PREFACE

This Report for the year ended March 2010 has been prepared for submission to the President of India under Article 151 of the Constitution for being tabled in Parliament. It relates to matters arising from the test audit of the financial transactions of Ministry of Defence pertaining to Army, Ordnance Factories, Department of Defence, Department of Defence Production, Defence Research and Development Organisation, Border Roads Organisation and Military Engineer Services. The matters arising from the Finance and Appropriation Accounts of the Defence Services for 2009-10 have been included in Audit Report No. 1 for the year 2009-10.

The Report includes 33 Paragraphs, reporting important audit observations as discussed from Chapter II onwards.

The cases mentioned in this Report are among those which came to notice in the course of audit for the period 2009-10. Matters relating to earlier years which could not be included in the previous Reports and matters relating to the period subsequent to 2009-10, wherever considered necessary have also been included.

OVERVIEW

Project Management in Armament Research and Development Establishment, Pune (ARDE)

Scrutiny of staff projects undertaken by ARDE during last 15 years, revealed that out of 46 closed Staff projects, only 13 underwent production while in the remaining either no production was required or claims of success could not be substantiated. Many of the projects failed as these were taken up without firming up the General Staff Qualitative Requirements (GSQR) or frequent changes in Qualitative Requirements were made by the users. Excessive time overrun and non-acceptance of the final output by the users also led to closure of the projects. In many cases, delays and failures led to dependence on imports.

(Chapter 7)

Delay in induction of state-of-the art Artillery Guns

Failure of the Ministry of Defence and Army in defining the requirement of specific gun system had deprived its Artillery, for over a decade, of guns of latest technology, which are in service world over. The abnormal delay in procurement of the state-of-the-art technology gun replacing the existing guns of obsolete technology of 1970, had not only impacted the operational preparedness of the Army but also resulted in substantial cost overrun.

(Paragraph 2.1)

Delay in establishment of repair facilities (Mini Depot) and unwanted import of Trailers

Advance payment of ₹ 100.18 crore had been made to the United States Government (USG) between March 2008 and October 2009 to establish Mini Depot for repair of 12 Weapon Locating Radars (WLRs) by September 2010. No progress had been made towards setting up of repair facility by due date. Consequently, a number of WLR remained non-functional for want of repairs. Besides, incorrect analysis of requirement of support equipments for the WLRs led to unwanted procurement of twelve Trailers at a cost of ₹ 2.19 crore.

(Paragraph 2.2)

Failure of the project "Mission Excel Information Technology (MEIT)" in Defence Accounts Department

The project "Mission Excel Information Technology (MEIT)" of Defence Accounts Department (DAD) planned with the objectives of automation of every function of DAD was derailed from its path in spite of incurring expenditure of ₹ 20.47 crore. The intended objectives of automation of all functions of DAD remain unachieved even after four years.

(Paragraph 2.3)

Non-realization of revenue due to non-revision of rent of land

Rent of 3.52 acres of land given to Cantonment Board, Agra for construction of shopping centres which was subject to revision after every five years could not be revised by the Defence Estate Officer, Agra for 36 years. This allowed the Cantonment Board to exploit Government land for commercial purposes without payment of commensurate revenue to the Government to the extent of ₹ 2.12 crore.

(Paragraph 2.4)

Extra expenditure due to acceptance of higher rates

Director General National Cadet Corps (DGNCC) violated the provisions of General Financial Rules and Defence Procurement Manual (DPM) while procuring mosquito nets for its Cadets. By adopting incorrect practice of purchasing 80 *per cent* quantity from past suppliers at higher rates than that of L-1 firm, extra expenditure of ₹ 21 crore had been incurred.

(Paragraph 3.1)

Diversion of funds from Government into non-Government account for procurement of Personal Kit items

Army HQ had set up a commercial outlet in the name of Personal Kit Store (PKS UN) without approval of the Ministry. Through this outlet, transactions of Government stores worth ₹ 140.75 crore were carried out for last three years. Stores for PKS (UN) were procured by diverting funds from Government into non-Government Account and Army had charged service charges of ₹ 5.36 crore irregularly.

(Paragraph 3.2)

Irregular de-hiring of house constructed on leased land

Chief of Staff, Southern Command accorded sanction for de-hiring of a house hired on old lease agreement prior to March 1976 although Ministry of Defence is the competent authority for de-hiring in such cases. This enabled the lessee to transfer the leasehold rights of 1.14 acres of Defence land valuing ₹ 2.77 crore to a private builder for its possible commercial exploitation.

(Paragraph 3.4)

Deficiency of fire fighting staff at Central Ammunition Depot

Non-rationalisation of fire fighting (FF) staff in Ordnance Depots within an Army Command created a critical deficiency over 40 *per cent* of fire fighting personnel in Central Ammunition Depot leaving it susceptible to risk of fire. Interestingly, other four depots were holding surplus FF staff ranging from 28 *per cent* to 120 *per cent* and paid pay and allowances of ₹ 5.81 crore to them from 2004-05 to 2008-09.

(Paragraph 3.5)

Loss of ₹ 1.19 crore due to irregularities in the accountal of Hay

Due to irregular accounting, hay weighing 1492.92 MT valuing ₹ 1.19 crore was not found on ground or found unfit for animal consumption in Military Farm Jammu. The irregularity could only come to light at the time of handing/taking over by the Officer-in-Charge of the Military Farm.

(Paragraph 3.6)

Non-conclusion of contract resulted in extra avoidable expenditure of ₹ 59 lakh

Director Military Farms, Western Command procured locally compounded cattle feed at higher rates due to non-acceptance of lowest tender within validity date as Integrated Financial Advisor (IFA) could not issue his concurrence for four months. The resultant delay in conclusion of contract for cattle feed for three stations had resulted in avoidable extra-expenditure of ₹ 59 lakh.

(Paragraph 3.7)

Avoidable expenditure due to rejection of a valid tender

Headquarters Western Command rejected a valid tender of a firm for procurement of meat group items by ignoring opinion of the Integrated Financial Adviser. Subsequently, the meat items were procured at higher rates first through local purchase and then in retendering from the same firm (s). This resulted in avoidable expenditure of ₹ 89.80 lakh.

(Paragraph 3.8)

Loss due to non-inclusion of laid down clause in wheat grinding contracts

Improper provision in the wheat grinding contracts concluded by the Major General Army Service Corps of two Army Commands resulted in less receipt of atta and consequential loss of ₹ 63.85 lakh. This also gave the millers undue advantage.

(Paragraph 3.9)

Injudicious procurement of Tippers

Engineer-in-Chief (E-in-C), Army Headquarters procured 15 Lorry Tippers for the Military Engineer Services (MES) at Port Blair without their authorization/demand. The Tippers on which an expenditure of ₹ 1.31 crore was incurred for procurement and transportation were lying unutilized since their receipt by the MES.

(Paragraph 3.10)

Irregular payment to Civil Hired Transport Contractors

Irregular payment of ₹ 32.29 lakh had been made to the Civil Hired Transport Contractors due to dubious booking of Civil Hired Transport by two Ordnance depots for conveyance of ordnance stores to dependent units.

(Paragraph 3.11)

Avoidable provisioning of tyres of Scania Vehicles

Over-provisioning of Scania Tyres costing ₹ 87.18 lakh had been made due to incorrect assessment of requirement by a Central Ordnance Depot. 70 *per cent* of the shelf life of these tyres had already expired in storage.

(Paragraph 3.12)

Procurement of defective spares from foreign vendor

Imported spares of Gun Machine and Missiles worth ₹ 2.30 crore were found unsuitable and were lying in Ordnance Depots without serving the intended purpose for the last three years.

(Paragraph 3.13)

Overpayment in Electricity Bills

Overpayment of ₹ 1.63 crore had been made to the electricity supplying agencies due to application of incorrect tariff schedule or failure to intimate correct contracted maximum demand (CMD) by the Military Engineer Services.

(Paragraph 4.1)

Loss due to collapse of a bridge

A bridge under construction by a Border Roads Task Force collapsed due to failure of unapproved staging/shuttering and non-implementation of checks and balances during execution. It has led to loss of ₹ 1.30 crore.

(Paragraph 5.1)

Non-completion of bridge after twelve years of sanction

Improper planning and supervision of works resulted in non-completion of the bridge on a river in Uttrakhand after 12 years despite spending ₹ 3.54 crore.

(Paragraph 5.2)

Avoidable procurement of core drilling machine

Director General Border Roads incurred an expenditure of ₹ 1.81 crore in procurement of eight core drilling machines for five Project Chief Engineers without their requirement. The machines could not be utilized for the intended purpose for the last three years.

(Paragraph 5.3)

Blockage of public money due to acquisition of unusable land

Defence Research and Development Organisation (DRDO) acquired 407 acres of forest land at Faridabad for ₹ 73.26 crore in April 2008 to set up a centre. The land could not be used for construction activities as diversion of land for non-forestry purpose was not permitted by the Central Empowered Committee (CEC).

(Paragraph 6.1)

Procurement/receipt of equipments after the closure or at the fag end of a project

Equipments worth ₹ 1.52 crore were procured by an Establishment of DRDO after completion of the concerned project, implying that the procurement was avoidable.

(Paragraph 6.2)

Development of a Modular Bridge below requisite specification

Against the users' requirement of modular bridge of 46 metre span with Military Load Class (MLC)-70, DRDO developed 40 metre span MLC-70 modular bridge by spending ₹ 21.46 crore. The Army did not accept the bridge being below requisite specifications and their requirement of modular bridge remains unfulfilled for nine years.

(Paragraph 6.3)

Performance of Ordnance Factory Organisation

The Ordnance Factory Organisation comprising 39 Ordnance Factories with manpower of 99374 is engaged in production of arms, ammunition, equipment, clothing etc. primarily for the Armed Forces of the country. The value of production aggregated to ₹11817.89 crore in 2009-10 which was 11.38 *per cent* higher than the value of production of ₹ 10610.40 crore in 2008-09.

While, till 2007-08, the Ordnance Factories had been able to maintain negative charge to the Consolidated Fund of India, the trend of generating surplus of receipts over expenditure in Ordnance Factory Organization got reversed since 2008-09 due to increase in manufacturing cost.

The total revenue expenditure of Ordnance Factory Organisation has increased from ₹ 9081.28 crore in 2008-09 to ₹ 10812.10 crore during 2009-10.

During 2009-10, production of 134 items (out of 434 items for which demands existed and targets were fixed) was behind schedule.

There was a shortfall of 70.22 per cent in achieving the target for export during 2009-10.

(Paragraph 8.1)

Extra expenditure due to delay in finalization of a purchase agreement

Abnormal delay in firming up an offer collectively by the Heavy Vehicles Factory Avadi, Armoured Vehicles Headquarters Avadi and Ministry of Defence despite being aware of the availability of a machine from only one source led to its procurement at an avoidable extra expenditure of ₹ 1.36 crore after obtaining fresh offers.

(Paragraph 8.2)

Extra expenditure due to purchase of spares at higher cost

Acceptance of costlier offer of M/s Bharat Earth Movers Limited by Ordnance Factory Board for procurement of spares of infantry combat vehicles despite being aware of their availability from the foreign firm at cheaper rates resulted in procurement of spares at a higher cost by ₹ 83.67 lakh by Ordnance Factory Medak.

(*Paragraph 8.3*)

Undue benefit to a firm

Ordnance Factory Ambernath extended an undue benefit of ₹ 9.77 crore to the Minerals and Metals Trading Corporation Mumbai owing to the factory's failure to insist upon supply of the outstanding quantity of copper cathodes at London Metal Exchange rates of February 2007 as per the supply order and accepting the same at higher rates of May 2007.

(Paragraph 8.4)

Avoidable import of propellant

Ordnance Factory Khamaria provided incorrect information to the Ordnance Factory Board about stock balance of propellants of an ammunition, which resulted in avoidable import of propellant valuing ₹ 2.17 crore and an extra expenditure of ₹ 39.79 lakh when compared with cost of production of the item at Ordnance Factory Bhandara.

(Paragraph 8.5)

Non-recovery of cost of rejected turret castings

Heavy Vehicles Factory Avadi failed to recover the cost of rejected turret castings valuing ₹ 73.83 lakh despite observing the defects within the warranty period. The factory however partly recovered ₹ 37.43 lakh from one of the Public Sector Undertaking after being pointed out in Audit and is awaiting recovery of remaining ₹ 36.40 lakh from another Public Sector Undertaking.

(Paragraph 8.6)

CHAPTER I : INTRODUCTION

1.1 Foreword

This report relates to matters arising from the compliance audit of the financial transactions of the Ministry of Defence and its following organizations:

- Army;
- Inter Service Organisations;
- Defence Research and Development Organisation and its laboratories dedicated primarily to Army and Ordnance Factories;
- Defence Accounts Department; and
- Ordnance Factories.

The report also contains the results of compliance audit of the transactions of the Border Roads Organisation under Ministry of Shipping, Road Transport and Highways.

Compliance audit refers to examination of the transactions relating to expenditure, receipts, assets and liabilities of the audited entities to ascertain whether the provisions of the Constitution of India, applicable laws, rules, regulations and various orders and instructions issued by the competent authorities are being complied with.

The primary purpose of the report is to bring to the notice of the legislature important results of audit. Auditing standards require that the materiality level for reporting should be commensurate with the volume and magnitude of transactions. The findings of audit are expected to enable the executive to take corrective actions as also to frame policies and directives that will lead to improved financial management of the organizations, thus contributing to better governance and improved operational preparedness.

This chapter, in addition to explaining the planning and extent of audit, provides a synopsis of the significant audit observations followed by a brief analysis on the expenditure of the above Organisations. Chapter II onwards, presents detailed findings and observations arising out of the compliance audit of the Ministry and the aforementioned Organisations.

1.2 Audited Entity Profile

Ministry of Defence at the apex level, frames policies on all defence related matters. It is divided into four departments, namely Department of Defence, Department of Defence Production, Department of Research and Development and Department of Ex-Servicemen Welfare. Each department is headed by a Secretary. The Defence Secretary who is the Head of the Department of Defence also coordinates the activities of other departments.

Army is primarily responsible for the defence of the country against external aggression and to safeguard the territorial integrity of the nation. It also renders aid to the civil authorities at the time of natural calamities and internal disturbances. It is therefore, incumbent upon the Army to suitably equip, modernize and train itself to meet the challenges.

DRDO, through its chain of laboratories is engaged in research and development primarily to promote self reliance in Indian defence sector. It undertakes research and development in areas like aeronautics, armaments, combat vehicles, electronics, instrumentation, engineering systems, missiles, materials, naval systems, advanced computing, simulation and life sciences.

The Inter Service Organisations like Armed Forces Medical Services, Military Engineer Services (MES), Defence Estates, Quality Assurance etc. serve the defence forces in the fields which are common to Army, Navy and Air Force. They are responsible for development and maintenance of common resources in order to economise on costs and provide better services. They function directly under Ministry of Defence.

Ordnance Factory Board (OFB) functions under the administrative control of the Department of Defence Production and is headed by Director General, Ordnance Factories. 39 factories are responsible for production and supply of ordnance stores to the armed forces.

1.3 Integrated Financial Advice and Control

Ministry of Defence and the Services have a robust internal financial control system in place. With fully integrated Finance Division in the Ministry of Defence, the Secretary (Defence Finance) and his/her officers scrutinize all proposals involving expenditure from the Government Accounts. Secretary (Defence Finance) is responsible for providing financial advisory services to Ministry of Defence, and the Services at all levels and also for treasury control of the defence expenditure.

Being Chief Accounting Officer of the Defence Services, Secretary (Defence Finance) is also responsible for the internal audit and accounting of Defence expenditure. This responsibility is discharged through the Defence Accounts Department with the Controller General of Defence Accounts as its head.

1.4 Authority for Audit

The authority for our audit is derived from Articles 149 and 151 of the Constitution of India and the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971. We conduct audit of Ministries/Departments of the Government of India under Section 13[1] of the CAG's (DPC) Act. Major Cantonment Boards are audited under Section 14[2] of the said Act. Principles and methodology of compliance audit are prescribed in the "Regulations on Audit and Accounts, 2007".

[1] Audit of (i) all expenditure from the Consolidated Fund of India (ii) all transactions relating to Contingency Funds and Public Accounts and (iii) all trading, manufacturing, profit & loss accounts & balance-sheet & other subsidiary accounts.

[2] Audit of receipt and expenditure of bodies or authorities substantially financed by grants or loans from the Consolidated Fund of India or of any State or of any Union Territory.

1.5 Planning and Conduct of Audit

Our audit process starts with the assessment of high risk of the organization as a whole and each unit based on expenditure incurred, criticality and complexity of activities, level of delegated financial powers, assessment of overall internal controls and concerns of stakeholders. Previous audit findings are also considered in this exercise. Based on this risk assessment, the frequency and extent of audit are decided. An annual audit plan is formulated to conduct audit on the basis of such risk assessment.

After completion of audit of each unit, Local Test Audit Reports (LTARs) containing audit findings are issued to the Head of the unit. The units are requested to furnish replies to the audit findings within a month of receipt of the LTARs. Whenever the replies are received, audit findings are either settled or further action for compliance is advised. Important audit observations arising out of these LTARs are processed for inclusion in the audit reports which are submitted to the President of India under Article 151 of the Constitution of India. During 2009-10, audit of 700[3] units/formations was carried out by employing 14059[4] party days. Our audit plan ensured that most significant units/entities, which are vulnerable to risks, were covered within the available manpower resources.

1.6 Significant Audit Observations

Capital and the Revenue Procurements made by the Ministry of Defence and the Service Organizations form the critical area as far as the audit of Defence Sector is concerned. Audit has been pointing out the deficiencies in the procurement process in its previous reports and the Ministry of Defence has taken several measures to improve the procedures involved. Periodical, revisions of the Defence Procurement Procedure (DPP) and Defence Procurement Manual (DPM), are significant steps to evolve better practices. Despite the same, significant deficiencies exist in the process of procurement, which have been highlighted in the Report.

The present Report highlights cases which assume importance in the light of their impact on operational preparedness and having substantial cost overrun. The Report also brings out issues regarding poor management of contract, inaccuracy in assessment of requirement, irregular payment, diversion of funds from Government into non-Government Account, land acquisition, non-revision of rent for leased Defence land, improper inspection of store, irregularity in accounting etc. which require immediate redressal.

The case regarding delay in induction of state-of-the-art Artillery Guns in the Army highlighted in Paragraph 2.1 is significant. The Army failed in defining the requirement of specific gun system which deprived its Artillery for over a decade from obtaining guns of contemporary technology for replacing the

[3] Number of units/formations audited by O/o Director General of Audit, Defence Services, New Delhi and O/o Principal Director of Audit (Ordnance Factories) Kolkata.

[4] Number of Party days employed during the financial year 2009-10 by O/o DGADS New Delhi and O/o PDA(OF) Kolkata

existing guns of obsolete technology of 1970. The delay in procurement has not only been impacting the operational preparedness of the Army but also resulting in substantial cost overrun. Another case of delay in establishment of repair facilities for 12 Weapon Locating Radars (WLR) even after making advance payment of ₹ 100.18 crore made to United States Government resulted in abnormal delay in repair of WLR (Paragraph 2.2).

Review of ARDE Pune highlighted the issue of lack of productionisation and induction of the outcomes of Staff Projects resulting in continuing dependence on imports.

Irregular purchase was made by DGNCC by placing 80 *per cent* supply order on past supplier at higher rates by ignoring valid L-1 offer, which resulted in extra expenditure of ₹ 21 crore (Paragraph 3.1). Another peculiar case came to notice in which diversion of public money into non-public fund to the tune of ₹ 5.36 crore was made by Army HQ charging 10 *per cent* profit on procurement of Personal Kit Stores for units proceeding on UN Mission. (Paragraph 3.2).

Operational Allowance not admissible to service personnel was paid to Defence Civilian of the same unit. The irregularity involved payment of ₹ 15.16 crore (Paragraph 3.3).

Poor contract management in DGBR caused collapse of a bridge resulting in loss of ₹ 1.30 crore (Paragraph 5.1). In another case a bridge had not been completed after 12 years despite spending ₹ 3.54 crore (Paragraph 5.2).

Sniper rifle procured under Fast Track Procedure for operational requirement could not be used for more than two and half years due to deficient pre-despatch inspection (Paragraph 2.5).

On matters relating to Defence land, Defence Estate Officer could not revise the rent for last 36 years when it was to be revised by every five years for 3.52 acre of land given to Cantonment Board Agra for construction of a shopping centre (Paragraph 2.4).

DRDO could not make use of 407 acre acquired forest land at Faridabad for ₹ 73.26 crore as Central Empowered Committee did not permit to use it for non-forestry purpose. This happened due to non-clearance of title from forest to normal purpose by DRDO before acquiring the land (Paragraph 6.1). In another case of DRDO, project for Modular Bridge was not executed according to the specification recommended in Statement of Case based on which sanction was accorded. This resulted in wastage of assets valued at ₹ 21.46 crore as user did not accept the bridge (Paragraph 6.3).

In case of Ordnance Factories, Audit has commented on the extra expenditure due to delay in finalization of a purchase agreement and purchase of spares at higher cost, undue benefit to a firm, avoidable procurement of propellants and non-recovery of cost of rejected turret castings. In addition, general performance of the Ordnance Factory Organisation for the financial year 2009-10 has also been commented upon.

1.7 Response of the Ministry/Department to Draft Audit Paragraphs

On the recommendations of the Public Accounts Committee, Ministry of Finance (Department of Expenditure) issued directions to all Ministries in June 1960 to send their response to the Draft Audit Paragraphs proposed for inclusion in the Report of the Comptroller and Auditor General of India within six weeks.

The Draft Paragraphs are forwarded to the Secretaries of the Ministry/Departments concerned drawing their attention to the audit findings and requesting them to send their response within six weeks. It is brought to their personal attention that in view of likely inclusion of such Paragraphs in the Audit Reports of the Comptroller and Auditor General of India, which are placed before Parliament, it would be desirable to include their comments in the matter.

Draft paragraphs proposed for inclusion in this Report were forwarded to the Secretaries concerned between July 2010 and March 2011 through letters addressed to them personally.

Ministry of Defence did not send replies to 16 Paragraphs out of 27 Paragraphs featured in Chapters II to VII. Department of Defence Production also did not send reply to three out of six Paragraphs included in Chapter VIII of this Report. The response of Ordnance Factory Board, wherever received, had been suitably incorporated in the paragraphs in Chapter VIII.

1.8 Action taken on earlier Audit Paragraphs

With a view to enforcing accountability of the executive in respect of all issues dealt with in various Audit Reports, the Public Accounts Committee desired that Action Taken Notes (ATNs) on all paragraphs pertaining to the Audit Reports for the year ended 31 March 1996 onwards be submitted to them duly vetted by Audit within four months from the date of laying of the Reports in Parliament.

Review of ATNs relating to the Army as of July 2011 indicated that ATNs on 76 paragraphs included in the Audit Reports up to and for the year ended March 2009 remain outstanding, of which the Ministry had not submitted even the initial ATNs in respect of 22 Paragraphs as shown in **Annexure-IA,** and 30 ATNs are outstanding for more than 10 years. With regard to Ordnance Factory Board as of July 2011, Ministry of Defence had not submitted ATNs in respect of three Paragraphs included in the Audit Reports for the year ended March 2003 to March 2010 even for the first time as per **Annexure-IB**. Further, Audit could not vet ATN in respect of other six Audit Paragraphs, as per the details given in the **Annexure-IC**, for want of revised Action Taken Note based on Audit's observations.

1.9 Financial Aspects/ Budgetary Management

What is commonly known as Defence expenditure comprises expenditure under six Grants. Grant No. 22 authorizes expenditure on Army, Inter Service Organizations and others like Inspection Organization, NCC, Rashtriya Rifles and includes Stores and Transportation etc. Grant Nos. 23 and 24 relate to Navy and Air Force, Grant No. 25 authorizes expenditure on Ordnance Factories, Grant No. 26 relates to expenditure for Defence Research and Development Organization and Grant No. 27 authorizes Capital Outlay on all Services.

Defence Outlays can broadly be categorized into Revenue and Capital. Revenue Outlays cover Pay and Allowances, Stores, Transportation etc. Capital Outlays cover expenditure on acquisition of new weapons and ammunitions, replenishment of obsolete stores with modern variety. Much of the modernization of Services takes place under Capital expenditure.

A detailed analysis of the budgetary provision (Voted portion) on Defence Services, Revenue side and Capital side (Voted segment) are given in the following table, which will give the overall picture:

(₹ in crore)

Sl. No.	**Budget provision On Defence Services (Voted) for the year 2007-08**	**Budget Provision On Defence Services (Voted) for the year 2008-09**	**Budget Provision On Defence Services (Voted) For the year 2009-10**	**Increase in Provision (in terms of *per cent*) from 2007-08 to 2009-10**
1.	99778.18	125358.64	148359.74	49
	Revenue Budget provision (Voted) 2007-08	**Revenue Budget provision (Voted) 2008-09**	**Revenue Budget provision (Voted) 2009-10**	**Increase in *per cent* (2007-08 to 2009-10)**
2.	57920.58	77382.54	93580.12	62
	Capital Budget Provision(Voted) For 2007-08	**Capital Budget Provision (Voted) For 2008-09**	**Capital Budget Provision (Voted) For 2009-10**	**Increase in *per cent* (2007-08 to 2009-10)**
3.	41857.60	47976.10	54779.62	31
	Actual Revenue Expenditure (Voted) 2007-08	**Actual Revenue Expenditure (Voted) 2008-09**	**Actual Revenue expenditure (Voted) 2009-10**	**Increase in *per cent* (2007-08 to 2009-10)**
4.	57619.55	77074.06	94645.46	64
	Actual Capital Expenditure (Voted) 2007-08	**Actual Capital Expenditure (Voted) 2008-09**	**Actual Capital Expenditure (Voted) 2009-10**	**Increase in *per cent* (2007-08 to 2009-10)**
5.	37439.90	40894.97	51019.42	36
	Unspent Provision Under Capital Expenditure (Voted) 2007-08	**Unspent provision Under Capital Expenditure (Voted) 2008-09**	**Unspent provision Under Capital Expenditure (Voted) 2009-10**	**Increase/decrease in *per cent***
6.	4417.70	7081.13	3760.20	2007-08 to 2008-09 - 60 **(increase)** 2008-09 to 2009-10 - 47 **(decrease)**

The increase on the Revenue side (Voted segment) was primarily due to revision of pay of defence forces on the recommendations of Sixth Pay Commission. The increase on the Capital side (Voted segment) was mainly due to modernization of services/additional requirement/outgo for new schemes etc. From the above table, it would also be evident that the unspent provision under capital segment was substantial for the three year period 2007-08 to 2009-10.

1.10 Analysis of Revenue Expenditure of Army

For the year 2009-10, the Voted portion of the Grant of Revenue Expenditure for the Army was ₹ 60253 crore. As against this, the expenditure recorded was ₹ 62717 crore registering an excess expenditure of ₹ 2464 crore. In the earlier financial year of 2008-09, there was an unspent provision of ₹ 808 crore.

Pay and Allowances for the Army constituted 58 *per cent* (₹ 36191 crore) of the total revenue expenditure in 2009-10. If Pay and Allowances for Civilians (₹ 3132 crore) and Auxiliary Forces (₹ 705 crore) are added, the Pay and Allowances component would constitute 64 *per cent*, Stores (₹ 9405 crore; 15 *per cent*) Transportation (₹ 1792 crore; 3 *per cent*) Works (₹ 4608 crore; 7 *per cent*) were other significant components of expenditure.

While comparing the expenditure within the Grant, significant excess expenditure took place in almost all the heads, especially in the heads involving Pay and Allowances of Army (₹ 3065 crore), Rashtriya Rifles (₹ 422 crore), Works(₹ 377 crore), Transportation (₹ 323 crore), Ex-Servicemen Contributory Health Scheme (₹ 202 crore), Pay and Allowances of Auxiliary Forces (₹18 crore), Civilians (₹171 crore), Inspection Organization (₹ 51 crore) and Military Farms (₹ 3 crore). Savings took place in Stores (₹ 2034 crore), National Cadet Corps (₹ 107 crore) and other expenditure (₹ 28 crore).

The savings in stores took place due to:

a) reduced expenditure on petroleum products;
b) procurement of sugar which was not re-offered by the Sugar mills;
c) non-conclusion of contract of barrels, deduct issue, return of bills;
d) slow pace of booking by CsDA; and
e) lesser expenditure by DGOF on Engineer Stores supplied.

The Army revenue budget during 2010-11 showed a marginal decrease at ₹ 57326.99 crore in comparison to ₹ 58648.10 crore in 2009-10. As against the budget estimates of ₹ 31599 crore for 2010-11 for Pay and Allowances for Army, the revised estimates stand at ₹ 32452 crore. The budget estimates for 2011-12 for pay and allowances was ₹ 34544 crore.

1.11 Analysis of Revenue expenditure of Ordnance Factories

The bulk of expenditure of Ordnance Factories are met by "Deduct recoveries" for supplies to Army, Navy and Air Force. In addition, Ordnance Factories also do Civil Trade and sell stores to paramilitary forces and to the public. These are booked as Receipts into the Consolidated Fund of India. The following table will give the picture:

(₹ in crore)

Year	Expenditure	Recoveries from supply to Armed Forces	Receipt on supply of surplus stores	Total Receipts	Net Receipt	Net Receipt as Percentage of expenditure
1	2	3	4	5(3+4)	6(5-2)	7
2005-06	6847.13	5701.31	1537.81	7239.12	391.99	5.72
2006-07	6191.89	5147.77	1384.52	6532.29	340.40	5.50
2007-08	7125.63	5850.65	1464.12	7314.77	189.14	2.65
2008-09	9081.28	6123.38	1474.54	7597.92	(-)1483.36	(-)16.33
2009-10	10812.10	7531.08	1545.01	9076.09	(-)1736.01	(-)16.06

The reversal of trend in generating surplus of receipts over expenditure in Ordnance Factory Organisation continued from 2008-09 to 2009-10 also. During 2009-10, though the total receipts has registered an increase of ₹ 1478.17 crore over that of 2008-09, because of increase in expenditure, there was an ultimate deficit of ₹ 1736.01 crore i.e. 16.06 *per cent*. The Ordnance Factories have attributed this to increase in manufacturing cost resulting from increase in Pay and Allowances, payment of arrear of 6th Central Pay Commission (CPC) and non-materialisation of certain CKD/SKD[5] items.

In the revised estimates for 2010-11, net budgetary support from the Consolidated Fund of India after adjustment of Deduct Recoveries and Revenue Receipts has been pegged at ₹ 150.13 crore. For the year 2011-12, the net budgetary support has been estimated at ₹ (-) 1176.75 crore, which is a surplus in accounting parlance.

While, till 2007-08, the Ordnance Factories had been able to maintain negative charge to the Consolidated Fund of India, supplies to the Services have never been able to match the budget provision indicating less supply than anticipated. Against the budgeted supply of ₹ 8393 crore in 2009-10, the supplies booked were at ₹ 7531 crore registering a shortfall of ₹ 862 crore. In 2008-09, the shortfall was of ₹ 474 crore and in 2007-08 it amounted to ₹ 594 crore.

In a number of cases, the issue prices are less than the actual cost of production. These factors have direct effect on the quantum of receipts of Ordnance Factories and consequently the budgetary support that they require from Government. Ordnance Factory Board needs to review the item-wise issue prices considering the actual cost of production otherwise they may run into deficit and would require huge budgetary support. The budget provision of ₹ 10844 crore for such supplies in the year 2011-12 therefore may prove to be very ambitious unless, prices of such supplies are revised sharply upwards.

Overall performance of Ordnance factories for the year 2009-10 has been analysed in this report at Paragraph 8.1.

[5] CKD/SKD – Completely knocked down/Semi knocked down

1.12 Analysis of Capital Expenditure of Army within Capital Outlay on Defence Services

In 2008-09, Army could spend ₹ 10611 crore against a Capital Outlay of ₹ 13312 crore leading to an unspent provision of ₹ 2701[6] crore. In 2009-10, it spent ₹ 14796 crore against an allocation of ₹ 17996 crore resulting in unspent provision of ₹ 3200[7] crore. Detailed analysis further indicates that under some heads even the expenditure incurred had no immediate impact on operational preparedness as an expenditure of ₹ 3466.70 crore was mainly in the nature of advance payments as discussed below:

	2008-09						2009-10					
Minor Head	**O**	**R**	**FG**	**Actual**	**Excess/ Savings***	**Per Cent**	**O**	**R**	**FG**	**Actual**	**Excess/ Savings***	**Per cent**
050-Land	35.00	(-) 5.00	30.00	31.32	(+) 1.32	4.4	51.99	(+) 6.75	58.74	40.95	(-) 17.79	30.29
101-Aircraft and Aero-engine	426.70	(+) 108.55	535.25	602.61	(+) 67.36	12.58	1020.62	(-) 882.45	138.17	138.09	(-) 0.08	0.06
102-Heavy and Medium Vehicles	1285.26	(-)58.48	1226.78	1114.86	(-)111.92	9.12	831.80	(+)351.71	1183.51	1273.56	(+) 90.05	7.61
103-Other Equipments	8345.33	(-) 2179.50	6165.83	5965.81	(-) 200.02	3.24	11121.24	(-) 1217.01	9904.23	10089.54	(+) 185.31	1.87
105-Military Farms	7.50	(-) 3.00	4.50	4.29	(-) 0.21	4.67	7.50	(-) 0.40	7.10	6.33	(-) 0.77	10.85
106-Rolling Stock	114.80	(-) 74.96	39.84	(-) 0.18	(-) 40.02	100.45	170.05	(-) 63.85	106.20	107.06	(+) 0.86	0.81
107-ECHS	60.00	(-) 50.50	9.50	7.57	(-) 1.93	20.32	37.00	(-) 30.60	6.40	5.91	(-) 0.49	7.66
112-Rashtriya Rifles	21.98	(+) 4.36	26.34	26.41	(+) 0.07	0.27	10.24	(+) 32.83	43.07	43.51	(+) 0.44	1.02
113-National Cadet Corps	23.66	(-) 20.00	3.66	3.32	(-) 0.34	9.29	27.30	(-) 22.70	4.60	3.60	(-) 1.00	21.74
202-Construction Works	2992.25	(-) 86.92	2905.33	2855.00	(-) 50.33	1.73	4718.20	(-) 1608.56	3109.64	3087.09	(-) 22.55	0.73

O –Original Grant; R-Re-appropriations; FG-Final Grant; ECHS-Ex Servicemen's Contributory Health Scheme
* - In this table **Saving** was calculated with reference to **Final Grant and Actual expenditure"**

Much of the savings have taken place during 2009-10 in Land, Aircraft and Aero-engines, Military Farms, Rolling Stock, ECHS, Construction Works, National Cadet Corps and Rashtriya Rifles.

The decrease in the appropriation of ₹ 1217.01 crore under the head 'Other Equipments' was due to non-fructification of new schemes, less requirement of funds for Brahmos Missile system, slippage in payments due to failure in PDI of SMERCH, reduced targets by DGOF etc. The expenditure of ₹ 3015.84 crore booked in the month of March 2010 for Brahmos Missile

[6] Saving was calculated with reference to Budget estimates (i.e. Original Provision + Supplementary)-Actual Expenditure
[7] Saving was calculated with reference to Budget estimates (i.e. Original Provision + Supplementary)-Actual Expenditure

system was in the nature of advance payment to Brahmos Aerospace Private Limited against contract concluded on 20 March 2010. Similarly expenditure of ₹ 49.77 crore was advance payment for Combat Net Radio (CNR). Therefore, of the total actual expenditure of ₹ 10089.54 crore booked under the Minor head 103-'Other Equipments', an expenditure of ₹ 3065.61 crore or 30 *per cent* was towards advance payments.

