds. Audit too was, therefore, unable to evaluate the extent of the use of the equipment.

Some of the laboratories, to name a few, Defence Metallurgical Research Laboratory (DMRL), Defence Research and Development Laboratory (DRDL), Defence Electronic Research Laboratory (DLRL) at Hyderabad, Snow and Avalanche Study Establishment (SASE), Manali, Defence Research Laboratory (DRL), Tezpur, etc. had agreed to maintain usage cards. Certain others like Defence Food Research Laboratory (DFRL), Mysore and Defence Science Centre (DSC), Delhi could not do so. To an Audit comment that the position be examined and general guidelines issued on the subject, Ministry of Defence (Ministry) stated in October 1988 that instructions would be issued to all laboratories/establishments for maintenance of usage cards for all items costing Rs. 5 lakhs and above.

Audit had, therefore, confined its study largely to, only such of those equipments, relating to "specific to projects" as well as "build up" not commissioned.

81.06 *Equipments not installed/commissioned*

As on 30th September 1987, in 15 laboratories, 33 equipments costing Rs. 461.75 lakhs, had not been installed/commissioned and were lying without utilisation, for varying periods. Of these, 23 equipments (cost : Rs. 357.93 lakhs) pertained to 'specific projects' and the balance to 'build up'.

The periods over which the equipments were lying unutilised are as below:

Period for which lying idle	Equipments lying unutilised			
	Imported		Indigenous	
	Number	Cost (Rs. in lakhs)	Number	Cost (Rs. in lakhs)
Upto 1 year	9	57.24	2	0.52
1-2 years	4	268.99	4	14.46
2-3 years	6	67.42	3	2.37
3-4 years	1	22.09	—	—
4-5 years	3	15.63	—	—
Over 5 years	1	13.03	—	—
Total	24	444.40	9	17.35

As would be seen from the above statement, the major part of the idle equipments were imported ones.

In order to ensure that investment of funds in costly equipments did not remain unproductive due to the assets remaining non-commissioned for long, the DRDO devised, in January 1981, a monitoring scheme requiring on all the laboratories to report every half year, details of new equipments not erected after one month from the date of their receipt. However, this exercise had either not been done or had been ineffective resulting in new equipments lying idle for long periods. The results of the case study of some of these equipments procured for use on 'specific projects' and those procured for 'build up' have been brought out in the succeeding paragraphs.

81.07 Equipments, specific to projects

81.07.1 *DMRL, Hyderabad* : A forge press, costing Rs. 245.34 lakhs was imported in June 1986. Its transportation, erection and commissioning were entrusted to an Indian firm in January 1985, for completion in September 1986 at a cost of Rs. 34.57 lakhs. The supply of the equipment itself got delayed due to delay by the laboratory in taking decision on the design of the press and its many sub-systems as a result of further thought and discussion on suppliers information. The equipment was received in three consignments upto August 1986 and was lying unutilised for over two years (October 1988).

The Ministry stated in October 1988 that the press had been fully erected by February 1988 and that the performance guarantee process trials could not be carried out due to power-cuts.

81.07.2 *Research and Development Establishment (Engineers) R&D(E), Dighi*: A high pressure compressor was imported at a cost of Rs. 13.55 lakhs in April 1985. Its oil cooler was damaged during transshipment and a free replacement was received only in June 1987. The commissioning of the compressor was to be done by the Indian agent of the foreign firm. The laboratory stated in January 1988 that the firm of Indian agent had since been dissolved and that they were trying to get this equipment commissioned. The equipment was lying unutilised for over three years (October 1988).

A frequency response analyser imported at a cost of Rs. 1.73 lakhs for an important project was received in May 1985. Some of the spares, received deficient, were subsequently made good by the supplier in July 1985. When the equipment was commissioned in May 1985, it was found that equipment was faulty and was returned to the supplier for repairs. It was received back in September 1986 but was not functional. The laboratory authorities stated (October 1988) that the Indian agent had not been able to repair the equipment with whom it was lying and their principal in U.K. have been requested to replace free of cost the entire machinery. Thus, the equipment had remained unutilised for over three years (October 1988).

81.07.3. *Institute of Armament Technology (IAT), Girinagar*: A Vacuum Induction Melting Furnace costing Rs. 11.10 lakhs imported against a contract of December 1984, shipped by the firm in December 1985, was brought on charge by the laboratory in July 1986. The plant was erected and fully commissioned by the Indian agent of the supplier only in March 1988.

According to the Ministry (October 1988), the delay of over one and a half years in fully commissioning the equipment was due to malfunctioning of components, defective components, etc.

81.07.4 *DSC, Delhi*: An imported equipment (excimer laser) costing Rs. 11.46 lakhs received in

November 1986 had not been installed due to delay in receipt of import permission for Hydrogen Chloride gas cylinders from the Controller of Explosives (C of E). The equipment was lying unutilised for two years (October 1988).

The Ministry stated in October 1988 that delay in receipt of import permission was occasioned due to objections raised by the C of E on the supplier's design for the cylinders which had to be sorted out with the supplier.

81.07.5 *Defence Research and Development Establishment (DRDE), Gwalior*: Techapher costing Rs. 1.82 lakhs and Techopac costing Rs. 1.42 lakhs imported in October 1986 had not been installed as the Indian agent of the supplying firm had changed. The equipments were lying unutilised for more than two years (October 1988).

