

Report of the Comptroller and Auditor General of India

for the year ended March 2006

Union Government (Defence Services)
Army and Ordnance Factories
No. 4 of 2007
(Performance Audit)

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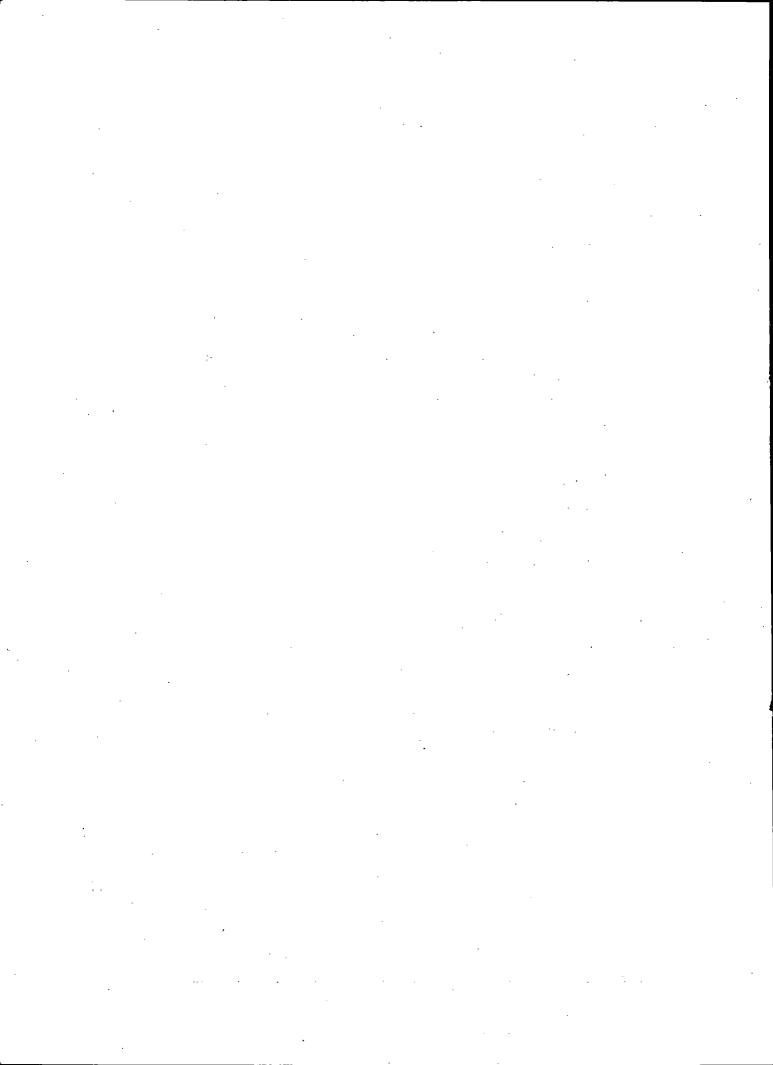
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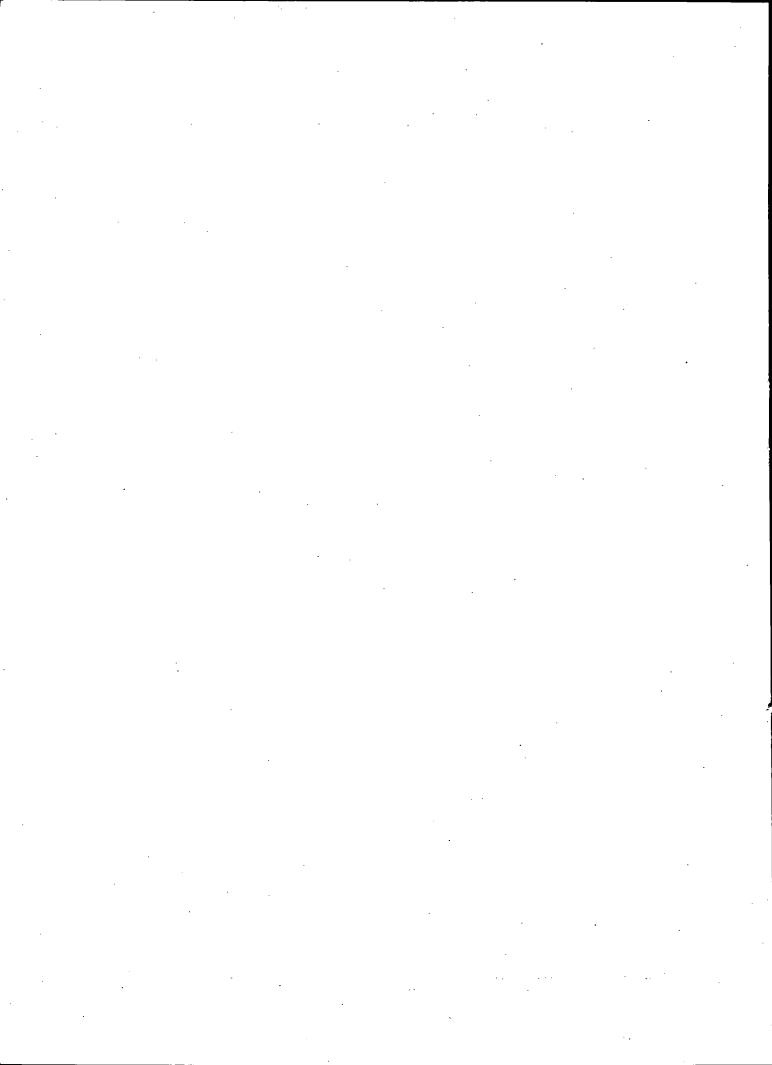
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PREFACE

This report for the year ended March 2006 has been prepared for submission to the President under Article 151 of the Constitution. It contains results of the performance audit of the selected Departments/programmes of Ministry of Defence and Army.

The Report includes three performance audits, namely, Defence Capital Acquisition (Army), Recruitment and training of Personnel Below Officers Rank in the Army and Management of Transport in the Army.



OVERVIEW

Defence Capital Acquisition (Army)

A sound defence acquisition system ensures acquisition of capabilities sought for by the Armed Forces to meet the threat perception within a stipulated time and at an optimal cost.

Performance audit of the capital acquisitions pertaining to the Army with main focus on procurement through import revealed the following:

- The capital acquisition planning in the Army suffered from delays and low fulfillment. Approvals of both the Long and Medium term plans were abnormally delayed. Percentage fulfillment of last three medium term plans varied from 5 to 60 per cent in respect of various Arms and Services of the Army.
- There was lack of co-ordination in procurement of items common to the three Services viz. Army, Air Force and Navy, resulting in inefficiency.
- Deficiencies in formulation of the General Staff Qualitative Requirements hampered selection of the optimum product besides causing delay in procurement.
- Identification of vendors in most of the capital acquisitions was inadequate. The vendors who responded to the request for proposals were too few.
- The process of technical and trial evaluation did not demonstrate objectivity and fair play. In 60 per cent of the cases, only a single vendor was pre-qualified.
- Time taken for trial evaluation was unduly long and the time taken for preparation of the trial evaluation report was even longer than the trials.
- Internal lead time for majority of procurements was too high and there
 were inordinate delays even in procurement through Fast Track
 Procedure.
- Multiple agencies with dispersed centres of accountability resulted in lack of co-ordination, diffused accountability and delay.

An integrated defence acquisition organisation should be put in place at the earliest in order to improve the efficiency and accountability of the acquisition system.

(Chapter I)

Recruitment and Training of Personnel Below Officers Rank in the Army

Personnel Below Officers Ranks (PBOR) constitute more than 90 per cent of the total strength of the Indian Army. For the Army to remain combat ready, it is vital to correctly assess the manpower requirement, recruit the right candidates in a timely manner and train them adequately for induction into appropriate Arms and Services.

A performance audit of manpower management of PBOR, with thrust on Other Ranks (OR), i.e. excluding Junior Commissioned Officers and focus on manpower planning, recruitment and training revealed the following:

- Due to incorrect assessment of manpower there was a mismatch between the authorization and actual manpower held. The deficiency of the PBOR in Army consistently decreased from 6.88 *per cent* in 2001-02 to an excess of 2.41 *per cent* over authorization in 2005-06 involving an additional liability of Rs.524 crore in 2004-06.
- Excess release of vacancies impacted the quality of training since the Regimental Training Centres (RTC) had to train recruits in excess of their designed capacities to the extent of 122 to 314 per cent.
- The manpower requirements of various Units and Establishments of Army were determined adopting vintage norms which did not conform to the technological advancements and changed scenario.
- The system of review of Establishments by the Army Standing Establishment Committee (ASEC) for optimization of manpower was woefully inadequate as two-third of the establishments due for review, were not reviewed by ASEC during 2001-06.
- The incidence of relegation of recruits increased from nine *per cent* in 2001-02 to 22 *per cent* in 2005-06.
- There was significant deficiency of critical infrastructure and essential training equipment such as firing ranges, parade grounds, gymnasium, simulators, tanks and other vehicles at RTC of six Arms and Services test checked in audit.
- Inadequate co-ordination among the various authorities resulted in significant delays in commencement of Basic Military Training, Technical Trade Training and dispatch of recruits to Units after the completion of training.

(Chapter II)

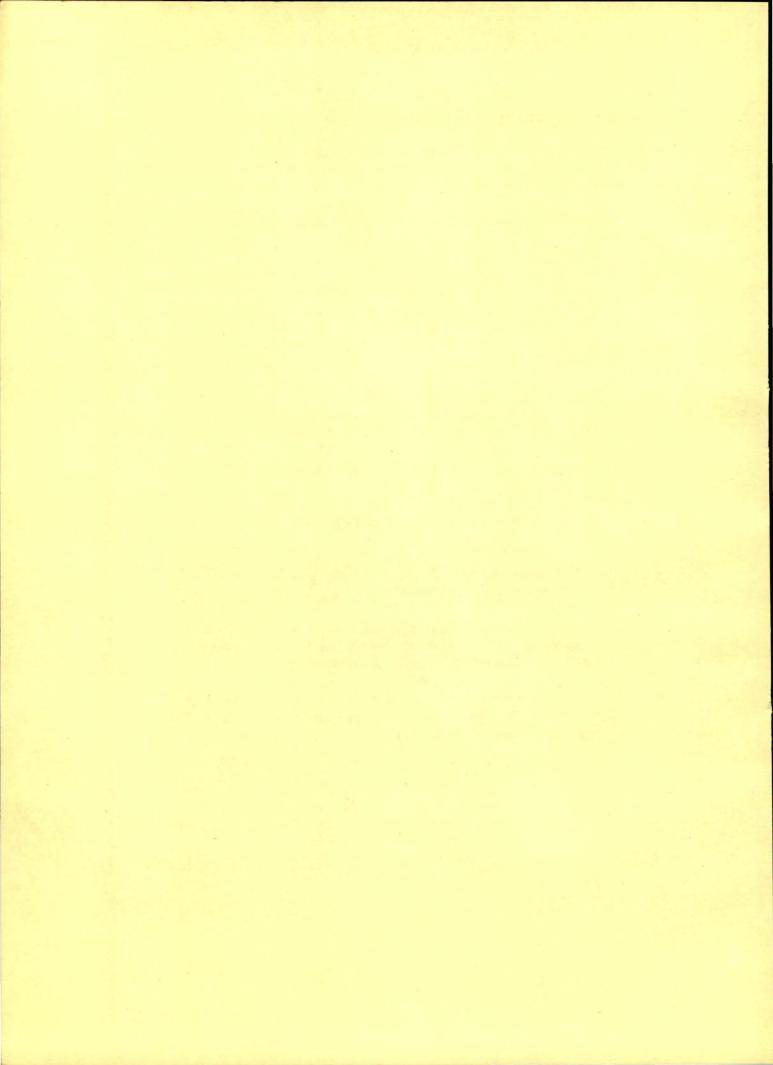
Management of Transport in the Army

Transport is the lifeline of the troops during peace time as well as during operations. Class 'B' vehicles constituting personnel carrying /load carrying and specialist vehicles provide mobility and logistic support to the Army.

A performance audit, focusing on management of Class 'B' vehicles revealed the following:

- Modernization of transport fleet in the Army was slow as restructuring of the fleet of 'B' vehicles initiated in 1971 had not been fully implemented till 2006. Delay in implementation of the restructuring decision resulted in Army carrying on with the vintage vehicles for nearly three decades that were not only fuel inefficient but also did not match the changed tactical requirements and weapons and equipment profile.
- The system of review of establishments by Army Standing Establishment Committee to right-size their manpower, vehicles and equipment was inadequate as only 34 per cent of the establishments due for review were reviewed by ASEC during 2001-06.
- The information maintained by MISO about vehicle authorization and holding by various Units and Establishments was incomplete and unreliable.
- Procedural delays and involvement of multiple agencies delayed issue of authorized vehicles to Units upto 29 months.
- Army Headquarters was holding vehicles much in excess of their authorization to the extent of nearly 400 per cent by inducting, hiring, and attaching vehicles from lower units/formations.
- About 32,000 unserviceable vehicles were lying in depots awaiting disposal, resulting in unnecessary inventory carrying cost and loss of disposal value due to prolonged storage.

(Chapter III)



CHAPTER I: DEFENCE CAPITAL ACQUISITION (ARMY)

Highlights

The capital acquisition planning in the Army suffered from delays and low fulfillment. Approvals of both the Long and Medium term plans were abnormally delayed. Percentage fulfillment of last three medium term plans varied from 5 to 60 per cent in respect of various Arms and Services of the Army.

(Paragraph 1.2.1 & 1.2.2)

There was lack of effective coordination among the Services viz. Army, Navy and Air Force in procurement of common items/capabilities. Therefore, Army resorted to independent procurement of common systems instead of planning joint procurement to obtain best value for money, reduce tendering cost and minimise processing time.

(Paragraph 1.2.5)

The acquisition process suffered from a major drawback of inaccurate formulation of Qualitative requirements (QRs). Audit noticed that in 50 per cent of the procurement cases test checked, specifications were changed after issue of tender/request for proposal (RFP). Deficiencies in QRs hampered selection of the optimum product and achievement of economy in procurement.

(Paragraph 1.3.1)

The process of technical and trial evaluation did not demonstrate adequate objectivity and fair play. In 60 per cent of the cases, only a single vendor was qualified after trial evaluation. Time taken for trial evaluation was unduly long and the time taken for preparation of the trial evaluation report was longer than the trials.

(Paragraph 1.5.1& 1.5.2)

❖ Identification of vendors in most of the capital acquisitions was inadequate. The number of vendors who responded to the RFP were too few thus restricting the competitive process in Army procurements. There was no system of vendor rating of the prospective suppliers.

(Paragraph 1.4.1)

There were inordinate delays in procurement through Fast Track Procedure thus defeating the very purpose of adopting such procedure on the grounds of urgency. Internal lead time for normal procurements was also too high as 60 per cent of the cases took more than three years to sign the contract.

(Paragraph 1.8.1 & 1.8.2)

The number of repeat orders was considerably high. In 50 per cent of the cases examined, procurements were made by placing repeat orders on the vendors from whom the equipment were purchased earlier. Due to repeat orders, economies of scale or increased volume of procurement could not be exploited to negotiate better terms

(Paragraph 1.7)

Multiple agencies with dispersed centres of accountability resulted in lack of co-ordination, diffused accountability and delay.

(Paragraph 1.9.1)

Ministry has introduced revised Defence Procurement Procedures in 2005 and 2006 incorporating some improvements in the procurement policy such as laying down time limits for finalisation of procurements. Impact of such policy changes remains to be seen.

(Paragraph 1.8.2 & 1.8.3)

Gist of Recommendations

- The Services Capital Acquisition Plan (SCAP) should be made more realistic with respect to the lead time required for acquisition and the availability of funds.
- GSQRs should be defined in terms of the required functions and performance levels and should clearly state the minimum essential parameters. Formulation of GSQR being a specialised activity, a scientific and methodical approach should be adopted supported by adequate market research.
- The vendor database should be made more comprehensive and integrated and should enable monitoring of vendors' performance. Market research should be improved through a specialised activity centre which would not only identify sources of supply but also provide price and cost inputs and verify the capability and authenticity of the vendors.

- Alongwith improvements in the formulation of GSQRs, the process of technical and trial evaluation should demonstrate objectivity and fair play. The possibility of adopting a quantitative method of technical evaluation in line with the best procurement practices may be explored.
- The time taken for trial evaluation should be reduced by better scheduling and synchronising of the events. The possibility of having a dedicated/standing trial unit may be explored.
- The costing activity in the acquisition wing needs to be strengthened by putting in place professionally qualified and trained manpower and an effective system of cost database and analysis.
- The process of formulation of scales should be expedited so that scales for equipment planned for acquisition in the Service Capital Acquisition Plan are formulated in a time bound manner before the procurement is progressed.
- The Ministry should have a transparent policy on repeat orders for various types of acquisition which should be strictly followed.
- An integrated defence acquisition organisation should be constituted by incorporating all the functional elements and specialisation involved in defence acquisition under one head. This should be accompanied by adequate re-engineering of the whole process of acquisition.
- A specialised cadre pool of Acquisition Managers should be developed by imparting suitable training in different areas of acquisition viz. project management, contract negotiations, contract management; and exposure to professional best practices of procurement.

1.1 Introduction

Defence services spend a major portion of their allocations on acquisition of new capabilities and replacement of existing systems to maintain desired level of defence preparedness. Annually about Rs 6000 crore is spent on import of defence equipment and capabilities for the Army alone. A sound acquisition system is, therefore, essential to ensure timely acquisition of capabilities and systems required by the Armed Forces at an optimal cost.

The Group of Ministers set up by the Prime Minister in April 2000 to review the national security system in its entirety observed that the then existing defence procurement structure led to sub-optimal utilisation of funds, long delays in acquisition and was not conducive to modernisation of the Armed Forces. The Group of Ministers recommended creation of a separate and dedicated institutional structure to undertake the entire gamut of procurement functions, which would ensure closer participation of Armed Forces in the process of decision-making, higher operational efficiency and cost

effectiveness. Based on the recommendations of the Group of Ministers, Government of India, Ministry of Defence (Ministry) set up broad defence procurement structures and systems in October 2001 to deal with Defence acquisitions on the capital account. The new defence procurement structures included a Defence Acquisition Council (DAC), which is an overarching structure under the Raksha Mantri (RM), a Defence Procurement Board (DPB) under the chairmanship of the Defence Secretary, a Defence Production Board under the Secretary Department of Defence Production and Supplies and a Defence Research and Development (R&D) Board headed by the Secretary Defence Research and Development. DAC assists the RM in giving approval in principle to capital acquisitions in the Long Term Integrated Perspective Plan (LTIPP)/five-year Service Capital Acquisition Plan (SCAP) and also monitor the progress of major projects. The decisions of RM based on DAC deliberations flow down for implementation to DPB, Defence Production Board and the Defence R&D Board.

In order to implement the new Defence Procurement system, the Defence Procurement Procedure 2002 (DPP-2002) was introduced effective from December 2002. The procedure was reviewed in 2005 resulting in introduction of DPP-2005 which laid down time frame for various activities in the procurement process. This was revised again in 2006 as DPP-2006 which inter alia laid down the procedure for 'Make' decisions. The objectives of the DPPs were to ensure expeditious procurement of the approved requirements of the Armed Forces in terms of capabilities sought and time frame prescribed by optimally utilising the allocated budgetary resources while demonstrating the highest degree of probity and public accountability, free competition keeping in mind the goal of achieving self-reliance in defence equipment.

The procurement process which starts with the initiation of the proposal by the Army Headquarters (AHQ), after passing through various stages of processing and approval involving the acquisition wing of the Ministry, ends with the signing of a contract and receipt of supplies as shown in *Annexure I*.

