PUBLIC ACCOUNTS COMMITTEE

(2001-2002)

Thirty-third report

(THIRTEENTH LOK SABHA)

Ministry of Defence

Presented to Lok Sabha on 29 April, 2002

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L O K S A B H A S E C R E T A R I A T

N E W D E L H I

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INTRODUCTION

I, the Chairman, Public Accounts Committee having been authorised by the Committee to present the Report on their behalf, do present this **Thirty-Third** Report on Paragraph 2 of the Report of C&AG of India for the year ended 31 March 1999, (No. 8 of 2000), Union Government (Defence Services – Air Force & Navy) relating to "Acquistion of SU-30 aircraft".

2. The Report of the C&AG for the year ended 31 March, 1999 (No. 8 of 2000), Union Government (Defence Services – Air Force & Navy) was laid on the Table of the House on 15 May 2000.

3. The Committee took the evidence of the representatives of the Ministry of Defence and HAL on the subject at their sitting held on 12 December, 2000. The Committee considered and finalised this Report at their sitting held on 19 April, 2002. Minutes of the sittings form Part II of the Report.

4. For facility of reference and convenience, the observations and recommendations of the Committee have been printed in thick type in the body of the Report and have also been reproduced in a consolidated form in Appendix* to the Report.

5. The Committee would like to express their thanks to the Public Accounts Committee (2000-2001) for taking evidence on the subject and obtaining information thereon.

6. The Committee would like to express their thanks to the Officers of the Ministry of Defence and HAL for the cooperation extended by them in furnishing information and tendering evidence before the Committee.

7. The Committee place on record their appreciation of the assistance rendered to them in the matter by the Office of the Comptroller and Auditor General of India.

N. Janardhana Reddy

Chairman, Public Accounts Committee

NEW DELHI; *19 April, 2002 29 Chaitra, 1924 (Saka)*

REPORT

Need for the aircraft

Indian Air Force (IAF) combat aircraft consisted mainly those inducted into squadron service during mid seventies and early eighties. This was expected to deplete sharply from the year 1995 due to phasing out of obsolescent aircraft. As per projections made in the IAF Perspective Plan for 1992-2007, by the turn of the century, 19 per cent of the squadrons were to be phased out on completion of their useful technical life, besides becoming technologically obsolete. The combat fleet strength was expected to decline further upto 50 per cent by 2005, if no new acquisitions were made. The requirement of multi role combat aircraft was recognised and reflected in the IAF Perspective Plan for 1992-2007.

2. *Audit Paragraph*

The Report is based on paragraph 2 of the Report of the Comptroller & Auditor General of India for the year ended 31 March 1999, No. 8 of 2000, Union Government – Defence Services (Air Force & Navy) relating to acquisition of SU-30 aircraft. The evaluation, selection, procurement, delivery and upgradation of the aircraft with reference to contracted schedule, establishment of facilities for repair and maintenance were reviewed in Audit.

3. *Evaluation and selection of the aircraft*

3.1. Based on the projections made in the IAF Perspective Plan (1992-2007), the Ministry of Defence was looking into various options available for acquiring a multi-role-combat aircraft. The Committee were informed that in May 1994 Government of India received a suo-motu offer from the manufacturer of SU-30K aircraft for its evaluation and subsequent induction in the IAF. The aircraft was evaluated by a six member evaluation team sent to the Supplier country from 12-21 June 1994. The evaluation report indicated that though the aircraft had multi-role potential, it was then optimised for air defence/air superiority role only. The evaluation report inter-alia brought out the following shortcomings in the aircraft:

- Certain features of the aircraft were found undesirable primarily from systems performance point of view. The Electronic warfare systems were found unsuitable to meet the Indian threat environment. Besides, the technology offered was most outdated. The pilot displays were found inadequate to meet the multi-role demands on the aircrew. The Radar performance was below expectation, and its maintainability was found to be poor. The navigation system severely lacked in accuracy, very limited capability existed for accurate weapon delivery and weapon systems controls were poorly integrated.

- Although the aircraft is capable of a large weapon load, the air to ground armament did not include any precision guided munitions. This was considered a serious drawback.

- Considering the large size and range of the aircraft, it was difficult for the aircraft to survive against the threat of modern air defence weapon systems unless its avionics, radar and electronic warfare systems were upgraded and well integrated.

3.2. While submitting their recommendations for acquisition of SU-30K aircraft, the evaluation team inter-alia pointed out that the existing configuration of the aircraft was unsuitable to meet the operational requirements of the IAF. According to them, certain minimum and mandatory changes in terms of incorporation of state-of-the-art avionics were needed to improve operational capability of the aircraft.

3.3. The manufacturer in a working protocol signed in June 1994 offered to fully upgrade and operationalise the multi-role variant, designated as SU-30 MKI jointly with India.

3.4. The Committee were informed that Mirage-2000 and Mirage – 2000-5 were the other two multi-role aircraft compared for technical and cost parameters with SU-30 MKI aircraft in the effort to decide upon the procurement of multi-role combat aircraft for IAF. On being asked about the distinct

advantage that weighed in favour of SU-30K aircraft as compared to Mirage-2000/Mirage-2000-5, the Ministry in a note submitted that a Committee headed by Dr Abdul Kalam (then SA to RM) had conclusively brought out that SU-30MKI aircraft was superior in aerodynamic performance and had a better mission capability, to the other contestants. It was added that the costs, including life cycle costs, as per the evaluation carried out in December 1995 were also considerably lesser for SU-30MKI compared to Mirage-2000 and Mirage 2000-5 aircraft. It is seen from the summary report on `comparison of multi-role aircraft' that the cost of Mirage 2000 and Mirage 2005 was non-negotiated costs. The cost parameters like unit fly away cost, acquisition cost and operation and support cost were estimated on the basis of available information with IAF. Air HQrs then indicated that correct and detailed estimation of Life cycle cost was not be possible at that stage for a new acquisition as all the details were not available.

3.5 From the information made available to the Committee, it is learnt that SU-30 MKI will be available with India as the first customer where reliability and maintainability are yet to be established. On the other hand Mirage 2000/Mirage-2000-5 are fully developed and are proven multi-role aircraft with adequate international experience. In this context, the Committee in evidence drew the attention of the representatives of the Ministry of Defence to the fact that the multi-role variant of SU-30K i.e. SU-30MKI was still at the drawing board stage and it required a lot of developmental efforts before it met the operational needs of IAF. In response, the representative of Air Headquarters inter-alia submitted:

> "The basic aircraft had been flying in the form of SU-27 since 1987. In fact, it is a 1987 design. The derivative of the parent aircraft continued to develop from time to time. SU-30 was essentially a derivative. Avionics are nothing but a group of systems that you put on the platform, that had to be integrated. To that extent you can say that the SU-30 MKI derivative aircraft did not exist….."