The Ministry stated (October 1988) that though the techapher was installed in May 1988, the two equipments have not been commissioned due to non-receipt of some small parts found missing, change of management of the manufacturing firm and delay and incompetence on the part of Indian agent.

81.07.6 *Defence Materials and Stores Research and Development Establishment (DMSRDE), Kanpur*: Hot Air Autoclave with accessories was imported at a cost of Rs. 10.50 lakhs and received in the laboratory in March 1987. The equipment could not be commissioned as it got damaged in transit. The civil works for installation of the equipment had also not been completed. As a result, the equipment was lying unutilised for over one year and seven months (October 1988).

The Ministry stated in October 1988 that installation was held up mainly due to civil works, scheduled for completion in March 1987, being incomplete.

An "automatic dynamic viscoelasto meter" imported at a cost of Rs. 7.65 lakhs was received in the laboratory in May 1983. It has not been commissioned due to certain defects. The equipment was returned to the supplier for repairs in April 1987 and had not been received back (February 1988).

The Ministry stated in October 1988 that delay in returning the equipment was due to delay in getting Bank guarantee from the supplier. The supplier could not undertake repairs as the equipment was totally damaged in transit. The case was, therefore, under reference to Law Ministry etc.

"Fokker Bond Tester System Model 80" procured at a cost of Rs. 1.05 lakhs was received in November 1986. At the time of commissioning, some defects were noticed as a result of which the equipment had to be returned to the supplier for repairs. The equipment was received back from the supplier in August 1988 and was under checking (October 1988). The delay in commissioning ranged over two years.

"Ultra-speed Muffle Furnace" was imported at a cost of Rs. 0.79 lakh in April 1985. On receipt, it was found that the insulation material was damaged and a twin heating rod needed replacement. Insulation material was despatched by the firm in October 1987 and the equipment was commissioned in March 1988. Commissioning of the equipment got delayed by three years.

81.07.7 *DRL, Tezpur*: A Microgen ULV Fog Generator imported by air at a cost of Rs. 0.88 lakh in March 1987 had not been installed due to delay in getting the Indian agent's agreement for installation of the equipment by an expert engineer of the supplying company and also due to non-availability of vehicle required for mounting the equipment on. The Ministry stated in October 1988 that efforts were being made to instal the equipment early.

81.07.8 *SASE, Manali*: A "mea-suronics system" was imported at a cost of Rs. 9.5 lakhs. The consignment sent by air in June 1986, was over carried to another destination and could be collected only in June 1987. Since then the equipment had been awaiting installation/commissioning (October 1988). The establishment is seeking the help of the supplier/the Indian agent to instal and commission the equipment. The Ministry stated in October 1988 that the supplying firm had changed hands and the new owners have been contacted to accept the commitment of the erst-while owners.

81.07.9 *Terminal Ballistic Research Laboratory (TBRL), Chandigarh*: "100 times input channel shell analysis system", costing Rs. 4.50 lakhs, failed within two months of commissioning in November 1985 and was still lying with the supplier (October 1988) for rectification of defects. The Ministry stated in October 1988 that the supplier had made an offer (July 1988) to import and supply a system from abroad, free of charge.

An equipment costing Rs. 0.97 lakh, imported by air in March 1986, incurring Rs. 0.33 lakh as freight charges could be commissioned only in September 1988. The Ministry stated in October 1988 that the connected building became available only in November 1986 and locating a willing and competent contractor to undertake a small value but highly specialised work of installation of the boiler and erection of steam lines led to further delay.

81.07.10 *DLRL, Hyderabad*: An equipment P-3 Laser System was imported at a cost of Rs. 4.16 lakhs in April 1985. Initially, there was delay in commissioning due to delay in procurement of dry nitrogen and high pressure hoses through local purchase (May and July 1986). The equipment was partially commissioned but it failed after working for one week. Supplier's local agent could not successfully repair it and the principals as well as other R&D laboratories are being consulted for getting it repaired. As a result, proper operation of the equipment had been delayed by over three years (October 1988).

81.07.11 *Vehicle Research and Development Establishment (VRDE), Ahmednagar*: The following three machines were procured indigenously for an important project:

Name of machines	Value (Rs. in lakhs)	Received in
(i) Neutral Salt Bath Furnace	2.16	September 1985
(ii) Shot Blasting Machine	1.60	January 1986
(iii) Oil Fired Reheating Furnace	1.60	April 1986

All the three machines were yet to be installed in the laboratory as the buildings were not ready (October 1988).

81.07.12 *Aerial Delivery Research and Development Establishment (ADR&DE), Agra*: Equipments for Radio Telemetry system were imported

at a cost of Rs. 18.77 lakhs and were received by the laboratory between January 1985 and March 1986. Provision for airconditioning (package type) in Instrument Laboratory where the equipment was to be installed, was sanctioned in February 1983. Approval for installation of window type airconditioners, in lieu of package type, was given only in July 1987 and the airconditioning works had not been completed so far (March 1988). The equipment was, however, commissioned in September 1987, after a delay of over eighteen months initially due to an incorrect antenna received and subsequently the correct type but without connectors.

