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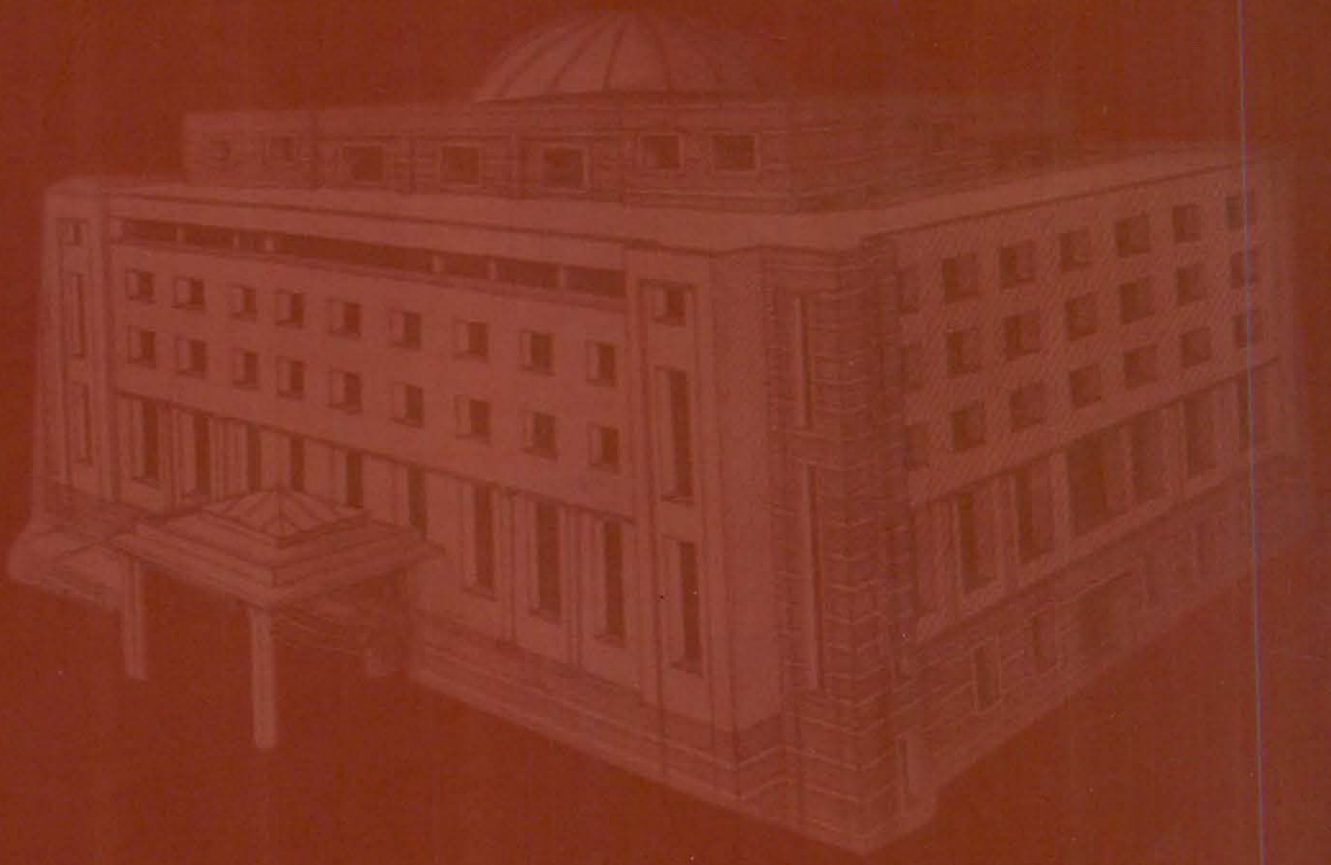
Report of the Comptroller and Auditor General of India



Union Government (Defence Services)
Air Force and Navy
Report No. 16 of 2010-11

Report of the Comptroller and Auditor General of India

for the year ended March 2009

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PREFACE

This Report for the year ended March 2009 has been prepared for submission to the President under Article 151 of the Constitution. The Report relates mainly to matters arising from test audit of the financial transactions of Ministry of Defence, Air Force, Navy, Coast Guard, associated Research and Development Units and Military Engineer Services. Results of audit of Ministry of Defence, in so far as they relate to Army and Ordnance Factories, Army HQ, Ordnance Factory Board, field units of Army, Ordnance Factories, associated Research and Development units and Military Engineer Services have been included in Report No. 12 of 2010-11.

The Report includes 25 paragraphs.

The cases mentioned in the Report are among those which came to notice in the course of audit during 2008-09 and early part of 2009-10 as well as those which came to notice during earlier years, but could not be included in the previous Reports.

OVERVIEW

The total expenditure of the Defence Services during 2008 - 09 was Rs 1,18,006 crore. Of this, the Air Force and Navy spent Rs 29,842 crore and Rs 17,406 crore respectively. The combined expenditure of the two services accounts for 40 per *cent* of the total expenditure on the Defence Services. The major portion of the expenditure of the Air Force and Navy is capital in nature, constituting almost 55 *per cent* of their expenditure.

Some of the major findings arising from test audit of transactions of the Air Force, the Navy, and associated units of the Defence Research and Development Organisation and Military Engineer Services included in the Report, are discussed below:

I Inordinate delay in fruition of Kaveri engine

Nearly two decades after the commencement of the programme and 13 years after the original probable date of completion, with an expenditure of Rs 1892 crore, Gas Turbine Research Establishment (GTRE) is yet to fully develop an aero-engine which meets the specific needs of the Light Combat Aircraft. The fate of the Kaveri project is highly uncertain as GTRE is now considering a proposal of co-development and co-production dependent upon a Joint Venture with a foreign vendor.

(Paragraph 5.1)

II Undue favour to a foreign vendor in procurement of fleet tankers

Indian Navy awarded a contract for acquisition of a fleet tanker to a foreign shipyard even though the steel to be used by the shipyard in construction did not meet Indian Navy technical specifications. Commercial negotiations with the foreign vendor for procurement of a fleet tanker, despite being protracted and delayed, did not address the issue of reasonability of pricing adequately. Excess provisioning of spares of Rs 30.44 crore and under-realisation of offset benefit to Indian industry were also noticed in the procurement of the tanker worth Rs 936 crore.

(Paragraph 2.1)

III Import of radars by a PSU against indigenous manufacture order

Bharat Electronics Limited (BEL) was awarded a contract for supplying 22 Surveillance Radar Element radars at a cost of Rs 870 crore. The contract was signed by the Ministry under special dispensation of the Defence Procurement Procedure on the premise that BEL would be able to manufacture the radars indigenously as they had absorbed the technology transferred from the Original Equipment Manufacturer (OEM). BEL violated this intent by procuring 60 *per cent* radars in Completely Knocked Down form from the OEM at a lower cost. As a result, BEL earned unwarranted additional returns of Rs 10 crore. Supplying completely knocked down radars instead of indigenously manufactured ones also resulted in premature delivery before finalization of associated works services with no benefit to the Indian Air Force.

(Paragraph 2.2)

IV Undue benefit to HAL on account of pricing policy

Hindustan Aeronautics Limited follows a Fixed Price Quotation (FPQ) Policy for the pricing of the supplies and services made to Indian Air Force. Delay of four years in finalising the base year to be used for the FPQ Policy resulted in Indian Air Force incurring extra expenditure of Rs 400 crore. Further, notwithstanding Government instructions to the effect that no budgetary support for wages increase would be provided separately and that resources for funding the increased cost on account of wage revision have to be generated by the company internally, Indian Air Force reimbursed arrears on account of wages and gratuity to the extent of Rs 315 crore.

(Paragraph 2.4)

V Abnormal delay in integration of Recce Pods onboard an aircraft

The Ministry of Defence procured an aerial reconnaissance system costing Rs 640.70 crore from M/s IAI Elta, Israel without fully evaluating the system as per Defence Procurement Procedure. Despite spending Rs 611 crore and delay of over one year, the system is yet to be proven.

(Paragraph 3.1)

VI Under utilisation of infrastructure created

The sanction for a Blade manufacturing facility at a cost of Rs 72 crore was taken based upon the consumption levels of the required blades in 1999-2000 and not on actual force levels which would prevail at the time when the Blade Manufacturing Unit would be operational, between 2007 and 2018. The actual requirement for these blades was only 50.62 *per cent* of the original projection in 2009. Since the facility is likely to be completed only by September 2010, its utility would be further limited in view of phasing out of the aircraft for which this facility has been created.

(Paragraph 3.3)

VII Injudicious expenditure on procurement and overhaul of helicopter engines

Despite knowing the facts that two Kamov 25 helicopters with the Navy were old and in a poor material state with virtually no product support, Ministry of Defence concluded contracts with a foreign firm for their overhaul at a cost of Rs 10.38 crore. Not only was the quality of the overhaul poor but expenditure amounting to Rs 8.14 crore became unfruitful as flying operations on these two helicopters were discontinued due to severe defects in their engines. Related procurement of spare KA 25 engines also became wasteful as the engines could not be utilised.

(Paragraph 4.1)

VIII Mid Life Upgrade of Mine Sweeper ships

The Midlife Update (MLU) of Indian Navy's four minesweepers envisaged upgradation of the Mine Counter Measure capability by providing them with a state-of-the-art Mine Counter Measure System Suite (MCMS). The MLU has been completed in the case of three ships after a delay of about two years without the fitment of vital MCM suite and weapon systems valuing Rs 170 crore. Advantages accruing from the subsequent installation of the equipment will be off-set by the limited residual life of the ships.

(Paragraph 4.4)

IX Procurement of shipborne Electronic Warfare System

Despite an on-going indigenous programme for development of Electronic Warfare systems, Indian Navy spent Rs 472 crore on import of seven Electronic Warfare systems, on the grounds of operational emergency. The timeline of nine weeks given by the Raksha Mantri was over-

shot considerably and it took 176 weeks to finalise this contract. The expenditure, thus, could not meet the urgent operational requirement.

(Paragraph 2.6)

X Inordinate delay in development of Air Bases

The Ministry sanctioned the establishment of an airbase at Phalodi in 1985 and an Air Force station in South India in 1984. Even after two decades both are yet to be commissioned. As on date, the utility of the air base and station has not been determined, given the constantly vacillating position of the Indian Air Force on their future use. In the case of Phalodi, the Indian Air Force intends to use the base for helicopter operations though the base was envisaged as a strategic forward base airfield. In the second case, the intended air cover over sensitive installations remains elusive in the absence of an active and operational air base.

(Paragraph 2.7)

XI Injudicious procurement of pumps

Naval authorities ordered 44 pumps worth Rs 4.56 crore without adequate user trials. Subsequent to delivery, the pumps could not be installed on-board the ships they were meant for due to fitment problems. Thus, these ships, even *six* years after many of the pumps being declared Anticipated Beyond Economical Repair (ABER), continue to operate with the old pumps rendering the entire expenditure infructuous.

(Paragraph 4.3)

XII Unfruitful expenditure on submarine rescue facility

Owing to poor planning, lack of need assessment and absence of a conclusive time bound agreement with US Navy, there was an inordinate delay in commissioning the Indian Navy submarine rescue facility. The expenditure of Rs 3.35 crore incurred could not serve its objective as by now 75 *per cent* submarines of Indian Navy have already completed three fourths of their estimated operational life.

(Paragraph 2.5)

XIII Irregular commercial exploitation of Santushti Shopping Complex

Ministry of Defence and Air Force authorities violated rules and regulations in managing the Santushti commercial shopping complex established on Government land. Irregular allotment of

shops has defeated essentially welfare role of providing assistance to ex-service personnel or family members of bereaved service personnel like war widows, disabled pensioners etc. Further, the Ministry's decision to suspend the eviction process without taking any action for more than two and a half years has allowed unauthorized occupants to retain possession of these shops for more than 13 years. Delay in revision of licence fee and irregular crediting of revenue to non-public fund by Indian Air Force authorities in violation of Ministry's directives and Government orders has deprived the Exchequer of revenue amounting to Rs 9.75 crore.

(Paragraph 2.3)

XiV Excess procurement of Electronic Warfare Systems

Indian Navy did not properly take into account the phase-out schedule of its Tu-142M aircraft while placing orders for the AES-210 and Homi Electronic Warfare (EW) systems leading to the excess procurement of one AES-210 system and one Homi system. This resulted in infructuous expenditure of Rs 19.19 crore on EW systems for non-existent or already phased out aircraft. Besides, given the phase out schedule of the aircraft fleet, two AES-210 systems and three HOMI systems procured for Tu-142 M aircraft would be exploited for less than 50 *per cent* of their useful life.

(Paragraph 4.2)

XV Financial irregularities in organising Military World Games 2007

Approval for funding for the Military World Games (MWG) 2007, organized by the Services Sports Control Board, was taken from a lower competent financial authority for Rs 50 crore even though expenditure was estimated to be Rs 138 crore by omitting certain works from the proposal. The financial arrangements have resulted in unspent balances lying outside of Government account, foregoing of revenue and diversion to non-public funds. Ministry failed to monitor the expenses incurred on MWG and the unspent amount has not yet been credited to Government Account.

(Paragraph 2.8)

XVI Irregularities in the procurement of Microlight Aircraft

Indian Air Force did not adhere to the procedures prescribed for tendering, price negotiation and release of funds while procuring the Composite Technology Short Wing Microlight Aircraft. Instead, actions and decisions were regularised subsequent to placement of the order.

(Paragraph3.2)

XVII Avoidable expenditure on repair of an aero-engine under warranty

An Indian Air Force Equipment Depot failed to exercise the contractual terms and conditions and thus a repair task which was to be undertaken under warranty free-of-cost was taken up as a regular task on payment basis. This resulted in an avoidable expenditure of Rs 1.09 crore.

(Paragraph 3.4)

XVIII Foregoing of revenue due to non-revision of licence fee rates for residential accommodation

Non-adherence of the procedure by Ministry for revising licence fee rates for accommodation occupied by service personnel, every three years, resulted in foregoing of revenue worth Rs 13 crore.

(Paragraph 3.5)

XIX Injudicious transportation of containers for UN Mission

Ministry of Defence authorised overseas transportation of containers in excess of that prescribed by the United Nations Peacekeeping Force for the purpose of claiming reimbursement. As a result, the Indian Government incurred avoidable extra expenditure to the extent of Rs 38.96 lakh.

(Paragraph 3.6)

XX Loss in procurement of petroleum products

Indian Navy did not take advantage of 'prompt-payment' discounts and also could not negotiate discounts on account of high volumes leading to a loss of Rs 136.39 crore.

(Paragraph 4.5)

XXI Lack of due care in passing claims of vendors

Naval officials did not exercise required care in passing claims of vendors or in availing the benefit of exemption from excise duty. As a result, Indian Navy incurred an expenditure of Rs 1.61 crore, out of which Rs 1.40 crore could be recovered at the instance of Audit.

(Paragraph 4.7)

XXII Delay in fruition of Online Examination System of Navy

Although Indian Navy decided to migrate to an online computer-based examination system in 2004, flaws in the tendering process led to delay in awarding a contract and commencing the Indian Navy Online Examination System. As of June 2010, despite an expenditure of Rs 97.92 lakh, the Indian Navy will not be able to conduct all planned examinations online even by 2013.

(Paragraph 4.6)

XXIII Recoveries/savings at the instance of Audit

An amount of Rs 3.40 crore was recovered / saved in two cases in respect of Air Force and Rs 2.30 crore in three cases in respect of Navy after having been pointed out by Audit.

(Paragraph 3.7, 4.7 and 4.8)

CHAPTER I: INTRODUCTION

1.1 About the report

The office of the Principal Director of Audit, Air Force and Navy (PDA/AFN) is responsible for auditing the accounts and the financial transactions related to Indian Air Force, Indian Navy, Indian Coast Guard and associated Research and Development (R&D) undertaken by the Defence Research and Development Organisation of the Ministry of Defence, linked Military Engineer Services (MES) offices and integrated Defence Accounts Department units dealing with these services. The audit exercise is carried out on behalf of the Comptroller and Auditor General of India in accordance with Article 151 of the Constitution of India.

The audit effort can be classified under three distinct types of audits: Financial Audit, Compliance Audit and Performance Audit.

Financial Audit is the review of financial statements of an entity that seeks to obtain an assurance that the financial statements are free from material misstatements and present a true and fair picture.

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

Performance Audits are in-depth examinations of a program, function, operation or the management system of entity to assess whether the entity is achieving economy, efficiency and effectiveness in the employment of available resources.

This report is on matters arising from the Compliance Audit of Indian Air Force, Indian Navy, Research and Development Organisation and associated activities and entities. The report contains findings pertaining to capital and revenue acquisitions, installation/upgradation of systems, blockage of funds and work services. Total financial value of cases commented upon in this report is Rs 5,698.40 crore. A brief financial analysis of the expenditure incurred on the Air Force, Navy, R&D (related to Air Force and Navy) and Coast Guard as a part of the over-all Defence budget of the country has also been included.

1.2 Authority for Audit

Article 151 of the Constitution of India and Section 13 of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 govern the scope and extent of audit. Detailed methodology of audit and reporting formats are prescribed in the 'Regulations of Audit and Accounts, 2007'.

1.3 Planning and Conduct of Audit

Audit areas are prioritised through an analysis of risks so as to assess their criticality in key operating units. Expenditure incurred, operational significance, past audit results and internal control issues are amongst the prime factors which determine the severity of the risks. This exercise in turn guides the formulation of the annual audit programme. The number of units selected for audit is determined by matching the high-risk areas with available resources. Besides, high-value capital acquisitions and procurements are audited by specially constituted dedicated teams under the personal supervision of senior officers.

In general, interaction with the auditee is encouraged from the initial stage in the auditing process. Audit findings are communicated during discussions at the end of an audit exercise and followed up in writing through Local Test Audit Reports / Statement of Cases. The response from the auditee is considered and results in either settlement of the audit observation or referral to the next audit cycle for compliance. Some of the more serious irregularities are processed for inclusion in the audit reports which are submitted to the

President of India under Article 151 of the Constitution of India, for laying them before each House of Parliament.

At present, the audit universe of the office comprises 857 units. During 2008-09, audit of 290 units/formations was carried out by using 10,069 man days.

1.4 Internal Control and co-ordination between Internal and External Audit

The Finance Division of the Ministry of Defence is headed by the Secretary (Defence/Finance)/ Financial Advisor (Defence Services). The SDF/FADS is responsible for financial scrutiny, vetting, advice and concurrence of all proposals of the Ministry of Defence. FADS is also responsible for internal audit and for accounting of the Defence Expenditure. Internal financial advice is provided both at the Headquarters level as also at levels of Command Headquarters and other units. Internal financial control is further aided by periodic internal audit by the Controller General of Defence Accounts (CGDA), the Head of the Defence Accounts Department, who functions under the FADS. The Principal Controllers of Defence Accounts, Air Force and Navy functioning under CGDA are located at Dehradun and Mumbai respectively. They are responsible for internal audit, financial advice at unit level and for scrutiny, payments and accounting of all personnel claims and bills for supplies and services rendered, construction, repair works, miscellaneous charges etc. received from Air Force and Navy units.

The internal audit mechanism is expected to be effective in implementing the rules, procedures and regulations enunciated in the form of Defence Procurement Procedure, Manual, Codes, etc. The office of PDA/AFN actively seeks assistance and co-operation from internal audit in audit examination and scrutiny. Internal auditors have to carry out 100 *per cent* checks. The external/statutory audit bases its audit on sample / test check. The Inspection Reports (IR) generated by external audit on the basis of Local Audit are issued to auditee units as well as their internal auditors i.e. Defence Accounts Department. These IRs are pursued to their logical conclusion after ascertaining the views of the internal auditors. Draft paragraphs proposed to be included in the audit report are sent to Defence Secretary. Simultaneously,

a copy is also forwarded to CGDA. The Ministry furnishes its response only after vetting by the FADS.

1.5 Auditee Profile

1.5.1 Organisation – Key responsibilities

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

The Indian Air Force is headed by the Chief of Air Staff. Air Headquarters (Air HQ) is the apex body and chief management organisation of the Indian Air Force. The ultimate and overall administrative, operational, financial, technical and maintenance control of IAF rests with Air HQ. Operational and maintenance units of IAF normally consist of Wings and Squadrons, Signal Units, Base Repair Depots and Equipment Depot.

The Indian Navy is headed by Chief of Naval Staff. Naval Headquarters (NHQ) is the apex body and chief management organisation and is responsible for command, control and administration of the Indian Navy. Operational and maintenance units of Indian Navy consist of Warships and Submarines, Dockyard, Naval Ship Repair Yards, Equipment Depots and Material Organisation.

The Coast Guard is the youngest service of the armed forces of India and was created to protect the country's vast coastline and offshore wealth. The Director General, Coast Guard exercises general superintendence, direction and control of the Coast Guard.

Military Engineer Services (MES) is one of the largest Government construction agencies. Engineer-in-Chief is the head of the MES. The MES is responsible for conclusion of contracts, execution of work services and maintenance of existing buildings of the Armed Forces. It works under the

Engineer-in-Chief Branch of Army Headquarters.

The Defence Research and Development Organisation undertakes design and development of weapon systems and equipment in accordance with the expressed needs and the qualitative requirements laid down by the services. Certain laboratories are dedicated exclusively to Air Force and Navy like the Gas Turbine and Research Establishment (GTRE), Aeronautical Development Agency (ADA), Electronics and Radar Development Establishment (LRDE) and Centre for Airborne System (CABS) etc. These organisations also render scientific advice to the Service Headquarters. They work under the Department of Defence Research and Development of Ministry of Defence.

