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DELAY IN OPERATIONAL DEPLOYMENT OF IMPORTED SYSTEMS AND DELAY IN DEVELOPMENT-CUM-PRODUCTION OF A SYSTEM

MINISTRY OF DEFENCE

PUBLIC ACCOUNTS COMMITTEE

2004-2005

FIRST REPORT

FOURTEENTH LOK SABHA

LOK SABHA SECRETARIAT
NEW DELHI

FIRST REPORT

PUBLIC ACCOUNTS COMMITTEE
(2004-2005)

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DELAY IN OPERATIONAL DEPLOYMENT OF IMPORTED SYSTEMS AND DELAY IN DEVELOPMENT-CUM-PRODUCTION OF A SYSTEM

Ministry of Defence

[*Action Taken on* 22*nd Report of Public Accounts Committee* (13*th Lok Sabh*a)]

Presented to Lok Sabha on.....
Laid in Rajya Sabha on .....

LOK SABHA SECRETARIAT
NEW DELHI

December, 2004/*Agrahayana,* 1926 (*Saka*)

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*Shri A.R. Antulay resigned from the membership of the Committee *w.e.f.* 27 August, 2004.

INTRODUCTION

I, the Chairman, Public Accounts Committee having been authorised by the Committee to present this Report on their behalf, do present the First Report on action taken by Government on the recommendations of the Public Accounts Committee contained in their 22nd Report (13th Lok Sabha) on "Delay in Operational Deployment of Imported Systems and Delay in Development-cum-Production of a System".

2. This Report was considered and adopted by the Public Accounts Committee at their sitting held on 28th September, 2004. Minutes of the sittings form Part II of the Report.

3. 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.

4. 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.

NEW DELHI;
27 *October*, 2004
5 *Kartika*, 1926 *(Saka)*

PROF. VIJAY KUMAR MALHOTRA
Chairman,
Public Accounts Commmittee.

CHAPTER I

REPORT

This Report of the Committee deals with the action taken by Government on the Observations\Recommendations contained in their 22nd Report (13th Lok Sabha) on paragraphs 21 and 39 of the Report of the Comptroller and Auditor-General of India for the period ended 31 March 1995 (No. 9 of 1996), Union Government (Defence Services— Air Force & Navy) relating to "Delay in operational deployment of imported systems" and "Delay in development -cum-production of a system."

2. The 22nd Report which was presented to Lok Sabha on 24 July 2001 contained 17 Observations\Recommendations. The action taken notes have been received in respect of all Observations\recommendations and these have been broadly categorized as follows:

(i) Observations\Recommendations which have been accepted by Government: Paragraph Nos. 7.1-7.3, 7.6-7.7, 7.12-7.14, 7.16-7.17

(ii) Observations\Recommendations which the Committee do not desire to pursue in view of the replies received from Government:

Paragraph Nos. 7.4-7.5, 7.8-7.11

(iii) Observations\Recommendations in respect of which replies of Government have not been accepted by the Committee and which require reiteration: Paragraph No. 7.15

(iv) Observations\Recommendations in respect of which Government have furnished interim replies:

3. The action taken notes furnished by the Ministry of Defence have been reproduced in the relevant chapters of this Report. The Committee will now deal with the action taken by the Government on some of their Observations\Recommendations.

- NIL -

Delay in Submission of Action Taken Notes

4. As per the prescribed procedure, the Ministry of Defence were required to furnish the requisite Action Taken Notes on the observations\recommendations contained in the 22nd Report of PAC within six months of presentation of the Report *i.e.* by 23 January, 2002. In the instant case, despite constant follow-up, the Action Taken Notes were only furnished by the ministry on 3 February, 2004 *i.e.* after a lapse of more than two years. It may be mentioned here that the Committee in their original Report had taken strong exception to the slackness on the part of the ministry in responding to draft audit paragraphs as well as abnormal delay in furnishing the desired information on the subject. The Committee had therefore recommended that

the Ministry of Defence should entrust specific responsibilities to designated nodal officers in the respective Departments so as to ensure that audit paragraphs and follow - up action thereon is processed, coordinated and responded to properly and expeditiously within the stipulated time frame. In their Action Taken Note, the Ministry stated that necessary instructions were issued to all concerned on 23 April, 2002 emphasizing the urgency to expedite Action Taken Notes. The Committee however, regret to note that despite issuance of instructions there was recurrence of delay in the action taken stage also obviously the system in place is still found to be lacking and needs further refinement. Taking a serious note of the prevalent state of affairs, the Committee urge the Ministry to strengthen their monitoring mechanism in order to ensure that the laid down procedures and instructions issued from time to time are followed scrupulously by the authorities concerned and any aberration thereto be looked into with a view to fixing responsibility. The Committee trust that the Ministry would initiate appropriate measures to obviate recurrence of such delays in future.

Deficiencies/Irregularities in Procurement of Electronic Warfare System (Sl. Nos. 2, 3, 4, 12 and 15-Paragraphs 7.2, 7.3, 7.6, 7.12 and 7.15)

5. The Government concluded two contracts in 1979 and 1985 respectively with a foreign firm 'A' for procurement of five Electronic Warfare System (EWS) to meet operational requirement of Navy. In their 22nd Report while deploring the questionable manner in which the case was made out for import of the EWS in disregard to its indigenous development, the Committee had opined that the whole system of projecting defence requirements of the Navy, their import and contract management warranted a thorough overhauling to ward off such incidents in future. The Committee's examination also revealed several irregularities/disquieting aspects in the execution of the contract with the firm.

Taking note of the fact that proper spadework was not done prior to selecting the supplier, the Committee concluded that the selection of the firm 'A' for import in question was almost pre-determined. The Committee were concerned to observe that the preferential treatment given and undue indulgence shown to the foreign firm over indigenous endeavours ultimately cost the exchequer dearly in terms of cost and time overrun besides impinging upon the supreme concern of national security. While expressing their grave anxiety in the matter and leaving it to the Government to explore as to whether it was feasible to take punitive action against the guilty officials at this distant point of time, the Committee had desired that the Ministry should evolve foolproof institutional mechanism for entering into finalising the defence deals. The Committee were astonished to find that the Ministry signed the second contract in June 1985 with the same firm for procurement of three more EW Systems despite being well aware of the fact that there had been abnormally long delay on the part of the firm in successful installation and commissioning of the systems contracted in 1979, failure on their part in fulfilling its contractual obligations and the need for advanced system in view of the technical advancement in the field during that period. The Committee had concluded that the decision to award the second contract to the firm for the same system was taken under influence/pressure without proper scrutiny and at the grave

risk to, and detriment of, national security. While viewing with grave concern and anxiety the vulnerability of defence procurements to extraneous considerations, the Committee had desired that all such strategic defence procurements should be examined threadbare invariably by a core group of users and professionals before taking a decision as to the necessity and modalities of the procurement.

6. The Committee had further observed that the imported EW systems were the technology of Seventies and by the time these systems were made operational, more than a decade's time had past and thus were outdated not only in terms of technological advancements but also in terms of their life span which was around twleve years and half. The Committee were unable to comprehend as to why and for what consideration the Ministry kept on procuring the systems which had become technologically obsolescent. While observing that the whole deal reflected a murky state of affairs at the prevalent time, the Committee had expressed serious apprehension whether any remedial and corrective action was taken in the Ministry of Defence to ensure transparency in deals and to safeguard the supremacy of national security.

7. Taking note of the irregularities in the contracts entered into with the foreign firm, the Ministry had decided in 1994 to conduct a special internal audit and fix responsibility. But the Committee were surprised to find that the formal order for internal audit was not given till January 1996. As regards making available the findings of the Economic Investigation Bureau (EIB) to the Committee, the Ministry pleaded non-availability of records. The non-availability of relevant records and findings of EIB only added to the worst apprehension of the Committee that there was a definite design to shield the guilty. The Committee had therefore desired that the findings of the EIB should be made available to them including the follow up action taken to prevent recurrence of such grave incidents in future.

8. As regards reviewing the Defence Procurement System, the Ministry of Defence in their Action Taken Note *inter-alia* stated:

> "As part of the implementation of the report of the Group of Ministers on reforming the National Security System, new defence procurement management structures and systems were set up in the Ministry of Defence (MoD) *vide* MoD order No. 17179/2001-Def.Secy.1C/2001 dated 11 October 2001 and No SA/01/104/2001 dated 10 September 2001. In order to implement the provisions laid out in the new defence procurement management strucutures and systems, the procedure for Defence Procurement laid down *vide* MoD ID No 1 (1)91/PO (Def) dated 28 February 1992 was revised. The Defence Procurement Procedure-2002 (DPP-2002) came into effect from 30 December 2002 and was applicable for procurements flowing out of 'Buy' decisions of Defence Acquisition Council. The scope of the same has been enlarged to include procurement flowing out of 'Buy and Make through Imported TOT' decision as well. The revised procedure is called the Defence Procurement Procedure—2002 (Version Jun. 03). A similar procedure covering ship building activities is also being examined. The defence procedure of ship building activity is being steered by Seceretary, Defence Production and Supplies and is presently being vetted by all sections of the Ministry of Defence involved in ship building activities."

9. On the question of selection of the foreign firm 'A' and the import of the entire system, the Ministry in their Action Taken Note submitted that a high powered technical team consisting of representatives from Defence Electronics Research Laboratory (DERL) and Navy visited five companies in Italy, Holland and UK, who were willing to export the system/sub-system/technology. Quoting from the report of the Technical Team, the Ministry stated that the system proposed by the company in Holland and one of the companies in UK could meet the technical requirements of the Navy in the Electronic Support Measures (ESM) only, but technology used was not very cost effective. It was stated that the Electronic Counter Measure system of that company was found to be inferior. According to the Ministry, based on these considerations, the team concluded that the offered system was the most cost effective system which were available at that time and to meet operational requirements in the time frame projected by the Navy. Regarding action taken against guilty officials and evolving foolproof institutional mechanisms for entering into and finalising Defence deals, the Ministry in their Action Taken Note explained:

> "At this distant point of time, it may not be possible to initiate action against any individual. However, to obviate such reoccurrence a comprehensive defence procurement procedure has been promulgated, which is periodically reviewed for high value/high technology procurements. Such proposals are reviewed by Technical Oversight Committee (TOC) especially nominated to ensure that the trials, trials evaluation, compliance of Quality Requirements (QRs) and selection of vendors have been done as per the prescribed procedures. In addition, for all acquisition proposals in excess of Rs. 300 crores and any other recommended by the Defence Procurement Board (DPB) a panel of Eminent Persons Group (EPG) having experience and expertise in defence procurement is constituted by the Raksha Mantri. The EPG examines whether all prescribed process and procedures have been followed. This process is undertaken after contractual negotiations have been finalised but before the contract is concluded. These procedures have been implemented to bring transparency in defence procurement."

10. Apprising the Committee about the measures taken to ward off import of technologically outdated system, the Ministry in their Action Taken Note stated as follows:

> "To discount induction of technologically obsolescent systems, Defence Procurement Board (DPB) has a Technical Wing in which the Technical Manager, Maritime & System (TM/M&S) is responsible for induction of state-of-art EW technology into the Navy. The Defence Procurement Procedure, ensures that technologically obsolescent system do not get inducted into the services. As part of the defence procurement procedure, Request for Proposals (RFPs) initiated by the Service Headqurters are scrutinised and vetted by the TM(M&S) staff. The TM and its staff comprises of experts from the three services with vast experience in their respective fields of specialisation. The Part II of the RFP, incorporates aspects of staff qualitative requirements that describe technical parameters for the proposed equipment in clear and unambiguous terms. Therefore

there exist a provision in the Defence Procurement Procedures to specify one's requirements, this would ensure that only state-of-art technology is inducted."

11. On the issue of Conducting Special Internal Audit in the matter of import of EW system in question and fixing responsibility, the Ministry have regretted the delay in giving formal order for the same. According to the Ministry, the Controller of Defence Accounts (CDA), Navy carried out a special audit and its report was analysed and found to have corroborated the known facts. The Committee have been informed that no individual has been held accountable for any wrong doing at any stage. As regards findings of the Economic Investigation Bureau (EIB), the Ministry stated that they had received no adverse Communication from EIB and efforts were being made to obtain the Report from them.

12. **The Government concluded two contracts with a foreign firm 'A' in 1979 and 1985 respectively for procurement of five Electronic Warfare Systems (EWS) to meet operational requirments of Navy. In their earlier Report, the Committee found several glaring irregularities/deficiencies in the execution of the contract by the Ministry of Defence. These broadly included, lack of proper spadework in selection of the supplier, preferential treatment and undue indulgence shown to the firm, questionable procurement of technologically obsolescent EW systems and above all inaction on the part of the Ministry of Defence to probe into the matter with a view to fixing responsibility. Having regard to the fact that the import, contract in question dated back to early eighties, the Committee thought it prudent to leave the matter to the Government to explore the feasibility of taking any punitive action against the guilty officials for various acts of omission and commission. Focusing their attention on the macro aspect of the case with a futuristic outlook for obviating such grave incidents, the Committee had inter-alia recommended that the whole system of projecting defence requirements of the Navy, their import and contract management warranted a thorough overhauling to ward off such incidents in future. While viewing with grave concern and anxiety the vulnerability of defence procurements to extraneous considerations, the Committee further desired that all such strategic defence procurements should be examined threadbare invariably by a core group of Users and professionals before taking a decision as to the necessity and modalities of the procurement. The Committee also urged upon the Ministry to evolve foolproof institutional mechanisms for negotiating and finalising defence deals with a note of transparency so as to safeguard the national security.**

As regards fixing responsibility for the reported irregularities in the instant case, though the Ministry of Defence had decided in 1994 to conduct a speical internal audit, the formal order for instituting the same was not given till January 1996. The Committee in their earlier Report had expressed strong dissatisfaction over the delay in probing into the matter. The Ministry in their Action Taken Note have now regretted the delayed issuance of formal order. According to them, the Controller of Defence Accounts, Navy (CDA) carried out a special audit and the report submited by them had corroborated the known facts, However, according to the Ministry, no individual was held accountable for any wrong doing at any stage.

Pertinently, an outside agency i.e. Economic Investigation Bureau (EIB) also enquired into the case. The Committee are perturbed to find that the Ministry are yet to obtain a report from EIB. What is further disquieting to note is the fact that even without obtaining the Report from EIB, the Ministry chose to inform the Committee that EIB did not observe any irregularity in the case. The Ministry owe an explanation to the Committee for this unusual act. The Committee desire that the Ministry should obtain a copy of the report from EIB expeditiously and submit the same to the Committee alongwith a copy of the special audit report submitted by CDA (Navy).

In respect of corrective and remedial action taken to obviate recurrence of such cases, the Ministry stated that a comprehensive defence procurement procedure has been promulgated with effect from June 2003, which is periodically reviewed for high value/high technology procurements. According to the Ministry, these procedures have been implemented to bring transparency in defence procurement. The Committee welcome the measures taken in the direction of structural and systemic refinements in the defence procurement management and trust that the envisaged objective behind this rejuvenated procedure will be observed and implemented in letter and spirit in the best interest of defence preparedness and supreme concern of national security.

The Committee have been informed that a similar procedure covering shipbuilding activities was also being examined in the Ministry of Defence. The Committee desire that a copy of the approved procedure may be furnished to them in due course.

CHAPTER II

OBSERVATIONS/RECOMMENDATIONS WHICH HAVE BEEN ACCEPTED BY GOVERNMENT

Recommendation

The Electronic Warfare System is a most sophisticated modern technique that plays key role in the present day strategic warfare scenario. An Electronic Warfare System (EWS) consists of three interdependent elements *viz.* (i) Electronic Support Measure (ESM), (ii) Electronic Counter Measure (ECM); and (iii) Electronic Counter-Counter Measure (ECCM). The effective life-span of an electronic equipment is considered to be about twelve and half years. Any delay in installation of an EW system on the ship reduces the exploitable life of the system by the period of delay. The import of EW system is never considered a preferable option because it always poses a possible threat of the operational characteristics being passed on to the potential adversaries by the foreign supplier. The Committee believe that in order to be successful in the area of EW techniques, it is essential that indigenous efforts are made for designing, developing and productionising of the EW systems closely related to the country's operational plans and usage patterns.

[Sl. No. 1 Appendix II Para 7.1 of Twenty-second Report of PAC (Thirteenth Lok Sabha)]

Action Taken

The effective life span of Electronic Warfare equipment is counted with its installation on board a ship. Any delay in the installation of an EW system on a ship does not reduce the exploitable life of the system by the period of delay. The concept of shelf life is not applicable to an EW system. The four numbers of INS-3 (Integrated Naval System) and the indigenised Ajanta system continue to be operationally exploited till today. It is pertinent to note that INS-3 systems were installed in the 80's on the ships.

Import option is resorted to only in case of non-availability of indigenous systems. All security measures are taken to ensure that the operational characteristics are not compromised.

The Ministry of Defence concurs with the observations of the PAC that to be successful in the area of EW techniques, it is essential that indigenous efforts are made for design, development and production of the EW systems. These efforts need to be in tandem with the country's operational plans and tactical needs. However, at the stage when INS-3 was inducted in the Navy the indigenous capability was not available.The import served to help and build indigenous capability. The technologies in this field are often emerging, proprietary and available only with the developed

countries. Indigenous effort in the field of EW technology, is a protracted and iterative effort. The delays in the indigenous efforts, therefore, necessitate imports. In order to build indigenous capability, project "Ajanta" was sanctioned in 70s for development of shipborne EW system was linked to this procurement. In 1995, naval Indigenous Electronic Warfare Programme 'Sangraha' has been approved which envisages development/production of five main variants of Electronic Warfare Systems, *viz.* Kite, Eagle, Homi, Porpoise and Ellora for fitment on aircraft, submarines and ships. DLRL/DRDO undertook the development and the production agency is M/s. BEL, Hyderabad. Development activities of all systems except Homi and Ellora has been completed, ESM system fitted on board helicopters has already been productionised and inducted into the Navy in Nov. 2001. The prototype of Eagle to be fitted on aircraft has been tried out successfully and 10 in numbers are under production. Porpoise ESM for submarines and Homi ESM for aircraft are under production and the production models for both would be ready for installation and trial in end March 03. Lab demonstration of Ellora was held in September 02 and production of the first model is expected in Oct. 03. For the future a 15-year perspective EW plan has also been prepared by the Navy and forwarded to DRDO so as to enable our in-house R&D organisations to decide what we can make and what we have to import. These perspective plans are projected to the Defence Acquisition Council, which would approve these plan and take a decision on indigenous production or import of planned equipment/systems.

[Ministry of Defence O.M. H11013/20/2001/D (Parl.) dated 30 Jan 04]

Recommendation

The Committee observe that the Naval Headquarters based on threat assessment, had projected an immediate requirement of three EW Systems for installation on the first three ships of "Project-A" with the fitment schedule of July 1981, July 1982 and July 1983 respectively. The Defence Research and Development Organisation (DRDO) had offered that the requirement of the Navy could be met through indigenous development and that they were capable of developing an EW system to meet the requirements. The Committee find that a Technical Committee had examined this proposal and a decision was taken on 10th January, 1978 to clear the "Project-A" and review the progress in January, 1979. The Committee are surprised to note that contrary to the recommendation of the Technical Committee as well as the decision taken in the meeting held on 10 January, 1978 for review of the "Project-A" in January, 1979 the project was reviewed in April 1978 itself *i.e*. just after three months and the delivery schedule fixed earlier was preponed to November, 1980. The Committee further observe that while placing the letter of intent, the preponed date was further advanced by one month *i.e*., October, 1980. The Ministry could not adduce any justification for advancement of delivery made from July, 1981 to October 1980 while by their own admission made before the Committee, the system was required for the Frigate which was to be commissioned between 1983 and 1985. The assertion made before the Committee that the Navy was in a position to meet effectively the enemy's threat even without depending upon the imported EWS renders questionable the case made out for import of EW Systems in extraordinary haste. While deploring the questionable manner in

which the deal was struck, and refraining from making any comment at this distant point of time, the Committee strongly feel that the whole system of projecting Defence requirements of the Navy, their import and contract management warrants a thorough overhauling to ward off such incidents in future.

[(Sl. No. 2 Appendix II Para 7.2 of Twenty-second Report of PAC (Thirteenth Lok Sabha)]

Action taken

The EW systems were meant to be installed on frigate class of ships that were due to be commissioned between 1983 and 1985. The ship building process is a long and tedious affair. A ship's design caters for the equipment, which is likely to be fitted in it. The design is worked out, finalized and intimated to the ship building yard well in advance. Thereafter, each compartment of the ship is built to specification of the equipment, which would be installed in it. Therefore, the equipment fit is decided well in advance so as to ensure that the ship is designed and built for effective usage of each compartment. It would be extremely difficult to fit any equipment especially an EW suite into any compartment of the ship. An EW system also consists of antenna and associated peripherals, which are located only at certain specific places on the ship mast and superstructure. All the EW equipment is installed well in advance of the commissioning of the ship. Records do not indicate the reason for preponement of delivery schedules of equipment. However, it may be inferred that the decisions to install the EW equipment were based on status of ship building activity and the cardinal dates projected by the shipyard.

As part of the implementation of the report of the Group of Ministers on reforming the National Security System, new defence procurement management structures and systems were set up in the Ministry of Defence(MoD) *vide* MoD order No 17179/2001-Def. Secy/IC/2001 dated 11 October 2001 and No. SA/01/104/2001 dated 10 September 2001. In order to implement the provisions laid out in the new defence procurement management structures and systems, the procedure for Defence Procurement laid down *vide* MoD ID No 1(1)91/PO(Def) dated 28 Feb. 1992 was revised. The Defence Procurement Procedure-2002 (DPP-2002) came into effect from 30 Dec. 2002 and was applicable for procurements flowing out of 'Buy' decision of Defence Acquisition Council. The scope of the same has been enlarged to include procurements flowing out of 'Buy and Make through Imported TOT' decision as well. The revised procedure is called the Defence Procurement Procedure-2002 (Version Jun. 03) and is placed at ANNEXURE I for information. A similar procedure covering shiphuilding activities is also being examined. The defence procedure for ship building activity is being steered by Secretary, Defence Production and Supplies and is presently being vetted by all sections of the Ministry of Defence involved in ship building activities. Once the procedure is finalised/approved, a copy of the procedure would be forwarded to the PAC and the audit authorities.

[Ministry of Defence O.M. H11013/20/2001/D (Parl) dated 30 Jan. 04)]

Recommendation

The Committee observe that in view of the short time frame, DLRL was advised to supply EW system for the first "Project-A" ship by resorting to import of necessary sub-systems and developing the rest indigenously. The team deputed abroad for the purpose of identifying the sub-systems expressed their favourable opinion about the system of a particular foreign firm. The Ministry failed to furnish convincing explanation as to what prompted the team to recommend import of the whole system rather than the sub-systems. What has caused serious concern to the Committee is the manner in which the foreign firm was selected for the purpose of import of the system. Having regard to the fact that further attempt was not made by the Ministry/Navy to identify other manufacturers/suppliers in the global market, proper exercise was not undertaken to verify the technical and production capabilities of the firm, efforts were not made to assess the earlier track record of the firm, measures were not taken to ensure that the specifications as well as the quality of the requisite equipments would be met by the firm and that due efforts were not made to ensure fulfilling of the contractual obligations by the firm, the Committee came to an inescapable conclusion that the selection of a particular foreign firm was almost pre-determined. The fact that the Naval authorities firmly stuck to the short-frame given to DLRL while liberally revising the delivery schedule of the foreign vendor only reinforces their conclusion about the predetermined selection of the foreign firm. The Committee are pained to observe that the preferential treatment given and undue indulgence shown to the foreign firm over indigenous endeavors ultimately cost the exchequer dearly in terms of the cost and time overrun besides impinging upon the supreme concern of the national security. While expressing their grave anxiety in the matter and leaving it to the Government to explore as to whether it would be feasible to take punitive action against the guilty officials at this distant point of time; the Committee would like the Government to draw suitable lesson and to evolve foolproof institutional mechanisms for entering into and finalizing the Defence deals.