A Micro computer was indigenously procured in January 1987 at a cost of Rs. 6.75 lakhs. The connected works for the computer room were sanctioned in January 1986. Due to non-completion of the computer room, the computer was installed in a temporary room. Due to paucity of space, all the terminals could not be put to use till completion of civil works in March 1988.

81.07.13 All the equipments mentioned above relate to requirements of specific projects. Delays in erecting/commissioning them have the normal fallout of delay in the completion of projects, if the equipment itself was an essential one.

81.08 Equipments for 'build up'—lack of policy guidelines

Over the years the laboratories had been purchasing equipments under the category of 'build up', required for general purpose uses. As these equipments were not covered by those procured for specific projects, policy guidelines regulating their procurement were enquired into by Audit. The following were the replies furnished by different laboratories.

- (i) The requirement of machinery was projected in the "Forecast Budget Estimates" (FBE) and on receipt of allotment, machinery was procured after scrutiny of its necessity and period of use (VRDE, Ahmednagar and DRL, Tezpur).
- (ii) Equipment Procurement Committee (EPC) at the DRDO Headquarters (HQ) headed by Chief Controller of Research and Development (CCRD) scrutinised

the proposal of the laboratories and approved the purchase of equipments under 'build up' and projects each year (Microwave Tubes Research and Development Centre (MTRDC), Bangalore, SASE, Manali (equipment costing more than Rs. 1 lakh).

- (iii) A few specific equipments, procured under project, were also transferred to 'build up' if they were still usable and the Director was the competent authority to decide these classifications (DFRL, Mysore, DRDE, Gwalior).
- (iv) It had been a practice to project all the major items coming under 'build up' at the time of Advisory Council Meeting. The Advisory Council examined the proposals and gave its approval (SASE, Manali).

The perceptions as above, indicate a lack of well known and established policy guidelines on the purchase of 'build up' equipments.

81.09 'Build up' equipments

81.09.1 Some instances of delay in commissioning of 'build up' equipments have been analysed in the succeeding paragraphs.

81.09.2 *DRDL, Hyderabad* : A shellcore blower and a shell moulding machine were imported in September 1983, at Rs. 7.98 lakhs to meet the laboratory's 'build up' requirements. They had not been erected/commissioned so far (October 1988). The delay in erecting the shell moulding machine was explained by the laboratory in January 1988 as due to delay in receiving short-landed/damaged equipments as well as subsequent changes required in operating the facility from gas to electric heating system. The equipments were not essential for the laboratory and were proposed to be transferred to Hindustan Aeronautics Limited (HAL) where it could "be better utilised". Pending acceptance by the HAL to the transfer, further work on commissioning therefor remained suspended, five years after their acquisition.

81.09.3 *DLRL, Hyderabad* : An "ESM System" costing Rs. 28.42 lakhs was imported in January 1985. The equipment had not been

commissioned successfully so far (October 1988). Rectification of defects (damaged antenna) attempted through the supplier, first in DLRL during September-October 1985, then in USA during 1986 for in-warranty repairs, again in May 1987 and finally in January 1988 in DLRL did not prove successful as the desired technical specification on frequency and accuracies were not satisfactory (October 1988).

A "Sine-cum-random vibration system", imported at a cost of Rs. 22.09 lakhs, was received in November 1983. Its erection work got completed only in May 1986 due to delay in civil works. Thereafter, at the commissioning stage, it was noticed that the digital control system was not functioning satisfactorily and as a result the equipment could not be put to use and the work had to be carried out through a specialist firm. The equipment had not been commissioned for five years (October 1988).

81.09.4 *Defence Bio-engineering and Electro Medical Laboratory (DEBEL), Bangalore* : The equipment, Instron Universal Testing Machine, was imported at a cost of Rs. 11.58 lakhs in September 1986. The equipment was installed only in February 1988.

Ministry stated in October 1988 that full commissioning of the equipment got delayed upto February 1988 due to problems with actuator and user programme option, despite constant attendance by technical experts of Indian agents and service engineers from U.K.

81.10 Allocation of expenditure between 'Projects' and 'build up'

When projects are approved with specific cost frames, all expenses incurred on them should be booked against the respective projects. It had, however, been noticed that expenditure debitable to projects, was wrongly debited to 'build up' reducing the outlay on the project concerned. Some instances of that type have been brought out in the following paragraphs.

(a) *DRDL, Hyderabad* : In July 1983, six technology development ongoing projects were amalgamated into a single programme with five projects (cost : Rs. 388.83 crores). Till the time of the

above amalgamation, DRDL had projected the requirement of plant and machinery and consumables against those six technology development projects upto the year, 1983-84. Thereafter, those requirements were projected as for 'build up' instead of as project requirement for the only programme assigned to it. The extent of budgetary support during 1983-84 to 1987-88 for 'build up' equipments was as below :

(In lakhs of Rupees)

Year	Forecast Budget Estimates for 'build up' (Items of new capital equipment intended for 'build up')	Actual value of supply orders placed
1983-84	1788.38	33.67
1984-85	1486.90	43.78
1985-86	1698.12	27.37
1986-87	1325.10	44.82
1987-88	920.59	42.06

Since the entire activity of DRDL, after July 1983, related only to one programme, provision of funds separately for 'build up' equipments was not justified as it would result in an under-statement of the project cost.