The Defence Accounts Department is headed by the Controller General of Defence Accounts, New Delhi who functions under the Financial Advisor, Ministry of Defence. The Department provides services to the Armed Forces in terms of financial advice and accounting of Defence Services receipts and expenditure as well as Defence Pensions.

1.6 Significant Audit Observations

Audit has, over the years, commented on many critical areas of Defence Sector pertaining to Indian Air Force, Indian Navy, Indian Coast Guard and dedicated R&D projects. The Ministry of Defence, on its part, has taken several measures in response to these observations. An important step taken to improve procurement procedures has been the introduction of Defence Procurement Procedure and Defence Procurement Manual and their regular updation.

The present Audit Report points out significant deficiencies/ short comings in the procurement processes followed - both under Capital and Revenue – by Ministry of Defence as well as by the Services Organisation. In two high-value capital expenditure cases the acquisition process was vitiated as Ministry / Service Headquarters violated evaluation / selection criteria. Fleet tankers contracted for the Indian Navy, are being constructed from a steel (Paragraph 2.1) which does not meet the specifications of the Navy. An aerial reconnaissance system contracted by IAF (Paragraph 3.1) was not evaluated as per the laid down procedures. IAF is, resultantly, devoid of this state-of-the-

art system for the last decade. On the revenue side, Navy's decision to purchase a particular make of pump (Paragraph 4.3) which did not conform to the required specification led to non utilisation of pumps costing Rs 4.56 crore.

The report highlights cases involving substantial expenditure in which either the procurement has been delayed or has failed to achieve its objective. In the case of the Kaveri Engine Development Project (KEDP) (Paragraph 5.1) the delay is attributed to lag in indigenous research and development. Inspite of an expenditure of Rs 1,892 crore and two decades of developmental effort, GTRE is yet to fully develop the Kaveri aero-engine to power the Light Combat Aircraft. In another indigenous effort, Indian Navy purchased seven imported systems at a cost of Rs 472 crore (Paragraph 2.6) on the ground of 'operational emergency' despite an on-going indigenous programme By the time they were available and could be fitted onto the ships, the indigenous systems were also developed and productionised. Similarly, the Midlife Update (MLU) of Indian Navy's four minesweepers, sanctioned at a cost of Rs 517 crore, has been completed in the case of three ships after a delay of about two years (Paragraph 4.4) without the fitment of the envisaged state-of-the-art Mine Counter Measure System Suite (MCMS).

Instances of violation of contractual terms and disregard of instructions have also been reported. BEL violated the terms of the contract (Paragraph 2.2) and supplied 60 *per cent* of the ordered number of radars by manufacturing them from imported CKD kits rather than indigenously manufacturing them. As a result, BEL earned Rs 10.14 crore over and above the profit already allowed to it by IAF. Air Force authorities not only flouted rules and regulations in managing the Santushti Shopping Complex established on Government land (Paragraph 2.3) but also did not accomplish the welfare objectives for which the Complex was set up. Further, revenue to the extent of Rs 9.75 crore was credited outside Government account to non public fund. The Government has suffered losses on account of the inability of Ministry and IAF to ensure that the Fixed Price Quotation used by HAL to price goods and supplies is formulated in line with Government instructions. IAF reimbursed arrears (Paragraph 2.4) on account of wages and gratuity amounting to Rs 315 crore to HAL despite Government instructions to the contrary. Further, due to delay

in the revision of the base year for adoption in Fixed Price Quotation, IAF incurred an extra expenditure of Rs 400 crore.

This report also impresses upon the need to strengthen work services planning and management. Blade manufacturing infrastructure created at a cost of Rs 72 crore will be under-utilised due to unrealistic assessment of the actual requirement (paragraph 3.3). Frequent changes in plans have delayed the commissioning, activation and operationalisation of two IAF air bases (paragraph 2.7).

Several cases have been highlighted where more vigilance on the part of the department was required for instance, excess procurement of two electronic warfare system costing Rs 19.19 crore (paragraph 4.2), incorrect classification of repair task of an aero engine under warranty leading to avoidable expenditure of Rs 1.09 crore (paragraph 3.4), non-availing advantage of 'prompt payment' discount in procurement of petroleum products resulting in a loss of Rs 136.39 crore (paragraph 4.5) and lack of due diligence in passing claims of a vendor resulting in avoidable payment (paragraph 4.7).

1.7 Financial Aspects relating to Air Force and Navy

India's Defence Budget is broadly categorised under Revenue and Capital Expenditure. While Revenue expenditure includes Pay and Allowances, Stores, Transportation and Work Services etc., Capital expenditure covers expenditure on acquisition of new weapons and ammunition and replenishment of obsolete stores with modern variety.

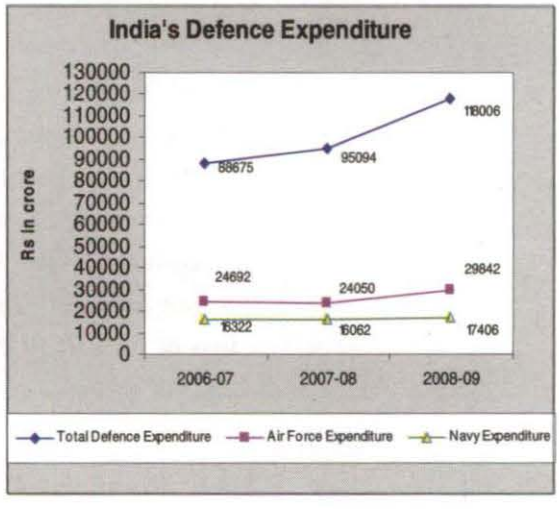
Indian Defence expenditure increased by 24.09 *per cent* from Rs 95,094 crore in 2007-08 to Rs 1,18,006 crore in 2008-09 primarily due to pay revision of the defence forces. The share of the Air Force and the Navy in the total expenditure on Defence Services in 2008-09 was Rs 29,842 crore and Rs 17,406 crore which together constituted approximately 40.04 *per cent*.

1.7.1 Defence Expenditure

1.7.2 The Indian defence expenditure, as depicted above, does not include the expenditure on the pensionary benefits of retired defence personnel and

expenditure incurred on Defence civilian staff like Defence Accounts Organisation, Defence Estates Organisation, Secretariat of the Ministry of Defence, Defence Canteens and Coast Guard Organisation. Indian defence spending increased from Rs 88,675 crore in 2006-07 to Rs 1,18,006 crore in 2008-09 with an average annual growth of 16.54 *per cent*. As a percentage of GDP, the Defence expenditure has shown a upward turn during this period from 2.07 *per cent* to 2.15 *per cent*.

Historically, revenue expenditure accounts for the bulk of the Defence Budget. Out of the total Defence expenditure, the share of revenue defence expenditure has gone up from 61.85 *per cent* in 2006-07 to 65.32 *per cent* in 2008-09 while the share of capital expenditure has gone down from 38.15 *per cent* to 34.67 *per cent* during the same period.



Defence Expenditure

(Rs in crore)

Year	Annual Expenditure			Percentage increase over previous year	Expenditure as percentage of CGE	Expend-iture as percentage of GDP
	REVENUE	CAPITAL	TOTAL			
2006-07	54,847	33,828	88,675	5.99	14.64	2.07
2007-08	57,632	37,462	95,094	7.24	12.86	1.94 (Q)
2008-09	77,088	40,918	118,006	24.09	12.72	2.15*

Q - Quick Estimates
CGE – Central Government Expenditure
*** Projected by CSO**

1.7.2.1 Air Force and Navy Expenditure

The total expenditure incurred by the Indian Air Force and Navy during 2006-09 ranged between 46.26 and 40.04 *per cent* of the total Defence Budget. In the year 2008-09, while Air Force expenditure rose by 24.08 *per cent* from Rs 24,050 crore to Rs 29,842 crore, the Navy expenditure increased by 8.44 *per cent* from Rs 16052 crore to Rs 17,406 crore. The distribution of Defence expenditure is depicted in the following table:

(Rs in crore)

Year	DISTRIBUTION OF DEFENCE EXPENDITURE					
	Army	Air Force	Navy	Ordnance Factories	R&D	Total
2006-07	41,141	24,692	16,322	1,135	5,385	88,675
2007-08	47,421	24,050	16,052	1,425	6,146	95,094
2008-09	59,688	29,842	17,406	3,309	7,761	118,006

1.7.2.2 Air Force Expenditure

A broad summary of Air Force expenditure is given below.

Air Force Expenditure

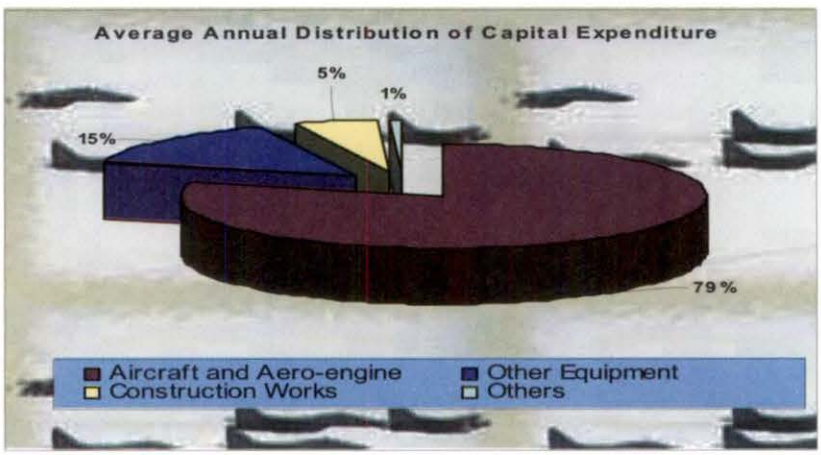
(Rs in crore)

Year	Total	Percentage change over previous year	As a percentage of total Defence Expenditure	Revenue	Capital
2006-07	24,692	(+) 12.62	27.85	10,065	14,627
2007-08	24,050	(-) 2.60	25.29	10,558	13,492
2008-09	29,842	(+)24.08	25.29	13,244	16,598

1.7.2.3 Capital Expenditure

The capital expenditure on Air Force rose by nearly 23.02 *per cent* during 2006 - 07 to 2008-09. In absolute terms, capital expenditure increased from Rs 14,627 crore in 2006 – 07 to Rs 16,598 crore in 2008-09.

The capital expenditure of IAF was mainly incurred on acquisition of new aircrafts and modernisation/ upgradation of the existing aircrafts. The average annual distribution of expenditure over different categories for the last three years is depicted below:



1.7.2.4 Revenue Expenditure

During the three year period under consideration, revenue expenditure increased by 31.58 *per cent* from Rs 10,065 crore in 2006-07 to Rs 13,243 crore in 2008-09. The sudden jump in the revenue expenditure during 2008-09 was primarily due to the pay revision of the Air Force personnel on account of Sixth Pay Commission. Repairs and maintenance of aircrafts including procurement of airframe and aero-engines, aviation stores of spares and POL[1] etc account for nearly 64.65 *per cent* of the revenue expenditure of the IAF. Besides, the pay and allowances of the IAF personnel

[1] POL = Petroleum, oil and lubricants

are nearly 31.29 *per cent* of the IAF revenue expenditure. The remaining expenditure is accounted for by transportation, works and other expenditure.

1.7.2.5 Indian Navy Expenditure

A broad summary of Navy expenditure is given below.

Navy Expenditure

(Rs in crore)

Year	Total	Percentage change over previous year	As a percentage of total Defence Expenditure	Revenue	Capital
2006-07	16,322	(+) 14.79	18.41	6,836	9,486
2007-08	16,052	(-) 1.65	16.88	7,117	8,935
2008-09	17,406	(+) 8.44	14.75	7,949	9,457

1.7.2.6 Capital Expenditure

The capital expenditure of Navy increased by 5.84 *per cent* primarily on account of acquisition/construction/upgradation.

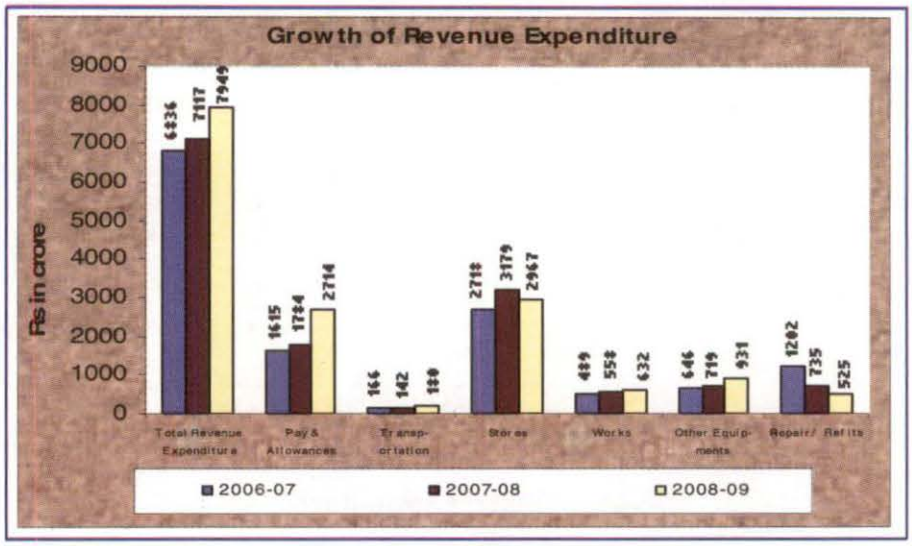
Capital Expenditure

(Rs in crore)

Year	Naval Fleet	Naval Dockyard	Aircraft and Aero-engine	Const-ruction Works	Other Equip-ments	Others	Total
2006-07	7,080	465	366	186	1,187	202	9,486
2007-08	6,162	668	410	285	1,162	248	8,935
2008-09	5,404	1,164	538	406	1,716	229	9,457

1.7.2.7 Revenue Expenditure

Revenue expenditure increased by 16.28 *per cent* during the period 2006 – 07 to 2008 - 09 from Rs 6,836 crore to Rs 7,949 crore. Repairs



and refits of aircraft carriers/ frigates/ destroyers/ corvettes /other warships including procurement of stores of spares and POL etc account for almost 62.20 *per cent* of the revenue expenditure of the Navy. Besides, the pay and allowances of the Navy personnel constituted nearly 27.91 *per cent* of the Navy revenue expenditure.

1.8 Coast Guard Organisation

The budgetary allotments and expenditure incurred during the last three years are tabulated below:

(Rs in crore)

Year	Budget Estimates	Final Grant/ Appropriation	Expenditure	Percentage of BE which could not be utilised
2006-07	1,075.00	820.19	704.48	34
2007-08	1,150.00	852.37	668.62	42
2008-09	1,468.14	1,090.18	1,027.05	30

Although the Ministry obtained substantial hikes in the Budgetary Estimates for the Coast Guard in 2007-08 and 2008-09 from the Ministry of Finance/Parliament, about one-third of the provisions approved could not be spent.

Major items of Capital Expenditure are enumerated below:-

(Rs in crore)

Year	Ships & Fleet	Major Works and Land Acquisition	Acquisition of Aircraft	Total Capital Expenditure	Budget Estimates
2006-07	288.22	37.09	13.04	338.35	645.00
2007-08	179.64	52.86	22.88	255.38	735.21
2008-09	373.72	51.19	81.52	506.43	947.97

It would be apparent that the Coast Guard has not been able to utilise the funds approved in the Budget Estimates during the last three years. The non-utilisation of the BE provisions of Capital Expenditure has been substantial in 2007-08 (65 *per cent*) and 2008-09 (47 *per cent*).

Major items of Revenue Expenditure are also shown below:

(Rs in crore)

Year	Salaries/ Wages/ Allowances	Minor Works	POL	Machinery/ Equipment	Supply /Material	Others	Revenue Expenditure
2006-07	104.51	112.48	62.5	31.43	13.97	41.24	366.13
2007-08	116.17	115.89	71.26	37.71	17.53	54.68	413.24
2008-09	187.07	136.79	88.39	29.27	17.93	61.17	520.62

1.9 Receipts of the Air Force, Navy and Coast Guard

The details of receipts and recoveries pertaining to Air Force and Navy and Coast Guard during the last three years for the services that they have provided to other organisations / departments are given in the table below:

(Rs in crore)

Year	Receipt and Recoveries in respect of Air Force	Receipt and Recoveries in respect of Navy	Receipt and Recoveries in respect of Coast Guard
2006-07	416.51	121.62	4.17
2007-08	456.95	166.31	8.13
2008-09	433.30(RE)**	81.86(RE)**	11.60

**** RE: Revised Estimate 2008-09**

1.10 Appropriation and Expenditure

The summarised position of appropriation and expenditure during 2006-07 to 2008 - 09 in respect of the Air Force and the Navy is reflected in the table below:

(Rs in crore)

	Final Grant	Actual Expend-iture	Total Excess/ Savings (+) / (-)	Final Grant	Actual Expend-iture	Total Excess/ Savings (+) / (-)	Final Grant/	Actual Expend-iture	Total Excess/ Savings (+) / (-)
AIR FORCE									
REVENUE	**2006-2007**			**2007-2008**			**2008-2009**		
Voted	10,115.89	10,062.96	(-) 52.93	10,663.58	10,556.01	(-) 107.57	12,632.21	13,242.58	(+)610.37
Charged	5.93	1.54	(-)4.39	1.94	0.98	(-) 0.96	2.04	0.79	(-)1.25
CAPITAL									
Voted	13,710.20	14,617.29	(+)907.09	13,594.87	13,489.68	(-) 105.19	16,539.12	16,591.21	(+)52.09
Charged	15.30	10.00	(-) 5.30	3.88	2.31	(-) 1.57	5.81	6.98	(+)1.17
Total	**23,847.32**	**24,691.79**	(+)844.27	**24,264.27**	**24,048.98**	(-)215.29	**29,179.18**	**29,841.56**	(+)662.38

(Rs in crore)

	Final Grant	Actual Expend-iture	Total Excess/ Savings (+) / (-)	Final Grant	Actual Expend-iture	Total Excess/ Savings (+) / (-)	Final Grant/	Actual Expend-iture	Total Excess/ Savings (+) / (-)
NAVY									
REVENUE	**2006-2007**			**2007-2008**			**2008-2009**		
Voted	6,889.27	6,836.29	(-) 52.98	7,172.68	7,115.58	(-) 57.10	8,190.56	7,948.42	(-)242.14
Charged	1.37	0.24	(-) 1.13	1.37	1.29	(-) 0.08	1.63	0.36	(-)1.27
CAPITAL									
Voted	9,607.77	9,484.64	(-)123.13	8,892.10	8,934.47	(+) 42.37	9,195.86	9,454.86	(+)259.00
Charged	3.60	1.07	(-) 2.53	6.40	0.69	(-) 5.71	8.40	239	(-)6.01
Total	**16,502.01**	**16,322.24**	**(-)179.77**	**16,072.55**	**16,052.03**	**(-) 20.52**	**17,396.45**	**17,406.03**	**(+)9.58**

An analysis of the Appropriation Accounts, Defence Services for each of the three years has been included in the Report of the Comptroller and Auditor General of India for the relevant years, Union Government – Accounts of the Union Government.

1.11 Audit Impact

1.11.1 Response of the Ministry to Draft Audit Paragraphs

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

The Draft Paragraphs proposed for inclusion in this Report were forwarded to the Secretary, Ministry of Defence between 14 May 2009 and 17 November 2009 through demi-official letters drawing attention to the audit findings and requesting for a response within six weeks. The Draft Paragraph on Kaveri engine was, however, forwarded through demi-official letter to Scientific Advisor to Raksha Mantri on 10 November 2008.

Despite the instructions of the Ministry of Finance issued at the instance of the PAC, the Ministry did not send replies to 4 Draft Paragraphs out of 25[2] Paragraphs included in this Report. Thus, the response of the Ministry could not be included in respect of these paragraphs.

1.11.2 Action Taken Notes on Audit Paragraphs of earlier Reports

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

Review of outstanding ATNs on Audit Paragraph relating to the Air Force, Navy and Coast Guard as on 30 June 2010 showed that the Ministry had not submitted the initial ATNs in respect of 7 out of 64 paragraphs included in the Audit Reports up to and for the year ended March 2008 as shown in Annexure-I.

1.11.3 Outcomes

Findings of earlier reports have resulted in various procedural changes in Defence Procurement Procedure as well as systemic changes in operations of the audit entity. In addition, each year's audit also results in savings and recoveries. During last three years, recoveries to the extent of Rs 7.34 crore (Rs 2.13 crore in respect of current Audit Report) and savings to the extent of Rs 12.45 crore (Rs 3.57 crore for current Audit Report) were effected at the instance of Audit.

[2] The introductory remarks included in Chapter I of this report were not forwarded to Ministry for their comments

CHAPTER II: MINISTRY OF DEFENCE

2.1 Undue favour to a foreign vendor in procurement of fleet tankers

Fleet tankers being constructed by a foreign vendor did not meet the specifications of the steel as envisaged in the RFP. Commercial negotiations with a foreign vendor for procurement of a fleet tanker, despite being protracted and delayed, did not take into account the quality of steel offered by the vendor. Excess provisioning of spares of Rs 30.44 crore and under realisation of offset benefit to Indian industry were also noticed in the procurement of the tanker worth Rs 936 crore.