[Sl.No. 3 Appendix II Para 7.3 of Twenty-second Report of PAC (Thireenth Lok Sabha)]

Action Taken

At the time of project sanction, it was planned to procure (import) some of the critical sub assemblies/sub systems and develop the rest indigenously in order to meet the delivery schedule envisaged at that period of time. A high powered technical team consisting of reps. from DLRL and Navy visited five companies in Italy, Holland and UK, who were willing to export the system/sub-system/technology. Electronic Warfare system are of intelligence gathering nature and very few foreign companies are allowed by their governments to export the system and technology. This was the period when tremendous development was taking place in the field of computers and these companies were at an advance stage of integrating their systems. During the visit the Team observed some of the complex problems being faced by the European firms, who had been in this field for much longer period in system realization and system integration both in Hardware as well as Software.

Witnessing the complexity of the task involved and the available timeframe, the team recommended import of first system with participation of DRDO for "Know-how" transfer in respect of system interface and system integration phase. Such a participation was to help the DRDO lab to study some of the critical design aspect and learn from the experience of others in this field. From the report of the high powered Technical Team, it is observed that the system proposed by the company in Holland and one of the companies in UK were technically not considered because of their very large and bulky antenna system and very high reaction time to a threat. Another company of UK could meet the technical requirements of the Navy in the ESM section only, but technology used was not very cost effective. In addition, the ECM system of that company was found to be inferior. Based on these considerations, the team concluded that the offered system was the most cost effective system which were available at that time and to meet operational requirements in the timeframe projected by the Navy.

At this distant point of time, it may not possible to initiate action against any individual. However, to obviate such reoccurrence a comprehensive defence procurement procedure has been promulgated, which is periodically reviewed for high value/high technology procurements. Such proposals are reviewed by Technical Oversight Committee (TOC) especially nominated to ensure that the trials, trials evaluation, compliance of QRs and selection of vendors have been done as per the prescribed procedures. In addition, for all acquisition proposals in excess of Rs. 300 crores and any other recommended by the Defence procurement Board (DPB) a panel of Eminent Persons Group (EPG) having experience and expertise in defence procurement is constituted by the RM. The EPG examines whether all prescribed process and procedures have been followed. This process is undertaken after contractual negotiations have been finalised but before the contract is concluded. Para 33 to 43 to Annexure I refers. These procedures have been implemented to bring transparency in defence procurement. The Defence Procurement norms and procedures have been made available on the web site of the Ministry.

[Ministry of Defence O.M. H11013/20/2001/D (Parl) dated 30 Jan. 04)]

Recommendation

Despite being well aware of the fact that there had been abnormally long delay on the part of the firm in successful installation and commissioning of the systems contracted in 1979, failure on the part of the firm in fulfilling its contractual obligations and the need for technically advanced systems in view of the technical advancement in the field during that period, the Committee are astonished that the Ministry signed the second Contract in June 1985 for procurement of three more EW systems with the same firm. Evidently, the testimony of the Ministry of Defence that Indian Navy had other Electronic Warfare(EW) equipments in its inventory to mitigate any emerging threat from adversaries and the failure of the same firm to supply defect-free system and the abnormally long time taken by it to rectify the defective system establish beyond any shadow of doubt that the decision to award second contract to the same firm for the same system was taken under undue influence/pressure without proper scrutiny and at the grave risk to, and detriment of, national security. While viewing with grave concern and anxiety the vulnerability of defence procurements to estraneous

considerations, the Committee desire that all such strategic Defence procurements should be examined threadbare invariably by a core group of users and professionals before taking a decision as to the necessity and modalities of the procurement.

[Sl.No. 6 Appendix II Para 7.6 of Twenty-second Report of PAC (Thirteenth Lok Sabha)]

Action Taken

NHQ had submitted an EW Plan, under which 10 EW systems were envisaged for different platforms. This requirement was expected to be met through five indigenous and five imported systems. The options available at that juncture were various European countries, the U.S. and possibility of indigenous production. The equipment from USA was not available due to their proximity with one of our potential adversaries at that time. The indigenous equipment was also not available. In order to maintain commonality of equipment on the same class of ships, the contract for additional 3 systems were signed with the same firm.

The countering of threat with available means/technology is always feasible. However this results into higher casualties, lesser reaction time for forces and uneconomic usage of own units. Better technology enhances the cost of war for the adversary and economizes on own cost in terms of number of units, equipment, manpower etc. MOD's testimony regarding availability of EW systems to mitigate the threat was made in this context.

A three tier Defence Procurement Organisation consisting of the Defence Acquisition Council, Defence Procurement Board and Defence Production Board has been set up to take a coordinated view of defence Procurements.

[Ministry of Defence O.M. H 11013/20/2001/D (Parl) dated 30 Jan. 04]

Recommendation

The Committee observe that the foreign vendor not only badly delayed the delivery of the system but also took abnormally long time extending upto 7 years in installation of the systems on ships. The Committee wonder as to how the Ministry would reconcile their own information furnished at one place that the ships were available at the time of actual delivery and that the delay in installation was mainly attributable to delayed ships building activities. The Ministry failed to furnish any tangible ground for necessitating import when the ships according to them, were still under the building process. While deploring the lackdaisical assessment of import requirement, the Committee recommend the Ministry to evolve an institutionalized system so that Defence requirements are projected on actual need basis and also to invariably incorporate a specific clause in all future contracts to the effect that in case of delayed delivery by the supplier, the cost of the Contract will be reduced by a certain percentage besides the option of foreclosure or rescinding of the contract.

[Sl.No. 7 Appendix II Para 7.7 of Twenty-second Report of PAC (Thirteenth Lok Saha)]

Action Taken

The EW equipment is generally installed during the ship building process and not after the ship is built. This optimizes space considerations on a ship and facilities better usage of limited space on naval ships. So far as the assessment of the import requirement is concerned, these were the inputs available at that time:—

(a) Indigenous Equipment was not available. The indigenous development of EW system had got delayed.

(b) There was an option clause in the existing contract of imported system.

(c) The imported system was technically evaluated and had been cleared for induction.

(d) The EW systems were to be made available during the stage of construction of the frigate ships.

(e) Induction of the imported system from the same source would result into standardization, thereby easing maintenance and support infrastructure.

(f) Fresh evaluation and import of another system at that stage would have led to further delays and was undesirable.

A three tier defence Procurement Organisation consisting of the defence Acquisition Council, Defence Procurement Board and Defence Production Board has been set up to streamline defence procurement. A copy of MoD No. 13984/2001/Def Secy/IC/2001 dated 24.8.2001 is ANNEXURE-IV

In case of delays, the contracts have a standard provision for levy of Liquidated Damages (upto the value of 5% of undelivered systems) and termination with provision for return of advance payments with interest in case delays are not acceptable to the Buyer. In case of termination for default, there is a provision for supplier being liable to pay the extra amount in case of purchase from another source at a higher price.

[Ministry of Defence O.M. H11013/20/2001/D (Parl) dated 30 Jan. 04]

Recommendation

The Committee further observe that the imported EW Systems were the technology of seventies and by the time these systems were made operational by the vendor, more than a decade's time had past. Thus, these systems had almost become outdated not only in terms of technological advancements which had taken place but also in terms of their own life span which was around twelve years and half. Surprisingly, the Ministry as well as the Naval authorities did not ponder over this crucial issue. The Defence Secretary while deposing before the Committee categorically admitted that these systems bought from the foreign firm contained the technology of the 70s and that there had been rapid developments since then. The Committee are unable to comprehend as to why and for what consideration the Ministry kept on procuring the systems which had become technologically obsolescent. Indubitably, the whole

deal reflects a murky state of affairs at the prevalent time and the Committee have little knowledge as to whether any remedial and corrective action has been taken in the Ministry of Defence to ensure transparency in Defence deals and to safeguard the supremacy of national security.

[Sl.No. 12 Appendix II Para 7.12 of Twenty-second Report of PAC (Thirteenth Lok Sabha)]

Action Taken

To discount induction of technologically obsolesent systems, Defence Procurement Board (DPB) has a Technical Wing in which the Technical Manager, Maritime & System (TM/M&S) is responsible for induction of state of art EW technology into the Navy. The Defence procurement procedure, ensures that technologically obsolescent system do not get inducted into the services. As part of the defence procurement procedure, Request for Proposals (RFPs) initiated by the Service Headquarters are scrutinised and vetted by the TM (M&S) staff. The TM and its staff comprises of experts from the three services with vast experience in their respective fields of specialisation. The Part II of the RFP, incorporates aspects of staff qualitative requirements that describe technical parameters for the proposed equipment in clear and unambiguous terms. Therefore there exist a provision in the Defence Procurement. Procedures to specify ones requirement, this would ensure that only state of art technology is inducted.

[Ministry of Defence O.M. H11013/20/2001/D (Parl) dated 30 Jan. 04]

Recommendation

The Committee observe that the preliminary work for development of an indigenous EW system was cmpleted by DLRL in May 1978 itself at a cost of Rs 94.50 lakh but the real development commenced from January 1982. The committee observe several disquieting features in regard to indigenous, development such as delayed placement of letter of intent, early review of the indigenous project in April 1978 instead of January 1979, delayed sanction of the project and earmarking of substantial portion of the sanctioned funds for the imported system. The Committee would like all these aspects, responsible for rolling back the indigenous development of the projects, to be looked into dispassionately in the context of overall Defence preparedness of the country in times to come.

[Sl. No. 13 Appendix II Para 7.13 of Twenty-second Report of PAC (Thirteenth Lok Sabha)]

Action Taken

While it is correct that the preliminary work for development was completed by DLRL in May 78, however, the first development model of "Ajanta" was offered by DLRL to Indian Navy for trials in July 1988. The philosophy of this project was based on import and indigenous development. The delay in start of development activity was due to quantum increase in FE rates and inflation leading to increase in price of

import element of the sanction amount, thus leaving negligible amount for progressing indigenous activity.

Inherent uncertainty in R&D activity is part of the system. This becomes more severe when the basic building block of electronic components and material are not indigenously available and have to be relied on foreign manufacturers under their export controls. If due to the fear of inherent uncertainties, the projects are not taken up, the index of self-reliance will not grow at all. Also the technical competence in military systems will not build up which will show on technical evaluation of imported systems too. Because Ajanta was taken up technical competence in EW field increased enabling DRDO to undertaken SANGRAHA programme for Navy. Funds in this case have been sanctioned to DRDO in advance. As far as the present indigenous EW programme, SANGRAHA is considered, it is a major programme by the DRDO, which caters for naval EW systems in all the three dimensions-air, subsurface (under water) and surface. There are five different types of EW suites being inducted under this programme. To address all issues relating to timeframe for development/delivery and sanctioned cost, monitoring boards have been constituted at each level of induction and are chaired by appropriate heads of organisation. The Sangraha indigenous EW project has four tiers for monitoring. These are as follows:—

(a) Sangraha Management Board (Development). This board is chaired by the prime development agency of DRDO i.e. DLRL and besides various other issues, it looks into timely development of the EW systems. The board meets once in two months.

(b) Sangraha Management Board (Production). The nodal directorate of the user service headquarters chairs this board. This board also meets once in two months and addresses all issues relating to the user including timely delivery of EW systems and meeting of all system specifications for user satisfaction.

(c) Sangraha Executive Board. This board is chaired by a PSO viz., Deputy Chief of Naval Staff. The board meets every quarter and addresses also issues relating to development, delivery, cost, etc. of indigenous EW systems. The board has member from the development agency. DRDO headquarters, user agencies, production agency, MoD, DRDO, qualification authorities, etc.

(d) Sangraha Apex Board. This board is the highest monitoring board and is chaired by SA to RM. The members of the board include Defence Secretary, Secretary Defence Finance, Secretary Defence Production and supplies, the Vice-Chief of Naval Staff, Deputy Chief of Naval Staff, besides all production, development and user agencies. The board meets half yearly and takes decision on all issues relating to induction of indigenous naval EW systems.

The various monitoring boards have delegated powers approved by the CCS to monitor progress of indigenous EW systems and address delays in the programme and take necessary corrective actions. Therefore, the induction of indigenous EW systems today is being monitored periodically and at appropriate levels in the Defence Ministry to quantify timeframes for indigenous induction in the Defence Procurement Procedure is not viable because each project in itself encompasses induction of

different type of technology, number of systems and each induction calls for specific R&D effort. All efforts are made by the empowered monitoring boards to ensure development and production in the sanctioned cost and timeframe. Wherever, additional costs are incurred beyond the sanctioned cost, such increase in finances are approved by the Competent Financial Authority by taking up each case separately. Thus, the cost, timely development/delivery of indigenous EW system to the user are being addressed by the Ministry of Defence. Review mechanism for all sanctioned DRDO project is instituted from the initiation of the project, so that cost and time over runs are avoided.

To strengthen the existing structure of Project Review and monitoring so that cost and time over runs are avoided, the Ministry has issued instructions *vide* MoD. Department of Defence Production and Supplies, Office Memorandum No. 3(1)/2001/ D(S-11) dated 17 July 03 and a copy of the letter is enclosed as ANNEXURE III. The following has been explicitly stated in these instructions:—

(a) Review of DRDO Projects. There shall be biannual review of all major projects/ programs by the respective Vice-Chiefs. Review reports shall be submitted to DGR&D and the respective Chiefs.

(b) Monitoring of Staff Projects

(i) There shall be regular monitoring of Staff projects by specially constituted Steering Committees. These Steering Committees shall be chaired by nominated PSOs and co-chaired by the associated CCR&D.

(ii) Most major projects and programs especially those jointly funded by DRDO and the Services, have multi-tier monitoring structures with the Apex Committee being chaired by SA to RM and the Executive Committees chaired by Vice or Depute Chief.

The goal of DPP 2002 (version June 03) is to achieve self-reliance in defence equipment. Electronic Warfare (EW) is one of key thrust area of the Defence Research and Development Organisation (DRDO). Cases for import of EW systems are not put up to the SA to RM prior to initiating the induction process. It is only when SA to RM clears the import, the induction of EW system through import is initiated. Therefore preferential treatment of import over indigenisation is unlikely with the promulgation of DPP 2002 (version June 2003).

[Ministry of Defence O.M. H11013/20/2001/D(Parl) dated 30 Jan. 04]

Recommendation

The model of EW system developed by DLRL was evaluated for a period of about two years and a letter of intent was placed only in 1985 with a PSU for manufacture of the systems. The first indigenous model was delivered much after the schedule time without furnishing any cogent explanation for the delay. Curiously, the installation and commissioning of the indigenously developed system consumed much more time and the removal of defects noticed in the system after installation took still a longer time. The Ministry even failed to furnish vital information like the dates on which the ships had actually become available for the purpose of installation and commissioning

of indigenous EW systems and also the dates of the actual commissioning of these systems on the ships. The Committee would like to be apprised of the dates of the indigenously developed EW systems, the dates of their commissioning on the ships, slippage in the prescribed schedule, deficiencies noticed in the functioning of these systems, the time taken in removal of defects and the status report on the operation of these systems on ships so that the issues could be examined further in the right perspective.

[Sl. No.14 Appendix II Para 7.14 of Twenty-second Report of PAC (Thirteenth Lok Sabha)]

Action Taken

The approval for the indigenously built Ajanta system was accorded in 1978. The Ajanta system's demonstration under controlled conditions in the laboratory was conducted in 1986. The prototype model of the Ajanta system was an integrated system consisting of both the ESM and ECM subsystems. It was installed and trial evaluated from 1986—88. There were eleven systems initially inducted. These eleven systems were of two types. The Ajanta (P) Mk I consisted of the ESM system. Where as the Ajanta (I) Mk I, consisted of both the ESM and ECM systems. The Navy inducted 7 Ajanta (P) and 4 Ajanta (I) systems.

The details of these 11 Ajanta systems, from the time they were dispatched from BEL, Hyderabad to its installation and successful commissioning are enumerated in the table below. It is pertinent to mention that the installation of the system caters for fitment on the ship, checking the correctness of the installation and its correct interfacing with other systems onboard. The successful commissioning involves performance trials, which are undertaken in harbour, and under field conditions at sea with various consorts, that includes other ships, aircraft and submarines. The details on the dates of commissioning and Installation schedule are as follows:—

System/Ship	Dispatched From BEL	Installation	Commissioning (Successful trials at sea)
1	2	3	4
Ajanta P/Kuthar	Feb 1990	Jun 1990	Jan 1996
Ajanta P/Khukri	Jul 1990	Dec 1990	Mar 1997
Ajanta P/Kirpan	Jun 1992	Nov 1994	Mar 1997
Ajanta P/Khanjar	Mar 1991	Dec 1991	Apr 1997
Ajanta P/Viraat	Sep 1991	Dec 1991	Jan 1996
Ajanta P/Subhadra	Aug 1992	Sep 1994	Oct 1995
Ajanta P/Kuthar	Nov 1992	Jun 1999	Sep 1999
Ajanta I/Dunagiri	Mar 1992	Nov 1993	Apr 2001
Ajanta I/Himgiri	Mar 1992	May 1995	May 1997

1	2	3	4
Ajanta I/Udaigiri	Mar 1990-ESM Sep 1990-ECM	Jan 1991	Jun 1993
Ajanta I/Rajput	Mar 1993	Nov 1998-ESM Jul 1999-ECM	Feb 2001

In the table above, the installation column indicates the date when the sytem was physically installed on board the particular ship. The installation of an EW system is completed, once the system is fitted and the necessary cabling is undertaken.

The commissioning column in the table, above indicates the date when the system finally cleared all observations that were made during HATs and SATs.

EW system HATs are taken up only when the air-conditioning, ventilation, power supply and integration with other onboard ship systems such as gyro, chaff, radars, action information organisation, tactical display etc. is completed.

Once the system clears HATs, the system is checked at sea with various consorts that include other ships, aircraft and submarines. Each EW system caters for definite frequency coverage. Therefore, consorts having emitters (radars) in those frequencies are to be made available for the SATs.

The availability of many requirements is critical for successful commissioning of an EW suite. However, non-availability of a resource can severely hinder the commissioning of an EW suite. The non-availability of resources could be due to various reasons. Therefore, to make a statement that slippage of definite time period and a definite time was taken to rectify the defect in each of the eleven Ajanta fitted ships would be extremely difficult.

The difference in the commissioning column and installation column in the table above could be indicative of the time taken for the system to clear each and every aspect of the acceptance trials. However, such an inferred time period would not reflect the factual delay and the time taken to rectify defects. Since the delays could have been caused due to other related issues and not necessarily due to the problems encountered in Ajanta systems. Numerous other issues related to ship building activities, non-availability of sensors, non-availability of platforms for trials, problems in power supply, problems with air-conditioning, change in refit schedules, operational status of the ship, limited manpower and expertise with BEL, concurrent requirements, non-availability of imported components, sanctions etc. could have caused the delay and effected early rectification of observed defects. Therefore at such a late time, it would be rather difficult to explicitly state the delays in schedule and the time taken to remove defects.

To conclude, slippage would have occurred in the prescribed schedule and to remove defects. However, Ajanta being the first indigenous effort in EW undertaken by a PSU with relatively negligible experience, such delays should be considered as part and parcel of own indigenous R&D effort. It is stated that all elevan Ajanta

systems that were inducted are operational and are performing satisfactorily. Efforts to implement corrective measures have been made in the present EW project 'Sangraha' being undertaken by DRDO.

[(Ministry of Defence O.M. H1101 3/20/2001/D(Parl) dated 30 Jan 04)]

Recommendation

Yet another intriguing aspect that came to the notice of the Committee was that the Naval Headquarters agreed to waive off all penalties on account of failure of the vendor in fulfilling the contractual commitments though not competent to do so as also agreed to by the Defence Secretary during oral evidence. The Committee are further astonished to note that though the Naval Authorities had recommended in January, 1990 for withholding payments to the firm but surprisingly, the stand was reversed in September 1991 despite continuance of the defaults on the part of the firm on various counts. For reasons not known, depsite clear breach of contractual obligations by the vendor firm, the Naval Headquarters and the Ministry refrained conspicuously from taking action against the defaulter firm within the ambit of the contracts. The Committee would like to caution and emphasize that all authorities and organizations under the Ministry of Defence are accountable to Parliament through the Ministry of Defence and as such it is incumbent upon the Ministry to ensure that all of them follow the prescribed financial and administrative regimen.

[Sl. No. 16 Appendix II Para 7.16 of Twenty-second Report of PAC

(Thirteenth Lok Sabha)]

Action Taken

The Ministry acknowledges the supremacy of the PAC and reassures the PAC that the prescribed financial and administrative regimes were followed at all stages.

[Ministry of Defence O.M. H11013/20/2001/D(Parl) dated 30 Jan 04]

Recommendation

The Committee are dismayed to observe studied slackness on the part of the Ministry in responding draft Audit Paras. On being asked to explain, the Ministry regretted the delay in sending reply to the draft audit Paragraph and assured the Committee that they would ensure timely remedial action on audit paras. The Committee are further constrained to express their displeasure over the inordinate delay in furnishing replies to post evidence questionnaire on the subject forwarded to them in October 1997. Taking the assurance of the Ministry to extend prompt and all possible cooperation in right perspective the Committee would like the Ministry of Defence to entrust specific responsibilities relating to audit paras of Comptroller and Auditor General of India (C&AG) and follow up thereon to designated nodal officers in the respective Departments so as to ensure that the Audit Paragraphs as well as follow up action thereon is processed, coordinated, and responded to properly and expeditiously within the stipulated time frame.

[Sl. No. 17 Appendix II Para 7.17 of Twenty-second Report of PAC

(Thirteenth Lok Sabha)]

Action Taken

Effort is made to send replies to Draft Audit Paras and Audit Paras, however, in view of consultation required from a number of organizations and agencies and necessity of scrutiny of very old records at a much later time frame, the process of information gathering takes time. Notwithstanding the above, necessary instructions are being issued regularly to emphasis the urgency to expedite ATN. Copy of instructions is placed at ANNEXURE II.

[Ministry of Defence O.M. H11013/20/2001/D (Parl) dated 30 Jan 04]

CHAPTER III

OBSERVATIONS/RECOMMENDATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF THE REPLIES RECEIVED FROM GOVERNMENT

Recommendation

The Committee observe that the written replies furnished by the Ministry in regard to selection of firm and the answer given by the Defence Secretary on the same question during evidence are mutually contradictory. While the Ministry categorically denied that any global tender were invited, the Defence Secretary clearly stated in evidence that "tenders were floated". The Committee would like the Ministry of Defence to reconcile both the averments to set the record straight so that the matter is again considered by the Committee in a factually correct perspective at a later stage.

[Sl. No. 4 Appendix II Para 7.4 of Twenty-second Report of PAC (Thirteenth Lok Sabha)]

Action Taken

Electronic Warfare Systems are of intelligence gathering nature and very few foreign companies are allowed by their governments to export the system and technology. Discussions were held with the five companies who agreed to export the system/sub system/technology, if selected. Accordingly, a delegation also visited these companies, short listed the company which was found to be most suitable. The statement made by Defence Secretary during the oral evidence may have been made in the context that the firm was selected out of five possible suppliers on technical grounds.

[Ministry of Defence O.M. H11013/20/2001/D (Parl) dated 30 Jan 04]

Recommendation

The Committee observe that the Government had concluded a contract on 18 June 1979 initially for procurement of one System. Subsequently, order was placed for procurement of second system from the same firm on 18 October, 1980. The Ministry failed to furnish any convincing reply as to why they did not consider it prudent to watch the operational viability of the first EW System before placing order for the second one with the same firm. The Committee are, therefor, unable to comprehend as to why the Ministry went for import of two systems when it was internally persuaded not to import the complete system. The Committee would like to know precisely the considerations, which weight with the Ministry to import two systems simultaneously.

[Sl. No. 5 Appendix II Para 7.5 of Twenty-second Report of PAC (Thirteenth Lok Sabha)]

Action Taken

At the time of the decision to import the second system, following inputs were available to the decision makers:—

(a) Indigenous Equipment was not available. The development of indigenous EW system, "Ajanta" had got delayed.

(b) There was an option clause in the existing contract of INS-3 that allowed the benefit of 5% price discount on the purchase of the second system.

(c) The INS-3 system was technically assessed by a Technical Team and had been cleared for induction.

(d) The EW systems were to be made available during the stage of construction of the frigate ships.

(e) Since import of second system was inevitable, the only option was to buy another INS-3 system or initiate import of a system from another source, Induction of the INS-3 system would result into standaridization, thereby easing maintenace and support infrastructure.

(f) Fresh evaluation and import of another system at the stage would have led to further delays and increased the logistics problems due to different inventory.

Therefore at that Juncture, if decision had not been taken for import of the EW system, the 2nd and 3rd frigate ships would have been without an EW system.