(b) Another project of the same laboratory, sanctioned in February 1972 at a cost of Rs. 16 crores, was closed after incurring an expenditure of Rs. 15.41 crores upto June 1983. The actual expenditure was more as the value of five high value machines imported at a cost of Rs. 139.96 lakhs for that project was shifted to 'build up' requirements. The Ministry stated in October 1988 that procurement of five machines was for 'build up' and not for the project. The Ministry's contention is not tenable as requirement of these machines was projected in June 1977 as being very crucial to the project for delivering developed items from 1981-82 to the Air Force. As that project was not continued, a view was taken in June 1979 to shift the burden to 'build up' taking the long term use in view.

(c) *MTRDC, Bangalore* : The first and the only project, assigned to this unit was sanctioned by Government in August 1987. A sum of Rs. 57.11 lakhs was spent on equipments and consumables, till March 1987, that is before the first project was sanctioned and had been booked to 'build up' requirements and not to the cost of that project.

The Ministry stated (October 1988) that as the works to be embarked upon by the laboratory were clearly known, preliminary studies on these had been initiated and the equipments referred to were procured so that certain minimum facilities could be established, which was a continuous process and the equipments would remain as an asset to the organisation. The Ministry has not explained as to why such procurement could not be identified against specific competence building projects and the cost debited thereagainst.

81.11 *Late receipt of equipments ordered for projects, booked to 'build up'*

Certain equipments, procured for use on specific projects, were received late. The cost of these equipments were accounted for as 'build up'. Some case studies, in which cost of equipments, debitible to projects, was debited to 'build up', have been brought out in the succeeding paragraphs.

(a) *DMRL, Hyderabad* : Twelve equipments costing Rs. 111 lakhs meant for a project were received quite late; the expenditure thereagainst was debited to 'build up'.

(b) *Defence Agriculture Research Laboratory (DARL), Almora* : A project relating to "adaptability and performance of goats" was completed in May 1987. However, expenditure continued to be incurred even after completion of the project as the animals were still held by the laboratory as a 'build up' facility. Expenditure so incurred after the close of the project upto 25th February 1988, was Rs. 0.28 lakh.

The Ministry stated in October 1988 that studies on and improvement of various breeds could not be completed within the probable date of completion and that extension of time till December 1990 had been approved. (What has not been stated is why the expenditure of Rs. 0.28 lakh was booked to 'build up').

81.12 Customs duty on equipments

81.12.1 Scientific and technical instruments and equipments, imported by public funded institutions, for research purposes, are exempt from payment of customs duty. Two certificates are required to be furnished for securing duty-free clearance of the goods. The certificates are :

- (i) "Not manufactured in India" (NMI) to be obtained from the Director General Technical Development (DGTD) and
- (ii) "Customs Duty Exemption" (CDE) to be obtained from the Ministry of Defence.

81.12.2 Instead of securing duty-free clearance of the goods, by completing the due processes well in time, in many cases, the laboratories resorted to the easy option of paying the customs duty first and then take action to secure the refunds. There had been considerable delays in that process too. Refund claims pending with customs authorities as on 30th September 1987 for the three financial years were as below :

Related to year	Number of laboratories	Customs duty paid		Refund claims outstanding as on September 1987	
		Num-ber of cases	Amount (Rs. in lakhs)	Num-ber of claims	Amount (Rs. in lakhs)
1984-85	5	52	59.04	22	38.83
1985-86	6	42	83.98	30	77.73
1986-87	9	65	258.48	58	163.42
Total	20	159	401.50	110	279.98

The Ministry stated (October 1988) that (i) there had been problems in getting the NMI certificate from the DGTD leading to delay in their issue (ii) sometimes the DGTD rejected the Organisation's requests (iii) most of the invoices, a must for customs authorities, did not cater to such a description of the item(s) concerned as to convince them of the items being

duty-free (iv) sometimes technical write up was insisted upon by the customs on the item(s) (v) sometimes Embarkation HQ were not able to link up CDE/NMI certificates already available with them (vi) where consignments were received in phases and original CDE/NMI certificates were furnished to customs with the consignment of first phase, originals were no longer available for production for subsequent consignments, all of which led to payment of duty first to get the goods cleared which in turn led to growing refund claims pending.

As for the steps taken to minimise payment of customs duty DRDO had set up cells in 1980, one each in two Embarkation HQ, for liaison with them. Their strength have since been increased and action was on hand to re-organise their structure and instal a personal computer in each. Proposal has been made for opening Embarkation detachment at Hyderabad and Bangalore.

As for refund claims, Embarkation HQ were equally responsible for lodging them.

Ministry's reply points to the need for development of scientific expertise by the Organisation to safeguard its interests over a matter which endows duty-free import facility of goods for the Organisation so that payment of duty and chasing refund claims therefor is reduced to the bare necessity, if not avoided altogether.

81.13 Customs duty on consumable goods

Consumable goods, required for the purpose of research, were similarly exempt from payment of customs duty with effect from 1st March 1986, subject to production of the two certificates. Despite this concession, some laboratories continued to pay duty on consumables even after that date.