1.1.1 Scope of Audit

This performance audit covered the capital acquisitions made for the Army through import contracts signed between January 2003 and March 2006. Most of these contracts were covered under the Defence Procurement Procedure-2002 and formed part of the 10th Five Year Plan of the Army.

Out of the 42 contracts signed during the above period, 37 contracts involving an expenditure of Rs 3201.47 crore made available to audit were examined. Of these, while 18 contracts (Rs 1211.42 crore) were fresh procurements, the other 19 were addendums or repeat orders (Rs 1990.05 crore) of previous contracts (*Annexure II*). The performance audit was conducted from December 2005 to September 2006.

1.1.2 Audit Objectives

The performance audit was conducted to assess whether:

- the procurement system ensures acquisition of the capabilities sought by the armed forces, within a reasonable timeframe and at an optimal cost;
- the acquisition process is transparent, accountable and competitive;
- the acquisition process ensures efficient use of budgetary allocations;
- the acquisition process adequately promotes self reliance through indigenous R&D and production; and
- the acquisition activity is well organised and efficiently coordinated to obtain best value for money.

1.1.3 Audit Criteria

The following criteria were used for performance evaluation:

- Long Term Integrated Perspective Plan and Medium Term-Five Year Services Capital Acquisition Plan;
- Norms for planning and procurement laid down in the DPP-2002;
- Competitiveness of the process;
- Critical milestones for acquiring capability on schedule;
- The acquisition process is fully documented as per the prescribed procedure;
- Approved project costs and annual expenditure levels;
- Budget allocations and their utilisation;
- Selection of the acquired capability meets the requirements of the endorsed concepts of operations and the needs of users/armed forces;
- The procurement process promotes indigenous R&D and production by taking judicious 'Make' and 'Buy and Make' decisions; and
- Co-ordination among the three Services to optimise procurements.

1.1.4 Audit Methodology

• The performance audit commenced with Entry Conference at the Ministry of Defence and another meeting during mid-course with the Director General (Acquisition). The audit ended with Exit Conference with the Director General (Acquisition).

- Audit examined the performance of the acquisition system by analysing the whole process from planning to formulation of Qualitative Requirements till the acquisition of the total capability. This was done by using the procurement contracts as case studies.
- Besides examination of files and documents, questionnaires were issued to the line directorates, Technical Manager Land System (TMLS) and the acquisition wing to assess their functioning.
- A limited work study was done to study the work flow involved in the processing of a procurement case.

AUDIT FINDINGS

1.2 Acquisition Planning

Proper acquisition planning is an essential element of a good procurement system. It enables the organisation to meet its specific acquisition objectives as well as organisational goals. Efficient acquisition planning will produce more efficient and economic procurements, which will deliver desired capabilities in an acceptable and timely manner. Defence Procurement Procedure 2002 provides for comprehensive planning in defence acquisitions and requires formulation of long term, medium term and short term perspective plans well in time for systematic acquisition of prioritised systems and capabilities. The three types of perspective plans prescribed in the DPP are:

- (a) 15 year Long Term Perspective Plan (LTPP),
- (b) Five year Service Capital Acquisition Plan (SCAP) and
- (c) Annual Acquisition Plan (AAP)

Need for such perspective planning was also highlighted in the subsequent procurement procedures of 2005 and 2006.

1.2.1 Delay in approval of Plans

Audit examination disclosed that Perspective plans were not finalised timely. The LTIPP for the period 2002-2017 was approved by the DAC only in June 2006 i.e after four years of the commencement of the plan period. The 10th Five Year Plan for the Army covering the period 2002-2007 has not yet been approved as of July 2006 which is the last year of the plan. The 11th Plan 2007-2012 which is to commence from April 2007 was stated to be in the final stages of budget allocation.

1.2.2 Poor fulfillment of the Capital Acquisition plans

The extent of achievement of targets of the five year plans i.e. out of the items included in the plan, the number of items which could be procured within the

plan period, has been very low. The extent of achievement of the last three 5 year plans in respect of major Arms and Services is shown in the Table 1 below:

Table 1: Percentage achievement of Five Year Army Plans for Capital Acquisition

Sl. No.	Arms/Services	8 th Plan (1992-97)	9 th Plan (1997-2002)	10 th Plan (2002-07) (Position upto 3/06)
1.	Infantry	10	50	48
2.	Armoured	05	10	30
3.	Mechanised Infantry	15	15	42
4.	Artillery	30	40	48
5.	Aviation	05	30	40
6.	Air Defence	40	30	23
7.	Engineers	10	35	43
8.	Signals	10	35	35
9.	Rashtriya Rifles	-		60

Thus the achievement of planned induction during the three SCAPs of the Army varied from 5 to 60 per cent in respect of various Arms and Services.

Of the 250 items planned for acquisition in the 10th Plan, only 96 items were acquired upto March 2006 i.e. upto the fourth year of the five year plan. At least 46 of the items which could not be acquired were identified as capability gaps in the Army Plan. Poor fulfillment of the plans reveals lacunae in the acquisition process which hampers the process of modernisation and affects defence preparedness.

The Ministry stated (December 2006) that after setting up of a separate organisation for capital acquisition within the Ministry, efforts were on to ensure that the main objective of modernisation of the Armed Forces was achieved with maximum possible efficiency while keeping in view the requirement of transparency and cost effectiveness. According to the Ministry, the compliance with the Army Plan in general is improving after the new setup.

1.2.3 Budgetary management

The actual expenditure against Budget Estimates (BE), Revised Estimates (RE) and projections made by the Army for capital acquisition are given in the Table 2 below:

Table 2: Comparative Statement showing requirement of funds, budgetary provisions and actual expenditure on Capital acquisition

(Rupees in crore)

Year	Amount projected by the Army for the years in	Amount projected by Army under Schedule of Demands to	Amount provided in the Budget	Amount provided in the Revised Estimates	Expenditure actually incurred during the	Amount of surrender with reference to BE
	the 10 th Plan	MOD(Fin)	B.E.	RE	year	
1	2	3	4	5	6	7
2002-03	13707.85	9361.25	6573.67	4111.36	4487.33	2086.34
2003-04	16795.77	11140.75	4434.88	3438.98	4217.59	217.29
2004-05	13726.08	15017.05	7400.66	6039.28	6150.14	1250.52
2005-06	12261.99	11182.19	7089.83	7700.40	7291.77	(-)201.94 (408.63 with respect to RE)
Total	56491.69	46701.24	25499.04	21290.02	22146.83	

The budget allocations were much lower than the projected requirements of the Army which may adversely impact on fulfillment of the perspective capital acquisition plans.

During the first three years of the 10th plan, the budgetary allocation was reduced at the RE stage and the actual expenditure exceeded the revised allocation. However the actual expenditure was less than the initial budgetary allocations which ranged from five to 32 *per cent*. On the contrary, in 2005-06 when the allocation at the RE stage was increased, the actual expenditure was less resulting in surrender of Rs 408.63 crore. This indicates deficient budget management and expenditure control.

The Ministry stated (December 2006) that there existed a system of monitoring and review of budget allocations vis a vis expenditure at different levels. However, due to the complexities involved in the acquisition process, sometimes the cases could not be finalised due to various factors such as delays in equipment trial evaluation, commercial negotiation and approvals.

The reply is not acceptable as surrenders in 2002-03 and 2004-05 were very significant and the Ministry should have closely monitored trial evaluation and tender processing to finalise the contracts as planned.

1.2.4 Unplanned procurements

There was significant amount of unplanned procurement as several items which were not catered for in the 10th Plan were procured each year. The unplanned procurements increased from two *per cent* in 2003-04 to 43 *per cent* in 2005-06 (in terms of value). The number of unplanned items procured each year along with their value is shown in Table 3 below:

Table 3: Items not included in the 10th Plan but procured

Unp	lanned Proci	rements	Total value of	Unplanned
Year	No. of items	Value (Rupees in crore)	planned and unplanned items contracted (Rupees in crore)	procurements as a percentage of total procurements (in terms of value)
2002-03	13	467.66	3531.12	13
2003-04	03	96.10	4267.81	2
2004-05	14	671.94	2372.91	28
2005-06	24	3366.61	7890.94	43

The Ministry stated (December 2006) that the requirement of these items emerged on the battlefield suddenly and that these items could not be forecast initially and hence were not included in the five year plan.

Examination revealed that many of these items were not exactly in the nature of emergency procurement. Items like Air Target Imitator (ATI), Boot Antimine etc. were identified for acquisition by the Army more than a decade before. The Army had proposed for procurement of ATI in 1997 yet it was not included in the 10th Plan. Similarly Boot Antimine was proposed for procurement in 2000 yet not included in the 10th Plan. Similarly Extended Range Rockets, Unattended Ground Sensors (UGS), Integrated Field Shelter etc., which were procured without being included in the original plan, could not be justified as emergent procurement.

1.2.5 Procurement of equipment common to the three Services

Aggregation of common purchases for tendering is desirable to minimise transaction cost, reduce processing time, avoid multiplicity of repair and overhaul facilities in terms of varied technologies, and achieve economy in procurements from bulk buying. Equipment common to the three Services are governed by Joint Services Qualitative Requirement (JSQR). Audit found four items¹ which were common to the three Services, were procured by Army independently. Hence the Army failed to coordinate effectively with the other Services and resorted to independent procurements instead of planning joint procurements to obtain best value for money. The instances of such independent purchases are discussed below:

- 1. Unmanned Arial Vehicles (UAV) are being procured by the Services independently during last ten years which could have been processed through joint procurement system to minimise delays, effect economy and avoid placement of repeat orders.
- 2. Integrated Oxygen/Communication Mask Helmet (IOCMH) was required by the Air Force as well as the Army Aviation. Instead of procuring the item jointly, the two Services were procuring the helmet independently. While the Air Force procured it from indigenous

¹ UAV, Sniper Rifles, Combat Underwater Diving Equipment and Integrated Oxygen Mask Helmet.

sources, Army went in for import at four times the cost at which it was procured by the Air Force.

- 3. Sniper Rifle SVD was procured by the Army and the Air Force separately during the same period. While negotiating the price, an escalation of 3.25 per cent per year was negotiated by the Army while an escalation of four per cent per year was negotiated by the Air Force. The independent procurement for Air Force and Army resulted in avoidable excess expenditure.
- 4. In the procurement of Combat Underwater Diving Equipment concluded in July 2003 valuing US \$ 2373209 (Rs 11.01 crore²), AHQ took nearly a year to evaluate the performance of two sets of equipment offered by the supplier for trials when Navy had already procured the same equipment in 1999.

The Ministry (December 2006) stated that HQ Integrated Defence Staff had initiated efforts to identify the items which are common to the three Services for procurement and that Inter Services Equipment Policy Committee (ISEPC) has been constituted to look into the issues for developing JSQRs.

Recommendation

The five year Services Capital Acquisition Plan (SCAP) should be made more realistic with respect to the lead time required for acquisition and the availability of funds.

1.3 Framing of Qualitative Requirements

1.3.1 Deficiency in formulation of General Staff Qualitative Requirement

The process of acquisition of an equipment starts with the formulation of user requirements known as the General Staff Qualitative Requirements (GSQR). The GSQRs are formulated by the user directorates in AHQ and vetted by the General Staff Equipment Policy Committee.

Audit noticed deviations in GSQRs in nine out of 18 fresh contracts examined. The frequent deviations (50 per cent cases) from GSQR after issue of tender/request for proposal indicate that GSQRs were not formulated correctly. As a result, the procurement process in these cases was delayed by about four to six months.

Of the 18 original contracts, GSQRs of 11 contracts were examined and the following deficiencies were noticed in the formulation of GSQRs:

(i) The DPP-2002 as well as the best procurement practices stipulate that the QR should be laid down in terms of functional and performance

 $^{^{2}}$ 1 USD = Rs 46.40

parameters³ in order to make them broadbased so as to elicit a more competitive response. Audit found that the QRs continued to be formulated narrowly. In addition to functional and performance parameters, physical characteristics e.g. length, volume, material etc. and design characteristics were also specified. It was these parameters which were later found inconsistent for which waiver had to be granted. Technical specifications were often given in terms of specific values which either did not match with the products available in the market or matched uniquely with a single product. A large number of parameters were specified which were unimportant, unverifiable and non-measureable. Restriction of competition as a result of narrow QRs is borne out by inadequate vendor response and the fact that in 60 per cent of the cases only a single vendor was prequalified.

- (ii) There was no proper grading of the parameters as critical and noncritical and nor was there an *inter-se* priority or weightage of the parameters. Selection of a product involves trade offs and optimisation between various competing parameters so that the field force is given the best possible equipment to match the capability sought for. This is not possible unless there is proper grading of the required parameters.
- (iii) In four cases, the specifications stipulated in the GSQR were later found to be inconsistent with the technology available in the world market.
- (iv) In four cases, the parameters laid down in the GSQR were unrealistic with respect to the actual requirements on the ground.
- (v) In seven cases, the parameters specified in the GSQR could not be tested during trial evaluation due to lack of testing facilities.

GSQRs were formulated by the user directorates without gathering adequate market intelligence, sometimes merely on the basis of manufacturer's brochure. Such a system for determining specifications may not only restrict the number of potential vendors but also reduce the scope for tenderers to offer alternate innovative solutions.

The Ministry stated (December 2006) that the DPP-2006 prescribed that the QRs should be broad based, realistic and express the users' requirements in terms of functional characteristics and should be of contemporary technology widely available in the world/indigenous market. That the QRs should be broad based, realistic and expressed in term of functional characteristics was already laid down in DPP-2002, which could not be adhered to as had been brought out by Audit.

³ Functional specification states the function to be fulfilled e.g. "Gun capable of firing targets at a minimum distance of 5 Km". Performance specification denotes the level at which the function is to be carried out e.g. "to be able to fire continuously for a minimum of 1 hour". Design specification states how the functional requirement will be met e.g. "track or wheel drive".

The DPP 2005 and 2006 stipulate that the GSQR should contain only "essential" parameters which are verifiable. Audit considers that this may help promotion of transparency and objectivity in technical selection of complex systems, provided essential parameters reflect the basic user requirements correctly.

With regard to narrow GSQR resulting in restricted competition, the DPP 2005 and 2006 state that, if at the Technical Evaluation stage a single vendor is qualified then the RFP shall be reissued after suitably reformulating the GSQR. Audit considers that the Ministry should lay more emphasis on the formulation of GSQR in a more scientific and methodical manner based on sound market intelligence instead of adopting such a reactive approach.

Recommendations

- SQRs should be defined in terms of the required functions and performance levels. The GSQRs should clearly state the minimum essential parameters.
- Formulation of GSQR being a specialised activity, a scientific and methodical approach should be adopted supported by adequate market research.

1.4 Solicitation of offers

1.4.1 Inadequate vendor identification

The position with regard to the number of vendors identified for issue of Request for Proposal (RFP), the number of vendors who responded to the RFP, number of vendors shortlisted by the Technical Evaluation Committee (TEC) for trial evaluation and the number of vendors prequalified in the technical bid is shown below in respect of the 18 contracts examined:

Table 4: Position of vendor identification, vendor response and selection

Sl. No.	Item	No. of vendors to whom RFP was issued	No. of vendors responded	No. of vendors shortlisted by TEC	No. of vendors prequalified (after trials)
1.	Explosive Vapour Detector	03	02	02	02
2.	Thermal Imaging Stand Alone Sight (TISAS) for T-72 Tanks	03	03	03	- 02
3.	High Resolution (HR) Binoculars	13	06	06	01
4.	Air Target Imitator (ATI)	02	02	02	02
5.	Combat Diving Equipment	06	02	02	01
6.	Remotely Operated Vehicle (ROV)	06	03	03	01

Sl. No.	Item	No. of vendors to whom RFP was issued	No. of vendors responded	No. of vendors shortlisted by TEC	No. of vendors prequalified (after trials)
7.	Helicopter Mounted Surveillance System (HMSS) for Cheetah Helicopters	04	03	03	02
8.	Basic Set of N/CROS (NVD for FOO)	09	02	01	01
9.	Boot Antimine	04	04	04	01
10.	EW System	08	06	05	02
11.	122 mm GRAD ERR	12	04	04	01
12.	Elint Payload for UAV	02	01	01	01
13.	Integrated Oxygen/ Communication Mask Helmet (IOCMH)	04	02	01	01
14.	T.I. Sight for BMP-II	02	02	02	02
15.	Demining Equipment	03	03	03	01
16.	Weapons & Equipment for Para SF	01	01	01	01
17.	I Level Test Equipment for UAV	01	01	01	01
18.	Upgradation of EMI/EMS Test System	01	01	01	01

Identification of vendor in respect of most of the capital acquisitions finalised during January 2003 to March 2006 was inadequate. It was found that the number of vendors who responded to the RFP was far less than the number of vendors identified and issued RFP as shown in Table 4. The market survey for capital acquisition was limited and there was no system of vendor rating or information on the past performance of the prospective supplier. Audit observed that with the development of computerised vendor database by the Technical Manager Land System in 2004, there was some increase in the vendor base but the response still remained inadequate (*Annexure III*). For example, for Mobile Cargo Search equipment and Spotter Scope with digital camera, RFP was issued to 24 and 54 vendors respectively while response was received only from four vendors in both the cases.

The Ministry should analyse reasons for such inadequate vendor response in most of its capital acquisitions for corrective action.

Reasons for poor response of vendors may be attributed to the ambiguous and narrow GSQRs, inconsistency of the QRs with the technology available in the world market, inadequate time for vendor response and incomplete and outdated vendor database. These deficiencies restricted competition in procurements.

The Ministry stated that the DPP-2006 provides for an improved system of vendor identification and registration. Audit considers this as a policy improvement, the efficacy of which needs to be seen.

1.4.2 Unsolicited offers

The Ministry did not follow uniform policy in dealing with unsolicited offers received from vendors who were not issued RFPs. Two such instances are discussed below:

For procurement of Helicopter Mounted Surveillance System, after the receipt of techno commercial offers from the vendors, Firm 'A' to whom RFP was not issued made a written request and after meeting with Additional Director General Weapon and Equipment (ADGWE), RFP was issued to the said firm and its techno-commercial offer entertained.

In the procurement of Explosive Detector before issue of fresh RFP, Electronic Corporation of India Ltd. (ECIL) in January 2002 intimated the Ministry that they were the exclusive authorised supplier in India for Firm 'B' who were the Original Equipment Manufacturer (OEM) of Explosive Detector and that the equipment had already been trial evaluated by Army's Central Command. The Ministry, however, did not entertain ECIL Hyderabad for issue of RFP on the grounds that AHQ does not recognise the trial evaluation by the Central Command. There was dispute on this issue between the Ministry and AHQ for four months resulting in delay the procurement which was to be done on Fast Track. RFP was issued to all other vendors in May 2002 except ECIL.

Recommendations

- Market research should be improved through a specialised activity centre which would not only identify sources of supply but also provide price and cost inputs and verify the capability and authenticity of the vendors.
- The vendor database should be made more comprehensive and integrated, and should enable monitoring of vendors' performance.

1.5 Technical and Trial evaluation

1.5.1 Lack of objectivity and fair play in technical evaluation

According to the Defence Procurement Procedure, the prequalification consists of an initial technical screening by a Technical Evaluation Committee (TEC) and the subsequent trial evaluation of the shortlisted products. The findings and recommendations are finally submitted in the form of a General Staff Evaluation Report (GSER).

Technical and trial evaluation is an assessment of the products offered based on the compliance of the product against the various GSQR parameters as conveyed in the RFP. But given the fact that the GSQRs are narrowly framed and in the absence of proper grading/weighting of the QR parameters, the objectivity of the selection process is not ensured as products were eliminated

for not meeting certain inessential, physical or design parameters. In the trial evaluation report, the advantages/ disadvantages and deviations from QRs of the various products were listed. However there was no method of determining the relative merits of these advantages or demerits of the disadvantages in arriving at the final selection. Thus, in the absence of an objective evaluation, selection of the optimum product could not be ensured.