The increase in Appropriation of ₹ 6.75 crore for land was mainly due to delay in acquisition process. The increase of ₹ 352 crore under Heavy and Medium vehicles was mainly due to (a) additional requirement of vehicles to make up existing deficiency, (b) additional requirement of funds for New Scheme (HMV Tatra Quantity 788), (c) erroneous booking and to make up the increased deficiency due to new Raising.

Of the total actual expenditure of ₹ 1273.56 crore booked for Heavy and Medium vehicles, the expenditure on modernization schemes for operational preparedness amounted to ₹ 496.45 crore. Out of this amount, ₹ 314.85 crore was towards advance payments for contracts concluded in late March 2010 for the Tatra Vehicles, for which no benefit could be achieved obviously, during the year 2009-10. Excess occurred under the same head 'Heavy and Medium vehicles' for ₹ 90.05 crore was due to payment against initial advance against HMV Tatra and over booking by CsDA.

The decrease in Appropriation of ₹ 882.45 crore under Aircraft and Aero Engines (Minor Head 101) was mainly due to:

a) Non-fructification of New Schemes (Other than HAL);
b) Non-materialisation of milestones payments of HAL schemes (ALH Utility and ALH WSI Qty 60); and
c) Russian rescheduled Liability Payment booked under Minor Head 103.

Of the total actual expenditure of ₹ 138.09 crore booked for the above Minor head, expenditure of ₹ 86.24 crore was mainly towards advance payments made for design and development of Sakthi Engine and Light Utility Helicopter (LUH), as also non-rescheduled liability, rescheduled liability etc.
The savings on Construction Works (Minor head 202) amounted to ₹ 22.55 crore which was 0.73 *per cent* of the final grant. This saving occurred inspite of re-appropriation of ₹ 1608.56 crore which was 34.09 *per cent* of the Original Grant. The saving was mainly due to:

- CAOs surrendering the allotted funds;
- Internal transfer of funds from New Capital Works to Carry Over Capital works by HQ Western Command;
- Procedural delays in materialization of supply orders
- Refusal by contractors to take mobilization advances in the last quarter of the financial year.

Other reasons for savings were due to:

a) Non-finalisation of land acquisition cases,

b) Non-receipt of sanctions for procurement from Ministry,

c) Less debit raised by the State Accountants General on account of Camp expenditure; delay in sanctions of cases due to limited financial powers of DGNCC in case of new/carry over works etc.

Excess occurred under other Minor head -106 – Rolling Stock was due to additional requirement of funds on completion of modification of wagons by BEML.

1.13 Capital expenditure of Ordnance Factories and DRDO

The capital expenditure of Ordnance Factories during 2009-10 was ₹ 240.29 crore. Normally, expenditure on renewal and replacement in the ordnance factories are met from the renewal and replacement fund created out of the revenue expenditure. During the year 2009-10, the amount transferred to the renewal and replacement fund was ₹ 280 crore and the expenditure incurred from it was ₹ 228 crore.

In the case of DRDO, the capital expenditure during 2009-10 was ₹ 4152 crore. Of this, expenditure on machinery and equipment was ₹ 3802 crore and it constituted 92 *per cent.* The capital expenditure on DRDO was less by ₹ 204 crore (4.91%) than that of the revenue expenditure during the year, which stood at ₹ 4356 crore.

1.14 Rush of expenditure in the last quarter of the financial year and in particular, in the month of March

Ministry of Defence (Finance/Budget) has from time to time, issued instructions to maintain an even pace of expenditure throughout the year. Such instructions had, however, little effect on the pace of expenditure. 44 *per cent* of the annual Capital expenditure under the grants for all the services to Budget Estimates was spent during the last quarter of 2009-10 against prescribed 33 *per cent.* 32 *per cent* of the expenditure to Budget estimates took place in the month of March, at the fag end of the year against the stipulated 15 *per cent*. Under Army Grant, 18 *per cent* of the expenditure to Budget estimates was spent in the month of March.

CHAPTER II : MINISTRY OF DEFENCE

2.1 Delay in induction of the state-of-the-art Artillery Guns

Artillery guns of modern technology could not be made available to the Artillery troops for over a decade for replacing the existing guns of obsolete technology of 1970 vintage. Acquisition of Artillery Guns included in 10th Army Plan has not materialized till now. The abnormal delay in procurement of the new guns had not only impacted the operational preparedness of the Army but also resulted in substantial cost overrun.

Artillery firepower plays an important role in military operations by degrading enemy's combat potential. At present the Artillery arm of Indian Army comprises of regiments holding a mix of various gun systems whose technology ranges of world war-II and those developed in the seventies. None of these can be considered as state-of-the-art in view of rapid technological advances. Acquisition of quantity 'X' of 155mm 52 calibre Towed guns and SP guns (Wheeled/Tracked) was included in 10th Army Plan[8] but could not materialize as of October 2010. Thus availability of modern Artillery arm with the Army for replacing the existing force level of 105mm/ 122mm/130mm guns of obsolete technology could not be ensured for over a decade.

After last acquisition of Bofors gun under a contract of 1986, Ministry planned and initiated procurement process for acquisition of Towed Gun system and Self Propelled (SP) Gun system in mid nineties, which could not materialize even after lapse of more than a decade due to non-defining the requirement of specific gun system by Army, non-selection of proven gun and inconsistencies in evaluation of gun system. Chronological history of events is given in **Annexure-II**.

2.1.1 Acquisition of 155mm Towed Artillery Gun

Contract for acquisition of Bofors guns concluded in 1986 with M/s AB Bofors, Sweden was valid for 15 years i.e. up to 2001. Under the contract, Department of Defence Production was to avail itself of arrangements, technology, services and assistance of M/s AB Bofors for upkeep and overhaul of the guns purchased and for indigenous production of the guns. However, ban was imposed in 1989 on dealing with M/s AB Bofors which remained in force up to June 1999. Meanwhile, to meet urgent operational requirements of new gun for Artillery, the General Staff Qualitative Requirement (GSQR) for 155mm towed mounted gun was formulated in April 1997 indicating 45 Calibre barrel length as 'vital' parameter and 52 calibre length as 'desirable'. While that being so, the Chief of Army Staff had clarified in May 1997 that the future policy for towed gun would be 155mm 52 calibre length. The

[8] 10th Army Plan = 2002-03 to 2006-07

formulation of requirements on two options did not recognize that vendor base of guns of two different calibers was different.

The ban on M/s Bofors was lifted in June 1999 permitting transactions with the successor firm M/s Celsius, Sweden, honoring the commitment of Bofors. Consequent to the lifting of ban M/s Celsius intimated Army HQ in September 1999 that the only upgrade system available with them was the existing gun mounted on a Volvo truck, thus making it a vehicle mounted instead of being towed. In addition, it was also informed that they have a prototype of a 45 calibre gun in an advanced stage of development. After considering the proposal of M/s Celsius, Chief of Army Staff in October 1999 approved the proposal for procurement of 155mm upgrade version truck mounted gun with 45 calibre length barrel from M/s Celsius. The main argument of Army HQ in favour of this proposal to issue RFP exclusively to M/s Celsius only was saving of TOT cost, facilitate easy absorption of technology and ease of operation and logistic support for the system. However in March 2000, Ministry with the approval of RM asked AHQ to define its need in terms of towed/truck mounted gun and if necessary of 45 and 52 calibre or both. It was proposed that RFP was to be issued to the known vendors for evaluating these guns in Indian condition against GSQR.

Army HQ submitted the draft RFP in July 2000 for issue to nine vendors of 155mm 45/52 calibre towed Gun Howitzer. After a detailed deliberation and exhaustive analysis carried out at the Army HQ level, from April 2001 to June 2001, the opinion of Army HQ crystallized only in favour of 155mm 52 calibre length towed gun. Accordingly, the GSQR was amended in August 2001 providing parameters for towed 155mm 52 calibre gun. Acquisition of quantity 'X'of the gun was included in the 10^{th} Army Plan.

The RFP based on amended GSQR was issued in December 2001 to nine vendors without specifying the quantities required. Only three foreign firms viz M/s SWS Sweden, M/s Denel Land System, South Africa and M/s Soltan System, Israel submitted their technical and commercial offers. In June 2002, Cabinet Committee on Security (CCS) granted the approval for procurement of quantity 'X' of 155 towed guns of 52 calibre length. In order to ascertain the suitability of 155mm 52 calibre towed guns offered for trials evaluation by three firms, the trials were carried out in four phases over 4 years between May 2002 and January 2007 resulting in inordinate delay.

After evaluation of trials results, the General Staff observed in April 2007 that none of the guns evaluated stood introduced in their own countries or in any Army. The guns did not meet certain technical parameters of the GSQR. At the time the RFP was issued in 2001, 155mm 52 calibre was a developing gun system but by the time the GS evaluation was taking place, a number of new systems of the same calibre were introduced, thus changing the complexion of the procurement. As such none of the guns was recommended for introduction into service. DG Artillery also recommended that GSQR of 2001 was time barred and needs to be formulated afresh followed up by fresh RFP and de-novo evaluation of 155mm 52 calibre gun system. The Ministry in October 2007 after six years of issue of the RFP foreclosed the case for procurement of the gun.

In December 2007, the case was re-opened when fresh ‘acceptance of necessity’ was accorded categorizing the acquisition as ‘Buy and Make’, where quantity ‘X’ were to be procured outright as ‘Buy’ and remaining to be manufactured under TOT. Quantity ‘X’ guns were to be procured in 11th Army Plan and balance in subsequent three five years Army Plans i.e. upto 2027. Meanwhile, GSQR formulated in August 2001 was revised in September 2007. In the revised GSQR, the minimum range stood reduced from 35 Kms to 30 Kms with the standard ammunition and minimum range in high angle of firing was diluted from 5 Kms to less than 5 Kms. This was in contradiction of universal fact that high calibre barrel length would achieve higher range. The weight of the gun was not specified in the revised GSQR also.

As per revised GSQR, RFP was issued in March 2008 for submission of technical and commercial bids. Only four firms had submitted their technical and commercial bids in September 2008 and out of them, two firms viz M/s Singapore Technologies, Singapore and M/s BAE Systems, Sweden had qualified for trials. The trials of the guns offered by these two firms were to be conducted in November/December 2009. However, Army HQ in July 2010 retracted the RFP issued in March 2008 for procurement of 155mm 52 Calibre Towed Gun and draft RFP with revised GSQR was under vetting as of October 2010. Fresh RFP was issued on 28 January 2011 against which bids were due on 29 April 2011. However on the request of vendors date of submission of bids was extended for eight weeks i.e. up to 24 June 2011.

2.1.2 Acquisition of Self Propelled Guns

Self Propelled (SP) guns are required to provide continuous fire support to mechanized formations, which normally operate cross-country in plains and deserts. The SP gun system consists of a Turret[9] and Chassis[10]. The design approach of SP gun system is categorized as ‘Integrated’ system and ‘Hybrid’ system. In Integrated system the turret and chassis are designed together whereas in Hybrid system, the turret is designed separately. The Indian army is presently holding SP guns with technology of seventies.

In March 1994, GSQR for SP gun was formulated keeping in mind the Russian MSTA SP Gun (152mm) since at that time it was considered to be the most affordable and available SP gun as a short term option. In July 1994, a global RFP was issued for a hybrid SP gun by mating gun turrets, ex import with indigenous T-72 chassis. Proposals were received in December 1994 from five vendors and trials of four gun systems were conducted between April-July 1995. The T-72 chassis for mounting the turret failed with all the gun systems and thus Army HQ rejected the offers of all the four manufacturers.

In May 1997 the Chief of Army Staff decided that AS-90 turret offered by M/s VSEL, UK and T-6 turret of M/s Denel of South Africa having lesser shortcomings be mated with the MBT Arjun Chassis for conducting fresh

[9] Turret houses the complete weapon system and provides protection to the crew as well as to the equipment.

[10] Chassis is a platform to transport the turret into the battlefield.

trials. M/s Denel produced their equipment for trials but M/s VSEL did not offer their turret and instead they offered their fully integrated system for trials, which was not as per QRs.

After the trials of 1995-96, Army felt that the GSQR formulated in March 1994 had laid down certain unattainable and stringent parameters. This necessitated revision of the GSQR. Accordingly, the GSQR was amended in March 1998. While the old GSQR covered only SP gun (Tracked) the amended GSQR caters for both tracked and wheeled SP guns. In the 10th Army plan, acquisition of 'X' quantity of the SP guns tracked and wheeled was planned.

A. SP Gun (Tracked)

After trial evaluation from July to September 1999, Army HQ in September 2000 recommended induction of BHIM T-6 tracked gun into service. In October 2000, Department of Defence Production and Supplies (DDP&S) had nominated Ordnance Factory Board as Nodal Production Agency for indigenous manufacture of gun. However in March 2002, the decision was reviewed and BEML was nominated as Nodal Production Agency although BEML had no expertise in the field. As such BEML was not even prepared for submitting their tender within stipulated time. CCS in June 2002 accorded approval in principle for acquisition of quantity 'X' of 155mm gun tracked version, BHIM T-6, comprising of Turret imported from M/s Denel, South Africa mated on MBT Arjun (BHIM) chassis by M/s BEML.

In June 2002, RFPs were issued to M/s Denel and M/s BEML. Based on their commercial proposals, price negotiations were held with both the firms between August 2002 and December 2003. The PNC recommended procurement of quantity 'X' fully integrated 155 mm/52 calibre SP tracked gun BHIM T-6. After one year, the Ministry decided in December 2004 to progress the case for CCS approval. Due to imposition of ban in June 2005 by the Government in dealing with M/s Denel due to their alleged involvement in making payment to certain agencies as commission relating to another procurement, all the contracts and negotiations with the firm were cancelled.

In June 2006 Defence Acquisition Council (DAC) approved an integrated SP gun system tracked as "Buy" with stipulation that integrated gun system to be trial evaluated and selected turret after trials be mated on Arjun chassis and tried as a hybrid system. The RFP was issued in May 2007 to twenty nine firms but finally only one firm offered techno-commercial offer and thus the RFP was retracted as it was treated as a single vendor situation. The development of a hybrid SP gun on indigenous chassis did not succeed. In February 2008, the DAC concurred for buying an integrated SP gun system instead of hybrid system. Accordingly, RFP was issued in August 2008 to eleven vendors inviting techno-commercial offers. Only one vendor responded in March 2009 and hence the RFP was withdrawn. However, on the request of vendors, date of submission of bids was extended by eight weeks i.e. upto 25 June 2011.

B. SP Gun (Wheeled)

While the Army was pursuing the trial evaluation of hybridized Tracked SP gun on Arjun Chassis in 1998, advancements in wheeled vehicle technology had made the Wheeled SP gun a viable option, especially in the plains and semi-desert terrain. The GSQR formulated in 1994 as amended in 1998 for Wheeled SP guns was further amended in November 2001 to change calibre length from '45/52 calibre' to '52 calibre'.

CCS, in June 2002, approved procurement of quantity 'X' of 155mm SP Wheeled gun. Meanwhile, RFP was issued in January 2002 to eleven vendors and technical offer of five vendors were received. Offer of only one firm i.e. M/s Denel South Africa was found to satisfy the GSQR and was recommended for induction into service. However, due to ban on M/s Denel in June 2005, the procurement process was closed by Ministry in July 2005.

The DAC in June 2006 decided procurement of quantity 'X' of Wheeled SP guns. RFP was issued in February 2007 to twenty nine vendors but only one vendor submitted their technical offer. Due to single vendor situation, RFP was retracted. A fresh RFP was issued in February 2008 to five vendors and the trials of guns of two vendors were in progress as of October 2010. Trials were likely to conclude as of 20 May 2011.

The case of procurement of artillery guns revealed as under:

- Army HQ took more than four years from April 1997 to July 2001 in deciding the actual requirement of guns in terms of towed/truck mounted guns, and calibre i.e. 45 calibre or 52 calibre.

- The failure of the Army in defining the requirement of specific gun system had deprived its Artillery, for over a decade, from obtaining guns of contemporary technology for replacing the existing obsolete force level with guns of 45 caliber length in service with the global Army. Induction of the state-of-the-art technology gun system in Artillery forces was uncertain as of October 2010 impacting adversely the operational preparedness of the Army.

- The Army spent nearly five years in trial evaluation of a gun (52 calibre) under development instead of a proven gun system.

- Dilution in the parameters of minimum ranges of the gun indicated that the Army had not frozen even the minimum requirement.

- As on date the procurement is not in sight in the foreseeable future.

- o Absence of a policy to govern the procurement of SP gun system by insisting on the 'hybrid' route with the chassis of MBT Arjun which itself was under development, and unwillingness to "buy" integrated system has delayed procurement inordinately.

2.2 Delay in establishment of repair facilities (Mini Depot) and unwanted import of Trailers

Ministry signed Letter of Offer and Acceptance (LOA) with the United States Government (USG) in February 2008 to establish Mini Depot for repair of 12 Weapon Locating Radars (WLR) already procured between August 2005 and September 2007 under Foreign Military Sales (FMS) route. But release of payment under LOA was not linked with receipt of components and work done for establishing the Depot. This resulted in undue benefit of advance payment of ₹ 100.18 crore, i.e. (95 *per cent*) to USG without initiation of work by even the original date of completion. In absence of repair facility, a number of WLRs were lying off road as of December 2010. Besides, incorrect analysis of requirement of support equipments for the WLRs led to unwanted procurement of twelve Trailers at a cost of ₹ 2.19 crore.

Weapon Locating Radars (WLRs) are surveillance radars designed to locate enemy's Artillery Weapon system. To meet urgent operational requirements of Army, the Ministry of Defence in April 2002 signed Letter of Offer and Acceptance (LOA) with the Government of the United States of America (USG) for procurement of eight WLRs for USD[11] 138.28 million (equivalent to ₹ 677.29 crore) which was increased to 12 WLRs along with support equipment and accessories at a cost of USD[12] 190.92 million (equivalent to ₹ 845.78 crore) through an amendment of March 2007 to LOA. This also included 12 Power Units mounted on Trailers. The value of these Trailers was USD 493,605 (₹ 2.19 crore).

These equipments were received from United States under Foreign Military Sales (FMS) route during 2005 and 2007. After Joint Receipt Inspection (JRI) of four WLRs received up to August 2005, Central Ordnance Depot (COD) Agra intimated the Director General Ordnance Services (DGOS) as well as user Directorate (DG Artillery) at Army HQ that the Generator Set/power unit was to be mounted on a Tatra Vehicle, hence Trailers were not required. It also suggested that the Trailers received may be returned to the United States through Supply Discrepancy Report (SDR) and further delivery may be suspended. However, USG declined to take these Trailers back stating that as the Trailers were initially contracted in the LOA, these cannot be returned to USG for credit. Subsequently, no further action had been taken by the Ministry either to return the Trailers or to declare these as surplus.

Initial Engineering Support Package (ESP) of WLRs was limited to field level repairs only. To overcome operational handicap of a lead time of one year to

[11] 1 USD = ₹ 48.98
[12] 1 USD = ₹ 44.30

repair these WLRs, necessity was felt to create component level facility in the form of a Mini Depot. Ministry signed LOA with USG in February 2008 to establish Mini Depot for repair of WLR at an estimated cost of USD[13] 22,640,129 equivalent to ₹ 89.59 crore. Pending establishment of this facility, an amount of USD 3,000,000 was also approved for repair facilities under 'Repair & Return' programme. In addition, three LsOA were signed in April 2010 for spare support arrangement for WLRs under Cooperative Logistic Supply Support Arrangement (CLSSA) for USD[14] 19,742,103 equivalent to ₹ 90.91 crore. However, no stores were received as of February 2011.

The site survey, receipt of stores and functioning of Mini Depot as per LOA was to be completed by September 2010, excluding six months provided for field engineering support for Mini Depot. The total payment was to be released in ten quarters starting from June 2008 and ending with September 2010. The payment of USD 21,477,208 equivalent to ₹ 100.80 crore, i.e. about 95 *per cent* of total amount of USD 22,640,129 was made between March 2008 and October 2009. As of September 2010 neither survey of site and functioning of Mini Depot had fructified nor 13 items mentioned in LOA received. In the absence of repair facility, a number of WLRs remained non-functional due to defects in different parts of radars as of December 2010.

Army HQ stated in December 2010 that delay in setting up of Mini Depot was mainly due to non-finalization of contract between USG and Original Equipment Manufacturer (OEM). The contract between USG and OEM was finally signed in August 2010 and as per revised schedule, work would be completed by December 2011 excluding six months of field engineering support. All payments were made to USG as per laid down schedule as its failure was to be subject to interest charges mentioned in terms and conditions of LOA.

Thus WLRs which were procured between 2005 and 2007 had gone frequently non-operational/off-road in the absence of non-fulfillment of contractual obligations to create component level repair facilities as of December 2010. Also by not binding contractually to link release of payment with receipt of store and work of establishing Mini Depot, about 95 *per cent* payment was made without any work done on ground. Thus the inclusion of a payment clause without linking it with progress of work of Mini Depot resulted in payment of ₹ 100.18 crore to the USA without any immediate return. Further, incorrect analysis of requirement of support equipments for the WLRs led to unwanted procurement of twelve Trailers for ₹ 2.19 crore which were held without any use. Ministry may fix the responsibility to avoid such lapses.

The matter was referred to the Ministry in November 2010; their reply was awaited as of July 2011.

[13] 1 USD = ₹ 39.57
[14] 1 USD = ₹ 46.05

2.3 Failure of the project "Mission Excel Information Technology (MEIT)"

Controller General of Defence Accounts' software development project "MEIT" was derailed from its path and inspite of incurring expenditure of ₹ 20.47 crore, the intended objectives of automation of all functions of DAD had not been achieved.

The Project "Mission Excel Information Technology (MEIT)" of Defence Accounts Department (DAD) was planned in September 2002 to keep pace with the Armed Forces who had undertaken large scale automation projects in areas such as inventory management, provisioning, procurement etc. Following were the features of the project:-

Objectives

- Automation of every function of the DAD ensuring online transaction processing.
- Computerisation of over 900 offices of the DAD at 200 locations.
- Ensuring that every member of the Department works on the computer.

Budget

Budgetary estimates for the whole project was ₹ 42 crore as under:

Area	**Allotment (₹crore)**
Software development	18.00
Hardware procurement	10.00
Networking	3.20
Training	2.10
System software	1.50
Contingency	7.20
Grand Total	**42.00**

Time frame

The activities were to be started with completion of User Requirement Specifications (URS) by January 2004, completion of software development by April 2005, installation of hardware and networking in April 2005 and finally the training for system administrators and end users by January 2006.

Selection of Vendors

The CGDA, in October 2003, set the pre-qualification criteria for the selection of software vendors. The two basic criteria were 'the company should have valid SEI-CMM[15] level 4 or 5 certification' and 'the company should have annual turnover of ₹ 10 crore or more in previous three years for development of software application.

[15] Capability Maturity Model for Software

In November, 2003 the request for submission of Expression of Interest (EOI) was issued to 83 Software Vendors and against which response was received from 34 vendors. The evaluation done by the CGDA disclosed that only 08 vendors were meeting the criteria. However, keeping in view the inadequate competition and difficulty for delivery within desired time span by selecting just eight or nine firms, CGDA decided to relax the criterion to include more vendors for better competition. In all 28 companies were selected to tender.

Sanction/PDC

The Ministry of Defence (Finance) sanctioned the Project in July 2004 at a cost of ₹ 42 crore with completion date as March 2007. The cost of the project was revised to ₹ 54 crore in September 2007 with PDC revision as December 2009. The revision in cost was attributable to increase in expenditure of ₹ 5 crore on hardware, ₹ 2.38 crore on networking expansion and ₹ 6.68 crore on inclusion of new scanning project MEIT-DIMS[16].

Structure

The whole software development portion of the project was structured in nine Lots as detailed below:-

Lot.	Area of Software Development	Estimated cost (₹ in crore)	Contracted cost (₹ in crore)
1	Pay & Allowances (Armed forces excluding Army Jawans)	2.46	0.62
2	Border Roads.	2.04	0.45
3	Store Payment & Audit of Army Commands, Navy, Air-force & DRDO	2.54	1.15
4	Service HQ and Defence Budget monitoring.	2.76	1.82
5	Pay & Allowances (Army Jawans)	1.32	1.52
6	Pay & Allowances of Defence civilians, DAD Administration & HQ / CGDA functions viz. MIS, Policy.	2.94	3.49
7	Financial advice to Defence organisation.	3.80	2.53
8	Pension	1.64	1.36
9	Ordnance Factories Accounting System + DIMS	6.68	Not yet contracted
	Total	26.18	12.94

Contracts

The CGDA invited tenders on two bid systems lot wise between January 2005 and October 2006 including M/s A F Fergusson and M/s IBilt Technologies on the plea that inclusion of these firm would generate more competition though both the vendors were not meeting the basic criteria during EOI stage. The technical evaluation criteria adopted for selection of firms was not foolproof as it was based on awarding marks rather than disclosing the technical details of software demonstration by the firms.

Analysis of commercial bids revealed that except for lots 4 & 5, there was a wide variation (38 % to 486 %) in the rates of the firms L1 & L2 as shown in

[16] Mission Excel Information Technology (MEIT) – Document Imaging & Management Solution (DIMS)

Annexure III. Despite unworkable rates quoted by L1 firms for each lot, contracts were awarded to them by the CGDA between June 2005 and March 2007. The CGDA did not exercise the option of retendering to achieve the reasonable rates worked out by them during planning stage of the project.

System Development

As per contract agreements, the time fixed for the coding and lab testing of the system was three months after start of the work. M/s. Infinite Computer Solution (ICS) to whom contracts for four lots 1, 2, 3 and 5 were awarded did not progress in their awarded task and failed to develop important and critical modules viz IRLA and DO II. The other modules developed by the firm could also not cross lab testing stage. Again, the lab testing was taken for incomplete system in June 2007. The ICS had released multiple version of software and in each time the system failed. This resulted in disputes between the CGDA and the firm. On the recommendations of a mid term review carried out by the CGDA team in February 2009, all the contracts for these lots were terminated in September 2009 by encashing the Bank Guarantee Bonds. The other Lots viz 4, 6, 7 & 8 were at the stage of lab testing and pilot implementation. The Lot 9 was yet to be contracted as of February 2011. A total payment of ₹ 4.94 crore was made to the firms for software development from 2005-06 to 2008-09.

Hardware Procurement

Meanwhile the CGDA made advance procurement of IT hardware viz. Computers, UPS, Servers, Networking equipments etc. for ₹ 14.55 crore as per details given below :-

Year	**Expenditure**	**(₹ in crore)**
	Hardware	**Networking**
2003-04	2.50	2.18
2004-05	2.13	0.00
2005-06	1.76	0.05
2006-07	3.22	0.00
2007-08	0.00	2.71
Total	9.61	4.94

The expenditure of ₹ 6.81 crore was incurred during 2003–04 and 2004-05 i.e. prior to sanction of the project/conclusion of contracts. Apart from this, an expenditure of ₹ 98 lakh was incurred during 2003-04 to 2008-09 on the Training on System Administrator & users.

Audit Findings

- Inspite of receipt of unworkable rates in three lots, the CGDA did not exercise the option of re-tendering and awarded contract of these lots to ICS, who failed to produce the critical and important modules of software by taking four years time as against the PDC of three months and ultimately caused for termination of the contracts.

- M/s A F Fergusson and M/s iBilt Technology Ltd. did not meet the basic criteria during EOI stage yet contracts were awarded to them on the grounds of generation of more competition. Both the firms could not complete the task within due dates.

- The CGDA could not expedite the progress of the software development resulting in non-completion of the project even within revised PDC. Thus, inspite of incurring expenditure of ₹ 20.47 crore on hardware, software and training, the project has already been inordinately delayed.

In their reply, the CGDA in June 2010 admitted the failure of the vendors in designing and development of the software in a time span of more than three years against the contracted time schedule of three months. The Ministry while accepting the facts stated in November 2010 that rejecting an offer which is substantially lower than the estimated cost on the ground that the offer is freakish cannot be considered prudent. Further costing done by CGDA was based on the market survey and there was possibility of revision in the assessment based on the actual response from the vendors. It was also stated that the hardware procured for MEIT is being used by officers and staff in the department to carry out their existing functions. The servers procured for MEIT are being used as Office Automation, backup server etc.

The contention of the Ministry is not tenable as acceptance of abnormally low rates quoted by vendors resulted in non-development of the software. The hardware procured for MEIT was not being utilised for the intended purpose. Even 47 *per cent* expenditure on hardware and networking was incurred prior to sanction of the project/conclusion of software contracts. Further, out of 50 Servers procured for one of the Controllers' office of pension disbursement, only 5 servers were being used for some activities. The hardware procured 3 to 7 years back had not only crossed the warranty period but might not be compatible to the software being developed. Thus inspite of incurring an expenditure of ₹ 20.47 crore on the MEIT project, the intended objectives of automation of all functions of DAD had not been achieved for over four years.

2.4 Non-realization of revenue due to non-revision of rent of land

DEO Agra failed to revise the rent of 3.52 acre class 'C'[17] land in accordance with the government sanction in last 36 years. This resulted in non-realization of revenue amounting to ₹ 2.12 crore from a Cantonment Board.

Ministry of Defence in July 1971 accorded sanction, for reclassification of defence land of 3.52 acres from class "A-1" to "C" for the purpose of construction of a shopping centre at Agra Cantonment. As per the sanction, area of shopping centre was vested under the management of Cantonment Board, Agra on payment of annual rent of ₹ 6647. The rent was subject to revision at the expiry of every five years. Cantonment Board Agra constructed

[17] 'C' land – land vested in Cantonment Board for municipal or public purpose

a shopping centre. 122 shops of various sizes have been running in this complex on ground floor and one State Bank of India Branch on 5800 sq. ft. area at first floor.

Audit observed in March 2007 that although the Standard Table of Rent (STR) of Agra Cantonment was revised regularly, rent of land was never revised in a span of nearly 36 years since issue of the Government sanction resulting in realization of rent upto 2006 at rates sanctioned in July 1971.

On being pointed out in audit, DEO Agra made a demand in June 2009 for an amount of ₹ 2.12 crore on account of arrear of revised rent. The payment however was not made as of July 2010.

DEO Agra in his reply did not explain why the rent could not be revised as and when due. This allowed the Cantonment Board to exploit Government land for commercial purposes, without receipt of commensurate revenue to the Government.

The matter was referred to the Ministry in August 2010; their reply was awaited as of July 2011.

2.5 Deficient pre-despatch inspection

Deficient pre-despatch inspection of Sniper Rifle led to rejection of one of its essential accessories and the Rifle could not be issued to users for two and a half years.

Ministry of Defence in August 2007 concluded a contract with a foreign firm for supply of 45 Sniper Rifle along with accessories at a total cost of ₹ 2.94 crore. Day & low light telescope sight[18] and night sight was an essential accessory of the rifle without which the weapon could not be used for the intended purpose. As per contract the buyer's representatives would carry out Pre Despatch Inspection (PDI) of the equipment in order to check compliance with specifications in accordance with Acceptance Test Procedure (ATP) which was to be provided by firm within one month after conclusion of the contract. ATP was received from seller in April 2008, after a delay of six months, which was then forwarded by DGQA to CQA (I) Dehradun for examination. The CQA(I), in June 2008, intimated DGQA that ATP was deficient for climatic and durability test which included immersion test along with other tests, i.e., field of view, magnification and range for night performance. Meanwhile, without waiting for the comments of CQA(I), PDI team inspected the store at vendor premises from 29 April 2008 to 5 May 2008 and stores were declared acceptable without conducting climatic and durability test. The supply was completed in July 2008 and payment of ₹ 2.50 crore was made in August 2008 to the firm.

[18] Day/low light Telescopic sight 'NIMROD' 6x40 is a mono power sight fitted on rifle for zeroing and used for aiming the target and accurate firing during day light.

In Joint Receipt Inspection (JRI) visual inspection, functional check, successful check proof firing and night trial of Night Sight of the consignment were carried out in October 2008. However, climatic and durability test for day/low light telescopic sight of weapons could not be carried out and it was recommended that these tests be carried out by CQA(I) Dehradun and the items would be accepted if declared satisfactory in the test. After climatic and durability test on two samples of five and ten day/low light telescopic sights, respectively, CQA(I) Dehradun in May 2009 declared the telescopic sight defective in immersion test. As a result the entire store was rejected and quality claim was raised.

While the firm replaced two telescopic sights rejected during testing at CQA (I) Dehradun, during re-testing of the balance 32 (45-15 +2) day and low light telescopic sights carried out in February 2011 in the presence of firm's representative, 28 sights were found acceptable. For the four remaining telescopic sights quality claim was being raised for replacement as of April 2011. Further department had taken nearly two years for retesting of telescopic sights which could have easily been curtailed to a few months as these rifles were procured under the fast track procedure to meet operational requirement.

DGQA in December 2009 clarified to Army HQ that no PDI was carried out in respect of day/low light telescopic sight due to non-availability of ATP.

The conduct of PDI without waiting for the vetted ATP from CQA(I) which included climatic and durability test led to declaring the consignment satisfactory and clearing it for dispatch. Thus non adherence to laid down inspection regime caused acceptance of defective equipment. This negligence resulted in non availability of the weapon worth ₹ 2.94 crore for more than two and half years of its receipt.

The matter was referred to the Ministry in August 2010; their reply was awaited as of July 2011.

CHAPTER III : ARMY

3.1 Extra expenditure due to acceptance of higher rates

DGNCC adopted an incorrect practice of placing supply order for 80 *per cent* of the required quantity on past suppliers considering the last purchase price as the basis and by ignoring valid L1 offers. This resulted in an extra expenditure of ₹ 19.90 crore in the procurement of items from September 2006 onwards. In another case, DGNCC made purchases other than through the rate contracts of the DGS&D and incurred extra expenditure of ₹ 1.09 crore.

Defence Procurement Manual (DPM) stipulated that when L-1 firm does not have the capacity to supply within the delivery period as per Request For Proposal, after loading as per its capacity and past delivery, order can be placed on L2, L3 and so on for the balance quantity at L-1's rate. Audit observed violation of the above said provisions in the procurement of Mosquito Nets by the Directorate General National Cadet Corps (DGNCC) between January 2008 and March 2008. In its procurement, 80 *per cent* of the total quantity of 97,762 was made from other than L-1 at exorbitantly higher rate involving an extra expenditure of ₹ 2.03 crore. A further review of procurements made by the DGNCC during 2006-07 to 2008-09 was carried out in audit and similar violation was found in procurement of 34 items under 349 supply orders, entailing an extra expenditure of ₹ 17.87 crore. The details are given in the succeeding paragraphs.

Based on Annual Provisioning Review for 2007-08, DGNCC made an open tender enquiry in August 2007 for procurement of 97,762 Mosquito Nets. In response, 37 tenders were received which were opened on 11 September 2007. Tender of one firm was not opened as it was not registered with Director General Quality Assurance (Defence) (DGQA). M/s Sureka International Kanpur with quoted rate of ₹ 180/- plus four *per cent* Sales Tax was found L-1.

Although L-1 had the capacity and had also offered to supply the full quantity, yet the Tender Purchase Committee chaired by the Joint Secretary (Training) and Chief Administrative Officer, decided in October 2007 to procure only 20 *per cent* of the tendered quantity, i.e. 19,552 from the L-1 firm at the offered rate of ₹ 180 plus taxes and the remaining quantity of 78,210 from four past suppliers at the rate of ₹ 429 plus taxes being Last Procurement Price (LPP). The past suppliers had quoted basic rates between ₹ 444.90 and ₹ 445.30 and were ranked L25, L26, L27 & L28 in the comparative statement of tenders.