Four laboratories paid customs duty on this account during 1986-87 in 48 cases; the amount so paid was Rs. 43.35 lakhs. Refund was applied for only in 20 of those cases for Rs. 28.61 lakhs. As a result in the remaining 28 cases, for Rs. 14.74 lakhs, the refund had not been applied for.

The Ministry stated in October 1988 that some establishments were not aware of the fact that consumables upto a value of Rs. 5 lakhs

could be got cleared duly without NMI/CDE but with a simple certificate from Head of Establishment. Action has since been taken to obtain refund in respect of cases pertaining to 1986-87 onwards.

81.14 Delay in clearance of air cargo and payment of warehousing charges

On stores imported by air, the airport authorities keep the goods in their warehouse free of cost for the first seven days. If the stores are not cleared within that period, warehousing charges are to be paid. One of the main reasons justifying import by air is the urgency for the receipt of the consignment. Despite such urgency, clearance of R & D air cargo got delayed and wasteful expenses incurred on payment of warehousing charges. The amount so spent during the last three years ending 31st March 1987 was as under :

Year	No. of laboratories	Warehousing charges incurred (Rs. in lakhs)
1984-85	5	1.50
1985-86	5	2.57
1986-87	7	8.21
Total	17	12.28

Some of the reasons attributed to the delays and payment of warehousing charges were :

- Cargo arrival notice reached the laboratory late.
- Delay on the part of the bank in clearing the documents.
- Location of some laboratories far away from airport at Delhi.
- Delay involved in obtaining financial sanction, etc.

The Ministry stated in October 1988 that a few laboratories located at Delhi, Agra, Chandigarh and Kanpur at times get their consignments

at Delhi airport and responsibility for their clearance devolved on them in the absence of a detachment of Embarkation HQ. There was a need for clearance of the items without delay and proposal was on hand to have such a detachment and with its finalisation, the burden of warehousing charges will be greatly reduced.

81.15 Surplus equipment

The laboratories had, over the years procured a large number of equipments specific to projects and otherwise, and they now hold a number of equipments even after completion of some of the projects. As per instance, around December 1987;

- (i) DRDL, Hyderabad held 1066 equipments, procured at a cost of Rs. 16 crores.
- (ii) DLRL, Hyderabad held Rs. 10.5 crores worth of equipment on 'build up' requirements.
- (iii) DEBEL, Bangalore held 15 equipments costing Rs. 34.66 lakhs against 'build up' requirements.
- (iv) DFRL, Mysore held 29 equipments valued at Rs. 43.34 lakhs against 'build up' requirements.
- (v) VRDE, Ahmednagar held 305 equipments valued at Rs. 195.86 lakhs and had acquired during the period 1984-87, 23 equipments valued at Rs. 36.82 lakhs against 'build up' requirements.
- (vi) Solid State Physics Laboratory (SPL), Delhi procured Rs. 348 lakhs worth of equipments since 1984-85 against 'build up' requirements.
- (vii) SASE, Manali held 120 equipments valued at more than Rs. 199.10 lakhs against 'build up' requirements.
- (viii) DMRL, Hyderabad held 1266 equipments valued at Rs. 537.07 lakhs.

- (ix) ADR&DE, Agra procured 60 equipments worth Rs. 65.53 lakhs against 'build up' requirements. It also held 356 equipments seven years after closure of the projects. The cost of 50 of those equipments alone was available, namely Rs. 1.38 lakhs.

The Laboratories did not have a system of reviewing the equipments held, periodically, in order to weed out those which were surplus to their requirements, the DRDO too did not have a policy for surplus equipments held. One laboratory (DRDL, Hyderabad) confirmed (January 1988) that a review of their holding with a view to identify the surplus equipment which was no longer required, was in progress.

The Ministry while confirming the figures in (i) to (ix) above stated (October 1988) that some equipments were in use, either in the projects concerned or other projects and as 'build up' after closure of projects and that some more equipments were under review for ascertaining whether they are surplus items. As for policy, the DRDO have a policy letter to weed out surplus/obsolete equipment, which involves circulation to other establishments/laboratories, Defence Departments, etc.

The implementation of the policy had, not, however, been effective leading to the situation pointed out above.

81.16 *Non-synchronisation of civil works and purchase of equipments*

81.16.1 Lack of synchronisation of the completion of buildings/airconditioning arrangements *vis-a-vis* the availability of equipments had been noticed in some cases, rendering the investment on one of the two assets idle and cost escalations on the other. The Ministry in October 1988 stated that it would be ensured in future that delays did not occur in the execution of civil works.

81.16.2 *IAT, Girinagar* : For implementing the project "Build up of facilities and infrastructure for teaching and research in Rocket propulsion and combustion", the buildings were completed at a cost of Rs. 10.53 lakhs and handed

over to the laboratory in April 1983. The proposals made by the laboratory in August 1978 for purchase of equipments/materials at a cost of Rs. 12.75 lakhs was sanctioned only in October 1984 that is after the building became available. Meanwhile, the cost of the equipments escalated by over 100 *per cent* to Rs. 26.24 lakhs. The project, anticipated to be completed by March 1987 was yet to be completed (October 1988) as one equipment *viz.* differential scanning calorimeter, value Rs. 14 lakhs was received only in August 1988.

The Ministry stated (October 1988) that PDC of the project has been extended till March 1989.