4. *Conclusion of contract*

According to the Ministry, it was decided to acquire SU-30MKI aircraft based on flight evaluation report, comparison with draft Air Staff Requirements (ASRs), introduction of new avionics to make the aircraft multi-role capable, joint IAF/MOD study on force levels and life cycle cost analysis between Mirage-2000 and SU-30 aircraft. `In principle approval' was accorded to the proposal by the Prime Minister on 20 January 1996. The Cabinet Committee on Political Affairs (CCPA) approved in November 1996 procurement of 40 SU-30 aircraft along with associated ground and test equipment, armament and electronic warfare equipment at a total cost not exceeding Rs.6310 crore. The Ministry of Defence concluded a contract with the manufacturer in November 1996 at a cost of Rs. 5122 crore for supply of eight SU-30K aircraft during 1997 and 32 SU-30 MKI aircraft in three phases between 1998 and 2001.

5. *Delivery schedule of the aircraft*

5.1 The Audit paragraph highlighted that as per the contract, only 10 out of the 40 aircraft scheduled to be delivered under phase-III during 2001 were to be fully upgraded to SU-30MKI version. While the initial consignment of eight aircraft was to be only the SU-30K version, the subsequent 22 aircraft before the last consignment under phase-III were to include progressively increasing number of equipment, which were needed to upgrade them fully to the MKI version. The equipment, which were not initially installed in these partially upgraded aircraft, were to be fully installed later in India/manufacturer's plant in a phased manner during 2001 and 2002. The manufacturer supplied eight SU-30K aircraft as per the original plan in May 1997. Audit pointed out that none of the partially upgraded aircraft scheduled for delivery upto December 1999 had been delivered, mainly due to setback in identification, development and import of avionics sub-systems. The delivery schedule was got revised in August 1998.

5.2 At the instance of the Committee, the Ministry furnished the status of delivery of SU-30MKI aircraft and their upgradation programme vis-à-vis the originally envisaged schedule as of November 2001. The position has been depicted in the following Tables (A&B) -:

Table-A.

Original/Revised delivery schedule of SU-30 aircraft

	Type of Aircraft	Original Schedule (November 1996	Qty	Ist Revision (3 August, 1998)	Qty.	IInd Revision (14 February 2001)	Qty.
Initial	SU-30K	December 1997(delivered)	8	Delivered in time			
Phase-I	SU-30MKI-1	July 98 – Jun 99	10	Jan 2000-Jun 01	16	Oct 01-Jun 02	10
Phase-II	SU-30MKI-2	Jul 99–Dec 2000	12	Jul 01-Jun 02	10	Jul 02-Jun 03	12
Phase-III	SU-30MKI-3	Jan 01 – Dec 01	10	Jul 02-Dec 02	06	Jul 03 – Dec 03	10

Table B

Original/Revised delivery schedule of upgraded SU-30 aircraft

Aircraft	Original Schedule	Qty	Ist revision	Qty	IInd Revision	Qty.	Remarks
SU-30K	1st & 2nd qtr 2002	08	1st & 2nd qtr 2003	08	1st and 2nd qtr 2004	08	In the Manufact-urer's Plant
SU-30 MKI-1	3rd & 4th qtr 2002	10	2nd & 3rd qtr 2003	16	2nd & 3rd qtr 2004	10	In India
SU-30 MKI-2	3rd & 4th qtr 2001	12	4th qtr 2002 & 1st qtr 2003	10	3rd & 4th qtr 2003	12	In India

5.3 On being enquired by the Committee the reasons for which the original delivery schedule of SU-30 MKI aircraft could not materialise warranting its revision on 3 August 1998, the Ministry in the post-evidence note stated that the delivery schedule was revised due to delays in the SU-30 MKI programme. According to them, the following reasons were responsible for the delay in the envisaged programme:

a. Delay in selection and procurement of western avionics.

b. Delay in finalisation of technical specifications of western avionics to be purchased as Customer Furnished Equipment (CFE) by the manufacturer

c. Finalisation of technical specifications of the avionics to be developed indigenously in consultation with the manufacturer

d. Delay in obtaining import/export licence by the manufacturer from their customs authorities.

e. Coordination difficulties faced during the development process due to multinational nature of the project.

5.4 The Committee were informed that the delivery schedule was further revised as per contract signed with the manufacturer on 14 February, 2001. On being asked about the underlying reasons for further revision in the schedule of delivery, the Ministry stated that the deliveries had been delayed due to the

equipment not being supplied to the manufacturer as envisaged in the contract. According to them, due to the multi-national nature of the project, undertaken for the first time ever by the Ministry of Defence, there were delays in the finalisation of technical specifications in consultation with aircraft manufacturer and avionics vendors, which was not foreseen. Subsequent price negotiations and finalisation of contracts was also stated to be time consuming since all the guidelines laid down by Central Vigilance Commission (CVC) had to be adhered to. It was stated that there had also been some slippage in the design and development of indigenous avionics. The Ministry further added that the manufacturer had also contributed to delays in the following ways:

- A delay of six months in obtaining the import/export clearance for the CFE equipment.
- Delay of as much as 18 months in giving technical clearance for the fitment of refuelling pod.
- Last minute changes in technical specifications such as RWR cable length, leading to delays in procurement of cable and subsequent supply to the manufacturer by six months. There were also delays in giving integration clearance for some of the equipment procured from sources other than the manufacturer of the aircraft.

5.5. In view of repeated revision in the delivery schedule of the SU-30 MKI aircraft, the committee drew the attention of the Ministry to the unscientific estimation of delivery schedule entered into in the main contract. In response, the Ministry in the post-evidence note submitted that the time frame for supply of CFE envisaged in the main contract of November 1996 was over optimistic in the context of the existing procurement procedures and CVC guidelines.

5.6. To a specific query from the Committee about the agreement of the manufacturer to the revisions effected in the original contract, the Ministry stated that the manufacturer agreed upon the revision of delivery schedule and further added that apart from the delivery and upgrade schedule, no other changes were made in the contract.

6. *Procurement of avionics and other systems*

According to Audit Paragraph the main contract concluded with the manufacturer in November 1996 inter-alia provided supply of indigenous/western sub-systems to the manufacturer for integration in order to give true multi-role capability to the aircraft. The Ministry decided to procure the avionics sub-systems partly through indigenous development by Defence Research and Development Organisation (DRDO), partly by import from Western countries and also through separate contracts with the manufacturer and other sources.

6.1 Development of indigenous avionics

6.1.1 The Ministry decided to develop eight avionics equipment indigenously as part of the joint development programme for SU-30 MKI. These included, Mission Computer (MC), Display Processor (DP), Radar Computer (RC), Programmable Signal Processor (PSP), Radar Warning Receiver (RWR), Identification Friend or Foe (IFF), Radio Altimeter and INCOM (Secure) Radio set. Audit paragraph highlighted delays in development and supply of laboratory models of indigenous avionics systems as against the envisaged schedule entered into in the original contract of November 1996. At the instance of the Committee, the Ministry furnished details of the actual delivery of the indigenous avionics equipment made to the manufacturer as against the envisaged schedule in the original contract alongwith the names of concerned development and production agencies, which is depicted in the following **Table – C:**

Table- C

Sl. No.	Equipment	Development Agency	Production Agency	Scheduled date	Actual delivery
1	Mission Computer	ASIEO	HAL	Feb 97	Sep 99
2	Display	Do	Do	Feb 97	Sep 99