[Ministry of Defence O.M. H11013/20/2001/D (Parl) dated 30 Jan. 04]

Recommendation

The Committee observed that the EW systems had to successfully go through three types of tests namely, Factory Acceptance Tests (FATs), Harbour Acceptance Tests (HATs) and Sea Acceptance Tests (SATs) before proving its worthiness. The Committee were informed that the foreign supplier had prescribed the conditions in which Factory Acceptance Tests (FATs) were to be carried out. This proposal was vetted and approved by the Navy. During the FATs, reportedly no major defects were noticed and the Indian team deputed for the purpose had declared the systems snag free. The Committee, however, observe that the FATs were conducted in the conditions which had no co-relation with those of the place of actual installation. As a result, all the systems failed abysmally by developing major defects when these were installed on ships. Far from satisfied with the explanation that the atmospheric conditions on board a platform cannot be simulated in the laboratory, the Committee are rather of the firm view that had FATs been conducted with due exercise of care and caution by the Indian team, atleast the major defects would not have escaped undetected at that stage.

[Sl. No. 8 Appendix II Para 7.8 of Twenty-second Report of PAC (Thirteenth Lok Sabha)]

Action Taken

In view of the observations made by the Committee it is now implemented that all Electronic Warfare (EW) systems being inducted in the Navy undergo a standard procedure for acceptance. Performance verification of EW systems is undertaken in three stages. These three stages are as follows:—

(a) Stage I-FATs

(b) Stage II-HATs

(c) Stage III-SATs

The three stages for acceptance of EW systems are inter linked and only when a system clears a particular stage, it is assessed in the next subsequent stages. In case, a system fails in a particular stage, the defects/observations made during that stage are rectified prior to progressing ahead in the acceptance chain.

FATs is the first stage in the acceptance process of EW systems and are conducted in OEM premises. The basic purpose of FATs would be to conduct a series of tests, which are performed in a controlled environment with test equipment that enables to perform quantitative analysis to verify the system performance. Hence, in FATs the designed technical specifications are checked.

The HATs will be conducted in harbour on board the ship. The purpose of HATs would be to verify that after shipment, the system is in operational status and has been properly installed and interfaced to other on board equipment/systems. The HATs tests would be mainly qualitative in nature.

The SATs are undertaken at sea and during the SATs, the overall system performance would be ascertained in a predefined operational scenario, where in other ships, submarine and aircraft participate. Thus, the three stages of system performance verification have been inter-linked.

[Ministry of Defence O.M. H11013/20/2001/D (Parl) dated 30 Jan 04]

Recommendation

The Committee further observe that though the deficiencies were brought to the notice of the vendor immediately but the vendor took almost five to six years to remove the deficiencies. During the period, the systems could not be made fully operational. The inordinate delay made by the vendor in making the systems operational reduced proportionally the life span of the systems. Surprisingly, no tangible action was taken by the Ministry to persuade the vendor to remedy the defects early. The Committee observe that the exploitable life of the Systems was virtually reduced from its normal life of twelve and half years to 4,5,9 and five and half years for systems I, II, III and IV respectively. Further, the Ministry have failed to explain as to what action was taken by them in terms of article 14.5 of the contract which provided for reduction in contract price in case of reduced utility. The Committee would like to know the precise action

taken, if any, by the Ministry against the officials for not invoking the appropriate clause of the Contract in this regard.

[Sl. No. 9 Appendix II Para 7.9 of Twenty-second Report of PAC (Thirteenth Lok Sabha)]

Action Taken

The Navy was not keen to accept any deviations and insisted upon the system meeting all technical and interfacing specifications. Therefore, the system took additional time in clearing SATs, which affected the exploitable life of the systems. Timely invoking clause 14.5 of the contract could have redeemed the situation. However, at this distant point of time, it may not be possible to initiate any action against the concerned officials. To obviate such reoccurrence, provisions have been made in DPP 2002 where in regular reviews of contract implementation involving representatives of concerned organisations are undertaken. Such reviews are carried out as frequently as necessary but atleast once every quarter to ensure timely remedial/corrective action. Para 48 of Annexure 1 refers.

[Ministry of Defence O.M. H 11013/20/2001/D(Parl) dated 30 Jan 04]

Recommendation

From examination of material on record, the Committee gather that escalation in the cost of the Contract was as a result of the terms and conditions of the contract whereby 70 per cent escalation had been made permissible. Obviously, the terms of the contract were not drawn by the Ministry with commensurate care leading to heavy additional payment owing to disadvantageous cost escalation clause. Taking note of the grave neglect of duty, gross inability and incompetence of officials entrusted with the crucial task of contract drawing and negotiation as well as contract management to its final discharge, the Committee would like to be apprised of the punitive as well as remedial action taken to ward off such incidents.

[Sl. No. 10 Appendix II Para 7.10 of Twenty-second Report of PAC (Thirteenth Lok Sabha)]

Action Taken

The data given by the Ministry of Defence in its reply to the cost of the Contract X, System I&II erroneously reflected the paid amount in "Rupees", as paid in was "Dollars". The correct data as under:

Contract X Systems I & II

System I	_	Rs 41698110.19	(US $4069424.27)
System II	_	Rs 44530158.66	(US$3740900.0)

The price escalation formula agreed to by the Price Negotiation Committee (PNC) is placed at annexure, It is seen that escalation is not 70% but only 70% of the actual escalation was to be paid. Comparison of Amount paid with the amount contracted

indicates that escalation actually paid worked to be around 10% per annum which is 70% of 15% inflation prevalent in Italy during those years. The Era of 70's and 80's was highly inflationary for both developed and developing world. The contracts were drawn usually with a price escalation, as the price at the time of negotiation and the price at the time of actual delivery used to defer considerably. However, where the availability of the suppliers are limited in the world market who are ready to sell the equipment to India, the best compromise was achieved and escalation was restricted to 70% of Price increase of the figure worked out on the basis of the formula. The Price Escalation Formula is as follows:

$$P_T = P_B \left(0.1 + \frac{0.2MF}{M_1} + \frac{0.7LF}{L_1}\right)$$

Where:

P_T = Total Price

P_B = Basic Price on 31st December 1978.

MF = Final Cost indexes as referred to group 5 of Index No. established by Chamber of Commerce of Milano and in force on the proper day of delivery or services completion.

MI = Initial material cost indexes referred to group 5 of Index No. established by Chamber of Commerce of Milano and valid on 31st December 1978.

LF = Final labour cost indexes referred to ANIE Bulletin in force on the proper day of delivery or services completion.

LI = Initial labour cost indexes referred to ANIE Bulletin in force on 31 December 1978.

As a result of the above formula the total increase on the price of each of the Equipment and services in Annexure 6 shall be calculated as follows:

$$P_T - P_B = P_B \left(\frac{0.2^M F}{M_I} + \frac{0.7^L F}{L_1} - 0.9\right)$$

It is here agreed that only and not more than 70% (Seventy per cent) of the above price increase will be paid by the Purchase to the Seller as its total compensation for Price Revision Clause, under Sub Article C of the Article VI.

The amount to be paid to the Seller for Price Revision Clause on each equipment delivered or service completed in addition to the basic price of such equipment or service shall be as follows : Additional amount to be paid.

$$0.7P_B \left(\frac{0.2^M F}{M_I} + \frac{0.7^L F}{L_1} - 0.9\right)$$

Example follows:

Basic Price of example equipment = PB= 1000$

Provided that the price Revision Formula given PT = 1,150 $

The total increase of price is PT-PB = 150 $

The additional amount to be paid to the Seller under price Revision Clause on the example equipment will be 0.7 X 150 = 105

[Ministry of Defence O.M. H11013/20/2001/D (Parl) dated 30 Jan 04]

Recommendation

The Committee are saddened to note that the Ministry neither made an efforts to persuade the vendor to fulfil its contractual obligations nor invoked the provisions of the contract to dissolve it even after serious slippages in the delivery of the systems. Worse, even a belated initiation of the proposal in 1990 by the Ministry for consideration of foreclosure of the contract was abandoned later on. The Ministry failed to furnish any explanation for non-enforcement of the contract provisions aiming to safeguard the interest of the purchaser. The examination of witness and the evidence on record makes it amply clear to the Committee that the whole deal made with the foregin firm was dictated by well entrenched and overriding interest rather than the dictates of national security. The Committee would expect the Ministry to spill the beans at least at this distant point of time so that those who undermined the paramount Defence needs of the country stand exposed.

[Sl. No. 11 Appendix II Para 7.11 of Twenty-second Report of PAC (Thirteenth Lok Sabha)]

Action Taken

The contractual obligations related to FATs, deliveries, setting to work, HATs, training were all met by the firm satisfactorily. The equipment took long time in clearing SATs for various reasons including the fact that no deviation or shortcoming were acceptable to the Navy/DRDO. The equipment were cleared in Sea Acceptance Trials only when all observations were fully liquidated.

The foreclosure of the Contract was earlier considered at a period when firm's response was tardy. This was also a period when the processing techniques and tools were improving by the day with the advent of PC based processors. The firm, M/s Selenia, also underwent corporate restructuring in the period where in it first became M/s Alenia and then sold off few of its key activity areas. In 1990, the firm stated that they would now be able to prove the systems in a time bound manner. Since four systems were already in service, foreclosure of the contract, in respect of these systems would not have served any purpose and the balance of convenience was in going ahead with the implementation of the contract. The firm proved the four systems in SATs during period 90-91.

The Contract has thereafter been foreclosed and import of last system decided against. All Bank Guarantees, amounting to Rs 14.3 Crores, in FE, have been encashed.

On date, all four INS 3 systems are being operationally exploited.

[Ministry of Defence O.M. H11013/20/2001/D(Parl) dated 30 Jan 04]

CHAPTER IV

OBSERVATIONS/RECOMMENDATIONS IN RESPECT OF WHICH REPLIES OF GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE AND WHICH REQUIRE REITERATION

Recommendation

Taking note of the irregularities in the contracts entered into with the foreign firm, the Ministry had decided in 1994 to conduct a special internal audit and fix responsibility but, surprisingly, the formal order for internal audit was not given till January 1996. The Committee outright reject the explanation, being explored one, given by Ministry for the delay of two years in giving formal order for Special Internal Audit on the ground that "this was awaiting appropriate level approval". On being asked to share the findings of the Economic Investigation Bureau (EIB) who had also enquired into the matter, the Ministry pleaded non-availability of records. The non-availability of relevant records and findings of the EIB only adds to the worst apprehension of the Committee that there is a definite design to shield the guilty. The Committee should, therefore, like to be apprised of the findings of the EIB and the remedial follow up action taken to prevent recurrence of such grave incidents in future.

[Sl. No. 15 Appendix II Para 7.15 of Twenty-second Report of PAC

(Thirteenth Lok Sabha)]

Action Taken

The Ministry regrets the delay in giving formal order for Special Internal Audit.

The CDA (N) carried out a special audit and its report has been analysed. The special audit has corroborated the known facts. No individual has been held accountable for any wrong doing at any stage.

The EIB has not observed any irregularity. This is stated based on the fact that the Ministry has received no adverse communication from EIB to date. Efforts are being made to obtain the EIB report. The PAC and Audit would be informed about the findings of EIB in due course on receipt of the EIB report.

[Ministry of Defence O.M. H11013/20/2001/D (Parl.) dated 30 Jan., 04]

CHAPTER V

OBSERVATIONS/RECOMMENDATIONS IN RESPECT OF WHICH GOVERNMENT HAVE FURNISHED INTERIM REPLIES

-NIL-

NEW DELHI;
27 October, 2004
5 Kartika, 1926 (*Saka*)

PROF. VIJAY KUMAR MALHOTRA,
Chairman,
Public Accounts Committee.

ANNEXURE-I

MINISTRY OF DEFENCE
[ACQUISITION WING (SECTT)]

DEFENCE PROCUREMENT PROCEDURE—2002
(VERSION JUNE 2003)

1. Defence Procurement Procedure (DPP-2002) was issued *vide* Ministry of Defence ID No. 82/Dir.(Acq.)/02 dated 30 Dec., 2002. It covered the procedure flowing out of "Buy" decision of Defence Acquisition Council.

2. After careful consideration and detailed discussions in DPB, the procedure relating to procurement based on "Buy and Make through Imported Transfer of Technology" has been finalised.

3. DPP-2002 has, thereafter been revised to include "Buy and Make Through Imported ToT Procedure" also. Standardised RFP and aspects of ToT have also been included in the new procedure. The new procedure has been approved by RM. The new procedure would be called Defence Procurement Procedure—2002 (Version June 2003) or DPP—2002 (Version June 03) and would be effective from 30 June, 2003. A copy of DPP—2002 (Ver. June, 03) is annexed.

4. DPP-2002 stands superseded as all aspects pertaining to "Buy" decision have been incorporated in DPP-2002 (Version June 03). The amplification notes to DPP-2002 issued *vide* MoD ID No 1638/SS(A)/2003 dated 30 June 2003, would however be applicable to DPP-2002 (Ver. June 03) also.

Sd/-
(K. K. KIRTY)
DIRECTOR

COAS	Secy. (DP &S)	Addl. FA(T)	JS/AM(LS)
CNS	Secy. (R &D)	Addl. FA(V)	JS/AM(M&S)
CAS	Secy. (Def/Fin)	Addl. FAs	JS/AM(Air)
CISC	SS(A)	FM(Air)	JSs
VCOAS	AS(S)	TM(LS)	
VCAS	AS(T)	TM(M&S)	
VCNS	AS(DP&S) FA(Acq)	TM(Air)	

MOD I.D. NO. 82/Dir(Acq)/02, dat. 30-6-2003.
Copy to : SO to Defence Secretary.

DEFENCE PROCUREMENT PROCEDURE—2002
('BUY' AND 'BUY AND MAKE THROUGH IMPORTED ToT' DECISIONS)
(VERSION JUNE 03)

General

1. As part of the implementation of the report of the Group of Ministers on reforming the National Security System, new defence procurement management structures and systems were set up in the Ministry of Defence (MoD) *vide* MoD order No. 17179/ 2001-Def Secy/IC/2001 dated 11 October, 2001 and No. SA/01/104/2001 dated 10 September 2001. In order to implement the provisions laid out in the new defence procurement management structures and systems, the procedure for Defence Procurement laid down *vide* MoD ID No 1(1)/91/PO (Def) dated 28 Feb., 1992 was revised. The Defence Procurement Procedure—2002 (DPP-2002) came into effect from 30 Dec., 2002 and was applicable for procurements flowing out of "Buy" decision of Defence Acquisition Council. The scope of the same has been enlarged to include procurements flowing out of 'Buy and Make through Imported ToT' decision as well. The revised procedure to be called as the Defence Procurement Procedure—2002 (Version June 03) is set out in the succeeding paragraphs.

Aim

2. The primary objective of this procedure is to ensure expeditious procurement of the approved requirements of the Armed Forces in terms of capabilities sought and time frame prescribed by optimally utilising the allocated budgetary resources. While achieving the same, it will demonstrate the highest degree of probity and public accountability, transparency in operations, free competition and impartiality. In addition, the goal of achieving self-reliance in defence equipment will be kept in mind.

Scope

3. The Defence Procurement Procedure-2002 (Version June 03) of DPP-2002 (Version June 03) will cover all capital acquisitions and Revenue purchases undertaken by the MoD/Departments/Defence Services both from indigenous sources and ex-import.

CAPITAL ACQUISITIONS

4. The procedure for Capital Acquisitions has been structured as under :—

(a) Acquisitions covered under the 'Buy' decision.

(b) Acquisitions covered under the 'Buy & Make' decision.

(c) Acquisitions covered under the 'Make' decision.

5. This document is however restricted to the procedure for Capital Acquisitions flowing out of the 'Buy' or 'Buy and Make' with Imported Transfer of Technology (ToT) decision only, except procedure for shipbuilding, which will be covered separately.

Linkage to Acquisition Plans

6. Proposals for acquisition of capital assets generally flow out from the Defence Procurement planning process. This planning process will cover the long-term, medium-term and short-term perspectives as under:—

(a) 15 year Long Term Perspective Plan (LTPP).

(b) 5 year Services Capital Acquisition Plan (SCAP).

(c) Annual Acquisition Plan (AAP).

7. Since the planning activities are applicable to acquisition cases involving an outlay of Rs. 20 crores and above (with the year 2002 being the base year), the procedure now laid down would be applicable to items costing Rs. 20 crores and above.

8. The planning process would be under the overall guidance of the Defence Acquisition Council, its decisions as approved by the RM will flow down for implementation to the Defence Procurement Board (DPB).

Annual Acquisition Plan (AAP)

9. The Defence Procurement Board (DPB) will arrive at the annual requirement of funds taking into account the acceptance of necessity by various entities of MoD for the year ahead, carry overs, operational exigencies and proposed changes in priorities recommended by the SHQ by 30 September of each year. The details of these requirements will be provided to Defence (Finance) for consideration while finalising the budgetary projections and allocations. The AAP will be formulated by the respective SHQ and approved by the DPB by 15 Apr. of the relevant Financial Year. The AAP should be based on a two year acquisition cycle and cater for adequate cushion to safeguard against surrender of funds.

10. The DPB may also carry out amendments in the Annual Acquisition Plan, if considered necessary, on account of national security objectives, operational urgencies, budgetary provisions or any other exigency based on recommendations made by SHQ/IDS/Department of Defence/Defence (Finance). The Acquisition Wing will process all acquisition proposals incorporated in the 'Annual Acquisition Plan' under the overall guidance of the DPB.

ACQUISITIONS COVERED UNDER THE 'BUY' DECISION

General

11. Once a 'Buy' or 'Buy and Make with Imported ToT' decision has been taken by the DAC, the acquisition process will involve a series of functions.

These are as follows:—

(a) Services Qualitative Requirements (SQRs).

(b) Acceptance of Necessity.

(c) Solicitation of offers.

(d) Evaluation of Technical offers by Technical Evaluation Committee (TEC).

(e) Field Evaluation.

(f) Staff Evaluation.

(g) Oversight by Technical Oversight Committee (TOC).

(h) Commercial negotiations by Contract Negotiation Committee (CNC).

(i) Oversight by Eminent persons Group.

(j) Award of contract/Supply Order(SO).

(k) Contract administration-and post-contract management.

Services Qualitative Requirements (SQRs)

12. All Capital Acquisitions shall be based on Services Qualitative Requirements (SQRs). The SQRs should lay down the users requirements in a comprehensive, structured and concrete manner. It should, however, be ensured that the SQRs are broad based yet realistic and cover all aspects of the system desired. The SQRs must express the users requirements in terms of functional characteristics and its formulation must not prejudice the technical choices by being narrow and focussed.

13. The SQRs will be drafted by the user directorate at SHQ and circulated to all concerned for obtaining their views/comments including other possible user directorates, maintenance directorate, DRDO, DDP&S, DGQA/DGAQA, Directorate of Standardisation etc. These agencies will also be represented on the Staff Equipment Policy Committee for approving the SQR. Records in respect of QRs will be maintained by the User Service(s). The QRs shall be prescribed in clear-cut terms and in full detail. Wherever any standard specifications of foreign Governments etc. are found acceptable, the precise specification number and all related details in respect thereof should be mentioned. SHQ may issue 'Requests For Information (RFIs)' in order to formulate realistic SQRs.

14. The performance parameters given in the SQR should be verifiable and classified as under:—

(a) *Essential.* It is the minimum essential military requirements, corresponding to the priority task or tasks to be performed by the system. Accordingly the 'essential' classification to a requirement must result from an indepth critical analysis of the necessity of requirement.

(b) *Desirable*. All parameters other than essential will be classified as 'desirable'. This classification should be assigned to military requirements corresponding to tasks that the system is intended to fulfil in an occasional way. The non-production of a requirement classified as 'desirable' is not in itself sufficient to bring into question the continuation of the procurement case.

15. *Waiver of SQR Parameters.* Waiver/amendment of essential parameter of SQR can be done by SHQ concerned before issue of Request For Proposal (RFP). Any

subsequent waiver/amendment will require approval of Raksha Mantri on recommendations of DPB. Waiver/amendment of desirable parameters can be done by the competent authorities in the SHQ.

Acceptance of Necessity

16. The SHQ will submit a Statement of Case justifying the full scope of acquisition. The following aspects will be exmained for approving the 'Acceptance of Necessity' (AON):—

(a) Deficiency in case of items already in use for which scales have been provided.

(b) Examination and validation of scales, for arriving at the total deficiency in case of introduction of new items including those being procured as 'Sector Stores'.

(c) The justification of introduction of new capital acquisitions in the context of the approved force levels.

(d) The likely financial effect the time span involved.

17. In order to avoid delays in according 'Acceptance of Necessities', the respective Additional Secretaries will hold a meeting consisting of the reps. of the Service Hqrs. Defence (Finance) and the MoD to identify the issues requiring attention and ensuring proper examination in a time-bound manner. The Additional Secretary concerned will sent the recommendations to Secretary (Def/Fin) for examination and recommending approval of the competent authorities. The reference to CCS at this stage would be on 'as required' basis, on the directions of RM.

Solicitation of Offers

18. Once the SQRs have been finalised, the sources of procurement of the weapons system/stores shall be ascertained and short-listing of the prospective manufactuers/suppliers carried out by the SHQ. The short-listed vendors will be the Original Equipment Manufacturers (OEMs)/Authorised Vendors/Govt. sponsored export agencies (applicable in the case of countries where domestic laws do not permit direct export by OEMs). In cases involving ToT, the short-listing of the vendors would take into account their ability to transfer requisite technology for licence production. The list of short-listed vendors may be supplemented by Technical Manager (TM) in Acquisition wing for which a databank will be maintained in Acquisition wing. Wherever possible, keeping the security and other relevant aspects in view, appropriate publicity may be given to the proposed procurement with a view to generating maximum competition.

19. The Technical Manager concerned, will issue the RFP to the short-listed vendors with the approval of the Special Secretary (Acquisition), after ensuring that it has been vetted by all concerned agencies including Finance Manager, user, procurement and maintenance directorates at SHQ, QA agency etc. In the cases where ToT is being sought the Department of Defence Production and Supplies (DDP&S),

Defence Research and Development Organisation (DRDO) and nominated Production Agency (PA) shall also vet the RFP. No addition to the vendors will be allowed after issue of RFP.

20. Solicitation of offers will be as per 'single Stage-Two Bid System'. It will imply that a 'Request For Proposal' (RFP) would be issued soliciting the Technical and Commercial Offers together, but in two separate sealed envelopes. This system safeguards against the possibility of vendor increasing his commercial offer consequent to development of a single vendor situation after evaluation of technical offers.

21. *Single Vendor Situation*. Competitive tendering would be the norms, however, situations may arise where recourse to single tender may become necessary. In such cases, prior approval of Raksha Mantri will be taken as under:—

(a) Acquisitions in excess of Raksha Mantri's powers-Through DPB.

(b) Acquisitions within Raksha Mantri's powers-On file.

22. The RFP will be self-contained document that will enable vendors to make offer after consideration of full requirements of the acquisition. A stardardised RFP document is attached as Schedule I to this paper. This will be applicable for all acquisitions. It will generally consist of four parts as under:—

(a) The first part elaborates the general requirement of the equipment, the numbers required, the time frame for deliveries, the environmental parameters for functioning, conditions of usage and maintenance, requirement for training, Engineering Support Package (ESP), and warranty/guarantee conditions, etc. It specifies the prescribed procedure and last date and time for submission of offers.

(b) The second part of the RFP incorporates the SQRs describing the technical parameters of the proposed equipments in clear and unambiguous terms. The 'essential' and desirable' aspects of the requirements will be clearly stated. In case equipment is being procured for the first time and needs to be evaluated, the RFP includes the requirement of field evaluation on a "No Cost-No Commitment" basis. In selected cases where it is proposed to utilise a matrix for short listing of vendors for field evaluation and/or for field evaluation/ demonstrations, the same will be included in the RFP with the weightages being indicated.

(c) The third part of the RFP outlines the commercial aspects of the procurement, including clear statements on payment terms, Performance Guarantees, Guarantees against warranty services to be performed by the supplier. It also includes standard contract terms along with special contractual conditions, if any.

(d) The fourth part of the RFP defines the criteria for evaluation and acceptance, both in terms of technical and commercial contents. A format will be enclosed

for submission along with commercial offer to facilitate preparation of Comparative Statement of Tenders (CST) and identification of L1 vendor. Submission of incomplete format enclosed along with commercial offer will render the offer liable for rejection.