81.16.3 *R&D (E), Dighi* : Three dimensional coordinate measuring machines, imported at a cost of Rs. 19.26 lakhs, for use in the project "Creation of testing and development facilities for gauges and metrology" were received in July 1985. The civil works for the project, were still (February 1988) incomplete. The machinery had been temporarily installed in an improvised temporary accommodation and can be put to optimum use only when shifted to a centrally airconditioned permanent building.

81.16.4 *Institute of Nuclear Medicine and Allied Sciences (INMAS), Delhi* : In October 1986, Government sanctioned provision of technical accommodation for Computerised Tomography (CT) scanner and allied facilities at an estimated cost of Rs. 58.23 lakhs. Building work had been completed and taken over in September 1987. Air-conditioning had progressed to the extent of 95 *per cent*. But the finalisation of contract for the procurement of equipments (to be installed in the building) had not been finalised. This has resulted in non-utilisation of the facilities created at a cost of Rs. 58.23 lakhs.

81.16.5 *VRDE, Ahmednagar* : 21 equipments, costing Rs. 52.55 lakhs, received during the past four years were awaiting erection as the new workshop buildings planned at the new Key location plan, expected to be completed by March 1986, are not ready. The new buildings (phase-II civil works) were expected to be ready by the end of 1987.

81.16.6 Due to delays in civil works/non-availability of ancillary facilities, the following delays had occurred :

Name of laboratory	Value of the equipment (Rs. in lakhs)	Details of the equipments and date of receipt	Date of installation/commissioning
DMRL Hyderabad	84.42	Rolling mill September 1983	December 1985
TBRL Chandigarh	17.25	Hydraulic Press 500 tons capacity March 1978	August 1980
SPL Delhi	54.98	EBMF March 1983	July 1985

81.17 Delay in accounting of equipments

In two laboratories, INMAS and DSC, out of 11 equipments received between January 1986 and October 1987, nine equipments were taken to stock after a time gap ranging from one to eight months and two had not been taken to stock and were lying unutilised (October 1988). The value of these equipments was Rs. 35.92 lakhs.

81.18 Delayed receipt of equipment

Some other cases of delay with varying reasons therefor have been brought out in the succeeding paragraphs :

(a) DLRL, Hyderabad had placed an order in December 1984 on an indigenous supplier for 16 hardware items for (a) computer aided design system for Printed Circuit Boards (PCBs) and (b) computer based drafting facility for mechanical engineering applications. The cost and time frames were Rs. 45.76 lakhs and three months. Only two items were delivered within the time schedule, March 1985. The last consignment was received, one year after, in March 1986. The laboratory could not even impose the full penalty of Rs. 2.43 lakhs for the inordinate delay of four times over the contractual supply period but chose to waive major part of the liquidated damages and collected only Rs. 11,600.

In October 1988, the Ministry stated that it was probably un-realistic to impose a very short delivery period of three months though the supplier

had quoted such a period and, therefore, extension for three months was granted. Liquidated damages were calculated at two *per cent* on the hardware cost of items delivered after the extended period. It was felt that the supplier should not be punished with very heavy penalties. (The contention does not indicate a business like attitude in securing the goods ordered and is likely to lead to situations where suppliers will not take the time frames on supplies seriously).

(b) Of the five packages containing an equipment costing Rs. 1.69 lakhs imported by SPL Delhi, only two packages were received at the airport in India in May 1986 and the remaining three were stated to have been lost in transit. The two packages were taken delivery of in March 1987 after considerable delay and the resultant warehousing charges of Rs. 13,000 on the entire consignment. The project work was carried out with the help of a machine available in sister institution. There was thus no justification for DRDO for import of this equipment.

In October 1988, the Ministry stated that refund claim for warehousing charges on untraced items was pending with the concerned authorities.

(c) A "3 target sputtering system" costing Rs. 24.08 lakhs was indented in March 1985 on the DGSD. SPL Delhi placed an indent in August 1984 on the DGSD for procurement of a "3 target sputtering system" and the latter had concluded a contract in September 1984 for its supply at a cost of Rs. 22.24 lakhs. The laboratory placed an indent, but with different specifications, for the same sputtering system with the DGSD again in March 1985 resulting in duplication in procurement effort. The two equipments were received and taken on charge in March and June 1988.

82. Irregular financing of tungsten ore concentrate project

In May 1983, at the instance of the Department of Defence Research and Development (R&D), Rajasthan State Mineral Development Corporation (RSMDC) set up a subsidiary company called Rajasthan State Tungsten Development Corporation (RSTDC) to attend exclusively to production of tungsten ore concentrate. During 1983-84,

Defence R&D prepared a project to accelerate the pace of production of ore concentrate by the RSTDC and chose also to fund it. The project envisaged modernisation of the production techniques of the RSTDC through a beneficiation plant of 50 tonnes per day (TPD) capacity. In March 1984, the last month of the financial year, a sanction was accorded by the Defence R&D for Rs. 195.50 lakhs, not only to fund the cost of the project "Development of tungsten ores concentrate", (Rs. 117.50 lakhs), but also for purchase of ore concentrate (Rs. 78 lakhs), for stockpiling. The entire sum of Rs. 195.50 lakhs was to be eventually adjusted against the cost of supplies to be made by the RSTDC, whose production in future was fully reserved for Defence stockpiling.