Consequently, in December 2007, the Ministry accorded sanction for procurement of 97,762 Mosquito Net at a cost of ₹ 3.71 crore. The DGNCC placed supply orders on these five firms for 97,762 Mosquito Net between January 2008 and March 2008. The firms supplied the entire quantity during the period from March 2008 to December 2008 and payment of ₹ 3.78 crore was made to the firms for the supplies received.

Further review by audit of procurements made by DGNCC from 2006-07 to 2008-09 in respect of 34 more items revealed that 349 supply orders were placed on firms other than L-1 resulting in an extra expenditure of ₹ 17.87 crore.

The Ministry stated in February 2011 that the practice being followed in the DGNCC was as per Director General of Supplies and Disposals (DGS&D) Manual whereby 80 *per cent* of order quantity is given to past suppliers with a proven track record and 20 *per cent* is ordered on new suppliers. Although DGNCC had assured in September 2009 that in future DPM 2009 would be adopted for all procurements, the Ministry remained silent about this in their reply of February 2011. The Ministry added that unlike the Army, NCC had no reserve stock and to ensure timely availability of stock, supply orders were issued to past suppliers.

The Ministry's reply is indefensible since DGNCC was bound to follow the provisions in the General Financial Rules (GFR) and DPM in their procurements. As per GFR and DPM – if a development order is to be placed – or if the capacity of L-1 is in doubt, or in case of urgency – counteroffer can only be made to L-2, L-3, L-4 in that order at the rate quoted by L-1. There is no provision for placing orders on past suppliers in a bidding process especially for a consumer items like Mosquito Net. This is not a high technology item, samples could have been procured and checked. Past practice cannot be the defence for not following the rules and showing undue favour to firms who have been overcharging NCC.

In another case, 4088 Tents Extended Frame Supported (TEFS) were procured by the DGNCC between February 2010 and May 2010 from trade when the same item was available on rate contract at lower rate. This was also in violation of GFR which stipulated that items of general stores for which rate running contracts have been concluded by the DGS&D, Ministries/Departments shall follow those Rate Contracts (RC) to the maximum extent possible.

When pointed out by Audit, DGNCC replied in October 2010 that the tents procured were mentioned with specification number and schedule number, whereas the tents available under DGS&D Rate Contract were mentioned only with the specification number, which means that the specification of the tents procured by DGNCC are different from those available on DGS&D Rate Contract. Further, DGNCC stated that the inspection norms adopted by the two different agencies are different. The reply is not tenable since schedule number for tent did not indicate any change in specifications.

Thus despite the availability of above item on RC at cheaper rate, 4088 tents were procured by DGNCC from trade incurring an extra expenditure of ₹ 1.09 crore in violation of codal provision.

The purchase of the common user items at exorbitant rates from the past suppliers in preference to the lower rates offered by other suppliers defied all procurement norms and was in gross disregard of the accepted standards of financial propriety. These resulted in an extra expenditure of about ₹ 21 crore.

The cases were referred to the Ministry in September 2010. Reply was received only in respect of the case of procurement of Mosquito Nets. The results of the audit review of procurement of the 34 items were referred to the Ministry in May 2011; their reply was awaited as of July 2011.

3.2 Diversion of funds from Government into non-Government account for procurement of Personal Kit items

Army HQ had set up a Personal Kit Stores (PKS) outlet without Government sanction for providing items of Personal Kit (PK) to units proceeding on UN Mission. PK items worth ₹ 140.75 crore were procured through PKS (UN) during last three years on which service charges of ₹ 5.36 crore were irregularly charged.

The Mobile Officers Kit Stores or Cash Purchase Issue Section of yester-years, which provided an ideal window for officers and men to procure items of uniform and accoutrements ceased to function in 1974. The void was by and large filled up by civilian vendors, which resulted in proliferation of different shades and patterns. Seized with this problem, the Chief of Army Staff (COAS) in May 2006 projected the vision and concept to establish Personal Kit Store (PKS) at selected stations across the country to have uniformity in the Army uniform and other service dress used by the officers and men.

The aim of these PKS was to provide a retail source for approved pattern and quality items at reasonable rates earning a profit of 10 *per cent*. The PKS were initially funded from welfare fund of Army Headquarters (HQ) and Commands HQ and its accounts were to be audited by registered Chartered Accountants. These PKS outlets are operating as a professional venture by the Army Ordnance Corps (AOC) being informal organisation formed in Army HQ without the approval of the Ministry of Defence (MOD).

In May 2006, COAS directed during Army Commanders Conference that units going on UN Mission after September 2006 would procure items of personal clothing (22 items) from PKS only although these were to be provided by the Government.

Accordingly, Standard Operating Procedure (SOP) for issue of Personal Kit Stores to units proceeding on UN Missions was framed by the Army HQ in November 2006. As per the SOP, the units proceeding on UN Mission would be kitted through PKS (UN Mission) outlet established in Delhi Cantonment for which five per cent service charges would be levied by the outlet. The kit items were to be procured from the OEM through Rate Contracts concluded by Army HQ and accounted for by the officer-in-charge (OIC) PKS (UN Mission). The Principal Controller of Defence Accounts (PCDA) HQ would release payments to PKS (UN) account (Non-Government Account) including five per cent service charges out of Government funds for making onward payment to the OEMs. Interestingly, no approval of the MOD had been obtained for this informal arrangement. Notwithstanding the provisions contained in Financial Regulations Defence Services that Controllers of

Defence Accounts (CsDA) would control all the cash and store accounts and arrange local audit of the accounts, no such procedure was enumerated in the SOP.

Directorate General of Ordnance Services (DGOS), Army HQ concluded rate contracts with OEMs in September 2006 and December 2006 for supply of personal kit items for UN bound units for two years, which were extended up to May 2010. As per rate contracts, the consignee was PKS (UN) Taurus Canteen, Delhi Cantonment, a non-Government Organisation. The PCDA had released payment of ₹140.75 crore including service charges to the PKS (UN) account from December 2006 to January 2010 for procurement of the personal kit items for the units deployed on UN Mission. An amount of ₹ 5.36 crore on account of service charges including bank interest had been accumulated in the PKS (UN) account from December 2006 to March 2010. On being pointed out in audit, OIC PKS (UN Mission) deposited ₹ 5.60 crore into Government account in instalments between June and August 2010 towards the service charges and interest.

The case revealed that: -

1. Army HQ had set up an informal organization, i.e. PKS (UN) without approval of the MOD through which transactions of Government stores worth ₹ 140.75 crore were carried out for last three years by diversion of funds from Government into non-Government Account and had charged service charges of ₹ 5.36 crore irregularly.

2. Government stores procured for ₹ 140.75 crore through PKS (UN) outlet had been kept outside the purview of internal audit as well as statutory audit.

3. The PCDA had irregularly released payment to the PKS (UN) account for procurement of Government stores instead of issuing cheques to the concerned firms.

The matter was referred to the Ministry in October 2010; their reply was awaited as of July 2011.

3.3 Irregular payment of field area allowance

Irregular payment of ₹ 15.16 crore was made to non-entitled defence civilian employees of static units on account of field area allowance during Operation Parakram even though the allowance was not admissible to service personnel of those units.

Mention was made in Para 3.4 of Report No. 6 of 2004 of the Comptroller and Auditor General of India, Union Government, Defence Services (Army and Ordnance Factories) regarding irregular payment of Field Area Allowance (FAA) during Operation (OP) Parakram to service personnel of static units. Under the Audit para, irregular payment made to service personnel of Ammunition Depot (AD) Bathinda was also brought out. In the Action Taken Note issued in August 2007, Ministry of Defence (MOD) stated that the irregular payment of FAA made to service personnel of AD Bathinda had been recovered. Similarly, service personnel of AD Dappar were not eligible for the FAA.

In March 2006, Ministry extended field service concessions to defence civilian employees who had been deployed on OP Parakram along with Army. These concessions were valid for the entire period of OP Parakram from December 2001 to March 2003 to all defence civilian employees deployed/mobilized irrespective of the geographical areas of deployment.

Army Headquarters (HQ) clarified in December 2006 that criteria for deployment of units/formations for the Operation would be as notified by the respective Command Headquarters. Since AD Bathinda and AD Dappar were notified for deployment/mobilization for the operation vide HQ Western Command (WC) order of 2002, the defence civilian employees of these depots were paid FAA of ₹1.40 crore.

The inconsistency in the Ministry’s orders where an operational allowance not admissible to service personnel had been allowed to defence civilians of the same units for the same purpose was pointed out by Audit in June 2008. In response to it, the Ministry in January 2010 stated that the compensation was paid to the defence civilian employees on the analogy that the service personnel were entitled for the same and agreed to recover the FAA irregularly granted to the defence civilian employees. As the service personnel of AD Bathinda and AD Dappar were not entitled for the FAA, an amount of ₹ 1.40 crore paid to the defence civilian employees of both the depots on account of FAA was irregular.

Meanwhile, in May 2009, HQ WC amended their deployment order of 2002 notifying deployment of defence civilian employees of 81 static units including Military Engineer Services (MES), Station HQ etc to grant field service concessions for OP Parakram. Based on HQ WC order of May 2009, FAA amounting to ₹ 13.76 crore was paid between May 2009 and April 2010 to defence civilian employees of various MES formations and other static units although no FAA was paid to the service personnel of these units. Evidently, HQ WC arbitrarily amended their operational deployment order after seven years merely to grant FAA to non-entitled defence civilian employees, which had resulted in irregular payment of ₹ 13.76 crore. The Audit contention of June 2008 regarding non-admissibility of the operational allowance to defence civilian employees was upheld by the Ministry in January 2010 i.e. after 18 months. Had the Ministry issued orders before May 2009, irregular payment of ₹ 13.76 crore could have been avoided.

The irregular payment of ₹ 15.16 crore on account of FAA made to non-entitled defence civilian employees of static units requires recovery.

The Ministry stated in June 2011 that since an operational allowance not paid to the Service Personnel had been paid to the Defence Civilian employees of the same units, necessary directions had been issued (May 2011) to Army HQ for recovery of the irregular payments made in this regard. The recovery of irregular payments made to non-entitled Defence Civilian employees was still awaited.

3.4 Irregular de-hiring of house constructed on leased land

Chief of Staff, Southern Command in January 2006 accorded sanction for de-hiring of a house hired prior to March 1976 although the powers for de-hiring in such cases were vested with the Ministry of Defence. This enabled the lessee to transfer the leasehold rights of 1.14 acres of Defence land valuing ₹ 2.77 crore to a private party for possible commercial exploitation of the land without any cost to the private party.

In the pre-independence period, to increase the availability of housing for officers, Defence land in the Cantonment area was leased to private individuals, who would then construct bungalows to be hired by Army for occupation by its officers. Lease of such land was normally done for a token amount.

De-hiring of houses hired on old lease agreement prior to March 1976 and 'de-hiring of houses before the expiry of lease period' require approval of the Ministry of Defence (MOD) as per the policy laid down in November 1979, Army Headquarters (AHQ) in August 1987 reiterated that requests for de-hiring of houses at certain stations including Pune would continue to be considered by the MOD.

Building site measuring 1.14 acres appurtenant to bungalow No. 9 Parvathi Villa at Pune Cantonment was leased in September 1937 to Miss Piroj K. Sanjana on Schedule VI of the CLAR[19] 1925 for 30 years up to September 1967 at annual rent of ₹ 1/-. Subsequently, the property was held by Mrs. Nargis S. Mazda. The lease was initially renewed up to September 1997 and finally renewed up to September 2027 with annual rent of ₹ 3/-. The bungalow was continuously hired by the Army since March 1941 on monthly rental of ₹ 303/-.

In May 2005, the Holder of Occupancy Rights (HOR) of the bungalow requested for de-hiring of the bungalow for carrying out repairs and for self use. While furnishing comments on the application for de-hiring of the bungalow, the Principal Director, Defence Estates, Southern Command in July 2005 clearly stated that as it was a case of pre 1976 hiring, Army Headquarters have to be approached for obtaining sanction of the MOD as per the policy on de-hiring. As the validity of the hiring was expiring, the Station Commander in December 2005 accorded sanction for continued hiring of the bungalow for a further period of three years effective from 1 January 2006. However, the Chief of Staff, Southern Command in January 2006 accorded sanction for de-hiring of bungalow in gross violation of the government's policy on de-hiring of houses. The possession of bungalow was handed over to the lessee in March 2006.

[19] CLAR = Cantonment Land Administration Rules

Soon after de-hiring, the HOR transferred the leasehold rights of the land along with structures to M/s Futura Promoters and Developers Private Limited (Private Company) in May 2006 at a cost of ₹ 0.40 crore. The leaseholder, in December 2007 approached the Cantonment Board with a building plan for demolition of existing main bungalow and reconstruction of the same for residential purpose. On seeking opinion on the proposed building plan, a construction agency of the Ministry of Defence opined that the proposed layout more appropriately seemed akin to a Guest House/Club/Institute/ Restaurant as it lacked the integrity of a family accommodation. Thus, 1.14 acres of defence land presently valued at ₹ 2.77 crore along with structures is likely to be commercially exploited by the private company.

Thus, irregular sanction accorded by the Chief of Staff, Southern Command for de-hiring of the bungalow enabled the lessee to transfer the leasehold rights of 1.14 acres building site valuing ₹ 2.77 crore to a private company. The possibility of commercial exploitation of the defence land by the private company cannot be ruled out. Further, evicting such occupant and resuming possession of the defence property on expiry of the lease period would be difficult.

HQ Southern Command replied in February 2010 that paying rent was wastage of Government money even though it was negligible as the bungalow was not being used. It was also stated that the property would be reverted to the Government on expiry of lease in 2027 and no sanction for undertaking any construction on the said land had been granted till date and the property was not being used for commercial exploitation.

The reply ignored the fact that sanction for de-hiring of the bungalow was accorded by the authority lower than the Ministry of Defence (MOD), which facilitated the lessee to hand over possession of the property to a private company and thus allowing the private builder to exploit Defence land in prime locality at no cost. Further rent for hiring was paid for several years even though the bungalow was vacant merely to keep possession of the property with the defence department.

The Ministry in March 2011 while accepting the facts has confirmed that the sanction for de-hiring should have been obtained from the MOD. The reply however did not indicate what action, it proposes to take against the concerned official(s) for breach in exercise of powers.

3.5 Deficiency of fire fighting staff at Central Ammunition Depot

Non-rationalisation of fire fighting (FF) staff in Depots of Army Ordnance Corps created a critical deficiency of fire fighting personnel in Central Ammunition Depot, keeping it vulnerable to risk of fire. On the other hand, four Depots were holding surplus FF staff and paid pay and allowances of ₹ 5.81 crore to them from 2004-05 to 2008-09.

Mention was made in Para 14 of the Comptroller & Auditor General's Report No.8 of 1992 regarding loss due to fire at Central Ammunition Depot, Pulgaon (CAD). Besides commenting on other issues, Audit had pointed out the inadequate fire fighting arrangements at CAD as one of the causes for the loss. In the Action Taken Note (ATN), Ministry of Defence (MOD), in May 1993, while agreeing to the fact that there was shortage of fire fighting (FF) personnel at CAD, had stated that attempts were being made to fill these vacancies.

In March 2004, the Ministry revised the authorisation of FF staff for Army Ordnance Corps (AOC) and authorised the strength of FF staff as 301 to the CAD holding ammunition worth over ₹ 500 crore.

Audit scrutiny of the posted strength of FF staff at CAD during 2004-05 to 2008-09 revealed overall deficiency ranging from 39 to 44 *per cent* as shown below. Percentage-wise shortage of fireman ranged from 44 to 55 *per cent*.

Sl. No.	Year	CAFM[20]/ Fire Superin-tendent		Fire Supervi-sor/ Fire Master		Leading Hand Fire		Fire Engine Driver		Fireman		Total		Overall Deficiency
		A[21]	H[22]	A	H	A	H	A	H	A	H	A	H	
1.	2004-05	1	-	12	-	48	37	48	28	192	108	301	173	128(43%)
2.	2005-06	1	1	12	6	48	50	48	23	192	105	301	185	116(39%)
3.	2006-07	1	1	12	6	48	45	48	22	192	104	301	178	123(41%)
4.	2007-08	1	1	12	6	48	42	48	29	192	95	301	173	128(43%)
5.	2008-09	1	1	12	5	48	42	48	33	192	87	301	168	133(44%)

With the revision of authorisation in March 2004, while the CAD was handicapped with huge deficiency of FF staff, four non-ammunition holding Depots within the same Command, were holding surplus FF staff ranging from 28 *per cent* to 120 *per cent*. Pay and allowances of ₹ 5.81 crore had been paid from 2004-05 to 2008-09 to the surplus FF staff of these four Depots.

Southern Command Pune, in March 2010, while accepting the facts clarified that since January 2005 they had repeatedly proposed to transfer surplus FF staff to depots where deficiencies existed but the MOD had not cleared the same.

Thus, shortage of FF staff at the CAD had not been made good even after lapse of one and a half decade despite assurance given by the Ministry in their ATN to fill up the vacancies. The critical Depot has been kept vulnerable to fire risk inspite of surplus FF staff held in other Depots within the same Command and an expenditure of ₹ 5.81 crore had been incurred on their Pay & Allowances during the period 2004-09.

While accepting the factual position of deficient and surplus FF staff in CAD and other Ordnance Depots respectively, the Ministry stated in October 2010 that 106 vacancies of Fireman had been released to CAD and on completion of the recruitment, there shall be no deficiency of Fire staff at CAD Pulgaon. It was further stated that transfer of surplus FF Staff could not be done due to political/Staff Union's influence.

[20] CAFM = Civilian Assistant Fire Master
[21] A= Authorised
[22] H = Held

The fact remains that non-rationalisation of fire fighting (FF) staff in Depots of Army Ordnance Corps created a critical deficiency of fire fighting personnel in Central Ammunition Depot leaving it susceptible to risk of fire.

3.6 Loss of ₹ 1.19 crore due to irregularities in the accountal of hay

Hay weighing 1492.92 MT was not found on ground/unfit for animal consumption in Military Farm Jammu. This loss of hay of ₹ 1.19 crore was attempted to be made up by irregular accountal.

Standing Orders Military Farms (Land) 1962 contains the orders for operation of Military Farms. As per Para 303 of the said order eight *per cent* loss on account of dryage of hay kept in stack is permissible and cases where the loss exceeds said limit are required to be reported to Director Military Farm without making any issue from stock where such a deficiency has arisen. Further stacking loss of 0.75 *per cent* is also allowed.

Contrary to the said provisions a deficiency of 1492.92 MT hay valuing ₹ 1.19 crore i.e. 65 *per cent* of the total stock of 2308 MT was shown transferred on stock ledger by Military Farm (MF) Jammu from BD Bari to new location Satrowan. This deficiency remained undetected between May 2008 and February 2009 till new Officer in charge of MF Jammu took over charge in March 2009. This issue was also objected to during audit of annual accounts of Military Farms of Northern Command/Director General Military Farm at Army HQ during November 2009. However, to investigate the misappropriation/loss of store a Court of Inquiry was convened only in February 2010 and the same could not be finalized as of November 2010. The case is discussed in the succeeding paragraphs.

MF Jammu was operating its stockyard at BD Bari for holding hay since 1985. As there was a requirement of land at BD Bari for Military siding the hay was to be shifted to new location at Satrowan. The shifting of hay commenced from 19 March 2008 and was completed on 2 May 2008. While only 1719 MT of baled hay was shifted to new location, entries were made in the stock ledger of MF Jammu as also at stockyard at Satrowan to show that 2308 MT of hay had been transferred.

Examination in audit revealed the following:

- At the time of handing over/taking over on 4 March 2009, by the officer in charge of the Military Farm, Jammu, it came to light that there was a shortage of 442.70 MT of baled hay. In addition 1146.17 MT of baled hay was found unfit. There was also a shortage of 218 MT of loose *bhoosa*.

- The Board of Officers in its findings of 21 March 2009 noted that 557.52 MT of hay was not found; 498.54 MT of hay was found unfit for issue. A doubt existed regarding 549 MT of hay.

- Subsequently a Board of Officers who met to set out to segregate the 549 MT of hay based on findings of previous Board of Officers concluded that of the said amount 436.86 MT of hay was unfit for re-baling.

Thus a total of 1492.92 MT[23] of hay was either not found on ground or was unfit for issue.

In November 2009 MF Jammu prepared two expense voucher of 557.52 MT quantity of hay not found on ground and 498.54 MT quantity of hay not found fit for issue and forwarded both to the Director MF Northern Command for countersignature. In January 2010 Director MF HQ Northern Command instructed MF Jammu that the action of regularisation should be taken as per Army instructions and Financial Regulations as Director had no power to accord approval for disposal of such huge quantity of hay. In February 2010 Sub Area Commander convened a Staff Court of Inquiry to investigate the matter.

The total net deficiency finally worked out to 1492.92 ton of hay valuing ₹ 1.19 crore. Besides, a deficiency of LWB was reportedly made good by the concerned individual and issued to cattle yard. No documents to evidence that the deficiency was actually 'made good' and issued to cattle yard was found on record. On being pointed out in audit HQ Northern Command replied in November 2010 that the shortage was not reported till March 2009. This only came to light during handing - taking over charge on 4 March 2009. The Staff Court of Inquiry convened in February 2010 also could not progress as the main witness was away on temporary duty for a long period as prosecution witness in a General Court Martial.

Thus there was a loss of 1492.92 MT hay valuing ₹ 1.19 crore and discrepancy in receipt and issue which has neither been regularized nor the responsibility for the same fixed even after lapse of two years. Further making good of deficient LWB without record of any cash recovery from the individual is against the financial rules.

The matter was referred to Ministry in December 2010; their reply was awaited as of July 2011.

[23] 1492.92 MT = 557.52 MT + 498.54 MT + 436.86 MT

3.7 Non-conclusion of contract resulted in extra avoidable expenditure of ₹ 59 lakh

Non-acceptance of tender due to protracted correspondence between Director Military Farms and Integrated Financial Advisor Western Command, necessitated the requirement of compounded cattle feed to be met by local purchase at higher rates. This resulted in avoidable extra expenditure of ₹ 59 lakh.

Based on the recommendation of Senior Military Farms Officers Conference in March 2007, Deputy Director General Military Farms (DDGMF) decided to switch over to compounded cattle feed (CCF) from concentrate feed. Compounded feed is ready mixture of various feed ingredients in certain ratio whereas concentrate feed is in individual form of wheat bran, maize, de-oiled rice bran etc.

Accordingly, tenders for procurement of CCF were advertised through newspapers by Director Military Farms, Western Command (DMF) who also issued tender notices to 12 likely suppliers as per list held with them in October 2008 for procurement of CCF for six Military Farms for the period 1.1.2009 to 31.12.2009. 12 Tender forms were issued to two firms for all six stations. Six tenders, one for each station, submitted by M/s Agro Tech Feeds Ambala, were received and opened on 30.10.2008. The firm after negotiation agreed to supply CCF for Adult and Young stock at six Military Farms at the rates per quintal ranging from ₹ 900 to ₹ 950 and ₹ 959 to ₹ 1020 respectively and a uniform rate of ₹ 1144 for Calves.

DMF in November 2008, recommended to Integrated Financial Advisor Western Command (IFA WC) for acceptance of tender. But the issue of concurrence by IFA remained under correspondence for five months as repeated clarifications were sought by IFA regarding codal parameters for introduction of CCF, scale of CCF, expenditure in past period, rate negotiated in tender for three stations being more than local purchase, renegotiate to bring down rates, etc,. DMF gave clarification on expenditure in the past, negotiation with L-1 firm, lower rate of tender for three stations as compared to local purchase rate. However, IFA while raising queries on five separate occasions, did not give a final decision. Thus the matter of finalization of the contract remained under correspondence between DMF WC & IFA, WC from 18 November 2008 to 26 March 2009, whereas both are located in the same building of HQ WC Chandimandir. In the mean time extended validity period of the offer of 30 April 2009 expired. Meanwhile, Deputy Director General, Military Farm, Army HQ, continued to issue approvals for local purchase of compounded cattle feed on day-to-day basis, invariably at higher rates.

Audit scrutiny revealed that contract rates (quoted) for CCF for three stations i.e. Jalandhar, Ambala and Dagshai were lower than local purchase rates and contract could have been concluded for these stations as tenders were issued for each station separately.

However, due to IFA's failure in taking a decision regarding conclusion of contract for three stations, local purchase of CCF from January 2009 to December 2009 had to be resorted to at higher rate which resulted in extra expenditure of ₹ 59 lakh.

The matter was referred to the Ministry in December 2010; their reply was awaited as of July 2011.

3.8 Avoidable expenditure due to rejection of a valid tender

Illogical rejection of a valid tender by Headquarters Western Command (HQ WC) led to procurement of meat items at higher rate through local purchase and in retender. This resulted in avoidable expenditure of ₹ 89.80 lakh.

HQ WC invited tenders for supply of two different quantities of meat dressed (MD) and Chicken dressed (CD) (Broiler) (B) and one specific quantity of meat on hoof at Chandimandir, and other four stations for the period from 1 April 2008 to 31 March 2009. Two tenders were received on 3 January 2008. M/s Moneesh & Co, quoted following two different rates for two different quantities for supply of MD and CD (B), whereas M/s Aman & Co. quoted rates for only CD (B).

Sl. No.	Chandimandir		Kasauli, Degshai & Solan		Subathu	
	Qty (Kg)	₹ per Kg	Qty (Kg)	₹ per Kg	Qty (Kg)	₹ per Kg
Rates tendered by M/s Moneesh & Co.						
MEAT (DRESSED)						
1.	240000 OR	84	18000	87	16500	87
	480000	80	42000	83	38500	83
CHICKEN (DRESSED)						
2.	22000 OR	54	450	57	300	57
	262000	62.70	24450	65.70	22300	65.70
Rates tendered by M/s Aman & Co.						
3.	**FOR MEAT (DRESSED) NOT QUOTED**					
CHICKEN (DRESSED)						
4.	22000 OR 262000	62.98	450 OR 24450	65.98	300 OR 22300	65.98

Board of officers assembled at HQ, WC on 03 January 2008 rejected tenders of M/s Moneesh & Co. on the plea that it had quoted two different rates for two different quantities of supply of MD and CD (B) and the format of the schedule had been changed which was incorrect in terms of the instructions to tenderers. This rejection was not in order as the notice inviting tender itself mentioned two different quantities of the items to be supplied.

Integrated Financial Adviser (IFA) to whom the proceedings were referred, was also of the opinion that since two quantities had been mentioned in the tender document quoting of two different rates by vendor did not seem illogical. Similarly, drawing a line between two rates quoted by vendor could not be construed as alteration in the tender documents. The IFA opined that tender of M/s Moneesh & Co. being lowest for Chandimandir station should be considered for acceptance. However Major General, Army Service Corps, Western Command (MG ASC) did not accept the opinion of IFA and recommended re-tendering. M/s Moneesh & Co. filed a suit in the Court in January 2008 for not awarding the contract to them.

Hon'ble Court under their order of August 2008 directed MG, ASC, HQ WC to consider the tender of M/s Moneesh & Co. for acceptance. Accordingly HQ WC in September 2008 informed the contractor that Court had directed to accept the tender being the lowest and same had been agreed to but as the validity of tender had expired on 30 June 2008, it could not be accepted.

Tenders were re-invited in September 2008 against which only M/s Moneesh & Co. responded. A new contract was concluded on 25 November 2008 with M/s Moneesh & Co. at higher rates of ₹ 98 per Kg and ₹ 101.50 per Kg for supply of MD at Chandimandir and other delivery points and ₹ 78 per Kg and ₹ 81.50 per Kg for CD (B) for supply at Chandimandir and other delivery points respectively for the period from 3 December 2008 to 31 March 2009.

Further, due to the rejection of tender of M/s Moneesh & Co. of January 2008, the requirement of MD and CD (B) for Chandimandir station and outstation were met by resorting to local purchases at higher rates for the period 01 April 2008 to 02 December 2008 and subsequently under the new contract for the period 03 December 2008 to 31 March 2009. This resulted in extra expenditure of ₹ 89.80 lakh. Strangely, local purchases at higher rates were also made, inter-alia, from these two firms whose tenders were rejected in the first instance.

Ministry stated in August 2011 that the panel of officers or any member of panel had no powers to overrule the board's action and there is no provision to process a rejected tender. As regards local purchase at a higher rate, it was clarified that it was not possible to predict local purchase rate as these are influenced by various environmental factors of market and demand and supply.

The fact remains that the Board's action which eventually did not stand the judicial scrutiny caused a loss of ₹ 89.80 lakh to the Government.

3.9 Loss due to non-inclusion of laid down clause in wheat grinding contracts

Imperfection in the terms of contracts concluded by two Command Headquarters with private Mills for grinding of wheat into atta for Supply Depots of the Army Service Corps, enabled three Mills to earn undue benefit of ₹ 63.85 lakh during the period 2006-2010, by holding back 616 Ton atta.

Ministry of Defence (MOD) accorded sanction in October 2004 for conclusion of annual contracts by Command Headquarters for grinding of wheat into atta and bran to meet the requirement of troops and laid down terms and conditions for such contracts. For grinding of wheat into atta, following two grinding process were laid down: -

(i) Through Roller Process (atta and bran being separated)

(ii) Through Mills other than Roller Process i.e. atta chakki (atta and bran not being separated)

In case of dry grinding of wheat through Roller Process, the miller will provide minimum 95 *per cent* atta and maximum 5 *per cent* bran out of the wheat collected after allowing 3 *per cent* refraction and invisible losses of the wheat. In case of dry grinding of wheat through Mills other than Roller Process, the miller will provide 100 *per cent* atta of the wheat collected after allowing three per cent refraction and invisible losses, i.e. minimum 97 *per cent* atta of total quantity of wheat collected would be supplied.

Audit scrutiny revealed that in the wheat grinding contracts concluded by the Major General Army Service Corps (MGASC) of Central Command and Southern Command, instead of laid down two grinding process only one grinding process i.e. 'Roller Process' had been specified whereas the millers (firms) were having infrastructure conforming to other than 'Roller Process', i.e. 'Atta Chakki'. This defective provision in the contracts had resulted in less receipt of 616 Ton atta from the firms in three supply depots from February 2006 to June 2010 and consequential loss of ₹ 63.85 lakh.

The cases are discussed below:-

Case-I:

The MGASC Central Command made contract agreements annually with M/s Dhanlakshmi Dall Mill, Gotegaon MP for grinding of wheat into atta and bran to be delivered at nodal supply depot Jabalpur for the period 2007-08 to 2010-11. Earlier also, the supply depot got the grinding of wheat into atta done from the same firm. The firm had c*hakki* but no roller mill to grind the wheat. The agreements, however provided that the contractor shall mill the wheat by dry grinding at the mill in such a way as to produce 95 *per cent* atta and 5 *per cent* bran out of wheat collected after extracting 3 *per cent* refraction and invisible losses. In other words, the contractor was liable to supply 92.15 *per cent* atta and 4.85 *per cent* bran of the quantity of wheat collected. The contractor had supplied atta to the supply depot according to the said provision. As per the contract, the contractor would purchase surplus bran at agreed rate. Accordingly, the contractor had been paying for the bran treating it as buy back item.

Since the firm was having infrastructure conforming to other than Roller Process, 97 *per cent* atta of the total quantity of wheat collected should have been supplied as per norms laid down by the MOD for dry grinding of wheat through other than 'Roller Process'. As such a quantity of 343.5 Ton atta was received less by the supply depot Jabalpur during February 2006 to June 2010, which had resulted in loss of ₹ 34.32 lakh.

Case-II:

The MGASC Central Command had also concluded agreements on similar terms with M/s Krishna Atta Chakki, Danapur (Patna) for grinding of wheat into atta to be supplied to supply depot Danapur for the years 2008-09 to 2009-10. The firm was not having roller mill but had eight atta *chakki* for grinding of wheat. However, the firm had supplied atta after deducting allowance for bran as per terms of the agreements. As such, a less quantity of 120.4 Ton atta was supplied by the firm to supply depot Danapur from May 2008 to June 2010 resulting in loss of ₹ 15.35 lakh.

Case-III:

The MGASC Southern Command made contract agreements on similar terms and conditions with M/s Anuradha Flour Mill, Saugor for dry grinding of wheat into atta to be delivered at supply depot Saugor during the period 2006-07 to 2009-10. The firm was having *chakki* and no roller Mill for wheat grinding. Similar to Cases I & II above, the supply depot received 152.3 Ton atta less from the firm, resulting in loss of ₹ 14.18 lakh. In their reply of September 2009 supply depot Saugor stated that grinding of wheat into atta was got done as per contract deeds issued by the Headquarters Southern Command.

Thus, conclusion of wheat grinding contracts with defective terms and conditions by two Command Headquarters resulted in short receipt of atta and consequential loss of ₹ 63.85 lakh. This gave the millers undue advantage.

Directorate General of Supplies and Transport (DGS&T) stated in November 2010 that ASC specifications No. 5 and 5A for Atta had been followed which provided for extraction of bran irrespective of grinding process. Further, acceptance of 100 *per cent* atta through 'other than Roller Process' i.e. *chakki* grinding would amount to accepting atta with bran. The bran content would be sieved and disposed off at the user level causing loss since the bran thus separated by the user will be disposed off. To the contrary, in the current arrangements, the bran was being disposed off gainfully for which not only the State is earning revenue but also the bran is available as feed for cattle.

The reply is not tenable as ASC specification No. 5 and 5A for atta relate to grinding through 'Roller Process' only. Contracts concluding authorities had incorporated only one process of grinding of wheat i.e. Roller Process which gives output of 95 *per cent* atta and 5 *per cent* bran. But the firms concerned were having infrastructure for grinding of wheat through other than Roller Process i.e. *chakki* giving output of 100 *per cent* atta mix with bran. The fact that the Mills had not been supplying bran and were offering credit for the same showing it as buy back item is an ample evidence to show that bran is not produced in *chakki* grinding employed by these Mills. In this process the bran cannot be separated from atta at milling stage and thus 100 *per cent* atta should have been supplied by the miller as per MOD policy of October 2004. Due to non-incorporation of both the laid down grinding processes in the contracts, loss of ₹ 63.85 lakh occurred with corresponding undue benefit given to the Mills.

The matter was referred to the Ministry in September 2010; their reply was awaited as of July 2011.

3.10 Injudicious procurement of Tippers

Engineer-in-Chief, Army Headquarters made unwanted procurement of 15 Tippers[24] valuing ₹ 1.08 crore for a Zonal Chief Engineer. An infructuous expenditure of ₹ 22.59 lakh was also incurred on their transportation.

Engineer-in-Chief (E-in-C), Army Headquarters in March 2007 placed a supply order on M/s Eicher Motors Limited, New Delhi against Director General Supplies and Disposal (DGS&D) rate contract for supply of 19 Lorry Tippers at a unit cost of ₹ 6,89,605.65 plus four *per cent* Sales Tax and delivery charges. As per the Supply Order, 15 Tippers were to be consigned to five Garrison Engineers (GEs) under Chief Engineer (CE) Andaman & Nicobar Zone Port Blair and the balance four Tippers to three other different GEs. The supplier was required to supply the vehicles to the nearest dealers point. Although the Supply Order had been placed by the E-in-C in the name of replacement of existing tippers as provided in the Ministry's sanction of December 2006, the GEs at Port Blair whom 15 tippers were earmarked were neither authorised to hold the tippers nor were holding any old tippers to be replaced. The tippers were also not demanded by the GEs. In July 2007, CE A & N Zone Port Blair, however, collected 15 Tippers from the supplier at Chennai and transported them to Port Blair incurring an expenditure of ₹ 22.59 lakh on transportation.

Audit scrutiny revealed that the five GEs under CE A & N Zone Port Blair were holding 15 Tippers without any authorisation and use since their procurement. Though the surplus holding was regularly reported to the Chief Engineer Southern Command (CESC) and also to the E-in-C's Branch, no action was taken to transfer the surplus Tippers to the units where these could be gainfully utilized.