23. In cases where TOT is involved, the RFP will include the requirement for licence production under TOT. The RFP in such cases would spell out the requirements of TOT depending upon the depth of the technology which is required, and whose range could cover technology for repair and overhaul; production from CKD/SKD kits and production from raw material and components level. Aspects which are to be included in the RFP in case production from CKD/SKD kits is envisaged are given at Schedule II and the same in case of indigenous manufacture from raw material and components level are given at Schedule III.

24. However, there may be occasions where it is not feasible to negotiate the TOT simultaneously and to cater to such contingencies the RFP should clearly indicate that Government reserves the right to negotiate TOT terms subsequently but that availability of TOT would be a pre-condition for purchase of the fully formed items. In these cases the procedure to be followed for negotiating TOT would not have to be repeated or started *ab initio* as it is a follow-up of the decision to purchase the selected equipment after due process.

25. The offers received should be opened on the notified date/time, by the members of a committee chaired by the Technical Manager, in the presence of the bidders or their authorised representatives, as may choose to be present. The committee will open the envelope containing the sealed Technical and Commercial offers. The technical offer will be opened by the committee and sent to SHQ for evaluation by a Technical Evaluation Committee (TEC) and sealed envelope containing the commercial bid will be sent to the Acquisition Manager, unopened. Offers which do not conform to the prescribed procedure for submission of offers as laid down in first part of RFP or which are received after the last time for submission of offers will not be entertained.

Technical Evaluation Committee (TEC)

26. A TEC will be constittuted by the SHQ for evaluation of the technical bids received in response of RFPs, with reference to the QRs, under an Officer from the SHQ. It will include, apart from the representatives of the user service and maintenance agency, representative of QA as deemed necessary. In case where TOT is involved, TEC will include apart from representatives of the user service and maintenance agency, representatives of PA, DRDO and QA, as deemed necessary. The TEC will examine the extent of variations/differences, if any, in the technical characteristics of the equipment offered by various vendors with reference to the QRs and prepare a 'Compliance Statement' short listing the vendor. The TEC may invite the vendors for technical presentation/clarifications on technical issues. The Special Secretary (Acquisition) will formally accept the report of the TEC on recommendations of the Technical Manager. Wherever TEC recommends trials/procurement based on a single vendor/ deviation of essential parameters, sanction of DPB/Raksha Mantri (as applicable) will be taken in accordance with the laid down procedure.

Field Evaluation (Trials)

27. Field Evaluation (Trials), if required, will be conducted by the User Service. Field Evaluation will be conducted by the User Service on the basis of Standard Operating Procedures (SOP) evolved by them. The short listed manufacturer of the selected equipment shall be asked to send the desired units of the equipment/ weapon system to India for Field Evaluation. SHQ will formulate the Trials Directive and constitute the Trials Team. The trial directive must specify the fundamental point on which it wishes the assessment to emphasise for validating the 'essential' features. The validation of the support system and maintainability trials integral to and complimenting the trial programme of the weapon system should be held simultaneously, wherever feasible. Representatives of DRDO, Quality Assurance (QA) agency may also be part of the field evaluation, on as required basis, by the SHQ. A representative of the Acquisition Wing may also participate in the field evaluation as an observer. The field evaluation shall be conducted by the User in all conditions where the equipment is likely to be deployed, and a detailed Field Evaluation Report shall drawn up and sent to SHQ for preparation of Staff Evaluation. Similar action would be taken in the cases where Trials Teams are deputed abroad for evaluation purposes.

28. In certain conditions, the Acquisition Wing, particularly in cases involving integration of Systems or sensitive equipment, can depute a multi-disciplinary Technical Delegation abroad for evaluation and an Empowered Committee for negotiation purpose. Both could be combined as a multi-disciplinary Committee. The Technical Delegation should have representatives from user service, Defence Research and Development Organisation (DRDO), Maintenance agency, and Quality Assurance (QA) agency on need basis. In addition, Acquisition and Finance Manager or their representative will be included in the Empowered Committee. Evaluation matrices, in all cases of major purchases, will be prepared by the SHQ concerned.

29. The field evaluation will normally be conducted on No Cost No Commitment (NCNC) basis.

30. Field Evaluation (Trial) in India, in the manner suggested earlier, may not be possible in all cases.

31. Where field evaluation may not be feasible, the possibility of conducting field evaluation through computer simulation should be explored. Field evaluation may be dispensed with only after approval of the DPB on recommendations at appropriate levels in the SHQ.

Staff Evaluation

32. Based on the methods of technical evaluation carried out as described in paragraph 24 onwards, the SHQ will carry out a staff evaluation, which gives out the compliance of the demonstrated performance of the equipment *vis-a-vis* the SQR. The staff evaluation will analyse the field evaluation results and shortlist the equipment recommended for introduction into service. The Staff evaluation will be approved by

the SHQ and accepted by Acquisition Wing. In cases involving waiver/amendment of essential QRs, approval of Raksha Mantri will be taken prior to acceptance of staff evaluation.

Technical Oversight Committee (TOC)

33. Technical Oversight Committee (TOC) provides expert oversight over the technical evaluation process. Defence Secretary will constitute TOCs for selected acquisition proposals in excess of Rs. 300 Crores and any other case recommended by the DPB. A TOC will comprise of 3 members, one Service Officer, one DRDO scientist and one representative of DPSU preferable not involved with that acquisiton. The TOC will be tasked to see whether the trials, trail evaluations, compliance to QRs and selection of vendors were done according to prescribed procedures. The Committee will have to give its ruling, based on a majority decision, within 30 days and the absence of a response will be deemed to be acceptance. The time limit of 30 days shall not be extended on any ground. Technical Managers of the Procurement Division will provide the secretarial support to the TOC and ensure availability of all inputs from Deptt. of Defence/Acquisition Wing, Defence Finance and SHQ to the TOC. Should the TOC have any queries, the Technical Manager will clarify these. Commercial negotiation process will only commence after the TOC process is complete.

Commercial Negotiation Committee (CNC)

34. Acceptance of the recommendations of the Staff Evaluation/TOC will lead to commercial evaluation of bids. The Special Secretary (Acquisition) will nominate a CNC, normally with the Acquisition Manager concerned as Chairman. The CNC may be set up at lower level also depending on the importance and value of procurement. In some cases, where considered necessary, a Services officer may be nominated as Chairman of the CNC with the prior approval of Raksha Mantri. The CNC would normally include Acquisition Manager, Technical Manager, Finance Manager, representatives from various Directorates at SHQ including user, procurement, maintenance, contract management directorates, QA agency, as required. The Commercial Negotiation Committee constituted in cases where transfer of technology is required should have representative of the DDP&S, DRDO and PA. The concerned organisations/agencies should ensure that their representatives in the CNC have adequate background and authority to take a decision without any need to refer back to their organisation/agency. The CNC will carry out all processes from opening of commercial bids till conclusion of contract. The sealed commercial offers of the technically accepted vendors shall be opened by the CNC at a predetermined date and time under intimation to vendors, permitting such Vendors or their authorised representatives to be present. The bids of the competing firms shall be read out to all present and signed by all members of the CNC.

35. It would be desirable to negotiate the licence production contract along with the contract for the finished product. In cases where this is not feasible, the purchase contract should include a clause wherein the vendor agrees to negotiate the licence contract at a subsequent date, thus obtaining a commitment from the vendor to part with the TOT.

36. Tender evaluation will involve recording and analysing the merits of each tender. The process will start with preparation of a 'Compliance Statement' incorporating the commercial terms offered in the RFP and that sought by the vendor(s), analysis of the discordance and the impact of the same. A similar statement would be prepared in regard to deviations noticed in the delivery schedules, performance warranty, guarantee provisions, acceptance criteria, Engineering Support Package (ESP) etc. Comprehensive analysis of the commercial offer will form the basis for subsequent decisions.

37. The CNC will prepare a Comparative Statement of Tenders (CST) with a view to evaluate the technically acceptable offers and determine the lowest acceptable offer (L1 Vendor). It will also evolve methods for bench marking of price.

38. The CNC may hold internal meetings to finalise the approach to be adopted by them in conducting negotiations with the L1 Vendor and lay down a tentative timetable for the proposed negotiations. Once a preliminary view has been taken by the CNC, it will invite the representatives of the L 1 vendor for financial/contractual negotiations. The CNC may require more than one round of negotiations with the L1 vendor. Negotiation would have two basic objectives, achieving the most reasonable and economical price, and obtaining the most favourable terms of contract, as near as possible to the standard terms of contracts, for the Ministry of Defence.

39. The CNC should document the selection of vendor using a formal written recommendation report addressed to the relevant approval authority. The report must be complete in all respect and comprehensibly elaborate the method of evaluation and the rationale for the selection made. All CNC members should sign the recommendation report, in the interests of probity and accountability, as evidence that they concur with the process adopted and the ultimate selection made. Any dissenting view, including the reasons for the same, should be documented.

40. The report of the CNC should include:—

(a) A brief background to the requirement.

(b) Composition of the CNC.

(c) An explanation of the commercial evaluation process, selection criteria and commercial evaluation matrices, if used.

(d) Brief description of different phases of the commercial negotiation process.

(e) A summary of the recommendations.

Eminent Persons Group (EPG)

41. An 'Eminent Persons Group (EPG)' consisting of retired officials (around twelve in number), having experience and expertise in Defence Procurement would be constituted by RM on recommendations from the Defence Secretary and Secretary Defence (Finance). Defence Secretary, in consultation with Secretary Defence (Finance), would nominate a panel of three persons from the EPG to provide pre-contractual 'Process and Procedures Audit' for all acquisition proposals in excess of Rs 300 crore

and any other case recommended by the DPB. The panel so constituted will examine whether all prescribed processes and procedures have been followed in the course of commercial negotiations.

42. The panel of the EPG will commence its evaluation after contractual negotiations have been finalised but before the contract has been concluded. The panel will have to give its ruling, based on a majority decision, within 30 days and the absence of a response will be deemed to be acceptance. The time limit of 30 days shall not be extended on any ground.

43. Government will only finalise the contract after go ahead by the panel of the EPG or after lapse of the 30 days period given to it. Should the panel have queries, these will be clarified by the CNC. Should the panel of the EPG deny consent, the decision on termination of negotiations will be taken by the CFA.

44. Secretary Defence (Finance) will set up a special 'Internal Audit Team' from the internal resources of the 'Controller General of Defence Accounts' (CGDA) to assist the EPG in its functioning. The team leader will be responsible to the head of the panel and render support to it is its functioning by assisting in the audit of processes and procedures. Pending the constitution of such an "Internal audit Team' by secretary (Def./Fin.) the EPG would be assisted by the Acquisition Wing.

Contract/Supply Orders

45. Acquisition Wing would evolve a standard Contract/Supply Order document, which will be used as a guideline for contract/supply orders for all acquisitions.

Inter Government Agreement (IGA)

46. In cases of large value acquisition and especially those requiring product support over a long period of time it may be advisable to enter into a separate Inter Government Agreement (IGA) (if not already covered under an umbrella agreement covering all cases) with the Government of the country from which the equipment is proposed to be procured after the requisite inter-ministerial consultation. Such an IGA is expected to safeguard the interests of the Government of India and should also provide for assistance of the foreign Govt. in case the contract(s) runs into an unforeseen problem.

Subsequent Procurement of already Contracted Equipment

47. In cases where there is an additional requirement of equipment/systems with an estimated value of more than Rs. 20 crores, and for which orders/contracts have already been placed in the past after necessary technical/field evaluation, the case will be put up to DPB who may order either fresh field evaluation or obtain technical and commercial offers or only commercial offers depending on the merits of the case. Similar decision in respect of additional requirements having an estimated value upto Rs. 20 crores may be taken by the Acquisition Wing.

Post Contract Review

48. Overseeing the effective implementation of every contract is as important as the soundness of the negotiation procedure leading thereto. In this context, concerned Acquisition Manager in the Acquisition Wing and an equivalent rank officer of the concerned User Service shall undertake regular reviews of the Contract implementation, involving senior representatives of the concerned organisations/agencies. Such reviews shall be carried out as frequently as necessary but at least once every quarter, to ensure timely remedial/corrective action. The nodal point for contract administration and management, however, would be the SHQ concerned. The Acquisition Wing will submit quarterly Contract Implementation Report (CIR) to the DPB. Over and above such joint progress reviews, the contract management directorates at SHQ should establish specified arrangements for the constant monitoring of the contract implementation and promptly report any default/failure to the concerned Acquisition Manager in the Acquisition Wing. Problems encountered in the operation of contract will be reported to the Acquisition Manager. The directorates in the SHQ, accordingly will work closely with Acquisition Wing and would be responsible for formally declaring completion of contractual responsibilities and closure of a contract. The concerned nodal officer in the SHQ shall draw up a clear time-frame for securing rectification of default/defect and assess the financial implications thereof which may justify being set off against payments due under the contract.

Equipment Induction Cells (EICs)

49. EICs will be raised for major projects on a case-to-case basis in Services HQ at the discretion of Services HQ. The EICs will deal with the induction of major equipments and help in planning the requirement of facilities essential for the serviceability and maintainability aspect of Acquisition. The EICs will help the Defence Procurement Board to move towards Life Cycle Cost Concept.

Processing of Procurement Cases

50. In order to cut down the delays in procurement of equipment and ensure that the procurement system is more responsive to the needs of the Armed Forces, the following steps need to be instituted:—

(a) DPB should issue guidelines to the Acquisition Wing giving out the broad time frame for completion of different procurement activities. Major deviations from this time frame should be brought to the notice of DPB for necessary corrective measures.

(b) Once the statement of case is initiated by SHQ to MoD, consolidated observations/clarifications sought up to and including the level of JS in MoD and MoD (Fin.) be clarified in a across the table discussion and minutes of the same recorded on file. This should be followed for all major procurement stages to cut down the processing time.

(c) A defence procurement network, electronically connecting all agencies involved in defence procurement, to build up a data base and information system, should be set up.

Procedure for Procurement from Countries having Strategic Partnership with India

51. In certain acquisition cases, imperatives of strategic partnerships may necessarily be the principle force determining the acquisition of a specific platform or item. Such strategic partnership in based on diplomatic, political, economic, technological and military relationships. For specific acquisition cases falling under this category for which a single vendor situation will necessarily emerge, case to case decisions will be taken on the recommendations of the DPB and with the approval of Raksha Mantri.

Deviations from DPP-2002 Version (June 03)

52. Any deviation from the prescribed procedure will be put up to Raksha Mantri through DPB for approval.

Review

53. A review of the procedure would be undertaken by the DPB periodically. The first such review would be undertaken two years after its coming into force.

CONCLUSION

54. DPP-2002 (Version June 03) should be read in conjunction with Fast Track Procurement (FTP) Procedure for meeting urgent operational requirements of the Services circulated under Ministry of Defence ID No. 800/SS (A) 2001 dated 28 Sep. 2001.

55. The procedure would be in supersession of the Procedure for Defence Procurement issued under Ministry of Defence ID No. 82/Dir. (Acq.) dated 30 Dec. 2002. The procedure will be applicable from 30 June 2003. The procedure will become applicable to all fresh proposals initiated after this date flowing out of 'Buy' or 'Buy and Make with Imported TOT' decisions of DAC.

SCHEDULE I

(THIS RFP PROVIDES A STANDARDISED FORMAT FOR GUIDELINES. IT MAY BE VARIED DEPENDING ON USER REQUIREMENTS, TYPE/COMPLEXITY OF EQUIPMENT/MACHINERY/ TEST EQUIPMENT AND OPERATIONAL IMPERATIVES, SHQ MAY ALTER IT AS PER THEIR SERVICE REQUIREMENTS)

Tele:

File No:
Technical Manager———(Systems)
Room No. 306, North Hutments
Kashmir House, Rajaji Marg
New Delhi-110011
2003

To

_____

_____

_____

REQUEST FOR TECHNICAL AND COMMERCIAL PROPOSAL FOR (GENERIC NOMENCLATURE OF EQUIPMENT)

Dear Sir,

1. The Ministry of Defence, Government of India, intends to procure———— (generic nomenclature of equipment and qty.) This Request for Proposal (RFP) consists of four parts as indicated below:—

(a) *Part I.* The first part consists of the general requirement of the equipment, the numbers required, the time frame for deliveries, the environmental parameters for functioning, conditions of usage and maintenance, requirement for training, Engineering Support Package (ESP), and warranty/guarantee conditions, etc. It includes procedure and last date and time for submission of offers.

(b) *Part II*. The second part of the RFP incorporates the aspects of SQRs describing the technical parameters of the proposed equipment. The operational characteristics and features that should be met by the equipment are elucidated at **Appendix A**. The 'essential' and 'desirable' parameters of the equipment have been stated. The Supplier would be required to offer the equipment for field evaluation on a "No Cost— No Commitment" basis. (*A matrix for short listing of the equipment for field evaluation and/or for field evaluation/demonstrations, along with weightages may be issued, as applicable in selected cases*).

(c) *Part III.* The third part of the RFP consists of the commercial aspects of the procurement, payment terms, performance guarantees, guarantees against warranty services to be performed by the supplier. It also includes standard contract terms along with special contractual conditions, if any.

(d) *Part IV*. The fourth part defines the criteria for evaluation and acceptance, both in terms of technical and commercial contents. A format has been enclosed for

submission along with commercial offer to facilitate preparation of Comparative Statement of Tenders (CST) and identification of L1 vendor. Submission of incomplete format enclosed along with commercial offer will render the offer liable for rejection.

2. The Government of India invites responses to this request only from Original Enquipment. Manufacturers/Authorised Vendors/Government Sponsored Export Agencies (applicable in the case of countries where domestic laws do not permit direct export by OEMs). **The end user of the equipment are the Indian Armed Forces.**

PART I : GENERAL REQUIREMENTS

3. **Year of Production.** Supplies should be of latest manufacture, conform to the current production standard and should have 100% of the defined life at the time of delivery. Deviations if any should be clearly brought out by the vendor in the Technical Proposal.

4. **Delivery Schedule.** (The acceptable range of delivery schedule of the equipment must be indicated clearly in the RFP. Option for the supplier to indicate earliest delivery schedule must be given only in unavoidable cases).

5. **Warranty.** The goods supplied shall carry a warranty for—*months/years operational hours (not to be left blank)* from the date of acceptance or from date of installation and commissioning, whichever is later. Draft Warranty Clause is given at **Appendix B.**

6. **Engineering Support Package *(ESP)/AMC (if required)*.** After the specified warranty period, the Indian technicians would be required to repair and maintain the equipment during its exploitation. To enable this process, an appropriate ESP would be required to be provided by the supplier. For this purpose, the general concept of repair and maintenance of equipment followed by the Indian Army is given at **Appendix C**. The information on Engineering Support Package that is required to be provided as part of Technical offer is enclosed at **Annexures I to IV to Appendix C.** *(if post warranty (AMC) is also being sought from the OEM, the level of AMC required (with spares/without spares/repair rate contract) must clearly be indicated. The details of AMC proposals must be also submitted separately by the vendor with technical aspects being included in the technical offer and commercial aspects being included in the commercial offer. The same will be taken cognisance of while deciding the L1).*

7. **In Service Life/Shelf Life**. The In Service Life/Shelf Life of the equipment (as applicable) shall be stipulated in the offer (in case of shelf life the relevant storage conditions should be clearly specified).

8. **Product Support.** The vendor would be bound by a condition in the contract, that he is in a position to provide product support in terms of maintenance, materials and spares for a minimum period of —Years. Even after the said mandatory period the vendor would be bound to give at least two years notice to the Government of India prior to closing the production line so as to enable a Life Time Buy of all spares before closure of the said production line. The said aspect would also form an integral part of the contract. All upgrades and modifications carried out on the equipment during the

next—years or during its life-cycle (as per requirement) must be intimated to the SHQ.

9. **Training of Crew and Maintenance Personnel.** (SHQ to give broad details of the training sought).

10. **Government regulations.** It may also be confirmed that there are no Government restrictions or limitations in the country of the supplier or countries from which sub-components are bring procured and/or for the export of any part of the system being supplied.

11. **Patent Rights**. The vendor has to confirm that there are no infringements of any Patent Rights in accordance with the laws prevailing in their respective countries.

12. **Transfer of Technology (TOT). (If applicable):** The Govt. of India Ministry of Defence is desirous of license production of (generic name of equipment) under TOT. Aspects of TOT which are to be fulfilled by the vendor are given at Appendix— Govt. .reserves the right to negotiate TOT terms subsequently but the availability of TOT would be a pre-condition for purchase of the fully formed items. If negotiations for TOT are not held as a part of the negotiations for equipment, then subsequent and separate TOT negotiations will continue from the stage where the equipment has been selected.

(The RFP in such cases would spell out the requirements of TOT depending upon the depth of the technology which is required, and whose range could cover technology for repair and overhaul; production from CKD/SKD kits and production from raw material and components level. Aspects which are to be included in the RFP in case production from (CKD/SKD) kits is envisaged are given at Schedule II and the same in case of indigenous manufacture from raw material and components level are given at Schedule III. Care should be taken to spell out the selection criteria clearly. The nominated Production Agency (PA) for the receipt of technology will be closely associated in the preparation of RFP).

13. The Technical and Commercial Proposals should be sealed separately and submitted together to the undersigned at the following address by—hours on —

As Applicable {
Technical Manager (Land Systems)
Room No 306, North Hutments
Kashmir House, Rajaji Marg
New Delhi-110011
Fax No: 23792414

14. The Technical Offer will be opened at —hours on —at the same venue as indicated at para 13 above. The vendor or his authorized representative is welcome to be present at the opening of the proposals. Necessary details may be sent a week in advance to facilitate obtaining of security clearance.

15. The Technical Offer will be evaluated by a Technical Evaluation Committee (TEC) to confirm that the equipment being offered meets the essential and desirable parameters features as elaborated subsequently in this RFP at **Appendix A**.Thereafter,

the vendor of the short listed equipment would be asked to provide the equipment (—Nos.) for trial evaluation in India at 'No Cost No Commitment' basis.

16. For an equipment to be introduced in service it is mandatory that it successfully clears all tests/trials/evaluations. The trial evaluation process comprises of the following phases. (SHQ may amend this paragraph as required):—

(a) User Trials.

(b) Technical and Environmental Evaluation.

(c) Maintainability Evaluation Trial (MET).

(d) EMI/EMC Evaluation.

17. Commercial offers will be opened only of the vendors whose equipment is shortlisted, after technical trials and evaluation. In other words, the equipment would be required to be trial evaluated and found suitable prior to commencement of any commercial negotiations (if trials are not proposed then the words 'trials and' may be deleted).

PART II : TECHNICAL PARAMETERS

18. **Operational Characteristics and Features.** The broad operational characteristics and features that are to be met by the equipment are elucidated at Appendix A. These have been divided into 'Essential' and 'Desirable' parameters.

19. **Technical offer.** The Technical Offer must enable detailed understanding of the functioning and characteristics of the equipment as a whole and each sub-system independently. It must include the performance parameters as listed at **Appendix A** and any other information pertaining to the technical specifications of the equipment considered important/relevant by you. The technical proposal should also include maintenance schedules to achieve maximum life and expected life of each assembly/ subassembly (or LRU/SRU), storage conditions/environment condition recommended and the resultant guaranteed in-service/shelf life.

20. If there is any associated optional equipment on offer, that should also be indicated separately along with the benefit that are likely to accrue by procuring such option equipment. Should the vendor be contemplating any upgrades or modifications to the equipment being offered the details regarding these should also be included in the Technical Proposal.

21. **Technical Details**

(a) The technical details should be factual, comprehensive and include specifications of the offered system/equipment against broad requirements listed in **Appendix A** of RFP.

(b) Insufficient or incomplete details may lead to rejection of the offer. **Mere indication of compliance may be construed as incomplete information** unless system's specific technical details are available in the offer.

22. The technical offer should have a separate detachable compliance table stating specific answers to all the parameters as listed at Appendix 'A'. It is mandatory to append answers to al the parameters listed in Appendix 'A'. Four Copies of the Technical Proposal should be submitted, however only one copy of the commercial proposal is required.

PART III : COMMERCIAL ASPECTS

Commercial Offer

23. Commercial Offers will be opened only of those vendors, whose equipment is short listed after staff evaluation. The Commercial Offer must be firm and fixed and should be valid for at least 12 months from the date of submission of offer (period may be amended, if required).