Actual drawal of funds for implementation of sanctioned projects/purchases should be with reference to the connected milestones materialising, as for instance, on the purchase of the equipment, availability of goods for sale, etc. Instead, the sanction itself provided for the drawal of the whole amount, Rs. 195.50 lakhs (from the Consolidated Fund of India) for payment to the RSTDC for executing the project. Accordingly, the amount was withdrawn by the Defence Metallurgical Research Laboratory (DMRL), Hyderabad and paid to the RSTDC in March 1984 itself; the latter had kept the amount in fixed deposit in a Bank.

The RSTDC did not implement the project prepared by the Defence R&D. It got instead a 20 TPD beneficiation plant from the Department of Atomic Energy, Government of India, stated to be free of cost. The Defence R&D project had thus failed to take off. In fact, on the basis of certain fresh developments, the proposal of setting up a 50 TPD plant, as originally envisaged, was considered unwise.

Of the sum of Rs. 195.50 lakhs advanced to the RSTDC in March 1984, Rs. 78 lakhs had been adjusted towards the cost of 65 tonnes of ore concentrate purchased till December 1985. The balance amount was lying in fixed deposit. In July 1986, the RSTDC, sought for Rupees one crore from Defence R&D for continuing the mining operations on the ground that it had incurred losses. Defence R&D, after failure of

its project cited above, sought to bail out the RSTDC by sanctioning, in November 1986, the diversion of Rs. 117.50 lakhs to other objects *viz.*

- (a) Materials/equipment and installation/commissioning of Atomic Minerals Division (AMD) of Department of Atomic Energy, Government of India's plant, etc.—Rs. 56.50 lakhs.
- (b) Trial exploratory mining/development, modification/extension of AMD plant, testing and preparation of flow sheets for beneficiation of Granite rocks—Rs. 61 lakhs.

Even these objects had not been realised till end of March 1987 when there was still a balance of Rs. 105.10 lakhs in fixed deposit and the benefit of interest enjoyed on unauthorised Defence R&D funds, by the RSTDC till then amounted to Rs. 32.82 lakhs.

Further, between 1985 and 1988, 52 tonnes of ore concentrate had been purchased by DMRL from the RSTDC. Its value, Rs. 77.59 lakhs, had not been adjusted against Rs. 117.50 lakhs lying with the RSTDC, as envisaged originally, but was again paid for. Of this quantity, 17 tonnes were not of the specification indicated by DMRL.

Department of Mines under the Ministry of Steel and Mines, is normally the appropriate agency in Government of India incharge of the development of mines and minerals in the country. In fact, the Mineral Development Board, Government of India had upto March 1987 released an interest free loan of Rs. 42.30 lakhs to the RSTDC for mine-prospecting operations. The role of Defence R&D in this venture had been outside its charter of duties.

In September 1988, Ministry of Defence (Ministry) stated that although the sanction for Rs. 195.50 lakhs provided for drawal of the whole amount for payment to the RSTDC, release of money for expenditure was being regulated with the identified milestone as decided by RSTDC Board in which Ministry was also represented.

The interest accrued from the deposit and amount released by the RSMDC on sale of rock phosphate were taken into consideration while negotiating the revised price of ore. 17 tonnes of below specification ore supplied had since been upgraded to the required specification. Tungsten development was not given adequate impetus by the Departments concerned with the mining and mine developments. As a consequence, Defence, being main user of this strategic mineral, had taken initiatives to its alround development.

To conclude,

- Rupees 195.50 lakhs were withdrawn from Government in March 1984, the last month of the financial

year, although there was no need for its immediate disbursement. The amount was passed on to a State Public Sector Undertaking, producing tungsten ore concentrate, and retained by the latter in fixed deposit. Out of that amount, Rs. 117.50 lakhs were meant to fund a project prepared by the Defence R&D, which failed to take off. The money had been subsequently diverted to bail out the State Public Sector Undertaking. Further, these operations on mineral development, are also outside the charter of duties of Defence R&D.

CHAPTER VII

OTHER CASES

83. Acquisition of land for field firing range

In February 1983, Ministry of Defence (Ministry) accorded sanction for acquisition/transfer of 5.51 lakh bighas of land for a field firing range-cum-training area in district Bikaner at a cost of Rs. 20.68 crores (private land—3.22 lakh bighas costing Rs. 12.08 crores and State Government land—2.29 lakh bighas costing Rs. 8.60 crores). The land was to be acquired under urgency clause of Rajasthan Land Acquisition (RLA) Act, 1953.

When the acquisition of private land was in progress by the State Revenue authorities, some land owners, not satisfied with the amount of compensation, obtained in May-June 1985 interim stay order from the High Court.

The quantum of compensation to be paid to the private land owners, was discussed in October 1985 between the State Revenue and Defence authorities. As a result thereof, Defence Estate Officer (DEO), Bikaner, informed, in October 1985, the Advocate General (AG) that under the Central Land Acquisition (CLA) Act 1894, 30 *per cent* solatium, as against 10 *per cent* under RLA Act and 12 *per cent* interest on market value of land in addition to rehabilitation grant of Rs. 2750 per family etc., were payable to the affected persons. Accordingly the AG filed, on 17th October 1985, an affidavit in the Court. Based on this, the Court vacated, in October 1985, the stay order allowing these additional reliefs in addition to the compensation admissible under RLA Act.