In order to maintain its approved force levels, Indian Navy's Ship-building Plan envisaged addition of two fleet tankers (tanker) by 2008 and 2011 respectively. Accordingly, a Request for Proposal (RFP) was issued to 12 firms in November 2005. In response to the RFP, only three firms responded, namely M/s Rosoboronexport, Russia (ROE), M/s Hyundai Heavy Industries Limited (HHIL) and M/s Fincantieri, Italy.

The RFP included a mandatory condition in the technical specifications for the tanker that DMR 249A / or equivalent grade steel be used in the construction of the hull of the vessel. DMR 249A is a high quality steel used for naval applications with specific weight and resilience qualities. The steel is almost double the cost of ordinary steel.

Out of the three firms, only ROE offered a technical proposal for using DMR 249A/ or equivalent steel. The offer of HHIL was rejected due to non-compliance with RFP provisions which included non-usage of DMR 249A steel. Fincantieri's proposal was stated to be compliant with the RFP conditions. However, the firm proposed to use DH 36 steel in place of DMR 249A steel.

The Technical Evaluation Committee (TEC) asked Fincantieri to provide justification for selection of DH 36 grade steel. In its justification, the firm stated that (i) sourcing DMR 249A steel was a problem, (ii) ordinary steel is normally used for tankers and (iii) high resilience performance of DMR 249A is not necessary for this ship. According to the firm's own admission, DH 36 grade steel has less weight and less resilience when compared to DMR 249A.

The chemical compositions of DH-36 grade steel and DMR 249A steel are different and they cannot be treated as equivalent to each other. The prices of these two grades of steel are also different in as much as DMR 249 A grade is more expensive than DH-36 grade steel. Incidentally, ***all*** three bidders had, in their offers, stated that usage of DMR 249A was affected by high costs and restricted sourcing but the usage could be considered subject to price adjustment.

Nonetheless, the TEC opined that the DH 36 steel was equivalent to DMR 249A grade steel and accepted the technical bid of Fincantieri without taking cognizance of the offer made by the other two bidders. The Technical Oversight Committee also recommended the offer of Fincantieri.

Later, when the commercial bids were opened, Fincantieri emerged as L1 (lowest bid) with a quote of Rs 723 crore. The offer of ROE was rejected as it was costlier, being based upon the prices of DMR 249A / or equivalent steel. The Commercial Negotiation Committee (CNC) used two models of costing to establish reasonableness of prices. In the first, the L1 cost was compared with that of a fleet tanker built indigenously between 1987 and 2000. The CNC after taking into account various factors worked out a figure of Rs 733.55 crore. This model used the prices of DMR 249A steel for estimating the cost of the vessel. The CNC also carried out an analysis of the break-up of costs provided by Fincantieri even though the break-down of the main elements of the cost of a vessel, i.e. labour and material, could not be used to compare the cost of the foreign-made vessel with the cost of the indigenous tanker The foreign vendor had high labour rates but used lesser number of manhours on account of automation in construction. Also, cost of yard material, including DH-36 could not be estimated.

In the second model, the CNC used a quotation from Hindustan Shipyard Limited (HSL) of Rs 350 crore in 2004. The CNC after adding the escalation factors decided on the reasonable price of Rs 730 crore and used it as a justification in favour of the bid of Fincantieri of Rs 723 crore. This model escalated the HSL estimate based on DMR 249A steel although Fincantieri had based their commercial bid on the cheaper DH 36 steel. The entire exercise was, thus, vitiated since it was based upon two different grades of steel.

Notwithstanding these flaws in the tendering process, in April 2008, Government sanctioned the acquisition of a fleet tanker from Fincantieri, at a cost of Euro 159,326,750 (Rs 936.04 crore[1]). The contract[2], concluded in the same month, with the shipyard envisaged delivery of the tanker by April 2010 and also had provision for purchase of one more tanker under an option clause. A separate contract for offset was also concluded in April 2008 for Euro 41,563,500.

It was observed that the cost of Base and Depot (B&D) spares was negotiated post-evaluation of the quotations received, thereby; passing an undue benefit to the supplier since the B&D cost was not made a part of the commercial offer. The quantum of B&D spares was agreed at 15 *per cent* of the basic cost of the ship. While computing this amount, the entire value of the ship, i.e. Euro 138,545,000 inclusive of weapons and other services, was taken rather than just the basic cost of the ship. As a result, there was excess provisioning of B&D spares to the tune of Euro 5,181,750 (Rs 30.44 crore). Delinking the B&D spares from the commercial offer had a fall-out on the offset contract as well. The Defence Procurement Procedure (DPP) prescribes an offset clause at a minimum of 30 *per cent* of the cost of the acquisition. However, Ministry concluded the offset contract for Euros 41,563,500 by taking 30 *per cent* of the basic price of the ship (Euros 138,545,000) excluding the cost of B&D spares on the grounds that offset is to be calculated on the commercial proposal. Audit noted that while taking the approval of the CFA, the total cost of acquisition was made up of the basic cost of the vessels and the B&D

[1] 1 Euro = Rs 58.75
[2] Price of ship: Euro 138,545,000; Base and Depot spares: Euro 20,781,750

spares. Resultantly, it led to under realisation of offset benefits to Indian Industry.

In March 2009, Government accorded another sanction for acquisition of one more fleet tanker from the same firm, at the same price, under the option clause. The RFP had envisaged that the option clause would be valid for 18 months post conclusion of contract. However, because of the delay in negotiations and conclusion of contract, the CNC was forced to accept the vendor's proposal that the option clause be exercised 18 months from the date of offer of the lowest firm. Thus, the option clause which was to remain in force for 18 months from April 2008 came into force from September 2007. Hence, Navy was forced to exercise the option as a ***fait accompli*** and ordered another tanker even before receiving/evaluating the equipment originally contracted for.

The Ministry stated in, October 2009, that the process of awarding contract for construction of the fleet tanker to the foreign vendor was carried out by providing a level playing field and within the provisions of RFP. The material cleared for use on the tanker is not inferior and is of a desired quality as required for a Navy tanker. Ministry defended the offset contract by stating that the DPP specifies that the offset percentage is to be based on the commercial proposal.

The reply of the Ministry is not tenable as the tankers being procured are not made from the requisite type of steel viz. DMR 249A as envisaged in the RFP but by using DH 36 grade steel suggested by Fincantieri. The equivalence of this steel was not established independently. Ministry's argument with respect to the offset is not acceptable as the RFP itself did not specify that B&D spares should be quantified.

2.2 Import of radars by a PSU against indigenous manufacture order

Approval of the Competent Financial Authority was obtained by the Ministry for supply of 22 SREs under Phase II to IAF by BEL citing its capability to manufacture these radars indigenously. However, BEL violated the intent of CFA by procuring 60 *per cent* radars in CKD form from the OEM at a lower cost. As a result, BEL had unwarranted additional returns of Rs 10 crore. Supplying CKD radars instead of indigenously manufactured ones also resulted in premature delivery before finalisation of works services.

Ministry of Defence (Ministry) concluded a contract with Bharat Electronics Limited (BEL) in March 2003 for procurement of 20 Surveillance Radar Element (SRE radars) from an Italian firm (M/s SELEX), the Original Equipment Manufacturer (OEM)), in Phase I at a total cost of Rs 585 crore excluding works services. Under this contract, BEL was to obtain 12 radars from the OEM and supply them to Indian Air Force (IAF) sites. The balance eight radars were to be indigenously manufactured (IM) after obtaining Transfer of Technology (ToT) of the equipment from the OEM. Delay in installation of the radar against 2003 contract has been commented in paragraph 2.1 of CAG's Report No. 5 of 2007.

In July 2007, the Competent Financial Authority (CFA) approved procurement of 22 SRE radars in Phase II from BEL at the cost of Rs 870 crore. The total cost included the works services component of Rs 137 crore at the installation sites. In turn, Ministry of Defence entered into a contract with BEL in September 2007 for the supply of indigenously manufactured radars. BEL was given the order by the Ministry under special dispensation of the Defence Procurement Procedure 2005 (DPP) as the procurement was categorised as 'MAKE' and a repeat order by the Defence Acquisition Council (DAC) on the premise that BEL would be able to manufacture the radars indigenously as they had absorbed the technology transferred from the OEM in Phase I. Though it was cheaper for the Government to purchase the fully furnished radars from the OEM directly, it was a considered decision of the Government to involve BEL in the procurement process in order to achieve self reliance. The cost of self reliance endeavoured to be achieved was Rs 41.39 crore. BEL,

however, did not manufacture the radars indigenously under Phase II. Audit found that within three months of getting the Ministry's order, BEL placed a follow-on order on the OEM, in December 2007, for import of nearly 60 *per cent* of the radars (13 out of 22 ordered) in CKD[3] form along with spares and 22 sets of assembly kits at a cost of Euro 52 million, in gross violation of its own commitment of manufacturing these radars indigenously. Not only was the sanctity of the Defence Procurement Procedure violated by BEL but the intent of the CFA approval was also flouted.

The negotiated price for the Phase II supplies of SRE was based on the indigenised product (IM modules) of 2003 supplies, whose cost was higher than those of imported products (Rs 0.78 crore per radar) whether in SKD[4] or CKD form. Since BEL purchased the CKD kits of radars in December 2007 from the OEM at lower prices than the prices taken from the Government for indigenously manufacturing these radars, it earned greater returns than those negotiated and agreed with the Ministry. This enabled BEL to carry an additional amount of Rs 10.14 crore over and above the profit already allowed to it.

It was also noticed in audit that though five radars were delivered by BEL prematurely, required work services to install the radars were not completed by them as of June 2010. As a result, the early delivery of radars did not yield any benefits to IAF.

Ministry, in February 2010, accepted the audit observation that 13 SRE radars out of 22 are assembled from a CKD kit rather than manufactured indigenously and the issue was being examined in consultation with the concerned administrative wing of Department of Defence Production. It also admitted a gap between the receipt of SREs and the works services. However, Ministry argued that the additional benefit of Rs 10.14 crore was not correct as prices were based on material procurement by BEL in 2005-06 and their value addition in 2007-08.

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[3] Completely Knocked Down
[4] Semi Knocked Down

Ministry's reply is not acceptable with reference to the unwarranted benefit as BEL purchased the CKD kits in 2007 at prices prevailing in 2003. Thus, the base price used by Ministry was already higher by the original difference between IM manufacture and CKD kits.

2.3 Irregular commercial exploitation of Santushti Shopping Complex

Delay in revision of licence fee and irregular crediting of revenue to non-public fund by IAF authorities in violation of Ministry's directives and Government orders has deprived the exchequer of revenue amounting to Rs 9.75 crore approximately. Further, the Ministry's decision to suspend the eviction process without taking any action for more than two and a half years has allowed unauthorised occupants to retain possession of these shops for more than 13 years.

The Santushti Shopping Complex (Complex) was established in 1985 by the Air Force Wives Welfare Association[5] (AFWWA) at Air Force Station (Station), Race Course, New Delhi primarily to assist Service personnel by providing income / employment opportunities through allotment of shops to selected categories of personnel / their families. In March 1998, management of the Complex was handed over by the Ministry of Defence (Ministry) to the Defence Estate Officer (DEO). However, in August 2006, management of the Complex reverted to Air Force Station authorities.

Unauthorised construction/ modification of an existing defence building and its conversion into a shopping complex by Air Force authorities and crediting substantial revenue into Non-Public Fund (NPF) *inter alia* was commented upon in paragraph 18.5.1 (a) of the Report of the Comptroller & Auditor General of India for the year ended 31 March 1996. Further, during the last 15 years, various authorities like the CGDA[6], Joint Secretary (APO&W[7]) and a High Powered Committee have through special audits / enquiries found various irregularities being committed by Air Force authorities in the running

5 A welfare organization set up in October 1970 as a registered body for providing assistance to the families of deceased/disabled/retired/serving personnel of the Indian Air Force.
6 Controller General of Defence Accounts
7 Joint Secretary (Army Purchase Organisation and Works)

of the Complex. One of the issues highlighted was the irregular commercial exploitation of the Complex to exclusive advantage of a non-government body, viz. AFWWA. In response to CGDA's internal audit report, Ministry had directed (October 1995) that since allotment of land at concessional rates for exploitation for commercial purposes was illegal, the entire proceeds realized/realizable by way of rent, rebate etc. from the premises should be deposited into government account, no rebate or any other dues realized from the premises should be deposited in any non-government fund and if the property was to be let out to private persons, it should be on commercial rates, which were to be settled by competitive bidding/auction.

The Government issued orders in January 2001 for crediting revenue realized from shopping complexes on Defence land to the Government account. The Government further issued Rules of Management of such complexes in November 2002 and June 2006. Despite these directives and orders, audit found that 50 *per cent* of the revenue earned during the period from August 2006 to June 2009, amounting to Rs 2.56 crore, had been deposited by Air Force authorities with the Regimental Funds of the Air Force which is a non-government fund. In comparison, during the period from March 1998 to August 2006 when the management of the Complex was with the DEO, the amount earned was Rs 12.12 crore which was deposited with the Government treasury. Incidentally, during this entire period (March 1998 to June 2009), Rs 4.88 crore was spent on maintenance of the Complex by deducting this amount from the revenue earned.

The Complex houses 43 shops, which are leased out to various allottees at a specified rate of license fee. As per the Rules of Management framed in 2002 and 2006, 60 *per cent* of the shops were to be reserved for (i) war widows/widows of defence personnel killed while on duty, (ii) disabled soldier, (iii) ex-servicemen and (iv) spouses/widows of ex-servicemen, and the remaining 40 *per cent* of the shops could be allocated to Government agencies including Public Sector Units and civilians whose spouse or dependent family members do not own any shops in the Complex/ Military station/ Cantonment. It was noted that as of February 2007, out of the 37 shops which were allotted on that date, only 11 shops were allotted to the defence category. This amounted to 30 *per cent* as against the requirement of 60 *per cent*. Four shops *did not actually* fall in the categories enumerated above as three shops were

allotted to relatives of ex-serviceman and one shop to AFWWA. The remaining 22 shops were also allotted to high-profile civilians mentioned in Annexure-II. After the allotment of the six vacant shops in 2008, the percentage of shops allotted to persons with defence background increased to 37 *per cent* although 22 shops continue to be leased to civilians.

Initial allotments made by AFWWA were through annual agreements which were renewed annually with or without revision of lease rent. In March 1998, when the management of the Complex was handed over to the DEO, license agreements of all shops had already expired during 1996-98. Subsequently, when the management reverted to the Air Force Station, the Station Authorities in pursuance of Rules of Management of 2002 and 2006[8] issued eviction notices (September 2006) after more than a decade to every shop owner to vacate the shops. Further, the occupants were granted a period of six months to vacate the premises. During this six months period, licence fee at the existing rates was to be charged. In the meanwhile, Santushti Entrepreneurs Association (SEA), however, gave a representation against the eviction notices to the Raksha Mantri (RM). Ministry, in March 2007, conveyed directions that till a final decision on the representation was taken, the existing occupants were not to be disturbed. Audit noted that the SEA made representations to the RM four times[9]. On each occasion, eviction proceedings were kept in abeyance. This has allowed unauthorised occupants to retain possession of these shops for more than thirteen years since 1997 despite eviction notices and without having valid agreements.

Meanwhile, the Station Authorities also initiated action for revising the license fee for shops by constituting a Board of Officers (Board) first in October 2006 and subsequently in November 2007. The licence fees prevailing were without any uniform criteria and varied at Rs 50[10], Rs 120[11] and Rs 170[12] per square feet per month. The Board of November 2007 adopted a rate of Rs 85 per square feet, after adding 10 *per cent* inflation for two years to a rate

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8 As per these rules, unauthorized occupants, whose allotment period/license had already expired on or before the date the management of the shopping complex was transferred to the Military authority, might be allowed, on request, six months to vacate the premises.

9 7 December 2006, 31 January 2007, 17 August 2007 and February 2008

10 28 shops paid Rs 50 from 1991onwards

11 06 shops paid Rs 120 from 1997 onwards

12 02 shops paid Rs 170 from 1998 onwards

given by the New Delhi Municipal Authority (NDMC) for the year 2005. The Board ignored a rate given by the CPWD (Rs 124.84 per *sq. ft*), which had been framed as per the Rules of Management 2002, on the grounds that the CPWD rate was much higher. This also implied that even the eight shops which had been paying rates of Rs 120 and Rs 170 would be paying lower rates in future. Though the complex is located in a prime area, surrounded by five star hotels, none of the agencies preferred to call for competitive bids for the shops to determine the market rent.

The Board further recommended that the existing rate be maintained for the current occupants till a decision on their tenancy was taken by the Ministry. This was because any increase in the licence fee would have involved a fresh agreement, which would legitimise their possession of the shops. Thus, as a result of delay in revising the licence fee coupled with non-adoption of CPWD rates and the Board's recommendation to maintain the existing rate pending Ministry's decision, the exchequer has suffered a revenue loss of Rs 7.19 crore approximately during the period 2003 to September 2009 in the case of 37 shops.

Scrutiny of the income earned by the Complex on account of rent etc., showed that despite many of the shop-owners being defaulters, they were allowed to continue operating from the premises. There were long outstanding dues amounting to Rs 46.99 lakh against the shop owners of Santushti Complex on account of charges for damage of shop occupation and electricity charges during the period 1998 to 2006 which were communicated by the Station authorities to 25 shop owners in September 2006. However, only three shops paid their arrears and arrears remain outstanding for more than three years in case of the remaining shops.

The matter was referred to Ministry in October 2009; their reply was awaited as of June 2010.

2.4 Undue benefit to HAL on account of pricing policy

Notwithstanding Government instructions to the effect that no budgetary support for wages increase would be provided separately and that resources for funding the increased cost on account of wage revision have to be generated by the company internally, IAF reimbursed arrears on account of wages and gratuity to the extent of Rs 315 crore. Further due to delay in revision of the base year, IAF suffered an extra expenditure of Rs 400 crore.

Hindustan Aeronautics Limited (HAL) provides a wide range of supplies and services to the Indian Air Force (IAF) which includes manufacture/ major repair/overhaul of aircraft/helicopters and its aero-engines and supply of maintenance/overhaul spares. From August 1995, HAL follows a Fixed Price Quotation (FPQ) Policy for the pricing of the supplies and services made to IAF. As per the FPQ policy, the base year prices were to be escalated annually up to 1999-00 at a pre-determined rate and 2000-01 was to be considered as the new base year. This was subsequently extended to 2001-02 on HAL's request. In August 2001, Ministry set up a Pricing Policy Review Committee (PPRC) to finalise, *within three months*, the standard terms and conditions of contracts, man-hour availability, labour efficiency / productivity levels at various HAL Divisions and overall cost reduction etc. The Report of the committee was submitted in June 2006 and approved in August 2006. Government sanctions were issued in October/November 2007 approving the base year price of 2004-05 for all the divisions with annual escalations to be applicable up to 2008-09.

I Extra expenditure due to delay in revision of base year

The delay in setting up of the PPRC and inordinate delay in finalisation of its report by more than four and a half years as against the prescribed period of three months, resulted in change of base year from 2000-01 to 2004-05, thus, allowing HAL to claim payments up to the year 2003-04 through simple escalation since Government sanction for approved prices for base year 2004-05 was issued only in October/November 2007. The delay in revision of base year by four years, thus, resulted in extra expenditure of Rs 400 crore approximately at the rate of Rs 100 crore annually to IAF for the year 2000-01 to 2003-04.

In their reply to audit, Ministry stated (May 2009) that no undue benefit had been given to HAL on account of delay in finalisation of the base year review and finalisation of the PPRC report. Ministry's reply is not acceptable to audit as the benefit of increased productivity by way of improved 'yield' (3.20 *per cent*) and 'efficiency' (6.89 *per cent*) was passed on to IAF from 2003-04 due to delay in revision of base year. The monetary value of this increased productivity was approximately Rs100 crore per annum. Further, IAF paid a higher Man Hour Rate from 2000-01, with the increase ranging from 15.92 to 17.62 *per cent*. It was noted that the delay in revision of base year was due to HAL's reneging on the agreement for review of base year and not making data available even after the decisions were taken by the PPRC. In fact, HAL was in favour of continuing the existing base price escalation with moderate escalation rates. However, audit noted that IAF had opposed HAL's view-point since, in their opinion, there was a strong case for revision of base year in view of the adverse financial implications for IAF. IAF also felt that HAL should be subjected to detailed verification of records. The fact remains that there has been inordinate delay in finalisation of the report because of HAL, resulting in change of base year from 2000-01 to 2004-05 which lead to extra expenditure for IAF / Government.

II Payment on account of wage revision

As per a Memorandum of Understanding approved by the Government between the workmen and the management of the HAL, resources to meet the increased cost which would arise on account of the Wage Agreement had to be generated by (i) ensuring uniform production by all divisions of HAL and (ii) by improving productivity, in conformity with conditions laid down by Government in 1999 to the effect that any increase in wages after negotiations would not result in any increase in administered prices of their goods and services and in labour cost per physical unit of output. Despite these provisions, IAF contributed Rs 219.76 crore to HAL towards payment of wage revision arrears and Rs 95.17 crore on account of revision in gratuity for the period 1997-98 to 1999-2000. IAF also accepted an increase ranging between 15.92 to 17.62 *per cent* in the Man Hour Rate for the year 2000-01. Incidentally, IAF has not made any payment on account of wage revision to other Defence PSUs.