24. The Commercial Offers will be opened by a committee and if supplier desires he may depute his representative, duly authorized in writing to be present at the time of opening of the offers. Further negotiations will be made only with the lowest bidder (L1), as determined by the committee. The date time and venue fixed for this purpose will be intimated separately after the evaluations are completed.

25. You are requested to take into consideration the Payment terms given at **Appendix D** while formulating the Commercial Offers.

26. To assist the supplier in formulating the Commercial Proposal and to ensure that all aspects are covered, a suggested format is given at **Appendix E**.

Additional Aspects

27. You are requested to confirm your willingness to provide the equipment for trial evaluation in India on **"No Cost No Commitment"** basis when so requested. If you consider that this is not practicable, alternative means of evaluation may be suggested. However, Government of India reserves the right to reject your proposal if you are not willing to provide the equipment for trial evaluation in India.

28. **Quality Assurance.** After the contract is negotiated, you would be required to provide the Standard Acceptance Test Procedure (ATP) to the Director General of Quality Assurance (DGQA) **(or the concerned Quality Assurance agency as applicable)** for their approval. The DGQA reserves the right to modify the ATP when necessary and the equipment supplied by you would be accepted subject to evaluation and clearance by the DGQA. You would be required to provide all test facilities at OEM premises for acceptance inspection by the DGQA team as also train the team as per sub para **1(e) at Appendix E.** The details in this regard will be coordinated during the negotiation of contract.

29. **Standard Clauses on Contract**. The Government of India desires that all actions regarding procurement of any equipment are totally transparent and carried out as per established procedures. The supplier is required to accept our standard clauses regarding agents/agency commission, penalty for use of undue influence, access to books of accounts, arbitration and laws which would be incorporated in the contract. The next of these clauses is at **Appendix F.**

30. **Option Clause (As applicable).** The format of option clause is placed at **Appendix G**.

PART IV: EVALUATION AND ACCEPTANCE CRITERIA

31. **Evaluation and Acceptance Process**

(a) *Evaluation of Technical Proposals.* The technical proposals forwarded by the firms will be evaluated by a Technical Evaluation Committee (TEC). The TEC will examine the extent of variations/differences, if any, in the technical characteristics of the equipment offered by various vendors will reference to the QRs and prepare a 'Compliance Statement' shortlisting the vendors. The shortlisted vendors shall be asked to send the desired units of the equipment/ weapon system to India for Field Evaluation in varying climatic, altitude and terrain conditions. A Staff evaluation will be carried out, which will give out the compliance of the demonstrated performance of the equipment *vis-a-vis* the requirements. The compliance would be determined only on the basis of the essential parameters. the staff evaluation will analyse the field evaluation results and shortlist the equipment recommended for introduction into service.

(b) *Evaluation of Commercial Proposals.* The Commercial proposals of the firms whose equipment have been short listed after staff evaluation will only be opened and a comparative statement will be prepared. Commercial offers should be based on the premise that no advance payment would be made. Comparison of offers will also be done on the same basis. The vendor quoting lowest price (L1), as determined by Contracts Negotiation Committee (CNC), would be invited for negotiations by CNC.

(c) *Contract Conclusion/Placement of Order (As applicable).* The successful conclusion of CNC will be followed by contract conclusion/placement of order (As applicable).

Conditions under which this RFP is Issued

32. This RFP is being issued with no financial commitment and the Ministry of Defence reserves the right to change or vary any part thereof at any stage. The Government of India also reserves the right to withdraw the RFP should it be so necessary at any stage.

33. Please acknowledge receipt.

Yours faithfully

( )

APPENDIX A

(Refers to Paras 1, 15, 18, 19&21 of RFP)

OPERATIONAL CHARACTERISTICS AND FEATURES

1. This information would be different for various equipment. As such only the guide lines for formulating this Appendix has been stated here. The information provided here flows from the GSQR and must contain the following:—

(a) The purpose for which this equipment is needed or in broad outline the capabilities that are needed. For example in the case of WLR.

> "The WLR should be able to provide accurate location of enenmy guns, mortars and rocket launchers (in all types of terrain) to enable own fire delivery means to engage them effectively. In addition it should also provide location of own shell burst to enable correction of fire."

(b) Technical Parameters. All technical parameters listed in the GSQR in terms of size weight, performance, operating environment, power, torque, preservation, utility life, storage, shelf life etc., should be specified for the following levels:—

(i) Essential Levels.

(ii) Desirable Levels.

(c) *Additional Features.* If any, should also be explained.

2. Based on above guide lines, this Appendix should be formulated very carefully for each type of equipment.

APPENDIX B

(Refers to Para 5 of RFP)

DRAFT WARRANTY CLAUSE

(To be amended as per requirement and no blanks to be left)

1. The seller warrants that the goods supplied under this contract conform to technical specifications prescribed and shall perform according to the said Technical Specifications.

2. The seller warrants for a period of—**months/years/operational hours** from the date of acceptance of stores by Joint Receipt Inspection Team or date of installation and commissioning whichever is later, that the goods/stores supplied under this contract and each component used in the manufacture there of shall be free from all types of defects/failures.

3. If within the period of warranty, the goods are reported by the Buyer to have failed to perform as per the specifications, the Seller shall either replace or rectify the same free of charge, maximum **within 45 days** of notification of such defect received by the Seller, provided that the goods are used and maintained by the Buyer as per instructions contained in the Operating Manual. Warranty of the equipment would be extended by such duration. Record of the down time would be maintained by user in log book. Spares required for warranty repairs shall be provided free of cost by Seller. The Seller also undertakes to diagnose, test, adjust, calibrate and repair/ replace the goods/equipment arising due to accidents by neglect or misuse by the operator or damage due to transportation of the goods during the warranty period, at the cost mutually agreed to between the Buyer and the Seller.

4. Seller hereby warrants that necessary service and repair back up during the warranty period of the equipment shall be provided by the seller and he will ensure that the downtime is within—% of the warranty period.

5. If a particular equipment/goods fails frequently and/or, the cumulative down time **exceeds 20% of the warranty period**, the complete equipment shall be replaced free of cost by the Seller within a stipulated period of **45 days** of receipt of the notification from the Buyer. Warranty of the replaced equipment would start from the date of acceptance by the buyer/date of installation and commissioning.

6. In case the complete delivery of Engineering Support Package is delayed beyond the period stipulated in this contract, then the Seller undertakes that the warranty period for the goods/stores shall be extended to that extent.

APPENDIX C

(Refers to Para 6 of RFP)

REPAIR AND MAINTENANCE PHILOSOPHY

Note: (The Repair and Maintenance Philosophy is only indicative and pertains to a particular service. SHQ concerned may amend this as per their requirement. No blanks to be left.)

1. The various levels of repairs are explained in succeedings paras. (However, all levels may not be applicable to all types of equipment. As such the type of repair facility required for the equipment for which the RFP is being issued should be stated clearly by modifying the succeeding paras.)

Unit Repairs

2. These are repairs carried out with in the unit holding this equipment with tools generally held within the unit or supplied by the manufacturer with each equipment or as per scaling of 1:10 or any other scaling recommended by the manufacturer as per population held in the unit.

3. These pertain to cleaning, lubrications, minor repairs and replacement of components and minor assemblies that can be carried out in field without any sophisticated tools or test equipment.

4. For carrying out such repairs, the manufacturer is required to provide the following:—

(a) Table of Tools and Equipment (TOTE) with each equipment including operators manual.

(b) Scaling of special tools and spares as explained at para 2 above including Maintenance manual.

Field Repairs

5. These are repairs carried out in the field by technicians specially trained for this purpose and where the required special tools and spares have to be provided. These repairs comprise replacement of major assemblies and other components beyond the scope of unit level repairs. Normally a field work shop that carries out such repairs looks after three to four units holding the said equipment.

6. The manufacturer is required to provide the following:—

(a) Quantity and specification of spares that need to be stocked for a population of —equipment.

(b) Special Maintenance Tools and Test Equipment that needs to be provided to

each such field work shop. (The total number of such facilities would also have to be stated based on deployment pattern of the concerned equipment to carryout total costing).

(c) All necessary technical literature.

(d) Misc. aspects, if any (*viz.* All necessary technical literature).

Intermediate Repairs

7. These are extensive or special repairs carried out for a few equipment in the field to reduce the down time. (Include this only if applicable for the equipment being procured and state the action required from the manufacturer).

Based Repairs

8. The Indian army would like to avoid dependence on the manufacturer in terms of factory repair. Thus all repairs including repairs to components, sub-assemblies and overhaul of the complete equipment are carried out by this facility.

9. Depending on the population of the equipment, one to five such facilities may be established in India for this purpose (The actual No. would have to be stated for costing). The manufacturer is required to provide the following:—

(a) All Special Maintenance Tools, jigs, fixtures and test equipment for carrying out repairs up to component level.

(b) Quantity and specification of spares, sub-assemblies as per population expected to be maintained.

(c) Oils and lubricants necessary for overhaul.

(d) All necessary technical literature.

(e) Calibration facilities for test equipment.

Manufacturers Recommended List of Spares (MRLS)

10. Based on the explanation given above, you are requested to provide MRLS to sustain the equipment for a period of ——years for various levels of repair as per format given at Annexure I to this Appendix. You will be required to provide this both with Technical and Commercial proposals.

11. While with the commercial proposal, the actual costs of each component/spare will be provided, in the case of Technical Proposal these will be reflected as Low Cost/ Medium Cost/High Cost. A guideline for this purpose is as under:—

(a) **Low cost.** Less than 2% of the unit cost of the equipment/sub-system.

(b) **Medium cost.** 2 to 10% of the unit cost of the equipment/sub-system.

(c) **High cost.** Greater than 10% of the unit cost of equipment/sub-system.

12. If the complete equipment comprises a number of different sub-systems, for *eg.* it is coming mounted on a vehicle or is provided with a stand for mounting or is inclusive of a generator or an air conditioner or has a sight, MRLS must be provided seprately for each sub-system.

Special Maintenance Tools and Test Equipment

13. This is to be formulated in a similar manner as explained for MRLS. A suggested format is given at Annexure II to this Appendix and is to be included in both Technical and commercial proposals. The cost column may be left blank in the Technical Proposal.

Technical Literature

14. The details of technical literature to be supplied with the system should be listed as per the suggested format at Annexure 3 to this Appendix. This should be provided with both Technical and Commercial Proposals. The cost column may be left blank in the Technical Proposal.

Miscellaneous Aspects (Applicable only when trials are required)

15. In cases where the equipment is required to undergo trials, the equipment will also be put through Maintenance Evaluation Test (MET). Based on this evaluation and in consultation with the supplier, the MRLS may be required to be refined. Under such eventually, the supplier will be asked to submit a fresh commercial proposal for MRLS before commencement of price negotiations.

16. During user trials it may be brought out that the equipment is acceptable subject to carrying out certain modification/improvements. This will be referred to the supplier to confirm his acceptance and also whether he needs to submit a frest commercial proposal.

17. **MET.** This is carried with a view to facilitate provisioning of effective engineering support during life cycle of the equipment. This would involve stripping of the equipment and carrying out recommended tests and adjustments and establishing adequacy of maintenance tools, test equipment and technical literature. To facilitate this process the supplier is required to provide the following:—

(a) Technical Literature:

(i) User Handbook/Operators Manual

(ii) Design Specifications

(iii) Tech. Manuals

(aa) **Part I.** Tech. description, specifications, functioning of various systems.

(ab) **Part II.** Inspection/Maintenance tasks, repair procedures, materials used, fault diagnosis and use of Special Maintenance Tools (SMTs)/Special Test Equipments (STEs).

(ac) **Part III.** Procedure assembly/disassembly, repair up to component level, safety precautions.

(ad) **Part IV.** Part list with drawing reference and list of SMTs/STEs Test Bench.

(iv) Manufacturers Recommended List of Spares (MRLS).

(v) Illustrated Spare Part List (ISPL).

(vi) Technical Manual on STE with drawing reference.

(vii) Complete Equipment Schedule.

(viii) Table of Tools & Equipment (ToTE) & carried spares.

(ix) Rotable list, norms of consumption, mandatory/non mandatory spares list for each system.

(b) One set of Gauges.

(c) One set of Special Maintenance Tools (SMTs).

(d) One set of Special Test Equipments (STEs).

(e) Presence of technical Rep. of the OEM during conduct of MET.

(f) Servicing Schedule.

(g) Condemnation limits.

(h) Permissive repair schedule.

(i) Packing specification/instructions.

(j) Design Specification.

(k) Any additional information suggested by the OEM.

18. Vendors quoting lesser ESP in terms of range and depth will have to make good the deficiency. The vendors quoting surplus items in ESP should agree to buy back the surplus ESP. The prices of individual items in the ESP should be indicated by the vendor.

19. The following may also be noted:—

(a) The requirement of training and associated equipment must be clearly specified in Part I or placed at a separate Appendix.

(b) The costs for aggregates and training must only be indicated in the commercial proposal.

(c) Sufficiency clause in terms of installation material and spares should also be included (as suggested by the SHQ).

MANUFACTURER'S RECOMMENDED LIST OF SPARES (MRLS)

EQUIPMENT:_____

Original Equipment Manufacturer (OEM):_____

Sr. No.	Manufacturer's Part No.	Source of Supply	Nomen-clature	Nos. fitted in one equipment	Illustrated Spare Part List (ISPL) Reference	Unit cost	Recommended scale for 100 equipment for two years			Total Cost				Remarks
							Unit Repair	Field Repair	Intermediate Repair	Base Repair	Unit Repair	Field Repair	Intermediate Repair	Base Repair
Total Cost														

Notes:—

1. Maintenance spares/stores like lubricants, sealing compound, gases should be given separately giving source of supply.
2. Spares for component repairs should be included under the column of nodal repair & base repair as suggested By OEM.
3. In 'Remarks' column following information (if applicable) be given:—
   (a) If an iteme has a shelf/operational life it be marked as 'G' and life indicated.
   (b) Matching set of components be indicated.
   (c) Item which can be locally manufactured should be marked 'LM.'
   (d) Items which can not be manufactured in India due to sophisticated design/technology may be marked as 'Sl' special item.
   (e) If a component/assembly is common to other similar equipment offered by OEM earlier these should be marked 'CM' and name of the equipment be indicated.
4. MRLS should be drawn out of the 'Part List' of the equipment, which should be separately given as part of Technical Manual Part IV.
5. If the main equipment consists of other equipment then MRLS should be prepared for them under proper heads.
6. MRLS be prepared as per the maintenance concept of the customer (Appx. C).
7. Items provided along with the equipment as spares should also be included in MRLS.
8. Modules/Shop Replaceable Unit (SRU)/assemblies should be listed and their components should be included under them so as to relate each item of spare to their module/SRU/assembly.
9. Complete MRLS should be costed separately for Field, Nodal and Base repairs as it is required to be included as part of 'Total costed Engineering Support Package (ESP).' OEM may give cost details in confidence to Price Negotiation Committee (PNC), but other details as above be provided during Maintainability Equipment Trial (MET).
10. MRLS for test equipment should also be provided on the similar format.

Annexure II to Appendix C

LIST OF SMT/STEs, JIGS, FIXTURE AND INFRASTRUCTURE

EQUIPMENT:_____

Original Equipment Manufacturer (OEM):_____

Sl. No.	Manufacturer's Part No.	Designation	Unit Cost	No. Required			Brief purpose	Remarks
			Unit Repair	Field Repair	Intermediate Repair	Base Repair		

Notes:

1. Prepare separate sheet for each type of eqpt.
2. Specify in remarks column whether the Special Test Equipment (STE)/Special Maintenance Tools (SMT) can be used as general purpose eqpt. on any other kind of eqpt.
3. For Nodal Repairs/Base repairs quantity required should be for repair of 10 equipment at a time.
4. If test eqpt. are commercially available ex. India, the source of supply be specified.
5. Test eqpt. for calibrating the STEs should be included in the list above.
6. Test eqpt. which are required to be provided by the customer should also be included in the list above.

Annexure III to Appendix C

TECHNICAL LITERATURE

EQUIPMENT: _____

Original Equipment Manufacturer (OEM): _____

Sr. No.	Technical Literature	Unit Cost	Scale for 100 equipment	Total cost	Remarks
1.	User Handbook/Operators Manual		100		
2.	Design Specifications				
3.	Technical Manual		40 each		
	(a) **Part I.** Tech description, specification, functioning of various Systems				
	(b) **Part II.** Inspection/Maintenance tasks Repair procedures, materials used, fault diagnosis and use of Special Maintenance Tools(SMTs) Special Test Eqpt. (STEs).				
	(c) **Part III.** Procedure assembly/disassembly, repair up to component level, safety precautions.				
	(d) **Part IV.**				
	(i) Part list with drawing reference (ii) List of SMT/STEs with Test Bench				
4.	Manufacturer's Recommended List of Spares (MRLS)		10		
5.	Illustrated Spare Part List (ISPL)		600		
6.	Technical Manual on STE with drawing reference		One per STE		
7.	Floppies on the above Tech. literature		One Set		
8.	Any other (specify)				
	Total Cost				

Notes:—1. In case any additional eqpt. is used their tech literature will be included.

2. Scale of Tech. literature is as per Government of India, Ministry of Defence, letter No. PC to MF 62348/ESP/EME-LS/DS (Plg.) dt. 11 Jan. 88.
3. If certain technical literature is being provided free of cost if should be indicated in the remarks column.

Annexure IV to Appendix C

TRAINING AGGREGATES

EQUIPMENT: _____
OEM: _____

Sr. No.	Description of Training Aggregate	Scale for 100 Eqpt.	Unit Cost	Total Cost	Remarks
1.	Complete Equipment	2			
2.	Sectionised Equipment	1			
3.	Shop Replaceable Units (SRU)/PCB/Modules/ assemblies as under:	One each			
	(a)				
	(b)				
	(c)				
	(d)				
4.	Computer based trg. package based on interactive multimedia to include:	One set			
	(a) Full graphics, Animation test and sound (b) Symptoms-jault corelation (expert system)				
5.	Training aids to include:	One set			
	(a) Charts				
	(b) Slides				
	(c) Training Brochures				
	(d) Training Work models				
	(e) Blow up diagram of such system				
	(f) Video films				
6.	Cost of training 06 operators and 08 technicians in country of OEM				
7.	Any other				
	Total Cost				

APPENDIX D

(Refers to Para 25 of RFP)

PAYMENT TERMS

(NO BLANKS TO BE LEFT)

Terms of Delivery and Payment

1. The delivery of goods will be based on FOB/CIP/CIF_____ and consigned to _____(Port/Air Port) with the ultimate consignee as _____.

2. **Payment.**

(a) The vendor may formulate the Commercial Offers on the presumption that no advance would be receivable. It would be open to the PNC when negotiating with L1 to discuss the question of advances as part of complete commercial negotiations.

(The other terms would be based on the terms for inspection (pre dispatch inspection or Joint Receipt Inspection or both. This para will be formulated accordingly based on the under mentioned guide lines. If pre dispatch inspection is to be carried out, then certain percentage payment agreed is to be released. If only JRI is contemplated, 5 to 10% of the amount should be held back and cleared only after JRI. If installation is contemplated 5 to 10% of the amount should be held back and cleared only after installation/commissioning).

Letter of Credit

3. The Letter of Credit shall be opened 30 days prior to intended delivey and shall be valid for 90 days and shall allow payment against the presentation of the following documents to the Bank:—

(a) Bill of Lading/Airway Bill (Original Copy).

(b) Commercial Invoice (Original Copy).

(c) Inspection Acceptance Certificate demonstrating compliance with the technical specifications of the contractor to be issued by the beneficiary.

(d) Packing List.

(e) Certificate of Origin.

(f) Insurance documents (in case of CIF contracts).

Performance Bond/Warranty Bond

4. A Performance Bond of ____% of value of the Contract and a separate warranty bond (as explained at Para 5 below) would be furnished by the supplier in the form of

a Bank Guarantee from a first class Bank duly confirmed by State Bank of India. The Performance Bond should be valid for a period until three months from the date of receipt of last consignment and should be furnished within ____ days of signing the contract.

5. The goods supplied shall carry a warranty for ___ months and shelf life (or in service life, as applicable) of _____ years from the date of delivery. Warranty Bond of _____% value of the contract in the form of a Bank Guarantee from a first class Bank and duly confirmed by State Bank of India will be furnished. The said Warranty Bond shall be valid for three months beyond the warranty period agreed by the vendor.

Inspection

6. (This should be in consonance with para 2 above. Explain whether it is PDI or JRI. If it is PDI, the supplier should intimate at least 45 days prior to the day when the eqpt. is to be offered for PDI to enable our QA pers to report accordingly. If it is JRI, then their rep. should be present and can be undertaken only when the eqpt. reaches the concerned depot and the supplier will be informed of the date for JRI).

Liquidated Damages

7. In the event of the seller's failure to have the stores delivered by the date/dates specified in the contract, the Buyer may, at his discretion withhold any payment until the whole of the stores have been supplied, and the buyer may also deduct from the seller as agreed, liquidated damages and not by way of penalty the sum of 0.5% of the Contract price of the undelivered stores for each and every week or part of a week for which the stores have been delayed subject to a maximum of 5% of the value of delayed stores, in case the delay in delivery is acceptable to the Buyer.

APPENDIX E

(Refers to Paras 26 & 28 of RFP)

Commercial Offer

1. The Commercial Offer should be in the following format:—

Sr. No.	Items	Nos. Required	Unit Cost	Total Cost	Remarks
(a)	Unit cost of fully formed and/or semiknock down and completely knock down kits for the quantity being negotiated for.				
(b)	Cost of Transfer of Technology (Where applicable).				
(c)	Cost of Manufacturers Recommended List of Spares as per the format given at Annexure 1 to Appendix B.				
(d)	Cost of Special Maintenance Tools and Special Test Equipment as per format given at Annexure 2 to Appendix B.				
(e)	Cost of recommended period of training excluding the cost of travel, boarding and lodging separately for operators and maintenance technicians and QA Representative.				
(f)	Cost of operators manual, technical literature including illustrated spare parts List as per Annexure 3 to Appendix B, in English Language.				
(g)	Details and cost of training aids such as simulators, cut out models, films, charts etc. as recommended by the supplier as per Annexure 4 to Appendix B.				
(h)	The package cost of equipment/ammunition of various quantities. (Range of quantum of equipment/ammunition be specified).				
(j)	Cost of Optional Equipment.				

Note: The same may be amended by SHQ in consultation with MoD (Fin.) on a case to case basis based on the requirement. It is recommended that warranty requirements, in service life and product support requirements are specified in the RFP to put all vendor on an even platform. The various heads may be carefully examined. Any addition/deletion/amendment which materially changes the LI may not be permissible at a later stage.

2. Following details should also be given in commercial offers:—

(a) Payment schedule.

(b) Delivery schedule that can be adhered to by the supplier with reference to the date of signing of contract.

(c) *Validity of quotation*. The prices should be firm and fixed and be valid for one year from date of submission.

(d) Nomenclature of items which will be provided with each equipment as Table of Tools and Equipment (ToTE) and whose cost is included as per Sr. 1(a) above.

APPENDIX F

(Refers to Para 29 of RFP)

STANDARD CLAUSES IN CONTRACT

LAW

1. The present Contract shall be considered and made in accordance to the laws of Republic of India.

ARBITRATION

2. All disputes or differences arising out of or in connection with the present Contract, including the ones connected with the validity of the present Contract or any part thereof, shall be settled by bilateral discussions.

3. Any dispute, disagreement of question arising out of or relating to this Contract or relating to construction or performance (except as to any matter the decision or determination whereof is provided for by these conditions), which cannot be settled amicably, shall within sixty(60) days or such longer period as may be mutually agreed upon, from the date on which either party informs the other in writing by a notice that such dispute, disagreement or question exists, will be referred to the Arbitration Tribunal consisting of three arbitrators.

4. Within sixty (60) days of the receipt of the said Notice, one arbitrator shall be nominated in writing by SELLER and one arbitrator shall be nominated by BUYER.

5. The third arbitrator, who shall not be a citizen or domicile or of the country either of the parties of any other country unacceptable to any of the parties shall be nominated of the parties within (90) days of the receipt of the notice mentioned above, failing which the third arbitrator may be nominated by the President of International Chamber of Commerce, Paris, at request of either party but the said nomination would be after consultation with both the parties and shall preclude any citizen or domicile or any country as mentioned. The arbitrator nominated under this Clause shall not be regarded nor act as an umpire.

6. The Arbitration Tribunal shall have its seat in New Delhi or such other place in India as may be mutually agreed to between the parties.