In satisfaction of the Court order, the State Revenue authorities declared, in December 1985, the award in part. While agreeing to the award, the Ministry observed, in February 1986, that there was no mention in the Court order for including the period covered by the stay order for payment of interest and requested the State authorities to deduct from the award an amount of Rs. 61.40 lakhs representing interest for the period covered by the stay order, being not admissible according to the explanation under the CLA Act. Simultaneously the DEO was directed to get the court order suitably amended as advised by the legal adviser who opined that the statutory provisions were not fully brought out during arguments in counter.

In February 1986, the civil authorities pointed out that the CLA Act was not applicable as the entire process of acquisition of land was done under RLA Act. Since the department had taken a decision to pay additional relief under CLA Act over and above the compensation payable under RLA Act, the interest for the stay period had also to be paid to the land owners in compliance with Court order as otherwise it would amount to contempt of Court. No action was taken to get the Court order amended. The State authorities declared in March—May 1986, the award in the remaining cases also. The total amount of interest awarded was Rs. 9.39 crores including Rs. 1.73 crores for the period covered by the stay order.

In July 1988, the Ministry stated that an administrative decision was taken to pay additional reliefs over and above the compensation

admissible under the RLA Act in order to avoid grievances/complaints on the part of land owners about inadequate compensation and it was the only practical solution to go ahead with the acquisition of such a large area to serve vital defence requirements. Since the land was acquired under the RLA Act, it was considered that application of the CLA Act might not be appropriate. Though the CLA Act was kept in view while offering additional reliefs, the acquisition of the land was under the State Act. Hence, an administrative decision was taken to pay interest during the period of stay also.

The resultant position had been that, on one side the liberalism of the CLA Act was extended for regulating the value of the acquired land on grounds of expediency and on the other, to justify a further payment expressly prohibited in the CLA Act, it had been argued that the application of that Act might not be appropriate. Though legal advice was obtained to remedy the position, no attempt was made to get the Court order suitably amended, as advised by the legal adviser. As a result, an extra expenditure of Rs. 1.73 crores had been incurred, which is not covered either under the CLA Act or the RLA Act.

84. Inordinate delay in demarcation of Defence land

In February 1966, Ministry of Defence (Ministry) sanctioned the raising of a Remount Training School and Depot (depot) at Hempur in Uttar Pradesh. The State Government transferred 4015.78 acres of land to the depot between March and June 1966. As no delineation of the land had been done earlier and some discrepancies in area had been noticed due to change in the course of a river in the vicinity, the depot approached, in September-October 1966, Army Headquarters (HQ) for survey and demarcation of land by fixing boundary pillars for making payment of the cost of property acquired.

In December 1966, the Ministry accorded sanction for acquisition of 4016 acres of State Government land and assets at a cost of Rs. 28.81 lakhs. The sanction, *inter-alia* provided that the payment be made only after taking complete possession of land and assets. In November 1969, Defence Estates Officer accepted the bills preferred by the State Government and made the payment without ensuring the possession of the land and assets thereon. Neither the bonafides of the papers produced by the State Government authorities, which indicated the total area transferred as 4016 acres, nor a detailed examination of the Revenue plan through Revenue authorities, was verified, carried out till then.

The demarcation of land attempted subsequently revealed that the area of land held was less and uncertain varying from

3783 acres as assessed in July 1978,
3928 acres as assessed in October 1979,
3866 acres as assessed in March 1980 and
3853 acres as assessed in July 1983.

The July 1978 assessment found that 128 acres (out of 3783 acres) were registered in the names of private persons in terms of Court orders. In January 1984, the demarcation of the land was proposed to be entrusted to the Survey of India; the final outcome was not known (September 1988). The mutation of the land had also not been got done through the State Government. The District authorities had recommended to the State Government mutation of only 3826 acres, that is about 190 acres less.

In September 1988, the Ministry while admitting the discrepancies in the area of land held, stated that land measuring 3853 acres was in actual occupation of the Military authorities and on the deficiency of 163 acres, action was on hand either to secure the balance land or get refund of its value. This contention of a deficiency of 163 acres does not tally with the recommendations

of the District authorities for mutation of land, which was 190 acres less.

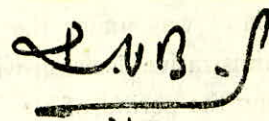
Thus,

- Land measuring 4016 acres purchased by the Ministry at a cost of Rs. 28.81 lakhs in 1966 was awaiting final demarcation/mutation even after a lapse of over 22 years (September 1988).

- The land transferred was less by 163 acres according to the Ministry in terms of actual occupation and 190 acres according to the District authorities for mutation. In addition, on the land transferred, 128 acres stood allotted to private persons by State Revenue authorities under orders of Courts.

NEW DELHI

Dated the 25 APR 1989



(R. V. BANSOD)

Principal Director

Director of Audit, Defence Services

Countersigned

T. N. Chaturvedi

(T. N. CHATURVEDI)

Comptroller and Auditor General of India

NEW DELHI

Dated the 26 APR 1989