Ministry stated in December 2009 that payment of wage revision separately should not be viewed as budgetary support from Government but cost recoverable through customer which happens to be IAF. Ministry's reply contradicts Government's order that the wage revisions would be subject to the condition that there should be no increase in labour cost per physical unit of output. Therefore, increased cost on account of the Wage Agreement should not have been passed on to the IAF.

2.5 Unfruitful expenditure on submarine rescue facility

Inordinate delay in commissioning the Indian Navy submarine rescue facility, due to lack of adequate need assessment, poor planning and the absence of a conclusive time bound agreement with the United States Navy, is likely to render the facility unviable and expenditure of USD 744,343 thereon unfruitful.

Government of India in March 1997 sanctioned USD 288,008 for a submarine interim rescue facility tie up between the Indian Navy (IN) and the United States Navy (USN). The Indian Navy accordingly accepted (April 1997) a Letter of Offer and Acceptance (LOA) of USN for site survey for Submarine Rescue Service to enable supply and installation by the USN of holding devices required for mating the Deep Submergence Rescue Vessel (DSRV) and Submarine Rescue Chamber (SRC) of the USN with IN submarines. As per the LOA the case for rescue was recommended in two phases. The first phase was to cover a site survey, analysis of the submarines and facilities of IN to ensure rescue operation success and the second phase to include developing a separate case to support the actual rescue operation.

The USN submitted its initial report of survey in January 1998. Certain minor deficiencies identified by the USN were to be undertaken by the IN, after which the USN would give the final certification. The IN submitted the status report after four years in January 2002, intimating non availability of materials and technology for fitment and welding of Padeyes[13] on escape hatch of the submarines.

[13] Holding device for securing the DSRV to the submarine

Subsequently in February 2004, an additional amount of USD 446,435 was sanctioned by the Government of India expanding the scope of first Phase of LOA to include fitting and installation of supply support items. The LOA of April 1997 was, thus, amended and validated in March 2004 increasing the cost of the project to USD 734,443. The payments were to be made on a quarterly basis with the final payment of USD 113,853 scheduled for March 2005. Though the IN was aware of the poor progress and need to link at least future payments with proper milestones, the entire amount was paid by April 2005.

After a meeting held between IN and USN in October 2006, the USN agreed to provide its qualified technical team to install Padeyes on the first submarine and to train the IN welders to install Padeyes on the rest of the submarines. The IN welders were accordingly trained in November 2006. In June 2007, the IN sought requirement of welding rods to complete the fitment process for which an additional amount of USD 9,900 was paid to the USN. The additional rods were received by IN in August 2008. However, as of November 2009, the fitment of the Padeyes was in various stages of installation. Thus the first phase of the LOA for submarine rescue was yet to be concluded (December 2009).

Despite the expenditure of USD 744,343[14] (Rs 3.35 crore) incurred so far, on the project, which is yet to be completed even after 6 years of its signing, the utility of the project is questionable for the following reasons:

- 75 *per cent* submarines in the IN fleet have already completed three fourths of their estimated operational life. In fact the IN envisaged the project without clearly identifying deadlines for completing the project. It is pertinent to mention that only 7 out of 16 submarines in IN are operational and 9 submarines are under refit/repair as of October 2009. As of November 2009, Padeyes fitment has been completed in 11 out of 16 submarines out of which only 4 SSK[15] submarines have been certified by USN for mating with US DSRV for a period of three years effective from 20 December 2007 and of which

[14] 1 USD = Rs 45.05

[15] SSK is a Russian acronym which means "Diesel Electric Attack submarines".

at least 2 are presently under refit. Two of the serving Foxtrot submarines, on which Padeyes were fitted, INS Vela and INS Vagli, would be de-commissioned in 2010 and 2011 respectively.

- The DSRV is to perform rescue operations on submerged or disabled submarines. It will remain stationed with the US Navy and in the event of an accident will be transported to the nearest seaport or airport, then to a mother ship to reach the rescue site. The nominal response time is 72 hours from the time the DSRV is lifted from its location to reach the rescue site and with the capability of rescuing up to a depth of 610 meters. Such time and depth restrictions further dilutes the effectiveness of a rescue facility which in any case is nowhere close to completion.

The matter was taken up by audit with the Ministry of Defence (Ministry), Government of India, New Delhi (May 2009). The Ministry in their reply (December 2009), while conceding to the point raised by Audit regarding delays in meeting the deadlines of the contract, attributed the delays mainly to imposition of sanctions, amendment of LOA in view of change in the scope of work, interpretation of contract differently by USN and other aspects concerning technology and operational incompatibility issues between IN and USN. The fact remains that despite the project having been envisaged in 1997, it is yet to be fully operationalised. There were flaws in conceptualisation and execution of the project in so far as time schedules were not laid down and payments not linked to work completed. Moreover, while the initial work of fitting of Padeyes and certification of IN submarines for mating with USN, DSRV was no where close to completion, a separate agreement with USN to enable DSRV to undertake rescue operations and further recertification of submarines is yet to be concluded.

Thus, lack of adequate need assessment, poor planning and the absence of a conclusive time bound agreement with the USN led to extensive delays in the timely commissioning of the essential and life saving submarine rescue facility.

2.6 Procurement of shipborne Electronic Warfare System

Expenditure of Rs 472 crore on import of seven Electronic Warfare Systems, considered critical for operational purposes, did not yield anticipated results due to delay at each stage of procurement.

Ministry concluded a contract in September 2003 with M/s Rafael, Israel for procurement of seven SEWS-V5 systems at a cost of USD 102,500,000 (Rs 472 crore[16]) with the first system to be delivered within 18 months from the date of contract and the remaining systems were to be delivered in another 18 months after successful completion of Sea Acceptance Tests[17] (SAT), which were expected to take about 3 months. Audit examination of the above procurement indicated the following:

- In August 1999, in order to overcome serious operational handicaps and enhance the Electronic Warfare (EW) capability of its ships, Navy proposed the priority procurement of ten Shipborne Electronic Warfare Systems (V5) (SEWS-V5) subsequently reduced to seven systems (February 2000) with a delivery schedule of 12 to 23 months. It was envisaged with the approval of the Raksha Mantri (April 2000) that the acquisition process from issue of Request for Proposal (RFP) to conclusion of contract would be completed in nine weeks. However, the competent financial authority (CFA) accorded approval for the foreign acquisition in August 2003.
- The process was delayed at each stage of procurement in general and, particularly, during the evaluation of commercial offers by the Price Negotiation Committee (PNC) as indicated below. The timeline of nine weeks given by RM was over-shot considerably and it took 176 weeks to finalise this contract as shown in the table:

[16] 1 USD = Rs 46.05

[17] Sea Acceptance Test means the tests to be carried out on the systems, while the ships are sailing on the sea

ACTIVITY	TIME PERIOD ENVISAGED	ACTUAL TIME TAKEN
Request for proposal	1 week	3 weeks
Receipt of technical and commercial offers	4 weeks	8 weeks
Evaluation of technical proposal and preparation of TEC report	2 weeks	6 weeks
Evaluation of commercial offers, work of PNC and finalisation of contract	2 weeks	159 weeks

Ministry took 17 months in concluding the contract after finalisation of price. Thus, the urgency shown in the procurement of the system did not seem to be reflected in the procurement process.

- Despite the urgent requirement, IN opted for the SEWS-V5 which had a large developmental portion and was not proven on the date of contract. Ironically, Navy, in 2000, while arguing for a single-tender procurement from Rafael had stated that the SEWS-V5 was an upgraded version of the 'C-Pearl' system already in service with the Navy and, thus, could be considered as a proven system. Nonetheless, the contract finally concluded was conditional as the vendor would supply the first system, prove its performance in respect of prescribed Qualitative Requirement (QR) parameters and only then would 'Go Ahead' be given for the supply of remaining six systems.

- Against the delivery period of 18 months, the first system was delivered in 25 months in November 2006. The Sea Acceptance Tests (SAT) of the first set was completed in December 2006, and the linked 'Go-ahead' for the remaining six systems was accorded in March 2007. The SAT of four systems was completed between April 2008 and November 2008. As on date (September 2009), the sixth and seventh systems are yet to be installed since the ships are under refit.

Incidentally, even while seeking the approval of the CFA for the acquisition Ministry had assured that the entire delivery[18] would be completed within 39[19] months as against which the supplier took 64 months. Thus, the equipment was actually commissioned and installed after a gap of four to six years from the planned date leaving the frontline ships of Navy vulnerable.

- At the time of conclusion of contract in September 2003, Ministry was aware of the fact that the indigenous system for which sanction was accorded in June 1995 for undertaking an EW programme "Ellora" would be available by 2004. A contract for manufacture and supply of four system was concluded with BEL Hyderabad in March 2004 at a cost of Rs 262 crore. Three systems were installed between September 2005 and December 2007 while the fourth is under installation.

Ministry, in February 2010, stated that the time line of nine weeks for the acquisition process from the issue of RFP to the conclusion of contract were not 'approved' but only 'envisaged'. Ministry also defended the delay by explaining that there was no benchmark available within the country to compare and assess the system, its price and other aspects. Further, payment terms, guarantees etc had to be deliberated and examined. Audit found the reply unacceptable as the nine weeks time was an explicit decision taken at a meeting chaired by the RM and attended by the Chief of Naval Staff and Defence Secretary.

To sum up, despite an on-going indigenous programme for development of EW systems, Indian Navy purchased seven imported systems at a cost of Rs 472 crore on the grounds of 'operational emergency'. Due to delay in procurement at each stage, these systems could not be made available to Indian Navy urgently, thereby, defeating the very purpose for which the priority procurement was proposed. By the time they were available and could be fitted onto the ships the indigenous systems were also developed and productionised.

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[18] From issue of RFP to complete delivery of systems

[19] 18 months for delivery of first system, 3 months for installation and trial evaluation and 18 months for delivery of the remaining six systems

2.7 Inordinate delay in development of Air Bases

Despite sanctioning an additional Rs 25.17 crore for speedy completion of the project on fast track basis, frequent changes in plans led to a delay of over two decades in commissioning a strategic forward base airfield. In the second case, an airbase could not be activated and operationalised, even 25 years after obtaining government approval, for use by fighter aircraft.

The prevailing security scenario and emerging threats led IAF to obtain approval for developing two air bases at Phalodi and Thanjavur. Audit reviewed the execution of the two decisions and found considerable delay in their establishment and activation. Each case is discussed in brief below.

Case I: Development of an Airfield at Phalodi

Citing the increasing number of air-fields in a neighbouring country, in March 1985, the competent financial authority (CFA) approved construction of a Forward Base Support Unit (FBSU), in Phalodi (Rajasthan), at a cost of Rs 29.33 crore. Although the land for the FBSU was acquired in October 1986 at a cost of Rs 0.67 crore, actual construction could not commence as the budgetary support[20] earmarked was utilised for other urgent and operationally important requirements. After a gap of more than a decade, in January 2002, the proposal was once again put up to the CFA who accorded a revised approval for construction of a full-fledged airfield, instead of a mere FBSU. As a result of the increase in scope of work, the cost increased to Rs 227.38 crore. The Ministry / IAF also identified 23 works which were to be executed over a period of four years. Given the delays and urgency of the air-field, this cost included Rs 25.17 crore for undertaking the project on fast track basis. Nonetheless, despite approval in 2002, initial funds were released only in August 2004, i.e after a delay of 31 months, thereby defeating the very purpose of sanctioning the project on a fast track mode.

[20] 1985-86: Rs 29.33 crore
1988-89: Rs 78 crore
1989-90: Rs 2.28 crore

As of September 2009, only 15 sanctions worth Rs 123.88 crore have been accorded against the originally identified works services. Though certain facilities were essential for the development of an Air Force Station, no works have been sanctioned for them. Thus, important works, viz. OTM for Tropo Communication Unit and Mobile Observation Flight, provision of bomb dumps, Blast pens, etc are yet to be sanctioned.

Audit noted that, as of September 2009, expenditure of only Rs 85.86 crore has been incurred and the progress of the various works ranged between 45 and 100 *per cent.* The airfield runway has achieved a progress of 71 *per cent.* Tardiness in the completion of work was initially due to the location of the run-way not being finalised leading to a delay of two years in commencement of work although works services for construction of the runway were sanctioned in October 2005. In addition, frequent changes in the Master Plan necessitated revision of five administrative approvals. Besides, the delay has led to cost revisions as well. In eight out of the 15 sanctions, there has been a cost escalation amounting to Rs 25.38 crore.

Further, IAF, in March 2005, decided to exploit the existing bases with surplus infrastructure rather than increasing the number of air bases. It was, therefore, decided to slow down the rate of build up at Phalodi. Audit, however, found that although till March 2005 only five sanctions to the tune of Rs 23.35 crore had been issued, between June 2005 and December 2008 Air HQ accorded approval to ten sanctions worth Rs 100.53 crore including non-priority works. Less critical infrastructure like Officers Institute, Mess, shopping centre, bank, RO plant and guest-house were given priority over the main works required for creation of an airfield. Officers' Institute was also being constructed although the station did not qualify for the Officers Institute owing to inadequate strength of officers.

In the meanwhile, audit found that the IAF, in March 2007, was contemplating operations of helicopters only at Phalodi and no fighter aircraft were envisaged to operate from the base at present. As the proposal, initially mooted, was for the operation of fighter aircraft from the FBSU, the infrastructure created at a cost of Rs 22.12 crore, in keeping with the requirements of a fighter squadron, would remain largely under-utilised by the helicopter unit.

Thus, despite the fact that the air-field at Phalodi was sanctioned about 24 years ago, it is doubtful whether it will be commissioned as per the objectives for which it was proposed. As on date, its utility is negligible, given the constantly vacillating position of the IAF on its future use.

Case II: Delay in establishment of an Air Base

In June 1984, the CFA gave its approval for an Air Force station at Cholavaram near Chennai by inducting a squadron of combat aircraft from the authorised force level. The Base was meant to provide air defence cover to certain sensitive installations of national importance. As the State Government was reluctant to give clearance for an airfield at Cholavaram, Air HQ, without reverting to the CFA, decided (October 1987) to relocate the air base to Thanjavur (Tamil Nadu), where two runways of 1942 vintage existed. Thereafter, Ministry in December 1989 sanctioned the establishment of a Wing at Thanjavur. In spite of forming the Wing (November 1990) and spending Rs 35 lakh to improve the condition of the runway, the runways were not fit for operation of fighter aircraft. As a result, operations were restricted to a few transport aircraft and unscheduled civil flights. Till date, no fighter aircraft operation has taken place. By November 1993, IAF had changed its stance about the nature and priority of the base and once again, without obtaining the approval of the CFA, Air HQ downgraded and converted the Base into a Care and Maintenance Unit, thereby, restricting its role to care and maintenance of the few aircraft that visited the base.

In 1999, while keeping the project on priority, a development plan for the Wing was revived and a proposal was sent to Air HQ by HQ Southern Air Command (SAC). On the basis of a Board of Officers recommendations, HQ SAC proposed that minimum work services including the strengthening of runway and operational facilities like hangar, etc. be taken up on priority to make the existing airfield suitable for fighter aircraft operation during Phase I at an estimated cost of Rs 49.78 crore and other activities in subsequent phases. However, Air HQ truncated (June 2002) the recommended works services and approved creation of facilities worth Rs 25.69 crore omitting provision for hangar, storage accommodation and other operational facilities.

In March 2003, Ministry suggested that estimates for the whole project be prepared before seeking administrative approval and expenditure sanction. Later (April 2004), HQ Southern Air Command also advised that the development of the air-field be taken up as a Special Project[21] and not under the general Capital Works Plan (CWP). In March 2006, Ministry, while remarking on the inadequate planning, again advised Air HQ to complete the land acquisition process, Board Proceedings and issues related to Local Flying Area (LFA) before approaching the competent authority for development of infrastructure for the Wing. Ignoring this advice, Air HQ split the expenditure to be incurred into small works programmes as shown below.

Date	Entity	Amount	Remarks
December 2003	Air HQ	Rs 7.59 crore	Approved CWP-2003-04
February 2004	Air HQ	Rs 7.59 crore	--
June 2006	Air HQ	Rs 4.37 crore	--
March 2006 to May 2007	HQ SAC	Rs 10.04 crore	18 sanctions in total

Besides the recurring annual expenditure of Rs 4.47 crore on manpower, Air Force, till date, has invested Rs 42 crore on the acquisition of land and execution of civil works, yet the Air Base is far from fully operational as between January 2002 and June 2007, only 51 service aircraft/microlite/ helicopter visited the base. Thus, the intended air cover over sensitive installations remains elusive even after 25 years of government approval for activation of an air base.

The matter was referred to the Ministry in August 2009; their reply was awaited as of June 2010.

[21] In April 2004, it was decided to earmark separate funds from the total allocation of IAF for major projects under the code head 'Special Projects'. A new accounting head was to be opened for each project.

2.8 Financial irregularities in organising Military World Games 2007

Funding for the Military World Games 2007, organised by the Services Sports Control Board, violated financial rules and regulations. The approval of the competent financial authority (CFA) was taken for Rs 50 crore as against an estimate of Rs 138 crore. The financial arrangements have resulted in unspent balances lying outside of Government account, foregoing of revenue and diversion to non-public funds.

The Military World Games (MWG) is a multi-sport event for military sports people organised under the aegis of the International Military Sports Council (CISM). Indian Armed Forces are a member of CISM since 1999. In September 2003, the Services Sports Control Board (SSCB) submitted a proposal to host the 4th Edition of the MWG at Hyderabad and Visakhapatnam. The competent financial authority (CFA), i.e the Raksha Mantri (RM), accorded *in-principle* approval to the proposal in the same month at an estimated cost of Rs 20.32 crore. In November 2005, CISM awarded the MWG – 2007 to Indian Armed Forces for organising them in October 2007.

In June 2006, the Ministry of Defence (Ministry) sanctioned Rs 40 crore for the MWG[22], which was to be equally shared by the three Services out of their Sports Funds. In addition, the Ministry sanctioned, in March 2007, Rs 10 crore for making payment to the Andhra Pradesh (AP) Government[23]. Further, on the request of SSCB, Department of Defence Production directed Defence Public Sector Units to contribute for the games. Accordingly, DPSUs contributed Rs 19 crore to SSCB by October 2007. Audit noted the following financial irregularities in the management of project funds:

- Projects exceeding Rs 100 crore require the approval of the Cabinet. Although the SSCB (January 2006) required funds in excess of Rs 100 crore for the conduct of MWG, a proposal omitting work services was put

[22] For incurring expenditure on hospitality, reception, transport, IT infrastructure etc.
[23] For provision of infrastructure facilities, supply of electricity and water etc.

up to the Ministry for only Rs 40 crore. Interestingly, sanctions amounting to Rs 138 crore in total were issued for the MWG.

- It was decided to undertake the works services through the Capital Head allocations of the respective Services as per existing works procedures. The works services were sanctioned by according 37 piece-meal sanctions costing Rs 78 crore from 2006 onwards.

- An amount of Rs 4.76 crore received on account of charges realised from extra CISM contingents was diverted to non-public fund between September 2007 and June 2008.

- The money received from the sponsors totalling Rs 0.84 crore was spent by SSCB without the sanction of the Ministry.

- Additionally, unspent money to the tune of Rs 7.21 crore was not deposited into Government account. The principal amount and the interest thereon (Rs 28.14 lakh) is still held by SSCB in private banks without any authority.

- Entire amount of Rs 10 crore was paid as advance to AP Government in July 2007. However, no formal agreement was concluded with the AP Government for the Services to be provided by them. As a result, the AP Government did not furnish any contingent bills/ details bills to SSCB for the services provided by them. Audit also noticed that the electricity charges were estimated at the rate of Rs 16 per unit for 16 hours utilisation per day, against a rate of Rs 6.30 per unit which is the commercial rate applicable in Andhra Pradesh.

Thus, SSCB organised the 4th edition of MWG without obtaining the approval of the competent authority for the entire expenditure. Ministry failed to monitor the expenses incurred on MWG and the unspent amount has not yet been credited to Government account.

The matter was referred to the Ministry in September 2009; their reply was awaited as of June 2010.

CHAPTER III : AIR FORCE

Procurement

3.1 Abnormal delay in integration of Recce Pods onboard an aircraft

Recce pods, procured by IAF, were not selected or evaluated as per Defence Procurement Procedure. The Pods have not met performance parameters in trials in India. While the IAF's operational need is yet to be fulfilled even after almost a decade, large proportion of the contractual payment, amounting to Rs 611 crore, has already been made to the vendor.

A reconnaissance (Recce) system is used to collect intelligence data for operational needs. An aerial Recce system comprises (a) Synthetic Aperture Radar (SAR) pods, (b) Electro Optic/Infra Red (EO/IR) pods and (c) Ground Exploitation Stations (GESs). The EO/IR pod possess dual band capability in both visible and infra red bands with a data link for real time processing of information whereas the SAR offers real time, all weather day and night stand-off strategic Recce capability with sub-meter resolution. The SAR pods use radar for imaging while the EO / IR pods use a camera. EO/IR offers better picture quality but they are fair weather systems that are adversely affected by adverse climatological conditions. The GESs are the control centres for the pods on the ground and are critical for information processing.