	Processor				
3	Radar Computer	Do	Do	Nov 97	Aug 00
4	Programmable Signal Processor	LRDE	Reverted to Manufacturer	Sep 98	-
5	Radar Warning Reciever (RWR)	ASIEO	BEL	Mar 97	Jun 00
6	Identification of Friend or Foe	HAL	HAL	Mar 97	Dec 99
7	Radio Altimeter	HAL	HAL	Mar 97	Dec 99
8	INCOM(Secure) Radio set	HAL	HAL	Sep98	Dec 01

6.1.2 The Committee were informed that DRDO was initially assigned the development of five avionics systems (MC, DP, RC,PSP and RWR) under the development programme named as Project `Vetrivale'. By March 1996 Government of India decided to purchase the SU-30 aircraft from the manufacturer and made a formal commitment. Keeping in view the development and delivery schedule of SU-30 aircraft, Rs. 6 crore was sanctioned to ASIEO in July 1996 to commence the development work pending formal allocation of funds for Project vetrivale. According to Audit , the delegation during their visit to ADE/ASIEO in February-March 1996 held extensive discussions with DRDO and the technical specifications of the sub-systems to be developed were finalised and their delivery schedules arrived at. The Ministry of Defence granted the formal approval to the Project `Vetrivale' in December 1997 at a cost of Rs. 100 crore. Subsequently, the cost of the Project was reduced to Rs. 76.8 crore due to removal of PSP from the project on account of inability expressed by DRDO to develop it in time. According to the Ministry, an amount of Rs.64.43 crore have already been spent on the Project till 31 March, 2002. The development of remaining three avionics systems namely, IFF, Radio Altimeter and INCOM (Secure) Radio set were assigned to a Defence Public Undertaking namely HAL. An expenditure of Rs. 31.27 crore have already been incurred by HAL till 31 March, 2002.

6.1.3 The Committee enquired the underlying reasons for delay in the indigenous development of avionics as against the envisaged schedule in the main contract of November 1996. The Ministry in the post-evidence note explained that initially there were no delays directly attributable to DRDO. The process of finalisation of technical specifications and their approval by the manufacturer took considerable time and the process of development was delayed. According to the Ministry, while DRDO had developed most of the systems in time after finalisation of technical specifications, the aspect of delays in finalisation of the specifications with the manufacturer was not foreseen. Intimating the status of production of these avionics, the Ministry stated that HAL had already been awarded contract for serial production of MC and DP and the case for award of contract for serial production of RC was under processing. The Committee were informed that M/s BEL will be manufacturing serial production models of RWR.

As regards PSP, the Committee desired to know the reasons for which LRDE failed to develop the item initially entrusted to them and was subsequently reverted to the manufacturer. According to the Ministry, LRDE expressed their inability to develop the system within the envisaged time frame, especially in view of the non-finalisation of technical specification by the manufacturer. It was stated that since the radar itself, of which PSP is a component, was under development in the manufacturer country, the technical specifications would have taken considerable time to finalise. The Committee were informed that the contractual negotiations had been concluded with the manufacturer and they would be supplying the PSP in time to meet the revised delivery schedule of the aircraft.

6.2 Import of avionics from Western countries

6.2.1 The contract of November 1996 envisaged delivery of some avionics/equipment of Western origin to the manufacturer for their integration into SU-30 MKI aircraft. Audit Paragraph highlighted delays on the part of the Ministry in conclusion of contracts for Western avionics and consequential time over-run in their supply to the manufacturer country. At the instance of the Committee, the Ministry furnished the details of the delivery schedule of all the Western avionics including reasons for delay. This is shown in the following Table-D :

Table-D

Sl.No.	Equipment	To be delivered to manufac-turer	Probable date of delivery	Reason for Delay
1.	MFD	Jan 97	Delivered in Sep 99	Delay in finalisation of Export-Import contract with Manufacturer
2	SBI	Jan 97	Delivered in Sep 99	Delay in finalisation of Export-Import contract with Manufacturer
3	INGPS	Jan 97	Delivered in Dec 99	RFP issued in 1997. Contract signed in Mar 99. Delay due to resolving certain technical issues with the vendor
4	VOR/ILS/ TACAN	Feb 97	Delivered in Sep 99	Delay in finalisation of Export- Import contract with Manufacturer
5	BKTV	Sep 98	Mar 00	Requirement emerged during ICD discussions in Jun 98.
6	DMG	Apr 01	Apr 01	Required for fitment on SU 30 MKI-2
7	HUD	Jan 97	Delivered in Dec 99	Contract signed on 03 Mar 98. Delayed due to resolving technical issues
8	LDP	May 97	Sep 02	Contract for LDP signed in March 1999. Required for fitment on SU 30 MKI-3
9	SAFIR	Mar 97	Dec 01	Contract signed in Nov 2000
10	VRS	Mar 97	Delivered in Jun 2000	Contract signed in Sep 99. Delay was mainly due to selecting the appropriate vendor
11	CMDS	Sep 97	Jun 01	Contract signed in Nov 2000. Delay was mainly due to selection of the appropriate vendor

6.2.2 As regards the latest position of acquisition/supply of avionics viz. BKTV, LDP and CMDS, the Ministry in the post evidence note intimated as follows:

(a) BKTV- Contract was signed on 01 October 1999 and delivery of production models commenced in August 2001.

(b) CMDS- Contract was signed on 27 November, 2000. Integration task has been completed and production models would be fitted and delivered alongwith the SU-30 MKI-I aircraft.

(C) LDP- Contract was signed on 31 March 1999 and initial supplies were received. Work is in progress in the manufacturer country so as to integrate the system with the SU-30MKI-3 aircraft.

6.2.3 There were abnormal delays in procurement/supply of five avionics. In the post evidence note, the Ministry furnished the latest position of procurement and supply of these equipments as follows:

A	PSP	Contractual negotiations were completed and the manufacturer have agreed to deliver the systems as per the delivery schedule of MKI-3 and subsequent upgrade of SU-30K, MKI-1 and MKI-2 series aircraft
B	FDR	Contractual negotiations got competed in Sep 01, and the supplier country has agreed to meet the necessary delivery schedule
C	ASPJ/EJ	This equipment was planned to be procured from the manufacturer country. Since the manufacturer had not developed such a system by Nov 94, a contractual provision was included to give the Indian side the choice to procure this system from other sources. Based on this, to generate competitive situation, two vendors have been short-listed. The contract is expected to be signed by Feb-Mar 02.
D	Refueling pod	Contractual negotiations got completed in Sep 01 and the supplier country agreed to the requisite delivery schedule
E	Recce pod	Contract is likely to be signed by Mar/Apr 02.

6.2.4. On being asked specifically whether the manufacturer was agreeable to the delay and consequential rescheduling of the supply of the western avionics, the Ministry stated that the manufacturer agreed with the delay vide the additional agreement signed on 14 February 2001. According to the Ministry, the equipment for each series of aircraft is to be delivered to the manufacturer eight months prior to the aircraft delivery. All the equipments for MKI-3 aircraft are planned to be delivered by October 2002.

6.2.5 Asked about the total expenditure incurred on procurement of western avionics, the Ministry intimated that the total amount spent in this regard was Rs. 274.9 crore as of 31 March, 2002.