7. The Arbitration Proceedings shall be conducted in India under the Indian Arbitration and Conciliation Act, 1996 and the award of such Arbitration Tribunal shall be enforceable in Indian Courts only.

8. The decision of the majority of the arbitrator shall be final and binding on the parties to this contract.

9. Each party shall bear its own cost of preparing and presenting its case. The cost of arbitration including the fees and expenses of the third arbitrator shall be shared equally by the Seller and the Buyer.

10. In the event of a vacancy caused in the office of the arbitrators, the party which nominated such arbitrator, shall be entitled to nominate another in his place and the arbitration proceedings shall continue from the stage they were left by the retiring arbitrator.

11. In the event of one of the parties failing to nominate its arbitrator within 60 days as above or if any of the parties does not nominate another arbitrator within 60 days of the place of arbitrator failing vacant, then the other party shall be entitled after due notice of at least 30 days to request the President of the International Chamber of Commerce to nominate another arbitrator as above.

12. If the place of the third arbitrator falls vacant, his substitute shall be nominated according to the provisions herein above stipulated.

13. The parties shall continue to perform their respective obligations under this contract during the pendency of the arbitration proceedings except in so far as such obligations are the subject matter of the said arbitration proceedings.

PENALTY FOR USE OF UNDUE INFLUENCE

14. The Seller undertakes that he has not given, offered or promised to give, directly or indirectly any gift, consideration, reward, commission, fees brokerage or inducement to any person in service of the Buyer or otherwise in procuring the contracts or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of the Contract or any other Contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the Contract or any other Contract with the Government. Any breach of the aforesaid undertaking by the seller or any one employed by him or acting on his behalf (whether with or without the knowledge of the seller) or the commission of any offers by the seller or anyone employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act, 1947 or any other Act enacted for the prevention of corruption shall entitle the Buyer to cancel the contract and all or any other contracts with the seller and recover from the seller the amount of any loss arising from such cancellation. A decision of the buyer or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the Seller.

15. Giving or offering of any gift, bribe or inducement or any such act on behalf of the seller towards any officer/employee of the buyer or to any other person in a position to influence any officer/employee of the Buyer for showing any favour in relation to this or any other contract, shall render the Seller to such liability/penalty as the Buyer may deem proper, including but not limited to termination of the contract, imposition of penal damages, forfeiture of the Bank Guarantee and refund of the amounts paid by the Buyer.

AGENTS/AGENCY COMMISSION

16. The seller confirms and declares to the buyer that the seller is the original manufacturer of the stores referred to in this contract and has not engaged any individual or firm, whether Indian or foreign whatsoever, to intercede, facilitate or in any way to recommend to the Government of India or any of its functionaries, whether officially or unofficially, to the award of the contract to the Seller; nor has any amount been paid, promissed or intended to be paid to any such individual or firm in respect of any such intercession, facilitation or recommendation. The Seller agrees that if it is established at any time to the satisfaction of the Buyer that the present declaration is in any way incorrect or if at a later stage it is discovered by the Buyer that the Seller has engaged any such individual/firm, and paid or internded to pay any amount, gift, reward, fees, commission or consideration to such person, party, firm or institution, whether before or after the signing of this contract, the Seller will be liable to refund that amount to the Buyer. The Seller will also be debarred from entering into any supply Contract with the Government of India for a minimum period of five years. The Buyer will also have a right to consider cancellation of the Contract either wholly or in part, without any entitlement or compensation to the Seller who shall in such event be liable to refund all payments made by the Buyer in terms of the Contract alongwith interest at the rate of 2% per annum above LIBOR rate. The Buyer will also have the right to recover any such amount from any contracts concluded earlier with the Government of India.

ACCESS TO THE BOOKS OF ACCOUNTS

17. In case it is found to the satisfaction of the Buyer that the Seller has engaged an Agent or paid commission or influenced any person to obtain the contract as described in clauses relating to Agent/Agency Commission and penalty for use of undue influence, the Seller, on a specific request of the Buyer shall provide necessary information/ inspection of the relevant financial documents/information.

APPENDIX G

(Refers to Para 30 of RFP)

OPTION CLAUSE

(NO BLANKS TO BE LEFT)

The Buyer shall have the right to place separate order on the SELLER on or before.....(.....year from the date of this contract) for the main equipment, spares, facilities or services as per the cost, terms and conditions set out in this contract. The price of the system, spares etc. shall remain same till.....year from the effective date of the contract. Beyond this, cost will be escalated through application of the mutually agreed escalation formula.

SCHEDULE II

(THIS PAPER LAYS OUT GENERAL GUIDELINES. MAY BE AMENDED IN CONSULTATION WITH PA AND OTHER AGENCIES INVOLVED TO MAKE IT EQUIPMENT SPECIFIC)

Transfer of technology (ToT)

(CKD Kit Based)

1. Preamble

(a) ToT shall be provided to the designated production Agency.

(b) Technology used shall be current, State of art as used in the Contemporary systems. (Critical technology aspects having bearing on ToT evaluation need to be specified on a case to case basis).

(c) The ToT shall be comprehensive, covering all aspects of design, manufacturing know-how and detailed technical information which will enable the Production Agency to manufacture, assemble, integrate, test, install and commission, use, repair, overhaul, support and maintain the licence product from CKD Kit. Design data shall include the details that are needed to give design disposition during production on deviation/concession, modify/ upgrade the licence product and substitute parts and systems of the licence product as required by the certifying agency and the production agency.

(d) The OEM is required to provide the latest version of Configuration control Document which will provide detailed break down of the product-structure in terms of lower level sub-systems/assemblies/sub-assemblies/modules/detail parts/PVBs/wiring diagrams etc. with their latest modification status.

(e) Vendor should submit an undertaking that he would provide & support complete ToT for phased manufacture to the buyer or his authorized Indian Organisation for the System and its sub-systems, modules, assemblies and detailed parts/components.

(f) Vendor should submit an agreement that the buyer or his authorized Indian Organisation reserves the right to approach directly the OEMs of the Sub-Systems for similar ToT agreements and that as Main Contractor he will provide total support.

(g) (*To be included on as required basis*) Vendor should submit a not to exceed budgetary price for the Transfer of Technology covering the following parameters:—

(i) Licence fee

(ii) Documentation

(iii) Technical Assistance

(iv) Training

(v) Materials

(vi) Spares

(vii) Tooling

(viii) Special Tools

(ix) Standard Tools

(x) Ground Support & Test Equipment

(xi) Programme Management

Vendor may note that this not to exceed budgetary price will be used for commercial evaluation. Vendor selected after technical & commercial evaluation will enter into detailed contractual negotiations on various aspects of the Transfer of Technology to the buyer or his authorized Indian Organisation based on the never exceed budgetary quotes.

(h) It is likely that some of the assemblies/sub-assemblies/modules/PCBs used in the realization of higher level assemblies/sub-systems and systems are manufactured by the OEM's vendors/sub-contractors either based on Engineering documentation provided by the OEM or developed by the OEM's vendors/sub-contractors based on procurement specifications provided by the OEM. Further, as a result of multiplicity of technologies involved and for reasons for price competitiveness arising due to economies of scale, some of the items used in the manufacture of licensed product may be brought out by the OEM from vendors as 'fully finished' against the procurement specifications provided by him.

(i) Although, not desirable, some of the components/process specifically developed by the OEMs for use in the manufacture of licensed product may be classified by them as 'proprietary' and not included within the scope of ToT offered to the Production Agency.

(j) To bring in a fair comparison between the ToT offered by various OEMs as also to have a fair assessment of the depth of technology being transferred, OEMs are required to identify each item (system/sub-system/assembly/sub-assembly/module/detail parts/PCB etc.) in the product structure under the following categories, as may be applicable and provide information on the

relative price for each of the items in the product structure as percentage of product cost.

(i) **Category-1.** Items for which complete TOT i.e. Engineering and Manufacturing documentation to enable the Production Agency carryout fabrication, assembly and test of the item from CKD Kit level is being provided by the OEM, may be classified under the head "CTOT".

(ii) **Category-2.** Items which are manufactured by the OEM's Sub-contractors based on engineering documentation provided by the OEM and these Engineering Documentation are being provided by the OEM to the Production Agency, may also be classified under the head "CTOT".

(iii) **Category-3.**

(aa) Items in respect of which development and manufacture by the OEM has been sub-contracted to its vendors/sub-contractors based on only the procurement specifications provided by him and the OEM is not in a position to provide any additional technical information to the Production Agency except the procurement drawings/specifications provided by him to his vendors/sub-contractors, may be classified under the head Single Vendor "Sub-contract". For the purpose of evaluating the depth of TOT, it will be presumed that the TOT in respect of these items for indigenous manufacture is not provided.

(ab) However, in case, the OEM in collaboration with his vendor/sub-contrator, is able to provide the production Agency, maintenance Documentation, the recommended list of spares for repair and overhaul as may be applicable and maintenance training at vendor's/sub-contractor's premises, then such items may be classified under the head 'Limited TOT for maintenance support' i.e. "M-ToT".

(iv) **Category-4.**

(aa) Items including catalogue/standard items sourced by the OEM against his procurement specifications as 'Fully Finished', may be classified as "Bought Out". Evidently ToT for such items for indigenous manufacture will not be available and the OEM will be able to provide only the procurement drawings/ specifications. OEM has to ensure the availability of such items or its equivalents during the life cycle of the product. However, in respect of some of the selected items in this category, if the OEM, in collaboration with his vendor, is able to provide the Production Agency documentation for maintenance, recommended list of spares for repair and overhaul as may be applicable and maintenance training in the vendor's premises, then such items may also be classified under the head 'limited TOT for maintenance support' i.e. "M-ToT".

(ab) OEM shall ensure periodical review of obsolescence, study of the Bill of Items (BOIs) and provide a retrieval scheme during the life span of the product.

(v) **Category-5.** Some of the items for which the ownership of Design and Manufacturing Documentation is available with the OEM, but the OEM is not willing to transfer the technology to the Production Agency may be classified under the head 'Proprietary' items. The list of such items shall be far and few and generally restricted to components/processes specifically developed by the OEM for the licensed product. No item in the product structure which is critical either from the technology point of view or from the point of view of significant value addition or which constitutes a significant relative percentage of the product cost (say > 10%), will be acceptable under the head "Proprietary items" Further, at any stage during the life cycle of the Product, if the OEM intends to discontinue the production of Proprietary items, the complete technical documentation in respect of these items available with the OEM or his sub-contractors will be passed on to the Production Agency to enable indigenous manufacture or establish alternative routes of meeting the requirement.

(l) The OEMs have to ensure that the depth of Technology being transferred shall enable the Production Agency achieve value addition commensurate with a minimum 30% of the relative cost of the licensed Product through indigenous manufacture.

(m) No single sub-system/assembly/sub-assembly which constitutes more than 10% of the cost of Licensed product, shall be without TOT option to the Production Agency. In case, such a sub-system/assembly belongs to the 'bought out' category, then the OEM as a prime bidder of the licensed product shall bid in consortium with the concerned vendors with separate ToT proposal for which items included in the bid directly from the relevant vendor. The bid for supplied/TOT in such a case shall be evaluated as an integrated composite proposal.

(n) OEM shall assist the production agency and take the lead to obtain maintenance related ToT to the maximum extent possible in respect of items covered under category 3 and 4, from his vendor/sub-contractors.

2. Evaluation of ToT

(a) In the technical bid, the depth of ToT being provided will be evaluated for comparison purpose as given below:—

(i) Relative Percentage of cost of Category 1 items (individual & composite)	Not less than 30% (After excluding the Corresponding CKD Kit Cost)
(ii) Relative Percentage of cost of Category 2 items (individual & composite)	
(iii) Relative Percentage of cost of Category 3 items (individual & composite	Not more than 25%

(iv) Relative Percentage of cost of Category 4 items (individual & composite) — Not more than 25%

(v) Relative percentage of cost of Category 5 items (individual & composite) — Not more than 15%

(b) Total percentage of (i) to (v) should be 100%.

(c) Bids of Vendors with relative percentage of cost of items manufactured indigenously based on ToT minus CKD Kit cost being higher than the minimum specified 30% during the IM Phase will only be considered further for commercial evaluation.

3. Phased Manufacturing Programme

(a) Based on the phased TOT absorption planned by production agency, quantity—will be supplied as Fully Finished during Phase-O, quantity—as SKD Kit during Phase-1, and quantity—as CKD Kit during Phase-2 Illustrative phase definitions are given below:—

(i) **Phase**-0. Shall be based on supply of Fully Assembled and tested product by the OEM.

(ii) **Phase-1**. Shall be based on supply of semi Knocked Down (SKD) Kits provided by the OEM. The Semi Knocked Down Kit will consist of sub-systems, assemblies, sub-assemblies, modules etc. assembbled and tested by the OEM and/or his vendors/ sub-contractors. The Production Agency will perform the final level assembly and testing of the product.

(iii) **Phase-2.** Shall be based on supply of Completely Knocked Down (CKD) Kits provided by the OEM in the form of unassembled Bill of Materials. CKD Kit may include certain components/ sub-assemblies Commercially available "Off the Shelf" (COTS) from multiple vendors as fully finished items. Production Agency will carry out assembly and test of individual PCBs/ Modules/ Sub-assemblies/ Assemblies/ Sub-systems etc. from component level and then carry out final assembly and testing of the product.

(b) The timeframe for completion of supplies by the OEM for various Phase of manufacturing is provided at Annexure 1. Conformance of the vendor to the time schedule provided in Annexure I will be one of the important Evaluation Criterion and the bids of OEM's not meeting the time schedules are liable to be rejected.

(c) OEM shall provide complete configuration of SKD and CKD Kits to the Production Agency to realize the Fully Finished Product. CKD Kits required to meet the spares requirement may be furnished separately. The OEM shall also provide estimated man-hours required for various stages of fabrication, assembly and test to realize the Licensed Product from SKD Kit during Phase-1 and CKD kit during Phase-2.

(d) OEM shall permit the production agency to sub contract components/ assemblies to sub contractors of production agency is able to procure components/subassemblies/test equipment directly from OEM's subcontractors/vendors.

4. *Itemised Price List (IPL).* The OEM shall provide Itemised parts list in the Technical Bid and itemized price list (IPL) totaling to end product unit cost in Commercial Bid. Man hours required during various phases of manufacture to realize the fully finished product shall also be provided. The prices of components, fabricated parts, standard items, bought out items, Proprietary items as may be relevant shall be provided for various phases of manufacturing programme. The list shall include the source of supply of compoents, standard items, BOLs and the TOT shall include authorization to production agency to procure these items directly from the sources without going through OEM. **(While this information may be possible for less complex products, it may not be possible if the itemized price list is very voluminous e.g. aircraft to be manufactured under TOT. Therefore this para of the draft procedure may have to be suitably modified on a case to case basis).**

5. Supply of Documentation.

(a) The TOT Documentation to be provided by the OEM shall be in English language and include documentation under the following heads:— (**In case of procurement from Russian vendors, they may be asked to quote translation charges separately to enable the production agencies to decide whether to undertake the translation themselves or to seek the English version of the documentation from the vendor).**

(i) Engineering documentation.

(ii) Software documentation

(iii) Manufacturing documentation.

(iv) Test documentation.

(v) Technical manuals.

(vi) General documentation including Company standards, National and International standards and specifications.

(vii) Additional documentation for repairs center.

(viii) Illustrated parts catalogue.

(ix) Design data—stress, fatigue, performance, qualification, environmental test, life (calendar/total/overhaul), where applicable.

(x) Source identification for BOIs and subcontracted items; standard parts consumables etc.

(xi) Spares parts lists and price catalogue for O,I, and D level maintenances.

(xii) Recertification/requalification test plan, series test, special category test due to change in venue of manufacture where applicable.

(xiii) "red band" units, calibration stands where applicable.

(xiv) quality procedures, plans, ESS, special tests during production other than ATP.

(xv) Data on reliability—FMECA, MTBF, MTBO, MTBUR, MTBR.

(b) The details/definition of Documentation to be provided by the OEM under the above heads is enclosed at Annexure 2.

(c) The OEM is required to furnish 'Compliance Statement' in respect of each type of detailed documentation requirement listed at Annexure 2. Non-Compliance by the OEM against any of the documentation requirements depending upon its criticality will have an adverse bearing in the evaluation of ToT proposal.

(d) The documentation to be supplied by the OEM shall be that which is used by the OEM or it sub contractors for the purpose of manufacturing, assembly and testing of the licensed product from CKD Kit in their Plant. The OEM will ensure completeness and exhaustiveness of the documentation for the purpose and work to be performed by the Production Agency for manufacturing, assembling, testing, installation and commissioning, maintenance and overhaul of the licensed product in his plant. Wherever approval of certification agency is relevant, approved documents will be provided. Certification standards as far as possible will be relevant MIL specs or as mutually agreed with the User's certification Agency.

(e) Documentation as detailed in Annexure 2 to enable the Production Agency procure, manufacture, operate and maintain the SMTs, STEs, Tools, Jigs and Fixtures required for the FF/SKD/CKD manufacturing phase, shall be provided. Wherever software is used, details of the software as per documentation listed at Annexure 2 including source Code shall be provided.

(f) The OEM shall also provide the data in respect of MTBF, MTBO, MTBR, and Reliability of the product being offered.

6. **Product Upgrades.** Technical data including relevant Documentation update in respect of any modifications/improvements/upgrades undertaken by the OEM in the licensed product during the entire life cycle of the product/licence Agreement shall be provided to the Production agency at no additional cost during the entire life cycle of the product.

7. **Training.**

(a) as part of TOT, Industrial Training required by the Production Agency to relies the Fully Finished Product from SKD and CKD kit during various manufacturing phases and for providing component level maintenance support to the Customer shall be provided by the OEM. The Industrial Training shall

be in English language, comprehensive, covering all aspects of design, Manufacture, software, installation and commissioning, system integration and checkout, and component level maintenance of the product down to sub-assembly, modules and PCB level. Apart from classsroom training covering the critical aspects, due emphasis will be given to on-the job training.

(b) All aspects of software are to be comprehensively covered during the software training module with a view to enable Production Agency's software Engineers undergoing training to acquire skills in the use, maintenance and update of the software.

(c) Industrial Training shall be in OEM's plants and/or in the plants of its sub-contractors, associates, principals and subsidiaries as the case may be. OEM shall ensure that such training is organized at the time when OEM has the product under production in its plant or in the plant of its vendors.

(d) OEM shall provide complete details of Industrial Training programme which will include scope, location, number of trainees and the duration for each phase of training in terms of instructor man weeks. Such Industrial Training programme shall be mutually agreed upon between OEM and Production Agency.

(e) Details of the training shall be sub-divided into batches with the date of start for each batch, duration of training etc, as will be agreed upon by OEM and Production Agency subject to over all training schedule. Operation and Maintenance training for end user shall also be provided.

(f) Details of Industrial and user Training programme recommended by the OEM shall be provided as an annex to the technical proposal. OEM shall provide details regarding the training aids and simulators required at the production agency and at user locations. Long term training of production agencies at the design departments of OEMs shall also be included to give a complete exposure to them on design practices of OEM. This will help in design liaison support including/upgrade Mods/Troubleshooting/concessions during the entire life cycle of the product.

8. **Technical Assistance**. As part of ToT, OEM shall provide requisite technical assistance to the production agency during the phased manufacturing programme of the product in India. The details of such technical assistance considered necessary by the OEM shall be provided as an annex to the technical proposal. The total Technical Assistance package shall be in number of man weeks spread over number of missions. OEM shall provide question/answer service and modification advices during the life cycle of the product at no additional cost.

9. **Special Maintenance Tools (SMTs) and Special Test Equipment (STEs).**

(a) OEM shall provide complete technical data of the SMTs and STEs used in the Production assembly, test and Maintenance of Product. This information shall also include the data for manufacture and maintenance of the SMTs and STEs. Details on manufacturing hours and cost details are to be provided.

(b) Details of special category test (recertification, production series testing) along with test rig/test set up shall also be provided. Wherever software is used, details of the software including Source Code shall be provided.

(c) OEM shall provide details of calibration and periodicity of calibration in respect of SMTs and STEs Details of master tester and associated special facilities required for this purpose (with source of supplies) will be provided by the OEM.

10**. Consumables.** List of consumables required for the manufacture/maintenance of product along with cost, source details and life data shall be provided.

11. **Special Technologies/Processes.** The OEM shall mention in the ToT proposal about special technologies and special coatings and treating processes along with details of plant and machinery/running cost etc. *vis-a-vis* specific components/ assemblies. For identifying the augmentation needs to plant and machinery available with the production agency, if required vendor specialists shall visit production agency before submission of technical and commercial bid.

12. **Product Support.** OEM shall ensure that the product support including supply of spares and management of obsolescence for the life of the product (minimum 20 years) shall be available to the production agency/its customer. OEM shall also provide a proposal for transferring the complete product support to the production agency in a phased manner.

13. **Commercial Proposal**. The commercial proposal should be submitted in a separate sealed cover.

14. **Transfer of Technology (ToT).** OEM shall provide commercial offer for providing complete Know-How and documentation for the manufacturing of product from FF, SKD, CKD Kits, Industrial Training and Technical Assistance and the required rights, licenses and authorization to manufacture, use and sell the product. For the Industrial Training and Technical Assistance phase, man week rate for providing training/technical assistance in OEM's own plant (s) or in India may be separately provided.

15. **Supplies**

(a) *FF. SKD and CKD Kits*. OEM shall provide itemized price list for supply of FF, SKD, CKD Kits inclusive of the production mortality used by the OEM during manufacture of product in its plants: Itemised price break-up upto component level it to be .provided at the time of signing of the TCA.

(b) *SMTs, STEs, Tools, Jigs and Fixtures.* OEM shall also provide complete list with itemised prices for SMTs, STEs, Tools, Jigs and fixtures required for the SKD, CKD and IM manufacturing phase and 'O' level, 'I' level and 'D' level maintenance of PRODUCT by the User/Customer.

(c) *Bought Out/Outsourced/Subcontracted items.* OEM shall provide the complete list of items, which are bought out/outsourced/subcontracted for use in the manufacture of PRODUCT along with intemized prices and details of the sources for procurement. Authorization for direct procurement by the

production agency from these sources shall be given so that no development cost or NRE charges are incurred. In case where suggested sources decline to supply the components/materials, OEM shall suggest alternate sources for the procurement of suitable equivalent components/materials.

(d) *Life Cycle Cost*. OEM shall provide the estimated LIFE CYCLE COST of the product and the basis thereof. Factors such as operational hours/year, MTBF, requirement of maintenance spares, mandatory replacements during preventive maintenance schedules etc. may be considered for arriving at life cycle cost.

(e) *Spares.* The OEM shall provide itemized price list of spares required as per three levels of maintenance of PRODUCT as follows:—

(i) 'O' level: —set per— —(product) (total————— product) (set) at field units:

(ii) 'I' level :— set each for a group of ——(product)(———sets for ——— (product) at Intermediate levelof maintenance; and

(iii) 'D' level: ————set for ———(product) at Depot level maintenance.

(iv) OEM should assist the production agency for indigenisation of spares and also provide equivalent NATO Code wherever applicable.

16. **Payment Terms.** OEM shall provide the terms of payment for all supplies including ToT forming part of its commercial proposal. Specimen Format for providing Prices is at Annexure 3. **[alternatively MoD Standard paymentTerms applicable to such RFP's may be specified]**

17. **Delivery Schedule.** OEM shall provide complete schedule for transfer of documentation, providing of Industrial Training and Technical Assistance, supply FF, SKD, CKD, Kits, Spares, SMTs, STEs, Tools, Jigs and Fixtures to match the overall delivery requirement for manufacture and supply of FF product by the Production Agency. The Documentation for a specific phase shall be provided one months prior to the commencement of training for that phase to enable the trainees study documentation prior to the training. Specimen format for providing delivery schedule is at Annexure 1.

18. **Liquidated Damages.** OEM shall undertake to complete its obligations in accordance with the contractual delivery schedule. For delay in delivery of FF, SKD, CKD Kits, spares, SMTs and STEs and delays in the implementation of PMP caused by or attributable to the OEM, the production agency shall be entitled to claim of liquidated damages.

19. **Warranty.**

(a) Documentation: OEM shall warrant that the documentation supplied shall be identical, complete and of equal quality as the documentation used by him in its own activities and shall be accurate and complete for manufacturing, assembling, integrating and testing of the product and shall provide updates including MoDs/improvements during the life cycle of the product/tenure of the Licence Agreement.