In reply, CESC stated in May 2009 that Port Blair is a remote area and it would be difficult to transfer the vehicles as the cost of transfer would be ₹ 1 lakh per vehicle. The CE A & N Zone Port Blair added that Tippers were being utilised for maintenance/miscellaneous services and a case for transfer of the surplus Tippers had been taken up with CESC so that these would be gainfully utilised where possible.

The Ministry stated in January 2011 that the tippers were released to various GEs in Andaman and Nicobar Islands for post Tsunami rehabilitation and relief work and were procured under the authority of the Ministry's letter of December 1992. The reply furnished by the Ministry is incorrect and is an attempt to mislead Audit. The Tippers were neither authorized nor demanded

[24] Tipper: A truck or lorry the rear platform of which can be raised at the front end to enable the load to be discharged by gravity.

by the GEs under the CE (A&N) Zone Port Blair, yet 15 Tippers were thrust on them after suo moto procurement by E-in-C. As the Tippers were procured after two years of Tsunami the argument of the Ministry that these were required for post Tsunami relief/rehabilitation work is untenable. The Tippers were lying unutilized since their receipt by the GEs in A&N Islands and these could not be transferred to other units in mainland due to high cost of transportation.

E-in-C's Branch thus made injudicious procurement of 15 Tippers valuing ₹ 1.08 crore without any justifiable requirement and got them shipped to A&N Islands spending ₹ 22.59 lakh where the Tippers were languishing since July 2007. The Ministry needs to inquire and fix responsibility for the unwanted procurement involving a sum of ₹ 1.31 crore.

3.11 Irregular payment to Civil Hired Transport Contractors

Inadequate internal check by Central Ordnance Depot, Dehu Road on the use of Civil Hired Transport for conveyance of ordnance stores to its dependant units resulted in irregular payment of ₹ 32.29 lakh.

Station Headquarters Dehu Road concludes contracts every year for hiring of civil transport (CHT) for transporting Defence Stores from different military units/depots in and around Dehu Road/Kirkee (near Pune) to various destinations all over the country. The contracts *inter alia* specified the capacity of vehicles to be supplied, applicable hire charges, distance and maximum transit period to different stations. Payments were to be made based on the capacity of the CHT and the distance covered up to consignee unit. Units hiring the vehicle under the contract were required to ensure compliance with the terms of contract, before making payment to the CHT contractor. Combining two vehicles' load into one and transshipment of the stores *en route* were not permissible under the contract. In case it is noticed that the vehicle load of two CHTs pertaining to either one consignor or different consignors is combined into one vehicle, freight charges will be admissible for one vehicle only. When transshipment becomes unavoidable due to the breakdown of vehicle *en route* the contractor should send a report in writing along with a certificate from the workshop to the consignor/consignee at the earliest opportunity.

Audit scrutiny of the CHT contracts and connected records in COD Dehu Road (COD) for the years 2006-07 to 2009-10 (up to June 2009) revealed following irregularities, entailing an expenditure of ₹ 32.29 lakh as shown in **Annexure IVA**, **IVB** and **IVC**. The case is described below:-

(i) **Annexure IVA** shows instances of use of same CHT again and again for conveyance of stores from COD Dehu Road to various units located at a distance of more than 1000 kilometres within a short spell of time, i.e. on the date CHT could reach the destination station or was *en route*, the same was again shown as booked from the COD and paid accordingly. To illustrate, a maximum 10 days had been provided for a CHT to reach Guwahati from Dehu Road. The COD booked Vehicle

No.MH-14-4874 to despatch stores to Guwahati on 16, 18 and 20 October 2008. Similarly, the Vehicle No. HR-39A-7220 was booked on 19 May 2009 for despatch of stores to Pathankot and the same vehicle was again booked on 20 May 2009 by the COD for despatch of stores to Udhampur. Booking of same vehicle for a station at a distance of more than 1000 kilometres within an unfeasible short frequency indicates that the COD authorities did not exercise proper internal check and failed to ensure compliance with the terms and conditions of the contract before authorizing the bills for payment. Evidently, the expenditure of ₹ 15.36 lakh incurred on such hiring was irregular.

(ii) On certain occasions, the CHTs booked and paid by the COD were different from the vehicles through which stores were actually received by the consignee units as shown in **Annexure IVB**. To illustrate, Vehicle No. MH-14-6449 was booked five times during February/ March 2008 to dispatch stores to Bagdogra, but on all these occasions vehicles through which the consignments were received at consignee's end were different. Evidently, transshipment of the stores *en route* was done by the contractor by violating the terms of the contract and the depot authorities had failed to detect it. This allowed irregular payment of ₹ 7.12 lakh to the contractor.

(iii) In the cases shown in **Annexure IVC**, same CHT was booked by the COD and Central Armoured Fighting Vehicle Depot (CAFVD), Kirkee for conveyance of stores to far-flung stations within a short spell of time (2-5 days) and the contractor got payment from both the depots. Booking of same CHT by both the depots for outstations within a short span was not feasible. Clearly, the consignments of both COD and CAFVD were combined by the contractor in one vehicle. In such cases, payment of the CHT was to be made by one depot as per terms of the contract. Hence, payment made in such cases to the tune of ₹ 9.81 lakh as per **Annexure IVC** was irregular. For example, one vehicle No. HR-64-0599 was booked on 20 February 2007 by both COD and CAFVD for despatch of stores to Jodhpur and Pathankot respectively and paid by both the depots. Similary, vehicle No. HR-56-A 5892 was booked on 24 March 2008 by the CAFVD for Suranassi (Jalandhar). On the next day (25 March 2008) the same vehicle was booked by the COD for despatch of stores to Pathankot and paid by both the depots, which was irregular.

Thus, dubious booking of CHTs by the COD and CAFVD had resulted in irregular expenditure of ₹ 32.29 lakh, which needs investigation and corrective action to stop such practices.

While accepting the audit observation, the Ministry stated in April 2011 that certain corrective action had been taken by the depot to increase transparency and also to ensure that no such irregularities take place in despatch of loads by CHTs. The Ministry further stated that a sum of ₹ 3.30 lakh had been recovered and the concerned depots advised to effect recovery from outstanding bills of CHT contractor, after a compete review of all such cases.

The Ministry should fix responsibility and take appropriate action to streamline the system of internal check to cap such irregularities in CHT contracts/payments.

3.12 Avoidable provisioning of tyres of Scania Vehicles

Error in calculating the Monthly Maintenance Figures for provisioning of Scania Tyres resulted in over provisioning and consequent surplus holding of stock of 507 Scania Tyres costing ₹ 87.18 lakh. Seventy per cent of the original shelf life of the stock lying in storage had already expired.

Director General Ordnance Services (DGOS) Technical Instructions on Provision Review provides that while deriving the Monthly Maintenance Figure (MMF),[25] if the upward or downward trend is anticipated to continue, the MMF will be suitably raised or lowered to avoid the risk of under or over-provisioning. Further, if past 12 months' normal issues are considered unrealistic, issues over a period longer than 12 months (2 or 3 years) may be taken at the discretion of Provisioning officer.

It was noticed in audit that Central Ordnance Depot Mumbai (COD) carried out Provision Review of Scania tyres in October 2005 on the basis of monthly maintenance figure of 68.61 based on issue of larger time span of last five years as against stipulated period of two or three years. This resulted in a estimated deficiency of 345 tyres. The MMF showed a declining trend in the immediate preceding three years which was 23.5 on one year's issue, 34.29 on two years' issues and 106.66 on three years' issues. Over-provisioning on part of COD Mumbai resulted in DGOS placing a supply order in September 2006 on M/s Madras Rubber Factory, Chennai (MRF) for procurement of 345 tyres at a cost of ₹ 55.97 lakh. The supply was received between November 2006 and April 2007.

The subsequent Provision Review carried out in October 2006 considered an MMF of 31.01 and it indicated a deficiency of 162 tyres. The MMF of 31.01 was again an inflated figure since it considered the double issue of tyres to OD Talegaon i.e. 264 tyres issued against a single demand for 132 tyres. By setting off this discrepancy, the MMF for 2005-06 would have been 20.12 as against 31.01 and there would have been a surplus of 132 tyres instead of deficiency. DGOS in March 2007 placed supply order on M/s MRF for procurement of 162 tyres at a cost of ₹ 28.81 lakh which was subsequently amended to ₹ 31.21 lakh. The supply was received in July 2007.

The Provision Review of April 2010 revealed surplus stock of 566 tyres, which were held in storage for more than three years. Keeping in view the shelf life of the tyres of five years, the stock held had already expired nearly 70 per cent of its shelf life. Being surplus, the COD authorities had requested the Controller of Quality Assurance, Vehicles (CQA(V)), Ahmednagar in June

[25] Monthly Maintenance Figure (MMF) is a figure expressed as an actual quantity of stores, which represents the estimated /calculated requirements of an item for a month. It is based on past average issues as modified by any known factor(s) governing future requirements.

2009 to explore possibility of issue of the tyres for other vehicles, to avoid loss to state exchequer due to non-utilisation of Scania tyres within shelf life. The CQA(V) clarified in July 2009 that surplus stock of the Scania tyres can be issued in lieu of tyres of three different Part numbers. However, no requirement existed for those types of tyres. Thus procurement of 507 Scania tyres in September 2006 and March 2007 at a cost of ₹ 87.18 lakh was avoidable.

The matter was referred to Ministry of Defence in October 2010; their reply was awaited as of July 2011.

3.13 Procurement of defective spares from foreign vendor

Due to wrong specification incorporated in the contract, delay in raising quality/quantity claim against vendor spares valuing ₹ 2.30 crore were lying in the depot without serving the intended purpose.

Based on indents received from different consignee depots for import of spares for three types of armaments, Army HQ concluded a contract with M/s SFTE "SPETSTECHNO EXPORT" Ukraine in December 2007 at a total cost of USD 1474926.46.

Audit scrutiny of the contract and connected documents revealed the following irregularity in import of spares for three types of armaments which led to non-utilisation of spares worth ₹ 2.30 crore:-

1) Spares of Gun Machine 7.62 MM valuing ₹ 0.54 crore

DGQA cleared the import of 500 spring of drawer or extractor spring a spare of Gun Machine 7.62 MM K-59. But Army HQ while concluding the contract mentioned the specification of part for Gun Machine 7.62 MM. The store was received by Central Ordnance Depot (COD) Jabalpur in December 2008. Joint Receipt Inspection (JRI) of the store was carried out in January 2009 and supplied item did not tally with bin sample and drawing of Spring Extractor reflected in spare parts of Gun 7.62 MM K-59. Accordingly the item was rejected and quality claim was raised against the firm in January 2009. The firm did not accept the claim stating that neither the contract agreement specified the subject item as spare part of GM 7.62 K-59 nor any clarification to this effect was issued at any time. The Ukrainian Original Equipment Manufacturer (OEM) confirmed that the spares supplied fully corresponded to spares list of Gun Machine 7.62 mm.

Thus improper mention of specification resulted in import of unwanted spares worth ₹ 0.54 crore which is lying in store without any use.

2) Spares of OSA-AK valuing ₹ 1.69 crore

Spares of OSA-AK were received in COD Dehu Road between July 2008 and August 2009. In the first JRI which was carried out in July 2009, two types of spares worth ₹ 9.23 lakh were rejected on the ground that item did not tally with depot sample. Quantity Claim was raised against the firm in August

2009. Second JRI which was carried out in November 2009 accepted five types of spares subject to Fitment & Functional Test (FFT). Two types of spares out of these five were found unserviceable/unfit for use during FFT which was carried out in January 2010. Quality Claim for two items valuing ₹ 1.60 crore were raised in May 2010, nine months after receipt of the spare as against the stipulation that such claims should be furnished within five and a half months of receipt of spares.

3) Spares of Kvadrat valuing ₹ 6.52 lakh

Spares of Kvadrat were received in July 2008. JRI was conducted during January 2009/October 2009. Three types of spares were rejected by the JRI team as required items was not supplied by the firm and one item was received in broken condition. Quality claim for ₹ 6.52 lakh was raised in March 2009 and November 2009. The claim was rejected by the vendor being time barred.

Thus incomplete specifications in the contract and delay in raising quality/quantity claims, spares worth ₹ 2.30 crore were not put to use for intended purpose and kept in store without any use.

In reply the Ministry stated for Case-1 that the contract was concluded on the catalogue Part No. C2/121 which is same for both the indented item as well as the item received. Received item pertained to 7.62 mm PKT which is also in service with Army. The case is at hand to assess the suitability and feasibility of utilizing the received item for the inventory of the equipment 7.62 mm PKT. Thus it proves that item nomenclature was quoted wrongly in the contract and item could not be used for intended purpose. For Case-2, Ministry stated that claims have been submitted and while for Case-3, it confirmed that the claim had been rejected.

3.14 Recoveries and savings at the instance of Audit

Recoveries

Based on audit observations the audited entities had recovered premium and rentals of defence land, excess payment of service charges, pay & allowances, under recovery of electricity, rent and allied charges and labour welfare cess etc amounting to ₹ 8.94 crore.

Test check of records of Defence Estates Office, Defence Research and Development Organisation, Military Engineer Services, Pay and Account offices, Canteen Stores Department (CSD) HQ etc revealed instances of overpayment of service charges, non-recovery of premium and rentals, non-recovery of liquidated damages (LD), under recovery of electricity, rent and allied charges and irregular payment of Pay and Allowances etc amounting to ₹ 8.94 crore as per details given in **Annexure-V**. On being pointed out by Audit, the units/ formation concerned recovered/agreed to recover the irregular payments.

Savings

Various sanctioning authorities had cancelled irregular administrative approvals/sanctions and CSD HQ Mumbai had taken corrective action at the instance of Audit, resulting in savings of ₹ 7.95 crore.

Consequent upon a test check of accounts at units and formations, Audit noticed instances of irregular sanctions. On being pointed out, the audited entities took corrective measures, resulting in savings of ₹ 7.95 crore as indicated in **Annexure-VI**.

The matter was referred to the Ministry in December 2010; their reply was awaited as of July 2011.

CHAPTER IV : WORKS AND MILITARY ENGINEER SERVICES

4.1 Overpayment in Electricity Bills

Garrison Engineer (GE) Babina made overpayment of ₹ 0.55 crore due to application of incorrect rate schedule by Uttar Pradesh Power Corporation Ltd (UPPCL). In another case, GE (West) Colaba made overpayment of ₹ 1.08 crore due to failure to intimate realistic maximum electricity demand by GE to Brihan Mumbai Electric Supply & Transport (BEST).

Two cases of overpayment of electric tariff due to payment of bills at incorrect rate schedule and failure to intimate realistically assessed Contracted Maximum Demand (CMD) to Electricity authorities have come to notice in audit. The total overpayment worked out to ₹ 1.63 crore. Both the cases are discussed as under:

Case-I

Electricity tariff rate schedules of Uttar Pradesh Power Corporation Ltd. (UPPCL) was revised with effect from December 2004. In the revised rate schedules, Military Engineer Services (MES) was placed under the category LMV[26]-1 as against the previous category of LMV-4. The tariff rates under schedule LMV-1 were less than that of LMV-4. A Voltage rebate of 5 per cent and 7.5 per cent of rate of charge were also admissible to MES if supply were at 11 Kilovolt (KV) and was above 11 KV respectively. GE Babina was getting bulk electric supply from the UPPCL at 11 KV contracted load since October 2001. The contracted load was increased from 11 KV to 33 KV with effect from June 2007.

Chief Engineer Lucknow Zone, Lucknow issued instructions in December 2004 that the concerned Garrison Engineers (GEs) should ensure that correct bills are raised by the UPPCL and payment thereof as per new schedule of category LMV-1 with effect from the billing month of January 2005.

Audit scrutiny of the electric bills paid by GE Babina revealed that UPPCL had floated bills at incorrect rate schedule (LMV-4) and GE continued to pay as per the bills raised. The payment of electric bills by the GE without ensuring the correct rate of the tariff had resulted in overpayment of ₹ 69.31 lakh between January 2005 and October 2007. Out of this, a sum of ₹ 14.26 lakh had been adjusted in the subsequent bills of April 2008 to October 2008 leaving an amount of ₹ 55.05 lakh unadjusted. The GE confirmed the overpayment of ₹ 55.05 lakh, which remained unadjusted as of December 2010.

[26] LMV = Low Medium Voltage

The matter was referred to the Ministry in November 2010; their reply was awaited as of July 2011.

Case-II

In July 2007, the Chief Engineer (CE), Southern Command (SC), issued guidelines to all Zonal CEs indicating that monitoring of the recorded maximum demand is to be done and if deemed necessary, the Contracted Maximum Demand (CMD) may be revised based on the actual consumption. Brihan Mumbai Electric Supply & Transport (BEST) tariff booklet, stipulated that monthly Billing Demand would be higher of the following:

(i) Actual Maximum Demand recorded in the month during 0800 hours to 2400 hours.

(ii) 75 per cent of the highest billing demand recorded during preceding eleven months subject to limit of contract demand.

(iii) 50 per cent of the contract demand.

Contract demand was demand in kilowatt (KW), mutually agreed between BEST and the Consumer as entered into the agreement or agreed through other written communication.

Audit noticed that Garrison Engineer (West) Colaba, Mumbai failed to take necessary action to assess and fix the CMD for two electricity connections resulting in avoidable payment of ₹ 1.08 crore. The detail of case is given below:

GE (W) Colaba receives bulk electric supply from BEST Mumbai, under high tension (HT) in respect of two electricity connections having connected load of 1352.08 kilo watt (KW) and 1796.38 KW respectively.

Prior to November 2006, no fixed/demand charges were charged by BEST and the electricity charges were based on the total units consumed in the month. From November 2006 onwards, BEST charged fixed/demand charges based on the recorded maximum demand. In August 2007 the BEST requested the GE to indicate the CMD in respect of the two connections, for charging the demand charges. However, the GE, instead of assessing and arriving at the required maximum demand based on the past consumption, as instructed by the CE SC, left it to BEST to examine the feasibility of entering into the contract demand.

In October 2007, BEST initially fixed the CMD 1352 KW (1690 KVA) and 1796 KW (2245 KVA) based on connected load and later on in January 2008, BEST unilaterally made an upward revision of CMD to 2718.4 KW (3398 KVA) in respect of both connections.

Audit noticed that for the two connections, the highest consumption during November 2006 and September 2007 was 600.8 KW (751 KVA) and 826.4 KW (1033 KVA) only. Moreover, the highest actual monthly level consumption of electricity for these connections for the period from October 2007 to February 2010 was 818.4 KW (1023 KVA) and 946.4 KW (1183

KVA) respectively, which is far less than the contracted load. After being pointed out in Audit, GE Colaba in October 2009 took up the matter with the BEST to fix the CMD at 880 KW (1100 KVA) and 1040 KW (1300 KVA) in respect of the two connections, which was implemented in March 2010. Further, an amount of ₹ 3.77 lakh out of ₹ 1.08 crore has been adjusted for the electricity bills from December 2009 to February 2010.

Thus non-intimation of realistically assessed CMD by the GE to BEST, resulted in excess payment of ₹ 1.08 crore from October 2007 to February 2010. Ministry in December 2010 agreed that the GE failed to assess and fix the contract demand and intimated that CE BEST has agreed for refund/adjustment of excess payment.

CHAPTER V : BORDER ROADS ORGANISATION

5.1 Loss due to collapse of a bridge

A bridge under construction by a Border Roads Task Force collapsed resulting in loss of ₹ 1.30 crore. Though the incident occurred in May 2008, a Court of Inquiry to ascertain the most likely causes for the collapse and to suggest remedial measures was convened after 15 months and its findings and recommendations were awaiting approval of the Competent Authority as of December 2010.

Director General Border Roads (DGBR) issued instructions in September 2001 to Headquarters (HQ) Chief Engineer Project Sewak that in case of departmental construction of bridge, the designs and drawings of centering and shuttering will be approved by Project HQ before actual execution on ground as they constitute very important stages in the construction of permanent bridges. Any inadequacy in the provision of centering/shuttering runs the risk of loss of Government property and human lives besides wastage of the time and efforts involved.

DGBR in August 2004 accorded administrative approval and expenditure sanction for 'construction of 35 metre span pre-stressed concrete permanent bridge and approach road along with its appurtenant works over Sidzu Nallah at Km 39.4 on Kohima –Jessami Road (NH-150)' at an estimated cost of ₹ 1.46 crore. The work was under the jurisdiction of Chief Engineer (CE) Project, Sewak. Execution of the works was commenced departmentally by 89 RCC[27] under 15 Task Force (TF) in September 2005 with probable date of completion in March 2007. In May 2008, when the physical progress of the work was about 77 *per cent*, the superstructure of the bridge collapsed. To investigate the circumstances under which the bridge had collapsed, the CE Project convened the Technical Board of Officers (TBO) in May 2008 instead of convening a Court of Inquiry (COI) as advised by DGBR. The TBO attributed the main reason for collapse of the structure to failure of staging/shuttering created to support the load of superstructure. Officials responsible for execution of the project were also not aware of the DGBR's instructions issued in 2001 and the designs and drawings of centering/shuttering of the bridge were not approved by the CE Project before execution on ground. The TBO worked out the loss of ₹ 1.30 crore due to collapse of the bridge and did not pinpoint responsibility for the same.

After 15 months of collapse of the bridge, HQ DGBR ordered in August 2009 a Court of Inquiry (COI) to investigate the causes leading to the collapse of the superstructure and to fix responsibility for it. Although the COI met in November 2009 and submitted the findings and recommendations to HQ DGBR, the same had not been concurred to by the competent authority as of December 2010.

[27] RCC: Road Construction Company

Thus, non-adherence to the instructions of DGBR by the CE Project regarding approval of designs and drawing of centering/shuttering and failure to implement checks and balances during execution of the work by the executives had not only led to loss of ₹ 1.30 crore to the state exchequer but also resulted in non-completion of the sanctioned project for over six years.

The matter was referred to the Ministry in October 2010; their reply was awaited as of July 2011.

5.2 Non-completion of bridge after twelve years of sanction

The bridge over river Dhauliganga in Uttrakhand could not be completed after 12 years despite spending ₹ 3.54 crore.

Improper planning and supervision resulted in non-completion of superstructure of a bridge after nine years of completion of abutment work executed departmentally at a cost of ₹ 2.31 crore. The case is discussed below:

Director General Border Roads (DGBR) accorded sanction in November 1998 for construction of a major bridge of 80 metre departmentally with intermediate pier at a cost of ₹ 3.03 crore. Work of both abutments[28] of bridge was completed departmentally up to cap beam level in March 2000 at a cost of ₹ 2.31 crore. There was difference of 1.37 metre between bearing cap top levels of both abutments which was due to original proposal of two span bridge. But since problems were envisaged during excavation of pier foundation, DGBR decided in July 2000 for design and construction of a steel superstructure bridge of 75 metre span by tender. For execution of the subject work DGBR issued tenders in January 2001 but the same had to be cancelled due to changes in Reduced Level(RL) of deck to avoid steep gradient in approaches and due to less vertical clearance as suggested by the Chief Engineer, Project (CE(P)) in the design. DGBR in September 2001 had finalized superstructure of bridge as inverted deck type but revised the RL of the deck in July 2002. The tenders were invited again in September 2002 and opened in December 2002, and rates quoted by M/s Kundan Singh Prem Singh Jamnal for ₹ 1.20 crore being lowest were accepted. Contract was awarded in May 2003. The contractor was to start the work after approval of drawings by DGBR and to complete the same by December 2004.

The contractor informed the CE and others in September 2003 that work on the superstructure of bridge would be started only after receipt of approval of drawings already submitted by him. The DGBR approved the design and drawing in September 2004. The contractor was paid ₹ 0.90 crore between July 2004 and January 2006. It would appear that no defect in the work was noticed by Bridge Construction Company (BCC) of General Reserve Engineer Force (GREF) prior to the Officer Commanding of the BCC observing the eccentricity of bearing plates during an inspection in November 2007. The contractor was advised to rectify the eccentricity and not to carry out further work till its rectification. A Board of officers held in August 2008 to assess the facts found that "existing structure does not seem to be safe".

[28] An abutment supports the ends of a bridge superstructure.

Despite issue of notices between September 2008 and March 2009, contractor did not rectify the defect. On the recommendations of Task Force HQ in April 2009, CE (P) cancelled the contract in October 2009 at the risk and cost of defaulting contractor.

Technical Board of Officers (TBO) held in November 2009 recommended that superstructure of the bridge be de-launched in totality and a new superstructure be launched. CE (P) agreed with these recommendations and forwarded these to DGBR in February 2010 along with proceedings of the TBO for their decision which was awaited as of April 2010. A total expenditure of ₹ 3.54 crore was booked till January 2010 including payment made to the contractor of ₹ 0.90 crore.

On being pointed out by Audit DGBR replied in October 2010 that a contract would be concluded at risk and cost of defaulting contractor and the amount of new contract/compensation charges would be recovered from the defaulter.

The fact remains that the bridge for which sanction was accorded by DGBR in November 1998 could not be completed after more than twelve years. In yet another case reported in paragraph 5.1 of this Report a bridge under construction had collapsed when about 77 *per cent* of the work was done. These reflect badly on the efficiency of executing agency for construction of bridges required in strategic areas. Responsibility for non-construction of the bridge in time needs to be fixed.

The matter was referred to the Ministry in September 2010; their reply was awaited as of July 2011.

5.3 Avoidable procurement of core drilling machine

Though there was no demand from the Chief Engineers, Director General Border Roads procured eight core drilling machines for five Project Chief Engineers. None of the machines including accessories valuing ₹ 1.81 crore could be used for the intended purpose.

Core Drilling Machine (CDM) having capacity to bore upto a depth of 60 metre is used for taking soil samples and is mainly used for Bridge constructions. To make up for the deficiency against authorisations of eight soil Investigation Section (SIS) unit, Director General Border Roads (DGBR) placed three supply orders on M/s AIMIL Limited New Delhi between December 2006 and March 2007 for supply of eight numbers CDMs along with accessories for five Project Chief Engineers (CE Project) at a total cost of ₹ 1.81 crore as under: -

Sl. No.	Date of Supply order	Quantity	Distribution	Amount of supply order (₹ in lakh)
1	30 December 2006	04	CE (P) Beacon – 01 CE (P) Sampark – 01 CE (P) Himank – 01	90.00

			CE (P) Hirak - 01	
2	14 March 2007	02	CE (P) Beacon – 02	45.58
3	28 March 2007	02	CE (P) Sampark – 01 CE (P) Dantak – 01	45.90
	Total	**08**		**181.48**

Say ₹ 1.81 crore

As per terms and conditions of the supply orders, 90 *per cent* payment was to be released at the time of delivery and balance 10 *per cent* after satisfactory commissioning of the equipment. The present position of receipt, commissioning and utilisation of the CDMs is as under:

Date of Supply order	**Name of CE(P) and quantity**	**Date of Receipt**	**Date of commissioning**	**Present position of utilization (in Hrs)**
30/12/2006	CE (P) - Himank - 01 CE (P) - Beacon - 01 CE (P)- Sampark- 01 CE (P) Hirak - 01	25/10/2007 25/10/2007 25/10/2007 24/10/2007	Not commissioned 03/07/2010 12/09/2009 19/05/2008	Nil 04 14 50.50
14/03/2007	CE (P) Beacon – 02	29/3/2008	01/07/2010 03/07/2010	05 09
28/03/2007	CE (P) Sampark – 01 CE (P) Dantak – 01	29/03/2008 30/03/2008	12/09/2009 Not commissioned	09 Nil

Audit found that the actual requirement of the CEs/Task forces had not been ascertained by the DGBR before procurement of the CDMs as explained below:

- Three CDMs received in CE (P) Beacon between October 2007 and March 2008 were commissioned only in July 2010 and ran for only 4 to 9 hours from their dates of commissioning to January 2011. Three Task force Headquarters (TF HQ) under CE (P) Beacon to whom one CDM each was issued informed to the CE (P) in January 2008 and April 2009 that there was no requirement of CDM to them as bridge works were being got executed through contracts and as such the CDM were declared surplus.

- Two CDMs received by CE (P) Sampark in October 2007 and March 2008 could only be got commissioned in September 2009 and used for 9 to 14 hours only upto January 2011.

- One CDM received by CE (P) Dantak in March 2008 could not be installed as of January 2011.

- One CDM received by CE (P) Hirak in October 2007 was declared surplus in August 2009.

- One CDM received by CE (P) Himank in October 2007 was declared surplus in June 2008 and as such it was transferred to the Task force under CE (P) Vartak (now CE (P) Arunak) in August 2008, which could not even be commissioned as of January 2011.

Thus procurement of eight CDMs for five CE (Ps) were unwarranted and these could not be utilised for the intended purpose for the last three years, which had resulted in idle expenditure of ₹ 1.81 crore.

The matter was referred to the Ministry in July 2010; their reply was awaited as of July 2011.

CHAPTER VI : DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION

6.1 Blockage of public money due to take over of unusable land

Imprudent decision to acquire forest land by DRDO at a cost of ₹ 73.26 crore which could not be used for other than forest purpose not only delayed the completion of project but also blocked Government money as land was not used for the project.

The Ministry of Defence in June 2003 sanctioned a project for 'Development of Vehicle Mounted Energy System' by Defence Research and Development Organisation (DRDO) at a cost of ₹ 97.40 crore. The project was to be completed by June 2010. An 'Integration and Test Facility' was to be created under the project in a vast area of approximately 700 acres of land for testing purpose.

DRDO initiated action in February 2004 for acquisition of 700 acres of land at Faridabad for the facility. The requirement was increased to 1100 acres in August 2005. The identified land belonging to Faridabad Municipal Corporation was covered under the Forest Conservation Act, 1980 and notified as such by Haryana Government in August 1992 under Section 4 of Punjab Land Preservation Act, 1900 (PLPA) which prohibited erection of buildings on the land. DRDO enquired from the Conservator of Forests, Haryana regarding the formalities to be completed for diversion of forest land for non-forest use and compensatory afforestation charges to be paid under Forest Conservation Act, 1980.

Conservator of Forests, Haryana informed in November 2005 that out of the total 1104 acre of proposed land, 1091 acres of land was forest land. He also informed that Hon'ble Supreme Court in its order dated 18.3.2004 clarified that land notified under Section 4 & 5 of PLPA 1900 would be treated as forest and diversion of this land for non-forestry use would invoke Forest Conservation Act, 1980 under which this land cannot be put to use for non-forestry purpose without obtaining permission from the Government of India.

Despite this, the Haryana Government in August 2006 on reconsideration offered 1100 acres of Forest land at Faridabad to the DRDO at the rate of ₹ 18 lakh per acre. DRDO in May 2007 reduced their requirement to 407 acres of land. In July 2007, the Commissioner, Faridabad Municipal Corporation informed DRDO that the Haryana Government had approved the proposal for allotment of 407 acres land at the rate of ₹ 18 lakh per acre to DRDO on the condition that DRDO will take necessary action for de-notification of land from the purview of PLPA 1900 from the Forest Department.

Pending clearance of Forest Department, DRDO paid ₹ 73.26 crore in three instalments from October 2007 to April 2008 to State Government and took possession of land in April 2008. In June 2008 the Forest Department, Haryana informed DRDO to seek prior permission of Central Empowered Committee (CEC) for use of land.

On an application filed by M/s R.D. Consultants on behalf of DRDO for seeking permission for non-forestry use of 407 acres of land allotted to the DRDO, the CEC filed a report in August 2009 in Hon'ble Supreme Court in pursuant to the Hon'ble Court order. The CEC recommended that the permission for use of land for setting up of the Centre by the DRDO may not be accepted. CEC also recommended that an alternative site jointly identified by the DRDO with Haryana Government may be used by DRDO and State Government should take immediate steps for acquiring the alternative identified land. However DRDO is yet to get the alternative land.

Meanwhile, the Apex Review Board for the Project in December 2008 directed to use Terminal Ballistics Research Laboratory (TBRL) Ramgarh range by creating infrastructure at a cost of ₹ 38 crore, as Faridabad test range was not ready. The PDC of the main project was extended from June 2010 to June 2013.

DRDO HQ stated that the test range to test the system was planned at Faridabad but the acquired land could not be utilized in view of non-clearance by CEC. TBRL Ramgarh has been identified as alternative site and development cost on this land for carrying out permanent facility for testing would be around ₹ 38 crore for which sanction was under process as of April 2010.

The fact that subject land was under Punjab Land Preservation Act, and also that Supreme Court judgement prohibited use of forest land for non-forest purpose was well known. Hence decision of DRDO to acquire the subject land from State Government which could not be used for creating facility as CEC refused permission to use the land for other than forest purpose was imprudent and resulted in blockage of Government money to the tune of ₹ 73.26 crore.

The Ministry stated in December 2010 that with the past experience, DRDO was confident and sure to get forest clearance for carrying out construction on the said land. But case for diversion for non-forest use was not accepted by the CEC as the area falls in the catchment area of two lakes posing serious environmental impact on ground water and flow of water to lake and Aravalli range. The case for refund of ₹ 73.26 crore had already been recommended by CEC and forwarded to Hon'ble Supreme Court of India on 22 September 2010. The fact, however, is that an amount of ₹ 73.26 crore paid from Defence Grants during October 2007 – April 2008 remained blocked with the State Government and this could have been avoided had the DRDO examined the likely legal implications beforehand.

6.2 Procurement/receipt of equipments after the closure or at the fag end of a project

Defence Materials and Stores Research & Development Establishment (DMSRDE) procured equipments worth ₹ 1.52 crore after technical completion of the project or at the fag end of a project. The project was completed with the facilities available in DMSRDE and other Labs implying that the procurement was avoidable.

Ministry of Defence in February 2005 sanctioned a project on “Development of New Generation Polymers” (DRM 546) at an estimated cost of ₹ 8.50 crore for completion by February 2010. The project was technically completed in December 2009 and closure report was submitted in February 2010 with completion cost of ₹ 6.13 crore which included procurement of machinery and equipments worth ₹ 2.83 crore.

Audit scrutiny indicated that the DMSRDE procured/received equipments worth ₹ 1.15 crore after technical completion of the project, i.e. December 2009 and equipment worth ₹ 0.37 crore at the fag end of the project. This was in contravention of DRDO Headquarters instructions to DMSRDE Kanpur in October 2004 to procure equipments at least six months before probable date of completion of the project to utilise these for production of some data or results which was expected from them. The time taken in procurement of five equipment i.e. from user demand to supply order ranged from 72 weeks to 142 weeks against the prescribed time of 26 weeks stipulated in Defence Procurement Manual 2005.

In response to the audit query DMSRDE clarified that the facilities available in the Lab (DMSRDE), IIT Kanpur and other R&D Labs were used for the project and hence the project could be completed without the equipments. The said equipments procured under the project were being utilised even after the completion of the project for other ongoing projects and are essential for future projects.

The Ministry in reply stated that most of the procurement delay in these specific cases were circumstantial, viz couple of cases were refloated twice, cases converting to resultant single tenders etc. These are the basic equipments having life span of around 15 years required for regular research work and were being utilised even after completion of the project. The value for money was partially achieved during the project. In order to overcome delays in procurement, a new schedule of delegation of financial power was issued in July 2010 which had bestowed higher power for procurement for the project Directors/Lab Directors.

The fact that equipments can be used for regular R&D activities being basic equipment is no justification to procure them for this project after it was completed. It could be procured from build up grant when required. It would appear that the cost estimates for the project was highly exaggerated as the project could be completed even without equipments worth ₹1.52 crore. To overcome abnormal delay in procurement, inherent weakness in the system of procurement also needs to be looked into.

6.3 Development of a Modular Bridge below requisite specification

Non execution of Project for Modular Bridge on specification recommended in statement of case based on which sanction was accorded resulted in wastage of assets created for ₹ 21.46 crore as users did not accept the bridge.