The inadequacy of the pre-qualification process is highlighted by the fact that in 60 per cent of the cases, a single vendor was pre-qualified. Thus pre-qualification, instead of being a qualification process whereby products are qualified on meeting the minimum required quality, had become a pre-selection process.

Audit examined the process of technical and trial evaluation in detail for six cases (Boot Antimine, HR Binoculars, Demining equipment, EW System, IOCMH and ROV). The trial evaluation reports of two cases are illustrated below to highlight the subjectivity involved in the current process of technical selection:

1. For the procurement of HR Binoculars in 2000, RFP was issued to 13 vendors of which six responded. All the six firms were recommended for trial evaluation.

Magnification, field of view and clarity of viewed objects are the key functional and performance parameters of a binocular. With respect to these important parameters the binoculars offered by Firm 'D', Bharat Electronics Ltd. (BEL) and Ordnance Factory Board (OFB) met the minimum GSQR and were better than or as good as that of foreign Firm 'C' as would be clear from the following Table 5:

Table 5: Comparison of important parameters

Sl. No.	GSQR	Firm 'C'	Firm 'D'	BEL	OFB
1.	Clarity (not defined)	clear upto 2000m	clear upto 2500m	clear upto 2500m	Definition chart clear upto 2000m in plain & 3000m in HAA
2.	Clarity (not defined)	clear upto 2500m	clear upto 3000m	clear upto 3000m	Vehicle/equipment clear upto 2500m in plain & 4000m in HAA.
3.	Magnification- Seven times or better	Magnification - 7 times	Magnification - 7 times	Magnification - 10 times	Magnification - 10 times
4.	Field of view (Minimum six degrees)	7.43 deg	7.25 deg	6 deg	120 m at 1000 m

The binocular of Firm 'C' was selected *inter alia* on the grounds of "good resolution and clarity" and "better magnification", which was not reflected in the trial report.

- GS Evaluation report revealed that the other binoculars were eliminated on non-functional and inessential parameters, like eye piece movement, tightness of the hinge, absence of cover, etc. and design characteristic like minimum focussing distance. Thus the selection of Firm 'C' was found to be subjective without providing a level playing field to the other vendors.
- 2. For the procurement of Demining Equipment under fast track procedure in 2003, the technical evaluation report showed that the equipment offered by Firm 'E' had no distinctive and demonstrable advantage over the equipment offered by Firm 'F'. While certain inadequacies in the detonation and clearance of Anti Personnel Mines were noticed in the equipment of Firm 'F', these parameters were not assessed for the equipment of Firm 'E' due to non-availability of the Anti Personnel mines. Similarly, while certain unflailed (uncleared) patches were observed in the case of the equipment of Firm 'F', in the case of equipment of Firm 'E' this was not tested on the assumption that since the flail system is computerised there would be total flailing. With regard to speed of clearance, the equipment of Firm 'F' was shown to achieve 1620 square meters per hour while for the machine of Firm 'E' it was stated 'very high rate of clearance' without mentioning the speed achieved. Therefore, the objectivity of selection of the equipment of Firm 'E' and elimination of the equipment of Firm 'F' could not be demonstrated in the GSER. Had the equipment of Firm 'F' also pre-qualified, the option for purchase of their equipment which was cheaper by Rs 80.87 crore would have been available.

The Ministry should ensure objective evaluation of technical offers and systems by adopting suitable evaluation techniques to be notified in advance which should be consistent with international best practices and ensure greater transparency in the selection procedure.

1.5.2 Unduly long time taken for trial evaluation

Of all the activities, maximum time was taken in trial evaluation and hence it was the most critical activity to ensure timely procurement. Audit found cases where the trials took more than 15 months as shown in Table 6. Further, the time taken for preparation of Trial (General Staff Evaluation) report was unduly long and in most cases much longer than the conduct of actual trials as shown in the Table 6 below:

Table 6: Time taken for trials and approval of GS Evaluation Report

Sl. No.	Equipment	Time taken for trials (months)	Time taken for GSER (months)
1.	Night Vision Device for FOO	Less than one month (9 days)	12
2.	Boot Antimine	15	7
3.	Air Target Imitator	34	7

Sl. No.	Equipment	Time taken for trials (months)	Time taken for GSER (months)
4.	R.O. Vehicle	61/2	6
5.	R.L. Mark-III	Less than one month (13 days)	9 1/2
6.	IOCMH	Less than one month (7 days)	10
7.	H.R. Binocular	1 1/2	7
8.	TISAS	24	2
9.	Demining equipment	Less than one month (8 days)	2 1/2
10.	EW System	3	9
11.	T.I. Sight for BMP-II	10 ½	7 1/2

The reason for the delay was that the evaluation of the trials had to go through the lengthy chain of command whereby the trial report is approved/recommended starting from the Commanding Officer of the trial unit to the respective Brigade, Division, Corps and Army Commander before final approval by the Deputy Chief of Army Staff (Planning & Systems) at the AHO.

Though some equipment may require trials in different climatic and terrain conditions, Audit feels that by proper scheduling and sequencing of events, the trials could be completed in a much shorter time. Some of the critically needed equipment were found to be under trial for more than two years and trials were yet (September 2006) to be completed.

The Ministry (December 2006) took note of the audit observation and advised AHQ to suggest ways and means to achieve this objective.

1.5.3 Inadequate trial evaluation

Trial evaluation is to be carried out as per the trial directive issued by the AHQ. Audit found that in seven out of 16 cases⁴, the trials were not conducted as per the trial directives and many of the parameters could not be tested (Annexure IV) due to lack of testing facilities as a result of which the quality of the procurement could not be ensured.

Recommendations

Along with improvements in the formulation of GSQRs, the process of technical and trial evaluation should demonstrate objectivity and fair play. The possibility of adopting a quantitative method of technical evaluation in line with the best procurement practices may be explored.

⁴ Two out of the 18 sample cases did not involve trial evaluation.

- The time taken for trial evaluation should be reduced by better scheduling and synchronising of the events. The possibility of having a dedicated/standing trial unit may be explored.
- The necessary testing facilities should be created or alternatively the civil testing facilities, if available, should be utilised to ensure that trials are conducted as per trial directive for full range of GSQR.

1.6 Cost of procurement

- (i) Best procurement practices advocate application of Life Cycle Costing (LCC) to select the product having the least total cost of ownership. LCC recognises the cash outflows occurring throughout the life of the product viz. cost of spares, maintenance, overhaul, retro-modification etc. The DPP-2005 as well as DPP-2006 also envisages application of LCC in selection of products for procurement. However since a single product very often prequalified, the application of LCC becomes more difficult.
- (ii) Application of Discounted Cash Flow (DCF) involves determining the present value of different streams of cash out flows of the different offers made by the vendors. The DPP-2005 envisages application of DCF to procurement decisions, yet Audit did not find its application in any of the four procurement contracts (Item No 13, 14, 15 and 16 of *Annexure II*) concluded after June 2005.

The Ministry stated (December 2006) that efforts were being made to put in place an effective cost computation mechanism since validation of vendor supplied data is an essential part of operation of LCC module.

Recommendation

The costing activity in the acquisition wing needs to be strengthened by putting in place professionally qualified and trained manpower and an effective system of cost database and analysis.

1.7 Determination of Quantities to be procured

The main problem faced in determining the quantities was the absence of scales for a large number of new items procured and delay in formulation of scales. Audit noticed that in seven cases (BMP, Bomb disposal equipment, Long Range Reconnaissance Observation System, Boot Antimine, Equipment for Para SF Battalions, UAV and IOCMH) there were severe delays in formulation of scales, which often took decades even after the initiation of procurements.

Even where scales were laid down, Audit noticed that in three cases (Rocket Launcher MK III, 122 mm grad rocket and Bomb disposal equipment) there

were discrepancies in application of the laid down scales while processing the case for procurement resulting in excess procurement and expenditure. Due to the problem in determining the quantities, the total requirement of an item was procured in piecemeal through repeat contracts.

Audit observed that in 50 per cent of the cases examined, procurements were made by placing repeat orders on the vendors from whom the equipment were purchased earlier. The details of repeat orders are given in **Annexure V**. Due to repeat orders, economies of scale or increased volume of procurement could not be exploited to negotiate better terms.

The case of procurement of RL Mk-III illustrates the adverse impact of piecemeal procurement. Army had included 4700 RL Mk-III in its 9th five year plan. The user Directorate (Infantry) had proposed for procurement of 3000 RL Mk-III ex-import in view of then existing 50 per cent deficiency. The Deputy Chief of Army Staff (Planning and Systems) reduced the quantity to 1000 RL which was procured in March 2002. Within two months, in May 2002 another proposal was made for 2000 RL. After 10 months of processing, a contract was signed in March 2003. This resulted in an extra expenditure of Rs 9.59 crore as the rates under the second contract were higher than the first contract.

The DPP-2006 provides that the quantities will be determined at the initial stage of Acceptance of Necessity and Categorisation which will result in holistic and judicious determinitation of quantities.

Recommendations

- The process of formulation of scales should be expedited so that scales for equipment planned for acquisition in the SCAP are formulated in a time bound manner before the procurement is progressed.
- In normal circumstances repeat orders should be avoided. The Ministry should have a transparent policy on repeat orders so that advantages of bulk procurement and technological advancements are not lost sight of.

1.8 Timeliness of acquisition

1.8.1 Internal lead time of procurement too high

The internal lead time i.e. the time between initiations of a case for procurement by the AHQ and the signing of the contract was considerably high. Thus while in 37 per cent of the cases it took about 24 to 36 months, in 60 per cent of the cases it took/likely to take more than 36 months to sign the contract as shown in Table 7 below:

Table 7: Internal lead time for procurement

Sl. No.	Category	Number of cases for which contract has been signed	*Cases under process as of August 2006	Total number of cases
1.	Less than 24 months	01	<u>.</u> .	01
2.	24 - 36 months	05	06	11
3.	Above 36 months	05	13	18
	Total cases	11	19	30

^{* 19} cases under process were under trials as of August 2006 and a processing time of eight months as per DPP-2005 has been added to arrive at the total lead time. Cases of procurement of spares have been excluded.

Some of the critical capabilities like Thermal Imaging Stand Alone Sight (TISAS) took more than a decade to acquire. Integrated Oxygen Mask and Helmet for helicopters took nine years. Besides enormous delay in acquiring complex weapon systems, even procurement of relatively simple requirements like HR Binoculars, Combat Diving Equipment and Boot Antimine took three years to procure (*Annexure VI*).

Repeat orders on the same vendor for procurement of additional quantities also took substantially longer time considering the fact that the lengthy activity of Technical and Trial Evaluation was not required in these cases as detailed in *Annexure VII* and Table 8 below:

Table 8: Internal lead time for Repeat Orders

Sl. No.	Time Taken	No. of Cases of Repeat order
1.	Less than 12 months	7
2.	12 to 23 months	6
3.	24 to 36 months	2
4.	Above 36 months	1
	Total	16

The Ministry stated that the time frame as prescribed in DPP-2006 would lead to cutting down of internal lead time for procurement as it brings in checks and balances to avoid multi layered examination on files and following a path of collegiate functioning at all levels. Audit finds this to be a significant policy improvement.

1.8.2 Inordinate delay in procurement through Fast Track Procedure

The DPP-2002 introduced Fast Track Procedure (FTP) for meeting urgent operational requirements. According to the procedure, the RM on the advice

of DPB will approve the adoption of FTP for a procurement case where the requirement emanates from an imminent operational situation or crisis. Under FTP, the stages of procurement like issue of RFP, technical evaluation and trial evaluation have been bypassed by providing for the procurement of an established and tested product. There is also provision for constitution of the Empowered Committee which would visit the vendors' premises and technically select the product, negotiate and conclude contract in the shortest possible time.

As against the maximum time limit of 12 months within which the product was to be made available to the Army, Audit observed inordinate delay in procurement defeating the very purpose for which FTP was applied as indicated in the Table 9 below.

Table 9: Internal lead time for Fast Track Procedure

Sl. No.	Item	Date by which item demanded	Date of initiation	Date of signing of contract	Time taken (in months)
1.	Remotely Operated Vehicle	Not indicated	July 1999 (Approved under FTP in October 2001)	October 2003	52 (24 months under FTP)
2.	Explosive Detector	Not indicated	September 2001	February 2003	17
3.	Weapons & Equipment for Para SF	Not indicated	September 2003	February 2006	29
4.	E.R. Rockets	Not indicated	August 2002 under FTP	December 2005	40
5.	Unmanned Aerial Vehicle	Not indicated	January 2003	January 2006	36
6.	Electronic Warfare System	Not indicated	June 1999 (Approved under FTP in October 2001)	November 2005	75 (50 months under FTP)
7.	TISAS	December 2002	1993 (Approved under FTP in June 2002)	February 2003	120 (9 months under FTP)
8.	Demining Equipment	October 2002	August 2002	March 2003	8 months

Audit also observed that in three cases the very application of FTP was not justified as discussed below:

In the case of ROV, UAV and TISAS, the need for acquisition existed since long and procurement was already underway and the items could have been procured in time through the normal procedure. UAV was under indigenous development since 1990's and was being imported by the three services since 1996. FTP compromises on competitiveness and therefore, the above FTP procurements made at the cost of competitiveness could not achieve the

intended purpose of acquiring the capability within the shortest possible time. Electronic Warfare System for Kargil and North East was an urgent requirement in 1999 when the case for its procurement was initiated. But it was brought under the FTP in October 2001, by which time it could have been procured through the normal procedure. Even after application of FTP it took four years to sign the contract.

The revised FTP-2006 promulgated with effect from 13 July 2006, provides that the application of FTP will be decided by the DAC and that the contract should be signed within five months of initiation and delivery to be completed within three to 12 months of signing of contract. With the stipulation of time frames it is expected that delays would be overcome.

As regards the external lead time i.e. the time taken to complete the delivery after the signing of the contract, there were no significant delays except for two out of 18 cases where there were extensions of delivery period. The external lead time was about six to 18 months.

1.8.3 Large number of submission and approval points

A limited work study of the procurement process was conducted by Audit which revealed that delay was essentially due to the way the procurement was processed. From the initiation of the case to the signing of the contract, the procurement case had to sequentially go through eight stages of processing. Each stage consists of about 9 to 10 approval points with each approval point having at least three submission points. The process flow chart is shown in *Annexure VIII*. The time taken for processing was long.

While there was no time frame in DPP-2002 for finalisation of contracts, DPP-2005 had stipulated a time frame of 24 to 35 months and DPP-2006 stipulates 20 to 34 months. Some of the approval/submission have been reduced by clubbing certain activities and introducing collegial vetting. These improvements if adhered to will result in reduction of delays.

The Ministry stated (December 2006) that the audit recommendation that the layers of scrutiny and oversight should be reduced were fully in consonance with the modern practices where reforms in the system envisage that each level would be a responsible self contained work centre which would not require much supervision and further scrutiny. The Ministry further stated that there were certain constraints in actual practice which require incorporation of certain checks and balances particularly in the Government system where large degree of probity, transparency and clear cut levels of delegation of financial powers have been built in.

Recommendation

For procurement of relatively simple items and in case of repeat orders where repeat orders are justified, a separate and shorter time frame should be laid down.

1.9 Organisation

1.9.1 Multiple agencies with dispersed centres of accountability

The organisational chart for capital procurement pertaining to the Army is shown in (Annexure IX). Thirteen different agencies each reporting to different functional heads are involved in the processing of procurement. As discussed in paragraph 1.8.3, from the initiation to signing of the contract the procurement case passes through the numerous approval and submission points through these multiple agencies. Even for post contract management four different agencies were involved with very little co-ordination among them.

Defence Acquisition is a cross-disciplinary activity requiring expertise in technology, military, finance, quality assurance, market research, contract management, project management, administration and policy making. Generally, the personnel involved in procurement did not have adequate training or exposure to project management, procurement management or contract management. Technical processing in the WE which is a key procurement activity was done by Service officers on tenure posting lasting for not more than a maximum of three years. This prevented specialisation.

The recommendations of the Group of Ministers in April 2000 to create a separate and dedicated organisational structure integrating all the procurement function remains to be fully implemented. Study of the acquisition system of a few advanced countries showed that most of them had a separate integrated defence acquisition organisation, within the Ministry which brought the Service, technical, finance, quality assurance and administrative elements under one accountability centre.

The Ministry stated in December 2006 that the revised structure took into effect the need for incorporation of adequate checks and balances with suitable oversight mechanism while at the same time speeding up the procurement process. The Ministry added that taking into account the historic realities and the age of the Defence procurement organisation, the whole restructuring of the procurement was still in nascent stage, but the results had been encouraging.

The Ministry stated (December 2006) that a Committee had been constituted to look into the re-structuring of the acquisition wing of defence.

1.9.2 Lack of a Management Information System

The existing management information system was inadequate to support the complex activity of acquisition by assisting the multiple agencies in decision making, monitoring and exercising effective control.

DPP-2002, DPP-2005 and DPP-2006 stipulate that a defence procurement network, electronically connecting all agencies involved in defence procurement should be set up. Efforts for development of an information system to support the acquisition organisation were yet to be taken. The

Ministry stated (December 2006) that there was an extensive monitoring mechanism in the acquisition system.

Recommendations

- An integrated defence acquisition organisation can be considered by incorporating all the functional elements and specialisation involved in defence acquisition under one head. This should be accompanied by adequate re-engineering of the whole process of acquisition to identify and remove the redundant activities.
- A specialised cadre/pool of Acquisition Managers may be developed by imparting suitable training in different areas of acquisition viz. project management, contract negotiations, contract management; and exposure to professional best practices of procurement. Certain stability of tenure of the personnel should also be ensured.
- A suitable integrated electronic information system connecting all defence procurement should be put in place to support the acquisition process.

1.10 Promotion of indigenisation/self-reliance

Audit observed in six cases where indigenous products were able to meet the broad requirements and could have been acquired and inducted with slight modifications, foreign products were given preference. The procurement cases of the Boot Antimine, HR Binoculars, ROV, UBGL, UAV and IOCMH reveal that the indigenous products instead of being given preference were not even provided a level playing field. As an example, the case of procurement of IOCMH for Cheeta Helicopters is discussed below:

For the procurement of IOCMH in 2001 when issue of RFP was in process, the Director General Aeronautical Quality Assurance (DGAQA) had intimated Additional Director General (ADG) Army Aviation that an indigenous mask had been developed by an Indian firm and after trials the Air Force had accepted these masks and placed an initial order for 80 masks on the indigenous firm. Substitution of the imported mask with indigenous mask had led to foreign exchange savings of approximately Rs 3.75 lakh per equipment. The delivery period would also be much shorter than import. In addition to the oxygen mask, a light weight helmet had also been developed by the indigenous firm which was being procured for the Air Force.

DGAQA's recommendations were not heeded by AHQ and no RFP was issued to the indigenous firm on the grounds that:

• the capability of the indigenous firm was suspect since the integrated oxygen mask helmet was not trial evaluated for Army Aviation using the existing oxygen system with no assurances of its success; and

• issue of RFP to the indigenous firm is fraught with unnecessary time delay which AHQ could ill afford since the expertise to integrate existing oxygen system specific to RFP already issued does not exist with indigenous vendor.

Doubting the capability of the indigenous product without trial evaluation especially when it was accepted by the Air Force after trials was not proper. When the Air Force had procured an indigenous IOCMH, trials were carried out at high altitude areas of Leh and Siachen, whereas, Army conducted the trial in Bangalore. Thus, the decision to go for import of IOCMH without considering indigenous offers was against the goal of indigenisation.