7. *Impact of delay*

Asked to indicate the operational and financial implication of the delayed induction programme of the aircraft, the Ministry in a note inter-alia explained as follows:

"The adverse operational impact of delay in the programme was effectively contained by adopting a two-pronged strategy. Firstly, the technical life of the MiG-21 and MiG-23 was extended through a life extension progarmme. Secondly, induction of a limited number of aircraft such as Mirage-2000 and Jaguar, already envisaged in the 10th Plan, was advanced to commence in the beginning of the 10th plan to ensure that no major shortfall in the combat fleet strength occurred. The deliveries of Jaguar and Mirage-2000 are scheduled to commence from 2003 onwards. The life extension was undertaken by IAF and HAL and hence entailed no financial implication. The cost of induction of 10 Mirages and 37 Jaguar aircraft is Rs. 1571 crs and Rs. 2879 crs. respectively, but is not specific to the delay in the SU-30 programme since these were already included in the plan. Due to delay in the development programme, there is likely to be a financial implication of approximately 9.82 MUSD towards upgrade of the SU-30K/MKI-1 & 2 to SU-30MKI-3 standard. The upgrade of these is to be negotiated under a separate contract in 2003 after completion of SU-30MKI-3 development. While there is no further financial implication in dollar terms due to the delay, there has been an implication of Rs 546 crore in Rupee term due to the foreign exchange variation during the period of delay."

8. *Present position of delivery of aircraft*

8.1 On being enquired whether the Ministry are confident of achieving the revised target of delivery of aircraft, the Ministry in a note submitted as follows:

> "No further delay from the target date of 2003 is envisaged. The pending CFE contracts are being finalised as per the priority of the revised delivery schedule of SU-30 MKI 1,2 and 3 aircraft. All necessary contracts required for series 1 and series 2 aircraft have been completed. Most of the equipment for Series-3 aircraft has also been finalised and technical/commercial negotiations are in progress to complete the CFE contracts for remaining equipment. As per the revised delivery schedule, these equipments are required from Oct 2002 onwards."

8.2 The Committee have been informed that the prototype of SU-30MKI was undergoing flight trials in the manufacturer country since November 2000 and the first batch of 10 aircraft was scheduled to be effected by June 2002. The Committee were informed that payments to the tune of Rs. 2671.54 crores have been made to the manufacturer under the contract of November, 1996 till 31 March, 2002.

9. *Setting up of Service Support Centre*

9.1 According to the Audit Paragraph, the main contract concluded in November 1996 provided for setting up of a Service Support Centre (SSC) at the operating base with the assistance of the manufacturer. One of the basic objectives of setting up of SSC was to undertake extended second line repair tasks of aircraft, avionics, aero-engines and aggregates to avoid the need to despatch them to the manufacturer. The negotiations for setting up of the SSC were to be held by May 1997 and the contract concluded within 12 months after delivery of the first SU-30K aircraft in order to ensue that SSC started functioning by May 1998. Audit pointed out that the establishment of SSC assumed greater importance as the warranty provided by the manufacturer was expiring by May 1998 i.e. one year after the supply of the initial batch of eight SU-30K aircraft and thereafter, Air Force was responsible for the maintenance of the aircraft fleet.

Audit paragraph highlighted that there had been delays in conclusion of contract and establishment of SSC. The contract which was to be made operational by May 1998 was not signed till January, 2000. Air Headquarters intimated Audit in August 1999 that non-availability of SSC had adversely affected the maintainability and operational preparedness of the SU-30 fleet.

9.2 The Committee desired to know the time frame within which the SSC was expected to be set up and the reasons responsible for the delay in this regard. In a note furnished to the Committee in January 2001, the Ministry stated that as per the main contract, SSC was to commence functioning within one year of the induction of 1st batch of SU-30K aircraft subject to signing of a separate contract. According to them, concept of SSC for Manufacturer's aircraft was being planned for the first time and there was, therefore, a need to exercise great caution while procuring capital equipment, spares and technology. SSC was to provide maintenance support for the aircraft after expiry of the warranty period. Thus, caution and economic viability were the main points to be taken care of during the negotiations. The Committee were informed that the primary reasons for adopting caution were as follows:-

a. The equipment shown to the IAF team by the Manufacturer was not as per our requirement since it was mainly for SU-30K and not for MKI. For MKI, Manufacturer was not ready for the test and repair facilities as the main equipment was under development.

b. It was considered economical to set up repair facilities for the systems common between K and MKI only and then add on for the remaining MKI systems.

c. A study was undertaken to utilise the existing infrastructure of the MiG-29 overhaul line. A presentation to MoD, HAL reps and the CAS was given in Nov 99 to chalk out the course of action for setting up of SSC.

9.3. The Committee specifically desired to know about the steps taken by the Ministry to set up SSC subsequent to the concern expressed by Air Hqrs in August 1999 on the maintainability and operational preparedness of SU-30 fleet due to lack of SSC. In a post evidence note the Ministry stated that the modalities for setting up of SSC had been under discussion with the manufacturer since November 1996 when the main contract was signed with them. A Steering Committee was stated to

have been set up in Februry 2000 under the Chairmanship of Additional Secretary in the Ministry of Defence to monitor the progress on the formation of SSC.

9.4 Indicating the status of formation of SSC as of November 2001, the Ministry stated that the SSC has been formed with limited capabilites with indigenous development. According to them, the process of setting up complete facilities can only be initiated after the finalisation of General Contract with the manufacturer, which was signed only in December 2001. The Committee have been informed that Rs.75 crore was earmarked for SSC and no expenditure has since been incurred on this count barring incurrence of Rs. 36 lakhs from IAF budget in respect of installation of some facilities in support of SSC.

9.5. Since warranty period of eight SU-30K aircraft expired in 1998 and 10 additional SU-30K were received in November 1999, the Committee enquired about the alternative arrangement made for maintenance of these aircraft in absence of requisite SSC. The Ministry intimated the Committee that besides attempting repair by technicians trained in the manufacturer's country to some extent, one Base Repair Depot (BRD) was also assigned the task of repair of certain items which were technologically and functionally similar to MiG-29 aircraft. It was stated that limited facilities for repair of some avionics also started functioning at the SSC.

9.6. In the absence of SSC, the Committee desired to know whether any expenditure was incurred for sending aircraft equipment to the manufacturer for repairs. According to the Ministry, no expenditure had been incurred till November 2001 in sending items to manufacturer for repairs. However, the Committee were informed by the Ministry that repair contracts for 18 complex assemblies were signed with a firm in the manufacturer country at a total cost of US $ 4.6 million till November 2001.

10. ***Poor Product Support***

10.1 It is seen from the Audit paragraph that the main SU-30 contract of November 1996 explicitly stipulated the supplier's responsibilities to deliver to the Government of India upon its request, spare parts and aggregates within the whole calendar service life of SU-30K and SU-30MKI aircraft. However, Audit scrutiny of various procurement cases initiated by Air HQ between January and December 1998 for procurement of spares of SU-30K aircraft disclosed that majority of these cases did not fructify till July 1999. As a result, Air Force had been operating the fleet for the last two years by consuming spares procured at the time of initial induction and no additional procurement of spares had taken place subsequently, which had affected the stock of spares. It has further been pointed out by Audit that Air Force felt an urgent need to finalise the general spares contract with the manufacturer as early as August 1997 to ensure smooth operation and maintenance of eight SU-30K aircraft beyond their warranty period of 12 months i.e. after May 1998 onwards. The general spares contract was, however, signed by the Ministry with the manufacturer only in January 1999. Audit observed that due to poor product support as a result of failure of the manufacturer to supply the spares already contracted for in the main contract, the average serviceability of the fleet, which was 69 per cent during 1997-98 deteriorated to 62 per cent during 1998-99.