A feasibility study on Modular Bridge was carried out by Defence Research and Development Establishment (Engineers) (R&DE) (E) in August 2002. The study was based on the requirement projected by Army in General Staff Policy Statement (GSPS) of 1993. The salient feature of the bridge was single span up to 46 metre with Military Load Class 70 (MLC 70). Based on the recommendations given in statement of case for Modular Bridge 46 metre with MLC 70, the Ministry of Defence accorded sanction in October 2002 for execution of the project at a total cost ₹ 24.25 crore. The work was to be completed by R&DE(E) within 4 years from the date of allotment of project i.e. by October 2006.

In May 2006, R&DE (E) sought extension of probable date of completion (PDC) of the project by two years, i.e. up to October 2008 due to technical difficulty in execution. Ministry accorded sanction for extension up to October 2008. In October 2007, the R&DE(E), against the 46 metre span and MLC 70 bridge, submitted Trial Report to Defence Research & Development Organisation Headquarters (DRDO) for 20 metre bridge with 40 MLC, which was not acceptable to the users and as such in March 2008 E-in-C Branch requested Directorate of Interaction with Services for Business (DISB) of DRDO HQ to accept proposal of 10 Modular Bridge 'Buy Global' at a cost of ₹ 600 crore to fill the operational voids as R&DE(E) had not developed requisite specification Bridge. Again the PDC of the project was revised in two spells upto December 2009.

During this time the R&DE (E) developed 40 metre MLC 70 Modular Bridge and technical trials were held from January 2008 to December 2009 and the bridge was found ready for traffic but the user requirement of 46 metre MLC 70 was not fulfilled. R&DE (E) confirmed that know how developed for Modular Bridge would be useful in future development.

In March 2010 R&DE(E) submitted Closure Report of the project to DRDO HQ and closed the project after having incurred an expenditure of ₹ 21.46 crore with the proposal to develop a 46 metre MLC 70 bridge to meet the requirement of General Staff Qualitative Requirement (GSQR) issued in September 2007. Hence, another project was sanctioned in January 2010 at a cost of ₹ 13.25 crore to develop 46 metre MLC 70 Bridge which is to be completed by July 2012.

Thus, instead of adhering to the specification given in the feasibility study for Modular Bridge upto 46 metre MLC 70, R&DE (E) Pune developed Modular Bridge of 40 metre MLC 70 which was not required by users. The end result of development of Modular Bridge at 40 metre MLC 70 was that after incurring expenditure of ₹ 17.89 crore excluding cost of five carrier vehicles being used in next project, the requirement of the user could not be served.

In February 2011 Ministry stated that as per feasibility study report the modular bridge was projected for MLC-70. But later on it was changed to MLC-40 on user requirement during quarterly interaction meeting held in August 2002 and clarification made by user in December 2002. The bridge can also take MLC-70 loads upto 40 M. Since the system was to be developed on an in-service high mobility vehicle which was tatra 8x8 at that time, only MLC-40 was possible due to counter weight problems during launching. While the development of MLC-40 was at an advanced stage the requirement of 46 M MLC 70 was projected in the final GSQR issued in June 2007. In the meantime tatra 10x10 vehicle got introduced in the services and DRDO is confident to develop 46 M MLC 70 system on tatra 10x10. After seeking clarification on this issue from user (E-in-C) it was stated that their requirement stands for 46 M MLC 70 but load class of bridge for spans of 46M to be MLC-40 and MLC-70 upto span of 38 M may be possible because of technology limitation. Ministry's reply and user clarification, both expressed limitation of technology for development of bridge 46M MLC-70.

The details of the case, Ministry’s reply and clarification given by users reveal the fact that both the user and DRDO were aware that the bridge was being built for 40 M MLC 70 /46M MLC 40. Further DRDO had its limitations for construction of bridge 46 M MLC-70. Even though both the user and the designer were aware of the limitations of the project, neither of them took the initiative to foreclose the project. As a result even after incurring government expenditure of ₹ 17.89 crore, excluding cost of carrier vehicles to be used in next project, the users requirement of modular bridge after lapse of nine years remains unfulfilled.

CHAPTER VII: PROJECT MANAGEMENT IN ARMAMENT RESEARCH AND DEVELOPMENT ESTABLISHMENT

Staff projects taken up for delivery of products required by Defence Forces during the last 15 years met with varying success. Out of 46 closed projects scrutinized in audit, only 13 underwent production while in the remaining either no production was required or claims of success could not be substantiated in Audit. Projects were initiated without General Staff Qualitative Requirements (GSQR). Frequent changes to QRs by Users, excessive time overrun also contributed to non realization of the project deliverables and in many cases this eventually led to import of items.

7.1 Introduction

The Armament Research & Development Establishment Pune (ARDE) is a Defence Research & Development Organisation (DRDO) Laboratory responsible for development of conventional armament systems and related technologies. During the last five decades, ARDE's efforts led to the induction of many significant weapons systems in the Services like 5.56 mm Indian Small Arms System Rifle, Light Machine Gun and ammunition, PINAKA Multi Barrel Rocket Launcher System, Armament of Main Battle Tank Arjun, Canopy Severance System for Light Combat Aircraft & HJT-36 Trainer Aircrafts etc.

ARDE like other DRDO laboratories takes up essentially two categories of projects namely Staff Projects and Technology Development Projects. Staff Projects are taken up on the basis of specific demands from the User Organizations- mainly the Services. These are expected to be based on well defined requirements framed by Users[29] in term of General Staff Qualitative Requirements (GSQR). These projects usually involve deliverables within a specified time frame for induction in service. The second category variously known as Technology Demonstration(TD)/ Research & Development (R&D)/ Science and Technology (S&T)/ Infrastructure Development Projects are taken up for general competence-building in a given area of research or to solve specific problems arising out of Staff projects. TD Projects are planned to establish technologies which would find application in Staff projects in future based on Users' requirement.

7.1.1 Scope of Audit

The present report is the result of an audit appraisal of projects taken up by the Laboratory from the point of view of project management. Staff projects were taken up for review. Only those projects which have been closed were taken up by audit in order to make an assessment whether such projects were closed after achievement of the projected deliverables. In case of on-going projects

[29] Users are Army, Air Force and Navy

such an assessment cannot be done and hence they were not considered in audit.

The present review by Audit scrutinizes the projects taken up by the Laboratory to examine whether the deliverables envisaged in the projects were achieved within the projected time and cost framework. In order to form a fair and balanced view of the success of the projects undertaken by the Laboratory, 55 (46 closed and remaining on going) Staff Projects valuing ₹ 387.35 crore were scrutinized.

The issues relating to Users were examined in Directorate General Infantry, Artillery, Engineer's-in-Chief Branch (E-in C) and Director General Ordnance Services (DGOS) for import of ammunition. The responses of respective User directorates, DGOS and E-in C's Branch have been suitably incorporated as and where applicable.

7.1.2 Criteria to determine success of Projects

Staff projects normally should be high priority projects taken up by DRDO based on well-defined User-requirements in terms of QR, deliverables and time frame. Successful Staff projects involve Technology transfer and post-project production activities. A Staff Project can be considered successful only if the deliverables in terms of equipments or systems are accepted by the Users for induction into service after satisfactory users' trials, thereby leading to their bulk production.

7.2 Staff Projects

7.2.1 Lack of production and induction of the outcome of Staff Projects

Out of the 55 Staff Projects, 46 projects were closed and the remaining nine were ongoing as on February 2011. Of these 46 closed projects, only 13 closed projects, completed at a cost of ₹ 67.83 crore, underwent production.

Ministry claimed 31 projects as successful. Ministry's claims were however based on unilateral claims by the DRDO regarding success of these projects. In many cases, Ministry had claimed that users did not indent or no production was involved. In a few cases, it claimed that the development as per the quality requirements was completed but the users changed the quality parameters at a later date. The details are given below:

Sl. No.	Category of Project	No. of Projects	Remarks of Audit
1	Projects successfully completed in which production started	13	No remarks
2	(i) Projects successfully completed meeting original GSQR. However not productionised as no requirement projected by Users. (ii) Projects successfully completed	06 02	Projects treated as unsuccessful by audit as staff projects not translated into deliverables to the service.

	but GSQR changed and no production order was placed by users.		
3	Projects completed but under TOT	02	The stage of such technology transfer was not clarified. Further, details regarding commencement of production or placement of indent by the Users were not provided.
4	Project completed but no production involved	08	The claims of successful completion could not be verified in audit as no records in support of the claims were made available.
	Total	**31**	

Ministry's reply would indicate a serious disconnect between the organization responsible for development of technology and the users. Without close synergy between the users and the technology development agency, much of the development efforts would go in vain, as the success rate of projects in this particular laboratory amply demonstrates.

While the rate of induction of the deliverables into service or bulk production was much to be desired, it was noticed in audit that the reasons for the same were complex and varied. Development of cutting edge technology of complex armament systems requires long term commitment on the part of both the laboratory and the user organisations.

Admittedly Staff projects are inherently more complex than TD/R&D projects. This is so because in case of Staff projects not only does the developer have to establish the technology in terms of a prototype acceptable to the User but has also to document the production process and arrange the transfer of technology to the domestic industry for bulk production. The capability of the industry to absorb the technology is in turn dependent upon the technological maturity level of the domestic industry.

As audit analysis indicated, it is not always the laboratory which is solely responsible for failure of Staff projects. Staff projects require constant cooperation between the users and developers. The users are also required to articulate their requirements in concrete and achievable terms.

In many cases, it was noticed that the projects were closed as there was no unanimity regarding success between the laboratory and the users. In many cases, the Ministry of Defence, Department of R&D replied to audit putting the onus of responsibility of failure of the projects on the User Organization. Both these Organizations are parts of Ministry of Defence and yet, there is no authority to reconcile the differences. Autonomous functioning of these organizations without a strong umpire to oversee and resolve differences also was responsible for slow progress of such projects.

Study of projects indicated that failure could mainly be attributed to the following:

- Taking up projects without GSQR;
- Frequent changes to the GSQR by the Users;
- Excessive time over run often making the developed technology obsolete;
- Project Closures without waiting for Users' acceptance; and
- Failure of the Laboratory to develop the desired deliverables.

Ministry in its reply, while agreeing with audit contention stated that staff projects are generally undertaken against GSQR/Draft GSQR. However, there are certain developments wherein GSQR is not necessary as it could be of the nature of upgradation of equipment, compilation of range table and development of software.

7.2.2 Taking up projects without GSQR

The process of development of equipments starts with the formulation of user requirements i.e. General Staff Qualitative Requirements (GSQR)[30]. As far as Army is concerned, GSQRs are formulated by the User directorates in Army HQ and vetted by the General Staff Equipment Policy Committee. Formulation of a Qualitative Requirements is of prime importance for undertaking a Staff project as it defines in precise terms the deliverables to be achieved. Taking up Staff projects without GSQR carries the risk of the system developed not meeting the Users' requirements or not being required by the Users at all. The following two cases illustrate the risks arising out of the ad hoc method of sanctioning Staff projects:

Case I: Design & Development of 125 mm Fin Stabilized Armored Piercing Discarding Sabot (FSAPDS) (Soft Core) MK-II Ammunition for T-72 tank

Ministry of Defence, Department of Defence Research and Development (DDRD) in May 1996 sanctioned the above project at a cost of ₹ 2.30 crore to be completed by May 1998. It was sanctioned by DRDO without GSQR from Army HQ. The project after four revisions of probable date of completion (PDC) and three cost revisions, was closed in December 2004 after an expenditure ₹ 7.27 crore.

The ammunition developed by the Laboratory did not meet the Users' requirement as Users expressed an apprehension as to whether the trials conducted for MK-II ammunition in the absence of GSQR for this ammunition would qualify as user trials. To resolve the issue, the ammunition was subjected to Accelerated User Cum Reliability Trials (AUCRT) in August 2007 which again proved to be unsatisfactory.

[30] Qualitative Requirements for Air Force are Air Staff Requirements and for Navy are Naval Staff Qualitative Requirements

Ministry of Defence in its reply in February 2011 stated that trials with 30 rounds of improved ammunition, have been successfully completed in May 2010 and Army HQ has given go ahead for accelerated user trials with 500 rounds of the improved ammunition. Ministry's reply should be viewed in the background of the fact that even after a lapse of 15 years the ammunition is yet to be inducted. Such ammunition is still being imported by Army.

Case II: Design and Development of ammunition 'A'

Air Headquarters 1984 had projected requirement for the above mentioned ammunition. In November 1997, Air HQ changed the specification of ammunition 'A'. However, without waiting for modified/fresh Air Staff Requirement (ASR) from Air Force, Department of Defence Research & Development(DDRD) in August 1998 accorded sanction for undertaking above Staff project at an estimated cost of ₹ 2.90 crore for completion by August 2001. In December 1998, DDRD requested Air HQ to update/issue a fresh ASR. As there was delay in revision of Air Staff Requirement, Design Review Committee of DRDO in October 2001 decided to close the project after spending ₹18.63 lakh.

Ministry in reply, while agreeing with the above facts stated that development of certain technology takes a long time and to cut short the time, the project was undertaken before finalisation of ASR. Ministry's reply should be viewed in the light of the fact that nothing was achieved from this project.

7.2.3 Frequent changes to the Qualitative Requirement by the Users

While project implementation must have a certain degree of flexibility to enable incorporation of the latest technology, it was noticed that indecision of the Users regarding design parameters resulted in frequent changes in the QR which affected the development and adversely impacted time and cost projections leading to foreclosures of projects without attaining the objectives.

This is evident from closure of three Staff projects including related Technology Demonstration projects on which an expenditure of ₹ 21.69 crore was incurred. The cases are narrated below.

Case I: Design and Development of 120 mm Long Range Mortar (LRM) System and its ammunition

Based on GSQR, Department of Defence Research & Development in June 1997 sanctioned the development of LRM System at a cost of ₹ 9.52 crore with Probable Date of Completion (PDC) as June 2001. The scope of the project included development of a family of High explosive (HE), Smoke and Illuminating ammunition. The GSQR envisaged the weapon system to have a range of 10 Km, rate of fire of 8-10 bombs per minute, with a burst fire capability of 12-15 rounds per minute. For portability, the mass of the equipment was not to exceed 700 kg and the weight of the three main components required for man/mule packing was not to exceed 450 Kg. The system also had to be capable of being split into three convenient loads. Two prototypes of the weapon system were required for trials. In February 2000 Army HQ issued fresh GSQR which was silent as to the mass of the three main components of the equipment to facilitate handling by man and mule packing.

Till June 2001, only one weapon and 200 HE bombs could be offered for User trials. To avoid further delay, DRDO de-linked development of Smoke and Illuminating bombs from the main LRM project and sanctioned a separate Staff project in October 2003 for these at a cost of ₹ 5.85 crore with PDC as October 2006.

The LRM developed by DRDO could not achieve the GSQR parameters as the desired range and rate of fire or burst fire capability could not be met with a low weight Mortar which was an inconsistency in the GSQR framed by the Army. Director General (DG) Artillery, decided against going ahead with the project. As a result, DRDO foreclosed the main project from December 2004 after incurring expenditure of ₹ 9.29 crore. Subsequently the other project for Smoke and Illumination ammunition was also foreclosed in December 2005 after incurring an expenditure of ₹ 1.08 crore. Army HQ while asking for foreclosure of the project in December 2004 accepted that the range of 10000 meters was not achievable with the low weight stipulations. It was also accepted that a mortar system with such QRs is not available in the world market and therefore a fresh GSQR was being initiated.

Ministry in its reply agreed with audit and stated that decision has been taken to procure the item through global tenders by diluting the GSQR parameters. However, the fact remains that due to unrealistic GSQR framed by the Army and DDRD's pursuance of it, the Staff project could not come to fruition even after an expenditure of ₹ 10.37 crore.

Case II: Development of 30 mm Fair Weather Towed Air Defence (AD) Gun System

For indigenization of technology for AD Gun, GSQR was framed by the Army in October 1985. DDRD in May 1986 sanctioned a Technology Demonstration project for design and development of Towed AD Gun, ammunition system and associated technology (Sharp shooter) at an estimated cost of ₹ 9.44 crore with the PDC of 5 years. The project was completed in September 1992 at a cost of ₹ 8.24 crore, after achieving rate of fire of 1200 rounds per minutes as against rate of 1000 rounds per minute specified in the GSQR. Later, a Staff Project (SL-PX-2K referred to at Sl No 4 below) was taken up in September 2000 for ₹ 17.70 crore to improve upon the rate of fire to 2000 rounds per minute. The project had to be foreclosed after an expenditure of ₹ 14.68 lakh as the Army again changed the parameters of the gun.

A total of nine changes in the GSQR were made impacting the basic parameters of the gun system such as caliber, rate of fire, size, number of barrels, weight etc. as detailed below:

Sl No.	GSQR No. & Month of Issue	Specifications of AD Gun	Revision to GSQR	Sanction of Project & its status
1.	GSQR 554 of October 1985	All weather, 30 mm, Towed, Multi-barrel, Rate Of Fire (ROF) not less than 1000 rpm		RDS–PX-86/ARD-826 in May 1986 for ₹ 9.44 crore. Successfully completed in September 1992 at a cost of ₹ 8.24 crore.
2.		No Revised QR. DRDO unilaterally decided to develop item with enhanced specifications to Multi-barrel, Gatling Gun with ROF 4200 rpm	Army in October 1995 suggested two types of AD guns. One with weight around 1000 – 1500 Kg and other weighing 4000–5000 Kg with ROF 1000–2000 rounds in each case.	RDR-PX-93/ARD-984 in August 1993 for ₹1.98 crore. Since Gatling gun did not meet the user requirement the project was foreclosed in October 1995 at an expenditure of ₹ 48.5 lakh
3.	Draft GSQR of May 1997	30 mm, Towed, Single Barrel, ROF not less than 1000 rpm, and Weight not more than 1500 Kg.	July 1998 Twin Barrel Gun ROF 2000 rpm Weight 3500 – 3800 Kg	RDX-PX-97/ARD-1080 in August 1997 for ₹ 9.85 core. Closed in April 2000 at an expenditure of ₹ 51.19 lakh.
4.	GSQR 767 of January 2000	Fair weather, 30 mm, Two Barrel, Towed AD Gun, Weight 3500–3800 Kg and ROF 2000 rpm		SL-PX-2K/ARD-1148 in September 2000 for ₹ 17.70 crore. Due to decision of the Army to upgrade in service 40 mm L/70 and 23mm ZU Gun, Project foreclosed in October 2001 at a cost of ₹14.68 lakh.
5.	GSQR 910 of October 2002	As a common successor to L/70 and 23mm ZU Gun. All weather, Two Barrel, ROF not less than 1000 per barrel	Amended in May 2004.	No project undertaken as GSQR was revised in September 2004
6.	GSQR 998 of September 2004	All weather, Towed/HMV mounted, 30/35mm, Two Barrel with ROF 1000 rpm and Weight about 4.5 ton	Amended in August 2006 Light Weight Air Defence Gun	No project undertaken as the GSQR was amended in August 2006 and revised GSQR superseding all the previous GSQRs was received in January 2007
7.	GSQR 1166 Received in January 2007 to replace L/70 and 23mm ZU Gun	Towed, HMV mounted, ROF 1000 rpm and weight Not < 6000 Kg		No project undertaken till date by ARDE

In August 2010 the User Directorate in Army HQ stated that revisions to GSQR in this case had become essential, as the features had become outdated during preceding 20 years and the proposed gun system was required to relate to the envisaged air threat. The User categorically denied any responsibility for the failure in development by DRDO and insisted that they had not agreed to any dilution in specifications of most critical of the GSQR parameters.

Consequently, even though three R&D projects and one Staff project were undertaken by the laboratory, the AD Gun system could not be developed by DRDO to satisfy the frequently revised requirements of the Users. This resulted in their mid-way closure after incurring an expenditure of ₹ 9.38 crore on the staff project in addition to the expenditure on the technology demonstration project.

Ministry in its reply agreed with the audit contention of non finalisation/frequent changes to QR leading to failure to develop a Gun system acceptable to the Users.

Case III: Design & Development of Vehicle Based ammunition 'B' laying system

DDRD in September 2000 sanctioned the above Staff project at a cost of ₹ 4.71 crore with PDC as September 2004. During the course of development, the Users proposed to enhance ammunition 'B' laying capability of the system from 70 metres in QR to 300 metres to meet its futuristic requirements. Accordingly, an engineering prototype capable of 300 metre range was initially developed but as further integrated trials of the system could be undertaken only after satisfactory development of Anti Tank and ammunition 'B' being developed under another project, ARDE in October 2003 sought extension of PDC of the project up to September 2007.

Army HQ in March 2004 intimated its requirement of traverse of 330 degrees and revised the range to 750 metres. DRDO in May 2004 expressed its inability to enhance the range to 750 metres with existing design/configuration and suggested that present design without traverse be treated as Mk I. Traverse of 330 degrees was proposed to be provided in Mk II to be undertaken separately as technology demonstration project.

However, during the bi-annual review of DRDO projects in April 2004 by Vice Chief of Army Staff (VCOAS), it was again decided to revise the system requirements and formulate a new GSQR. Accordingly the project was closed from September 2004 after incurring an expenditure of ₹ 1.94 crore. In July 2007 ARDE informed the Army that it could not deliver the system within three years when Army HQ asked it for comments for adopting the route of 'Buy' and 'Make' through TOT. E-in-C Branch in August 2010 stated that system after being categorized as 'Buy global' was being processed for procurement as due to technological advancement and operational requirements, amendment to GSQR became necessary. Ministry in their reply stated that the project was closed due to frequent changes in GSQR.

7.2.4 Excessive Time Overrun in Staff Projects

Effectiveness of project management is measured by the delivery of project output within the given time and cost. However, it was seen that time over run/extension was the norm rather than an exception in Staff Projects. 37 Staff projects constituting 80 *per cent* of the 46 closed Staff projects reviewed by audit did not adhere to the original time schedule. The number of extensions granted to projects ranged from one to 10 while extension in terms of number of months was between eight months to 146 months. In many cases frequent extensions to PDC also did not lead to success in the projects as shown in six cases below:

Unsuccessful projects involving frequent PDC extensions

Sl. No.	Project No	Original PDC	Actual time taken	Number of PDC extensions	Status of the projects
1	ARD-804	2years	13 years 7months	08	Not accepted by Users
2	ARD-813	3years	15 years 2 months	07	Unsuccessful
3	ARD-972	3years	15 years 2 months	10	Uunsuccessful
4	ARD-1045	2years	8 years 7 months	05	Not accepted by Users
5	ARD-1053	2years	7 years 4 months	05	Not accepted by Users
6	ARD-1078	2years	9 years 6 months	04	Unsuccessful

Non adherence to time schedule originally committed is indicative of overestimation of capabilities by the laboratory as well as unrealistic projection of time frames.

At least in case of four staff projects, failure of the Laboratory to develop the weapon/ammunition within the stipulated time frame after an expenditure of ₹ 6.11 crore led to closure of them and Army had to resort to import to fulfill its requirement. The details of each case are given below.

Case I: Design & Development of 84 mm RL MK III along with its Ammunition

As replacement of in-service 84mm Rocket Launcher, a shoulder fired weapon, Army HQ, in November 1997, issued GSQR for design and development of new light weight 84mm Rocket Launcher (RL MK III) along with five types of ammunition and sighting system. In contrast to the normal practice of taking up a project in totality, ARDE proposed to first develop the launcher, followed by the ammunition.

Project for development of Rocket Launcher was earlier sanctioned in April 1997 by DDRD at a cost of ₹ 75 lakh and PDC as October 1999 in anticipation of the Staff requirement. The launcher was stated to be successfully trial evaluated by DRDO and accordingly project was closed with effect from 31 March 2000 after an expenditure of ₹ 60.32 lakh.

DDRD in February 2002 sanctioned a staff project for undertaking design and development of ammunition for 84mm RL MK III by the laboratory at an estimated cost of ₹ 6.35 crore with PDC of four years.

DRDO was to offer five Light Weight Rocket Launchers for troop trials by March 2001 but it conveyed that tubes could be offered in June 2002 and that too without enhanced range sights and ammunition which would take another three years to develop. To meet the requirement of carrying out troop trials with modified tube, DDRD in March 2001 sanctioned another project at a cost of ₹ 90 lakh with PDC as November 2002. The launcher was claimed to be successfully trial evaluated under this project, and was closed in March 2004 at a cost of ₹ 79.96 lakh.

It was noticed in audit that Army HQ had concluded contract in March 2002 and March 2003 to procure 3000 Rocket Launchers Mk-III, 3000 telescopic sight and 36000 HEAT ammunition from M/s FFV, AB Sweden at a total cost of SEK 859.90 Million. Further OFB also entered into a contract in February 2005 with M/s FFV, AB Sweden for TOT for 84 mm RL MK-III Weapon and HEAT 551 ammunition at a cost of SEK 17 Million for which they received technology for all parts of the weapon except for Carbon Filament Winding (CFW) of the barrel. In the meantime Ordnance Factory Board received TOT of ammunition in 2005 consequent to which the project was foreclosed.

Ordnance Factory Board Kolkata informed the laboratory that the Army had an urgent requirement of the ammunition. As development of the ammunition would take further four years, the Users could not wait that long and had decided to import the launcher system and ammunition system. The Army also intimated that they did not need the indigenous system any more.

Ministry in its reply contended that the development had culminated in fruitful indigenization of composite technology.

Ministry's reply is not tenable as Directorate General of Infantry in April 2011 stated that the launcher developed by ARDE was trial evaluated four times and after each trial there were defects to be rectified/modifications required to be carried out.

Case II: Development of Electronic equipment for three types of ammunition

The DDRD in May 1985 sanctioned the above mentioned Staff project for ₹ 1.86 crore to be completed by May 1987. The GSQR envisaged as essential qualitative requirement of the equipment that the mean deviation of the equipment should not exceed 0.1 seconds; on firing it should be safe for up to 1 $\pm$ 0.05 seconds and the equipment should be reliable up to 95 *per cent* of Air Burst and 99 *per cent* on percussion setting.

Though initial PDC of the project was May 1987 user trials could be conducted only in December 1990. As the reliability and consistency of the equipment was poor during these trials, Army suggested further improvements and modifications before offering the electronic equipment for retrials.

In September 1991 Army HQ stressed that the equipment should achieve the results within +0.05 seconds deviation which were erroneously indicated as 0.5 sec in GSQR and should have consistency in height of burst. ARDE in October 1991 claimed that since the GSQR parameters regarding mean deviation were achieved, the item be considered acceptable. Eventually, in May 1993, DRDO expressed its inability to achieve the time accuracies indicated by Army, but offered a modified equipment for user trials in 1994. However user trials were inordinately delayed. Phase-I trials of modified equipment were conducted in February and March 1996. The equipment did not perform satisfactorily during the trial but during Phase-II user trials conducted in September 1997 the equipment performed satisfactorily and met the GSQR requirements.

In the meanwhile Ministry of Defence in August 1997, entered into a contract with M/s Electronic Corporation of India Limited (ECIL) for supply of 21000 equipment from M/s Bulova Technologies, USA at a total cost of ₹ 12.13 crore. The imported equipment was trial evaluated along with DRDO equipment, in October 1997. Army HQ, in August 1998 indicated that the performance of the imported equipment was superior to the equipment developed by DRDO in terms of both reliability and technology. It recommended that the project be short closed as it was based on GSQR of 1984 vintage, and directed for generation of fresh GSQR. Finally, the project was closed in August 2003 with retrospective effect from December 1998 after incurring an expenditure of ₹ 1.88 crore. Army accepted imported equipment in the interim.

While Army HQ did not respond to audit, Ministry in its reply claimed that electronic equipment had given performance of 94.88 per cent as per ARDE's evaluation. Regarding consistent height of burst (HOB) by reduction in mean deviation, it stated that GSQR acceptance criteria for electronic equipment was only the timing accuracy and not the HOB. However, the fact remains that the fuze could not be developed by ARDE within the initial PDC of May 1987 and finally, its performance was found to be poor in terms of reliability and consistency leading to its import by the Users.

Case III: Indigenization of ammunition 'C' for Automatic Launcher System

DDRD in August 1991 sanctioned a Staff project for indigenous development of ammunition 'C' for Automatic Launcher (AL) at a cost of ₹ 1.45 crore to be completed by August 1994. Its mass production was expected to result in foreign exchange (FE) saving of ₹ 760 crore.

In user trials of August 1994 Army suggested certain improvements. However, as the PDC of the project was over, the project was closed after an expenditure of ₹ 93.30 lakh and improvements were undertaken under a separate project. The expenditure incurred for development of the ammunition 'C' under the second project was ₹ 27.73 lakh. The reliability of the fuze could not be achieved in the 12 trials conducted between May 2000 and April 2006, and a proposal of Ordnance Factory Board agreed to by DRDO in June 2005 to use imported fuze in place of indigenous one for initial 50,000 rounds of ammunition 'C' was not agreed to by the Army.

Army HQ in August 2010 informed audit that since the year 2000, Army had procured 37,50,000 units/rounds of the ammunition 'C' from Bulgaria/ROE Russia at a cost of USD 72.19 million i.e. ₹ 340 crore.

Ministry accepted the facts but stated that development of ammunition 'C' was not wasteful as Border Security Force (BSF) has placed an indent for supply of

Qty 50,000 rounds with imported fuze. The fact however remains that Army did not find ammunition ‘C’ acceptable.

Case IV: Design and Development of equipment for Aircraft ammunition

Based on Air Service Requirement, DDRD in October 1985 sanctioned the above Staff project at a cost of ₹ 62.50 lakh with PDC as October 1988. The project underwent seven PDC extensions up to December 2000 and cost of the project was revised to ₹ 2.12 crore.

As 10 development flight trials conducted till October 1998 failed, Air Safety Technical Establishment (ASTE) recommended complete design review before conduct of further trials. However, the 11th trial also ended up with similar results. The delay in development of the equipment led to import by the Air Force to make good the shortfall. The project was closed from December 2000 after incurring an expenditure of ₹ 1.62 crore without achieving its aim.

Ministry stated that the failure or success of the project should not be based on the results of the development trials. However, the fact remains that repeated trials could not meet the requirement of Air Force even after 15 years of sanction of the project.

7.2.5 Unilateral closure of projects

The Weapon system developed by DRDO is inducted into service based on performance during trials by the Users and the project is considered for closure. In the event of Users suggesting further trials/ modifications, the project activities are continued to achieve the desired results. However, unilateral closure of projects by DRDO even before validation in trials, on the ground of having successfully developed the system, precludes its acceptance and introduction into service by the User. This not only negates the investment made in time and money on development of the weapon system but also adversely impacts the defence preparedness of the Users. Two projects of those reviewed by audit were closed after incurring an expenditure of ₹ 2.58 crore without waiting for acceptance by the User. The details of the cases are given below.

Case I: Design & Development of 125 mm FSAPDS Practice Ammunition for T-72 Tank

To reduce the cost of training, a Staff project based on GSQR for the development of a training version of the FSAPDS ammunition was sanctioned in August 1996 at a cost of ₹ 95 lakh to be completed by August 1998. The project was closed in December 2003 after incurring an expenditure of ₹ 1.82 crore without its acceptance by Army.

Though ARDE claimed the ammunition to be successful in trial evaluation; Army differed in their inference from the trial results. Interestingly ARDE in

2009 acknowledged the limitation in the practice ammunition developed by them, which it claimed could be overcome by changes in its design and formulation of a new GSQR.

ARDE further contended that the expenditure incurred is not infructuous since new technology established in the project will be utilized for development of practice ammunition for T-90 and Arjun tanks. This needs to be considered in the light of the fact that Staff projects are expected to culminate in a deliverable as stipulated in the GSQR followed by induction of the system into the services. The Ministry in its reply did not offer any comment on unilateral closure of project without consulting the Users.

Case II: Validation of Provisional Firing Tables for 105 mm Illuminating MK-II Ammunition

DDRD in July 1998 sanctioned a Staff project for the above project at a cost of ₹ 73 lakh with PDC as December 1999, revised to December 2000. Validation firings were carried out in September/November 2000 but without waiting for Users' acceptance of the trial results, DDRD closed the project from December 2000 after an expenditure of ₹ 75.52 lakh on the grounds of avoidance of audit objections.

DG Artillery in February 2001 and again in November 2001 pointed out certain inaccuracies in the firing table which needed to be resolved before being subjected to user trials. Though ARDE stated that three Firing Tables viz Sea level, 2000 metres and 4000 metres altitudes are being used by the Indian Army and so far ARDE has not received any adverse feedback, ARDE in March 2001 had requested Ordnance Factory Dehu Road to look in to the quality aspects of the ammunition used to validate the firing tables to avoid failures.

No information as to whether the observations made by Army HQ were rectified or not was furnished by ARDE. In reply, Ministry stated that there is a separate forum to address and solve issues related to quality during production thereby suggesting that the quality of the ammunition needed to be examined.

7.2.6 Failure in development

In the following three Staff projects and related two R&D projects in spite of a development time of sixteen years, eight years and seven years, respectively and after an expenditure of ₹ 17.62 crore, the technology could not be developed due to technical problems in design/development of the systems.

Ministry, while agreeing to the audit comment, stated that since the year 2002, DRDO has introduced Decision Aid in Technology Evaluation (DATE), a process whereby the DATE committee scrutinizes the project proposals and recommends for its further processing based on the maturity of technologies, which should minimize the failures due to under assessment of complexity of technologies. However no comment on the effectiveness of the DATE process is feasible at this stage as none of the projects taken up at ARDE after its adoption has come to fruition.

Case I: Design & Development of Remotely Delivered Mine System (RDMS) – Anti Tank & Anti Personnel based on existing 122 mm GRAD Rocket

DDRD in October 1992 sanctioned above mentioned Staff project for ₹ 1.75 crore with PDC of three years. Both, Anti tank (AT) and Anti personnel (AP) mines were to be developed under the Project. Initially AP mines with blast effect were to be developed under the project and in 1995, the Users projected the requirement of AP mines with both blast and fragmentation effect including self destruction element. The change in requirement necessitated undertaking of a separate project for AP mines in June 1997 at a cost of ₹ 1.50 crore with PDC of two years.

Despite ten PDC revisions, repeated cost revisions and 16 technical trials and one Pre User Trial Evaluation (PUTE) trial conducted from December 1996 to October 2006, the AT mine system failed to meet the Users requirement and as such further modifications to the system were suggested by the Users. After implementing the modifications and conducting confirmatory trials in May 2007 the system was recommended for user trials.

However the Army did not agree for user trials stating that RDMS was based on the existing 122 mm GRAD, BM-Rocket system which was going to be phased out in next three to five years and production of BM-21 launcher had also been stopped. Accordingly in April 2008 Army HQ designated PINAKA Rocket Regiments as the launcher for RDMS and instructed ARDE that development /procurement of remotely delivered AT/AP mines be progressed as a part of 'New Family of Mines'. Consequently, DRDO closed the project for Anti Tank mines from December 2007 at a cost of ₹ 8.49 crore without fulfilling the objective even after 15 years of development.

Moreover, in spite of sanction in June 1997 of a separate project for development of the AP mines at a cost of ₹ 1.90 crore , the same could not come to fruition even after four PDC revisions up to December 2006. By that time, Users had projected a new GSQR for AP mines under the project 'New Family of mines' and the project was closed in April 2007 after incurring an expenditure of ₹ 2.51 crore.

Ministry's contention that the project should not be treated as failure, as technologies of sub-munition (AT minelet) developed for 122mm Grad rockets have been transferred to Pinaka for its AT sub-munition warhead development is to be viewed in light of the fact that the aim of the Staff project was development of RDMS based on existing 122mm GRAD Rocket and not technology development of sub-munition for PINAKA.