Audit also found that another Indian firm had introduced themselves as supplier of Oxygen Masks and matching helmets in March 1998. This firm was also not considered for issue of RFP.

The Ministry stated that the Air Force was using oxygen at low pressure while Army Aviation needed regulator with high pressure oxygen and that the requirement being urgent it was decided to entertain the indigenous firm for future requirements.

The Ministry's reply that the requirement was urgent is not tenable as the contract was signed only in March 2006 i.e. 3½ years after being intimated about the existence of an indigenous firm and the required modification could have been carried out by the firm by that time.

1.11 Conclusion

Audit findings showed that the acquisition planning process suffered from delays. The low fulfillment of the Army's five year capital acquisition plans adversely affected modernisation programme and were reflective of the delays in the acquisition process. GSQRs on which the whole process of technical selection was dependent were not formulated correctly resulting in delays due to reformulation of QRs at later stages of tendering. Incorrect formulation of QRs coupled with the absence of objective technical evaluation system militated against objective selection of a product. Due to inadequate vendor base and market research, the competitive market could not be fully exploited.

The Ministry, through DPP 2002, 2005 and 2006 has brought about substantial changes in the acquisition procedure by including amongst others Integrity Pact, off-set provisions, decisions through collegiate process, vendor registration through internet, time frame for procurement process etc. The efficacy of these reforms remains to be seen.

CHAPTER II: RECRUITMENT AND TRAINING OF PERSONNEL BELOW OFFICERS RANK IN THE ARMY

Highlights

The deficiency of the Personnel Below Officers Rank (PBOR) in Army consistently decreased from 6.88 per cent in 2001-02 to an excess of 2.41 per cent over authorisation in 2005-06. The excess manpower in nine Arms and Services resulted mainly due to incorrect estimation of wastages on account of retirements, invalidment, discharge etc. In financial terms, excess manpower in Army involved an additional liability of Rs 129 crore in 2004-05 and Rs 395 crore in 2005-06.

(Para 2. 2.2)

Excess release of vacancies due to incorrect estimation of wastages etc., had impacted the quality of training since the Regimental Training Centres (RTC) had to train recruits in excess of their designed capacities to the extent of 122 to 314 per cent.

(Para 2.2.2 & 2.4.4)

❖ Staffing norms for determining manpower requirements of various Units and Establishments of Army were adopted in 1950s and 1960s. These norms have become outdated and require immediate review to take note of technological advancements and changed scenario.

(Para 2. 2.3)

The system of review of Establishments by the Army Standing Establishment Committee (ASEC) for optimisation of manpower did not work efficiently. Nearly two-third of the establishments due for review, were not reviewed by ASEC during 2001-06. Test checks in 19 establishments disclosed that inordinate delays in review led to delayed optimisation of 4711 personnel for periods ranging from 16 to 274 months.

(Para 2.2.4)

Despite overall excess in the strength of PBOR in Army, there was shortfall in recruitments in EME and Signals cadres against notified vacancies during last six years (2000-06).

(Para 2.3.1)

Test checks in four Recruiting Offices disclosed that an average of 27 to 64 per cent of the candidates initially declared unfit by the Recruiting Medical Officer (RMO) were later declared fit by the Review Medical Board (RMB).

(Para 2.3.2)

The incidence of relegation (extension of training) of trainees (OR) increased from nine per cent in 2001-02 to 22 per cent in 2005-06. The percentage of relegation due to poor performance in training also went up significantly from 34 per cent in 2001-02 to 64 per cent in 2005-06. The increasing trend of the relegation needs to be analysed for effective remedial action by AHQ.

(Para 2.4.2)

There was significant deficiency of critical infrastructure and essential training equipment such as firing ranges, parade grounds, gymnasium, simulators, tanks and other vehicles at RTCs of six Arms and Services test checked in audit. These deficiencies resulted in poor standard of firing of troops and non-achievement of excellence in Battle Physical Efficiency Test/Physical Proficiency Test (BPET/PPT).

(Para 2.4.3 & 2.4.9(ii))

❖ Inadequate co-ordination among the various authorities resulted in significant delays in commencement of Basic Military Training, Technical Trade Training and dispatch of recruits to Units after completion of training.

(Para 2.4.5 & 2.4.6)

Test checks at seven Centres disclosed retention of large number of trained personnel at the Centres and attachment with formation HQ for various non standard duties such as guard at residence, Army Wives Welfare Association (AWWA) duties, Canteen duties, Golf Club duties etc.

(Para 2.4.10)

Gist of Recommendations

- Procedure for assessment of manpower should have provision for mid course corrections based on real time data so that recruitment matches current requirements.
- Staffing norms require periodic review to conform to the environmental realities and the backlogs in the review of Establishments need to be cleared in a time bound manner.

- > AHQ should address the problem of shortfall in recruitment in Technical cadres by de-linking the intake to recruitable male population of States and tapping human resources on a national level
- Army HQ needs to review the working of RMO to ensure more reliable medical assessment of candidates by them and minimise the number of cases being referred to RMB.
- The increasing trend of the relegation needs to be analysed for ensuring quality of intake of human resources and their training.
- Continuous upgradation of training facilities in pace with the Army's modernisation and equipment induction plan should be ensured.
- A well documented feedback system common to all services should be evolved, so that corrections can be applied where necessary.

2.1 Introduction

2.1.1 PBOR constitute 94.17 per cent of the total strength of the Indian Army. PBOR are recruited to be trained and inducted into one of the 194 trades constituting the 19 Arms and Services of the Army. The expenditure on pay and allowances of PBOR, Recruiting Organisations and Training establishments was Rs 11,842 crore in 2005-06. For the Army to remain combat ready, it is vital to correctly assess the manpower requirement, recruit the right candidates in a timely manner and train them adequately for induction into appropriate Arms and Services.

2.1.2 Scope of audit

This performance audit was concerned with the manpower management of PBOR, with thrust on Other Ranks (ORs), i.e. excluding Junior Commissioned Officers (JCOs). It focussed on three major components of manpower management viz. manpower planning, recruitment and training and covered the five year period from 2001-2002 to 2005-2006.

Policy letters, records and documents relating to manpower planning and recruitment were scrutinised at the Directorates concerned of AHQ. Of the 14 Zonal Recruiting Offices (ZRO) and 73 Branch Recruiting Offices (BRO), a sample of six ZRO and 13 BRO was selected for detailed examination.

For evaluating training, apart from examining the documents at AHQ and Army Training Command Shimla (ARTRAC), a sample of 14 of 53 Training Centres was selected for carrying audit scrutiny.

The performance audit was conducted from September 2005 to August 2006.

2.1.3 Audit objective

This performance audit was conducted to verify whether:

- i. assessment of requirement of ORs was done correctly to meet the needs of various Arms and Services effectively;
- ii. recruitments against the vacancies notified were conducted timely following the laid down procedure;
- iii. the training imparted was operationally oriented, need based, contemporary and structured towards practical applications;
- iv. proper co-ordination was maintained among the various authorities to ensure completion of training as per the prescribed schedule and posting of trained recruits to their units without delay; and
- v. the training was cost-effective and the performance of the trained recruits was at the desired level.

2.1.4 Audit criteria

Manpower Planning

- i. Actual holding of manpower vis-à-vis authorisation.
- ii. Actual wastages vis-à-vis estimated wastages.
- iii. Staffing norms for determining War Establishment(WE)⁵/Peace Establishment (PE)⁶.
- iv. Review of Army establishments carried out by various agencies and implementation of their reports.
- v. Optimum utilisation of manpower.

Recruitment

- i. Vacancies identified by the Additional Director General Manpower Planning (ADGMP) vis-à-vis the vacancies notified to Additional Director General Recruiting (ADGR) and actually recruited.
- ii. Adherence to recruitment schedule, recruitment procedures and conformity with the laid down standards and qualifications.
- iii. Adherence to the schedules for dispatch of recruits to training centers.

Training

i. Updating of training syllabus and manual at par with the technology available in the field and conformity of the training with the operational requirements.

⁵ Sanctioned establishment strength of Headquarters, Formation or Unit.

⁶ An establishment normally based on the corresponding war establishment but designed to meet the minimum peace time requirement.

- ii. Adherence to the norms laid down for training such as number of rounds of practice firing, mileage covered for training of Mechanical Transport (MT) drivers etc.
- iii. Adherence to the time schedule laid down for commencement and completion of training, and timeliness of dispatch of trained recruits to units.
- iv. Requirement vis-à-vis availability of infrastructure and equipment required for training.
- v. Performance of recruits in evaluation tests and feed back from their units.

2.1.5 Audit methodology

The performance audit commenced with Entry Conference at the Ministry of Defence and another meeting during midcourse with the Vice Chief of Army Staff (VCOAS). Detailed audit scrutiny was conducted at selected Units/Establishments including AHQ to collect data on performance parameters and evaluate the performance against the audit criteria. The observations raised in each Unit were discussed with the Commandants of the respective Units and their views and concerns were taken into account to arrive at the audit conclusions. The audit findings and recommendations were discussed in the Exit Conferences held at AHQ and finally with the Ministry. The efficiency and effectiveness of the recruitment system were examined with reference to the timeliness and actual availability of recruits at the training centers.

The effectiveness of training conducted by the Regimental Training Centres (RTC) was assessed based on the training syllabus/manual and the technology available on ground, the performance of recruits in tests and evaluation reports of Units. Efficiency of system of imparting training was examined with reference to the extent of adherence to the training schedule and the timeliness in making available trained recruits to Units.

2.2 Audit findings

2.2.1 Manpower planning

The concept of manpower planning in the Army is based on the principle of 'One man out - One man in'. Release of vacancies is to offset the projected wastages⁷ in time so as to maintain the strength of the Army as per authorisation. Prior to April 2000, the recruiting cycle (RC) was annual comprising of four sub-cycles of three months each. The two-year RC was introduced from 2000-2002, which comprised of four six monthly sub-cycles

⁷Wastages are categorised as:

a) Known: i.e. Superannuation

b) Variable: Desertion, premature retirements (PMR), training wastage, death, invalidment, discharge on medical grounds etc.

spread over two years. The whole cycle of release of vacancies, recruitment, training and then deployment of trained soldiers to the Units takes three to four years. It is, therefore, essential that any mismatch between wastages and intake be corrected immediately by adjustment in the next release of vacancies so that the strength of the Army is maintained at the authorised level.

2.2.2 Authorisation and actual holding of manpower

Audit observed excess PBOR in certain Arms and deficiencies in others against the authorisation during the period 2001-2002 to 2005-2006 as shown in Table 10:

Year	Percentage of overall Excess (+)/Deficiency (-)	Arms / Servi deficient m	, -	Arms / Services holding excess manpower		
	against Authorisation in Army	Total No. of Arms / Services	Deficient PBOR	Total No. of Arms / Services	Excess PBOR	
2001-02	(-)6.88	17	75182	02	89 ·	
2002-03	(-)4.05	- 15	47125	04	3063	
2003-04	(-)2.70	15	40680	04	11331	
2004-05	(+)0.87	10	9109	09	18628	
2005-06	(+)2.41	-07	7072	12	33642	

Table 10: Authorisation vis-à-vis holding of PBOR

The deficiency in manpower consistently decreased from 6.88 per cent in 2001-02 to 2.70 per cent in 2003-04 and thereafter the Army had excess manpower of 0.87 per cent during 2004-05 and 2.41 per cent during 2005-06 against authorisation. Though the surplus might be small in terms of percentages, in terms of financial impact, it was significant as it involved an additional liability of Rs 129 crore in 2004-05 and Rs 395 crore in 2005-06 on account of the pay and allowances of the excess manpower.

Thus, while in 2001-02 there was deficiency of manpower in 17 Arms/Services and surplus manpower in two Arms/Services, in 2005-06 there was reversal of the situation whereby seven Arms/Services had deficiency and 12 Arms / Services had surplus.

Audit found that the primary reason for excess holding was the unrealistic estimation of wastages. The annual anticipated wastages, with reference to which Arms and Services declared vacancies in the RC 2000-02 and 2002-04, were higher than the actual wastages during the period. Against the planned 3 to 3.5 per cent Premature Retirement (PMR) wastages, the actual PMR wastages were in the range of 0.8 to 2.43 per cent during 2000-2006. Also, actual wastage against the four per cent training wastage assumed for Recruitment releases was less during 2002-04 and 2004-06. In nine Arms/Services which accounted for more than 80 per cent of vacancies, the release was much in excess due to overestimation of wastages as given in Table 11:

Table 11: Vacancies released in selected Arms/Services

		RC 2000-02		RC 2002-04			RC 2004-06			
Sl. No.	Arms/ Services	Anticipa- ted wastages	Actual wastages	Excess release of vacancies	Anticipa- ted wastages	Actual wasta- ges	Excess release of vacancies	Anticipa- ted wastages	Actual wasta- ges	Excess release of vacancies
1.	Infantry	61792	47036	14756	59901	45454	14447	56440	40096	16344
2.	Artillery	18432	16608	1824	20392	18344	2048	12127	10896	1231
3.	Armoured Corps	6813	6435	378	4348	3879	469	4827	3514	1313
4.	Mechanised Infantry	3649	2526	1123	4377	1942	2435	4049	2602	1447
5.	Guards	4755	2428	2327	4841	2102	2739	4008	1820	2188
6.	EME	11319	12580	(-)1261	13679	7678	6001	16084	8900	7184
7.	Army Air Defence	3568	4666	(-)1098·	4694	3815	879	4895	2918	1977
8.	Engineers	9365	11044	(-)1679	11259	11464	(-)205	6718	4930	1788
9.	Signals	10075	8261	1814	9875	8163	1712	7407	7658	(-)251
	TOTAL	129768	111584	18184 (14 %)	133366	102841	30525 (23%)	116555	83334	33221 (29%)

Thus the overestimation of wastage existed during all the three RCs and it steadily grew from 14 per cent to 29 per cent. Further, Infantry contributed to the overestimation to the extent of 47.3 per cent to 81.1 per cent during last three RCs thereby leading to excess release of vacancies.

AHQ stated in December 2006 that wastages could not be predicted with a great degree of certainty and added that liquidation of the surplus needed to be phased over a period of time for better cadre management. Audit is of the opinion that had AHQ corrected the mismatch in wastages and intake immediately by adjustment in the next release, the surplus on account of unpredictable wastages could have been avoided.

AHQ added that temporary surpluses occurred due to certain policy changes pertaining to accretion, disbandment and manning profiles due to operational necessity. These included imposition of a cut of 50,000 personnel in 1997 and its subsequent revocation in 2001, raising of Rashtriya Rifle (RR) battalions for which vacancies were released in RC 2000-2002 (18,965) and RC 2002-04 (7,074), releasing of 14,000 additional vacancies in RC 2000-2002 to cater for anticipated casualties in Operation (OP) Vijay, releasing of 17,392 vacancies in RC 2000-2002 in lieu of Low Medical Category (LMC) personnel held on strength and releasing of 20,814 manpower against Foot notes⁸ in RC 2000-02 (9,892) and RC 2002-04 (10,922). An examination of these factors by Audit revealed that:

(i) As per Government policy, 51 per cent of the strength of RR has to be drawn from the Infantry. During the Recruiting cycle 2002-04, of the total requirement of 7,074 for RR, 51 per cent i.e. 3,537 was to be drawn from the Infantry. During this period, Infantry was already

⁸ Manpower provided to enable establishments to invoke additional manpower essential for functional/operational needs pertaining to specific circumstances.

- holding a surplus of 10,578 OR, yet additional vacancies of 3,537 were released for Infantry during the RC.
- (ii) Release of additional 17,392 vacancies in lieu of OR held under Low Medical Category was not in accordance with the policy of 'One man out-One man in' and was without the approval of the Ministry.
- (iii) As per Government orders, the footnote manpower should not exceed 17,000. During OP Vijay the Army was already operating with 17,000 footnote manpower. Yet vacancies for 9,892 and 10,922 footnote manpower were released in the recruiting years 2000-02 and 2002-04 respectively without the approval of the Government.

Therefore, the excess manpower during 2004 to 2006 could have been avoided by judicious and timely action and adherence to Government policy. Apart from the extra expenditure of Rs 524 crore on account of the excess recruitment of OR mentioned above, the excess release of vacancies of manpower impacted the quality of training since the Regimental Training Centres (RTC) had to train recruits in excess of 122-314 *per cent* of their designed capacity as mentioned in Para 2.4.4.

AHQ stated in December 2006 that a computer model had been introduced with effect from June 2006 for refining the manpower management process to avoid excess release of vacancies.

2.2.3 Non-revision of staffing norms

The norms, adopted for determining the manpower component included in WE/PE of Units/ Establishments, were of 1950s and 1960s vintage and did not conform to the contemporary environment due to technological advancement. It was only in February 2005 that VCOAS ordered a study to carry out a review of the staffing norms in a holistic and comprehensive manner. AHQ stated (December 2006) that the review would take note of the changed environmental realities and that staffing norms of all Establishments and trades were brought under the scope of the study.

2.2.4 Delay in review of manpower

(i) Army Standing Establishment Committee (ASEC) is responsible for periodical review of the WE/PE of Units/ Establishment referred to them by the line directorates in AHO.

Audit observed inordinate delay in initiating cases for review of Units/ Establishments by line directorates and in carrying out the review by ASEC. Of the 750 Establishments due for review during 2001-02 to 2005-06, line directorates referred 330 Establishments only for the review. Of these, ASEC reviewed only 253 Establishments. Thus nearly two-third of the Establishments due for review were not reviewed during 2001-06.

AHQ stated in December 2006 that the delay in review was due to lengthy procedures and that the procedural time frame had been shortened in 2006 and

a provision for unilateral review incorporated to avoid such delays. ASEC had informed Audit that due to manpower inadequacy of their own establishment, review of only 50-70 establishments could be completed as against the requirement of about 150 establishments in a year. AHQ stated that the Units/Establishments are reviewed after expiry of the current sanction and not on average basis. This reply did not adequately address the issue of deficient manpower indicated by ASEC since even from the referred cases (out of 750) there was a shortfall of 23 per cent (77 out of 330) in the review of the Establishments during 2001-06.

(ii) Test check in 19 Establishments revealed that inordinate delay led to delayed manpower optimisation (redistribution of surplus) of 4711 personnel for periods ranging from 16 to 274 months.

AHQ stated (December 2006) that the savings, if any, were used for new raisings within the Army. The fact, however, remains that the said 19 Establishments continued to operate with 4711 surplus PBOR instead of diverting them to other Establishments where their services could have been gainfully utilised.

2.2.5 Positioning of men without providing required weapon/equipment

- (i) 370 PBOR including 290 OR were released from temporary suppressions⁹ to cater for reorganisation of five battalions of Para Special Forces into a four team configuration from the existing three team structure as per AHQ executive instructions issued in July 2003. The reorganisation was to be completed by August 2004. Audit found that these battalions were provided with full complement of manpower, yet the necessary weapons were not made available as of December 2006. AHQ while admitting the facts stated (December 2006) that action was on hand to provide weapons and equipment to the Units as per authorisation.
- (ii) Ten squadrons were to be raised under the Army Aviation Directorate during 9th and 10th Army Plan as per the Army Aviation Accretion Plan. In addition to the basic manpower of Aviation Corps, dedicated EME technical personnel were required to provide maintenance cover to the equipment authorised to these squadrons. Government sanction was issued for two squadrons and sanction for the balance squadrons was awaited as of December 2006. EME Directorate, however, initiated advance action for recruitment in anticipation of Government sanction for raising these squadrons. Resultantly, 833 EME personnel were rendered surplus as of September 2006 for want of Government sanction for raising of eight squadrons.

AHQ stated (December 2006) that manpower was catered for the above accretion keeping in view the time required for training and attributed the delay to serviceability problems and delay in delivery of helicopters by Hindustan Aeronautics Limited.