10.2 The Committee enquired the reasons for poor product support by the manufacturer despite the fact that relevant provisions existed in the main contract earmarking the responsibility of the manufacturer. According to the Ministry, the procurement of spares contract could not fructify in 1998 and 1999 due to the fact that the prices quoted by the manufacturer was inconsistent and abnormally high, (500 per cent in certain items) which resulted in delay in finalising the general spares contract. It was also stated that the general contract (commercial terms) for supply of spares was heavily in favour of the manufacturer and the same had expired in February 1998.

10.3 Asked to explain the fall out of the deficiency in the spares contract, the Ministry in a note submitted that due to lack of suitable pricing philosophy and pricing mechanism with the manufacturer, certain problems on availability of spares were encountered. They added that the problems were, to some extent, offset with the spares kit supplied with the additional 10 aircraft and repairs carried out with the help of the team from the manufacturing country, which helped sustaining a better serviceability during the year 2000.

10.4. Indicating the status of conclusion of general spares contract, the Ministry stated that the supply of spares at reasonable prices was resolved after several rounds of prolonged discussion with the manufacturer. In October 2000, an agreement on pricing philosophy was stated to have been finalised.

The Committee were informed that price lists have since been negotiated and were under verification by the Ministry of Defence for finalisation.

11. *Repair and Overhaul facilities*

11.1 According to the Audit paragraph, within the ambit of main SU-30 contract, the manufacturer was required to assist the Air Force in upgrading the repair and overhaul facilities at a base repair depot and at Hindustan Aeronautics Limited (HAL) to undertake the repair and overhaul of SU-30 K/MKI aircraft and its engines respectively. For this purpose, a team from the manufacturer carried out a feasibility study in November 1995 to assess the facilities. The team indicated that the MiG-29 line at the base repair depot could be upgraded easily to handle the SU-30 overhaul task. However, at that time the financial and cost implications of the project were not worked out. Subsequently, Air HQ after a gap of nearly three years, submitted a proposal to the Ministry in September 1998 for setting up of the overhaul facilities for the SU-30 aircraft and engines. It also sought the approval of the Ministry to extend an invitation to the manufacturer for holding further discussions for this purpose and to work out the financial and time implications of the project. According to Audit, the proposal of the Air HQ was, however, not approved by the Ministry till July 1999.

11.2. The Committee enquired the reasons for which Air HQrs/Ministry took such a long time to give shape to the proposal for setting up of repair/overhaul facilities and the status of its installation. The Ministry in a post evidence note explained that the proposal of setting up of repair/overhaul facilities at BRD was initiated in 1998 when no clarity on the finalisation of Licensed Manufacture Contract existed. After Inter Governmental Agreement (IGA) and General Contract was signed by the Government for licenced Manufacture of aircraft by HAL, it was nominated as the repair/overhaul agency. It was stated that a clear cut commitment for setting up of complete repair and overhaul facilities with a time schedule was finalised in the General Contract for licenced production. According to the Ministry, the repair and overhaul facilities will be set up by 2004-2005 as per the time frames laid down in the IGA/GC.

12. *Procurement of additional aircraft*

12.1 Audit Paragraph highlighted that the delay in supply of the multi-role MKI version compelled the Ministry to conclude another contract with the manufacturer in December, 1998 for procurement of 10 additional SU-30K aircraft with associated equipment at a cost of Rs. 1187 crore. On being enquired the reasons for acquiring 10 additional aircraft, the Ministry in a post evidence note stated that based on threat perception and operational requirements arising out of depletion/ageing of IAF combat fleet, a case for procurement of these 10 aircraft was taken up in January 1998. The delays in the SU-30 MKI development programme and the non-availability of the SU-30 aircraft in requisite numbers were also stated to have been considered. According to the Ministry, with only a limited SU-30 aircraft in the IAF inventory, the force did not constitute the basic combat element of a squadron. It was envisaged that the additional aircraft would augment the existing eight aircraft to form a full squadron capable of Air Defence (AD) role and manning two AD detachments.

12.2 To a query from the Committee whether suo-motu offer was received from the manufacturer for procurement of 10 additional aircraft, the Ministry stated that the manufacturer made a suo-motu offer in August 1997 for supply of MiG-29SM combat aircraft against unutilized portion of long term credit of US $ 375 million. In a protocol signed between the manufacturer country and Indian sides in December 1997, it was agreed upon to consider the possibility of utilizing the balance of this credit for purchase of SU-30K aircraft. According to the Ministry, it was felt that acquisition of SU-30K aircraft upgradable to multi-role combat aircraft instead of MiG-29 aircraft would be more advantageous. The approval of Cabinet Committee on Security (CCS) for the purchase of 10 additional aircraft was obtained by the Ministry in June 1998. The Committee have been informed that all 10 aircraft were delivered by the manufacturer between June 1999 and November 1999 and were put into operational service. Asked to indicate the cost variance per additional aircraft compared to the aircraft negotiated at November 1996 contract, the Ministry indicated that the variance was Rs. 13.31 crores.

12.3 As regards upgradation of the 10 additional aircraft to multi-role combat aircraft, the Committee were informed that the requisite upgradation would take place under a separate contract, which is proposed to be finalized in 2003, after completion of the development of SU-30MKI-3. On being asked the cost implication of this upgradation, the Ministry in a post evidence note stated:

"The cost of upgradation of these 10 additional aircraft has been fixed as US $ 6 million per aircraft for the base year of 1996 with an escalation of 5% per year thereafter. Hence, the total cost of upgrade is fixed at US $ 84 million. However, the escalation factor is still to be negotiated since the (Manufacturers) are also responsible for some of the programme delays."

12.4 The Committee have been informed that payments amounting to Rs. 651.87 crore have been made to the manufacturer till 31 March 2002 under the 1998 contract for acquiring 10 additional SU-30 aircraft.

13. *License production of SU-30MKI aircraft*

13.1 The Committee have been informed that IGA for the licensed production of SU-30MKI aircraft was signed by the Government of India with the manufacturing country in October 2000. Government of India has designated M/s HAL as the licenced manufacturing agency of the aircraft. 140 SU-30MKI aircraft are planned for licensed production in India to meet the IAF's requirement of sustaining the combat fleet. Asked about the cost effectiveness of the project, the Ministry intimated that the unit cost of licensed manufactured aircraft worked out to US $ 30.130 million compared to the imported cost of US $ 31.266 million (at 2000 economic conditions). As regards proposed delivery schedule of the aircraft, the Committee have been informed that the delivery of the aircraft will commence from the year 2004.. A peak rate of production of 12 aircraft per year is planned so as to complete the delivery of 140 aircraft by 2017-18. According to the Ministry, the funding for the project will mainly consist of non-recurring cost of US $ 846.2 million and recurring cost of US $ 3745.7 million i.e. total of US $ 4591.9 million (Rs. 19975 crore) at 2000 price level spread over 17 years exclusive of taxes, duties and insurance.