Case II: Design and Development of Universal Variable Time Fuze for Guns

Based on GSQR, DDRD in January 1998 sanctioned this Staff project at an estimated cost of ₹ 3.20 crore with PDC as January 2001 which was extended up to March 2004 by grant of two PDC extensions. DDRD granted further extension of PDC up to 31 March 2006 on ARDE's proposal on the ground that development was almost 90 *per cent* complete, halting at this stage and under taking a new project would hinder its pace.

Despite three PDC revisions up to March 2006, ARDE was unable to develop the fuze in time due to technological problems in designing the system, resulting in closure of the project from 31 March 2006 after incurring an expenditure of ₹ 1.88 crore.

Ministry's contention that the expenditure of ₹ 1.88 crore has not been unfruitful as the sub-systems and technologies developed during the project tenure shall be utilized in future development of proximity fuzes does not justify the fact that the objective of the Staff project of development of deliverable in the form of Universal Variable Time Fuze was not achieved.

Case III: Development of Ammunition for various Artillery systems

In accordance with the GSQR of April 1995, DDRD in January 1998 accorded sanction for development of ammunition for various artillery systems i.e. 155mm, 130mm, 105mm guns, 120 mm mortar and 122mm GRAD rocket at an estimated cost of ₹ 16.35 crore. The PDC was January 2002.

Since Army had gone for import of ammunition for 155 mm guns, DRDO took up development of 130 mm ammunition on priority. As ARDE could not develop the ammunition within the PDC, it requested DRDO HQ for extension of PDC which did not materialize. In the meanwhile, the User decided to import 130mm ammunition too and DRDO HQ decided to short close the current Staff project and take up a technology development project to establish the technologies needed. Accordingly the project was short closed from January 2002 with an expenditure of ₹ 2.79 crore.

DDRD in February 2003 sanctioned two separate technology development projects one for technology demonstration of sub munition projectile for 130 mm caliber and the other for design and development of fuze DA/SD[31] for non spinning sub munition at a cost of ₹ 4.72 crore and ₹ 2.19 crore respectively to be completed by February 2005. Neither project could be completed within the original PDC. As further extensions were not forthcoming, both were closed from February 2005, after incurring an expenditure of ₹ 1.67 crore and ₹ 28.07 lakh, respectively.

[31] Direct Action/ Self Destructing

The frequent sanctions and closures indicate that the complexities of the technologies involved in the development of the above three projects were not fully addressed before undertaking them. Resultantly, ARDE was unable to develop the ammunition and the projects had to be closed without achievement of any deliverables in spite of having incurred an expenditure of ₹ 4.74 crore. In reply, Ministry stated that all projects sanctions are given after due vetting of statement of cases. The experience gained on this project was utilized for development of ammunition for Pinaka system. The reply of Ministry is not tenable as the purpose of development of ammunition for various artillery systems given in GSQR remains unfulfilled.

7.3 Absence of a mechanism to correlate success or failure of projects

In ARDE there was no mechanism in place to relate success or failure of Projects with personnel deputed on them, which could facilitate the assessment of the output of Scientists/Technical Officers. This is evidenced from the fact that despite repeated requests, the lab could not furnish any data regarding Scientists and Technical Officers deployed on various projects and their output in terms of success or failure of the project and expertise gained.

ARDE in its reply agreed that for the initial years of the period covered by audit, the information correlating the success and failure of a project to personnel or individuals is not available in the data base and maintaining this information is a difficult exercise though possible. Though ARDE further claimed that all project related information regarding the achievement of technologies established and manpower involved is documented in the Technical Closing Reports of the projects, however ARDE could not furnish this information even for the past five years.

Ministry stated in February 2011 that Design and Development of projects is a dynamic process and manpower deployment changes depending on stage of the project. R&D project is obviously a team works either within a Lab or multi disciplinary involving other DRDO Labs. In view of this it will not be feasible to correlate success and failure of project to an individual.

While the reply clearly endorsed the view point of audit that ARDE had no mechanism in place to assess the output of its human resource deployed on project activities, it also indicated lack of accountability of personnel towards success or failure of the projects.

7.4 Understatement of project cost due to exclusion of Manpower Cost

As manpower cost of regular establishment forms a significant portion of the expenditure of the Laboratory, exclusion of manpower cost of regular establishment results in highly understating the project cost. Further, it also results in understatement of cost overrun in cases of delayed projects.

Audit analysis in this regard revealed that during the period 2004-05 to 2008-09 year-wise expenditure incurred on Pay & Allowances of regular establishment of ARDE ranged between 36 *per cent* and 54 *per cent* when compared to the overall expenditure of the ARDE as indicated below:

Percentage of Pay & Allowances to total expenditure

Year	Total Expenditure (₹ in crore)	Expenditure on Pay &Allowances (₹ in crore)	Percentage w.r.t Total expenditure
2004-05	48.28	25.98	53.80
2005-06	49.35	25.80	52.27
2006-07	54.00	26.61	49.27
2007-08	77.44	27.98	36.12
2008-09	92.03	43.54	47.31
Total	321.10	149.91	46.68

Ministry stated in February 2011 that the project manpower is merged with the Peace Establishment of the Lab/Establishment. Hence this objection is not valid.

Ministry's reply needs to be viewed in the context that the core functions of the Lab are the projects and the scientific and technical manpower are dedicated to the projects. Hence project costs should include the manpower cost, particularly because substantial portion of the expenditure of the laboratory comprises of manpower costs.

7.5 Conclusion

DRDO needs to acknowledge and address the reasons for the high failure rate of Staff projects, failing which its credibility as a R&D organisation will be at risk. The organisation which has a history of its projects suffering endemic time and cost overrun needs to sanctions projects and decides PDCs on the basis of a conservative assessment of technology available and a realistic costing system. The success or failure of projects should be identified with the Scientists working on them so as to decide on their future assignments. The Ministry should fix responsibility in cases where PDC extensions become necessary due to overstating the capabilities available or failure to account for the complexities of technologies.

The matter was reported to the Ministry in December 2010.The Ministry in its reply of February 2011 has broadly agreed with the facts brought out in the paragraph but differed in some cases with the conclusions drawn from these facts. Replies of the Ministry have been suitably incorporated.

CHAPTER VIII : ORDNANCE FACTORY ORGANISATION

8.1 Performance of Ordnance Factory Organisation

8.1.1 Introduction

The Ordnance Factory Board (OFB) functions under the administrative control of the Department of Defence Production of the Ministry of Defence and is headed by the Director General, Ordnance Factories. There are 39 factories divided into five products based Operating Groups[32] as given below:

Sl. No.	Name of Group	Number of Factories
(i)	Ammunition & Explosives	10
(ii)	Weapons, Vehicles and Equipment	10
(iii)	Materials and Components	8
(iv)	Armoured Vehicles	6
(v)	Ordnance Equipment (Clothing & General Stores)	5

In addition to the existing 39 ordnance factories, two more factories viz Ordnance Factory Nalanda and Ordnance Factory Korwa are under project stage. ₹ 786.01 crore had been spent up to March 2010 for the Ordnance Factory Nalanda as against the sanctioned cost of ₹941.13 crore, revised subsequently to ₹ 2160.51 crore in February 2009. A sum of ₹48.71 crore had been spent as of March 2010 in connection with Ordnance Factory Korwa project as against the sanctioned cost of ₹ 408.01 crore. Ordnance Factory Nalanda- earmarked to manufacture two lakh Bimodular Mass Charge System per annum-and Ordnance Factory Korwa being set up to manufacture 45,000 carbines per annum were to be completed by August 2011 and March 2011 respectively.

8.1.2 Core activity

Ordnance Factories - the departmental undertaking under the Department of Defence Production of the Ministry of Defence – are basically set up to cater to the requirement of Indian Army, Air Force and Navy. The core activity of Ordnance factories is to produce and supply arms, ammunition, armoured vehicles, ordnance stores, etc., based on the requirements projected by Indian Armed Forces during the Annual Target Fixation meeting held every year.

[32] ***On a functional basis, the factories are grouped into Metallurgical (5 factories), Engineering (13 factories), Armoured Vehicles (6 factories), Filling (5 factories), Chemical (4 factories), Equipment and Clothing (6 factories)***

These requirements are later on confirmed by Indian Armed Forces in the form of Indents.

However, to utilize spare capacity if any, the Ordnance Factories also supply arms and ammunition to Paramilitary Forces of the Ministry of Home Affairs, State Police, and Other Government Departments and also for Civil Indentors including Export.

The present product range at Ordnance Factories encompasses 881 Principal Items including Anti Tank Guns, Anti-Aircraft Guns, Field Guns, Mortars, Small Arms, Sporting Arms including their Ammunitions, Bombs, Rockets, Projectiles, Grenades, Mines, Demolition Charges, Depth Charge, Pyrotechnic Stores, Transport Vehicles, Optical and Fire Control instruments, Bridges, Assault Boats, Clothing and Leather Items, Parachutes, etc. These product ranges collectively constitute 84 per cent of the total cost of production of all the ordnance factories.

8.1.3 Manpower

The employees of the Ordnance Factory Organization are classified as (i) "Officers" of senior supervisory level, (ii) "Non-Gazetted" (NGO) or "Non-Industrial" (NIEs) employees who are of junior supervisory level and the clerical establishment and (iii) "Industrial Employees" (IEs), who are engaged in the production and maintenance operations. The number of employees of various categories during the last five years is given in the table below:

(*In number*)

Category of employees	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**
Gazetted Officers	3866	3877	4036	3947	3481
Percentage of gazetted officers to total manpower	3.31	3.47	3.77	3.84	3.50
NGO/NIEs	35517	33783	32359	31105	30482
Percentage of NGOs/NIEs to total manpower	30.38	30.20	30.22	30.27	30.67
IEs	77528	74181	70666	67717	65411
Percentage of IEs to total manpower	66.31	66.33	66.01	65.89	65.82
Total	**116911**	**111841**	**107061**	**102769**	**99374**

There is continuous decline in manpower of Ordnance Factory Organization. The manpower position in Ordnance Factory Organization as of 31 March 2010 had declined by 15 *per cent* when compared with the position as of 31 March 2006. The decline in the Industrial employees and Non-gazetted officers/Non-industrial employees was 15.63 *per cent* and 14.18 *per cent* respectively.

The Gazetted officers in Ordnance Factory Organization comprise Group A and B officers. When compared to 2005-06 the number of Group A officers (1622 in 2005-06 to 1577 in 2009-10) decreased by nearly 3 *per cent*, the

Group B officers (2244 in 2005-06 to 1904 in 2009-10) decreased by 15 *per cent* in 2009-10.

8.1.4 Analysis of the performance of OFB

Revenue Expenditure

The expenditure under revenue head during 2005-06 to 2009-10 is given in the table below:

(₹in crore)

Year	**Total expenditure incurred by ordnance factories**	**Receipts against products supplied to Armed Forces**	**Other receipts and recoveries** [33]	**Total receipts**	**Net receipts of ordnance factories** (5-2)
1	2	3	4	5	6
2005-06	6847.13	5701.31	1537.81	7239.12	391.99
2006-07	6191.89	5147.77	1384.52	6532.29	340.40
2007-08	7125.63	5850.65	1464.12	7314.77	189.14
2008-09	9081.28	6123.38	1474.54	7597.92	(-) 1483.36
2009-10	10812.10	7531.08	1545.01	9076.09	(-) 1736.01

Comparison of element wise expenditure revealed that the increase in Revenue expenditure during 2009-10 vis a vis 2008-09 was due to increase in Maintenance, Manufacture (comprising direct labour and indirect labour charges), Direction/Administration charges and Stores expenditure to the extent of 25.09, 24.75, 22.61 and 20.55 *per cent* respectively with the corresponding fall in the expenditure towards Works and Renewal and Replacement by 19.39 and 17.37 *per cent* respectively.

The trend of generating surplus of receipts over expenditure in Ordnance Factory Organization got reversed since 2008-09 due to increase in manufacturing cost resulting from increase in pay and allowances on implementation of recommendations of Sixth Central Pay Commission and non-materialization of certain CKD/SKD items.

While, till 2007-08, the Ordnance Factories had been able to maintain negative charge to the Consolidated Fund of India, supplies to the Armed Forces have never been able to match the budget provision indicating less supply than anticipated. Against the budgeted supply of ₹8393 crore in 2009-10, the supplies booked were ₹ 7531 crore registering a shortfall of ₹ 862 crore. In 2008-09, the shortfall was ₹474 crore and in 2007-08, it amounted to ₹594 crore.

Audit came across cases where the issue prices are less than the actual cost of production even though instructions exist to recover the actual cost from the

[33] ***Other receipts and recoveries includes receipt on account of transfer of RR funds, sale of surplus/obsolete stores, issues to MHA including Police, Central and State Governments, Civil trade including Public Sector Undertaking, export and other miscellaneous receipts.***

Armed forces. This has a direct effect on the quantum of receipts of Ordnance Factories and consequently the budgetary support that they receive from the Government. Audit also came across cases where the (i) Ordnance Factories estimated their cost abnormally on a higher side and (ii) Ordnance Factory Board fixed an abnormal issue price for the Army as per the details given below and as a result of which there was an abnormal profit of ₹ 317.91 crore in issue of items to the indentors:-

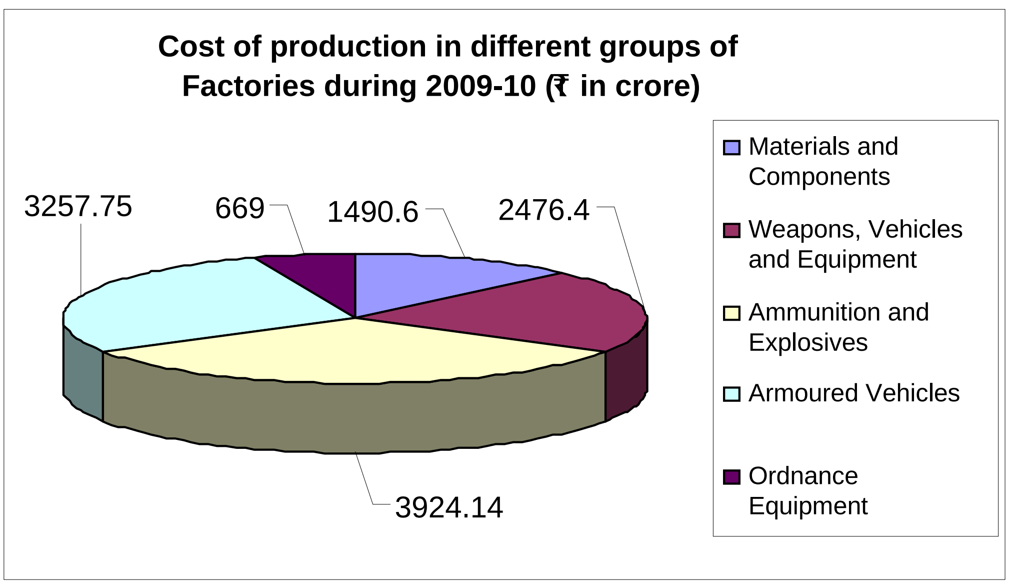
Name of the item	Qty supplied (in numbers)	Factory Involved	Estimated Unit cost (₹ in lakh)	Actual Unit cost (₹ in lakh)	Issue Price per unit (₹ in lakh)	Profit (₹ in lakh)
Final Stage (stage wise indigenized T-90 tanks)	24	HVF	1434.35	44.33	175.50	3148.08
Proof firing (stage wise indigenized T-90 tanks)	24	HVF	1427.46	39.02	351.00	7487.52
PTA-M	1075	OPF	0.83	0.72	7.20	6966.00
14.5 Artillery Trainer	53	MTPF	8.71	7.94	11.45	186.03
Final Stage (Stage-wise MBT)	35	HVF	1876.39	34.41	226.88	6736.45
Proof Firing (Stage wise MBT)	21	HVF	1862.63	107.74	453.76	7266.42
					Total	**31790.50**

Ordnance Factory Board (OFB) stated in May 2011 that unit issue price of PTA-M at Ordnance Parachute Factory Kanpur was erroneously shown as ₹ 7.20 lakh in place of ₹72,000 and necessary amendment would be issued to all concerned. The OFB's reply supports the Audit contention that the factory had gained huge profit due to depiction of abnormal issue price of the PTA-M. With regard to huge difference in estimated cost and unit cost of four items (i) Final Stage (stage-wise T-90 indigenised) (ii) Proof firing (stage-wise T-90 indigenised) (iii) Final Stage (stage-wise MBT) and (iv) Proof firing (stage-wise MBT), the OFB stated that at HVF the tanks are manufactured in four stages and also issues are booked in stages. OFB added that (i) separate estimates were prepared for the four stages viz I to IV and also issue rates are fixed at 45 per cent for Stage-I, 25 per cent for stage II, 20 per cent for Stage III and 10 per cent for Stage IV without any relevance to the estimated cost of production involved in these stages and (ii) ₹ 35 lakh are added to the T-90 tank cost towards TOT expenses in stage IV. OFB's contention is unconvincing and contradictory to each other since on the one hand they had stated that separate estimates were prepared for the four stages viz I to IV on the other hand they argued that issue rates of various stages of production are independent of the estimated cost of production involved in these stages.

Cost of production

The following table indicates the group-wise/element-wise expenditure incurred during the year to arrive at the cost of production for 2009-10 and the percentages of various elements to the cost of production:

Sl. No.	**Group of factories**	**Cost of production**	**Direct Store and percentage to cost of production**	**Direct Expenses and percent-age to cost of production**	**Direct Labour and percentage to cost of production**	**Overhead Charges**		
						Fixed Overhead and percentage to cost of production	**Variable Overhead and percentage to cost of production**	**Total Overheads & percentage to cost of production (8+9)**
1	**2**	**3**	**4**	**5**	**7**	**8**	**9**	**10**
1	Material &	1490.60	548.17 **(36.78)**	55.24 **(3.71)**	193.84 **(13.00)**	459.70 **(30.84)**	233.64 **(15.67)**	693.34 **(46.51)**
2	Weapons, Vehicles	2476.40	1159.29 **(46.81)**	21.04 **(0.85)**	292.67 **(11.82)**	686.83 **(27.74)**	316.58 **(12.78)**	1003.41 **(40.52)**
3	Ammunition and Explosive	3924.14	2567.77 **(65.44)**	17.03 **(0.43)**	294.15 **(7.50)**	763.02 **(19.44)**	282.17 **(7.19)**	1045.19 **(26.63)**
4	Armoured Vehicles	3257.75	2452.46 **(75.28)**	12.21 **(0.38)**	148.06 **(4.54)**	489.69 **(15.03)**	155.33 **(4.77)**	645.02 **(19.80)**
5	Ordnance Equipment	669.00	268.63 **(40.15)**	0.24 **(0.04)**	173.48 **(25.93)**	165.95 **(24.81)**	60.69 **(9.07)**	226.64 **(33.88)**
	Total	11817.89	6996.32 **(59.20)**	105.76 **(0.89)**	1102.20 **(9.33)**	2565.19 **(21.71)**	1048.41 **(8.87)**	3613.60 **(30.58)**



During 2009-10, Ammunition & Explosives group of factories registered the highest cost of production of ₹3924.14 crore amongst all the five group of factories with Material, Direct Expense, Labour and Overheads at 65.44 *per cent***,** 0.43 *per cent,* 7.50 *per cent* and 26.63 *per cent* respectively while Ordnance Equipment Group of factories registered the lowest cost of production of ₹ 669.00 crore with Material, Direct Expense, Labour and Overheads at 40.15 *per cent*, 0.04 *per cent*, 25.93 *per cent* and 33.88 *per cent* respectively. While the average overhead charges of Ordnance Factory Board were 30.58 *per cent,* the Material and Components Group registered the highest overheads at 46.51 *per cent* and the Armoured Vehicles Group registered the lowest overheads at 19.80 *per cent*.

Overhead Charges

The details of overheads in relation to the cost of production in respect of various Ordnance Factories from 2005-06 to 2009-10 are shown in **Annexure-VII.**

The percentage of overheads to the cost of production was more in respect of factories classified under Material and Components Division where overheads averaged at 45 *per cent* of the cost of production and the same was lowest at 22 *per cent* in the Armoured Vehicles Division.

The expenditure on overheads as a percentage of the cost of production is increasing every year as may be seen from the table given below:

(₹in crore)

Year	**Cost of Production**	**Total overhead Charges**	**Percentage of overhead to Cost of Production**
1	2	3	4
2007-08	9312.61	2643.37	28.38
2008-09	10610.40	3180.11	29.97
2009-10	11817.89	3613.60	30.58

It can be seen from the above that total overhead to the cost of production for the Ordnance Factories as a whole for the year 2009-10 stood at 30.58 per cent. The increase in overhead percentage was due to failure of Ordnance Factory Board to fix target for 171 items for which the demand existed and partly due to non-achievement of target in respect of 134 items.

OFB stated in May 2011 that supplies were made based on targets mutually agreed between them and Indentors considering the availability of budget with customers and one of the major reasons for marginal increase in overhead was on account of payment of 60 per cent arrear as well as the increase in salaries due to sixth central pay commission implementation.

High Supervision and Indirect Labour Charges

Group-wise amount of supervision charges incurred during the last five years and its relation with the total Labour charges as well as with Direct Labour charges is shown in the **Annexure-VIII.**

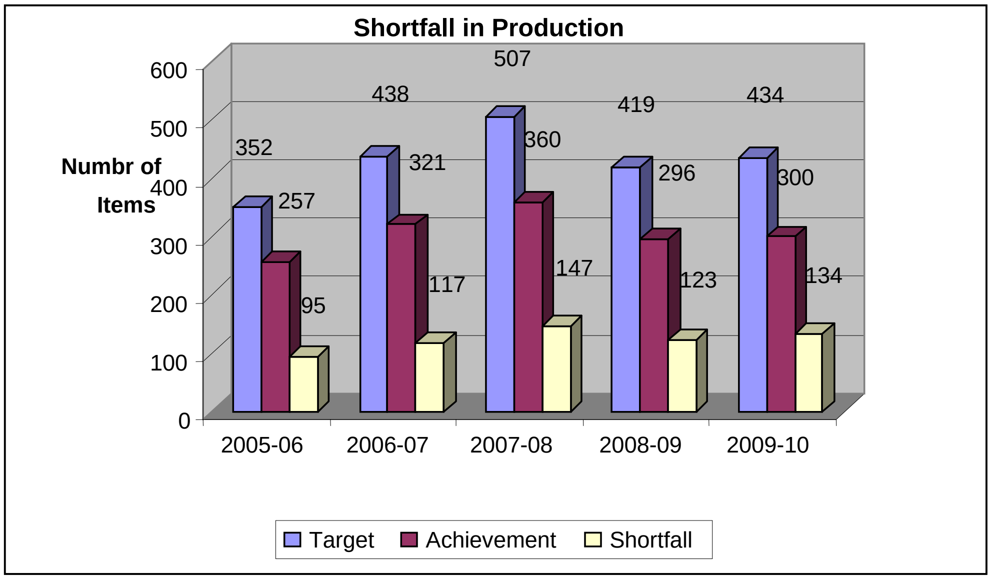
It can be seen from the **Annexure-VIII** that except Ordnance Equipment Group, in all other Groups the supervision charges compared to the Direct labour charges was quite abnormal as is evident from the fact that for every ₹spent on Direct labour, the Ordnance Factories spent supervision charges ranging between ₹1.67 and ₹ 1.35. There appears to be some disconnect in these figures since the number of Group A and B officers- forming major element of supervision charges- was only 3481 whereas the Industrial Employees coming under the category of Direct Labour was 65,411. In any case, the supervision charges to the direct labour charges as a percentage should be brought down to a reasonable level.

Production programme

The production programme for ammunition, weapons and vehicles, materials and components and armoured vehicles was fixed for one year, while four yearly production programme was fixed for equipment items. The details of demands, targets fixed and shortfall in achievement of the targets during the last five years are shown in the table below:

Year	Number of items for which demands existed	Number of items for which target fixed	Number of items manufactured as per target	Number of items for which target were not achieved	Percentage of shortfall with reference to target fixed
2005-06	352	352	257	95	26.99
2006-07	552	438	321	117	26.71
2007-08	628	507	360	147	28.99
2008-09	419	419	296	123	29.36
2009-10	605	434	300	134	30.88

It may be seen from the above table that during the last few years, Ordnance Factories never met the target. During the year 2009-10, though demand existed for 605 items manufactured in Ordnance Factories, the target was fixed only for 434 items. Even in respect of items for which the target was assigned during 2009-10, the Ordnance Factories could achieve target only in respect of 300 items resulting in the Ordnance Factories failing to achieve targets for 31 per cent of targeted items. Fulfillment of targets on all the items for which the demand existed could have reduced the overhead burden on the Ordnance Factory organization by offloading the fixed overhead cost to these items and recovering the issue price from the indentors.



OFB stated in May 2011 that production targets are fixed in consultation with the customers according to the priority of the items and hence though the indents may be available for large number of items, all the items are not targeted for production in a particular year. OFB further added that major reasons for shortfall with reference to accepted target for the year 2009-10 was attributed to (i) non receipt of inputs from trade sources due to business dealing put on hold with certain firm (ii) non receipt of bulk production clearance in certain stores (iii) indent coverage not sufficient to cover the target in respect of certain items (iv) delay in proof and acceptance (v) long lead time required in procurement of some input materials particularly in case of imported ones after receipt of indent and (vi) design problems in some of the ammunition and rockets like 130mm Cargo, Round 120mm HESH, Round 120mm FSAPDS ammunition and Pinaka Rocket. OFB's contention regarding fixation of targets by the customers well below the indented quantity is acceptable but their justification for failing to achieve the targeted production is untenable.

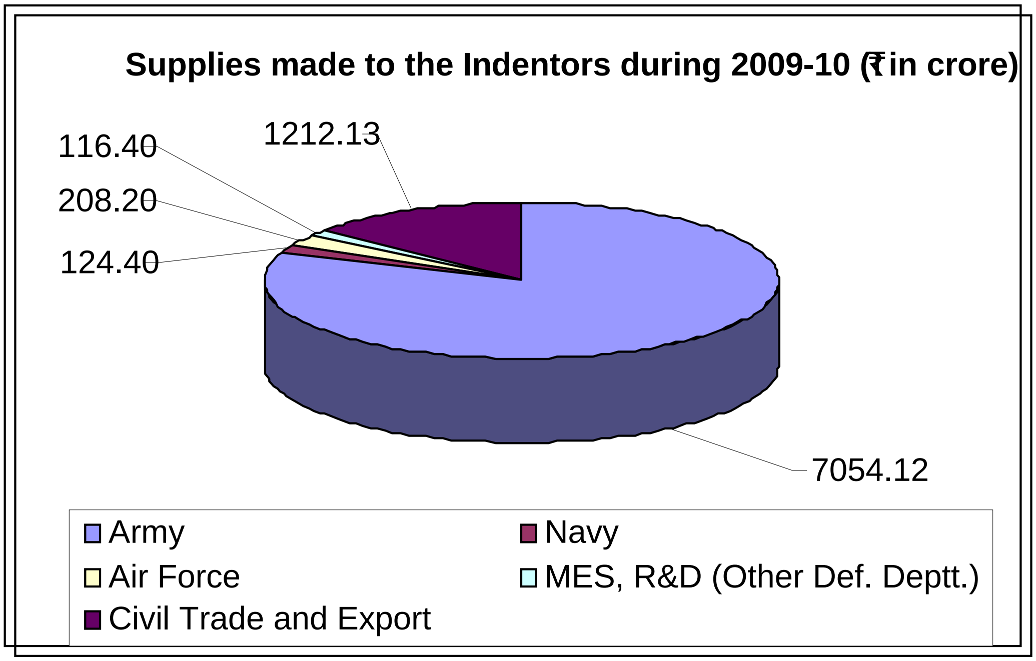
Issue to users (Indentors)

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

(`₹ in crore)

Name of Indentors	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**
Army	5187.25	4535.43	5252.15	5557.66	7054.12
Navy	147.49	130.76	119.39	179.41	124.40
Air Force	203.44	208.09	239.53	221.02	208.20
MES, Research and Development (Other Defence Department)	106.15	143.08	145.63	124.67	116.40
Total Defence	**5644.33**	**5017.36**	**5756.70**	**6082.76**	**7503.12**
Civil Trade and Export	1247.35	1179.98	1181.11	1146.55	1212.13
Total issues	**6891.68**	**6197.34**	**6937.81**	**7229.31**	**8715.25**

Total value of issues during 2009-10 has increased by 20.55 *per cent* in comparison to the previous year. As evident from the chart below, the Army remained the major recipient of the products of the Ordnance Factories, accounting for nearly 80.94 *per cent* of the total issues during the year 2009-10.



Civil Trade

The Ordnance Factories undertook civil trade since July 1986 for optimal utilization of spare capacities and to lessen dependence on budgetary support. The turn-over from civil trade other than supplies to the Ministry of Home Affairs and State Police Departments during 2005-2006 to 2009-2010 was as under:

(₹in crore)

Year	Number of factories involved	Target	Achievement	Percentage of achievement
2005-06	33	266.00	312.17	117.36
2006-07	33	279.16	298.56	106.95
2007-08	32	335.01	359.56	107.33
2008-09	39	351.12	329.30	93.79
2009-10	27	374.23	425.18	113.61

Though during the year 2008-09 there was shortfall in achieving the target of civil trade, during the year 2009-10 the achievement was 13.61 *per cent* higher than the target.

Export

The following table shows the achievement with reference to target in export from 2005-06 to 2009-10:

(₹in crore)

Year	Factories involved	Target	Achievement	Shortfall (-) /Excess (+)	Percentage shortfall (-) / Achievement (+) w.r.t. target
2005-06	11	15.00	14.66	(-) 0.34	(-) 2.27
2006-07	13	25.00	15.12	(-) 9.88	(-) 39.52
2007-08	10	30.00	27.44	(-) 2.56	(-) 8.53
2008-09	11	35.00	41.07	(+) 6.07	(+)17.34
2009-10	13	41.30	12.30	(-) 29.00	(-) 70.22

During the last few years, except during 2008-09, Ordnance Factories could not achieve the targeted export. During the year 2009-10 the shortfall in achieving the export target was 70.22 *per cent.* Ordnance Factory Board stated that deliveries of the major orders were scheduled in 2010-11 hence, the shortfall in achievement. As on 31 March 2010 amount due to be realized from the Ministry of External Affairs against supplies to Royal Bhutan Army in January 2004 was ₹15.62 lakh. Expeditious action need to be taken by Ordnance Factory Board to recover the amount.

Inventory Management

Stockholding

The level of store-in-hand inventory holding by a factory at any time in respect of imported stores as well as indigenous items, will depend upon the criticality of the items in maintaining the continuity of production, lead time required to procure the item, availability of alternate capacity verified and established sources, availability of storage space, etc. The optimum level of store- in- hand inventory for any item may be fixed by the General Managers in such a way that overall assessed inventory holding for the factory should not normally exceed the maximum level as indicated below :

Sl. No.	Group of Factories	Authorized limit of inventory holding (maximum)
1.	Armoured Vehicles	6 months
2.	Ordnance Equipment Factories	3 months
3.	Others	4 months

It is seen that (i) Ordnance Factory Dehra Dun under Armoured Vehicles Group was holding inventory for 12 months requirement (ii) Ordnance Clothing Factory Shahjahanpur and Hazratpur under Ordnance Equipment Factories Group was holding inventory for six months requirement and (iii) Ordnance Factory Katni/Ambernath/Muradnagar and Metal and Steel Factory Ishapore coming under Others category were holding inventory for meeting 12 months requirement. Besides, Gun and Shell Factory Cossipore and Ordnance

Factory Khamaria was holding inventory for 10 months and 9 months requirement respectively as against the authorized limit of 4 months.
Besides blocking Public money, holding of inventory for long time results in deterioration of quality of the inventory and also occupies valuable storage space. Necessary action needs to be taken by the factory management to reduce the excess inventory holding.

OFB stated in May 2011 that the status of inventory is discussed in the Board Meeting on quarterly basis in a financial year and suggested that Store section of each ordnance factory should exhibit 30 to 40 items with full details like nomenclature, date of receipt, source of supply etc to enable General Managers along with officers to discuss the best course of utilization of such items. The suggestion of OFB, if implemented, may help to liquidate the excess stock held with factories. It however does not explain as to how such inventory was allowed to be accumulated and the steps OFB propose to take to ensure that the factories do not resort to such overstocking in future.

Status of inventory holding

The position of total inventory holdings during 2005-06 to 2009-10 was as under:

(₹ in crore)

Sl. No.	**Particulars**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10** [19]	**Percentage of increase (+) /decrease (-) during 2009-10 in comparison to previous year**
1.	Working stock						
a.	Active	1649.99	1734.00	2160.00	2354.00	2732.00	16.06
b.	Non-moving	253.55	256.00	333.00	322.00	297.00	-7.76
c.	Slow moving	241.48	194.00	211.00	287.00	507.00	76.66
	Total Working Stock	**2145.02**	**2184.00**	**2704.00**	**2963.00**	**3536.00**	**19.34**
2	Waste & Obsolete	10.43	14.00	14.00	26.00	39.00	50
3.	Surplus/ Scrap	57.88	80.00	81.00	68.00	64.00	-5.88
4.	Maintenance stores	73.28	87.00	79.00	73.00	73.00	0.00
	Total	**2286.61**	**2365.00**	**2878.00**	**3130.00**	**3712.00**	**18.59**
5.	Average holdings in terms of number of days' consumption	151	169	160	149	177	18.79

6.	Percentage of total slow-moving and non-moving stock to total working stock	23.08	20.60	20.12	20.55	22.74	10.66

Average holding in terms of number of days' consumption has increased by 18.79 *per cent* during 2009-10 in comparison to 2008-09. The huge accumulation of Slow and Non-moving as well as Waste & Obsolete stores needs immediate review by the management to explore reasons and to ensure effective utilization/disposal of the stores.

Finished Stockholding

Position of Finished stockholding (completed articles and components) during the last five years as extracted from the Review of Annual Accounts of the Ordnance Factory Organisation for the year 2009-10 as prepared by the Principal Controller of Accounts (Fys) Kolkata was as under:

(₹ in crore)

Particulars	2005-06	2006-07	2007-08	2008-09	2009-10
Holding of Finished articles	121.06	125.11	79.00	506.00	166.59
Total cost of production	8811.59	7957.53	9312.61	10610.40	11817.89
Holding of finished stock in terms of number of days issue	5	5	3	17	5
Holding in terms of percentage of total cost of production	1.37	1.57	0.85	4.77	1.41
Finished component holding	437.92	465.45	617.00	458.00	1015.04
Holding of finished components in terms of number of days consumption	46	52	44	38	85
Holding of finished components in terms of percentage of total cost of production	4.97	5.85	6.63	4.32	8.59

Though as on 31 March 2010 there was decrease in the value of finished (completed) articles in hand, the value of finished components in hand had increased abnormally by 121.62 *per cent* in 2009-10 when compared with 2008-09. Immediate action needs to be taken for early utilization of huge finished components. Audit observed that actual cost of finished components consumed by the Ordnance Factory Organisation during the year 2009-10 had not been reflected in any of the accounts. Rather, in a footnote under the Annual Production Account for the year 2009-10 it was indicated that cost of finished components consumed in production was ₹ 1448.07 crore whereas in the Review of Annual Accounts 2009-10 prepared by the Principal Controller of Accounts (Fys) Kolkata, the total consumption of finished components had been reflected as ₹ 4342 crore resulting in discrepancy of ₹ 2893.93 crore. As a result, the veracity of the figures shown by the Principal Controller of Accounts (Fys) Kolkata regarding consumption of finished components during the year 2009-10 is highly questionable. Audit recommends that suitable entry as to the consumption of finished components by the ordnance factories for the financial year need to be incorporated in the Consolidated Annual Accounts of the Ordnance Factory Organization.