⁹ Reduction in Strength

Recommendations

- Procedure for assessment of manpower should provide for timely midcourse corrections based on real time data after expiry of each sub cycle so as to match the recruitment with current requirements.
- Staffing norms require periodic review and revision to conform to technological advancement.
- The revision of staffing norms be speeded up and the backlog in review of Establishments be cleared on a time bound manner.

2.3 Recruitment

Recruiting system through recruitment rallies was introduced with effect from April 1998 to make the recruitment process more transparent and fair.

2.3.1 Shortfall in Recruitment to Technical cadres

Despite the existence of excess manpower in the Army as a whole, there was shortfall inter alia in recruitment to EME and Signals as shown in Table 12:

Recruitment Cycle	Vacancies released	Recruitment made	Shortfall (-)/ Excess (+)	Shortfall (per cent)
	-	EME		
2000-02	13691	11072	(-)2619	19.1

Table-12: Shortfall in Recruitment to Technical Cadres

Recruitment Cycle	Vacancies released	Recruitment made	Shortfall (-)/ Excess (+)	Shortfall (per cent)
		EME		
2000-02	13691	11072	(-)2619	19.13
2002-04	18491	18712	(+)221	0
2004-06	11981	9873	(-)2108	17.59
		Signals		
2000-02	9091	6716	(-)2375	26.12
2002-04	19957	17923	(-)2034	10.19
2004-06	13880	11087	(-)2793	20.12

There was general shortage in filling the vacancies released for EME and Signals to the extent of 10 to 26 per cent.

AHQ attributed (December 2006) the shortfall to the stringent norms relating to educational qualifications at the intake level. AHQ added that shortfall was also due to the policy linking recruitment to the total recruitable male population of each state, which prevented the transfer of shortage in filling of vacancies allotted to one state to other states, except with the approval of the Defence Minister. However, to tide over the difficulty of recruiting candidates meeting the prescribed educational standards, the norms were revised and AHO claimed that shortfall levels had reduced drastically thereafter. Dilution of standards to fill the vacancies in technical cadres is not a preferred solution. In such cases, it would be ideal to delink such cadres from the policy of linking intake to the recruitable male population factor and to tap the wealth of technically competent candidates on a national level rather than confining to regional levels and thus compromising quality of intake.

2.3.2 Lacunae in system of medical examination prior to recruitment

As a rule, Recruiting Medical Officer (RMO) should not examine more than 40 candidates in a day since it was acknowledged that performing more than the prescribed medical examination would be extremely taxing. Scrutiny of the documents in the Recruiting Offices test checked in audit revealed that the number of candidates medically examined by an RMO exceeded the prescribed limit of 40 candidates. Inadequate initial medical examination was evident from the large number of cases getting referred to Review Medical Board (RMB). In four Recruiting Offices, an average of 27 to 64 per cent of the candidates initially declared unfit by the RMO was later declared fit by the RMB. AHQ stated in December 2006 that the growing level of awareness amongst the candidates prompt them to opt for review when they are declared unfit by RMO. AHQ added that it was not unusual of giving differing medical opinions by different medical officers. The reply is not acceptable as the percentage of cases being declared fit after review by RMB was significantly high and calls for an independent assessment of their evaluation methodology.

2.3.3 Inadequacy of system of feedback on quality of recruits

System of feedback is a major tool for evaluating the quality of recruits. A system of feedback on quality of recruits was introduced from November 2004 wherein the Regimental Training Centres (RTCs) were required to give feedback on the quality of recruits to the Headquarters Recruiting Zones (HRZ). Accepting the inadequacy of the feed back system, AHQ stated in December 2006 that the HQ Recruiting Zones were directed to obtain feed back of quality of recruits from all RTCs.

2.3.4 Dispatch of recruits to the RTCs throughout the year resulting in delay in formation of squads by the RTCs

AHQ stipulated (August 2002) a dispatch schedule of recruits, according to which recruits were to be dispatched by ROs to RTCs in batches in July, September, January and March. AHQ in February 2004 revised the dispatch schedule to the months of June, September, December and March to facilitate the RTCs to form viable training squads.

Audit in two ROs revealed that the newly enrolled recruits were dispatched to RTCs throughout the year disregarding the schedule prescribed by AHQ, resulting in the recruits idling in the RTCs awaiting commencement of Basic Military Training. AHQ stated (December 2006) that no despatch months had been specified for Defence Security Corps (DSC) and Territorial Army (TA) and those recruited to these cadres were dispatched throughout the year. Audit comment was however on dispatching recruits other than DSC and TA. There is, therefore, a necessity to instruct the ROs to adhere to the schedules to avoid idle manpower.

Recommendations

- AHQ should address the problem of shortfall in recruitment in Technical cadres by de-linking the intake to recruitable male population of States and tapping human resources on a national level.
- Army HQ needs to review the working of RMO to ensure more reliable medical assessment of candidates by them and minimise the number of cases being referred to RMB.

2.4 Training

2.4.1 Deficient training

(i) Scales are laid down for use of ammunition in firing practice for recruits so that they can have complete exposure to handling and firing of weapons. Analysis of the ammunition utilised for firing practice in respect of seven¹⁰ Training Centres revealed that the scales were not adhered to as there were significant shortages and excess in annual consumption of ammunition.

AHQ stated (December 2006) that training standards were not diluted and no recruit who had failed in firing was made to pass out.

The syllabus for MT drivers requires a recruit to drive a minimum of 750 km during the training period of 19 weeks but the distance actually covered by the recruits during driving training was far less at three Centres as indicated in the Table 13:

Table 13: Shortfall in mileage covered in driving training

Centre	Kilometers to be covered	Kilometers covered during training	
ACC&S, Ahmednagar	750	296 то 460	
BEG&C Kirkee	750	209 то 816	
AAD Nasik	750	195 то 1053	

Driving training was imparted only on the training tracks and less exposure was given in the highway driving, city driving, convoy driving, night driving etc. AHQ attributed the deficient training of MT drivers to excess intake of recruits but added that RTC was able to achieve the terminal objective by instituting innovative measures. To remedy the problem, AHQ agreed to initiate issue of a uniform driving syllabus for recruits for ensuring standardisation of training and to acquire driving simulators.

¹⁰ (1) Artillery Centre, Hyderabad (2) ACC&S (3) 2 STC, Goa (4) MRC, Wellington

^{(5) 1}EME Centre (6) Artillery Centre Nasik and (7) Sikh LI Centre

2.4.2 Poor performance of recruits during training

Audit noticed that significant number of ORs were relegated (extension of training) each year due to poor performance in training. The incidences of relegation on this account in eight Centres are indicated in the Table 14:

Table 14: Relegation of ORs in eight¹¹ Centres

Year	2001-02	2002-03	2003-04	2004-05	2005-06
Average strength of recruits in eight Centres	19899	25487	37337	30460	22233
Recruits relegated in eight Centres	1867	4886	4934	5950	4800
Percentage of total Relegation to Avg. Strength of recruits	9	19	13	20	22
Relegations on account of poor training	635	2865	2450	3666	3056
Relegation due to poor training as a percentage of the total relegation	34	59	50	62	64
Total period (days) of relegation on account of poor training	17457	74934	72348	96625	967.10
Per capita rate of manpower in Rupees.	118036	123813	128806	135719	148685
Expenditure on relegation on account of poor training (Rupees in crore)	0.56	2.54	2.55	3.59	3.94
Total cost of relegation on account of poor training (Rupees in crore)	. 14				

The incidence of relegation increased steadily from nine *per cent* in 2001-02 to 22 *per cent* in 2005-06. The percentage of relegation due to poor training also went up significantly from 34 *per cent* in 2001-02 to 64 *per cent* in 2005-06.

Audit analysis revealed relegation of 33 batches at BEG&C Kirkee and two batches at Maratha Light Infantry Regimental Centre (MLIRC). AHQ stated in December 2006 that the relegation had been within the permissible limits. The batch relegation in the BEG&C was due to weaknesses noticed during centralised tests of drill and range classification where majority of the recruits were of average or below average standards and the relegation in MLIRC was carried out to instill sense of discipline. AHQ stated in December 2006 that relegation was dependent on quality of human resources being trained, physical build up and capability to withstand stress etc. The increasing trend of the relegation however needs to be analysed for ensuring quality of intake of human resources and their training.

2.4.3 Inadequate training facilities

Up-gradation of training facilities must be in pace with the Army's modernisation and equipment induction plan. Shortage of infrastructure such as parade ground, firing ranges, education blocks, training sheds, driving

⁽¹⁾ Artillery Centre, Hyderabad (2) AAD, Nasik (3) 2 STC, Goa (4) 1 EME Centre (5) Artillery Centre Nasik, (6) Sikh LI Centre (7) MLIRC and (8) JRC Bareilly.

track, physical training facilities, simulators and other training aids and equipment were noticed at RTC of six Arms/Services as discussed below:

(i) Artillery

The Artillery Centres of Nasik and Hyderabad were holding inadequate equipment/stores such as DRONA Simulators, KRAZ vehicles for 130mm Gun, Global positioning system, BCM for Gun 155mm, Arty. Trainer 14.5mm and Bofors gun.

Bofors gun was introduced in the Army in 1988. The guns were authorised to the Centre only from March 2002, but the ammunition for this Gun was yet (February 2006) to be authorised; therefore, only theoretical training was imparted. Trainees in Artillery Centre, Hyderabad underwent training without 105/37mm LFV and AT 14.5mm in the year 2001-02 to 2005-06.

Because of shortage of vehicles and the excess recruit strength at Artillery Centre, Hyderabad, the recruits could not be trained for the prescribed mileage of 750 km.

The two small arms firing range of the Artillery Centre Nasik for small arms firing practice of recruits was being shared by Army Air Defence (AAD) Centre Nasik. The existing small ranges were found to be grossly inadequate for training of recruits. AHQ agreed (December 2006) that shortage of training infrastructure coupled with the excess recruit strength adversely affected the standard of training.

(ii) Engineers

Nine items of Counter Improvised Explosive Devices (IED) equipment were authorised to three Engineers' training centres in August 2001. In the absence of the equipment, the centres were conducting only theoretical training till December 2005. Further, Engineer Centres Roorkee and Kirkee had deficiency of equipment, due to which only familiarisation training was imparted.

Engineer Centre Kirkee was to impart Nuclear Biological & Chemical (NBC) training to 120 recruits annually against which training for only 86, 69 and 54 was conducted during 2003-06 due to shortage of training equipment and infrastructure. Accepting the existence of deficiency of equipment in the Centres, AHQ stated in December 2006 that in the absence of the equipment, training was being imparted using models and other audio visual aids but added that the situation had improved.

(iii) Signals

The Signal Centre, Goa had deficiency of educational blocks, firing ranges, MT Driver track, assault course, obstacle course, swimming pool and gymnasium resulting in deficient training. The existing facilities were created in the 1960s. AHQ stated in December 2006 that sufficient infrastructure was expected to be created by 2009-10.

(iv) Army Air Defence

Army Air Defence, Nasik was imparting training as of May 2006 to recruits without Radars, which is a vital equipment for such trainings. AHQ stated in December 2006 that recruits were being given training through mock up models.

2.4.4 Training beyond designed capacity

While the Training Centres had severe shortages of infrastructure, excess release of vacancies due to improper assessment of manpower resulted in the Centres training recruits in excess of their designed capacity to the extent of 122 per cent to 314 per cent. This adversely impacted the quality of training imparted. The excess training in respect of four Arms/ Services is brought out in the Table 15:

Table-15: Recruits strength and designed capacity of Training Centres

Arm/Service	Designed	Year wise strength of recruits strength as a percentage of designed capacity					
	Capacity	2001-02	2002-03	2003-04	2004-05	2005-06	
Corps of Engineers	8100	10610 (131 %)	17978 (222 %)	20786 (257 %)	14048 (173 %)	7377 (91 %)	
Infantry	17760	32533 (183 %)	32498 (183 %)	38229 (215 %)	24133 (136·%)	17003 (96 %)	
Armoured	2400	2928 (122 %)	5592 (233 %)	6924 (289 %)	7535 (314 %)	3892 (162 %)	
Artillery	5400	13550 (251%)	14181 (263%	14278 264%)	10184 (189%)	3405 (63%)	

Figures are as furnished by line directorates

Given that the infrastructure and training facilities/equipment at the Centres were inadequate even as per the designed capacity, the excess strength of recruits hindered proficiency level of trainees.

AHQ stated (December 2006) that increase in training beyond capacity was due to stoppage of training during OP Parakram and that the situation had since improved. AHQ added that to avoid such a situation, planning of forecast should be based on wastage envisaged and ensure smoothening out of the cluster effect.

2.4.5. Delay in commencement of training

i. Delay in commencement of Basic Military Training (BMT)

The Ministry in their Action Taken Note on Para 6.2 of the Report No.13 of 1992 of the Comptroller and Auditor General of India, stated in September 2000 that after the introduction of the new manpower policy, delay in commencement of the training after recruitment would not be more than one

or two weeks. Audit observed persistent delays in 12 Centres in commencement of BMT, with delays ranging from one to seven months, as shown in Table 16:

Table 16: Delay in commencement of BMT

Centre	Maximum delay upto (Days)
MLIRC	118
MRC	90
ACC& S	218
1 EME	136
BEG & C Kirkee	92
Arty Centre Nasik	31
Arty Centre, Hyderabad	31
2 STC	31
Army Air Defence Nasik	150
JRC	128
PRC	. 30
Sikh LI	184

AHQ stated in December 2006 that there was no significant delay in Armoured Corps Centre and School (ACC&S) and Artillery Centres and that the delay in other Centres was due to irregular reporting of recruits from ROs and time required for preparation of squads. AHQ added that synchronisation of reporting of recruits to RTC from the RO for formation of viable squad was necessary and corrective measures were being taken. The significant delay in taking corrective measures despite the assurance given to the Public Accounts Committee was unjustified.

ii. Delay in commencement of Technical Trade Training

Trade/Advanced training at Centres was required to commence after expiry of four weeks' leave to recruits granted immediately on completion of BMT. Analysis of the documents at four Centres revealed that the Centres failed to follow the laid down procedure leading to delays in commencement of trade and technical training as detailed in Table 17:

Table 17: Delay in commencement of Technical Trade Training

Centre	Delay in days for Tech. Training
MLIRC	7 to 330 days
ACC&S	7 to 205 days
1 EME	7 to 285 days
2 STC	7 to 49 days
Arty Hyderabad	2 months to 16 months

AHQ stated (December 2006) that there was no delay in ACC&S but attributed the delay in other Centres to non-availability of economically viable training strength, non-availability of course vacancies, unexpected relegations etc.

2.4.6 Delay in dispatch of recruits to Units

In response to Para 6.2 of the Report No.13 of 1992 of the Comptroller and Auditor General of India, the Ministry stated in September 1992 that AHQ had formulated a policy to avoid delay in dispatch of recruits to Units on completion of training. Whenever there is a requirement to hold trained manpower after completion of training because of duties given to the Training Centre by static formations, Centre Commandants were required to ensure that such delays do not exceed four weeks.

However, delay in dispatch of recruits to Units beyond the grace period continued. One of the reasons for such delay was non-availability of vacancies at the Unit level.

AHQ stated in December 2006 that there were certain delays which were within the permissible time frame, personnel were deployed for only *bona fide* duties and that there was no idle manpower. However, AHQ added that necessary instructions had been issued to the Centres for ensuring physical movement of recruits immediately after completion of training.

2.4.7 Inconsistent syllabus

The laid down block syllabus for BMT was 19 weeks for all Arms and Services other than Infantry. There was wide variation in the periods allotted for each drill in all the three Centres of Engineers Corps. Passing in Basic Foundation Course (BFC) was one of the mandatory requirements before attestation and for this purpose 139 periods had been provided in block syllabus. However, BEG&C, Kirkee was not imparting any training in BFC and BEG&C, Roorkee was imparting only five periods for the same.

The draft range course for INSAS firing for Basic Military Training (BMT) issued in 2001 prescribed night firing in the syllabus for Infantry, but not for other Arms/Services. The absence of night firing in the syllabus of the other Arms/Services indicated non-standard syllabi for common training/courses. Director General Military Training (DGMT) confirmed in September 2006 that the draft range course had since been made common for all Arms and Services.

ACC&S imparts recruit training as per Standard Pamphlet 1956, which was outdated and did not fulfill the needs of change in technology.

AHQ stated (December 2006) that remedial action was already on hand.

2.4.8 Excess duration of training

There was excess training in engineer and infantry centres as indicated in the Table 18 as the prescribed period and syllabus for BMT of 19 weeks and Technical trade training of four to 42 weeks were not being followed:

Table 18: Excess duration of training

Centre	Nature of excess/ unauthorised training	Period of excess training	Remarks
BEG &C Kirkee	Technical advanced trade training to certain trades	1-5 Weeks (Stage I &II) &2-25 weeks (in stage III)	Duration of technical and trade training applicable to all Sapper Centres was approved by E-in-C's Branch in January 2005 which was not complied with.
BEG &C Kirkee	Clerks training	4 weeks	Reduction in clerks training from 38 to 34 weeks applicable since January 2005 was not implemented.
BEG &C Kirkee	Recruit Refresher Training	7 weeks	 7 weeks in respect of trades like clerks, store keeper etc Relegation of 7 weeks to failed recruits which is not authorised. 4 weeks training in BPET/PPT which is not authorised as per policy.
BEG &C Kirkee	Pre BMT	2 weeks	As per the Army Training Note 6/98, pre BMT is not authorised.
MRC	Basic and Advanced Training	7 – 15 weeks	Basic Training and Advance Training in excess of the laid down schedule.
MLIRC	CI capsule	2 weeks	Against authorised 2 weeks, 4 weeks training was imparted.

The training syllabus of trade Store Hand General Duty (SHGD) of both Ordnance and Artillery with same training content had widely varying durations. Even though ASEC recommended bringing it at par with that of the Ordnance Corps thereby reducing the training period of four weeks, Artillery Centre, Hyderabad continued with the old duration of 16 weeks.

AHQ stated (December 2006) that remedial action had been taken where anomalies existed.

2.4.9 Effectiveness of training

i. Absence of mechanism to assess user satisfaction on posting of trained soldier

Training establishments are required to elicit a feed back from units under all Arms/Services except in Infantry. But the Centres took no action on the reports of weakness in the training. This system of feedback was discontinued from June 2004 by Director General (DG) AAD in respect of AAD units. AHQ stated in December 2006 that standards achieved by the recruits were being reflected in the recruitment card carried by the recruit to the unit. However, there is no system of regular feed back from the units to the Centres on the quality of newly posted recruits.

ii. Non-achievement of the laid down standards in the training directives

The Annual Training Directives issued from time to time by DG Infantry laid down that all Centres should strive to ensure that recruits achieve minimum of first class in shooting while 25 per cent should achieve Marksman in INSAS and 20 per cent Marksman in LMG firing. It was seen from the training reports that the targets laid down by the DG Infantry were not achieved as is evident from the Standards achieved by MLIRC during last five years indicated in the Table 19:

Table 19: Standard achieved in firing by recruits during 2001-06 INSAS RIFLE

Period	Actual Achievement								
	Marksman (Those scoring 70 % and above)		First Class (Those scoring 60 % and above)		Standard Shoot (Those scoring 40 % and above)				
	Norms Ach		Norms	Achieved	Norms	Achieved			
	(%)	(%)	(%)	(%)	(%)	(%)			
2001-02	25	2.18	75	21.56	-	76.26			
2002-03	25	1.00	75	20.72	_	78.28			
2003-04	25	1.67	75	15.76	-	82.57			
2004-05	25	1.91	75	16.95	· -	81.14			
2005-06	25	3.40	75	41.58	-	55.02			

LMG

Period	Actual Achievement							
ļ	Marksman First Class		Marksman First Class		First Class		Stand	ard Shoot
	Norms (%)	Achieved (%)	Norms (%)	Achieved (%)	Norms (%)	Achieved (%)		
2001-02	20	0.35	80	11.22	-	88.43		
2002-03	20	0.16	80	12.36	-	87.48		
2003-04	20	0.60	80	11.48	-	87.92		
2004-05	20	2.76	80	13.17	-	84.07		
2005-06	20	4.58	80	16.47	-	78.95		

Further, as per INSAS firing norms, four marks in night firing were required for securing Standard Shoot in 5.56 mm Rifle, but recruits obtaining 0 to 3 marks in night firing were also declared passed by MLIRC. The Centre stated that the point system was wrongly adopted due to oversight. Further, DG Infantry had fixed target of 80 per cent excellent BEPT/PPT for recruit test for Centres but the grading obtained ranged from 32 to 78 per cent without any case of excellent grading. AHQ stated that the Centre was achieving the basic requirement and standards laid down by the Training Directorates but the Infantry Directorate in their Training Directives laid down higher standards to foster competitiveness.