13.2 Indicating the present status of the project, the Ministry stated that the general contract for licensed manufacture between HAL and the manufacturer was signed on 28 December 2000. An advance to HAL, for onward advance payment to the manufacturer, has already been paid. According to the Ministry, a draft contract is proposed to be signed with HAL for the supply of the aircraft alongwith associated equipment after the Detailed Project Report (DPR) has been prepared by HAL and the manufacturer by December 2001.

14. *Non fulfilment of contractual obligations*

14.1 The Audit Paragraph highlighted that the main contract of November 1996 *inter-alia* provided supply of associated equipment valuing US $ 347.85 Million, equivalent to Rs. 1252.25 crore to India in a phased manner starting from July 1997 to 2000. The contract explicitly stipulated that equipment to be delivered by the manufacturer would be new, unused, of current production and serviceable. According to Audit, equipment delivered by the manufacturer between 1997 and 1998 were old, used, corroded, defective and unserviceable though full payment had been made.

14.2 On being asked the total value of associated equipment already received by the Government as against the number of items contracted for supply in the main contract, the Ministry in a post-evidence note stated that equipment valuing US $ 255,775,058 had been received by November 2001. The total value of the equipment to be supplied as per November 1996 contract was US $ 375,841,211.

14.3 On being asked as to how old and corroded equipment were cleared during inspection, the Ministry stated that out of all the equipment supplied so far, only two Air Field Air Conditioners were found to be old and corroded. According to them, these were detected during the acceptance checks and warranty claims were raised immediately. Value of these two vehicles were stated to be Rs. 1.8 crore.

14.4 Giving the details of the warranty claims raised with the manufacturer, the Ministry stated that out of 80 claims, 62 claims were got settled as of December 2000 and 17 claims were settled by October 2001. One claim amounting to US $ 142, 400 is still pending on behalf of one R-73 missile whose glass dome was found broken. According to the Ministry, a team from the manufacturing country which visited India in December 2000 tried to change the glass but were unsuccessful and had suggested change of guidance head. The Committee were informed that the manufacturer had been insisted upon to change the glass dome/guidance head at the earliest. As regards replacement of two Air Field Air conditioners, the Ministry stated that the value of these two equipment had been deducted subsequently from the invoice payment under the main contract of SU-30K aircraft.

According to the Ministry, these would be replaced by the manufacturer with equipment of current production.

14.5 Air HQ had intimated Audit in August 1999 that unserviceable and defective equipment had adversely affected operation/maintenance of the aircraft. It further added that the issue had been addressed to the Ministry for appropriate action and follow up. The Ministry could not stop payments of Rs.16.85 crore to the manufacturer for defective equipment due to a faulty one sided provision in the contract that non-settlement of claims could not be used as a ground for the denial to pay invoices. The Committee specifically desired to know whether the Ministry ever attempted to withhold the payment due to the supplier, pending satisfactory settlement of warranty claims. The Ministry in a note submitted:

> "Contractually, the Supplier are bound to supply serviceable, new and unused equipment. A warranty claim is to be raised in case of violation of Article 5.2 to the main contract. However, as per the article 14.19 of the main contract `A claim shall not be the ground for the denial to pay invoices'. Therefore, contractually payment of Rs. 16.85 crore to the manufacturer could not have been stopped against the warranty claim. Yet with MoD concurrence, payment to manufacturer was withheld till MoD cleared the payment in May 1999."

14.6 The Committee were further informed that since the manufacturer did not initiate prompt action to settle the warranty claims, the Ministry withheld payments of US $ 13.2 million against the invoices in the year 2000 to force the manufacturer to settle the claims. According to them, this brought positive results and several claims had since been settled.

14.7 When asked were the attendant complications not the result of faulty provision in the contract, the Ministry in the post-evidence note submitted:

> "In hindsight, this clause had some faulty provisioning which has led to the current situation."

Observations/Recommendations

15. The Committee note that owing to the progressive obsolescence of the ageing combat fleet, the Indian Air Force (IAF) projected the requirement of multi role combat aircraft to make good the phasing out of older aircraft. In order to improve the combat capability of the IAF, Government of India approved acquisition of 40 SU-30-K aircraft and associated equipment at a total cost of Rs. 6310 crore and concluded a contract with a foreign manufacturer in November 1996. According to the Ministry, the selection of the aircraft was based on flight evaluation report, comparison with Air Staff Requirements, introduction of new avionics to make the aircraft multi-role capable, joint study by the IAF/Ministry of Defence on force levels and life cycle cost analysis between Mirage-2000/Mirage 2000-5 and SU-30 aircraft. The Committee observe that the flight evaluation report submitted to the Government in 1994 indicated that though SU-30K aircraft had multi-role potential, it was then optimised for air defence/air superiority role only. While submitting their recommendations for acquisition of this aircraft, the evaluation team pointed out *inter-alia* that the existing configuration of the aircraft was unsuitable to meet the operational requirements of the IAF and certain minimum and mandatory changes in terms of incorporation of state-of-the-art avionics were needed to improve the operational capability of the aircraft. The Committee were informed that the manufacturer in a working protocol signed in June 1994 offered to fully upgrade and operationalise the multi-role variant, to be designated as SU-30 MKI, jointly with India. The Committee find that Mirage-2000/Mirage-2000-5, the other feasible alternatives, were fully developed and proven multi-role aircraft with adequate international experience whereas SU-30 MKI will be available with India as the first customer, whose reliability and maintainability is yet to be established. Nevertheless, the Government selected the SU-30 aircraft on the grounds that after upgradation into a multi-role aircraft, it would still be cheaper and also have superior capabilities in terms of range and the load delivery. The Committee note that the presumptive superiority of SU-30 multi role aircraft was based on assumptions that certain avionics systems which had been only conceptualised at that stage, would be successfully designed/developed in India and others would be imported from Western sources and integrated into SU-30K aircraft for enhancing its capabilities, from a purely air defence role to multi-role capabilities. Further, the conclusion of

the Ministry that they had arrived at a cost-effective procurement decision appears untenable considering the fact that comparative life cycle cost was got evaluated for an aircraft, which is yet to be developed and for which all cost parameters were not available on a firm basis. The Committee therefore, conclude that the multi-role variant of SU-30K was still a *'concept'* at that time when Government went ahead with the decision to acquire the aircraft and it required a lot of developmental efforts before it met the operational needs of the Indian Air Force.