(b) Material/equipment/kit supply: Items supplied should be free from any defects arising from faulty material, design or workmanship and should be guaranteed for quality/satisfactory performance for a period of minimum 24 months calendar months from the date when the stores are delivered to Production Agency. During this warranty period, defects arising from faulty material, design or workmanship, shall be remedied by OEM at his own cost. If it becomes necessary, the OEM should replace any defective portion of the goods or replace the material/equipment as a whole without any additional cost to production Agency.

20. **Infringement.** OEM shall indemnify and protect at its own cost, the production agency in respect of cost/claims/legtal claims/liabilities arising from third party claim with regard to the existence of any patent or intellectual & industrial property right of any such parties in India or from other countries.

21. **Performance Guarantee.** OEM shall guarantee the performance of the product to design specifications at the production agency/end customer locations.

22. **Validity.** The proposal will be kept valid for acceptance for a minimum period of——months from the date of submission (*as per the main RFP documen*t).

23. **Cross Reference of para Wise Technical Bid to Commercial Bid**. This should be made available by OEM in the price bid.

24. **Technical Collaboration Agreement(TCA).** After the PNC is concluded, the OEM shall enter into a detailed Technical Collaboration Agreement (TCA) with Production Agency incorporating mutually agreed terms and conditions.

ANNEXURE 1

SPECIMEN FORMAT FOR PROVIDING DELIVERY SCHEDULE

DELIVERY SCHEDULE

No	Description	Qty.	Month After Effective Date	Remarks
1.	Documentation transfer in lots for each phase*			
2.	Training including final assembly of SKD/CKDs to FF (for each phase)			
3.	Operation & Maintenance course training			
4.	Test Equipment delivery			
5.	First system FAT and delivery			
6.	Spare Parts delivery (O' Level Spares)			
7.	Spare parts delivery (1' Level Spares)			
8.	Spare parts delivery ('D' Level Spares)			
9.	Test Equipment delivery for SKD and CKDs			
10.	SKD Kits delivery (Kits per month)			
11.	CKD Kits delivery (Kits per month)			

* Documentation for each phase shall be supplied one month prior to start of training of that phase.

ANNEXURE 2

DOCUMENTATION DETAILS TO BE PROVIDED BY OEM

1. **Engineering Documentation**

(a) Product Network Structure.

(b) Parts List.

(c) Part electrical Lists.

(d) Part Drawings.

(e) Assembly drawings.

(f) Cable looking diagram including its part list, connectors and end preparation details.

(g) Configuration Control; Document.

(h) Stress Reports (static/fatigue), performance reports, type test schedule/ records, type test certificate.

(i) For Coils and Transformer: Winding details, mechanical drawing, purchased parts specification, details for special processes, moulding tools etc.

(j) Drawings of castings/forgings with material details, vendor information, heat treatment details.

(k) Details of vendor items specifically developed by the OEM for the Licensed Product.

(l) For PCB Cards: Schematics, General Assembly drawings, Assembly instructions, SMD location processing files including CAE/CAM files.

(m) Engineering Change proposals covering details of modifications.

(n) Wiring List and details including schematics of sub-assembly/modules/ drawers/racks.

(o) List of components where traceability records are important.

(p) Details of environment tests carried out on equipment and its sub-systems.

(q) With respect to FPGAs the following details are required:

ACTEL or SRAM (depending on the manufacture) design files and the complete schematic with I/o details-in the form of a timing diagram of sim files

2. **Software Documentation**

(a) Software Requirement Specification.

(b) Interface design document.

(c) Software Change proposals.

(d) Firmware support manual for embedded software.

(e) Software environment/tools including third party procurements.

(f) Software Test procedure.

(g) Software user Manual.

(h) Software installation procedure including user settings of pass words, site specific data and any customization code/key or encryption.

(i) IV & details (independent verification & validation).

3. **Manufacturing Documentation.**

(a) Details of B/FPGA programming and testing with co-ordinate details or placement Programming file (fuse file in the standard format), Programming platform Configuration- tools and associated version control document, verification document with check sum details.

(b) Process Sheets including details of special processes and finishes as may be applicable.

(c) Complete set of drawings for tooling, jigs and fixtures as may be applicable.

(d) Photographs of wiring harness/bundling level.

(e) List of shop consumables with details of specifications, source of procurements, data on shelf life.

(f) Assembly tree/sequence, assembly process sheets including assembly settings and checks, assessment to be made, matching sub assemblies, markings.

(g) Any special manufacturing facilities to be set up indicating plant and machinery, test equipment and their vendor details and cost.

(h) Estimated man-hour requirements for assembly and testing at sub-system level.

(i) Inspection stages, quality plan, details of inspection equipment, gauges etc.

(j) Calibration procedrues for inspection equipment, gauges, heat treatment & process equipment (furnace/baths).

4. **Test Documentation**

(a) Factory Test specification, procedure and acceptance test specification, procedure for PCBs modules and equipment with detail instructions on

test set up, user of test and/or simulation equipment and software, execution of test with recording of results.

(b) Complete set of drawings for manufacture of test jigs including ATE fixtures, programmes as applicable.

(c) Complete set of drawings for special to test equipment. This will include manufacturing details as well as software documents.

(d) Special category test details (recertification, production series testing, quality assurance testing.

(e) "Red band" units, calibration procedures for test rigs/equipment.

5. **Technical Manuals**

(a) User hand book detailing operational use of equipment.

(b) User hand book detailing operational use of equipment.

(c) Installation and commissioning manual

(d) Technical description of PCB, Modules, drawers, racks, etc., with details of block diagram, schematic general assembly drawing, timing details, PROM etc.

(e) Maintenance Manual covering.

(f) Permissible wornout dimension limits, acceptance test procedure and acceptance limits of overhauled product.

(g) Repair/salvage schemes, mandatory replacement parts.

(h) Periodic maintenance.

(i) Trouble shooting and fault diagnosis manual. Testing and repair procedure for faulty PCBs upto component level and Peripheral equipment received from the customer. Overhauling manuals including details tests, adjustment, calibration tuning etc., for all levels of equipment.

(j) Structural Part list for complete equipment.

(k) Recommended Spares List, Site supply and depot stocking.

(l) The Maintenance Manual shall cover the product for which the file of drawings/documents are given as well as all vendor items which are part of Licensed Products.

6. **General Documentations (including Standards and Specifications)**

(a) Standard inspection method (inward goods in-process and final acceptance).

(b) Process standards/procedures.

(c) Workmanship standards/procedures.

(d) Quality standards/procedures including incoming inspection procedures, quality manuals.

(e) General procedures as may be applicable.

(f) Qualified Vendor Lists as may be applicable.

(g) Standard tools, jigs and fixtures as may be applicable.

(h) Company standards.

(i) ISO 9001 certification of OEM, vendors & subcontractors/ISO 14000 certification.

7. **Additional Documentation**. Repair centre documents including details of Test Instruments, jigs, fixtures etc., for the End User.

8. Documentation shall be provided in the form of hard copy, in microfilm/microfisch and magnetic media, including that required for making copies of technical manuals as specified by the customer. Documentation shall be provided in English Language.

ANNEXURE 3

SPECIMEN FORMATS FOR PROVIDING PRICES INFORMATION

1. TOT

No.	Item	Price	Remarks
(a)	**Know-how and documentation**	USD—	Payment shall be subject to deduction of taxes in India as per Double Taxation Avoidance Agreement in accordance with the following schedule (depending on the product, various stages of payments should be included without indicating the quantum of payment):— 1. Stage 1.— 2. Stage 2.— 3. Stage 3.— 4. — — — — — —

No.	Item	Price	Remarks
(b)	**Training**		
	(a) Industrial Training covering all aspects for TOT at OEM's facility.	USD—* Instructor man day/ week rate	
	(i) FF Phase		Upto—trainees Max.
	—Working days/week		
	(ii) SKD Phase		Upto—trainees Max.
	—Working days/week		
	(iii) CKD Phase		Upto—trainees Max.
	—Working days/week		
	(iv) Training on design liaison design practices, design disposition on concessions/deviation.		Upto—trainees Max.
	(b) Operational/Field Maintenance Training		Upto—trainees and—Customer trainees Max.
	(i) — working days/week in-and		Upto—trainees and—Customer trainees Max.
	(ii) — working days/week in India		
	(c) Technical Assistance in OEM's Plan to be availed as required	USD—*(Man day/week rate)	Maximum No. of manweeks—spread over No. of mission
	TOTAL		

*Minimum mandatory Training and Technical Assistance which can be provided at no additional cost to be indicated.

2. Cost of FF. SKD and CKD Kits, Spares and SMT/STES.

	Item	Unit Price in USD	Qty.	Total Price in USD	Remarks
(a)	_____-system				
	(a) Fully Finished System				
	(b) SKD Kits				
	(c) CKD Kits				
(b)	Spares				
	(a) 'O' Level				
	(b) 'I' Level				
	(c) 'D' Level				
(c)	SMT's/STE's*				
	(a) Test Jigs/Software for 'O' level maintenance				
	(b) Test Jigs/Software for 'I' level maintenance				
	(c) Test Jigs/Software for 'D' level maintenance				
	(d) Test Jigs and software for manufacture under TOT				
	*Excluding Standard Test Equipment				
	TOTAL				

3. **Itemised SKD Kit Price.**

Part No.	Description	Qty.	Price in USD

4. **Itemised CKD Kit Price.**

Part No.	Description	Qty.	Price in USD

5. **List of Special Maintenance Tools (SMTs) and Special Test Equipment (STEs)**

Part No.	Description	Model	MFR.	Qty.	Price in USD	Remarks
(a)	SMTs and STEs required for Maintenance					
(b)	TOT Test Equipment					

6. **List of Single Source Vendor Assemblies/Components and Proprietary Items**

Components	P/N	Price in USD	Vendor
(a)	Single Source Vendor items		
(b)	Proprietary Items		

7. **Spares**

(a) 'O' Level spare parts List:(_____set per_____)

No.	Item Description	Qty. per set	Item Price in USD	Total price in USD
	Total			

(b) 'I' Level spare parts List:(_____set per_____)

No.	Item Description	Qty. per set	Item Price in USD	Total price in USD
	Total			

(c) 'D'Level spare parts List:(_____set per_____)

No.	Item Description	Qty. per set	Item Price in USD	Total price in USD
	Total			

SCHEDULE III

(THIS PAPER LAYS OUT GENERAL GUIDELINES MAY BE AMENDED IN CONSULTATION WITH PA AND OTHER AGENCIES INVOLVED TO MAKE IT EQUIPMENT SPECIFIC).

Transfer of Technology (ToT)

(IM Kit Based)

1. Preamble.

(a) ToT shall be provided to the designated production Agency.

(b) Technology used shall be current, State of art as used in the Contemporary systems. (Critical technology aspects having bearing on ToT evaluation need to be specified on a case to case basis).

(c) The ToT shall be comprehensive, covering all aspects of design, manufacturing know-how and detailed technical information which will enable the Production Agency to manufacture' assemble, integrate, test, install and commission, use repair, overhaul, support and maintain the license product. Design data shall include the details that are needed to give design disposition during production on deviation/concession; modify/upgrade the licence product and substitute parts and systems of the licence product as required by the certifying agency and the production agency.

(d) The OEM is required to provide the latest version of Configuration Control Document which will provide detailed break down of the product structure in terms of lower level sub-systems/assemblies/sub-assemblies/modules/detail parts/PVBs/wiring diagrams etc. with their latest modification status.

(e) Vendor should submit an undertaking that he would provide & support complete ToT for phased manufacture to the buyer or his authorized Indian Organisation for the System and its sub-systems, modules, assemblies and detailed parts/components.

(f) Vendor should submit an agreement that the buyer or his authorized Indian organisation reserves the right to approach directly the OEMs of the Sub-Systems for similar ToT agreements and that as a Main Contractor he will provide total support.

(g) (To be included on as required basis) Vendor should submit a note to exceed budgetary price for the Transfer of Technology covering the following parameters:—

(i) License fee.

(ii) Documentation.

(iii) Technical Assistance.

(iv) Training.

(v) Materials.

(vi) Spares.

(vii) Tooling.

(viii) Special Tools.

(ix) Standard Tools.

(x) Ground Support & Test Equipment.

(xi) Programme Management.

Vendor may note that this not to exceed budgetary price will be used for commercial evaluation. Vendor selected after technical & commercial evaluation will enter into detailed contractual negotiations on various aspects of the Transfer of Technology to the buyer or his authorized Indian Organisation based on the never exceed budgetary quotes.

(h) It is likely that some of the assemblies/sub-assemblies/modules/PCBs used in the realization of higher level assemblies/sub-systems and systems are manufactured by the OEMs vendors/sub-contractors based on Engineering documentation provided by the OEM. It is also likely that some of these assemblies/modules/PCBs are developed by the OEMs vendors/sub-contractors based on procurement specifications provided by the OEM and therefore their engineering/manufacturing documentation file may not exist with the OEM. Further, as a result of multiplicity of technologies involved and for reasons for price competitiveness arising due to economies of scale, some of the items used in the manufacture of licensed product may be brought out by the OEM from vendors as 'fully finished' against the procurement specification provided by him.

(i) Although, not desirable, some of the components/process specifically developed by the OEMs for use in the manufacture of licensed product may be classified by them as 'Proprietary' and not included within the scope of ToT offered to the Production Agency.

(j) To bring in a fair comparison between the ToT offered by various OEMs as also to have a fair assessment of the depth of technology being transferred, OEMs are required to identify each item (system/sub-system/assembly/sub-assembly/module/detail parts/PCB etc.) in the product structure under the

following categories, as may be applicable and provide information on the relative price for each of the items in the product structure as percentage of product cost.

(i) C*ategory-1*. Items for which complete ToT i.e. Engineering and Manufacturing documentation to enable the Production Agency carryout fabrication, assembly and test of the item from raw material/ lowest component level is being provided by the OEM, may be classified under the head "CTOT".

(i) *Category-2*. Items which are manufactured by the OEM's Sub-contractors based on engineering documentation provided by the OEM and these Engineering Documentation are being provided by the OEM to the Production Agency, may also be classified under the head "CTOT".

(iii) *Category-3*.

(aa) Items in respect of which development and manufacture by the OEM has been sub-contracted to its vendors/sub-contractors based on only the procurement specifications provided by him and the OEM is not in a position to provide any additional technical information to the Production Agency except the procurement drawings/specifications povided by him to his vendors/sub-contractors, may be classified under the head Single Vendor "Sub-contract". For the purpose of evaluating the depth of ToT, it will be presumed that the ToT in respect of these items for indigenous manufacture is not provided.

(ab) However in case, the OEM in collaboration with his vendor/sub-contractor, is able to provide the Production Agency, Maintenance Documentation, the recommended list of spares for repair and overhaul as may be applicable and maintenance training at the vendor's/sub-contractor's premises, then such items may be classified under the head 'Limited ToT for maintenance support' *i.e.* "M-ToT".

(iv) *Category-4*.

(aa) Items including catalogue/standard items sourced by the OEM against his procurement specifications as 'Fully Finished', may be classified as "Bought Out". Evidently ToT for such items for indigenous manufacture will not be available and the OEM will be able to provide only the procurement drawings/specifications. OEM has to ensure the availability of such items or its equivalents during the life cycle of the product. However, in respect of some of the selected items in this category, if the OEM, in collaboration with his vendor, is able to provide the Production Agency documentation for maintenance, recommended list of spares for repair and overhaul as may be applicable and maintenance training in the vendor's premises, then such items may also be classified under the head 'limited ToT for maintenance support' *i.e.* "M-ToT".

(ab) OEM shall ensure periodical review of obsolescence, study of the Bill of Items (BOIs) and provide a retrieval scheme during the life span of the product.

(v) *Category-5.* Some of the items for which the ownership of Design and Manufacturing Documentation is available with the OEM, but the OEM is not willing to transfer the technology to the Production Agency may be classified under the head 'Proprietary' items. The list of such items shall be far and few and generally restricted to components/processes specifically developed by the OEM for the licensed product. No item in the product structure which is critical either from the technology point of view or from the point of view of significant value addition or which constitutes a significant relative percentage of the product cost (say 10%), will be acceptable under the head "Proprietary items". Further, at any stage during the life cycle of the Product, if the OEM intends to discontinue the production of Proprietary items, the complete technical documentation in respect of these items available with the OEM or his sub-contractors will be passed on to the Production Agency to enable indigenous manufacture or establish alternative routes of meeting the requirement.

(l) The OEMs have to ensure that the depth of Technology being transferred shall enable the Production Agency achieve value addition commensurate with a minimum 60% of the relative cost of the licensed Product through indigenous manufacture.

(m) No single sub-system/assembly/sub-assembly which constitutes more than 10% of the cost of Licensed product, shall be without ToT option to the Production Agency. In case, such a sub-system/assembly belongs to the 'Bought Out' category, then the OEM as a prime bidder of the licensed product shall bid in consortium with the concerned vendors with separate ToT proposal for which items included in the bid directly from the relevant vendor. The bid for supplied/ToT in such a case shall be evaluated as an integrated composite proposal.

(n) OEM shall assist the production agency and take the lead to obtain maintenance related ToT to the maximum extent possible in respect of items covered under category 3 and 4, from his vendor/sub-contractors.

2. Evaluation of ToT.

(a) In the technical bid, the depth of ToT being provided will be evaluated for comparison purpose as given below:

(i) Relative Percentage of cost of Category 1 items (individual & composite)

(ii) Relative Percentage of cost of Category 2 items (individual & composite)

} not less than 60%

(iii) Relative Percentage of cost of Category 3 items (individual & composite)
(iv) Relative Percentage of cost of Category 4 items (individual & composite) } not more than 25%

(v) Relative Percentage of cost of Category 5 items} not more than 15%

(b) Total percentage of (i) to (v) should be 100%.

(c) Bids of Vendors with relative percentage of cost of items manufactured indigenously based on ToT being higher than the minimum specified 60% during the IM Phase will only be considered further for commercial evaluation.

3. Phased Manufacturing Programme.

(a) Based on the phased ToT absorption planned by production agency, quantity—will be supplied as Fully Finished during Phase-o, quantity—as SKD Kit duing Phase-1, quantity—as CKD Kit during Phase-2 and quantity—as IM Kit during Phase-3. Illustrative phase definitions are given below:—

(i) **Phase-0.** Shall be based on supply of Fully Assembled and tested product by the OEM.

(ii) **Phase-1.** Shall be based on supply of Semi Knocked down (SKD) Kits provided by the OEM. The Semi Knocked Down Kit will consist of sub-systems, assemblies, sub-assemblies, modules, etc assembled and tested by the OEM and /or his vendors/sub-contractors. The Production Agency will perform the final level assembly and testing of the product.

(iii) **Phase-2.** Shall be based on supply of Completely Knocked Down (CKD) Kits provided by the OEM in the form of unassembled Bill of Materials CKD Kit may include certain components/sub-assemblies Commercially available "Off The Shelf" (COTS) from multiple vendors as fully finished items. Production Agency will carry out assembly and test of individual PCBs/ Modules/ Sub-assemblies/ Assemblies/ Sub-systems etc. from component level and then carry out final assembly and testing of the product.

(iv) **Phase-3.** Shall be based on supply of proprietary items [IM Kit] by the OEM. Production Agency will perform procurement of all the components/ raw materials, and carry out complete fabrication, assembly and testing of the product from raw materials/ component stage through various stages of manufacture.

(b) The time frame for completion of supplies by the OEM for various Phases of manufacturing is provided at Annexure 1. Conformance of the vendor to the time schedule provided in Annexure 1 will be one of the important Evaluation Criterion and the bids of OEM's not meeting the time schedules are liable to be rejected.

(c) OEM shall provide complete configuration of SKD, CKD and IM Kits to the Production Agency to realize the Fully Finished Product. CKD Kits required to meet the spares requirement may be furnished separately. The OEM shall

also provide estimated man-hours required for various stages of fabrication, assembly and test to realize the Licensed Product from SKD Kit during Phase-1, CKD Kit during Phase-2 and IM kit during Phase-3.

(d) OEM shall permit the production agency to sub contract components/ assemblies to sub contractors of production agency/ agencies. ToT shall be such that the production agency is able to procure components/ subassemblies/raw material/test equipment directly from OEM's subcontractors/vendors.

4. Itemised Price List (IPL). The OEM shall provide Itemised parts list in the technical Bid and itemized price list (IPL) totaling to end product unit cost in Commercial Bid. Man hours required during various phases of manufacture to realize the fully finished product shall also be provided. The prices of raw materials, components, fabricated parts, standard items, bought out items, Proprietary items as may be relevant shall be provided for various phases of manufacturing programme. The list shall include the source of supply of raw material/components, standard items, BOIs and the ToT shall include authorization to production agency to procure these items directly from the sources without going through OEM. **(While this information may be possible for less complex products, it may not be possible if the itemized price list is very voluminous e.g. aircraft to be manufactured under ToT. Therefore this para of the draft procedure may have to be suitably modified on a case to case basis).**

5. Supply of Documentation.

(a) The ToT Documentation to be provided by the OEM shall be in English language and include documentation under the following heads:— (In case of procurement from Russian vendors, they may be asked to quote translation charges separately to enable the production agencies to decide whether to undertake the translation themselves or to seek the English version of the documentation from the vendor).

(i) Engineering documentation.

(ii) Software documentation.

(iii) Manufacturing documentation.

(iv) Test documentation.

(v) Technical Manuals.

(vi) General documentation including Company standards, National and International standards and specifications.

(vii) Additional documentation for repairs centre.

(viii) Illustrated parts catalogue.

(ix) Design data-stress, fatigue, performance, qualification, environmental test, life (calendar/ total/ overhaul), where applicable.

(x) Source identification for BOIs and subcontracted items; standard parts consumables etc.

(xi) Spares parts lists and price catalogue for O,I, and D level maintenances.

(xii) Recertification/requalification test plan, series test, special category test due to change in venue of manufacture where applicable.

(xiii) "Red band" units, calibration stands where applicable.

(xiv) Quality pocedures, plans, ESS, Special tests during production other than ATP.

(xv) Data on reliability—FMECA, MTBF, MTBO, MTBUR, MTBR.

(b) The details/definition of Documentation to be provided by the OEM under the above heads is enclosed at Annexure-2.

(c) The OEM is required to furnish 'Compliance Statement' in respect of each type of detailed Documentation requirement listed at Annexure-2. Non-Compliance by the OEM against any of the documentation requirements depending upon its criticality will have an adverse bearing in the evaluation of ToT proposal.

(d) The documentation to be supplied by the OEM shall be that which is used by the OEM or it sub-contractors for the purpose of manufactuing, assembly and testing of the licensed product in their Plant. The OEM will ensure completeness and exhaustiveness of the documentation for the purpose and work to be performed by the Production Agency for manufacturing, assembling, testing, installation and commissioning, maintenance and overhaul of the licensed product in his plant. Wherever approval of certification agency is relevant, approved documents will be provided. Certification standards as far as possible will be relevant MIL Specs or as mutually agreed with the User's Certification Agency.

(e) Documentation as detailed in Annexure-2 to enable the Production Agency procure, manufacture, operate and maintain the SMTs, STEs, Tools, Jigs and Fixtures required for the FF/SKD/CKD manufacturing phase, shall be provided. Wherever software is used, details of the software as per documentation listed at Annexure-2 including Source Code shall be provided.

(f) The OEM shall also provide the data in respect of MTBF, MTBO, MTBR, and Reliability of the product being offered.

6. Product Upgrades. Technical data including relevant Documentation update in respect of any modifications/improvements/upgrades undertaken by the OEM in the licensed product during the entire life cycle of the product/licence Agreement shall be provided to the Production agency at no additional cost during the entire life cycle of the product.

7. Training.

(a) As part of ToT, Industrial Training required by the Production Agency to realise the Fully Finished Product from SKD, CKD and IM kits and for provoding component level maintenance support to the Customer shall be

provided by the OEM. The Industrial Training shall be in English language, comprehensive, covering all aspects of design, Manufacture, software, installation and commissioning, system integration and checkout, and component level maintenance of the product down to sub-assembly, modules and PCB level. Apart from classroom training covering the critical aspects, due emphasis will be given to on-the-job training.

(b) All aspects of software are to be comprehensively covered during the software training module with a view to enable Production Agency's Software Engineers undergoing training to acquire skills in the use, maintenance and update of the software.