2.4.10 Attachment of trained recruits for non-standard duties

An analysis of the data at seven centres revealed retention of trained personnel at Centre and attachment with Formation HQ for various non bona fide duties

such as guard to residence, Army Wives Welfare Association (AWWA) duties, Canteen duties, Golf Club duties etc as detailed in the Table 20:

Table 20: Details of trained recruits attached for non-standard duties

Centre/Units	Nos. of personnel away from Units/Centres	Period	
20 Infantry Centres	953 OR	2004-05	
BEG&C Kirkee	23 JCO & 679 OR	2001-02 to 2005-06	
MEG&C Bangalore	5 JCO & 142 OR	2004-05	
BEG&C Roorkee	35 Admn. & 10 Trg. Staff	2004-05	
ACC&S	447 OR	2001-02 to 2005-06	
Arty Centre Nasik	17 JCO & 276 OR	2001-02 to 2005-06	
Arty Centre Hyderabad	27 JCO, 1102 OR	2001-02 to 2005-06	

This deployment of trained recruits for non bona fide duties had deprived the availability of authorised manpower as per PE/WE at Units.

AHQ did not accept the contention of deployment of personnel for non bona fide duties but stated in December 2006 that Headquarters Command and Regimental Centres were instructed to utilise only five per cent of administrative staff outside Regimental Centre duties of temporary nature.

Recommendations

- > Upgradation of training facilities must be in pace with the Army's modernisation and equipment induction plan. There is need to standardise the training infrastructure including training aids to all the Training Centres.
- The training curriculum must be reviewed periodically in consultation with the Training Centres and the Units to ensure that it meets the current training needs.
- All newly inducted training weapons and equipments should be scaled for the Centres.
- A workable feedback system from the users to the training establishment should be evolved, so that corrections can be applied where necessary.

2.5 Conclusion

There were inadequacies in manpower planning as reflected by incorrect assessment of requirement of PBOR in Army resulting in significant excess holding of manpower and consequent excess expenditure. Therefore the Ministry needs to take timely corrective action. Management of training also revealed various inadequacies like delay in commencement of training and delay in despatch of trained recruits to units because of which timely

availability of trained recruits at the units could not be ensured besides wastage of resources. Inadequate infrastructure and facilities led to compromise on the training standards of recruits. Overall quality of intake of human resources needs to be kept in view.

The matter was referred to the Ministry in October 2006; their reply was awaited as of December 2006.

CHAPTER III : MANAGEMENT OF TRANSPORT IN THE ARMY

Highlights

There were significant delays in modernisation of transport fleet in the Army. Restructuring of the fleet of 'B' vehicles initiated in 1971 had not been implemented fully till 2006. Of the three classes of vintage vehicles planned to be replaced, 24 per cent and 42 per cent of vehicles in two classes remained to be replaced by new generation vehicles as of May 2005.

(Para 3.2.1)

Delay of nearly three decades in implementation of the restructuring decision resulted in Army carrying on with the vehicles that were not only fuel inefficient but also did not match the changed tactical concepts and weapons and equipment profile.

(Para 3.2.2 and 3.2.3)

The system of review of Establishments by Army Standing Establishment Committee (ASEC) to right-size their manpower, vehicles and equipment did not work efficiently as 66 per cent of the existing establishments were not reviewed by ASEC within the stipulated time frame. Review of balance 34 per cent establishments done by ASEC was delayed by three to six years resulting in an estimated savings of Rs 423.39 crore not being achieved.

(Para 3.3.1)

❖ The Management Information System of the Army was deficient as the information maintained by Management Information System Organisation about vehicle authorisation and holding of various units and establishments was incomplete and unreliable.

(Para 3.3.2)

❖ Procedural delays and involvement of multiple agencies delayed issue of authorised vehicles to Units upto two years or more. Test check in Northern Command disclosed delay of six to 29 months in issue of 1229 vehicles to the indenting Units.

(Para 3.5.1)

Army Headquarters were holding vehicles much in excess of their authorisation to the extent of nearly 400 per cent by inducting, hiring, and attaching vehicles irregularly from lower units/formations.

(Para 3.5.2)

Unserviceable vehicles numbering about 32,000 were lying in depots awaiting disposal, resulting in unnecessary inventory carrying cost and loss of disposal value due to prolonged storage.

(Para 3.6.1)

Despite the deficiency in vehicle holding getting reduced, expenditure on hiring of civil transport increased by 17 per cent during 2003-06. While there was reduction of 23 per cent in expenditure on hiring of store carrying vehicles, the expenditure on hiring of personnel carrying vehicles registered a significant increase from Rs 30.18 crore in 2003-04 to Rs 86.53 crore in 2005-06.

(Para 3.6.2).

Service transport was used for non *bona fide* duties without realisation of hire charges.

(Para 3.6.4)

Gist of recommendations

- There is a need to review the existing futuristic 'B' vehicle policy considering the developments in the automotive technology and to implement them in a time bound manner.
- Timely review of establishments by ASEC should be ensured.
- Procedure for issue of vehicles to units should be streamlined so as to avoid delay in availability of vehicles to units.
- Attachment of vehicles of subordinate offices by higher formations should be discouraged; if found inevitable, attachment should be regulated by framing policy guidelines so that the subordinate units are not deprived of their entitlement.

3.1 Introduction

The vehicles used by the Army are grouped into three classes. Class 'A' constitutes the fighting vehicles, Class 'B' constitutes personnel carrying/load carrying and specialist vehicles and Class 'C' constitutes all cranes,

engineering plants and earth moving equipments. Transport is the life line of the troops during peace time as well as during operations. Class 'B' vehicles, which provide mobility and logistic support form the transport fleet of the Army and are organised as 1st line, 2nd line and 3rd line fleet. 1st line transport authorised to all Units/Formations and establishments meets the operational, functional and administrative needs. The 2nd and 3rd line transport are reserve resources at the disposal of Division (Div), Corps and Command Headquarters (HQ) for stocking, moving forward and replenishment of the Units and Formation in the combat zone.

The Vice Chief of Army Staff (VCOAS) enforces management of transport in the Army through various Branches/Directorates as per Table 21 below:-

Table 21- Responsibility centres for management of transport in the Army

Centre	Responsibility				
Weapon Equipment (WE) Directorate	Policy formulation and initial induction of vehicles.				
Master General Ordnance (MGO)	Procurement, issue, maintenance and discard of vehicles.				
Directorate General Operational Logistics (DGOL)/ Directorate General Military Operations (DGMO)	Deployment, usage in peace and operations and movement of vehicles.				
Directorate General Supply and Transport (DGST)	Management of 2 nd and 3 rd line transport through Div/Corps/Command HQ.				
Respective Line Directorate	Management of 1 st line transport.				
Management Information System Organisation (MISO)	Collection, compilation, maintenance and analysis of data relating to vehicles.				

3.1.1 Scope of audit

This Performance Audit focussed on management of Class 'B' vehicles during the five years from 2001-02 to 2005-06 and was conducted between May and August 2006. Where complete data for the five years were not available, the audit was restricted to three years from 2003-04 to 2005-06.

Besides examining the policy documents and records at Integrated HQ of the Ministry of Defence -Army (AHQ), field work was conducted at all Command HQ except South Western Command. One each of Corps HQ, Div HQ,

Area/Sub Area HQ, Station HQ in each Command were selected as sample. Central Vehicle Depots (CVD)/Vehicle Depots (VD)/Vehicle Sub Depots (VSD), were also covered. In addition, three static and five non-static Units in each Command were selected to examine $1^{\rm st}$ line transport and a sample of Army Service Corps (ASC) Battalions/Transport companies was selected to examine $2^{\rm nd}$ and $3^{\rm rd}$ line transport. Details of units covered under the Performance Audit are given in *Annexure – X*.

3.1.2 Audit Objective

The performance audit was conducted to examine whether:

- i. the fleet composition of transport vehicles in Army was in tune with the changing operational needs and developments in the automobile industry;
- ii. the assessment of requirement of vehicles was realistic based on actual user needs;
- iii. the procurement of vehicles was carried out in a cost effective and timely manner;
- iv. vehicles held by the Units were as per their authorisation and that there were no serious deficiencies that could affect their operational preparedness;
- v. vehicles were utilised optimally and efficiently; and
- vi. hiring of civil vehicles was economical.

3.1.3 Audit Criteria

- i. Fleet composition *vis-à-vis* approved vehicle policy.
- ii. Timely induction and de-induction of vehicles in line with the decided fleet mix.
- iii. Timely and realistic revision of norms of authorisation of vehicles.
- iv. Vehicles held vis-à-vis authorisation.
- v. Laid down norms for fuel efficiencies, utilisation, and disposal of vehicles.

3.1.4 Audit methodology

The performance audit commenced with an entry conference at the Ministry of Defence (Ministry) and another meeting during mid-course with the VCOAS. Performance audit involved collection of data through scrutiny of records and files at AHQ, Command HQ and other selected Units and Formations; analysis of data and evaluation of performance based on pre-determined set of audit criteria. The observations raised in each sample unit were discussed with the Commandant of the Unit and their views and concerns were taken into account to arrive at the audit conclusions. The performance audit concluded with exit conference at the AHQ and the Ministry.

Audit findings

3.2. Modernisation and optimisation of the fleet of 'B' Vehicles

The fleet of 'B' vehicles held by the Army was based on the World War-II load classification. Shaktiman 3 Ton (4x4), Nissan 1 Ton (4x4) and Jonga 250 Kg class were the main load and personnel carrying vehicles used by the Army. In 1971, a study was conducted by AHQ to identify a new optimum mix of vehicles to match the new load pattern and tactical requirements. The Study Team recommended replacement of 250 kg Jonga (4x4), Nissan1 ton (4x4) and Shaktiman 3 ton (4x4) by 500 kg (4x4), 2.5 ton (4x4) and 5/7.5 ton (4x4/6x4/6x6) vehicles respectively. Government accepted these recommendations in September 1972. After preparation of the General Staff Qualitative Requirements (GSQR) in 1975-76, extensive trials of the new generation of vehicles were carried out in different terrains from 1982 to 1985.

AHQ formulated a futuristic vehicle policy in July 1988. According to this policy, the vehicles used by the Non-Field Forces (NFF) should be of commercial design and 4x2 configurations. This would result in cost effectiveness besides fuel efficiency. Accordingly, 50 per cent of the existing 3 ton vehicles held by NFF were to be replaced by 1 ton Light Commercial Vehicles (LCV) in the NFF. Based on further trial evaluation and studies conducted in 1988-89, Ministry decided in December 1989 to induct Maruti Gypsy (in 500 Kg class) and Telco 2.5 ton 4x4 (to be productionised in Vehicle Factory Jabalpur (VFJ)) as a replacement of 250 kg Jonga and 1 ton Nissan vehicles respectively. After further trials, Ministry also approved introduction of 5/7.5 ton 6x6 Stallion vehicles in replacement of 3 ton Shaktiman vehicles in March 1993. Introduction of futuristic class of vehicles was expected to result in considerable savings. The annual saving based on life cycle cost analysis was assessed at Rs 156.51 crore in case of replacement of 250 Kg Jonga vehicles by Maruti Gypsy vehicles and Rs 178 crore if the 1 ton Nissan vehicles were replaced by Telco 2.5 ton 4x4 vehicles.

Another study conducted in 1994 to determine the authorisation of the new generation vehicles for the various Units and Establishments in line with the policy changes recommended reduction of 4363 vehicles and down scaling ¹² of 3481 vehicles taking into account the operational, functional and administrative requirements of the Army. The study envisaged a saving of Rs 537 crore with the reduction and downscaling of vehicles, besides recurring annual saving of Rs 22.80 crore on account of saved manpower and an unspecified recurring savings in terms of fuel, repair and maintenance cost which the study group could not assess. Government approved this recommendation in August 1997.

Audit assessed the implementation of these polices and observed as follows:

¹² Reduction in load e.g. 2 ton instead of 3 ton

3.2.1 Slow pace of modernisation of fleet

Based on AHQ study of 1971, Government in 1972 had accepted the need to restructure the transport fleet of Indian Army to match the changing tactical requirements and equipment profile. It took more than two decades for the Army to decide the modalities of its implementation. Such abnormal delay affected restructuring and modernisation of the fleet. It was only in 1997 that the Ministry approved detailed authorisation for various units of the Army based on the new vehicle mix and the replacement of old generation vehicles with new generation vehicles was still continuing as of December 2006. The total holdings of new and old generation vehicles as of 31 May 2005 was as shown in Table 22:

Table 22: Position of holding of new generation and vintage vehicles in the Army

Sl. No.	Type of vehicle	e of vehicle Holding of new generation vehicles generation vehicles		_	Percentage of old generation		
		Number	Туре	Number	Туре	vehicle	
1.	Jonga/Jeep/Gypsy	21680	Gypsy	6837	Jonga	23.97	
2.	1/2.5 ton	19480	Telco 2.5 ton	13856	Nissan 1 ton	41.56	
3.	3/5/7.5 ton	29235	Stallion 5/7.5 ton	149	Shaktiman 3 ton	0.50	
	Total	70395		20842		23.00	

The Army thus held over 20,800 old generation vehicles (i.e. 23 per cent) as of May 2005. While in the 3/5/7.5 ton category the replacement was almost complete, the replacement in the 1 / 2.5 ton category and Jeep could be completed to the extent of 58 per cent and 76 per cent respectively.

3.2.2 Impact of delay in induction of new generation vehicles

Delay in implementation of new policy had following adverse impact on preparedness, efficiency and cost effectiveness:

(i) The envisaged annual savings of Rs 334.51 crore (at 1992 price levels) expected to result on replacement of entire 1 ton Nissan and Jonga fleet could not accrue to the extent of 42 per cent and 24 per cent respectively. The fuel efficiency of truck 1 ton Nissan was relatively low as compared to 2.5 ton Telco. Therefore the continued operation of Nissan 1 ton was found to be costlier by Rs 5.54, Rs 6.02 and Rs 7.58 per km during the years 2003-04, 2004-05 and 2005-06, respectively. As per de-induction plan of 1999, the entire fleet of 1 Ton Nissan (4x4) was to be de-inducted by 2007. However, the planned 4019, 2973 and 2467 numbers of fuel inefficient vehicles were not de-inducted during 2004, 2005 and 2006, respectively causing recurring extra expenditure on fuel consumption.

- (ii) The futuristic Vehicle Policy of 1988 *inter alia* envisaged that the NFF should use only commercial 4x2 vehicles and that 1 ton Nissan be replaced by LCV. Contrary to this, the Army continued to hold Maruti Gypsy 4x4 and Truck 2.5/5/7.5 Ton 4x4 in NFF. As the 4x4 vehicles are significantly costlier than 4x2 vehicles, the expected economy on induction of 4x2 in NFF and downscaling was not achieved. AHQ stated in December 2006 that the total fleet of NFF cannot be 4x2 because the NFF also had assigned operational roles and the transport held with NFF Units were pooled in by various echelons during operations, but added that a GSQR for 4x2 vehicles had since been formulated for policy implementation. AHQ's contention was inconsistent because the above decision was taken after detailed study and therefore the operational role of NFF would have been considered before making the recommendations.
- (iii) High Mobility Vehicles (HMV) play a crucial role in providing mission oriented battlefield mobility for Formations and Units operating in desert and semi-desert terrain. The policy of 1988 had considered the induction of 6x6 High Mobility Vehicles. However, AHQ took 11 years in carrying out trial evaluation and getting approval of Government (February 2000) for introduction of 6x6 vehicles into service. Army did not have 6x6 High Mobility Vehicles during OP Vijay. In the light of OP Vijay during 1999, AHQ assessed the requirement of 5000 HMV against which it procured 1644 HMV of 4x4 during 2000-2006. Orders for 490 HMV of 6X6 type could be placed by the Army only in March 2006. Therefore it took over 17 years for the Army to induct the required HMV.
- (iv) Casualty management in the first hour is crucial in saving lives and raising morale of troops during operation. The existing ambulances of the Army were built on Nissan 1 ton chassis. As the vehicle policy 1988 envisages the replacement of Nissan 1 ton, Army has been trial evaluating a suitable replacement but till date could not find a suitable ambulance.

3.2.3 Reasons for delay

The main reason for delay in implementation of the 1988 policy i.e. delay in de-induction of the old generation vehicles was the continued production of these vehicles in the Vehicle Factory Jabalpur (VFJ) until 2000. When the decision to replace the old generation vehicles produced at VFJ was taken in 1989, order until 1994-95 for these vehicles were pending with VFJ. But the factory continued production till 2000 which was injudicious. Mention was made in paragraph 48 of Report No.7 of 2001 (Army and Ordnance Factories) of the Comptroller and Auditor General of India about the continued production of the old generation vehicles in VFJ upto 1999-2000 even after commencement of production of new generation vehicles in 1998. AHQ attributed the delay in de-induction of the old generation vehicles to limited indigenous production capability, time required to exhaust the stocks held in

assembly line of the old generation vehicles and stringent parameters for discard of vehicles.

The reply is not tenable as even after considering the above factors, the time taken in implementing the decision was inordinately long. While the modalities of replacement of vehicles were decided in 1989, the revised authorisation of the new generation of vehicles was finalised only in 1994 and approved by the government after a delay of three years in 1997. This delay of seven years in determining the authorisation was unjustified as the detailed requirement of vehicles was already determined by the study team in 1989.

Thus it took more than three decades for the Army to modernise and optimise its fleet of 'B' vehicles resulting in continuing ineffectiveness and inefficiency. The changing of the vehicle profile in line with the changed tactical requirement and equipment profile envisaged in 1971 could not fully materialise till 2006. While the delay in full implementation of the 1988 policy may be attributed to the continued production of old generation vehicles at VFJ, the delay of 17 years in deciding the modalities of implementation of 1971 policy to change vehicle profile of the Army remains unjustified. Even when the modalities and the optimum vehicle mix was decided by the Government in 1989, it still remains to be fully implemented after more than 15 years.

Recommendation

The induction of new generation vehicles as per the futuristic vehicle policy of 1989 should be completed at the earliest. The 'B' vehicle policy should be periodically reviewed to derive benefits of rapid advancements in the automotive industry and ensure better fleet management in the Army.

3.3 Assessment of Requirement

3.3.1 Delay in review of vehicle authorisations

Army Standing Establishment Committee (ASEC) has the mandate to examine, review and approve all types of existing and new Army establishments which *inter alia* involved review of vehicle authorisations. For revision of the establishment, the sponsors/line directorates had to initiate the case through staff duties directorate at Army Hqrs, at least nine months in advance of the date of expiry of current sanction. During the last five year cycle (2000-01 to 2005-06), against the total number of 750 establishments, proposals for review of only 330 cases were received by ASEC of which only 253 were actually reviewed. Thus 66 *per cent* of the existing establishments could not be reviewed within the stipulated time frame.