16. The contract contemplated induction of fully upgraded SU-30 aircraft in a phased manner commencing with 10 multi-role aircraft from the first half of 2001. While the initial consignment of eight aircraft was to be only the SU-30K (air-defence) version, the subsequent 22 aircraft before the last consignment under phase-III were to include progressively increasing number of equipment, which were needed to upgrade them fully to the multi-role version. The delivery of 22 partially upgraded aircraft including 10 in phase-I and 12 in phase-II was scheduled to commence from July 1998 and July 1999 respectively. The equipment, which were not initially installed in these partially upgraded aircraft, were to be fully installed later in India/manufacturer's plant in a phased manner during 2001 and 2002. The Committee are perturbed to find that barring delivery of eight SU-30K aircraft in May 1997, not a single upgraded SU-30 MKI aircraft has been delivered, despite an investment of 2671.54 crore and delay of more than 3 years. The original delivery schedule has already been revised twice and 10 fully upgraded multi-role aircraft which, scheduled to be supplied by December 2001, are expected to be available by the end of 2003. As a result, final upgradation schedule of 22 partially upgraded aircraft and eight SU-30K air defence aircraft planned in India/manufacturer's plant was also rescheduled leading to delays of about two years. The major reasons for non-materialisation of the planned induction schedule of the aircraft have been attributed to delay in development and procurement of indigenous and Western avionics equipment and their ultimate supply to the manufacturer for integration to the SU-30K aircraft. Obviously, repeated revision in the delivery schedule indicates that the time frame was drawn up without realising that embarking on a complex upgrade programme with divided responsibility for procurement of avionics and the attendant difficulties in their integration would seriously distort the programme of induction of SU-30 multi-role aircraft in the Indian Air Force. While taking exception to such an unviable planning, the Committee recommend that the Ministry should strengthen its monitoring mechanism and vigorously pursue the joint development programme to realise the acquisition of the multi-role aircraft within the revised time frame spelt out in agreement with the manufacturer.

17. The Committee note that the Ministry chose to follow an uncertain route of joint development programme by equipping the SU-30K air defence aircraft with modern avionics systems to be imported and supplied by Government of India and through indigenous development and production, to convert it into a multi-role aircraft. Undoubtedly, the divided responsibility for procurement of the systems and their integration has blurred the responsibility of the manufacturer towards producing an integrated state-of-art multi-role aircraft. The succeeding paragraphs corroborate the findings and concern of the Committee.

18. The Committee observe that the development and production of key avionics systems like Mission Computer, Display processor, Radar computer, Radar Warning Receiver etc. entrusted to DRDO under project 'vetrivale' and some other systems assigned to HAL was delayed by more than two years. According to the Ministry, the process of finalisation of technical specifications of the avionics and their approval by the manufacturer took considerable time and therefore the process of development was delayed. The Ministry's contention is not borne out by facts as the delegation from the manufacturer in February-March 1996, held extensive discussions with DRDO and the technical specifications of the sub-systems to be developed were finalised and their delivery schedules arrived at. The Ministry also released Rs. 6 crore to DRDO in July 1996 for initial development of sub-systems under the project 'Vetrivale' and DRDO commenced the development of laboratory models of the sub-systems in July 1996 itself as 'lead-in-project', Evidently, indigenous capability was overstated without realising the complexity in the development of identified state-of-the-art avionics. The failure of the Indian side to develop and deliver the indigenous sub-systems to the manufacturer within the time frame spelt out in the contract distorted the planned induction schedule of the multi role aircraft. The Committee are constrained to conclude that the project 'Vetrivale' was yet another case where DRDO failed to deliver the goods in time. The Committee find that though production agencies were identified, serial production of the indigenous avionics is yet to commence. Considering the

urgency of equipping IAF with these multi-role aircraft, the Committee hope that the MOD would do their utmost for speedy production of indigenous sub-systems required for upgradation of the aircraft.

19. Apart from delayed development of indigenous avionics by DRDO, the Ministry also failed to place procurement orders for Western avionics items for supply to the manufacturer as per contracted schedule. While there was enormous delay in procurement and supply of almost all the Western equipment to the manufacturer, some of the equipment are yet to be contracted by the Government. The reasons advanced by the Ministry mainly related to delay in finalisation of Export-Import contract and selection of appropriate vendor, which in view of the Committee should have been aptly taken care of by the Government in the course of implementation of a multi-national nature project with identified milestones. The absolute failure of the Ministry to ensure timely procurement of the requisite Western avionics and imprudent management on the part of authorities concerned in dealing with a delicate and sensitive project under joint development Venture, largely affected the original schedule of delivery of the multi-role aircraft by the supplier country. The Committee hope that keeping in view the prevailing security scenario, now at least, the Ministry will wake up to its responsibility and ensure that the remaining Western equipment are procured expeditiously and supplied to the manufacturer by the revised time frame i.e. by October 2002, with a view to obviating any further delay in the delivery schedule of the multi-role aircraft.

20. The Committee note with concern that the delay in the induction of Su-30 multi-role aircraft had its cascading impact on the proposed aircraft phase out plan, as the IAF was compelled to extend the technical life of the ageing MiG-21 and MiG-23 aircraft, besides advancing procurement of Mirage-2000 and Jaguar aircraft to contain major shortfall in the combat fleet strength. In addition, the delay in the development programme would entail a huge financial burden on the exchequer to the tune of approximately US $ 9.82 million towards upgradation of the Su-30 aircraft, involving an outflow of additional Rs. 546 crore due to foreign exchange variation. The Committee are therefore, constrained to conclude that imprudent planning and inept handling of the execution of the joint development project cost the exchequer avoidable extra expenditure besides affecting the operational preparedness of the forces. While expressing their anxiety and concern over the situation, the Committee recommend that the Ministry initiate urgent measures to realise acquisition of the Su-30 multi-role aircraft within the revised time frame in order to contain avoidable outgo of precious foreign exchange.

21. The Committee observe that the main contract provided for setting up of a Service Support Centre (SSC) at the operating base assisted by the manufacturer with the basic objectives of undertaking extended second line repair tasks of aircraft, avionics, aeroengines and aggregates to avoid the need to despatch them to the manufacturer. The SSC was to commence functioning within one year of the induction of the first batch of Su-30K aircraft, subject to the signing of a separate contract. Significantly, the establishment of SSC assumed greater importance as the warranty for the aircraft was to expire by May 1998 and thereafter the Air Force was responsible for the maintenance of the aircraft fleet. To the utter dismay of the Committee, a full-fledged SSC is yet to be established even after a lapse of four years. According to the Ministry, the process of setting up complete facilities can only be initiated after the finalisation of the General Contract with the manufacturer, which was signed only in December 2001. Citing reasons for delay in the establishment of SSC, the Ministry stated that since such facilities were being planned for the first time, there was a need to exercise caution and assess the economic viability of the equipment to be procured and installed. With the advancement of such an argument at this stage, the Ministry themselves negate the rationale applied for drafting relevant provisions in the contract. The Committee are distressed to point out that the manner in which this project has been handled is suggestive of lack of concern and sense of purpose. The Air Force admitted that the non-availability of SSC had adversely affected the maintainability and operational preparedness of the Su-30 fleet. Besides, the Government was compelled to sign repair contracts for 18 complex assemblies with a foreign firm at a total cost of US $ 4.6 million till November 2001. The Committee cannot but conclude that expenditure to the tune of US $ 4.6 million could have been avoided had the SSC been in place. The Committee therefore, hardly need to emphasise that urgent steps should be taken by the Ministry for the formation of SSC so as to reduce the down time of the aircraft and contain further expenditure on account of undertaking repairs of the equipment abroad.