In November 1996, the IAF contracted for 50 Sukhoi 30 MKI (Su-30) aircraft, of which ten aircraft were expected to undertake a reconnaissance role. These ten Sukhoi aircraft were to be delivered, as per contract, without Recce Pods but in a condition ready for installation of Pod in conformity with the submitted interfaces[1]. The Ministry of Defence (Ministry) issued a Request

[1] Audit had commented upon the non-synchronisation in integration of the Reconnaissance System with the delivery of the last batch of ten Su-30 aircraft in Paragraph 1.4.1.2 of the Report of the Comptroller and Auditor General of India, No.4 of 2006 (Performance Audit).

for Proposal for this equipment to seven vendors in 2002. Responses were received from only two vendors, M/s Thales, France and M/s IAI, Elta, Israel.

Despite having finalised and categorised the Staff Qualitative Requirements (SQRs) / Operational Requirements (ORs)[2] between 'essential'[3] and 'desirable'[4] performance parameters in August 2002, IAF re-classified six parameters during evaluation thereby reducing the transparency of the process. In 2003, the Technical Evaluation Committee modified the parameter of "Electronically Steered Antenna" from essential to desirable. Thereafter, during the on-site evaluation at IAI, Elta Israel, IAF re-classified another four parameters[5] as 'essential' on the grounds that these features were not available / mature at the time of issue of the RFP. Incidentally, when the second vendor, M/s Thales was asked to provide all these features, the firm could not do so. Finally, just before concluding the contract with the OEM in 2004, the IAF deleted an 'essential' parameter[6] stating that it was no longer required by the IAF. Although these changes were approved by the competent authority, the frequent changes were made to facilitate the procurement of Recce pods offered by IAI, Elta as it became the only vendor capable of meeting these ORs. Incidentally, the same TEC in 2003 had held that the performance of Thales EO/IR pod was superior due to newer technology but the developmental risks for the French Recce system were greater.

Further, while the Defence Procurement Procedure 2002 stipulates that field evaluation trials be conducted for any new equipment proposed for induction into Services, the IAF / Ministry instead opted for 'on-site' evaluations of the Recce Pods because the systems as specified in the ORs were not available and were still under development. The technical evaluation was of the IAI Elta system available on the F-16 aircraft and the Thales system on the Mirage aircraft. This was done despite IAF being fully aware that crucial elements of

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2 The technical characteristics required in the equipment

3 Minimum essential military requirements corresponding to the priority task or tasks to be performed by the system, resulting from an in-depth critical analysis of the necessity of requirement

4 All parameters other than 'Essential'. No vendor can be rejected if the equipment offered by him does not meet a 'Desirable' parameter.

5 In flight control and display facility, Synthetic Aperture Radar Mode enhancement package, Electro-optic/Infra-red modes enhancement, Synthetic Aperture Radar Interpreters Advanced Training

6 Cockpit control and display system

any such system, like the Man Machine Interface and Control logic, are designed exclusively for each platform. Hence, even though the on-site evaluation committee did not have the means to assess the compatibility or otherwise of the system on the Su-30 aircraft, it accepted both systems for the Su-30 aircraft. The IAF, in support of its decision for 'on-site evaluation' had stated that the Recce system is not an off-the-shelf item which can be installed on any aircraft and the platform would require extensive modification before the system can be fitted. Accordingly, while seeking approval for the procurement of these systems, IAF had also assured the competent financial authority (CFA) that suitable clauses would be incorporated in the contract to ensure compliance to performance parameters envisaged through 'Acceptance / Flight' testing.

Notwithstanding the above, the Ministry concluded a contract with M/s IAI, Elta, Israel (OEM) in December 2004 for procurement of an aerial Recce system, to be integrated on the Su-30 aircraft, at a total cost of USD 136.61 million (Rs 640.70 crore[7]). The first lot of the Recce system was to be delivered by the OEM in March 2007. Most of the supplies were made between December 2007 and March 2009.

Audit scrutiny revealed that while integration and flight trials of the SAR pods were undertaken in 2008 and the same has been cleared for operational use in January 2009, the functionality of the EO/IR is still to be proven by IAF due to large number of problems persisting in the system. Although the IAF found the system 'acceptable' during Factory Acceptance Trials under laboratory conditions simulated at the OEM premises, it discovered that the pod design had not matured after conducting flight trials in India. It was also noticed in audit that basic operating software testing for EO/IR pod was not conducted at OEM's premises despite contractual provisions for the same. As on date, even though the IAF has conducted 24 out of the 30 flight trials stipulated in the contract, the basic operating software still requires extensive testing and the EO/IR has both hardware and software bugs. As on date (June 2010), the On-Site Acceptance Test to verify and demonstrate complete functionality of the system in India is yet to be done. However, by August 2008, payment

[7] 1 USD = Rs 46.90

totaling to US$ 130,340,000 representing 95 *per cent* of the contracted cost had already been made.

The progress of the project, with respect to creation of necessary infrastructure for GES at three stations has also been tardy. Works services, amounting to Rs nine crore, were sanctioned by the CFA to be completed by 2007. As on date (June 2010), the cost of these works had increased to Rs 10.71 crore. While civil works at one station were completed in 2009, the civil works at the remaining two stations are expected to be completed only by 2010-11.

Ministry stated in, November 2009, that the induction of any avionics system requires extensive laboratory integration and flight testing. A complex system like Recce Pod is no exception. Checks of operational compliance require checks of imaging capabilities. This particular aspect requires a large window of fair weather conditions. Delay in the actual induction of the Recce assets can therefore be attributable to the availability of a good window with ideal weather conditions for flight trials. The reply furnished by Ministry is not tenable as the project has been delayed by over three years from the originally scheduled delivery date. Thus, adequate time was available with IAF for undertaking operational compliance for imaging capabilities in a large window of fair weather conditions. Besides, the requirement of fair weather conditions ought to have been factored in at the contracting stage. Further, the delay is primarily attributable to non-maturity of design.

To sum up, IAF adopted an approach in formulating its Operational Requirements in such a manner that they were aligned to the system offered by M/s IAI Elta. By deviating from the prescribed procedure of field trials, the IAF has accepted a system which has exhibited several hardware and software problems in inconclusive trials in India and is yet to be proven fully. The IAF did not ensure that critical integration was successful at OEM premises and failed to safeguard Government interest as assured to CFA, before authorising stage wise payments to the foreign vendor. Further, delay in provision of works services has lead to non-installation of vital imported equipment costing Rs 65.46 crore. Thus, despite spending Rs 611 crore and delay of over three years from the originally scheduled dates, the IAF remains devoid of a state-of-the-art strategic Recce system.

3.2 Irregularities in the procurement of Microlight Aircraft

Air Headquarters procured the CTSW Microlight Aircraft in an uncompetitive and non-transparent manner. There were serious financial irregularities while processing the proposal like release of advance prior to placing the supply order, making bill payment before receipt of the aircraft, constitution of PNC after placement of order etc.

As a part of its Platinum Jubilee (75th year) celebrations, the Indian Air Force planned a 'Round the World' (RTW) Microlight Expedition. In February 2007, Air Headquarters placed a purchase order on M/s Flight Design GmbH, Germany for supply of one CTSW[8] Microlight Aircraft at a cost of Euro 95,744[9] (Rs 56.40 lakhs[10]). At the time of placement of order, the approval of the competent authority, the Vice Chief of Air Staff, was not obtained. The acquisition was given *post facto* approval by the competent authority in May 2007.

The IAF did not short-list / select the vendor or aircraft through either an open bid or Limited Tender system despite comparable aircrafts being available, in violation of Defence Procurement Manual (DPM)[11] provisions. Instead, a comparative study of leading contemporary microlight aircrafts was put on record. The IAF also granted the firm a Proprietary Article certificate, thereby, processing the procurement as a single tender. Further, IAF by-passed the DPM requirement of forming a Technical Evaluation Committee for scrutinising the proposal to ensure compliance with technical parameters prescribed[12].

The DPM prescribes that commercial negotiations be conducted through a duly constituted Price Negotiation Committee (PNC) which would also

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8 Composite Technology Short Wing

9 Cost of the microlight aircraft is Euro 90,143 and air freight charges Euro 5,600

10 1 Euro = Rs 58.90

11 Para 4.9 and 4.10 of DPM

12 Para 4.11 and 4.12 of DPM

determine the reasonableness of the price[13]. Audit, however, found that a PNC was constituted *after* the order was placed and initial advance released. The vendor, even, trained the Indian pilots. At the insistence of Defence Finance, the PNC met on 14 March 2007, in the *absence* of the vendor as the vendor declined to attend the meeting and recommended that the CTSW Microlight be procured.

IAF sanctioned an advance amounting to Euro 21,000 (Rs 12.58 lakh[14]) to the vendor on 5 December 2006 from ***outside*** Government funds and prior to order being placed. Interestingly, even the Request for Quotation itself was issued to the supplier on 12 January 2007. The competent authority sanctioned release of funds in March 2007 and the entire contracted amount was released as an advance[15] prior to delivery of the aircraft in April 2007. Ultimately, IAF, on the advice of Defence Finance, sought the approval of the Raksha Mantri for exemption from DPM provisions regarding release of advance. IAF also obtained waiver of the Performance Bank Guarantee Clause.

Ministry, in their reply (December 2009), stated that the aim was to set a world record in global circum-navigation, hence, all possible sources were exploited and then finally narrowed down to one particular type of aircraft which would suit the requirement. They stressed that the CTSW was a PAC item and inviting quotations from earlier suppliers did not arise. The Ministry added that the vendor had quoted the fixed global price for the Microlight and the same was verified and put on record. As regards, the absence of the vendor in the PNC, Ministry stated that the vendor was invited by e-mail but declined to attend. Ministry also claimed that the advance of Euro 21,000 was made from funds outside Government account as the vendor insisted upon the same, without which the order could not have been placed. The advance was, thus, released after due deliberations to expedite the procurement with the intention that the same would be reimbursed from public funds after sanction by the Ministry of Defence.

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13 Para 5.6 of DPM

14 1 Euro = Rs 59.90

15 Balance amount of Euro 74,744 (Rs 44 lakh) was released on 19 March 2007, thereby, making 100 *per cent* payment to the firm

Ministry's arguments do not address the core issue as to why the IAF chose not to adhere to the procedures prescribed for tendering, price negotiation and release of funds and instead got these actions and decisions regularised subsequent to placement of the order.

Thus, the procurement of the CTSW Microlight Aircraft by Air Force Headquarters did not adhere to the canons of financial propriety, which would set an undesirable precedent for future procurements.

Contract Management

3.3 Under utilisation of infrastructure created

Establishment of a blade manufacturing facility, at a cost of Rs 72 crore, has been delayed on account of over-optimistic assessment of the existing capabilities. The facilities so created would remain largely under-utilised due to inflated estimation of requirements. Due to absence of a formal contract, the vendor has not been penalised for the delay.

In August 2002, Ministry of Defence (Ministry) accorded sanction, for setting up of a Blade Manufacturing Unit (BMU) at a total cost of Rs 71.99[16] crore, at Hindustan Aeronautics Limited (HAL), Koraput for indigenous manufacture of turbine/compressor blades of aero-engines of Mi-8 / Mi-17 helicopters and AN-32 aircraft. The facilities were to be established by August 2007 and would have potential for effective use till 2017-18. Till May 2009, Indian Air Force (IAF) had released a sum of Rs 53.76 crore (i.e. 75 *per cent* of project costs) to HAL for the project.

I The project was based on unrealistic assessment of requirement of blades

The sanction for the project was based on the assumption that the IAF would require 53,290 blades annually for the Mi-8, Mi-17 and AN-32 helicopters/aircraft. This projection was based upon the consumption levels

[16] Inclusive of Rs 60.33 crore for machinery and civil work and Deferred Revenue expenditure of Rs 11.66 crore for design, tooling and trials etc.

of 1999-2000 without taking into account actual force levels which would prevail at the time when the BMU would be operational. Audit noted that, majority of the Mi-8 helicopters, which accounted for approximately 62 *per cent* of the demand, would be phased-out in stages by 2016. In fact, by June 2009, the actual requirement for these blades had come down to 26,978 annually (i.e. 50.62 *per cent* of the original projection).

Incidentally, in March 2004, the Directorate of Indigenisation had suggested alterations in the project well before the tooling stage on account of phasing-out of the Mi-8 helicopters so that both public money could be saved and the facility could be more productively diverted to enhance similar capacity for other type of blades.

Although the benefits of indigenisation cannot be quantified, yet it is pertinent to note that, as per the proposal submitted to the competent financial authority for approval, the BMU was expected to start generating profits from 2013 if the originally scheduled milestones had been achieved. These profits were largely based upon the sales of the Mi-8 helicopters. However, as 20 *per cent* of the Mi-8 fleet would be phased out by 2013 and majority by 2016, the investment made in the project may not be able to yield enough profits to compensate for the original cost.

II The project is also delayed

As on date (June 2010), the project is far behind schedule and is likely to become operational only by September 2010. HAL, in February 2008, stated that the delay is attributable to the fact that a project of this nature was being developed for the first time by HAL, there was no Transfer of Technology available and the blades were to be manufactured by reverse engineering processes.

III No formal contract was signed with HAL

It was also observed that despite the Financial Advisor's advice to the contrary, Ministry sanctioned the project without any formal contract with HAL. Thus, the rights and responsibilities of the contracting parties remained undefined thereby creating a project environment with little accountability.

This became evident as after the initial sanction of August 2002, two revised sanctions were issued altering the payment milestones and extending the expected date of completion. The usefulness of the facility, already restricted by the reduced demand, has been further undermined by the delay.

The Ministry, in December 2009, defended the sanction for the project on the grounds that there was a need to develop indigenous capability so as to reduce dependence on foreign suppliers and no country was willing to part with this critical technology. Ministry, agreed that the initial projection for blade requirement was made based on the actual consumption record till the year 1999-2000. They, however, added that the views of the Directorate of Indigenisation were not disregarded and the utilisation of the excess capacity of the Blade Manufacturing Unit is under active consideration of Air HQ in consultation with Headquarters Maintenance Command. Ministry also stated that the project was sanctioned through a Government letter since it was of a development nature.

Ministry's reply is not tenable as IAF and Ministry were well-aware of the phasing-out schedule of the helicopters. Even now (June 2010), three years after the facility was supposed to have commenced production, IAF has not been able to put forth a concrete proposal for utilising the excess capacity of almost 50 *per cent.* Incidentally, in June 2009, a further extension has been sought till September 2010. As regards Ministry's contention that no country was willing to part with this technology, the argument is not convincing as HAL (Koraput) had indigenised the aero-engine blades of the MiG 21 and MiG 29 under transfer of technology. In fact, HAL's lack of expertise in this area has been a critical factor in delaying the project.

In brief, the blade manufacturing facility at HAL, Koraput was planned on wrong assessment of requirements. The project has also been undermined by a lack of honest appraisal of the capabilities of HAL. To blame 'inadequate knowledge base in the country' is a ***fait accompli*** as this factor should, however, have been known both to Ministry and the Company. The lack of capabilities was borne out by the fact that HAL itself admitted that the risk would be high. The absence of a formal contract further compounded the problem leading to delay and grant of repeated extensions. Despite an expenditure of Rs 54 crore, the IAF has not gained commensurate benefits.

Since the facility is likely to be completed only by September 2010, its utility would be limited in view of phasing out of the aircraft for which this facility has been created.

3.4 Avoidable expenditure on repair of an aero-engine under warranty

Failure of an IAF Equipment Depot to correctly classify the repair task of a damaged aero-engine under warranty led to an avoidable expenditure of Rs 1.09 crore.

The Ministry of Defence, in March 2006 concluded a contract with Hindustan Aeronautics Ltd (HAL), at a total cost of Rs 1,710 crore, for supply of Jaguar Twin Seater aircraft, spares and TTGE[17]. The aircraft and spares carried a warranty of 12 months or 150 operational hours from the date of acceptance or date of installation and commissioning whichever is earlier. The contract also, *inter alia*, stipulated that the warranty for the unserviceable equipment would be extended by the period of down time.

Against this contract, HAL supplied, in October 2005, an aircraft to IAF, which was allotted to an Air Force Station in Bangalore. The aircraft remained with the AF Station for about a year, during which it was available for flying for only four and a half months. In October 2006, the aircraft was transferred to an Indian Air Force Wing located in Pune. A month later, the aero-engine fitted on the aircraft developed a snag and the engine RPM[18] dropped below the permissible limits, although it had completed only 70 hours of operation against a Time Between Overhaul (TBO) of 1,200 hours. The concerned Wing, therefore, rejected the engine and sent it to the designated Equipment Depot (ED) of the Indian Air Force, which in turn allotted the engine to HAL for repair in March 2007. Audit scrutiny of the case revealed the following:

- The contract concluded in March 2006 provided that if within the warranty period the goods are reported by the Buyer to be unserviceable and not available for flying, then the Seller would either

[17] Tools, Testers and Ground Equipment
[18] Revolutions per minute

replace or rectify them free of charge. Although, the aero-engine was under warranty when it developed snag on 17 November 2006, the ED allotted the aero-engine to HAL against the regular task rather than classifying it as 'under warranty repair'. As a result, the repair of engine was not done free-of-charge and IAF made a payment of Rs 1.09 crore for the same to HAL in August 2006 and November 2007.

- HAL agreed in December 2008, that the engine was received against regular task. They added that warranty claims for the said engine were not received through proper authorities, with prescribed documentation in the specified format and hence, the engine repair could not be claimed against warranty claim.

The Ministry stated, in February 2010, disagreed with audit and stated that the engine was not under warranty on 17 November 2006 when it developed the snag as the aircraft was inducted in Air Force on 17 October 2005 and, thus, carried warranty only up till 16 October 2006. Reply of the Ministry is not tenable as IAF failed to take cognizance of the fact that between 17 October 2005 and 16 October 2006, the aircraft was not available for flying to Air Force for 51 days for the reasons attributable to HAL. As noted above, the contract explicitly provided that if the goods were not available for flying within the period of warranty then the warranty period would be extended by such period of down time. Thus, the warranty for the aircraft as well as the aero-engine stood extended by 51 days to 4 December 2006.

The ED failed to exercise the contractual terms and conditions and thus, a repair task which was to be undertaken under warranty free-of-cost was taken up as a regular task on payment basis. This resulted in an avoidable expenditure of Rs 1.09 crore by IAF.

Miscellaneous

3.5 Foregoing of revenue due to non-revision of licence fee rates for residential accommodation

By not revising the License Fee rates in respect of residential accommodation every three years, Ministry continued to make recovery at older rates resulting in foregoing of revenue totalling Rs 13 crore.

The Government of India provides residential accommodation to a number of its eligible employees with the Ministry of Urban Development (MUD) being responsible for the administration and management of such residential accommodation. The Government also recovers a license fee (LF) from the Government servant for the use of such accommodation. The license fee is required[19] to be revised every three years and the MUD has been adhering to the prescribed interval for revision of LF.

Ministry of Defence also provides residential accommodation to serving officers. This Defence Pool Accommodation refers to such accommodation constructed or hired by the Ministry of Defence and accommodation constructed by Ministry of Urban Development but included in the Defence Pool. A Group of Ministers (GoM) in, May 1987, *inter alia* set out that the Ministry of Defence may fix a package of suitable rates (License fee) for the accommodation under their jurisdiction on the basis of principles laid down by the Ministry of Urban Development. The GoM also approved the recovery of LF from service officers @ 50 *per cent* of the rates notified by MUD, owing to trans-India location and varying condition(s) of the dwelling units. Accordingly, the Ministry of Defence, in January 1988 notified the LF chargeable from service officers for Standard and Classified Defence Pool Accommodation. These rates were made effective from 1st July 1987 and were subject to review after a period of three years.

[19] In terms of Supplementary Rules

Audit scrutiny of documents leading to the revision of license fee by the Ministry of Defence revealed the following:-

- The Ministry of Defence did not review/revise the rates of license fee every third year, as prescribed. Post 1999, the revision of license fee was required to be made effective from April 2001, however, the Ministry of Defence revised the rates with effect from September 2004 only.

- As of April 2001, the Defence Services had a total of 35,667 residential dwelling units. The non-revision of LF for the period from April 2001 to September 2004 led to foregoing of revenue worth Rs 12.44 crore[20] at a minimum.

- Further, another revision of license fee was required to be made with effect from July 2007, however, it was revised from May 2010. The non-revision of LF for the period from July 2007 to April 2010 also led to a minimum foregoing of revenue worth Rs 56 lakh.

To sum, Ministry has not followed the prescribed procedure for revising the license fee rates for the residential accommodation occupied by service personnel every three years. The loss of revenue due to this delay, on a very conservative estimate, is about Rs 13 crore.

The matter was referred to the Ministry in September 2009; their reply was awaited as of June 2010.

[20] Computed after applying a 10 *per cent* reduction to the total holdings of dwelling units to cater for disuse/ non-allotment etc. The lowest slab of LF rates i.e. Type 'D' and 'E1' has been applied to calculate the loss to the Exchequer assuming that 50% of the houses fall in the category of 59 to 75 sq.mt. and up to 130 sq. mt and remaining 50% are upto and above 159.5 sq.mt.

3.6 Injudicious transportation of containers for UN Mission

Ministry of Defence authorised overseas transportation of containers in excess of that prescribed by the United Nations Peacekeeping Force for the purpose of claiming reimbursement. As a result, the Indian Government incurred avoidable extra expenditure to the extent of Rs 38.96 lakh.