OFB in May 2011 stated that increase in finished stock holding compared to 2008-09 was mainly on account of receipt of T-90 Semi Knocked Down (SKD) items at HVF Avadi. Of the SKD items valuing ₹1710 crore recovered up to 2009-10 only ₹ 960 crore work items had been converted into finished products. OFB did not comment on the deficiencies in the system of depiction and consumption of finished components in the accounts.

8.1.5 Work-in-progress

The General Manager of an Ordnance Factory authorizes a production shop to manufacture an item of requisite quantity by issue of a warrant whose normal life is six months. Unfinished items pertaining to different warrants lying at the shop floor constituted the work-in-progress. The value of the work-in-progress during the last five years was as under:

(₹in crore)

As on 31 March	Value of work-in-progress
2006	1270.68
2007	1179.31
2008	1265.00
2009	1961.82
2010	2121.75

The total value of work-in-progress as on 31 March 2010 has increased by 8.15 *per cent* as compared to the previous year. As on 31.03.2010 a total of 27708 warrants were outstanding, of which 20877 warrants pertain to the year 2009-10 and balance 6831 warrants pertain to the years prior to 2009-10, the oldest being the year 1993-94. Necessary action needs to be taken by OFB for closure of the warrants outstanding for more than six months particularly the outstanding warrants pertaining to the period 1993-94 to 2006-07. OFB stated in May 2011 that status of outstanding warrants is being reviewed by Board every six months and directives were issued for closing the old outstanding warrants.

8.1.6 Losses written off

The table below depicts losses written off during the last five years ending 31 March 2010:

(₹in lakh)

Sl. No	Particulars	2005-06	2006-07	2007-08	2008-09	2009-10
1	Overpayment of pay & allowances and claims abandoned	0.15	1.21	0.00	0.22	0.00
2	Losses due to theft, fraud or neglect	2.81	0.55	29.11	0.28	0.17
3	Losses due to deficiencies in actual balance not caused	0.00	4.65	0.00	0.00	0.00

	by theft, fraud or neglect					
4	Losses in transit	6.51	0.00	0.16	6.46	16.85
5	Other causes (e.g. conditioning of stores not caused by defective storage, stores scrapped due to obsolescence, etc.)	5.98	0.34	19.58	180.41	1.07
6	Defective storage loss	0.00	0.45	0.00	0.00	0.00
7	Losses not pertaining to stock	1984.21	883.70	333.90	73.75	233.19
	Total	**1999.66**	**890.90**	**382.75**	**261.12**	**251.28**

As of June 2010, 173 cases of losses amounting to ₹77.21 crore were awaiting regularization by the Ministry of Defence, the oldest items pertaining to the year 1964-65. As of March 2009, 175 cases of losses amounting ₹ 77.42 crore were awaiting regularization by the Ministry. Only four cases aggregating to ₹ 0.21 crore had been regularized during 2009-10. This indicates tardy progress in regularization of losses by the Ministry and effective steps need to be taken by Ordnance Factory Board to impress upon the Ministry to regularize the losses at the earliest. As the oldest item requiring regularization of loss pertained to the year 1964-65, Ministry is recommended to accord sanction to Ordnance Factory Board for operating capital outlay for regularization of loss which had occurred long time ago.

OFB stated in May 2011 that they had taken up the matter with the Ministry of Defence for regularization of losses.

8.1.7 Capacity utilization

The table below indicates the extent to which the capacity had been utilized in terms of machine hours during the last five years.

(Capacity utilization in terms of Machine Hours)

Year	Machine hours available	Machine hours utilized	Percentage of Capacity utilization
2005-06	1763	1392	78.96
2006-07	1472	1120	76.08
2007-08	1351	1147	84.90
2008-09	1696	1294	76.30
2009-10	1839	1261	68.57
Total	**8121**	**6214**	76.52

During the last five years the utilization of available capacity of Machine Hours was around 76.52 *per cent*. Though the available capacity of Machine Hours has increased during 2009-10 the utilization of the available capacity has reduced drastically leaving 31.43 *per cent* of the available capacity as idle. Action needs to be taken for optimum utilization of the available capacity.

OFB stated in May 2011 that in view of increased target and sanction to recruit manpower against retirees the capacity utilization in terms of machine hours is likely to improve in the coming years.

The matter was referred to the Ministry of Defence in February 2011; their reply is awaited as of July 2011.

NOTE : The figures incorporated in this paragraph are mainly based on the figures of the Consolidated Annual Accounts of Ordnance and Ordnance Equipment Factories in India finalised by Principal Controller of Accounts (Fys.), Kolkata for the year 2009-10, documents maintained by and information supplied by Principal Controller of Accounts (Fys.), Kolkata as well as Ordnance Factory Board, Kolkata.

Procurement of Stores and Machinery

Machinery

8.2 Extra expenditure due to delay in finalization of a purchase agreement

Abnormal delay in finalization of a purchase agreement by Heavy Vehicles Factory Avadi, Armoured Vehicles Headquarters Avadi and Ministry of Defence led to its procurement at an avoidable extra cost of ₹ 1.36 crore.

Heavy Vehicles Factory Avadi (HVF) required a Special Purpose Semi Automatic Longitudinal Rolling Machine (Machine) for indigenous manufacture of Torsion bar of T-90 tanks. The machine was stated to be essential to avoid perennial import of the Torsion bar. HVF therefore initiated procurement action in March 2003 and sought quotation from the Original Equipment Manufacturer, viz. M/s Rosboronexport (OEM). As the quotation of USD 1.297 million, subsequently reduced to USD 1.10 million in August 2003 was more than the amount projected in the Detailed Project Report (DPR) and repeated attempts to obtain further reduction in the cost of machine did not bear any fruit, Armoured Vehicles Headquarters, Avadi (AVHQ) directed HVF in December 2003 to go in for Global Tender Enquiry.
Global Tender Enquiry floated by HVF in January 2004 failed to obtain any quote. HVF decided in October 2004 to procure the machine from OEM, which was accepted by the AVHQ in December 2004. The AVHQ took nearly eight months to refer the matter to the Ministry of Defence (MOD) in August 2005 for sanction. MOD in turn took more than a year to accord sanction (October 2006) to procure the machine from OEM at USD 1.10 million (equivalent to ₹ 5.14 crore).

In the meantime, OEM on the request of HVF extended the validity period of their offer of May 2003 from time to time i.e. up to December 2005, April 2006 and finally to August 2006.

HVF in October 2006 approached OEM to ink the deal. OEM however informed HVF in December 2006 that due to the long period of about three years taken by the Indian side, the offer had been cancelled. HVF thereafter obtained a fresh offer (June 2007) from OEM and signed the agreement in November 2007 for purchase of the machine at a total cost of USD 1.38 million. HVF received the machine in October 2009 which was commissioned in December 2009.

In the meantime, due to non-availability of machine, HVF imported 1800 Torsion Bar LH and RH between September 2008 and October 2009 against two supplementary agreements of November 2007 and December 2007 at a total cost of ₹ 6.69 crore (USD 1.633 million) from OEM to indigenously manufacture T-90 tanks.

Delay of more than two years in formalizing an offer collectively by HVF, AVHQ and MOD had resulted in procurement of machine at an avoidable extra expenditure of USD 0.28 million, equivalent to ₹ 1.36 crore.
OFB stated in September 2010 that efforts were made to obtain reduction in price but the reduced price was higher than the cost catered in the DPR. Owing to the exorbitant rate quoted by OEM, HVF was advised by AVHQ to go for Global Tender Enquiry anticipating quotations from global machine suppliers. Contention of OFB is not acceptable since even after realizing that there was no other source of supply for the said machine and further reduction in the rate was not foreseeable, the authorities failed to process the procurement action within the extended validity of the offer of the OEM. This had resulted in avoidable delay in procurement of the machine entailing an extra cost of ₹ 1.36 crore for the machine. Additionally, torsion bars required for production of the tanks had to be imported at a cost of ₹ 6.69 crore. The delay in processing the procurement action when it had been known in October 2004 itself that machine has to be imported from the single known source was inexplicable.

The matter was referred to the Ministry of Defence in July 2010; their reply was awaited as of July 2011.

Stores

8.3 Extra expenditure due to purchase of spares at higher cost

Ordnance Factory Medak incurred an extra expenditure of ₹83.67 lakh due to injudicious decision of Ordnance Factory Board, i.e. acceptance of costlier rate of Bharat Earth Movers Limited, towards procurement of spares of infantry combat vehicles.

To cater for two indents (May 2003 and August 2003) received from Central Armoured Fighting Vehicles Depot, Pune (Depot) for spares, Ordnance Factory Medak (factory) issued a single tender enquiry (December 2003) on M/s Bharat Earth Movers Limited, Kolar Gold Fields (BEML), for procurement of 75 gears, 55 sleeves, 135 oil pumps and 105 servo boosters.

Based on quotation received from BEML in January 2004 the factory requested (April/May 2004) Ordnance Factory Board (OFB) to accord sanction for placement of order for above items at a total cost of ₹2.06 crore. Pending decision on rates quoted by BEML, OFB directed the factory to obtain import prices and also to call the representatives of BEML for negotiations on 14 July 2004.

The factory obtained a quotation (USD 128,110 equivalent to ₹ 60.12 lakh) from M/s Cenrex Poland on 8 July 2004 and forwarded it to the OFB on 14 July 2004 through FAX, before the Tender Purchase Committee meeting was held. In the Tender Purchase Committee meeting of 14 July 2004, BEML was offered their last paid rates (total cost of ₹ 1.42 crore) instead of cheaper rate of M/s Cenrex (₹ 60.12 lakh). BEML, however, reduced (24 July 2004) their rates from ₹ 2.06 crore to ₹ 1.60 crore. The Tender Purchase Committee of OFB accepted the revised offer in August 2004 in preference to the lower rate of M/s Cenrex of ₹ 60.12 lakh and directed the factory to procure spares from BEML at the revised price.

The factory accordingly placed an order in August 2004 with Proposed Date of Completion of March 2005. The factory received 75 gears, 55 sleeves, 102 oil pumps and 80 servo boosters resulting in short receipt of 33 oil pumps and 25 servo boosters. Subsequently the factory supplied 33 numbers of oil pumps by importing (February 2007) from M/s Cenrex Poland against another indent of April 2006. However, the order of August 2004 was short closed in May 2010 at supplied quantity only after the matter was pointed out by Audit.

The decision of OFB to accept higher offer of BEML (₹1.60 crore) at their last paid rate instead of rates offered by M/s Cenrex (₹60.12 lakh) was injudicious. As a result, the Ordnance Factory Medak incurred an avoidable expenditure of ₹83.67 lakh on supplied quantity.

Ministry of Defence (MOD) stated in February 2010 that (i) very purpose of going to BEML was to encourage a Defence Public Sector Undertaking and designated indigenous source of the main equipment and (ii) import price details might have been obtained for assessment of market trend and involvement of foreign exchange. MOD also added that the process of import was more time consuming. The contention of the Ministry is untenable as the BEML's bid was more than three times the price quoted by the foreign supplier and the OFB has been importing equipments on regular basis. The Tender Purchase Committee had failed to take advantage of the information supplied to it by the factory about the availability of the spares at cheaper rates ex-import. The MOD's contention regarding import process being time consuming is also not acceptable as the BEML did not supply the entire quantity even in more than five years. Interestingly, OFB had to supply 33 oil pumps and 25 servo boosters to the Depot by import from the same foreign firm, whose offer had not been considered in 2004 before placing the supply order for the spares on BEML. Thus, the purchase of spares from BEML at higher cost led to an avoidable expenditure of ₹83.67 lakh.

8.4 Undue benefit to a firm

Ordnance Factory Ambernath failed to make a Public Sector Undertaking liable to bear an extra expenditure of ₹ 9.77 crore for delayed supply of copper cathodes.

Ordnance Factory Ambernath (OFA) requires copper cathode for manufacture of brass cups and strips. In order to meet the production requirement for the year 2006-07 and the first quarter of 2007-08, OFA placed an order in March 2006 on M/s Minerals and Metals Trading Corporation Mumbai (MMTC) for procurement of 4800 tonne copper cathode to be delivered by March 2007 at a cost of ₹ 102.79 crore. The order inter alia contained a price variation clause according to which payment would be made by OFA based on the average price of London Metal Exchange (LME) of copper for the month prior to month of shipment for each consignment.

OFA received 3626.693 tonne copper cathode from MMTC between July 2006 and February 2007, of which 1329.758 tonne was rejected due to presence of copper sulphate and other deformities. MMTC replaced the rejected copper cathode free of cost in May-June 2007 and September 2008. MMTC's proposal (April 2007) for supply of outstanding 1173.307 tonne (i.e. 4800 tonne ordered quantity – 3626.693 tonne supplied quantity) copper cathode which was due for supply by March 2007, in June/July 2007 at the LME rate applicable during May 2007 was accepted by OFA by extending (May 2007) the delivery period up to August 2007. OFA received 1173.307 tonne copper cathode in August 2007 at LME rate of May 2007.

OFA erred in accepting MMTC proposal for supply of 1173.307 tonne at LME rate of May 2007 since the deferred supply arose due to failure of the MMTC to supply the total ordered quantity within specified date of completion of supply and extension of delivery period ought to have been provided by the former with the condition to apply LME rate of February 2007. Failure to do so, had resulted in an extra expenditure of ₹ 9.77 crore due to difference in the LME rate applicable in February 2007 (US $5676.45 per tonne) and May 2007 (US $ 7682.17 per tonne).

Ministry of Defence (MOD) in their reply of January 2011 agreed with facts but stated that the last consignment of 1,200 tonne due in March 2007 would have inflated the stock and blocked the Government money to the tune of ₹ 30 crore. Further, they stated that from January 2006 to December 2006 the rate of copper was on increasing trend and there was sudden drop in January - February 2007. In such situation one could think that the decreasing trend had started. Hence the term business hazard is more appropriate rather than terming it as a loss. MOD's contention regarding inflating the stock position at OFA and thereby blocking the Government money with the receipt of last consignment of 1200 tonne copper cathode in March 2007 is untenable since the purchase order stipulated the delivery to be completed by March 2007 itself. Further, acceptance of last consignment of copper cathode at the LME rate applicable for May 2007 was also not justified since MMTC ought to have supplied it in March 2007 at LME rate of February 2007. As a result, the question of increasing or decreasing trend in price of copper cathode is irrelevant.

Thus, OFA extended an undue benefit to MMTC instead of making it liable to bear the extra price of ₹ 9.77 crore for delayed supply of 1173.307 tonne.

8.5 Avoidable import of propellant

Supply of incorrect information to the Ordnance Factory Board by OFK and decision of OFB to grant extension of delivery period, resulted in avoidable import of propellant valuing ₹ 2.17 crore. The import was also costlier by ₹ 39.79 lakh, when compared to the cost of production in Ordnance Factory Bhandara (OFBa).

Ordnance Factory Khamaria (OFK) required a propellant powder (propellant) to assemble 40mm Pre-fragmented full charge (PFFC) ammunition (ammunition). OFK received a target from Ordnance Factory Board (OFB) in November 2005 for manufacture of 50,000 ammunition during 2006-07, which was subsequently reduced to 25,000 in December 2006 in view of shortage of propellant.

In order to assemble the ammunition, OFK placed two inter factory demands on OF Bhandara in July 2005 and February 2006 for 23,756 Kg propellant. The propellant was under development at OF Bhandara since March 2003. OFB felt that indigenous development and manufacture of propellant at OF Bhandara would take some more time and therefore authorized the factory (October 2006) to import propellant equivalent to 25,000 ammunition for the year 2006-07.

In November 2006, OFK obtained a quotation from M/s Simmel Difesa, Italy and requested OFB to sanction import of 13,140 Kg propellant, on the ground that it did not have the requisite stock of propellant to manufacture ammunition for the year 2006-07. Audit, however, observed that the required quantity of 12,693 Kg propellant was available, as per their bin card. OFK incorrectly informed OFB that the available propellant had been utilized for production of ammunition for the year 2005-06 even though they drew the propellant only between January 2007 and March 2007.

Based on input of OFK, OFB in January 2007 authorized the former to place order on M/s Simmel Difesa for the import. OFK placed the order in January 2007 with the condition to complete the entire supplies by February 2007.

In February 2007, after receipt of the import order, the firm offered to supply only 5,000 Kg of the propellant immediately and the balance by June 2007. OFK thereupon informed OFB that OF Bhandara had supplied 6,000 Kg and an additional 3,000 Kg were under proof. OFK sought decision of OFB for allowing the supplying firm for completion of supply by June 2007 and to use the supplies that are received after April 2007 to meet the production requirement of 2007-08. OFB authorized OFK in April 2007 to re-fix the delivery period up to 31 August 2007, without liquidated damages, for full quantity of 13,140 Kg.

OFK received 13,140 Kg propellant valuing ₹ 2.17 crore (₹ 1,652.32 per Kg) from the supplier only in December 2007. OFK however could assemble 22,000 ammunition during 2006-07 with the propellant available ex- stock and 6,000 Kg propellant received from OF Bhandara between November 2006 and

February 2007, which was more than sufficient to meet the target of 25,000 ammunition for 2006-07. With the receipt and acceptance of additional 18,000 Kg propellant ex-OF Bhandara and 13,140 Kg propellant ex-import, OFK manufactured 3,184 and 25,500 ammunition during 2007-08 and 2008-09, i.e. to the extent of Fuze availability, and was holding 9,468 Kg propellant in stock as of October 2009.

Provision of incorrect information to the OFB by OFK about the stock balance of propellant in the first instance and the decision of OFB to allow the extension of delivery date to the supplier resulted in avoidable import of propellant valuing ₹ 2.17 crore. This also led to an extra expenditure of ₹ 39.79 lakh, since the cost of production of the propellant in OF Bhandara was cheaper when compared with the cost of import.

Ministry of Defence (MOD) stated in March 2010 that the import of propellant was justified considering the target of 50,000 ammunition for 2006-07 and the available stock of 12,693 Kg propellant was sufficient for 24,000 ammunition. MOD added that the supply from OF Bhandara was not regular and bulk production clearance had been given only in July 2008. Further, in November 2010 the OFB stated that there had been no reduction of target to 25,000 and OFK was able to achieve 22,000, i.e. to the extent of availability of other components.

The contention of the OFB and MOD does not address the issue as to why they had overlooked the fact that the indigenous source of supply from OF Bhandara had been established and the import initiated with the specific objective of meeting production schedule of 2006-07 would not have been accomplished if the revised delivery schedule sought by the foreign supplier is acceded to. General Manager OFK had informed the Member/A&E of OFB in February 2007, i.e., before the grant of extension of delivery schedule, that the existing stock was sufficient to meet the revised production schedule of 25,000 ammunition in 2006-07 and that OF Bhandara had supplied the indigenously developed propellant. The Member, however, had recorded that the revised delivery schedule offered by the foreign supplier be accepted as the imported propellant can be effectively used for production during 2007-08. The statement made by OFB in November 2010 amplifies that there were other limiting factors such as non-availability of other components that hindered the production of the ammunition. Thus, despite the availability of imported and indigenous propellants, OFK could manufacture only 3,184 ammunition during 2007-08 to the extent of availability of Fuze. OFB should have considered all such factors before re-fixing the delivery date of the propellant ordered for import. An objective and thorough assessment of the requirements vis-à-vis availability could have avoided the import of the propellant for ₹ 2.17 crore and consequential extra expenditure of ₹ 39.79 lakh. The matter may merit inquiry to fix responsibility for the lapse.

Miscellaneous

8.6 Non-recovery of cost of rejected turret castings

Heavy Vehicles Factory Avadi failed to recover the cost of four rejected turret castings from two Public Sector Undertakings, despite observing the defects within the warranty period. After being pointed out in Audit, HVF recovered ₹ 37.43 lakh towards cost of two rejected turret castings from one of the PSUs while the cost of remaining two rejected castings valuing ₹ 36.40 lakh was yet to be recovered from another PSU.

Heavy Vehicle Factory Avadi (HVF) placed supply orders in August 1998 on M/s Bharat Heavy Electricals Limited, Haridwar (BHEL) and M/s Heavy Engineering Corporation Limited Ranchi (HEC) for procurement of 150 and 65 turret castings respectively – a raw material for manufacture of turrets of T-72 tanks. Against these orders, HVF received 143 and 59 turret castings from M/s BHEL and M/s HEC between January 1999 and July 2001. HVF however short-closed its order of August 1998 placed on M/s BHEL and M/s HEC at the supplied quantity of 143 and 59 turret castings respectively, in October 2004. The short-closure of its two orders of August 1998 was due to the Army reducing (May 2004) its order for T-72 tanks from 1380 to 1300.

It was seen in audit that of the 202 of turret castings supplied by the Public Sector Undertakings (PSUs), HVF had rejected 14 turret castings (Eight turret castings of M/s HEC and six turret castings of M/s BHEL) due to crack in well bore area, bottom plate and core shifting. Of these rejected turret castings, HVF returned two rejected turret castings to M/s BHEL after recovery of the payment and was holding 12 rejected turret castings in their stock as of November 2010.

Even though HVF had recovered the cost of 10 of the 14 rejected turret castings – four from M/s BHEL and six from M/s HEC, amounting to ₹ 2.18 crore, the cost of remaining four rejected turret castings (two each from M/s BHEL and M/s HEC) was not recovered.

Failure of HVF to recover the cost of the four rejected turret castings valuing ₹ 73.83 lakh despite the defects having been noticed in 2001 and 2002 were pointed out by Audit in March 2006 and March 2010. Thereupon, HVF recovered ₹ 37.43 lakh from M/s BHEL in March 2010. OFB confirmed in November 2010 that cost of two rejected turret castings was yet to be recovered from M/s HEC.

Thus, at the instance of Audit, HVF could recover the cost of two rejected castings valuing ₹ 37.43 lakh from M/s BHEL in March 2010 while recovery of the cost of remaining two turrets castings valuing ₹ 36.40 lakh from M/s

HEC was still awaited (November 2010). The delay of nearly a decade to recover the cost of rejected items supplied by the PSUs is symptomatic of the poor follow up of post-contract events by the HVF.

The matter was referred to the Ministry of Defence in August 2010; their reply was awaited as of July 2011.

(C.M.SANE)

New Delhi **Principal Director of Audit**

Dated: 2011 **Defence Services**

Countersigned

New Delhi **(VINOD RAI)**

Dated: 2011 **Comptroller and Auditor General of India**

ANNEXURE-IA

(Referred to in Paragraph 1.8)

Position of outstanding ATNs

Ministry of Defence - excluding Ordnance Factory Board

(i) Pending for more than ten years

Sl.No.	Report No. and Year	Para No.	Subject
1.	Audit Report, Union Government (Defence Services) for the year 1985-86	34*	Loss due to delay in pointing out short/ defective supply.
2.	No.2 of 1988	9**	Purchase of Combat dress from trade.
3.	No. 2 of 1989	11**	Purchase and licence production of 155mm towed gun system and ammunition
4.	No.12 of 1990	9**	Contract with Bofors for (a) purchase and licence production of 155mm gun system and (b) Counter Trade
5.		10*	Induction and de-induction of a gun system.
6.		19*	Import of ammunition of old vintage.
7.		46**	Ration article-Dal.
8.	No.8 of 1991	10*	Procurement of stores in excess of requirement.
9.		13*	Central Ordnance Depot, Agra.
10.		17**	Infructuous expenditure on procurement of dal chana.
11.	No.8 of 1992	20**	Procurement of sub-standard goods in an Ordnance Depot.
12.		28**	Avoidable payment of maintenance charges for Defence tracks not in use.
13.	No. 8 of 1993	15**	Non-utilisation of assets.
14.		22**	Over-provisioning of corrugated card board boxes
15.		29*	Import of mountaineering equipment and sports items

Sl.No.	Report No. and Year	Para No.	Subject
16.		31*	Avoidable payment of detention charges
17.	No. 7 of 1997	15*	Over provisioning of seats and cushions for vehicles
18.		18**	Management of Defence Land
19.		23**	Avoidable expenditure on Demurrage charges
20.		27**	Non-realisation of claims from the Railways.
21.		69**	Defective construction of blast pens and taxi track
22.	No. 7 of 1998	30**	Avoidable payment of container detention charges
23.		32*	Infructuous expenditure on procurement of substandard cylinders
24.		36**	Procurement of batteries at higher rates
25.	No. 7 of 2000	52***	Repowering of Vijayanta Tank
26.	No. 7 of 2001	15**	Procurement of an incomplete equipment
27.		19**	Infructuous expenditure on procurement of entertainment films
28.		27**	Undue benefit to a private society
29.		32***	Wrongful credit of sale proceeds of usufructs to regimental fund
30.	No.7A of 2001	@Entire Report (ATN for 8 out of 42 paras yet to be received even for the 1st time.	Review of Procurement for OP VIJAY(Army)
(ii)	**Pending more than 5 years upto 10 years**		
31.	**No. 6 of 2003**	2**	Exploitation of Defence lands
32.		11**	Recoveries effected at the instance of Audit
33.		14***	Irregular recruitment of personnel
34.	No. 6 of 2004	3.2*	Recoveries/Savings at the instance of Audit.

Sl.No.	Report No. and Year	Para No.	Subject
35.	No. 6 of 2005	3.2*	Recoveries/savings at the instance of Audit
36	No.18 of 2005 (Performance Audit)	Standalone Report**	Performance Audit of the Directorate General of Quality Assurance
(iii)	**Pending more than 3 years upto 5 years**		
37.	Report No. 4 of 2007	2.1@@	Delay in execution/renewal of lease
38.		2.4**	Follow up on Audit Reports
39.		3.3**	Unauthorised use of Defence assets and public fund for running educational institutes
40.		3.5*	Recoveries/savings at the instance of Audit
41.		6.2**	Irregular payment of counter insurgency allowance
42.	No. 4 of 2007 (Performance Audit)	Chapter II**	Recruitment and Training of Personnel Below Officers Rank in the Army
43.		Chapter III*	Management of Transport in the Army
(iv)	**Pending upto 3 years**		
44.	Report No. CA 4 of 2008	2.8***	Follow up on Audit Reports
45.		3.2**	Avoidable extra expenditure in procurement of blankets
46.		3.3**	Recovery and savings at the instance of Audit
47.		3.4*	Avoidable loss due to acceptance of defective ammunition
48.	Report No. PA 4 of 2008 (Performance Audit)	Chapter I*	Supply Chain Management of General Stores and Clothing in the Army
49.	Report No. CA 17 of 2008-09	2.7***	Non-renewal of lease of land occupied by Army Golf Club
50.		3.4***	Unauthorized use of A-1 Defence land by Army Welfare Education Society
51.		3.5***	Utilisation of Government assets for non-governmental purposes
52.		3.6*	Misuse of special financial powers by Army Commanders
53.		3.7*	Irregular sanction of works out of operational funds
54.		3.10***	Recoveries and savings at the instance of Audit

Sl.No.	Report No. and Year	Para No.	Subject
55.		4.1*	Irregular diversion of savings of a project for execution of new works
56.	Report No. 12 of 2010-11	2.1***	Defective import of SMERCH Multi Barrel Rocket Launcher System
57.		2.2***	Procurement of low capability missiles
58.		2.5**	Procurement of Defective Oxygen Mask
59.		3.1**	Non-inclusion of Pre-Despatch Inspection
60.		3.2***	Irregular procurement of Punched Tape Concertina Coil
61.		3.3**	Irregular procurement of short life drug
62.		3.6***	Recoveries and savings at the instance of Audit
63.		3.7*	Irregularities in procurement of slit lamps
64.		3.8***	Extra expenditure due to unrealistic evaluation of rates
65.		3.9***	Non-identification of imported stores
66.		4.1***	Irregular sanction and construction of accommodation for a Golf Club
67.		4.3***	Additional expenditure on execution of a work due to indecision by the users
68.		5.1***	Hasty procurement of segregators
69.		5.2***	Misappropriation of Government stores
70.		5.3***	Additional cost due to delay in opening of commercial bids
71.		6.1**	Injudicious creation of assets
72.		6.2*	Loss due to damage to imported equipment

Sl.No.	Report No. and Year	Para No.	Subject
73.		6.3*	Avoidable expenditure due to poor planning of a work service
74.	Report No. 6 of 2010-11 (Performance Audit)	Standalone Report***	Supply Chain Management of Rations in Indian Army
75.	Report No. 14 of 2010-11 (Performance Audit)	Standalone Report***	Canteen Stores Department
76.	Report No. 35 of 2010-11 (Performance Audit	Standalone Report***	Defence Estates Management

* **Action Taken Notes examined by Audit but yet to be finalised by the Ministry in the light of Audit remarks – 21**

** **ATN vetted by Audit but copy of the finalised ATN awaited from Ministry – 31**

*** **Action Taken Notes not received even for the first time - 22**

@ **Part ATN received – 01**

@@ **Observation on final ATR -01**

ANNEXURE-IB

(Referred to in paragraph No 1.8)

Ministry of Defence - Ordnance Factory Board

Action Taken Notes which have not been received even for the first time

Sl. No.	Report No. & Year	Para No.	Subject
1.	No 12 of 2010-11 (Compliance Audit)	7.2	Injudicious sanction of Ordnance Factory Korwa Project
2.		7.4	Undue benefit to a firm in procurement of oleum.
3.		7.7	Extra expenditure in the purchase of sponge iron.

ANNEXURE-IC

(Referred to in paragraph No 1.8)

Ministry of Defence - Ordnance Factory Board

Action Taken Notes on which Audit has given comments/observations but revised ATNs were awaited from the Ministry/Department

Sl No.	Report No. & Year	Para No.	Subject	Remarks (Date of Return)
1	6 of 2004	7.11	Non recovery of inspection charges	13 June 2005
2		7.3	Functioning of CNC machines in ordnance factories	20 November 2009
3	No CA 4 of 2008	6.3	Abnormal delay in execution of Ordnance Factory Project Nalanda	17 June 2010
4	No CA 17 of 2008-09	7.8	Suspected fraud in reimbursement of Customs duty to a supplier	20 May 2011
5	No 12 of 2010-11	7.3	Extra expenditure in procurement of oleum	11 February 2011
6		7.10	Suspected fraud in reimbursement of Customs duty to a supplier	20 May 2011

ANNEXURE-II

Referred to in Paragraph 2.1)

Chronology of events

(i) For acquisition of 155mm Towed Artillery Gun

Date	Event
24 March 1986	Ministry concluded a contract with M/s Bofors for acquisition of Bofors guns. Contract includes licence production of guns valid up to March 2001.
1989	Ban was imposed on M/s Bofors.
April 1997	To meet urgent operational requirement of new gun for artillery, a GSQR for 155 mm Towed mounted gun was formulated indicating 45 Calibre barrel as 'Vital' parameter and 52 calibre as 'desirable'.
May 1997	Chief of Army Staff clarified that future policy for towed gun would be 155 mm x 52 Calibre length.
26 June 1999	Ban on M/s Bofors was lifted permitting transactions with the successor firm M/s Celsius, Sweden, honoring the commitment of Bofors.
24 September 1999	M/s Bofors proposed a prototype of 45 calibre gun in an advance stage of development mounted on a Volvo truck.
04 October 1999	Chief of Army Staff (COAS) approved the proposal of M/s Celsius on the arguments of saving of TOT cost, facilitate easy absorption of technology and ease of operation and logistic support.
March 2000	Ministry with the approval of Raksha Mantri asked AHQ to define its need in terms of towed/truck mounted gun and if necessary, of 45 and 52 Calibre or both.
July 2000	AHQ submitted a draft RFP to nine vendors for evaluating 155 mm 45/52 calibre towed gun in Indian conditions against GSQR.
April 2001 to July 2001	Detailed deliberation and exhaustive analysis carried out at AHQ level and opinion of AHQ was crystallized only in favour of 155 mm 52 calibre length towed gun.
21 August 2001	DCOAS (P&S) approved the amendment to GSQR providing parameters for 155 mm x 52 calibre gun.
27 December 2001	RFP based on amended GSQR issued to nine vendors and only three firms of foreign origin viz. M/s SWS Sweden, M/s Denel Land System, South Africa and M/s Soltam System, Israel submitted technical and commercial offers.
10 October 2002	CCS granted approval for procurement of quantity 'X' of 155mm x52 calibre towed gun.
May 2002 to January 2007	Trials were carried out in four phases as under a) Users trial - June 2002 to July 2002 b) Users trial - June 2003 to July 2003 c) Validation firing - November 2004 to December 2004 d) Re-validation trials - May 2006 to January 2007
03 April 2007	After trial evaluation, Directorate General of Artillery observed that guns did not meet certain technical parameters and none of the guns evaluated stood introduced in their own countries or in any

	Army. User Directorate also observed that at the time of the RFP issued in 2001, 155 mm x 52 calibre gun was a developing gun system and as such none of the guns were recommended for induction into service.
27 September 2007	GSQR formulated in August 2001 was revised wherein minimum range reduced from 35 Km to 30 Km.
October 2007	Ministry foreclosed the case for procurement of gun.
13 December 2007	Defence Acquisition Council (DAC) approved a fresh case of procurement categorizing the acquisition as 'Buy and Make'
26 March 2008	RFP was issued to nine vendors.
15 September 2008	Four firms submitted their technical and commercial bids and out of four only two vendors viz. M/s Singapore Technology and M/s BAE System have qualified.
26 July 2010	RFP was retracted.
19 October 2010	Draft RFP was under vetting at service HQ.

(ii) For acquisition of Self Propelled Gun (Tracked)

Date	Event
11 March 1994	GSQR No. 612 for SP Gun was formulated keeping in mind MSTA SP Gun (152 mm) ex-Russia.
27 July 1994	A global RFP was issued to 12 vendors for a hybrid SP gun by mating gun turrets ex-import with indigenous T-72 M1 chassis.
1 December 1994	Proposals were received from five vendors viz. M/s VSEL, UK, M/s GIAT, France. M/s Denel – South Africa, M/s Keranetal, Slovakia and M/s HSW, Poland.
1995	TEC found the technical offer received from the Polish firm unsuitable.
April – July 1995	Trials of remaining four gun system were carried out and the T-72 chassis for mounting the turrets failed with all the gun system.
31 January 1996	Offers of all four manufacturers were rejected after trials.
May 1997	Chief of Army Staff decided that the AS-90 turret offered by VSEL, UK and T-6 by LIW, South Africa having lesser shortcomings be mated with the Arjun chassis for conducting fresh trials.
30 March 1998	GSQR No. 621 formulated in March 1994 was revised taking into account the number of developments in technology and fire control system of SP gun
June-August 1998	M/s Denel Produced their equipment for trials. M/s VSEL did not offer their equipment for trials instead offering their fully integrated system for trial which was not as per the QRs.
July-September 1999	Confirmatory trials were held for T-6 turret of M/s Denel.
September 2000	Army HQ recommended induction of BHIM T-6 tracked gun into service based on GSQR.
October 2000	Department of Defence Production and Supplies nominated OFB as nodal production agency.
March 2002	Decision for nomination of OFB as nodal production agency was reviewed and after approval of Raksha Mantri, BEML was nominated as nodal production agency for acquisition of 155 mm SP tracked gun by mating T-6 South African turret with indigenous MBT Arjun chassis.
07 June 2002	Tender enquiry was floated by Ministry.
19 June 2002	BEML sought extension of time for submission of tender up to 31.7.2002 as they were offering the SP gun for the first time.