22. The Committee note that the contract explicitly stipulated the Supplier's responsibilities to deliver to the Government of India, upon its request, spare parts and aggregates within the whole calendar service life of SU-30K and SU-30MKI aircraft. However, the Committee find that the procurement of spares contract could not fructify in the years 1998 and 1999 resulting in depletion of stock of spares with recurring consumption by I.A.F. According to the Ministry, the main contributory factor that caused delays in the finalisation of general contract for spares was that the prices quoted by the manufacturer were inconsistent and abnormally high. The Ministry however, admitted that due to lack of suitable pricing philosophy and pricing mechanism with the manufacturer, problems of spares were encountered. The Committee observe that though poor product support from the manufacturer affected the serviceability and availability of the SU-30 fleet, no initiative was taken by the Ministry to enforce relevant provisions in the contract beneficial to the Government. The Committee have been informed that an agreement on pricing philosophy was agreed upon in October 2000 and price lists were being verified by the Ministry. The Committee recommend that the Ministry should endeavour to execute general spares contract at the earliest and also ensure mutual adherence to the provision in the contract to guard against any contravention by the manufacturer at the cost of national interest.

23. The Committee note that the manufacturer was contractually bound to help in upgrading the repair and overhaul facilities at a base repair depot and at Hindustan Aeronautics Limited (HAL) to undertake repair and overhaul of SU-30K/MKI aircraft and its engines respectively. After assessing the facility in November 1995, the manufacturer indicated that the MiG-29 line at the base repair depot could be upgraded easily to handle the SU-30 overhaul task. However, the Ministry did not pursue this cost- effective option and rather chose to establish the facilities at HAL which is now expected to come up by 2004-2005. The Committee are distressed to point out that even though the SU-30K fleet is already four years old and the considerable lead time involved in procurement of equipment and building up of the requisite infrastructure, the abysmal delay on the part of Government to evolve a viable and effective overhaul and maintenance plan is unconscionable. The Committee urge the Ministry to strictly adhere to the time frame envisaged for setting up of the repair/overhaul facilities at HAL and intimate them the total cost incurred on the project.

24. The Committee observe that apart from revising the original delivery schedule due to delay in development and delivery of indigenous and Western avionics, the Ministry imported 10 additional Su-30K aircraft from the manufacturer at a cost of Rs. 1187 crore,which was not suitable for multi-role performance.These aircraft are planned to be upgraded to multi-role version under a separate contract with the manufacturer, to be finalised in 2003, involving an estimated expenditure of US$ 84 million. The Ministry pleaded that the case for procurement of 10 additional aircraft was advanced based on threat perception and operational requirements, arising out of depletion/ageing of IAF combat fleet. However, taking note of the measures taken by the Ministry to take care of the depleted combat strength, the Committee are of the firm view that acquisition of previously unacceptable 10 additional Su-30K aircraft at a cost of Rs. 1187 crore, thereby incurring an additional expenditure of Rs.133.10 crore (13.31 crore per aircraft) and accepting further liability of US $ 84 million on its upgradation, was avoidable.

25. As per agreement signed between Government of India and the manufacturing country, HAL has been designated to undertake licensed production of SU-30 multirole aircraft. The Committee have been informed that the general contract for licensed manufacture between HAL and the manufacturer was signed on 28 December 2000. The delivery of the aircraft is planned to commence from 2004 with 12 aircraft per annum. The total expenditure on the project including both recurring and non-recurring cost is estimated to be Rs. 19975 crore (at 2000 price level) spread over 17 years exclusive of taxes, duties and insurance. The Committee desire that a high level monitoring mechanism involving HAL be instituted to keep a strict vigil over the progress of the project so as to fructify the indigenous manufacture of the multi-role aircraft within the scheduled time frame. They recommend that the Ministry/HAL should strive for ensuring cost-effectiveness of this project with a view to reaping the optimum return from the indigenous manufacture of the multi-role aircraft. The Committee would like to be apprised of the progress made in implementation of this project.

26. The Committee note that out of total equipment valuing US $ 375,841,211 to be supplied by the manufacturer as per November 1996 contract, equipment valuing US$ 255,775,058 had been received by Government till November 2001. While the contract explicitly stipulated that the

equipment to be delivered would be new, unused, of current production and serviceable, the Committee find that most of the equipment were defective and unserviceable, besides two items were found to be old and corroded. In effect, 80 warranty claims were preferred on the manufacturer during 1997-2000, of which 79 were got settled by October 2001 and one claim valuing US$ 142,400 is yet to be settled. What is disquieting to observe that the Ministry could not stop payments to the manufacturer, pending satisfactory settlement of warranty claims due to a faulty one sided provision in the contract that non-settlement of claims could not be used as a ground for the denial to pay invoices. The Ministry admitted that the provision in the contract was faulty, which gave rise to complications in settlement of warranty claims. The Committee therefore, conclude that with the insertion of defective clause in the contract, the Government not only failed to secure the legitimate claims of the Government in time but also allowed the supplier to dictate terms in violating contractual obligations. It is relevant to mention that since the manufacturer did not initiate prompt action to settle the warranty claims, the Ministry withheld payments of US$ 13.2 million against the invoices in the year 2000, to force the manufacturer to settle the claims, which yielded positive results and several claims were got settled expeditiously. The Committee regret to conclude that had the Ministry taken such a recourse earlier, abnormal delay in settlement of warranty claims with the manufacturer could have been avoided, but for the lenient attitude exhibited by the Ministry the supplier benefited at the cost of the exchequer. The Committee trust that the Ministry would learn appropriate lesson from this case and recommend that adequate care be taken in future to obviate its recurrence while concluding contracts of similar nature. They desire that the remaining claims be settled with the supplier expeditiously along with obtaining supply of outstanding equipment valuing US $ 120, 066,153.

27. To sum up, the acquisition of SU-30 aircraft approved by the Government in 1996 at a cost of Rs. 6310 crore as replacement of the retiring combat fleet leaves much to be desired. The Ministry opted for an uncertain route of joint development which proved not only delay prone but also rendered the entire upgradation programme significantly complex both in terms of technology and management. The unrealistic assumptions regarding the capability of timely indigenous development of certain avionics systems and lead time for import of the system of Western origin for upgradation of the SU-30K air defence aircraft into multi-role SU-30MKI version has seriously jeopardised the schedule of induction of this aircraft into the Air Force. The delayed induction programme not only afflicted the operational equation of Indian Air Force but would also entail additional financial burden on the exchequer estimated to be of the order of US$ 9.82 million towards upgradation of the aircraft to multi-role version. Besides, indecisiveness of the Ministry led to non-establishment of a service Support Centre at the operating base of IAF, considered essential to reduce the down time of the aircraft, which also affected the maintainability of SU-30 fleet. Further, the product support from the manufacturer was far from satisfactory, imposing operational limitation on the fleet. What is further disquieting to note is the fact that a viable repair/overhaul facility is yet to be realised even though the SU-30 fleet is more than three years old. Over and above, the manufacturer violated the contractual provisions and supplied defective and unserviceable items, but for the faulty provisions drafted into the contract, the Ministry failed to adequately safeguard and secure the legitimate claims of the Government. The Committee came to the inescapable but unhappy conclusion that this complex collaborative venture, fraught with many uncertainties was badly executed and ultimately turned out to be one of the main causes for abnormal delay in the availability of the SU-30 multi-role aircraft for the Air Force. The Committee hope that the Ministry would now tone up the existing monitoring mechanism to strive for achieving the desired milestones set in the joint development programme, at least by the latest revised induction schedule.

N. Janardhana Reddy

Chairman, Public Accounts Committee

New Delhi, 19 April, 2002 (29 Chaitra 1924 (Saka))