Indian Airfield Services Unit (IASU) was deployed in September 2004 in Kindu, Democratic Republic of Congo (Congo) as part of an Indian Air Force United Nations (UN) Mission (MONUC). The Mission was deployed for one year for which the cost of deployment of equipment and personnel[21], cost of maintenance and services and the cost of repatriation to India on termination of the Mission, were to be reimbursed as per the MOU[22] entered between UNDPKO[23] and the Indian Government. Though the initial deployment was for a period of one year, however, the deployment was continued till 2008 through three rotations. The Mission tenure was terminated with the UN Mandated repatriation of the IASU-IV contingent after end-September 2008.

The Indian Air Force transports Mission-specific material through containers. As per the MOU, the IASU was authorised 16.5 containers[24] for which the United Nations would bear the cost of transportation to the Mission area and back to India consequent on repatriation of the contingent.

It was observed that the Mission on termination possessed 38 serviceable containers, an excess of 21.5 containers against the prescribed authorisation. Air HQ stated in, October 2009, that self sustenance of the contingent was the responsibility of the Government of India and for self sustenance, upkeep and maintenance of vehicles equipment, the Government had sent an additional 15 containers. Audit, however, noted that the Indian Air Force was able to negotiate with UN re-imbursement for 23 containers during induction. Thus, 15 containers during induction were transported at a cost of Rs 38.96 lakh,

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21 As mandated by the UN
22 Memorandum of Understanding
23 United Nations – United Nations Department of Peace Keeping Organisation
24 Containers are of different types viz. 20 feet Sea Containers and 10 Feet Yak Containers

borne by the Government of India. During de-induction[25], the IAF was able to claim re-imbursement for the costs of transportation of 27[26] containers which returned to India.

Ministry stated in May 2010 that MOU was only for one year initially but at the request of UN three rotations took place each requiring additional containers to be taken to Missions area. Further, Ministry stated that IAF could not have claimed reimbursement for the extra containers as self sustenance was the responsibility of Troop Contributing Country. Ministry's reply is not tenable as the period of deployment of the Mission was increased from one year to three years and the Government should have re-negotiated and obtained prior approval of the UN for shipment of the additional 15 containers before deployment as per UN manual. Further, the fact remains that IAF was able to obtain reimbursement for the additional containers at the time of de-induction. This would also have been in line with the principle of cost neutrality, i.e the cost of deployment incurred should be equal to the reimbursement being received from the UN over a given period of time.

Thus, due to inability of Government to negotiate and obtain prior UN approval towards transport of additional containers, resulted in a ***fait accompli*** situation causing an avoidable expenditure of Rs 38.96 lakh.

3.7 Savings at the instance of Audit

An amount of Rs 3.40 crore was saved in two cases after having been pointed out by Audit.

During the audit of Administrative Approvals (A/As) for works services accorded by Air HQ and HQ Western Air Command, following instances of lapses were noticed. Acting upon the advice of audit, the auditee initiated

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[25] UN inspectors in the Mission Terminal Inspection found ten of the available containers with the Mission as no longer seaworthy for the purpose of repatriation. However, as these containers were in excess of the authorised serviceable containers for the purpose of repatriation, no reimbursement by way of forced loss could be claimed and the containers were gifted away as charity to another country's (Bolivian) Mission.

[26] One yak container was put inside a sea container to cut down on space, making total number of containers returned to India as 28.

necessary action resulting in savings of Rs 3.40 crore to the exchequer in two cases. Each case is discussed below.

Case I

Air HQ, in December 2006, accorded an Administrative Approval (A/A), at an estimated cost of Rs 3.30 crore, for construction of 72 quarters for civilians at an Equipment Depot (ED).

Audit scrutiny revealed that:

- Despite the fact that the ED already possessed the authorised number of quarters for civilians, *vis-à-vis* that authorised in the Scales of Accommodation for Defence Services 1983, the A/A was accorded in December 2006 for construction of additional 72 quarters.

- Certain Type-I quarters were vacant and there was no waiting list for occupying them.

On this being pointed out in audit (April 2008), the A/A accorded in December 2006, was cancelled in August 2009, thereby, resulting in a saving of Rs 3.30 crore.

The matter was referred to the Ministry in September 2009; their reply was awaited as of June 2010.

Case II

Headquarters Western Air Command (HQ WAC) accorded Administrative Approval (A/A) in September 2007 for additions / alterations at a cost of Rs 9.70 lakh, to a building at an AF Station, housing a Unit-run Canteen (canteen). In October 2008, audit scrutiny revealed that the A/A was irregular since the canteen was a Non-Public Fund venture and Government funds are to be utilised for bonafide Government activities only. The Station Commander accepted the error in November 2008, leading to the cancellation of the A/A by HQ WAC in December 2008.

The Ministry accepted the facts in February 2010.

CHAPTER IV: NAVY

Procurement

4.1 Injudicious expenditure on procurement and overhaul of helicopter engines

Despite the fact that two Kamov 25 helicopters with the Navy were old and in a poor material state with virtually no product support, Ministry of Defence concluded a contract with a foreign firm for their overhaul at a cost of Rs 10.38 crore. Not only was the quality of the overhaul poor but expenditure amounting to Rs 8.14 crore became unfruitful as flying operations on these two helicopters were discontinued due to severe defects in their engines. Related procurement of spare KA 25 engines also became wasteful as the engines could not be utilised.

Indian Navy acquired in 1980 seven Kamov 25 (KA 25) helicopters from a Russian Company (Kamov Co) which were fitted on board the Rajput class of ships. With the loss of one helicopter at sea, IN was left with an inventory of six such helicopters. By 1986, it also stopped production of GTD-3M engines, which powered these helicopters. By 1997-98, the OEM also ceased all product support services for these helicopters.

In February 2005, Headquarters Naval Area, Goa proposed the overhaul of two helicopters by M/s Spetstechnoexport Ukraine (M/s STE). Product support for these helicopters was available only from this Company. Integrated Headquarters (Navy) advised in April/May 2005 against such overhaul on the grounds that (a) these helicopters were already too old, (b) maintenance, even after the overhaul would be difficult, as engines, main gear box and rotor blades would be only refurbished and they would not be new, and (c) proposed overhaul of these helicopters would not be economically viable proposition.

Notwithstanding such reservations, the case was processed and Ministry of Defence in December 2005 issued the Request for Proposal (RFP) to

M/s STE. The contract was finally concluded in May 2006 for an amount of US $ 2.32 million (Rs. 10.38 crore[1]). The overhaul was to be completed by January and March 2007 with a post overhaul life of 500 hours/five years. An agreement for some additional works was concluded in January 2007 for another US $ 606,450 (Rs. 2.73 crore[2]). Delivery schedule of both the helicopters was later revised to May 2007.

The helicopters were received in April 2007 but could be accepted only by June 2007 as several defects found by the Test Team had to be rectified. Finally, the Test Team found that (a) the material state of the helicopter after the overhaul was satisfactory (b) all other structural fittings and state of on board equipment were satisfactory and (c) husbandry state of the helicopter was found to be satisfactory. However, due to the presence of minor defects detected during the assembly and acceptance, the test team recommended a requirement for improvement in quality of overhaul. The Indian Navy also observed in another correspondence a conspicuous deterioration in observance of quality standards by the Ukrainian company. In fact, in less than one month of its acceptance, the parts of engine exhaust of one helicopter shroud blew off. Both the engines were replaced, one of which again developed defects in July 2007. The engine was repaired again. In July 2008, engine of the other overhauled helicopter caught fire. In September 2008, merely within a year of the overhaul, all flying operations of the Kamov fleet were discontinued.

Indian Navy had separately procured four refurbished GTD-3M engines with a minimum residual life of 500 hours from M/s Hazel UK Ltd, Ukraine at a cost of US $373,440 (Rs.1.74 crore[3]). Of these four, two were fitted in one of the overhauled helicopters. The other two engines had never been put to use. Thus, the decision of the Indian Navy and Ministry of Defence to overhaul two helicopters despite their 1970 vintage and lack of facilities for such overhauling led to an expenditure of Rs13.11 crore without any commensurate benefits.

Ministry of Defence stated, in January 2010, that the KA helicopters were procured as an integral part of the first three Kashin class destroyers and it was

[1] 1 USD = Rs 44.74
[2] 1 USD = Rs 45.02
[3] 1 USD = Rs 46.59

envisaged that the helicopters would be in operation till the ships were in operation. Further, the shelf life of the operation of one of the ships has been extended to 2018 and similar extensions were being planned for other two ships. It was, therefore, decided to keep the helicopters in operation till such time the ships were decommissioned. The Ministry also confirmed that the flying operations of KA 25 fleet had to be stopped due to sudden spurt in defects in the engines due to ageing of internal components.

Ministry's intention that the helicopters should be kept in operation as long as the Rajput class of ships were in operation should have had a reality check as by the time it took the decision to overhaul the last two helicopters, the OEM had stopped production and support. The decision also ignored the opinion that such overhauling was not economically viable. Indian Navy and Ministry were also aware that the overhauling would be done by refurbished parts as new parts were not available.. An expenditure of more than Rs. 13.11 crore thus did not bring any benefit whatsoever to Indian Navy.

4.2 Excess procurement of Electronic Warfare Systems

Ministry incurred an infructuous expenditure of Rs 19.19 crore on procurement of Electronic Warfare Systems for non-existent or already phased out aircraft. Besides, given the phase out schedule of the aircraft fleet, two AES-210 systems and three HOMI systems procured for Tu-142 M aircraft would be exploited for less than 50 *per cent* of their useful life.

As a part of the Naval Integrated Electronic Warfare Programme (NIEWP), the Indian Navy was to induct and fit Electronic Warfare (EW) Systems, during 1994-2003, on eight Tu-142M, its maritime patrol aircraft. The plan involved indigenous development of EW systems. In June 1995, Ministry of Defence (Ministry) sanctioned Project Sangraha for the indigenous development of EW systems by DRDO[4] for various platforms of the Indian Navy. The project, *inter alia*, included development of the airborne ESM-HOMI (Homi) system for fitment on the Tu-142M. The system was to be

[4] Defence Research and Development Organisation, an entity under the Ministry of Defence

productionised by Bharat Electronics Limited, Hyderabad (BEL). Under the project, five Homi systems were to be made available to Navy by June 2000.

Prior to this, in October 1994, in order to bridge the gap between the operational requirement and indigenous development, Navy proposed the procurement of six EW systems through import. Owing to the limited inventory of the Tu-142M aircraft with Navy and the on-going indigenous development of the Homi system, DRDO in February 1996 recommended procurement of only two imported systems. Consequently, Ministry in 1998 assured that any import of EW systems in excess of these two or after 2000 would be undertaken only after consultation with DRDO. Thereafter, Ministry (August 1999) concluded a contract with M/s Elisra Electronics Systems Ltd, Israel (Elisra) at a cost of USD 4,562,150 (Rs 19.92 crore[5]) for the supply of two AES 210 ESM / ELIINT systems and associated modification of four Tu-142M aircraft on the ground that the two systems could be removed and refitted on the four aircraft on an 'as-required' basis. The modification also implied that these Tu-142M aircraft would be compatible only with the AES 210 ESM / ELIINT systems and hence, would not be able to carry the indigenous Homi system.

Despite the assurance given to DRDO, the Ministry, in January 2006, concluded another contract with Elisra for procurement of two more AES 210 systems and spares for supporting all the four originally modified aircraft at a total cost of USD 4,150,000 (Rs 19.09 crore[6]), on the plea that the frequent removal and re-fitment adversely affected the efficiency of the systems. This was done despite the fact that IN had drawn-down one aircraft in 2006 and was holding only three Tu-142M aircraft which were compatible with the AES-210 system. Resultantly, Navy was left with one AES-210 system in excess of the requirement leading to an infructuous expenditure of Rs 9.55 crore.

Ministry, in their reply, of October 2009 stated that the decision to 'draw down' one aircraft was taken much later than the decision for installation of EW systems and that the 'drawn down' aircraft had not been removed from the inventory and should there be need in future, it would be recovered and

[5] 1 USD = Rs 43.66
[6] 1 USD = Rs 46.00

exploited. The reply is not tenable as the life of the aircraft was not extended after 2003 which indicates that the possibility of bringing the aircraft back into service is remote.

Meanwhile, the development and installation of the Homi system, which was to have been completed by 2000 was also delayed. Ministry could conclude the contract with BEL for five systems only in October 2002 at a cost of Rs 48.21 crore. However, the system was proven successful in flight trials in January 2005 and, thereafter, in August 2006 Navy placed a supply order at a cost of Rs 3.11 crore for installation of the Homi systems on four Tu-142 aircraft. Thus, as Navy held only four aircraft for which five Homi systems were ordered, the procurement resulted in excess procurement of one Homi system costing Rs 9.64 crore.

IHQ MOD (Navy) stated, in April 2009, that one Homi system would be maintained as a 'hot spare'. The reply is not tenable as the concept of holding a 'hot spare' was never deliberated at the time of conclusion of the contract. Besides, the second contract concluded for installation material and commissioning included charges for five systems. Moreover, it was noted that the first system delivered by BEL was used for trials and was planned to be removed and sent for training purpose to Naval Aircraft Yard while the fifth and last system would be installed later on the same aircraft.

Audit also observed that the systems (AES-210 and Homi) both have a useful life of 12 ½ years. The utility of the systems procured in 2006 and installed after 2006 would be restricted in view of the limited residual life of the Tu-142M aircraft as the three Tu-142M aircraft compatible with the AES-210 systems are scheduled to be 'drawn-down' by 2010-11. As regards the aircraft on which the Homi is installed, the life of one aircraft is till 2010, up to 2011 for another aircraft and upto 2017 for the remaining two aircraft.

In brief, Ministry incurred an infructuous expenditure of Rs 19.19 crore on procurement of two systems in excess of requirement. Besides, two AES-210 systems and three Homi systems will be exploited for less than 50 *per cent* of the full span of their useful life.

4.3 Injudicious procurement of pumps

Naval authorities ignored clear evidence that pumps offered by a vendor were unsuitable and instead purchased 44 such pumps worth Rs 4.56 crore from the vendor. Subsequent to delivery, the pumps could not be installed on-board the ships they were meant for due to fitment problems. Thus, these ships, even six years after many of the pumps being declared ABER[7], continue to operate with the old pumps.

The Veer and Abhay class of ships, of Russian origin and commissioned in the Indian Navy (IN) since 1988, have on-board different types of pumps. Replacement of these pumps by the Original Equipment Manufacturer (OEM) has not been possible due to their obsolescence and difficulty in procurement. In 2003, Integrated Headquarters (IHQ) Navy directed Headquarters Western Naval Command (HQWNC) that a board of officers (board) may be constituted to examine the feasibility of installing indigenous pumps as replacement for the Russian-made pumps. Accordingly, HQWNC constituted a Board of Officers (Board 'I') in July 2003 to carry out a study to identify a suitable indigenous substitute out of the offers received from three firms, namely, M/s BE Pump, M/s Sehra Engineering and M/s Johnson Limited.

In respect of a critical auxiliary pump, i.e. the Fire Main Pump, the Board ('I') found that the technical specifications of the pumps offered by all three firms matched those of the existing pump, however, pumps offered by M/s Johnson required modifications to be made on the ship by the Navy while the pumps offered by the other firms were one-to-one replacements. Therefore, the Board ('I') recommended (February 2004) that the pumps be trial evaluated by installing on-board an operational platform for six months for performance monitoring and evaluation. HQWNC, while concurring (February 2004) with the Board ('I') findings recommended that the firm offering a one-to-one replacement and willing to undertake replacement on a turn-key basis be given preference.

Though, one-to-one replacements were available, in May 2004, IHQ Navy, citing reasons of 'standardisation', directed HQWNC to carry out another

[7] Anticipated Beyond Economical Repair

feasibility study of the pump offered by M/s. Johnson *only*. In September 2004, HQWNC confirmed the suitability of the Johnson-make pump and IHQ Navy also gave approval for its installation. However, as this study had not considered the feasibility of actual fitment on-board the Veer and Abhay class of ships, in February 2005, HQWNC issued directives and constituted another Board of Officers (Board 'II') for certifying the suitability of installation of the Johnson-make pumps. The Board ('II') re-confirmed the findings of the first Board (2004) that the pump was not a one-to-one replacement and observed that the pumps were dimensionally bigger than the existing pumps fitted on the ships in all respects (i.e. length, height and breadth). The Board ('II'), however, stated that installation would be possible with certain limitations.

While the Board Proceedings were yet to be approved, Material Organisation, Mumbai (MOM) placed a supply order in May 2006 on the firm for procurement of 23 pumps at a cost of Rs 2.33 crore. In September 2006, however, HQWNC informed the Board ('II') that the Johnson-make pump had not been assessed as per technical drawings and suggested that the suitability of the pump be re-assessed. In contradiction of their earlier recommendations, in October 2006, the Board ('II') through an addendum to the original Board proceedings stated that the replacement of existing pumps with the Johnson-make pumps was a final solution. Consequently, MOM placed two further supply orders for 21 pumps at a cost of Rs 2.23 crore in February 2007. The entire quantity, against all the orders, was received during August 2007 - May 2008. Out of 44 pumps, 18 were issued between August 2007 and March 2008 for installation on-board various ships.

In the context of the Board findings, audit observed that, at the time of installation, Naval Dockyard, Mumbai intimated (February 2008) HQ WNC that physical dimensions of the supplied pumps were much bigger than the existing pumps and would have adverse impact on the fitment and the maintenance of other equipment fitted in the vicinity. The Dockyard stressed that in terms of naval specifications regarding design and installation for maintainability, adequate space would not be available for fitment of the pumps even after major modifications. As such, there would be future problems and delays each time the pump required over-hauling. Hence, HQWNC constituted a third Board ('III') in June 2008 to re-evaluate and reassess the feasibility of pumps as ABER replacement on platforms *other*

than the Abhay and Veer ships. The Board ('III') found that the pumps could not be fitted on-board any other ship based at Mumbai as they were suitable for replacement for fire pumps only on the Abhay class of ship.

The matter was referred to Ministry of Defence (September 2009). In reply, Ministry stated (December 2009) that the Board had overlooked certain areas of installation/integration leading to difficulty in installing the pumps onboard the Veer class and the same was under examination by HQWNC. The Ministry defended HQWNC's decision not to insist upon user trials as user trials of a similar pump had been performed on-board the INS Ajay and anticipated that the pumps would be installed during the next refit of the ships, possibly during their Medium Refits in 2010-12.

The fact remains that Navy over-looked the recommendation regarding one-to-one replacement pumps. Also, Navy did not exercise due diligence by performing subsequent user trials on-board the ships for which the pumps were meant (Veer class) and instead relied upon user trials held for a pump with different dimensions on-board a different class of ships (Abhay class) even though there was a vast difference in the dimension between the existing pump and the Johnson pumps. Ministry's assertion that these pumps will be utilised is in contradiction of Board ('III') findings regarding non-compatibility of these pumps with other ships and Dockyard observation that there will be maintainability problems in case the pumps are installed on-board the Veer class of ships. Incidentally, the guarantee of the pumps also expired in November 2009.

Thus, Navy's decision to purchase a particular make of pump despite the selected pumps not conforming to the required specifications in terms of dimensions has led to non-utilisation of 40 pumps costing Rs 4.15 crore. Out of the 44 pumps procured, two pumps have been installed on-board Abhay class of ships and the two on the LST class of ships as a ***fait accompli,*** while the Veer class of ships continue to function with the ABER pumps.

Contract Management

4.4 Mid Life Upgrade of Mine Sweeper ships

Upgradation of Indian Navy's four minesweeper ships, sanctioned at a cost of Rs 517 crore, has been completed in the case of three ships without fitment of vital MCM suite and weapon systems valuing Rs 170 crore. Advantages accruing from the subsequent installation of the equipment will be off-set by the limited residual life of the ships.

In January 2004, Ministry accorded approval for the Mid Life Upgradation (MLU) of four mine sweepers, inducted in Indian Navy between October 1987 and December 1988, at a total cost of Rs 516.67 crore (Foreign Exchange Rs 400.14 crore) to be carried out at Naval Dockyard, Visakhapatnam / Hindustan Shipyard Limited (HSL), Visakhapatnam. The MLU project, scheduled between December 2004 and July 2009, envisaged *inter alia* upgradation of Mine Counter Measure capability by providing them with a state-of-the-art Mine Counter Measure System Suite[8] (MCMS).

The Naval Staff Qualitative Requirements (NSQRs) for the MCMS Suite were formulated in February 2004 and the equipment was prioritised as operational and immediate. Despite that, the contract for procurement of the MCMs could, however, be finalised in January 2008, by which time, mid life upgradation of three ships out of four was completed. While the bid for MCMs were received in November 2004, Technical and Field Evaluation could be completed only by March 2006. The Cost Negotiation Committee conducted its proceedings only from November 2006 and approval of RM was obtained in September 2007.

The contract for supply of four MCM suites was concluded finally, with M/s Thales, in January 2008 at a cost of Euros 30.50 million (Rs 170 crore) with delivery schedule between November 2009 and April 2011. Thus, Navy

[8] Mine Counter Measure System Suite consists of a package of three equipment viz. a Mine Hunting Sonar (MHS) to detect the mines, a MCM Command and Control System (MCM C2 System) as the nerve centre for the MCM operations and the expendable Mine Identification and Disposal System (MIDS) meant to identify and destroy the mines.

took almost four years i.e 48 months (February 2004 to January 2008) against the time frame of 29 months provided in multi-vendor cases in Defence Procurement Procedure 2006, for completion of different procurement activities.