During 2001-06, the reviews carried out by ASEC had a distinct trend of optimising the number of vehicles in the establishment. Net total of the vehicles optimised during that period were 3088. Analysis of the reviews in

respect of selected establishments, where bulk optimisation was done, revealed that there was delay ranging from three to six years in conducting the review as tabulated below in Table 23:

Table 23: Delay in review by ASEC

Establishment	Due date of review	Actual date of Revision	Delay (years)	Vehicles optimised	Saving possible (Rupees in crore)
Field Regiment	01.12.2000	10.05.06	5	930	134.85
Medium Regiment	01.04.2003	10.05.06	3	539	78.15
ASC Bn Inf Div	01.11.1998	15.07.04	6	1091	158.19
ASC Bn Mtn Div	01.02.1998	27.03.03	5	360	52.20
Total	. ,			2920	423.39

The delay in reviews indicated that savings of Rs 423.39 crore expected from optimisation of the vehicles was not achieved due to the delay.

AHQ stated in December 2006 that Audit suggestion regarding time bound review of establishments was constructive and action had been initiated in this regard to provide for unilateral review by ASEC of establishments which do not forward cases for review.

3.3.2 Absence of reliable Management Information System

Management Information System Organisation (MISO) in the Army acts as a nodal agency for collection, compilation and maintenance of data, *inter alia*, on the vehicles held. This information forms the basis for planning and provisioning of vehicles. MISO compiles the data for vehicles on the basis of a Four Monthly Vehicle Casualty Return (FMVCR) rendered by each unit to MISO. Audit scrutiny revealed that on an average only 79 per cent of the units rendered this report and for the remaining 21 per cent, the last available figures of these units were incorporated. Thus, MISO statistics was incomplete, not up to date and therefore unreliable.

AHQ stated (December 2006) that online updation of data was being planned.

Recommendation

Reviews by ASEC should be ensured in a timely manner to reap the benefits of optimisation of resources.

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3.4 Procurement of vehicles

Deficiencies noticed in procurement of vehicles are discussed below:

(i) Procurement from revenue grant would be force, as the bone of the

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Expenditure on procurement of heavy and medium vehicles costing Rs 2 lakh and a life of seven years or more till 2003-04 and thereafter vehicles costing

Rs 10 lakh and a life of seven years or more were to be met from Capital Grant. Contrary to this, AHQ continued to procure heavy and medium vehicles costing each Rs 10 lakh and more from revenue grant. AHQ stated in December 2006 that the procurements were charged to revenue being routine replacements. The reply is not acceptable as the Defence Services Estimates clearly stipulate that the expenditure on heavy and medium vehicles in the above category should be from the Capital Grant.

(ii) Unsuitable long chassis buses

During trial evaluation carried out between September 1999 and July 2001, Tata make long chassis bus was found unsuitable for hilly terrains due to length of chassis and lesser road clearance. Despite this, Master General Ordnance procured 1049 Long Chassis buses from Telco between September 2002 and January 2005 at a total cost of Rs 135.44 crore and deployed 182 buses valuing Rs 23.50 crore in the hilly terrain of Northern Command and 176 buses valuing Rs 22.72 crore in the hilly terrains of Eastern Command. On actual use, these buses were found unsuitable for plying in hilly terrain. Therefore in January 2006 AHQ decided to de-induct the long chassis buses from Northern Command and procure short chassis buses for hilly terrain. Accordingly, the buses were proposed to be withdrawn from use in Northern Command.

AHQ stated in December 2006 that unsuitability of these buses were found on prolonged use in difficult terrain. Reply is not tenable as the unsuitability of such buses for hilly terrains was already established during 1999-2001.

(iii) Irregular fabrication of containerised vehicles

Based on study conducted, AHQ formulated a policy in December 1997 on containerisation which envisaged development of utilities like command and control room, kitchen etc in a container which can be loaded on a suitable vehicle or unloaded as and when required. This results in better utilisation of both, the prime mover and the container and hence increased efficiency and reliability of mobile equipment. This policy was not approved by the government, but it was decided that approval would be given on a case to case basis. Audit found that 132 Radio Relay vehicles were developed through containerisation by the Army (94 in Central Command and 38 in Eastern Command) without the approval of the Ministry. Similarly 161 kitchen lorries were fabricated in Southern Command without Government approval. AHQ stated in December 2006 that the vehicles were modified in view of urgency, while induction as per Defence Procurement Procedure would have entailed delay.

The contention of the AHQ is not acceptable as the above fabrications were made without the approval of the competent authority.

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3.5 Availability of 'B' Vehicles

3.5.1 Delay in release and issue of vehicles

Vehicles are released by MGO's Branch in bulk to Commands and direct to certain units as per availability in vehicle depots. Release Orders (ROs) are generated by Equipment Management Directorate against unit's deficiency or on payment by book debit. Command HQ forward consignment instructions (CI) containing name of units and number of vehicles to MISO for generating Release Issue Order (RIO). RO and RIO so issued are valid for 90 days each from date of issue. Inspection of all new vehicles is carried out by Directorate General Quality Assurance (DGQA) before acceptance. Vehicle received from trade or VFJ is taken on provisional charge of the vehicle depot and Broad Arrow (BA) number allotted by AHQ. After receipt, inspection and classification by the Resident Inspector (EME), the vehicles are issued to units as per RO.

The number of agencies involved from acceptance of vehicles up to the stage of actual issue to the user was unwieldy; with each agency working in isolation resulting in delays even upto two years in issue of vehicles to the units. Illustrative cases of delayed issue of vehicles are enumerated in the succeeding paragraphs:-

- In Vehicle Sub Depot Chheoki, there was delay of one to six months in classification of 587 vehicles received during 2004-05 and issue of these vehicles to units took further one to six months.
- There was a delay of six to 29 months in issue of various types of 1229 vehicles from Northern Command Vehicle Depot during last three years.
- Out of 5,117 vehicles received in VSD Mumbai, 60 per cent of the vehicles took more than one to six months and 27 per cent of the vehicles took six to 12 months in classification during 2003-06. Consequently, 52 per cent of the vehicles were issued to units after six to 12 months of receipt and seven per cent had not yet (August 2006) been issued.
- Against designed capacity of 600 vehicles of various types, VSD Mumbai was holding 2013 and 1366 vehicles at the end of March 2005 and 2006 respectively because of sudden inflow, which added to the delay of classification process.

AHQ stated in December 2006 that the procedure was being studied for curtailing the time for release and issue of vehicles.

3.5.2 Excess attachment of vehicles

Vehicles were authorised to the Units/Formations of the Army in their PE/WE and the authorisation was sanctioned by the Government after assessing their

functional requirement. PE/WE are subject to periodical review and replenishments.

Notwithstanding the authorisation and corresponding holding of vehicles in their fleet, attachment of 451 vehicles from other units was observed in AHQ and various formation headquarters. These irregular attachments were made despite an already excessive holding by some of the establishments and without any documented attachment orders. The cases of bulk attachments of vehicles during 2003-06 are given in *Annexure-XI*.

Audit analysed the availability of vehicles in AHQ and observed that while the AHQ was already holding vehicles more than two times their authorisation, yet they hired and irregularly attached a large number of vehicles from lower units as shown in the table below:

Table 24: Attachment of vehicles far in excess of authorisation and holding at AHQ

Year	Vehicle	Vehicle	availability	Total availability of		
·	authorisation of AHQ	Vehicle held (Average)	Average number of	Average number of vehicles	vehicles vis-à-vis authorisation	
		(vehicles hired	attached	Nos.	Percentage
2003-04	88	208	46 ·	83	337	383
2004-05	88	. 229	36	83 .	348	395
2005-06	88	234	49	83	366	416

AHQ stated in December 2006 that attachment were ordered normally for operational/logistic requirement and also for special situation like mitigating deficiency of minor detachments where vehicle were not authorised. The above explanation is not acceptable as the attachments were made by higher formations irregularly in excess of authorisation by depriving the subordinate units of their *bona fide* entitlements. The cases of unauthorised use of vehicles should be investigated.

Recommendations

- Involvement of multiple agencies at different stages like inspection, release and collection in issue of new vehicle to units needs to be cut down to ensure quick availability of vehicles.
- Since attachment is a temporary measure, in no case should it exceed a period of one year, that too after approval of apex Headquarters.
- To provide an updated state of vehicle holding and their actual deployment to the Senior Commanders at Command & AHQ, all vehicles on attachment for more than three months should be reflected distinctly in the Monthly Vehicle Casualty Report of the Units concerned.

The transfer of the state of the second than the

3.6 Utilisation of Vehicles

3.6.1 Holding of unserviceable vehicles

The Army was holding about 32000 unserviceable vehicles during 2003-06 resulting in unnecessary inventory carrying cost and loss of disposal value due to prolonged storage.

3.6.2 Increasing expenditure on hiring of civil transport

The Budget Estimates and actual expenditure on hiring of civil transport during 2003-06 were as under:-

Table 25: Budget and expenditure on hiring of civil transport

(Rupees in crore)

Year	Budget Estimates	Expenditure actually incurred by Army	Expenditure booked by CGDA	Expenditure on personnel carrying vehicle	Expenditure on load carrying vehicle
2003-04	207	230.36	224.63	30.18	126.47
2004-05	261	240.38	235.59	68.03	91.57
2005-06	276	278.60	274.79	86.53	97.24

- Above table would indicate that there had been an overall increase of 22 per cent in the expenditure on hiring of transport during the last three years, with a steep hike of 17 per cent in 2005-06 over the previous year's expenditure.
- Though deficiency in vehicle holdings came down from 45 per cent during 2003-04 to 16 per cent during 2005-06, the expenditure on hiring had gone up by 17 per cent from Rs 156.65 crore to Rs 183.77 crore during the corresponding period. While the expenditure on hiring of store-carrying vehicles had come down from Rs 126.47 crore in 2003-04 to Rs 97.24 crore in 2005-06 by 23 per cent, the expenditure on hiring on personnel-carrying vehicles had gone up by 187 per cent from Rs 30.18 crore to Rs 86.53 crore during above period.
- Though the expenditure on hired transport is shown separately for personnel movement and stores movements in the Defence Services Estimates, allotments of funds and monitoring of the expenditure is not done separately.

3.6.3 Hiring of transport through ad-hoc boards

The procedure laid down for use of civil hired transport stipulated that all hiring be done through regular contracts and ad-hoc hiring would be resorted to only in exceptional cases with prior concurrence of the Competent Financial Authority. A scrutiny of hiring procedures adopted by the Army in various Commands revealed that despite specific instructions, Command and Formation Headquarters had hired transport through ad-hoc boards in a routine manner and no regular contracts were concluded. For ad-hoc hiring, the terms and conditions including the rates were determined by the local Board of Officers (BOO). Since no Standard Operating Procedure (SOP) for hiring of transport was issued by the AHQ, the terms and conditions for ad-hoc hiring were generally not standardised making the hiring process arbitrary and non-competitive. Some of the flaws in ad-hoc hiring are illustrated below:

- HQ, ARTRAC had hired light vehicles through ad hoc boards during 2003-06 with a stipulation for a minimum payment for 200 km. The location of the Headquarters vis-à-vis other important Units/Formation/Cities/ Railway station/Airport etc was within 110 kms. Hence there was no justification for fixing the minimum charges for 200 kms that too when the adjacent formations at Chandigarh was hiring for a minimum of 80 kms. Government had to pay for additional 120 kms for each vehicle hired and practice adopted was, therefore, uneconomical.
- Ad-hoc rates for hiring fixed by Headquarters MG&G Area for Mumbai were found to be higher when compared to the rates accepted by Headquarters Western Naval Command during 2003-04 and 2005-06 by Rs 45 & Rs 48 for the minimum charges when hired for 80 kms.

AHQ stated in December 2006 that a detailed SOP for contract management was under finalisation.

3.6.4 Irregular deployment of vehicles

Unit Run Canteens (URC), except in J&K area, are not permitted the use of Vehicles free of charge and the rules stipulate that vehicles would be used solely for bona fide military duties. In contravention of rules, vehicles were used regularly for collection of stores from Canteen Stores Department (CSD) Depots for the URCs without realisation of hire charges. Vehicles were also being utilised regularly for unauthorised duties such as for Army Wives Welfare Association (AWWA), Golf Course, Army Public School, Exservicemen rallies and other non-government/regimental activities without recovering hire charges. AHQ stated in December 2006 that vehicles were used to a limited extent for welfare activities and the use of vehicles for CSD duties was discontinued.

Recommendations

To rule out irregular use of vehicles for URC duties and nonrealisation of hire charges thereby, every unit running a URC should deposit the hire charges in advance and attach the copy of MRO with the indent.

- Usage of Service vehicles by AWWA, schools, mobile vegetable, milk & book shops, other profit earning ventures of the Army and for non-government regimental duties should be made only on payment of hire charges at the applicable rates.
- Hiring of transport should be done only through regular contracts and the exceptions where justified, authorising ad-hoc hiring, should be specifically listed.

The matter was referred to the Ministry in October 2006; their reply was awaited as of December 2006.

New Delhi

Dated: 13 March 2007

(K.G. MAHALINGAM)
Director General of Audit

Defence Services

Countersigned

(VIJAYENDRA N. KAUL)

Comptroller and Auditor General of India

Dated: 13 March 2007

New Delhi

ANNEXURE-I

(Refer Paragraph 1.1)

Procurement Process Flow Chart

Process	Issues	Responsibility Centre			
Acquisition Planning	 Linkages between service strategic requirement/plan, Acquisition Plan and Financial Plan/Budget Whether procurement as per the plan. 	Service HQrs/Acquisition Wing			
GSQR •	Formulation of user requirement	Line DirectorateADGWE			
Acceptance of Necessity	JustificationQuantityFinancial Implication	Line DirectorateWE DirectorateDefence Procurement Board			
Solicitation of Offers	 Short listing of prospective manufacturer/supplier Issue of RFP to short-listed firm Response of manufacturer 	- Technical Manager (Land System)			
Technical Evaluation	 Appointment of TEC by TMLS Technical Evaluation of the offers/responses of RFPs 	- Technical Evaluation Committee			
Field Evaluation	- Field Evaluation by user Directorate	- Technical Manager (Land System)			
Staff Evaluation	 Comparing performance of field trials with Staff Qualitative Requirement by the TEC Pre qualification –selection by TEC Any deviation referred to RM for approval 	- Technical Evaluation Committee/ Technical Manager (Land System)			
Technical Oversight Committee	- If more than Rs 300 crore	-			

CNC/Acquisition wing of Commercial Negotiation CNC/PNC nominated by Special Ministry of Defence Committee Secretary Acquisition Evaluation of Commercial bids Analysis of financial terms and conditions given in the bids Preparation of CST - determine Negotiation with the L1 and finalisation of term and conditions. Final approval by Special Secretary (Acquisition) Cabinet Committee on Security/ Approval of CFA Raksha Mantri /Defence Secretary Award of Acquisition Wing/ Ministry Framing of Contract Terms and Conditions of Defence contract/Supply Order AHQ/Acquisition Post Contract Monitoring and review of contract implementation by user Management Directorate. Request of alteration by vendor Receipt, Inspection and Whether the product ultimately User Directorate meets the user requirement utilisation User satisfaction

ANNEXURE-II

(Refer Paragraph-1.1.1) LIST – 'A'

List of contracts examined

Sl.	Item	Contract No. & Date	Value	Ren	narks
No.			Rs crore		
1.	Explosive Vapour Detector	60170/ED/GS/WE-6/D(GS-IV)	20.00	Fast	Track
		dated 11.2.2003		Procu	rement
2.	TISAS for T-72 Tanks	13(1)/91/D(Proc) Vol.IV dated 21.2.2003	181.26	Fast	Track
				Procu	rement
3.	Boot Antimine	51836/Boot Antimine/GS/WE-6/D(GS-	26.00		
		IV) dated 25.2.2003		1	
4.	Demining Equipment	51836/DM/GS/WE-6/D(GS-IV) dated	99.00	Fast	Track
		5.3.2003		Procu	rement
5.	High Resolution Binocular	B/30611/BINO/HR/GS/WE-5/D(GS-IV)	12.00		
	of Firm 'C'	dated 28.3.2003			
6.	Air Target Imitator (ATI)	PC8/97 to B/28389/GS/WE-11/D(Proc)	4.31		_
		dated 31.3.2003			
7.	Combat Under Water	31(1)/2001-D(GS-IV) dated 31.7.2003	11.13		
	Diving Equipment				
8.	Remotely Operated	60170/ROV/GS/WE-6/D(GS-IV) dated	76.13	Fast	Track
	Vehicle	17.10.2003		l	rement
9.	Helicopter Mounted	02(7)/2002/D(Proc) dated 21.11.2003	14.01		
	Surveillance System			}	
	(HMSS) for Cheetah			İ	
	Helicopters				
10.	Basic Set (NVD for FOO)	30611/BINO(NV)/GS/WE-5/D(GS-IV)	24.00	_	
	,	dated 24.11.2003			
11.	TI Sight for BMP-II	90054/TI/BMP-II/GS/WE-15B/D(GS-	304.47		
		IV) dated 22.1.2004		Ì	
12.	Weapons & Equipment for	LOA No. IN-B-UMN dated 24.3.2005	60.26	Fast	Track
	Para Special Forces			Procu	rement
13.	LIC EW System	50529/J&NKNE/SURAJ dt 11.11.2005	178.50		Track
					rement
14.	1 Level Test Equipment	B/93316/UAV/GS/WE-5 dt 29.11.2005	10.00		
	for UAV				
15.	ER Rockets	P/135606121861 dt 31.12.2005	154.40		
16.	Integrated Oxygen	2(2)/06/D(Proc)/CON/IOCMH dt	4.93	<u> </u>	_
	Communication Mask	31.3.2006			
	Helmet (IOCMH)				
17.	Elint Payload for UAV	CON/A/46174/MI/ELINT/2004 dt	26.00		
		9.11.2004	·		
18.	Upgradation of	50529/EMI-EMS/SURAJ dt 29.3.2005	5.02		
	Electromagnetic				
	Interference/				
	Electronic Susceptibility				
	System	·		1	
_	T	TOTAL	1211.42	1	