07 June 2002	RFP were issued to M/s Denel and M/s BEML.
21 June 2002	CCS accorded approval for acquisition of quantity 'X' of 155 mm SP gun tracked version.
8 July 2002	PNC was constituted with the approval of SS(A).
September 2002 to December 2003	PNC held negotiation with M/s BEML and M/s Denel.
16 December 2004	Ministry decided to progress the case for CCS approval.
June 2005	Ban was imposed on M/s Denel due to their alleged involvement in making payments to certain agencies as commission relating to another procurement.
August 2005 to November 2005	Ministry considered other options but not finally approved.
June 2006	DAC approved an integrated SP gun system tracked as 'Buy' with stipulation that integrated gun system be trial evaluated and selected turret after trials be mated on Arjun chassis as a hybrid system.
May 2007	RFP issued to 29 vendors.
20 July 2007	Pre-bid meeting was attended by four vendors.
19 September 2007	Only one vendor submitted Techno-commercial offer. RFP was retracted due to single vendor situation.
February 2008	DAC concurred for buying an integrated SP gun system instead of hybrid system.
29 August 2008	RFP was issued to eleven vendors for inviting Techno-Commercial offers.
04 March 2009	Technical and commercial bids were received from one vendor i.e. M/s Rheinmetal Defence, hence RFP withdrawn on 21.4.2009.
October 2010	Fresh RFP was under process.

(iii) For procurement of SP Gun (Wheeled)

Date	Event
1998	Wheeled SP Guns emerged as a new concept. While the Army was pursuing the trial evaluation of hybrid Tracked SP gun, advancements in wheeled vehicle technology had made the wheeled SP gun a viable option.
June – September 1999	G 6 – T6 wheeled SP gun, offered by M/s Denel was trial evaluated in India.
January 2001	It was decided to de-link the procurement cases for the tracked and wheeled gun so that for wheeled gun, RFP could be issued to all known vendors.
November 2001	GSQR 621 (amended) was further amended to change calibre length from '45/52 calibre' to '52 calibre'.
31 January 2002	RFP was issued to 11 vendors.
13 March 2002	Technical offers submitted by five vendors were opened.
15 April 2002	As per TEC report, out of five Technical offers, only the offer of M/s Denel, South Africa was found to satisfy the GSQR.
14 June 2002	CCS approved procurement of qty 'X' of 155 mm SP wheeled gun.
December 2003	PNC concluded the negotiations.
16 December 2004	Due to infirmity in the procedure such as no adequate time had been given to vendors to develop and field the required configuration of guns, it was decided to issue fresh RFP to identify other possible contenders in the world market.
June 2005	In between ban was imposed on M/s Denel.
July 2005	The procurement process was closed by Ministry.

19 June 2006	DAC approved for procurement of 155mm x52 calibre SP gun (Wheeled) categorized as 'Buy with global RFP'
15 February 2007	RFP issued to 29 vendors.
01 August 2007	Technical offers were opened and only one vendor submitted technical offer. Due to single vendor situation. RFP was retracted.
08 October 2007	To identify more vendors RFI was issued to 10 vendors.
04 February 2008	RFP issued to five vendors.
October 2010	Trials of guns offered by two firms viz M/s Konstruka Defence, Slovakia Republic and M/s Rheinmetall was in progress.

ANNEXURE-III

(Referred to in Paragraph 2.3)

Statement showing lot wise position of rates achieved in commercial bids: -

Sl. No.	Name of the Firm	Date of acceptance of contract	Total price quoted	Remarks	Difference of rates in percentage between L1 and L2
Lot-1					
1.	Infinite Computer Ltd.	20 June 2005	₹ 63 Lakh	**L1**	**486**
2.	CMC Limited		₹ 3.79 crore	L2	
3.	L & T Infotech Ltd.		₹ 4.12 crore	L3	
4.	Tata consultancy Ltd.		₹ 4.70 crore	L4	
5.	IBILT Technology Ltd.		₹ 5.47 crore	L5	
6	3i Infotech Ltd.		₹ 11.40 crore	**L6**	
Lot-2					
1	Infinite Computer Solutions	27 June 2005	₹ 46.44 lakh	**L1**	**387**
2.	L&T Infotech Ltd.		₹ 2.24 crore	L2	
3.	TCS Ltd.		₹ 3.43 crore	L3	
4.	iBilt Technologies		₹ 3.87 crore	L4	
5.	Birlasoft Ltd.		₹ 4.01 crore	L4	
6.	CMC Ltd.		₹ 4.59 crore	L5	
7.	3i Infotech Ltd.		₹ 5.25 crore	L6	
8.	Covansys India (P) Ltd.		₹ 28.69 crore	L7	
Lot-3					
1.	Infinite Computer Solutions	27 June 2005	₹ 1.18 crore	L1	303
2.	L & T Infotech Ltd.		₹ 4.76 crore	L2	
3.	3i Infotech Ltd.		₹ 6.89 crore	L3	
4.	CMC Limited		₹ 9.95 crore	L4	
5.	Birlasoft Ltd.		₹ 13.61 crore	L5	
Lot-4					
1	A F Fergusson & Co.	07 February 2006	₹ 1.86 crore	**L1**	**--**
2.	iBilt Ltd.		₹ 2.23 crore	L2	
3.	Birlasoft Ltd.		₹ 2.98 crore	L3	
4.	Infinite Computer Solutions		₹ 4.13 crore	L4	
Lot-5					
1.	Infinite Computer Solutions	27 December 2005	₹ 1.68 crore	L1	--
2.	A.F.Ferguson & Co.		₹ 1.80 crore	L2	
3.	Birlasoft Limited		₹ 2.14crore	L3	
Lot-6					
1.	IBILT Technology Ltd.	30 March 2007	₹ 3.54 crore	L1	38
2.	A.F.Ferguson & Co.		₹ 4.87 crore	L2	
3.	Infinite Computer		₹ 10.47 crore	L3	

	Solutions				
Lot-7					
1.	IBILT Technology Ltd.	30 March 2007	₹ 2.80 crore	L1	129
2.	A.F.Ferguson & Co.		₹ 6.41 crore	L2	
3.	Infinite Computer Solutions		₹ 8.20 crore	L3	
4.	Wipro Infotech Ltd.		₹ 10.29 crore	L4	
Lot-8					
1.	IBILT Technology Ltd.	30 March 2007	₹ 1.52 crore	L1	71
2.	Birlasoft Ltd.		₹ 2.60 crore	L2	
3.	A.F.Ferguson & Co.		₹ 3.31 crore	L3	
4.	Infinite Computer Solutions		₹ 5.16 crore	L4	
5.	Wipro Infotech Ltd.		₹ 7.90 crore	L5	

ANNEXURE- IVA

(Referred to in Paragraph 3.11)

Sl. No.	Convoy Note No. & Date	CHT No.	CHT Capacity in Ton as indicated in Budget Register	Weight of stores in Kg	Destination	Distance in Kms	Transit period one way (in days)	Amount (Paid) ₹	Date of receipt of stores at consignee end	Vehicle No. through which stores received at consignee end
1.	156 dated 03.07.06	RJ-13GA-0029	3	3000	Udhampur	2060	8	21445	10.7.06	RJ-13-GA-0029
2.	167 dated 06.07.06	RJ-13GA-0029	3	3000	Batinda	1830	6	14439	12.7.06	RJ-13-GA-0029
3.	370 dated 23.11.06	HR-61-3921	9	6643	Ambala	1646	6	21135	29.11.06	HR-61-3921
4.	375 dated 27.11.06	HR-61-3921	5	5000	Jodhpur	1261	4	12673	-	-
5.	424 dated 26.12.06	HR-61-3921	3	2998	Shakurbasti	1429	5	11275	-	HR-61-3921
6.	429 dated 29.12.06	HR-61-3921	3	2995	Shakurbasti	1429	5	11275	-	HR-61-3921
7.	385 dated 1.12.06	HR-38-4906	9	7298	Guwahati	2868	10	48756	-	HR-38-4906
8.	394 dated 05.12.06	HR-38-4906	9	8999	Guawahati	2868	10	48756	-	HR-38-4906
9.	532 dated 10.03.07	MH-14-6449	5.6	3000	Bagdogra	2350	8	28905	-	MH-14-6449
10.	545 dt.20.03.07	MH-14-6449	3	2913	Bagdogra	2350	8	24464	-	MH-14-6449
11.	152 dt27.07.07	MH-14-6449	3	2234	Jalandhar	1800	6	15120	1.8.07	MH-14-6449
12.	154 dt27.07.07	HR-39-A5073	15	5699	Udhampur	2060	8	49234	2.8.07	HR-39-A-5073
13.	165 dt.02.08.07	HR-39 A-5073	5.6	3000	Jalandhar	1800	6	19800	6.8.07	HR-39A-5073
14.	324 dt.16.11.07	MH-14F-1949	3	3000	Meerut	1450	5	12180	20.11.07	MH-14F-1949
15.	390 dt.24.12.07	MH-12DG-1321	9	7243	Udhampur	2060	8	32960	-	-
16.	402 dt 01.01.08	MH-12DG-1321	5.6	4897	Jalandhar	1800	6	19800	-	MH-12DG-1321
17.	409 dt.04.01.08	MH-14-AS-2280	3	3000	Gauwahati	2868	10	31548	17.01.08	MH-14-AS-2280
18.	416 dt.08.01.08	MH-14-AS-2280	3	2963	Gauwahati	2868	10	31548	-	MP-09GE-2628
19.	490 dated 25.02.08	MH-12-4840	3	2371	Bagdogra	2350	8	25850	14.3.08	MH-12-4840
20.	508 dt.05.03.08	MH-12-4840	3	3000	Bagdogra	2350	8	25850	20.03.08	MP-09-HF-0585

21.	531 dt.15.03.08	MH-12-4840	3	3000	Bagdogra	2350	8	25850	-	-
22.	540 dt.24.03.08	HR-56-A-5892	20	3000	Udhampur	2060	8	49234		HR-56-A-5892
23.	542 dt.26.03.08	HR-56-A-5892	20	5428	Pathankot	1907	7	45577		HR-56-A-5892
24.	514 dt.7.03.08	MH-11T-4185	9	3000	Udhampur	2060	8	32960		-
25.	523 dt.13.03.08	MH-11T-4185	20	5534	Pathankot	1907	7	45577		-
26.	536 dt.17.03.08	MH-11T-4185	20	5534	Pathankot	1907	7	45577		-
27.	011 dated 10.04.08	MH-12DG-1321	20	5600	Pathankot	1907	7	45577	16.4.08	MH-12DG-1321
28.	67 dated 07.05.08	HR- 56B-5892	5.6	5600	Pathankot	1907	7	20977	12.5.08	HR- 56B-5892
29.	72 dated 12.5.08	HR- 56B-5892	3	3000	Pathankot	1907	7	16019	-	HR- 56B-5892
30.	285 dated 7.10.08	MH-14-4874	3	2966	Guwahati	2868	10	33842	16.10.08	MH-14-4874
31.	293 dated 10.10.08	MH-14-4874	3	3000	Guwahati	2868	10	33842	20.10.08	MH-14-4874
32.	305 dated 16.10.08	MH-14-4874	3	2800	Guwahati	2868	10	33842	25.10.08	MH-14-4874
33.	309 dated 18.10.08	MH-14-4874	3	3000	Guwahati	2868	10	33842	4.11.08	MH-14-4874
34.	311 dated 20.10.08	MH-14-4874	3	3000	Guwahati	2868	10	33842	4.11.08	MH-14-4874
35.	379 dated 13.01.09	HR-39-5892	15	3150	Jalandhar	1800	6	40176	20.1.09	HR-39-5892
36.	382 dated 15.01.09	HR-39-5892(39B)	15	4568	Jalandhar	1800	6	40176	20.1.09	HR-39-5892
37.	33 dated 29.04.09	HR-63-4571	5.6	5558	Guwahati	2868	10	41586	-	-
38.	38 dated 04.05.09	MH-12AR-8732	5.6	5629	Guwahati	2868	10	41586	16.5.09	MH-12AR-8732
39.	56 dated 13.05.09	MH-12AR-8732	5.6	4518	Guwahati	2868	10	41586	23.5.09	MH-12AR-8732
40.	77 dated 19.05.09	HR-39A-7220	9	6775	Pathankot	1907	7	31332	26.5.09	HR-39A-7220
41.	84 dated 20.05.09	HR-39A-7220	9	6751	Udhmpur	2060	8	35164	29.5.09	HR-39A-7220
42.	95 dated 26.05.09	MH 14V-3735	5.6	5174	Guwahati	2868	10	41586	4.6.09	MH 14V-3735
43.	109 dated 29.05.09	MH 14V-3735	5.6	5590	Guwahati	2868	10	41586	8.6.09	MH 14V-3735
44.	65 dated 15.05.09	MH-14 F-2331	3	2995	Guwahati	2868	10	32695	25.5.09	MH-14 F-2331
45.	87 dated 22.05.09	MH-14 F-2331	3	1604	Guwahati	2868	10	32695	1.6.09	MH-14 F-2331
46.	116 dated 06.06.09	HR-56B-5892	5.6	5592	Guwahati	2868	10	41586	16.6.09	HR-56B-5892
47.	118 dated 12.06.09	HR-56B-5892	9	9017	Udhampur	2060	8	35164	-	-
48.	122 dated 22.06.09	HR-56B-5892	9	9000	Udhampur	2060	8	35164	2.7.09	HR-56B-5892
	Total							**1535653**		

ANNEXURE-IVB

(Referred to in Paragraph 3.11)

Sl. No.	Convoy Note No. & Date	CHT No.	CHT Capacity in Ton as indicated in Budget Register	Weight of stores in Kg	Destination	Distance in Kms	Transit period one way (in days)	Amount (Paid) ₹	Date of receipt of stores at consignee end	Vehicle No. through which stores received at consignee end
1.	030 dated 02.05.06	MH-12 R-6201	3	3000	Jodhpur	1261	4	10176	4.5.06	RJ-191G-4751
2.	049 dated 08.05.06	MH-12 R-6201	3	3000	Jodhpur	1261	4	10176	10.5.06	RJ-191G-7853
3.	121 dated 12.07.07	MH-14-6449	3	3000	Bagdogra	2350	8	25850	25.7.07	WB-39-9220
4.	133dated 17.07.07	MH-14-6449	3	2999	Bagdogra	2350	8	25850	25.7.07	WB-39-9220
5.	498 dated 28.02.08	MH-14-6449	3	3000	Bagdogra	2350	8	25850	14.3.08	MH-12-4840
6.	505 dated 04.03.08	MH-14-6449	3	2900	Bagdogra	2350	8	25850	20.3.08	MP-09HF-0585
7.	524 dated 13.03.08	MH-14-6449	3	3000	Bagdogra	2350	8	25850	25.3.08	MP-09HF-0485
8.	527 dated 14.03.08	MH-14-6449	3	3000	Bagdogra	2350	8	25850	25.3.08	MP-09HF-0485
9.	535 dated 17.03.08	MH-14-6449	3	3000	Bagdogra	2350	8	25850	26.3.08	NL-06A-2418
10.	316 dated 10.11.07	MH-14F-1949	3	3000	Bagdogra	2350	8	25850	6.12.07	WB-73B-0611
11.	330 dated 19.11.07	MH-14F-1949	3	2649	Ambala	1646	6	13826	24.11.07	HR-56B-5892
12.	351 dated 29.11.07	MH-14F-1949	3	3000	Bagdogra	2350	8	25850	12.12.07	WB-73-0586
13.	495 dated 27.02.08	MH-14F-1949	3	3000	Bagdogra	2350	8	25850	14.3.08	MH-12-4840
14.	512 dated 06.03.08	MH-14F-1949	3	3000	Bagdogra	2350	8	25850	20.3.08	MP-09HF-0585
15.	399 dated 29.12.07	MH-14-AS-2280	3	3000	Guwahati	2868	10	31548	14.1.08	AS-11C-3154
16.	405 dated 02.01.08	MH-14-AS-2280	3	3000	Guwahati	2868	10	31548	17.1.08	MP-09HF-1201
17.	010 dated 07.04.08	MH-12DG-1321	20	5466	Bhatinda	1830	6	43737	12.4.08	HR-39A-6663
18.	114 dated 03.06.08	MH-14-4874	5.6	5066	Guwahati	2868	10	38718	27.6.08	HR-56 Vehicle (No. not clear)
19.	082 dated 22.05.08	MH-14-AS-9170	9	9008	Kolkata	2102	7	26801	31.5.08	WB-41B-7031
20.	102 dated 27.05.08	MH-14-AS-9170	9	8244	Kolkata	2102	7	26801	3.6.08	WB-23A-7951
21.	115 dated 04.06.08	MH-14-AS-9170	9	7694	Kolkata	2102	7	26801	11.6.08	WB-22B-4999
22.	5 dated 16.04.09	HR-56B-5892	5.6	5511	Udhampur	2060	8	29870	24.4.09	HR-39A-9891

23.	1 dated 15.04.09	HR-63-4571	5.6	4565	Udhampur	2060	8	29870	21.4.09	HR-39A-5892
24.	15 dated 20.04.09	HR-63-4571	9	5277	Udhampur	2060	8	35164	4.5.09	HR-39A-5891
25.	67 dated 15.05.09	HR-39A-7220	9	4350	Pathankot	1907	7	31332	22.5.09	HR-56A-5892
26.	83 dated 21.05.09	MH 14V-3735	5.6	5290	Guwahati	2868	10	41586	30.5.09	MP-09HF-5020
	Total							**712304**		

ANNEXURE-IVC

(Referred to in Paragraph 3.11)

Sr. No.	Name of Depot	SO No Date	CHT No.	Convoy note No. & Date	Destination	Km No. of days required as per contract	Hiring charges paid
1-A	COD Dehu Road	20 dated 3.5.06	RJ-14-GA 2688	42 dated 4.5.06	Jalandhar	1800 KMs 6 days	14526/-
1-B	CAFVD	22 dated 6.5.06	RJ-14-GA 2688	30 dated 8.5.06	Patiala	1600 KMs 6 days	12912/-
2-A	COD Deha Road	32 dated 9.5.06	HR-46C- 2249	54 dated 10.5.06	Hissar	1500 KMs 6 days	12831/-
2-B	CAFVD	32 dated 11.5.06	HR-46C- 2249	43 dated 12.5.06	New Delhi	1429 KMs 5 days	14361/-
3-A	COD Dehu Road	134 dated 1.7.06	RJ-13-GA 0029	156 dated 3.7.06	Udhampur	2060 KMs 8 days	21445/-
3-B	CAFVD	84 dated 6.7.06	RJ-13-GA 0029	97 dated 7.7.06	Bhatinda	1830 KMs 6 days	14438/-
3-C	COD Dehu Road	145 dated 5.7.06	RJ-13-GA 0029	167 dated 6.7.06	Bhatinda	1830KMs 6 days	14438/-
4-A	COD Dehu Road	149 dated 6.7.06	HR-37A- 7932	171 dated 7.7.06	PTK	1907 KMs 7 days	19165/-
4-B	CAFVD	88 dated 11.7.06	HR-37A- 7932	101 dated 12.7.06	Jalandhar	1830 KMs 6 days	14202/-
5-A	CAFVD	90 dated 12.7.06	HR-39A-5073	103 dated 13.7.06	Jodhpur	1261 KMs 4 days	9941/-
5-B	COD Dehu Road	167 dated 15.7.06	HR-39A-5073	189 dated 17.7.06	Jodhpur	1261 KMs 4 days	12673/-
6-A	COD Dehu Road	313 dated 28.10.06	PB-10-AR-7219	336 dated 30.10.06	Jalandhar	1800 KMs 6 days	14202/-
6-B	CAFVD	141 dated 30.10.06	PB-10-AR-7219	151 dated 31.10.06	PTK	1907 KMs 7 days	15046/-
7-A	COD Dehu Road	339 dated 16.11.06	HR-56A- 1246	363 dated 17.11.06	PTK	1907 KMs 7 days	44052/-

7-B	CAFVD	150 dated 17.11.06	HR-56A- 1246	160 dated 17.11.06	PTK	1907 KMs 7 days	19165/-
8-A	COD Dehu Road	346 dated 21.11.06	HR-61C-3921	370 dated 23.11.06	Ambala	1646 KMs 6 days	21135/-
8-B	CAFVD	152 dated 20.11.06	HR-61C-3921	162 dated 21.11.06	PTK	1907 KMs 7 days	19165/-
9-A	CAFVD	204 dated 20.2.07	HR-64-0599	215 dated 21.2.07	PTK	1907 KMs 7 days	15046/-
9-B	COD Dehu Road	494 dated 20.2.07	HR-64-0599	518 dated 22.2.07	Jodhpur	1261 KMs 4 days	9949/-
10-A	COD Dehu Road	140 dated 19.7.07	HR-56A-5892	140 dated 20.7.07	Bhatinda	1830 KMs 6 days	20130/-
10-B	CAFVD	35 dated 21.7.07	HR-56A-5892	35 dated 23.7.07	Suratgarh	1805 KMs 6 days	19855/-
11-A	COD Dehu Road	230 dated 12.9.07	HR-39C-9510	230 dated 14.9.07	Bhatinda	1830 KMs 6 days	20130/-
11-B	CAFVD	68 dated 14.9.07	HR-39C-9510	68 dated 14.9.07	Suratgarh	1805 KMs 6 days	15162/-
12-A	COD Dehu Road	241 dated 19.9.07	MH-14-AS-8315	241 dated 21.9.07	Allahabad	1465 KMs 5 days	18679/-
12-B	CAFVD	70 dated 14.9.07	MH-14-AS-8315	70 dated 17.9.07	Jalandhar	1800 KMs 6 days	22950/-
13-A	COD Dehu Road	240 dated 19.9.07	HR-39-A-5891	240 dated 21.9.07	Udhampur	2060 KMs 8 days	32960/-
13-B	CAFVD	72 dated 18.9.07	HR-39-A-5891	72 dated 19.9.07	Jalandhar	1800 KMs 6 days	15120/-
14-A	COD Dehu Road	402 dated 31.12.07	MH-12-DG-1321	402 dated 1.1.08	Jalandhar	1800 KMs 6 days	19800/-
14-B	CAFVD	138 dated 3.1.08	MH-12-DG-1321	138 dated 4.1.08	Jalandhar	1800 KMs 6 days	19800/-
15-A	CAFVD	172 dated 6.2.08	MH-12-DG-1321	172 dated 6.2.08	Jalandhar	1800 KMs 6 days	15120/-
15-B	COD Dehu Road	470 dated 11.2.08	MH-12-DG-1321	470 dated 12.2.08	PTK	1907 KMs 7 days	45577/-
15-C	CAFVD	178 dated 16.2.08	MH-12-DG-1321	178 dated 18.2.08	Roorkee	1594 KMs 6 days	17534/-

16-A	CAFVD	186 dated 23.02.08	HR-39-A-7197	186 dated 26.2.08	Hissar	1500 KMs 6 days	38001/-
16-B	COD Dehu Road	496 dated 26.2.08	HR-39-A-7197	496 dated 27.2.08	PTK	1907 KMs 7 days	45577/-
17-A	COD Dehu Road	492 dated 25.2.08	HR-56-4393	492 dated 26.2.08	Bhatinda	1830 KMs 6 days	43737/-
17-B	CAFVD	190 dated 27.2.08	HR-56-4393	190 dated 28.2.08	Delhi Cantt.	1429 KMs 5 days	34153/-
18-A	CAFVD	192 dated 29.2.08	MH-12-4840	192 dated 1.3.08	Allahabad	1465 KMs 5 days	12306/-
18-B	COD Dehu Road	508 dated 4.3.08	MH-12-4840	508 dated 5.3.08	Bagdogra	2350 KMs 8 days	25850/-
19-A	COD Dehu Road	540 dated 20.3.08	HR-56-A-5892	540 dated 24.3.08	Udhampur	2060 KMs 8 days	49234/-
19-B	CAFVD	213 dated 24.3.08	HR-56-A-5892	213 dated 25.3.08	Suranassi	1800 KMs 6 days	19800/-
19-C	COD Dehu Road	542 dated 25.3.08	HR-56-A-5892	542 dated 26.3.08	PTK	1907 KMs 7 days	45577/-
20-A	COD Dehu Road	36 dated 19.4.08	HR-56-B-5892	36 dated 21.4.08	PTK	1907 KMs 7 days	45577/-
20-B	CAFVD	3 dated 22.4.08	HR-56-B-5892	3 dated 23.4.08	Suratgarh	1805 KMs 6 days	19855/-
							981176/-
						Say ₹ 9.81 lakh	

ANNEXURE-V

(Referred to in Paragraph 3.14)

Recoveries at the instance of Audit

Sl. No.	Unit/Formation	Nature of overpayment/ non-recovery	Amount (₹ in lakh)
1	DEO Secunderabad	Recovery from Hyderabad Cricket Association and Sports Authority of AP towards premium and rentals	**365.95**
2	DEO, Ambala Circle, Ambala	Adjustment of excess amount of service charges paid to Cantonment Board Ambala Cantt.	**230.00**
3	PCDA (O) Pune	Irregular payment of Pay and Allowances i. Irregular payment of Qualification Grant (₹1.64 lakh) ii. Irregular payment of Field Allowance (₹ 4.94 lakh) iii. Irregular payment of Transport Allowance (₹ 8.31 lakh) iv. Recovery on account of encashment of leave (₹ 8.26 lakh) v. Recovery from VI Pay Commission Arrears in respect of Retired Army Officers (₹ 47.97 lakh) vi. Recovery of cost of Training (₹ 6.84 lakh) vii. Irregular Payment of Flying Allowances (₹ 1.20 lakh) viii. Recovery on account of other allowances (₹ 7.92 lakh)	**87.08**
4	(i) PAO (GREF) Pune (ii) PAO (EME) Secunderabad (iii) PAO (ORs) Arty Centre Nasik (iv) PAO (ORs) AOC Secunderabad	Excess VAT paid on furniture (₹ 1.88 lakh) Irregular payment of CMFA Allowance (₹5.31lakh) Irregular payment of transfer grants (₹5.17 lakh) Irregular payment of Field Allowance while in peace (₹ 17.89 lakh)	

	(v) Accounts Section CDA Bangalore	Under recovery of pay and allowances of Army personnel deputed to AGIF (₹ 3.03 lakh)	**33.28**
5	GE(P) Jabalpur/ GE Talbahet	Labour welfare cess from contractors	**68.87**
6	(i)GE(N) Ahmednagar (ii) GE Chennai	Recovery of electricity charges from paying consumers (₹ 45.03 lakh) Non-recovery of rent and allied charges from Palm Grove Girl's' hostel (₹ 5.81 lakh)	**50.84**
7	(i) Supply Depot Pune (ii) HEMRL Pune (iii) CSD HQ Mumbai (iv) HQ PSA Pune	Issue of dry ration to DIAT Pune (₹ 38.64 lakh) Deduction of training charges (₹ 1.35 lakh) Monitoring of Gift Schemes (₹ 3.56 lakh) Use of Government buildings for non-bonafide purposes (₹ 0.3 lakh)	**43.85**
8	DRDL Hyderabad	Recovery of LD for delayed supply of items	**14.50**
		Total	**894.37**

Say ₹ 8.94 crore

ANNEXURE-VI

(Referred to in paragraph No 3.14)

Savings at the instance of Audit

Sl. No.	Unit/ formation	Nature of irregularity	Remedial measure taken by auditee	Amount involved (₹ in lakh)
1	Headquarters Madhya Bharat Area	Irregular provision of accommodation for civil Gazetted Officers (CGO) at MCTE	Cancellation of sanction	**168.02**
2	Commander, HQ MP, C & A Sub Area	Provn of sewage system and External Water Sup for security post at COD Chheoki (₹ 10.19 lakh) Spl repair to Offrs md accn bldg No. P-64 (EKALVAYA NIVAS) of CMM Jabalpur (₹13.00 lakh) Spl repair to Offrs md accn bldg No. P-63 (EKALVAYA NIVAS) of CMM Jabalpur (₹13.00 lakh) Spl Repair to JCOs md accn bldg No. MM-37 (CHURCH Lines) at CMM Jabalpur (₹12.85 lakh) Spl Repair to JCOs md accn bldg No. MM-34 (CHURCH Lines) at CMM Jabalpur (₹13.50 lakh)	Cancellation of sanction	**62.54**
3	HQrs Andhra Sub Area	Construction of five additional rooms in MES IB Secunderabad	Cancellation of sanction	**36.00**
4	ACC&S Ahmednagar	Special repair to Water proofing Treatment for Roof Slab of Building in AC Depot during warranty period	Cancellation of sanction	**14.88**
5	NDA Khadakwasla	Special repairs to Offices of Dy. Comdt Sectt and Training Branch at Sudan Block at NDA.	Cancellation of sanction	**14.57**

6	(i) Adhoc Station HQrs, Joshimath (ii) Station HQrs Lansdowne (iii) Station HQrs. Kamptee	Irregular sanction of provision of Chain Link Fencing from Nilgiri Complex to Building MT Complex at HQ 9 (I) Mtn Bde Gp Camp at Joshimath (₹ 4.95 lakh) Irregular sanction of provision of deficient accommodation for Defence Civilian employees of GRRC at Lansdowne (₹ 5.00 lakh) Provision of Boundary Wall 8 feet height surrounding the washing point of dhobi ghat at APS Centre Kamptee. (₹1.98 lakh)	Cancellation of sanction	**11.93**
7	COD Dehu Road	Purchase of Crank Shaft Std.	Cancellation of supply order	**16.91**
8	(i) Station HQ Ranchi (ii) HQ 3 Corps	(i) Provision of solar Water Heater for OTM Accommodation and cook House (₹ 3.90 lakh) (ii)Provision of solar Heater at living accommodation of ORs of 4 Bihar (₹ 3.58 lakh) Irregular sanctioning of special repair works to Building No. P-1 and P-2 at Rangapahar Military Station (₹12.43 lakh)	Cancellation of Admin Approval De-released of Admin Approval	**19.91**
9	(i) Headquarters, Meerut Sub Area	(i) Non deduction of amount of schedule of credit in sanction for improvement of HT Feeder for CMVL & Vaidya Enclave Area at Meerut Cantt. (₹ 2.64 lakh) (ii)Non-deduction of amount of schedule of credit in sanction for improvement of HT Feeder for Mall road and Malhotra Enclave Area at Meerut Cantt (₹ 3.46 lakh)	Sanction amount reduced	

	(ii) CE(Fy) Hyderabad	Provision of contingency in Admin. Approval for deposit work given by MES to other organization (₹12.80 lakh)	Reduction Statement	**18.90**
10	CSDHQ Mumbai	Overvaluation of closing stock thereby inflating the profit (₹ 244.54 lakh) Under valuation of invoiced stores resulting in inflation of sales and profit (₹178.02 lakh) Incorrect valuation of closing stock CSD Kochi inflating the profit (₹4.76 lakh) Incorrect valuation of closing stock resulted in overstating the profit in Annual Account 2008-09 (₹ 3.61 lakh)	Annual Account 2008-09 amended to indicate true profit Annual Account 2008-09 amended to indicate true profit	**430.93**
			Total	**794.59**

Say ₹ 7.95 crore

ANNEXURE-VII

(Referred to in Paragraph 8.1.4)

Showing details of Overheads in relation to the cost of production in respect of various Ordnance Factories from 2005-06 to 2009-10. (Prepared based on the Summary of Cost of Outturn for the years 2005-06 to 2009-10)

(₹ in crore)

Division	Year	Fixed Overhead Charges	Variable Overhead Charges	Total Overhead Charges	Cost of Production	Percentage of Overhead to cost of production	Average percentage of overhead to cost of production
1	2	3	4	5	6	7	8
Materials and Component	2005-06	288.67	238.20	526.87	1148.08	45.89	
	2006-07	321.86	226.91	548.77	1191.23	46.07	
	2007-08	337.07	251.54	588.61	1417.35	41.53	
	2008-09	403.98	301.82	705.80	1656.29	42.61	
	2009-10	459.70	233.64	693.34	1490.60	46.51	44.52
Weapons, Vehicles and Equipment	2005-06	540.49	308.58	849.07	2588.77	32.80	
	2006-07	506.76	264.21	770.97	2027.79	38.02	
	2007-08	544.71	287.29	832.00	2512.26	33.12	
	2008-09	636.85	238.87	875.72	2350.08	37.26	
	2009-10	686.83	316.58	1003.41	2476.41	40.52	36.34
Ammunitions and Explosives	2005-06	376.95	210.29	587.24	2611.83	22.48	
	2006-07	396.81	181.58	578.39	2736.10	21.14	
	2007-08	415.16	216.80	631.96	3149.68	20.06	
	2008-09	547.70	393.89	941.59	3807.14	24.73	
	2009-10	763.02	282.17	1045.19	3924.14	26.63	23.01
Armoured Vehicles	2005-06	247.35	122.81	370.16	1830.41	20.22	
	2006-07	271.88	100.36	372.24	1422.57	26.17	
	2007-08	265.39	149.08	414.47	1682.75	24.63	
	2008-09	299.13	133.24	432.37	2137.34	20.23	
	2009-10	489.69	155.33	645.02	3257.75	19.80	22.21
Ordnance Equipment Factories	2005-06	118.11	61.84	179.95	632.50	28.45	
	2006-07	117.21	54.31	171.52	579.84	29.58	
	2007-08	122.79	53.54	176.33	550.57	32.03	
	2008-09	162.31	62.32	224.63	659.55	34.06	
	2009-10	165.95	60.69	226.64	669.00	33.88	31.60
Grand Total Ordnance Factories as a whole	2005-06	1571.57	941.72	2513.29	8811.59	28.52	
	2006-07	1614.52	827.38	2441.90	7957.53	30.69	
	2007-08	1685.12	958.25	2643.37	9312.61	28.38	
	2008-09	2049.97	1130.14	3180.11	10610.40	29.97	
	2009-10	2565.19	1048.41	3613.60	11817.89	30.58	29.63

ANNEXURE-VIII

(Referred to in Paragraph 8.1.4)

(Showing the details of Division wise amount of supervision charges incurred during the last five years and its relation with Direct and Indirect labour charges)

(₹ in crore)

Division	Year	Direct Labour	Indirect Labour	% of Indirect Labour on Direct Labour	Total Labour Charges	Super vision charges	% of Supervision charges on Total Labour Charges	% of Supervision charges on Direct Labour Charges
Material & Components	2005-06	111	129	116%	240	131	55%	118%
	2006-07	106	117	110%	222	137	62%	129%
	2007-08	116	125	108%	241	143	59%	123%
	2008-09	137	190	139%	327	205	63%	150%
	2009-10	198	193	97%	391	267	68%	135%
Weapons, Vehicles and Equipment	2005-06	197	204	104%	401	230	57%	116%
	2006-07	177	179	101%	356	222	62%	125%
	2007-08	188	185	98%	373	236	63%	126%
	2008-09	224	292	130%	516	342	66%	153%
	2009-10	298	312	105%	610	433	71%	145%
Ammunition and Explosive	2005-06	168	178	106%	346	228	66%	136%
	2006-07	153	154	101%	306	233	76%	152%
	2007-08	168	156	93%	324	246	76%	146%
	2008-09	205	250	122%	455	380	84%	185%
	2009-10	299	243	81%	542	477	88%	160%
Armoured Vehicles	2005-06	63	67	106%	130	95	73%	151%
	2006-07	64	60	94%	124	96	77%	150%
	2007-08	73	63	86%	136	98	72%	134%
	2008-09	97	101	104%	198	172	87%	177%
	2009-10	137	100	73%	237	229	97%	167%
Ordnance Equipment	2005-06	117	64	55%	181	53	29%	45%
	2006-07	113	54	48%	166	51	31%	45%
	2007-08	111	54	49%	165	53	32%	48%
	2008-09	136	93	68%	229	99	43%	73%
	2009-10	186	117	63%	303	102	34%	55%
Total	2005-06	656	642	98%	1298	736	57%	112%
	2006-07	612	564	92%	1176	738	63%	121%
	2007-08	655	583	89%	1238	776	63%	118%
	2008-09	800	926	116%	1726	1199	69%	150%
	2009-10	1118	965	86%	2083	1508	72%	135%