Navy, while submitting their proposal for the MLU (December 2003), had clarified that the commencement of the MLU would coincide with the Normal Refit (NR) / Medium Refit (MR) of these ships. Due to inordinate delay in acquisition process of the MCM suite, Navy was forced to reschedule the NR/MLU of the ships as shown in the table:

Name of the ship	Planned/ Original date of commencement	Actual period of NR/MLU	Expected date of delivery of MCM suite
Cannanore	December 2004	March 2006 to November 2006	April 2010
Konkan	November 2005	December 2006 to September 2007	October 2010
Kozhikode	December 2006	May 2007 to January 2008	April 2011
Cuddalore	October 2008	October 2009* to July 2010 (likely)	November 2009

** The NR / MLU was postponed to coincide with delivery of the MCM suite.*

Despite the rescheduling, the MLU was completed on the first three ships without the MCM equipment. Navy, was, therefore, forced (October 2007) to de-link the scope of fitment of the MCM suite on the first three ships from the MLU and planned to install it during the next extended Short Refit (ESR). Navy also would be forced to incur an estimated extra expenditure of Rs 20.40 crore on installation of MCM equipment on the ships due to delay. By this time, in the case of the first three ships, at least two years out of the extended life of eight / ten years would be over.

Apart from the MCMs, sanction for the MLU provided Rs 65 crore for equipment / weaponry for each ship which were to constitute the core of the upgradation programme and were critical to the role the ship plays. Out of 38 equipment required to be fitted on each ships, only 23, 25 and 25 equipments

were actually fitted on the three ships whose MLU was completed while six, five and five equipment were fitted subsequent to the MLU. Again, the AK 630 Gun Mounts and Operational Director System, sanctioned at a cost of Rs 8.60 crore per ship were delinked from the MLU package as the guns were not supplied in time. In the case of the IGLA Surface to Air missile, although Rs 3 crore was provided, even the Request for Proposal has not been issued.

Thus, major weapons / equipment constituting 50 per *cent* of the total cost have not been installed. Audit also noted that the reduction in scope of the MLU work was done without the approval of Competent Financial Authority even though, critical capabilities were not added during the MLU. The delay in fitment of the envisaged equipment will not only adversely affect their operational capabilities but also significantly reduce the benefits to be reaped from extension of their service life by eight to ten years.

Accepting the facts, Ministry stated in November 2009 that as per DPP time taken to finalise the CNC report is 24-1/2 months. The time taken was on account of resolution of various issues raised during processing of the case.

4.5 Loss in procurement of petroleum products

Flaws in the rate contract coupled with lackadaisical approach in clearing the bills of IOC resulted in loss of Rs 136.39 crore to Indian Navy.

Indian Navy (IN) uses eight types of primary fuels for running various ships, machinery and equipments and has been procuring these petroleum products from Indian Oil Corporation Limited (IOC) since 1992-93 through Rate Contract. Of the eight types of primary fuels, Low Sulphur High Flash High Speed Diesel (LSHFHSD) accounts for more than three fourths of the total petroleum products consumed by IN. Navy has an estimated annual financial out go of approximately Rs 760 crore on purchases of petroleum products.

The Administered Price Mechanism (APM) for petroleum products was deregulated over a period of four/five years commencing from 1998. In the APM deregulated era, IN entered into rate contracts with IOC in 2000 and 2005. In terms of the conditions of the rate contract for the period 2005-2008,

IN was entitled to claim 'prompt payment discount' ranging from Rs 10 per KL/MT to Rs 20 per KL/MT. Audit noticed that, IN failed to claim 'prompt payment discount' to the full extent due to delays in processing then bills/making payments to IOC timely. Resultantly, IN failed to realize Rs 0.79 crore on this account from IOC.

Audit further observed that the rate contracts concluded by Indian Railways with IOC between 2004 -05 and 2008-09 contained a provision for discount in the cost of High Speed Diesel (HSD) for the 'volume sales'. However, the rate contracts concluded by IN with IOC did not provide for this condition. Resultantly, IN lost an opportunity to realise Rs 135.60 crore from IOC on the purchases of LSHFHSD made between 2004-05 and 2008-09.

Accepting the facts, the Ministry intimated, in December 2009 that it has not always possible to avail 'prompt payment discount' due to the limitations or the operational requirements of the system. Ministry further confirmed that the Price Negotiation Committee of the Ministry has been able to extract a commitment from IOC, for giving discount equivalent to 35 *per cent* of the discount offered by them to Indian Railways, on the volume sales of LSHFHSD and HSD commencing from the next rate contract.

Miscellaneous

4.6 Delay in fruition of Online Examination System of Navy

Faulty drafting of tender documents, first time in 2004 and again in 2007, for award of a contract to develop the Indian Navy Online Examination System led to delay in computerising the examination system prevailing in the IN. Despite an expenditure of Rs 97.92 lakh, the IN will not be able to conduct all 12 examinations online even by 2013.

The Directorate of Naval Education (DNE) is the nodal agency of the Indian Navy (IN) for conducting a number of examinations for recruitment / promotion purposes. Indian Navy in 2004, decided to migrate from the existing system to an online computer-based examination system. After

procedural delays resulting in the re-tendering of the contract twice, Integrated Headquarters (IHQ), (Navy) could conclude a contract only in February 2007, with M/s Sankhaya Infotech Ltd., Secunderabad, at a total cost of Rs 1.26 crore[9], for development of the Indian Navy Online Examination System (INOES). While the contract was to be completed by August 2007, the firm was able to deliver the INOES by July 2008 only.

The system was to be implemented at 18 locations across length and breadth of India at Designated Examination Centres (DEC). After delivery and acceptance testing of the software in July 2008, six mock examinations were conducted between September 2008 and June 2009. During these mock examinations, the system exhibited a number of problems. The software problems were primarily attributable to large number of candidates and large size of files. By October 2008, the system was non-operational and found to be unreliable as the DECs had been giving repeated defect lists. Nonetheless, the last payment milestone @ 60 *per cent* of the cost of software contracted, valuing Rs 24.45 lakh, was released to the firm in the same month. To remedy the problem, each time a problem arose, the firm provided software patch to be installed/updated in the main software. It was seen that this approach resulted in more problems[10].

Audit noted that the delay in delivery of the software was also due to lapse on the part of DNE to inform the vendor of a particular condition regarding hosting of all IN systems on NIC[11] servers to ensure IT[12] related security and robustness. Despite being aware of this clear requirement, the same was not clarified in the Request for Proposal (April 2006). Subsequently, during System Requirement Study Acceptance, in May 2007 the vendor was told to provide software that could be uploaded on NIC servers. As per NIC requirements the software was to be subjected to a third party 'external audit'

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9 Inclusive of Rs 28.12 lakh for Annual Maintenance for three years, to be paid later.

10 More problems relating to – (a) Download/upload of files through dial up mode (b) Problems in the registration modules at the INOES website thus denying candidate. Opportunity to Register for an exam (C) Difficulty in feeding mathematical/scientific
Questions in the Question paper and (d) Source code of software

11 National Informatics Centre, a government body

12 Information Technology

to ensure stringent technical audit prior to hosting the portal. This resulted in a delay of seven months.

The firm was thus, ultimately able to deliver a modified software in August 2009, more than one year after the formal acceptance and delivery of the initial INOES software. However, the INOES could be put to use for the first Pilot Examination only by January 2010. Audit noted that despite the fact that the original goal was to switch over to an online system for 12 different examinations, the same has not been achieved since the Pilot Examination was held for only one subject. As on date (April 2010), a second subject / examination is scheduled to go online in October 2010, five other examinations during 2011 and 2012 while the remaining examinations are proposed to go online at an indefinite date after 2013.

The Ministry explained (January 2010) that the registration and conduct of examination were two different processes and that no problems were noticed with the registration. Ministry further stated that hosting the website on a server owned by the NIC required an 'external audit'. Dependence on an external agency for conduct of audit was, thus, the primary cause of delay. Ministry clarified that Mock Examinations have been helpful in training the users, administrators and fine tuning of online examination SOPs, etc. Ministry added that the delays and rectifications have been cost neutral.

The Ministry's reply does not take into cognizance the fact that the tender action initially initiated in 2004 was flawed as the Tender Enquiry did not contain all the relevant clauses necessary for successful execution of the project. The Chairman NLC[13] accepted this fact in November 2006 and emphasised the need for preparation of tender documents in complete detail and thereafter incorporation of all relevant/necessary clauses in the contract documents. However, IN again erred in this respect in the fresh tender and the contract concluded.

Audit appreciates Ministry's view that registration and conduct of examinations are two different processes. However, as the size of files for an

[13] Naval Logistics Committee, empowered to negotiate the terms and conditions of contract with a vendor

on-line system would determine the technical specifications in terms of band-width required, speed of transfer etc, it is felt that greater due diligence in evaluating requirements and testing the system would have helped in curtailing the delay and increasing confidence levels in migrating to an on-line system. Incidentally, the original warranty of the system expired in July 2009. Though the system was delivered in 2008, all 12 examinations will not be online even by 2013

To sum, although the need for a modern online computerised system for 12 examinations was felt in 2004, as on date, even after an expenditure of Rs 97.92 lakh Indian Navy has been able to utilise the INOES (April 2010) for only one Pilot Examination.

4.7 Lack of due care in passing claims of vendors

Naval officials did not exercise required care in passing claims of vendors or in availing the benefit of exemption from excise duty. As a result, Indian Navy incurred an expenditure of Rs 1.61 crore, out which Rs 1.40 crore could be recovered at the instance of Audit.

Effective handling of procurement cases requires knowledge of applicable taxes, duties, etc and exemptions from the said taxes, duties, etc. Similarly, monitoring of claims raised against contractual payments requires thorough familiarity with relevant terms and conditions. Test check of the tendering process and bills raised at various naval establishments revealed that concerned officials did not perform their duties as expected leading to avoidable expenditure of Rs1.61 crore. Two cases illustrating the same are narrated below:

Case I: Avoidable payment of management fee amounting to Rs 1.40 crore

In January 2004, Ministry of Defence issued a work order on Cochin Shipyard Limited for the design, development and pre-production activities of the Air Defence Ship (ADS). The work order stipulated that cost of design and other related additional work in accordance with the scope of work would be reimbursed on the basis of actual expenditure plus a 5 *per cent* management

fee. However, it also clarified that with respect to taxes, duties and levies, if payable, reimbursement would be limited to actual expenditure. Audit scrutiny of the bills submitted by the shipyard for the construction of ADS revealed that the shipyard was charging management fee @ 5 *per cent* on income tax, service tax and bank charges for the design work executed under three separate contracts concluded with two foreign firms. Despite the clear-cut contractual clause governing payment of management fee, the Warship Overseeing Team (WOT) admitted claims amounting to Rs 1.40 crore made by the shipyard during the period March 2006 to November 2008, which were later cleared for payment by the Controller of Defence Accounts disclosing inadequate concern for internal control both at the level of the WOT and the accounting authorities.

As a follow up to audit observation, WOT on the directives of IHQ (MOD) (N)/DND, recovered in August 2009 an amount of Rs 1.40 crore towards excess management fee paid on external design contracts, from the adjustment voucher/ bills submitted by the shipyard.

Ministry accepted the facts in May 2010.

Case II: Incorrect treatment of Excise Duty resulting into avoidable payments

In May 2007, Controller of Procurement, Mumbai (CPRO, MB) floated tenders to nine firms on Limited Tender Enquiry basis for procurement of copper ingot, zinc ingot, aluminium ingot and ingot antimony. The quote, for supply of copper ingot, by M/s Mehta Tubes Limited @ Rs 450 per Kg (exclusive of ED), was considered as lowest.

Audit scrutiny of the evaluation of bids received for procurement of copper ingots revealed the following flaws:

- M/s Mehta Tubes Ltd. had not included ED in their quoted price. They had categorically specified that the ED would be applicable as extra. Another vendor M/s Hind Metal Syndicate Pvt. Ltd. had quoted for

copper ingots @ Rs 487 per Kg (inclusive of MODVAT[14]). The quote of M/s Hind Metal Syndicate Pvt. Ltd., works out to Rs 429[15] per Kg excluding ED. However, this quote was not declared as the lowest since the rates quoted i.e Rs 487 per Kg were assumed by CPRO to be exclusive of ED.

- CPRO MB also failed to take cognizance of the fact that the excise duty exemption was available to the Indian Navy since 1995. CPRO, thus, made the payment to the firm i.e M/s Mehta Tubes Ltd. @ Rs 535.48 per Kg (inclusive of ED @ 14 *per cent*, Educational cess, Secondary and Higher Education cess and Central Sales Tax @ 4 *per cent*).
- Rejection of the lowest quote of M/s Hind Metal Syndicate Pvt. Ltd. resulted in undue benefit to M/s Mehta Tubes Ltd. of Rs 15.17 lakh in procurement of 16,982 Kg copper ingots.

Accepting the facts, Ministry stated, in May 2010, that the error was due to oversight and without any malafide intention. It further added that the total loss was Rs 3.57 lakh and not Rs 15.17 lakh as worked out by audit in respect of copper ingots as the rates for taxes like VAT and ED are same for all vendors. Ministry's reply is not tenable as Ministry has not taken into account the payment of ED at the time of calculation of loss for which Navy was exempted since 1995. Audit contention is further strengthened as Ministry itself admitted that excise authorities are being approached for refund of ED paid.

Additionally, audit noticed that there was a similar error in determining the lowest quote for procurement of zinc ingots and aluminium ingots. The procurement was made from M/s Max Steel, even though, M/s Hind Metal Syndicate Pvt. Ltd. had quoted the lowest. This resulted in an extra expenditure of Rs 5.65 lakh in procurement of zinc and aluminium ingots.

In sum, an avoidable expenditure of Rs 20.82 lakh was incurred owing to incorrect treatment of ED.

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[14] MODVAT stands for Modified Value Added Tax. It is a scheme for allowing relief to the final manufacturer on excise duty borne by their suppliers in respect of goods manufactured by them.

[15] Rate quoted by M/s Hind Metal Syndicate Pvt. Ltd. : Rs 487 per Kg (inclusive of MODVAT Rs 58). Effective quote without MODVAT Rs 429 per Kg

4.8 Recovery/saving at the instance of Audit

An amount of Rs 90.07 lakh was recovered / saved in two cases after having been pointed out by Audit.

During the course of audit, several instances of financial irregularities and lapses were noticed in different units and establishments. Acting upon the advice of audit, the auditee initiated necessary action resulting in recovery/saving of Rs 90.07 lakh to the exchequer in two cases. Each case is discussed below:

Case I: Amendment in the total cost of supply order

Material Organisation (MO), Mumbai, in August 2008, placed two orders on M/s BHEL for supply of the same item, namely Cam Roller, for different quantities (10 and 50 numbers). Audit, in January 2009, pointed out that there was a wide variation in the per unit price in the two orders, i.e. Rs 4,801 and Rs 38,263, respectively. Accordingly, MO took up the matter with M/s BHEL and amended the total cost of the order in April 2009, which resulted in a saving of Rs 16.74 lakh.

The Ministry accepted the facts in December 2009.

Case II: Excess payment

Ministry of Defence accorded sanction for the acquisition of three Landing Ship Tanks (LST) for the Indian Navy through indigenous design and construction at Garden Reach Shipbuilding and Engineering, Kolkata (GRSE) at a total cost of Rs 699.60 crore inclusive of Base & Depot[16] spares (Rs 63.60 crore). As per the Letter of Indent (LOI), payment in respect of B&D spares was to be made in four stages. Audit scrutiny of relevant documents revealed that an amount of Rs 73.33 lakh was paid in excess to GRSE during the second and third stage payment for the supply of B&D spares due to erroneous

[16] B&D spares constitute the spare equipment and spare parts estimated as required to maintain a ship during the first five years of commission.

calculation. On this being pointed out in audit, Warship Overseeing Team, Kolkata recovered the excess amount from the subsequent bills of GRSE.

The Ministry accepted the facts in November 2009.

CHAPTER V: RESEARCH AND DEVELOPMENT ORGANISATION

5.1 Inordinate delay in fruition of Kaveri engine

Despite almost two decades of development effort with an expenditure of Rs 1,892 crore, GTRE is yet to fully develop an aero-engine which meets the specific needs of the LCA. The successful culmination of the project to develop an aero-engine through indigenous efforts is now dependent upon a Joint Venture with a foreign vendor.

Introduction

In order to overcome the attrition of combat aircraft in the Indian Air Force (IAF) during the 1990s and beyond, the Government sanctioned in August 1983 the development of a multi-role Light Combat Aircraft (LCA), at an estimated cost of Rs 560 crore. Accordingly, there was a corresponding demand for a suitable engine for powering the LCA. Feasibility studies carried out in India and abroad revealed that there was no suitable engine available anywhere in the world, though Rolls Royce RB-1989 stage D and GEF404-F2J engines, by and large, met the requirement, provided certain concessions were granted in the Air Staff Requirements (ASR). At this point of time, the Gas Turbine Research Laboratory was already working upon an aero-engine project, the GTX 37[1] engine, since 1982.

In August 1986, a feasibility study was carried out jointly by Aeronautical Development Agency (ADA), Hindustan Aeronautics Limited (HAL) and Gas Turbine Research Establishment (GTRE) for evaluating the GTX-37 engine. The feasibility study indicated that the GTX-37 engine would, after certain rescheduling, meet the requirements of the LCA. GTRE accordingly, in

[1] A Research and Development project for building a gas turbine engine which was expected to find application in future indigenous combat aircraft programmes.

December 1986, submitted a project proposal for the development of the Kaveri engine. GTRE further proposed that it would be desirable to prove the newly designed airframe of the LCA with a proven engine first. Subsequently, the prototypes would be flown with the GTX-35[2] engine, as soon as this engine was type certified and cleared for the flight. Based on the above proposal, Government sanctioned a project in March 1989 at a cost of Rs 382.81 crore with the probable date of completion (PDC) as December 1996, for the design and development of Kaveri engine.

The Kaveri Engine Project was sanctioned with the following basic objectives:

- Designing and developing the GTX-35 engine to meet the specific needs of the LCA.
- To create a full fledged indigenous base to design and develop any advanced technology engine for future military aviation programmes.
- The engine so developed was to establish its performance integrity in various categories of tests prescribed by the aero-engine industry world over.

Given that the development of the Kaveri engine is critical to the establishment of indigenous expertise in the field of aerospace engineering, audit examined the Kaveri Engine Development Project (KEDP) from the initiation of the project till date (with emphasis on the period 2002-08), and the achievement of the goals and objectives set in the project, with reference to economy, efficiency and effectiveness. The audit findings were forwarded to the Ministry in November 2008; their reply was received in January 2009 and has been taken into account while finalising the audit findings. Findings of the audit study follow:

I Time and cost over-run

In developing an aero-engine for the LCA, GTRE faced a multi-dimensional challenge of developing a highly sophisticated and complex deliverable from a background which was significantly deficient in the required expertise and

[2] Later renamed as Kaveri engine

experience in the area. Audit scrutiny revealed that in so far as turbo fan technology of engines, GTRE had only a very limited experience of the GTX engine behind it. At the time of sanctioning of the project, GTRE had to nearly double its sanctioned strength of trained manpower to cope with the target. Even today, the institute is beset by shortages in the scientific and technical branch personnel which are affecting the progress of the project. Owing to inadequate planning, many elements of the project viz. Flight Test Bed Trials and altitude testing were not conceptualised /included in the initial project proposal and were added later only at the insistence of the IAF.

In the absence of realistic planning and programme formulation which took into account constraints of scope, time and money, the development of the Kaveri engine has been beset by delays in almost all vital components of the engine. When the original completion date of December 1996 could not be met, GTRE secured an extension till March 2000 based on the recommendations of a peer review by foreign engine houses, delayed deliveries of material like castings, difficulties in manufacturing of specific alloys, introduction of certain test like the Exploratory Altitude Test and Flight Test Bed Trials. However, GTRE was unable to meet this extended target date also due to changes in design and material flowing from (a) design review, (b) flaws in design of a particular part like the compressor or (c) failure in performance. Although a revised PDC, i.e. December 2004 was approved, ultimately, the PDC was further postponed to December 2009. The justification for extension was the same once again as GTRE was unable to freeze a design as per requirements and further refinements were required. Besides non-availability of certain systems from vendors, indigenous development of accompanying systems was also not successful as a result of which there were delays.

Milestone	Originally planned date	Completion date	Revised PDC	Position as on 08/09	Delay
Core Engine demonstration	12/90	3/95	-	Achieved	4 yrs plus
Full Engine demonstration	6/92	9/95	-	Achieved	3 yrs plus
High Altitude tests	6/94	-	12/06	Not achieved	15 yrs
Preliminary Flight Rating Test	12/95	-	12/07	Not achieved	14 yrs
Type test	6/96	-	6/08	Not achieved	13 yrs
FTB	9/98	-	5/07	Not achieved	11 yrs
Production clearance	12/96	-	12/09	Not achieved	13 yrs

All in all, only two out of six milestones prescribed could be achieved and those too, with delays ranging from 3 to 15 years. Over all, the project has been already delayed by over 12 years.