LIST – 'B'
List of Addendums/Repeat Orders examined

Sl. No.	Item	Contract No. & Date	Value Rs crore	
1.	Radio receiver AR 5000+3 with SDU 5500	Addendum III dated 13.2.2003 to Cont No. CON/1/RR/AOR/D(GS-IV)/01 dated 14.3.2001	4.89	
2.	RL MK-III, Tele Sight & Heat Rounds	85770/GS/WE-4/D(GS-IV) dated 13.3.2003	326.42	
3.	LORROS	Addendum No. 2 dated 17.12.2003 to Contract No. 13(2)/2001/D(GS-IV) dated 15.2.2002	121.51	
4.	VHF 5W & 50W Radio Sets	30910/2002/D(GS-IV) dated 8.3.2004	517.83	
5.	Radio Receiver AR 5000+3 with SDU 5500	Addendum IV dated 26.2.2004 to Cont No. CON/1/RR/AOR/D(GS-IV)/01 dated 14.3.2001	0.50	
6.	Visual Search Kits	Addendum No. 1 dated 19.11.2004 to Cont No. 33(13)/2001/BD/SDS/D(GS-IV) dated 10.1.2002	0.27	
7.	SVD Dragunov Sniper Rifles	Supp No. 435606131031 dated 14.3.2005 to Cot No. P/235606131021 dated 17.10.2002	3.25	
8.	Procurement of balance qty of Telescopic Manipulator	60170/BD/MED(TM)/GS/WE-6/D(GS-IV) dt 20.7.2005	4.66	
9.	Supply of Portable X-ray Generators	60170/BD/Sector-6/GS/WE-6/D(GS-IV) dt 20.7.2005	5.69	
10.	Supply of Non Linear Junction Detector	61070/BD/All/GS/WE-6/D(GS-IV) dt 26.8.2005	14.27	
11.	Bomb Disposal Suit	60170/BD/Med Engrs/GS/WE-6/D/(GS-IV) dt 20.7.2005	25.32	
12.	40 mm MGL	10(8)/2005/D(GS-IV) dt 15.9.2005	50.60	
13.	HR Bino with TOT	11(1)/CON/2005/D(GS-IV) dt 14.12.2005	9.32	
14.	Hale UAV	1(1)/2003/D(proc) Vol.III dt 31.1.2006	879.50	
15.	ACADA & CAM	Addendum dt 28.3.2006	2.70	
16.	AR 5000 Interceptor Receiver	82708/RR/GS/WE-7/D(GS-IV) dt 2.3.2006	1.37	
17.	Fibre Optic Surveillance Device Counter IED	60170/BD/Allen/GS/W-6/D(GS-IV) dt 28.9.2005	11.83	
18.	Electronic Stethoscope 60171/BD/Allen/GS/W-6/D(GS-IV) dt Counter IED 28.9.2005			
19.	Helicopter Mounted Surveillance System (HMSS) for Cheetah Helicopters	Addendum No. 1 dated 21.11.2004 to Cont No. 02(7)/2002/D(Proc) dated 21.11.2003	6.36	
			1990.05	
	GRAND TOTAL OF LIST 37 CONTRACTS	('A' & 'B'	3201.47	

Total contracts examined: 37

ANNEXURE-III

(Paragraph 1.4.1 refers)

Table showing numbers of vendors to whom RFP was issued and number of vendors responded

Sl. No.	Item	No. of vendors to whom RFP was issued	No. of vendors responded
1.	HMSS .	02	02
2.	Chetak Helicopter	07	05
3.	Gyro Stablised Binocular	21	03
4.	8/34 MBPS Radio Relay Equipment	29	09
5.	Qty 132 of 2 MBPCMMUX	18	04
6.	Mobile Cellular Communication System	03	03
7.	2 MBPS FH RR	24	05
8.	Mobile Cargo Search System	24	04
9.	100 Subscriber End Secrecy Devices	07	· 07
10.	ZU 23 mm 2B Upgrade	03	03
11.	Upgrade of 40 mm L70 Guns	12	05
12.	Pilotless Target Aircraft	17	03
13.	Schilka upgrade	09	02
14.	Angular Measurement Device	09	05
15.	Multi Special Camouflage Net	24	11
16.	Multi Spectral Personal Camouflage Equipment	25	07
17.	Demining Equipment	04	03
18.	Passive Night Vision for Gunner, Driver & Commander	32	11
19.	Integrated Missile Simulator BMP-II	40	09
20.	Tank T-72 Driving Simulator (TDS Vijayanta)	04	02
21.	Commander T-55 Tank	14	07
22.	I.I. Sight for Integrated with Laser Range Finder (LRF T-55 Gunnder)	26	07
23.	T-55 Driver Simulator	31	08
24.	ARV WZT-3	02	02.
25.	TISAS T-72 (Qty 700)	29	05
26.	Laser Target Designator	16	02
27.	General Purpose Machine Gun	04	02
28.	Passive Night Sight for Rifle AK-47	32	11
29.	UBGL	19	07
30.	Hand Held Digital Compass	44	09
31.	Optical Sight for Rifle AK-47	24	06
32.	Bore Sight Collimeter for Rifle AK-47	20	06
33.	Spotter Scope with Digital Camera	54	04

NB: Contracts in progress, but crossed RFP Stage.

(Source: Details of response of vendors to Global RFP: 01 April 2002 to Aug 2006 furnished by Technical Manager (Land Systems), Min of Defence vide I.D. No. 10014/TM(LS)/Coord dated 25 Aug 2006).

ANNEXURE-IV

(Refer paragraph 1.5.3)

Cases where the parameters could not be trial evaluated/tested

Sl.No.	Name of the		Audit Views
	item	the GSQR	
1.	Boot antimine	The boot was to be trial	The actual trial was,
		evaluated to assess the	however, conducted using
		blast effect from	only one type of explosive
		explosive content of	that too with 28 grams
		35grams using two types	explosive content.
		of explosives	
2.	Remotely	The ROV was to be tested	However, the ROV could
	Operated	in the temperature range	not be tested at this
	Vehicle	of -20 C to +55 C.	temperature range due to
			non availability of the test
			facility.
3.	EW System for	Tactical analysis of the	Not carried out
	Kargil and	software	
	North East		
4.	Combat Under	The equipment was to	The equipment was
	water Diving	operated at a depth of 75	actually tested for a depth
	equipment	meters and a temperature	of 10 meters only as the
÷	•	range of -20 C to +50 C	Army divers were trained
			to dive up to only 10
			meters and for temperature
*			range of -8 C to +43 C
			only. Waiver obtained on
			the grounds that the Navy
			was using the equipment for over a decade in
			l .
			rugged conditions and the
			same was acceptable to the
5.	IOCMH	Cockpit temperature : -40	Army. Trials carried for
J.	IOCIVIT	C to +30 C	temperature range of -20 C
		C 10 730 C	to +35 C
6.	Demining	Flail test	Not tested
J.	Demming	I fall toot	1101 103101
7.	NVD for FOO	Temperature range	Trials carried out for +7 C
· ·	(MFC)	required: -10 C to +50 C	to +35 C
	(1,11 0)	1044	10.33.0
		L	L

ANNEXURE-V

(Refer paragraph 1.7)

Repeated procurement of imported items

Sl. No.	Item	Date of Contract	Quantity
1.	Long Range Reconnaissance &	15.2.2002	31
	Observation System (LORROS)	22.8.2002	30
	-	6.9.2002	20
		17.12.2003	54
2.	Automatic Chemical Agent Detector	12.6.2002	356+
	& Chemical Agent Monitor		143
	(ACADA & CAM)	2005-06	18+
			12
3.	Interceptor Receiver AR 5000	17.12.2002	165
	-	Feb 2003	277
	·	26.2.2004	26
		2.3.2006	78
4.	Multi Grenade Launcher (MGL)	2.7.99	108
	, ,	23.3.2002	720/6 Lakh ammunition
		13.9.2002	1000
		15.9.2005	2977
5.	Sniper Rifle SVD	17.10.2002	485
		14.3.2005	244
6.	High Resolution Binocular (HRB)	28.3.2003	10,000
	` ´	14.12.2005	6,000
7.	Unmanned Aerial Vehicle (UAV)	11.12.96	12
	, ,	20.11.2001	8+1
		31.1.2006	16
8.	Anti Material Rifle	21.3.2002	200
		7.3.2005	400
9.	Rocket Launcher Mark-III &	23.3.2002	1000/12000 Rounds
	Ammunition		ammunition
		13.3.2003	2000/24000
10.	Hand Held Thermal Imager (HHTI)	12.3.99	208
		2001-02	208
		12.3.2003	300
11.	Telescopic Manipulator	20.2.2002	182
		20.7.2005	182
12.	Bomb Disposal Suit	20.2.2002	366
	•	20.7.2005	367
13.	X-ray Generator	15.2.2002	124
		20.7.2005	39
14.	Non Linear Junction Detector	28.3.2002	185
		26.8.2005	186

ANNEXURE-VI

(Paragraph 1.8.1 refers)

TIME STUDY (Original Contracts)

Sl. No.	Item	Time taken from initiation of the case till conclusion of the contract at various stages of procurement (time taken in months unless otherwise mentioned)									
		AON, QV & up to approval of RFP	Issue of RFP and Receipt of RFP	Tech evaluation	Trial evaluation and preparation of GSER	CNC and CFA approval	Award of contract	Total time taken	Remarks.		
1.	Boot Antimine (engineers)	6	1	Not available	21	1	5 days	29			
2.	Helicopter mounted surveillance system	7 days	10-1/2		12 + 4-1/2	4 1/2	1 .	33	4-1/2 months for RM's approval for deviation in GSQR parameters		
3.	TI sight for BMP-II	35	8	Not available	29	12-1/2	4	89			
4.	NVD for FOO	Not available	2 .	Not available	9+6	5	7 days	22	6 months for RM's approval for deviation in GSQR parameters		
5.	Combat under water diving eqpt	12	1	3	10 + 6	4	7 days	36	6 months for RM's approval for deviation in GSQR parameters		
6.	HR Binoculars	16	1	1	14	1-1/2	-	33			
7.	EMI/EMS for MIL STD	35	1	28-1/2	No trial	21-1/2	1 day	86			
8.	Electronic test eqpt as BFE for UAV	20	1	Not applicable	Not applicable	6	2-1/2	29			
9.	ELINT Pay load	16-1/2	1-1/2	9	5 days Trial conducted before issue of RFP	15-1/2	2	45			

SI. No.	Item		Time taker		of the case till concli me taken in months			s stages of pro	curement
		AON, QV & up to approval of RFP	Issue of RFP and Receipt of RFP	Tech evaluation	Trial evaluation and preparation of GSER	CNC and CFA approval	Award of contract	Total time taken	Remarks
10.	IOCMH - 1 st time 2 nd time	24-1/2 36	3 2	1day 1day	Not available 22	Not available 24	9-1/2 3	37 } 87 }124	1 st contract cancelled. Total time taken 124 months
11.	Air Target Imitator	-	4	-	39 + 24	4	1	72	
12.	RO Vehicle	7	2	Not available	14 + 5	7	3 days	35	Under FTP. 5 months for RM's approval for deviation in GSQR parameters
.13.	Extended Range Rockets	27	1	2 days	8 (incl RM's approval)	24	3 days	60	Under FTP
14.	EW system for Kargil and North East	17	7	23-1/2	No trial	28	1-1/2	77	under FTP
15.	Demining eqpt	2	1	2 weeks	-	. 4	1	8-1/2	under FTP
16.	TISAS- 1 st time 2 nd time	24 2 weeks	12 2 weeks	Not available Not applicable	24 not applicable	2 7	Not concluded 10 days	62 } 8-1/2}71	under FTP
17.	Weapon and eqpt for Para SF	3	-	8	1-1/2	14 (incl for RFP)	2	29	under FTP
18.	Explosive Detector	1	13	Not available	Not available	2	7 days	16	under FTP

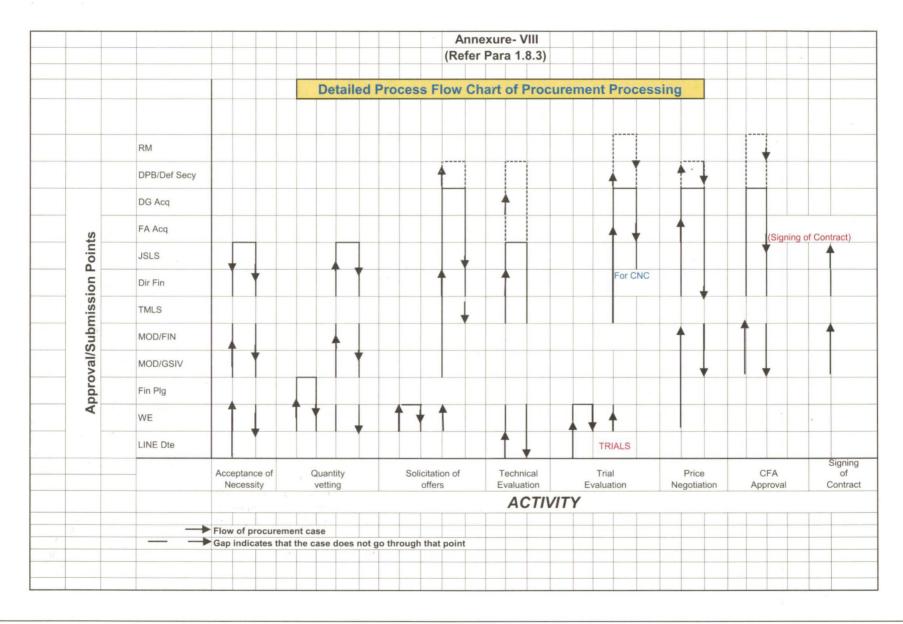
ANNEXURE-VII

(Paragraph 1.8.1 refers)

TIME STUDY (Repeat Contracts)

Sl. No.	Item	Time taken from initiation of the case till conclusion of the contract at various stages of procurement (time taken in months)								
1100		AON, QV & up to approval of RFP	Issue of RFP and Receipt of RFP	CNC and CFA approval	Award of contract	Total time taken	Remarks			
1.	RL Mk-III	6-1/2	1	2	2	11				
2.	Fibre Optic Surveillance Device	4 -1/2	1	11-1/2	3 weeks	17-1/2				
3.	Electronic Stethoscope	4 -1/2	1	11-1/2	3 weeks	17-1/2	,			
4.	Non linear junction detector	5-1/2	3 weeks	6-1/2	2-1/2	15				
5.	Telescopic manipulator	4 -1/2	1	4-1/2	4	14				
6.	X-ray generator	2 weeks	1	5	3-1/2	10	,			
7.	Multi Grenade Launcher	12	3-1/2	16	1	32				
8.	Interceptor Receiver AR 5000 Dt. 13.02.2003	4 -1/2	-	-	2	6 –1/2				
9.	Interceptor Receiver AR 5000 Dt. 26.02.2004	1	-	-	7	8				
10.	SVD Dragunav Rifle	3	-	-	17	20				

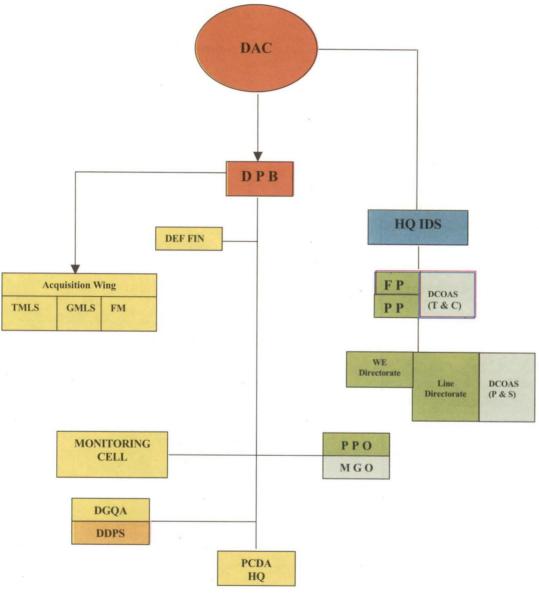
Sl. No.	Item	T	Time taken from initiation of the case till conclusion of the contract at various stages of procurement (time taken in months)						
		AON, QV & up to approval of RFP	Issue of RFP and Receipt of RFP	CNC and CFA approval	Award of contract	Total time taken	Remarks		
11.	Bomb Disposal Suit	1	2 -1/2	2	4 -1/2	10			
12.	HR Bino with ToT	4	1	7* + 24		36	* 7 months time taken for technical evaluation of ToT proposal		
13.	ACADA & CAM	5 -1/2		-	1	6 -1/2			
14.	Interceptor Receiver AR-5000 Dt.02.03.2006	12	1	7	1	21			
15.	HMSS	6	-	-	1	7			
16.	UAV (Jan 2006 contract)	5	1	29	2-1/2	38	Under FTP		



ANNEXURE - IX

(Refer Paragraph 1.9.1)

Procurement Organisation



DAC DPB HQ IDS - Defence Acquisition Council

Defence Procurement Board

Headquarters Integrated Defence Staff Defence Finance

TMLS

Technical Manager Land Systems General Manager Land Systems

GMLS FM Finance Manager FP Financial Planning

DCOAS (T&C)

Prinancial reanning
Perspective Planning
Deputy Chief of Army Staff (Technical and Coordination)
Weapon & Equipment Directorate
Deputy Chief of Army Staff (Planning and Systems)

MGO DGQA DDPS PCDA HQ

WE Directorate DCOAS (P&S)

Master General of Ordnance Directorate General of Quality Assurance

Department of Defence Production and Supplies - Principal Controller of Defence Accounts (Headquarters

ANNEXURE - X

(Refer Paragraph 3.1.1)

SAMPLING TECHNIQUE USED FOR SELECTION OF UNITS

Sample of Static Formation/Units selected for the Performance Audit

Static Formation/Units	Numbers
Army HQ	One
Command HQ	All
Area HQ including DDST	One in each command
Sub Areas/DDST/ADST and Station HQ	Three in each command
Transport Coy/Supply Depot/Units responsible for payments of hiring bills	All the in above locations (40)
Static Units	Three in above locations – Ordnance, EME, Medical (one each)- Eight in all.
Non Static Formations/Units	Numbers
Corps HQ	One in each command
Div. HQ	3 in each command
Brigade HQ	Two under each Div.
ASC Bn/Coy and units responsible for payment for hiring bills	All attached with above formation HQ (10)
Non-static units	Six units (Engineer, Signal, EME Arty, Infantry, Armoured)

ANNEXURE - XI

(Refer Paragraph 3.5.2)

Statement of vehicles attached continuously during 2003-2006

SI. No.	Unit between wh		Type of Vehicle	Original State of holding of the beneficiary unit	No. of veh. attached	Total period of attachment
	From	То]	(Surplus/Def)		
1	2	3	4	5	6	7
Weste	ern Command					
i)	Various units under	767 Tpt Coy	M Gypsy	Surplus	04	3 for 3 years 1 for 20 months
	2/10/11Corps		2.5 Ton Tata	do	02	3 years
ii)	501 ASC Bn	629 Tpt Coy	Coach Bus	Not authorised	02	3 years
iii)	Different units	629 Tpt Coy	do	do	30	26 for 2 years 4 for 1 year
iv)	do	972 Tpt Coy	do	Not authorised	98	2 years
			ALS	Not authorised	05	1 year
v)	Various units	AHQ	Car/Gypsy/Jeep	Surplus	83	3 years
vi)	Various units	AHQ	1Ton/2.5Ton Tata	do	- 17	3 years
North	ern Command					
vii)	5271 ASC Bn	HQ 71 SA & Other Units	2.5 Ton 3 Ton ALS	."'	40	3 years
			Car/Gypsy		02	3 years
			Bus		01	3 years
viii)	5171 ASC Bn	do	Car/Jeep /Gypsy		07	3 years
ix)	do	222 Sup coy	S/Man		03	3 years
x)	do	ASHA School	Bus	Non Govt. institution	02	3 years
xi)	966Tpt. Coy ASC	HQ 16 Corps "Q"	Maruti Gypsy	Surplus	08	3 years
xii)	do	Various units	5/7.5 Ton ALS		03	3 years

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xiii)	554 ASC Bn.	ASC Centre Bangalore	5/7.5 Ton ALS	Surplus	15	3 years
xiv)	EME Wksp Pune 757 Tpt Coy	HQ MG&G Area	Staff Car	Surplus	02	3 years
xv)	BEG Kirkee	HQ Pune Sub Area	do	do	02	3 years
Centr	al Command					· · · · · · · · · · · · · · · · · · ·
xvi)	5685 ASC Bn (MT)	HQ UB Area	M/Gypsy	Surplus	03	3 years
xvii)	Various Units	do	S/Car/M Gypsy	No deficiency	04	3 years
xviii)	66 Engr Regt	HQ 6 Mtn Div	Gypsy	do	01	3 years
xix)	506 ASC Bn	6 Mtn Div and other units	2.5 Ton/ALS		15	3 years
xx)	5685 ASC Bn	do	ALS	· · · · · · · · · · · · · · · · · · ·	55	3 years
					14	2 years
			1		27	1 year