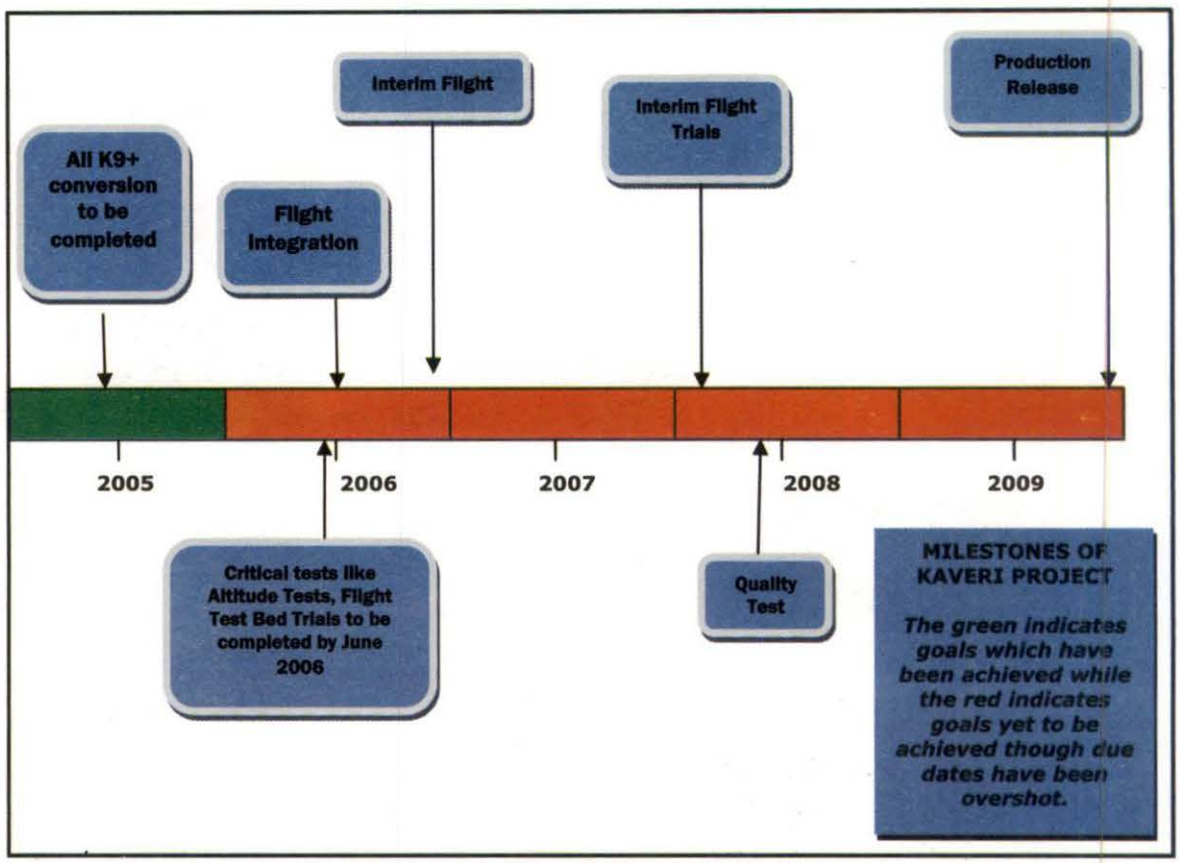
Financially also, the project has witnessed steep cost increases. The initial sanction of the Government stipulated that the KEDP was to be executed at a cost of Rs 382.81 crore {Foreign Exchange (FE) Rs 155.39 crore}. Subsequently, there were five revisions in the cost of the project, whereby, the project cost was revised to Rs 2,839 crore (FE Rs 1,730 crore). As of March 2010, there has been a 642 *per cent* increase in project costs and 1,013 *per cent* rise in foreign exchange element since inception.

Accepting the facts, the Ministry of Defence (Ministry) stated, in January 2009, manpower was an issue and that the depleting strength of skilled and expert manpower could not be replenished at the same rate. The Ministry sought to explain that the KEDP was an extremely complex technological effort and owing to inadequate knowledge and available data, the cost projections were not appropriate in the beginning. The Ministry, however, defended the development effort by asserting that the experience gained has made GTRE realise that such development work is really costly and time consuming manifold in comparison to the estimates projected. Ministry further stated that no engine house was willing to part with their development experience for the benefit of GTRE as they viewed GTRE as a competitor.

II Tardy progress in Full-design intent

The engine development was to address all associated issues of design, manufacturing, development testing, material development, airworthiness certification and production. This technology intensive programme sought to demonstrate technologies component-wise in the core engine (C series) and the full engine (K series). As the development of the engine has progressed, the engine has been rebuilt may times. Thus, though the project started with the presumption that 10 prototypes would be built, this was later modified to 42. At present, GTRE has developed seven Kaveri engines and three core engines along with necessary spares manufactured mostly in India and assembled at GTRE.

KEDP has been reviewed twice in 2000 and 2004, since its inception by the competent financial authority (CFA). The latest approval granted by CFA in November 2004 prescribed target dates for critical activities in order to achieve key milestones of flight trials of the Kaveri engine. A primary goal was conversion of five existing Kaveri engines (K5 to K9 series) to K9+ standard so as to realize K10, which is the full design intent of Kaveri engine. However by August 2009, only two engines have been upgraded to K9+ standard as against the scheduled date of May 2005. The details of important milestones are indicated in the chart.

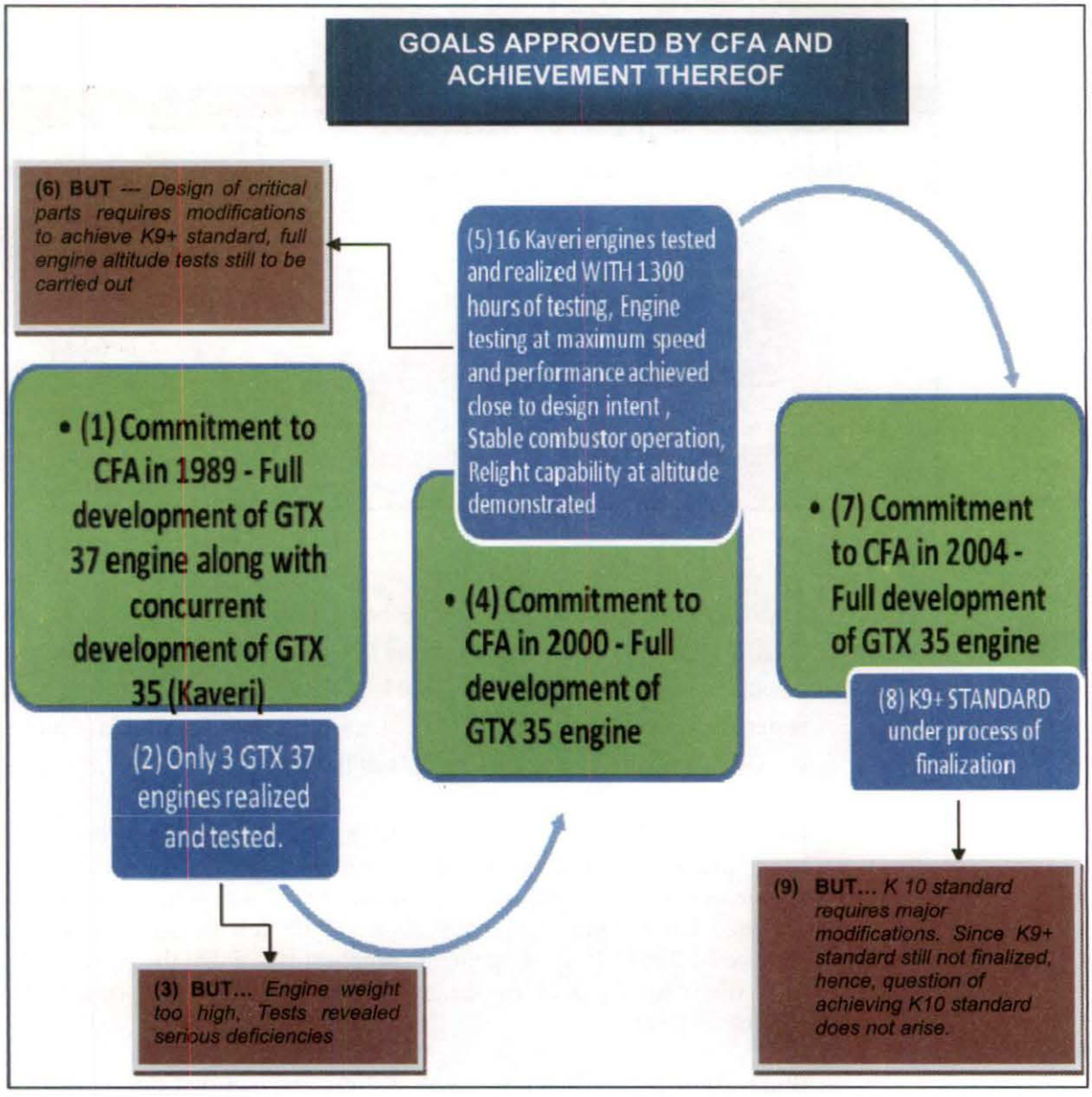


Audit scrutiny revealed that despite being unable to achieve primary goals, GTRE made new commitments to the CFA. Rather than highlighting actual outcomes, both in 2000 and 2004, GTRE focused more on activities undertaken like infrastructure created, conduct of various trials and partial successes in attaining associated goals as illustrated below.

Illustration 1: It was claimed in 2000 that five prototypes of the engine had been manufactured and tested, however, these tests revealed several deficiencies necessitating large modifications. It was further claimed that the designed engine was marginally short of the full design which would be realized by 2004. In 2004 again, the proposal stated that the full design intent, i.e a flight worthy K10 engine, would be realised by the revised PDC of December 2009.

Illustration 2: The main proposal of 2004 claimed that the programme had reached a reasonable level of maturity and, therefore, suggested that at this stage possibilities of combining with modules of other proven engine builders

could be exploited to expedite development. The annexures to this main proposal, however, showed that almost all critical components like compressor, combustor and turbine needed re-designing. The non-achievement of goals is illustrated below:



Ministry stated, in January 2009, that the revisions in cost and extensions in time were sought based on the situation for sustaining the project and were inescapable. They further stated that GTRE provided all facts and figures to the CFA for cost/PDC revisions with proper technical and financial justification. Ministry added that though GTRE has not been able to deliver the engine for LCA, however, they have reached a stage where two leading engine houses have come forward to collaborate in the project.

Audit, however, reiterates that the actual status of development of the engine was not clearly intimated to the CFA as is brought out above.

III Shortcomings in the engine developed

Despite incurring an expenditure of Rs 1,892 crore (Annexure-III) as of March 2010, the engine developed has many problems.

- ✗ The weight of Kaveri engine required to fly the LCA should not exceed 1100 Kg. The first assembled Kaveri K1 engine weighed around 1423.78 Kg. Therefore, GTRE embarked on a weight reduction plan as early as July 1993. However, due to delay in development of the component assemblies/modules, polymer composites, design and freezing, GTRE has not been able to achieve the derived weight in the engine and, as of January 2009, the engine weighs 1235 Kg.

- ✗ Certain critical and crucial activities for successful development of Kaveri, viz. development of Compressor, Turbine and Engine Control System, have been lagging behind despite increase in cost by Rs 186.61 crore.

- ✗ GTRE has been unable to freeze the design of the turbine blades, the compressor has witnessed mechanical failure in performance and the engine control system is not flight-worthy.

Ministry stated, in January 2009, that the target of reducing engine weight by 135 Kg is expected to fructify only around production phase.

Testing of the existing engines has also indicated short-comings. Various tests have to be undertaken at stages in order to test the different modules of the Kaveri engine for quality, efficiency and endurance. Audit found that critical tests for components have not been carried out owing to the absence of facilities. More significantly, tests carried out to evaluate the engine itself have revealed the following deficiencies:

Sl. No.	Nature of test	Cost	Status
1.	Component Testing	Rs 142 crore	Despite lapse of nine years since original sanction, most of the tests, including EAT, OAT, PFRT, QT have not been completed.
2.	Kaveri Compressor Drum Test	Rs 6 crore	The test delayed was completed only in September 2009. The test is mandatory for proving airworthiness and only after its successful completion can components be cleared for fitment into engine.
3.	Altitude test	Rs 127 crore	Not even a single altitude test, which is essential for assessing whether an engine can actually fly an aircraft, could be completed on Kaveri engine.
4.	Flight Test Bed trials	Rs 39.60 crore	No FTB trials on Kaveri engine could be conducted (as of July 2009) due to delay in manufacture of critical components of the engine.

Accepting the facts, the Ministry stated that delays in tests like EAT[3], OAT[4], PFRT[5] and QT[6] have increased the project cost quite substantially and that GTRE is putting all efforts to bridge the gap as early as possible. The

[3] EAT – Exploratory Altitude Test
[4] OAT – Official Altitude Test
[5] PFRT – Preliminary Flight Rating Test
[6] QT – Qualification Test

Ministry added that the Altitude test on K8 engine is slated for 2009, however, FTB trials cannot commence till the performance of engine modules are proven to the desired level.

IV Inadequate Monitoring of the Project

The KEDP is monitored by a three-tier-structure which has the Aero-Engine Development Board (AEDB) at the top, followed by the Programme Management Board (PMB) and the Project Management Board (PJMB). The boards consist of members drawn from the DRDO, Ministry of Defence and Indian Air Force. Audit noted that meetings of AEDBs were not held as per the prescribed schedule of once in six months and there were delays in holding the meetings ranging from 3-12 months. Considering that AEDB was the highest level of monitoring mechanism and was responsible for monitoring the activities of KEDP, the fact that there were significant gaps in between its meetings is indicative of inadequate control.

The Ministry stated that there had been some delays in holding the meetings of the Apex Board which was beyond the control of GTRE since the members of the Board were from various Ministries and Departments.

V Indigenous objective not achieved

While trying to achieve long-term objective of self-reliance, establishing expertise in defence acquisitions, there is a need to achieve a realistic balance between the existing capacities in the country with the urgency/timelines involved in the planned acquisition. Alternative paths of development like entering into a joint venture with an established engine house with transfer of technology were not explored before embarking on this ambitious period. In general, GTRE has sought technical opinion on various aspects of design, manufacturing and testing from various foreign agencies. For instance, Snecma of France has been involved in the Project since very inception in various Critical Design Reviews (CDR) and have been paid Rs 4.07 crore till September 2001. In June 2000, the project suffered a major setback due to mechanical failure of the new compressors rotor blade. This necessitated a CDR and the review conducted in September 2001 led to a number of useful

design inputs. Snecma, was extended an invitation to participate in either joint development or in providing design assistance, which was declined. Instead, Snecma proposed a joint development partnership for Kaveri in September 2001. However, GTRE did not accept the offer on the plea that this would necessitate the abandonment of all the indigenous efforts made so far.

Notwithstanding the stand taken by them in September 2001, GTRE, seven years later (2008) is seeking a proposal from Snecma for a Joint Venture (JV) involving co-design and co-development of an aircraft engine. Ironically, though GTRE obtained the approval of the CFA in 2004 for extension of the PDC of indigenous development of Kaveri engine to December 2009, it started the process of entering into a JV with an established foreign engine manufacturer in 2005 itself. Given that the Request for Proposal floated for this purpose clearly states that the vendor would be in a lead role for development of combustor, compressor and turbines and GTRE would be only in an assist role, it is evident that GTRE is not adhering to the original sanctioned goals regarding indigenisation.

The Ministry stated, in January 2009, that since the original performance of Kaveri engine is not adequate, Joint Venture engine was proposed. Besides, in order to meet the enhanced performance of LCA, GTRE had to seek help from foreign engine houses and finally chose Snecma as the partner. Through this, higher level technologies would be available though the core will also be used for improving the remaining modules of GTRE.

VI LCA will not fly with Kaveri

The prime objective has not been achieved and GTRE has not been able to deliver an engine that could power the LCA. Meanwhile, 41 GE engines for the LCA have been procured at a total cost of Rs 883 crore. HAL the manufacturer of the LCA, has an option for purchasing 98 more engines from General Electric, USA

VII Conclusion

The Kaveri Engine Development Project is an ambitious project aimed at indigenisation of the propulsion system for LCA. However, the prime objective of the project has not been achieved and GTRE has been unable to deliver an engine that could power the LCA despite a cost overrun of 642 *per cent* and delay of about 13 years. The project is now faced with the alternative of entering into a joint venture with a foreign house for further development of the engine. Even after about two decades, since its sanction, the probable outcome of the project vis-à-vis its objectives in near future cannot be foreseen clearly.

(GAUTAM GUHA)
Director General of Audit,
Defence Services

New Delhi
Dated: 7 August 2010

Countersigned

(VINOD RAI)
Comptroller and Auditor General of India

New Delhi
Dated: 7 August 2010

ANNEXURE-I

(Refers to Para No. 1.11.2)

List of Action Taken Notes not received as of 30 June 2010

Sl. No.	Report No. and Year	Chapter of the Report	Para No.	Pertains to	Brief Subject
1.	CA 5 of 2008	III	3.2	MOD	Procurement of sub-standard components for a helicopter
2.	CA 5 of 2008	III	3.6	MOD	Non-recovery of interest due on ad-hoc advance
3.	CA 5 of 2008	III	3.9	MOD	Unauthorised erection of antennae on a defence building
4.	PA 5 of 2008	III	CH-III	MOD	Operational availability and maintenance of submarine in the Indian Navy
5.	CA 18 of 2008-09	II	2.8	MOD	Inept execution of 'D' Level repair facilities
6.	CA 18 of 2008-09	IV	4.7	MOD	Failure to have unsuitable equipment replaced promptly
7.	CA 18 of 2008-09	V	5.1	MOD	Procurement of spares at a higher cost by the Coast Guard

ANNEXURE -II

(Refers to Para No. 2.3)

Details of shops allotted to civilians, Defence Personnel and others

Category : Civilians

SL. No.	Name of the Shop	Name of the owner of the shop	Relation
1.	**Diamate Exports**	Shri. Rupinder Anand	Self
2.	**Picture Que**	Smt. Kavita Singh	Self
3.	**Oggan**	Smt. Kavita Baritya	Self
4.	**Anokhi-I**	Mr. JP Singh	Self
5.	**Anokhi-II**	Mr. JP Singh	Self
6.	**Shahnaj Herbal**	Smt Shahnaj Hussain	Self
7.	**Women World International**	Smt Shahnaj Hussain	Self
8.	**Christina**	Smt Neelam Khanna	Self
9.	**Shayama Ahuja**	Mrs Soni Beri	Self
10.	**Basil and Thyme**	Mr. Susil Chandra	Self
11.	**Sanskriti Creation**	Mrs. Saroj Jain	Self
12.	**Lotus Eaters**	Mrs. Usha Amla	Self
13.	**Good Earth**	Mrs. Anita Lal	Self
14.	**Tulsi**	Mrs. Neeru Kumar	Self
15.	**Noorjehan**	Smt. Praveel Behal	Self
16.	**Fizzaro**	Mr. Mohit Gujral	Self
17.	**Mandira**	Mrs. Geeta Dixit	Self
18.	**Kapoor Di Hatti**	Mr. Brij Kapoor	Self
19.	**Young Fashion**	Smt. Anita Beri	Self
20.	**Moon Pri**	Mrs. Chand Balbir Singh	Self
21.	**Carving and Gilding**	Mrs. Geeta Chandok	Self
22.	**Mamta Swaika**	Mrs. Mamta Swaika	Self

Category : Defence Personnel and others

1.	Image Design	Mrs. Minni Sodhi	Wife of Ex-serviceman (Army)
2.	Leather Boutique	Mrs. Minni Sodhi	Wife of Ex-serviceman (Army)
3.	Claire's	Mrs. Claire Dutta	Wife of Ex-serviceman (IAF)
4.	Amaya	Mrs. Asha Singh	D/o Mshl of AF Arjan Singh (IAF)
5.	Rekha Enterprises	Smt. Rekha Dutt W/o Wg. Cdr. KN Dutt	Wife of Ex-serviceman (IAF)
6.	Padakam	Smt. Srilata Katre W/o Late Air Chief Marshal LM Katre	Wife of Ex-serviceman (IAF)
7.	Sadhka	Mrs. Radhika Rawley	Wife of Ex-serviceman (IAF)
8.	Kargha	Ex Flt Lt Rai Ajay Kumar	Self
9.	Tack India	Smt. Ritu Handa	D/o Ex-serviceman (IAF)
10.	IK Art allery	Air Cmde KS Rao (Retd)	Ex Air Force
11.	Ensemble	Mr. Tarun Tahalani	S/o Ex-serviceman (IAF)
12.	Art Indus	Mrs. Vijay Laxmi Dogra	Wife of Ex-serviceman (IAF)
13.	Its Beautiful	Mrs. Manju Manik	Wife of Ex-serviceman (IAF)
14.	Atsar	Mrs. Kelly Sikand	Wife of Ex-serviceman (IAF)
15.	AFWWA Office	--	

Authority:- Air HQ (VB), New Delhi letter No.Air HQ/36520/651/(AU) dated 21.2.2007

ANNEXURE –III

(Refers to Para No. 5.1)

The break up of expenditure of Kaveri engine Project as on 31.3.2010 is as follows:

Sl No.	Expenditure Head	Amount (Rupees in lakh)
1.	Stores (Revenue)	1,70,582
2.	Stores (Capital)	1,338
3.	Project Management Cost	15,957
4.	Civil Works	1,350
	Total	1,89,227

PRICE: INLAND: Rs. 65.00

FOREIGN: US$ 5

(Including postage/air mail)