(c) Industrial Training shall be in OEM's plants, and/ or in the plants of its sub-contractors, associates, principals and subsidiaries as the case may be. OEM shall ensure that such training is organized at the time when OEM has the product under production in its plant or in the plant of its vendors.

(d) OEM shall provide complete details of Industrial Training programme which will include scope, location, number of trainees and the duration for each phase of training in terms of instructor man weeks. Such Industrial Training programme shall be mutually agreed upon between OEM and Production Agency.

(e) Details of the training shall be sub divided into batches with the date of start for each batch, duration of training etc, as will be agreed upon by OEM and Production Agency subject to over all training schedule. Operation and Maintenance training for end user shall also be provided.

(f) Details of Industrial and user Training programme recommended by the OEM shall be provided as an annex to the technical proposal. OEM shall provide details regarding the training aids and simulators required at the production agency and at user locations. Long term training of production agencies at the design departments of OEMs shall also be included to give a complete exposure to them on design practices of OEM. This will help in design liaison support including/ upgrade Mods/ Troubleshooting/ concessions during the entire life cycle of the product.

8. Technical Assistance. As part of ToT, OEM shall provided requisite technical assistance to the production agency during the phased manufacturing programme of the product in India. The details of such technical assistance considered necessary by the OEM shall be provided as an annex to the technical proposal. The total Technical Assistance package shall be in number of man weeks spread over number of missions. OEM shall provide question/ answer service and modification advices during the life cycle of the product at no additional cost.

9. Special Maintenance Tools (SMTs) and Special Text Equipment (STEs).

(a) OEM shall provide complete technical data of the SMTs and STEs used in the Production assembly, test and Maintenance of Product. This information shall also include the data for manufacture and maintenance of the

SMTs and STEs. Details on manufacturing hours and cost details are to be provided.

(b) Details of special category test (recertification, production series testing) along with test rig/test set up shall also be provided. Wherever software is used, details of the software including Source Code shall be provided.

(c) OEM shall provide details of calibration and periodicity of calibration in respect of SMTs and STEs. Details of master tester and associated special facilities required for this purpose (with source of supplies) will be provided by the OEM.

10. Consumables. List of consumables required for the manufacture/maintenance of product along with cost, source details and life data shall be provided.

11. Special Technologies/Processes. The OEM shall mention in the ToT proposal about special technologies and special coatings and treating processes along with details of plant and machinery/running cost etc. vis-a-vis specific components/ assemblies. For identifying the augmentation needs to plant and machinery available with the production agency, if required vendor specialists shall visit production agency before submission of technical and commercial bid.

12. Product Support. OEM shall ensure that the product support including supply of spares and management of obsolescence for the life of the product (minimum 20 years) shall be available to the production agency/its customer. OEM shall also provide a proposal for transferring the complete product support to the production agency in a phased manner.

13. Commercial Proposal. The commercial proposal should be submitted in a separate sealed cover.

14. Transfer of Technology (ToT). OEM shall provide commercial offer for providing complete Know-How and documentation for the manufacturing of product from FF, SKD, CKD Kits and IM phase, Industrial Training and Technical Assistance and the required rights, licenses and authorization to manufacture, use and sell the product. For the Industrial Training and Technical Assistance phase; man week rate for providing training/technical assistance in OEM's own plant(s) or in India may be separately provided.

15. Supplies

(a) FF, SKD and CKD and IM Kits. OEM shall provide itemized price list for supply of FF, SKD, CKD and IM Kits inclusive of the production mortality used by the OEM during manufacture of product in its plants: Itemised price break-up upto component level is to be provided at the time of signing of the TAC.

(b) SMTs, STEs, Tools, Jigs and Fixtures. OEM shall also provide complete list with itemised prices for SMTs STEs, Tools, Jigs and Fixtures required for the SKD, CKD and IM manufacturing phase and 'O' level, 'I' level and 'D' level maintenance of Product by the User/Customer.

(c) *Bought Out/Outsourced/Subcontracted Items.*— OEM shall provide the complete list of items, which are bought out/outsourced/subcontracted for use in the manufacture of PRODUCT along with itemized prices and details of the sources for procurement. Authorization for direct procurement by the production agency from these sources shall be given so that no development cost or NRE charges are incurred. In case where suggested sources decline to supply the components/materials, OEM shall suggest alternate sources for the procurement of suitable equivalent components/materials.

(d) *Life Cycle Cost.*—OEM shall provide the estimated LIFE CYCLE COST of the product and the basis thereof. Factors such as operational hours/year, MTBF, requirement of maintenance spares, mandatory replacements during preventive maintenance schedules etc. may be considered for arriving at life cycle cost.

(e) *Spares.*—The OEM shall provide itemized price list of spares required as per three levels of maintenance of PRODUCT as follows:—

(i) 'O' level:____ set per___ {product} (total ___ {product} sets) at field units:

(ii) 'I' level:___set each for a group of {product} (___ sets for __ __ {product}) at Intermediate level of maintenance; and

(iii) 'D' level: ____ set for____ {product} at Depot level maintenance.

(iv) OEM should assist the production agency for indigenisation of spares and also provide equivalent NATO code wherever applicable.

16. Payment Terms. OEM shall provide the terms of payment for all supplies including TOT forming part of its commercial proposal. Specimen Format for Providing Prices is at Annexure 3. [Alternatively MoD Standard Payment Terms applicable to such RFP's may be specified]

17. Delivery Schedule. OEM shall provide complete schedule for transfer of documentation, providing of Industrial Training and Technical Assistance supply FF, SKD, CKD Kits, Spares, SMTs, STEs, Tools, Jigs and Fixtures to match the overall delivery requirement for manufacture and supply of FF product by the Production Agency. The Documentation for a specific phase shall be provided one month prior to the commencement of training for that phase to enable the trainees study documentation prior to the training. **Specimen format for providing delivery schedule is at Annexure 1**.

18. Liquidated Damages. OEM shall undertake to complete its obligations in accordance with the contractual delivery schedule. For delay in delivery of FF, SKD, CKD IM Kits, Spares, SMTs and STEs and delays in the implementation of PMP caused by or attributable to the OEM, the Production agency shall be entitled to claim of liquidated damages.

19. Warranty.

(a) Documentation: OEM shall warrant that the documentation supplied shall be identical, complete and of equal quality as the documentation used by him in

its own activities and shall be accurate and complete for manufacturing, assembling, integrating and testing of the product and shall provide updates including Mods/improvements during the life cycle of the product/tenure of the Licence Agreement.

(b) Material/equipment/kit spupply: Items supplied should be free from any defects arising from faulty material. design or workmanship and should be guaranteed for quality/satisfactory performance for a period of minimum 24 months calendar months from the date when the stores are delivered to Production Agency. During this warranty period, defects arising from faulty material, design or workmanship, shall be remedied by OEM at his own cost. If it becomes necessary, the OEM should replace any defective portion of the goods or replace the material/equipment as a whole without any additional cost to production Agency.

20. Infringement. OEM shall indemnify and protect at its own cost, the production agency in respect of cost/claims/legal claims/liabilities arising from third party claim with regard to the existence of any patent or intellectual & industrial property right of any such parties in India or from other countries.

21. Performance Guarantee. OEM shall guarantee the performance of the product to design specifications at the production agency/end customer locations.

22. Validity. The proposal will be kept valid for acceptance for a minimum period of_____ months from the date of submission (as per the main REP document).

23. Cross Reference of Para Wise Technical Bid to Commercial Bid. This should be made available by OEM in the price bid.

24. Technical Collaboration Agreement (TCA) .After the PNC is concluded, the OEM shall enter into a detailed Technical Collaboration Agreement (TCA) with Production Agency incorporating mutually agreed terms and conditions.

ANNEXURE 1

SPECIMEN FORMATS FOR PROVIDING DELIVERY SCHEDULE

DELIVERY SCHEDULE

No.	Description	Qty	Month After Effective Date	Remarks
1.	Documentation transfer in lots for each phase.*			
2.	Training including final assembly of SKD/CKDs to FF (for each phase)			
3.	Operation & Maintenance course training			
4.	Test Equipment delivery			
5.	First System FAT and delivery			
6.	Spare Parts delivery ('O' Level Spares)			
7.	Spare Parts delivery ('I' Level Spares)			
8.	Spare Parts delivery ('D' Level Spares)			
9.	Test Equipment delivery for SKD and CKDs			
10.	SKD Kits delivery (— kits per month)			
11.	CKD Kits delivery (—kits per month)			
12.	IM Kits delivery (—kits per month)			

*Documentation for each phase shall be supplied one month prior to start of training of that phase.

ANNEXURE 2

DOCUMENTATION DETAILS TO BE PROVIDED BY OEM

1. Engineering Documentation.

(a) Product Network Structure.

(b) Parts List.

(c) Part Electrical Lists.

(d) Part Drawings.

(e) Assembly Drawings.

(f) Cable looking diagram including its part list, connectors and end preparation details.

(g) Configuration Control; Document.

(h) Stress Reports (static/fatigue), performance reports, type test Schedule/ records, type test certificate.

(i) For Coils and Transformer: Winding details, mechanical drawing, purchased parts specification, details of special processes, moulding tools etc.

(j) Drawings of castings/ forgings with material details, vendor information heat treatment details.

(k) Details of vendor items specifically developed for the Licensed Product.

(l) For PCB Cards: Schematics, General Assembly Drawings, Assembly instructions, PCB blank documents, Drilling Drawings, Punch tape and master film complete with Gerber data, SMD location processing files including CAE/ CAM files.

(m) Engineering Change proposals covering details of modifications

(n) Wiring List and details including schematics of sub-assembly/modules/ drawers/racks.

(o) Bill of Materials and Ordering Specification with vendor addresses including OEMS specifying MIL grade details.

(p) Details of all non-MIL Grade components and their screening procedures.

(q) Full technical details of ASICS and Hybrid Microcircuits including manufacturing documents.

(r) Full technical details of Proprietary Items if any (including manufacturing documents).

(s) List of components where traceability records are important.

(t) Details of environment tests carried out on equipment and its sub-systems.

(u) With respect to FPGAs the following details are required.

(v) ACTEL or SRAM (depending on the manufacture) design files and the complete schematic with i/o details—in the form of a timing diagram of sim files.

(w) Material data sheets—chemical composition/mechanical-properties-for all metallic/non-metallic materials and consumables.

2. Software Documentation

(a) Software Requirement Specification.

(b) Interface design document.

(c) Software Product Specification including Source code with comments.

(d) Interface design document.

(e) Software Change proposals.

(f) Firmware support manual for embedded software.

(g) Software environment/tools including third party procurements.

(h) Software Test procedure.

(i) Software User Manual.

(j) Software installation procedure including user settings of pass words, site specific data and any customization code/key or encryption.

(k) IV & V details (independent verification & validation).

3. Manufacturing Documentation

(a) Operation sequence sheets.

(b) Details of B/FPGA programming and testing with co-ordinate detail for placement. Programming file (fuse file in the standard format), Programming Platform Configuration—tools and associated version control document, verification document with check sum details.

(c) Process Sheets including details of special processes and finishes.

(d) Complete set of drawings for tooling jigs and fixtures.

(e) Programme for production (e.g. NC tapes/ s/w as applicable).

(f) Photographs of wiring harness/bundling level.

(g) List of shop consumables with details of specifications; source of procurements, data on shelf life.

(h) Assembly tree/sequence, assembly process sheets including assembly settings and checks, assessments to be made, matching sub assemblies markings.

(i) Any special manufacturing facilities to be set up indicating plant and machinery, test equipment and their vendor details and cost.

(j) Estimated man-hour requirements for fabrication, assembly and testing at sub-system level.

(k) Inspection stages, quality plan details of inspection equipment, gauges etc.

(l) Calibration procedures for inspection equipment, gauges, heat treatment & process equipment (furnace/baths).

4. Test Documentation

(a) Factory Test specification, procedure and acceptance test specification, procedure for PCBs, modules and equipment with detail instructions on test set up, use of test and/or simulation equipment and software, execution of test with recording of results.

(b) Complete set of drawings for manufacture of test jigs including ATE fixtures, programmes as applicable.

(c) Complete set of drawings for special to test equipment. This will include manufacturing details as well as software documents.

(d) Special category test details (recertification, production series testing, quality assurance testing).

(e) "Red band" units, calibration procedures for test rigs/equipment.

5. Technical manuals

(a) User hand book detailing operational use of equipment.

(b) Installation and commissioning manual.

(c) Technical description of PCB, Modules, drawers, racks, etc., with details of block diagram, schematic general assembly drawing, timing details, PROM etc.

(d) Maintenance Manual covering.

(e) Permissible wornout dimension limits, acceptance test procedure and acceptance limits of overhauled product.

(f) Repair/salvage schemes, mandatory replacement parts.
Periodic maintenance.

(g) Trouble shooting and fault diagnosis manual. Testing and repair procedure for faulty PCBs upto component level and Peripheral equipment received from the customer.

(h) Overhauling manuals including details tests, adjustment, calibration tuning etc., for all levels of equipment.

(i) Structural Part list for complete equipment.

(j) The Maintenance Manual shall cover the product for which the file of drawings/documents are given as well as all vendor items which are part of Licensed Product.

6. General Documentation (including Standards and Specifications)

(a) Standard inspection method (inward goods in-process and final acceptance.)

(b) Material/component and product standards including general fasteners and consumables.

(c) Process standards/procedures.

(d) Workmanship standards/procedures.

(e) Quality standards/procedures including incoming inspection procedures, quality manuals.

(f) General procedures.

(g) Qualified Vendor Lists.

(h) Standard tools, jigs and fixtures.

(i) Design standards/company standards.

(j) ISO 9001 certification of OEM, vendors & subcontractors/ISO 14000 certification.

7. Additional Documentation. Repair centre documents including details of Test Instruments, Jigs, fixtures etc., for the End User.

8. Documentation shall be provided in the form of hard copy, in microfilm/microfisch and magnetic media, including that required for making copies of technical manuals as specified by the customer. Documentation shall be provided in English Language.

ANNEXURE 3

SPECIMEN FORMATS FOR PROVIDING PRICES INFORMATION

1. TOT

Item	Price	Remarks
(a) Know-how and documentation	USD—	Payment shall be subject to deduction of taxes in India as per Double Taxation Avoidance Agreement in accordance with the following schedule (depending on the product, various stages of payments should be included without indicating the quantum of payment): 5. Stage 1..... 6. Stage 2..... 7. Stage 3..... 8. .....
(b) Training		
(a) Industrial Training covering all aspects for TOT at OEM's facility.	USD—	
*Instructor man day/weekrate		Upto—trainees Max
(i) FF Phase — working days/week		
(ii) SKD Phase working days/week		
(iii) CKD Phase—working days/week		Upto—trainees Max
(iv) IM Phase—working days/week		Upto—trainees Max
(v) Training on design liaison, design practices, design disposition on concessions/ deviation.		Upto—trainees Max
(b) Operational/Field Maintenance Training		Upto—trainees Max
(i) —working days/week in— and		Upto—trainees and— Customer trainees Max
(ii) —working days/week in India		Upto-trainees and— Customer trainees Max

	Item	Price	Remarks
(c)	Technical Assistance in OEM's Plant to be availed as required	USD—* (Man day/ week rate)	Maximum No. of manweeks—spread over No. of mission
	Total		

*Minimum mandatory Training and Technical Assistance which can be provided at no additional cost to be indicated.

2. Cost of FF SKD and CKD Kits, spares and SMT/STEs.

	Item	Unit Price in USD	Qty.	Total Price in USD	Remarks
(a)	—System				
	(a) Fully Finished System				
	(b) SKD Kits				
	(c) CKD Kits				
(b)	Spares				
	(a) 'O' Level				
	(b) 'I' Level				
	(c) 'D' Level				
(c)	SMT's/STE's*				
	(a) Test Jigs/Software for 'O' level maintenance				
	(b) Test Jigs/Software for 'I' level maintenance				
	(c) Test Jigs/Software for 'D' level maintenance				
	(d) Test Jigs and Software for manufacture under TOT				
	Total				

*Excluding Standard Test Equipment

3. Itemised SKD Kit Price

Part No.	Description	Qty.	Price in USD

4. Itemised CKD Kit Price

Part No.	Description	Qty.	Price in USD

5. List of Special Maintenance Tools (SMTs) and Special Test Equipments (STEs)

Part No.	Description	Model	MFR.	Qty.	Price in USD	Remarks
(a) SMTs and STEs required for Maintenance						
(b) TOT Test Equipment						

6. List of Single Source Vendor Assemblies/Components and Propreitary Items

Components	P/N	Price in USD	Vendor
(a) Single Source Vendor items			
(b) Proprietary Items			

7. Spares

(a) 'O' Level spare parts list: —

No.	Item Description	Qty. per set	Item Price in USD	Total Price in USD
	Total			

(b) 'I' Level spare parts list: —

No.	Item Description in USD	Qty. per set	Item Price in USD	Total Price in USD
	Total			

(c) 'D' Level spare parts list: —

No.	Item Description in USD	Qty. per set	Item Price in USD	Total Price in USD
	Total			

ANNEXURE II

MOST IMMEDIATE
AUDIT PARA

MINISTRY OF DEFENCE

Subject: Finalisation of Action Taken Notes on Pending Audit Paras.

C&AG have invited attention towards huge pendency and inordinate delays in the submission of ATNs by the Ministries/Departments in respect of Audit Paras covered under 105th Report of the PAC and other C&AG Reports, and have requested Ministries/ Departments for ensuring that ATNs duly vetted by Audit are submitted to the Lok Sabha Secretariat. The inordinate delay in furnishing ATNs by Ministry of Defence continues to be a matter of serious concern with PAC. In case of unavoidable delay in finalization of ATNs, extension of time may be sought in each case from PAC indicating *inter alia* the reasons of delay. The Audit has also emphasized that the Ministry or concerned organisation should point out failure of individuals and deficiency in system to prevent delay in submission of ATNs in each case. It is, therefore, requested that immediate steps may kindly be taken in Ministry of Defence to finalise the ATNs pending in respect of Audit Paras and submit them to Monitoring Cell of Ministry of Finance after duly vetted by Audit without further delay. Defence Secretary had also emphasized the point in the last meeting convened by him on 5.12.2001.

Sd/-
(K. G. GOEL)
Joint Secretary (ESW)

JS (G) — In respect of Army & Air Force
JS (O) — In respect of 'O' Naval Wings
JS (AP) — In respect of Defence Procurement Board
JS (Trg.) & CAO)
JS (E)
JS (P&C)
JS (Coord.) — In respect of DDP&S
CCR&D — In respect of DRDO
Secy. BRDB

MOD I.D. No. 21(10)/2001/D(Coord.) dated the 23rd April, 2002

Dir. (Pen.), Dir. (Works), Dir. (Res.) for similar action

ANNEXURE III

NO. 3(1)/2001/D(S-II)
Government of India
Ministry of Defence
(Department of Defence Production & Supplies)
South Block, New Delhi

July 17, 2003.

OFFICE MEMORANDUM

Subejct: Rationalisation of DRDO Laboratories.

Consequent upon the acceptance of the recommendations of the Group of Ministers on National Security regarding Rationalisation of DRDO Laboratories, the Government had constituted a Group of Officers *vide* DDP&S OM No. 3(1)/2001/D (S-II) dated 14.8.2001 to examine the issue and made its recommendations to the Defence Minister for his consideration. The Group of Officers after due deliberations have made their recommendations under three headings given here as under:—

1. DRDO Laboratories

2. Interaction between the DRDO and the Services

3. DRDO and Production Agencies

2. On the basis of these recommendations, the role and functions of DRDO Laboratories is redefined with the establishment of new fora as given here under the aforesaid three headings.

(1). DRDO Laboratories

(A) Clustering of laboratories in the same generic areas shall be formalised in order to maximise interaction with laboratories with similar works and to minimise duplication of work. These clusters would have Councils internal to DRDO, Chaired by the DGR&D or CCR&D. These clusters will be for Aeronautical, Agricultural Sciences, Biosciences, Combat Engineering, Computer Science, Electronic, Material Sciences, Missiles and Naval Sciences. The details of these clusters are given in **Appendix-IX.**

The Terms of Reference for these Councils will be as follows:—

— To provide thrust to the development of the core technologies.

— To synergise the working of the labs in the cluster.

— To address common technological and project related issues.

— To address common techno-managerial issues.

The Council shall meet thrice a year.

(B) It has also been decided to constitute 3 Integrated Research Councils (IRCs) for Service Laboratories. The IRCs decided to be constituted are:—

(i) For agricultural and food sciences comprising of the following labs—DFRL, FRL., DARL.

(ii) For Life and biosciences comprising of the following laboratories—INMAS, DIPAS, DIPR, DEBEL, DRDE, DRLT

(iii) For high altitute engineering and logistics comprising of the following labs—SASE; FRI, DIPAS, R&D (E), DMSRDE. The compostion of these Councils has been given in Appendices I, II & III.

The Terms of Reference of the IRCs will be as follows:—

(i) To provide R&D direction to the requirement of users in short, medium and long term in the respective area.

(ii) To recommend science and technological plans of the laboratories.

(iii) To monitor the progress in the area of interest and submit a report on the same.

(iv) To make recommendations on the infrastructure and other managerial requirements of the laboratories.

The IRCs will meet thrice a year and their recommendations will be sent to DG, R&D for implementation.

2. Interaction between the DRDO and the Services

In order to ensure effective interaction between DRDO & Services, the following has been decided:—

(a) *Review of DRDO Projects*

There shall be biannual review of all major projects/programmes by the respective Vice-Chiefs. Review reports shall be submitted to DG R&D and the respective Chiefs.

(b) *Monitoring of Staff Projects*

(i) There shall be regular monitoring of Staff projects by specially constituted Steering Committees as has already been done in most projects. These Steering Committees shall be chaired by nominated PSOs and co-chaired by the associated CCR&D.

(ii) Most major projects and programmes, especially those jointly funded by DRDO and the Services, have multi-tier monitoring structures with the Apex Committee being chaired by SA to RM and the Executive Committees chaired by Vice or Deputy Chiefs.

(iii) Major programmes like LCA and Missiles have a Board structure with sufficient Services representation.

(c) *Defence R&D Panels*

It has been decided to constitute the following five Defence R&D Panels:—

(i) Aeronautics R&D Panel

(ii) Electronics R&D Panel (Radars, Communication & EW)

(iii) Electro Optics R&D Panel

(iv) Armament and Combat Engineering R&D Panel

(v) Naval Systems R&D Panel

The compostion of these R&D Panels has been given in **Appendices IV, V, VI, VII & VIII** respectively.

The Terms of Reference for these R&D Panels shall be as follows:—

(i) To make recommendations on systems and technologies of interest and requirement to the three Services, that could be developed indigenously.

(ii) to provide long-term vision to these laboratories and link services Perspective Plans to DRDO technology development.

(iii) To differentiate between high and low end technologies and identify appropriate agencies to develop these technologies.

(iv) To identify appropriate agencies for design and production of items of low-end technology and product improvement (Base Workshops, Vendors developed by OF and DGQA etc.)

The R&D Panels will meet thrice in a year. Their reports will be submitted to SA to RM. After discussion in the Defence R&D Board, the final recommenations will be presented to the Defence R&D Council.

3. DRDO and Production Agencies

It has been decided to constitute Management Councils for the clusters mentioned against each for creating forums to improve interaction and create synergy between the Prodcution Agencies and DRDO laboratories and to realistically implement the concurrent engineering process of many of the DRDO Projects:—

Generic Area	Clusters (DPSU/DRDO Lab./OF)
(i) Aeronautics	—HAL, *ADA, ADE, GTRE
(ii) Armaments	—OF, ARDE, HEMRI, TBRI
(iii) Combat Engneering	—OF, BEML, CVRDE, VRDE, (R&D (Engrs.)
(iv) Communication	—BEL (Bangalore & Panchkula) CAIR, DEAL
(v) EW/Avionics	—BEL (Bangalore & Hyderabad), DLRL, DARE
(vi) Missiles	—BDL, DRDL, RCL, ASI
(vii) Naval	BEL, NPOL, NSTL
(viii) Radar	BEL (Bangalore & Ghaziabad) LRDE

*Selected representatives from HAL Divisions and other labs can be invited depending upon the agenda of MC meetings.

These Management Councils would act like mini Boards of Directors and empowered accordingly except in the exercise of financial powers. These will be chaired by the CMDs of the DPSUs and co-chaired by the nominated CCR&D and draw membership from DPSUs, DRDO labs. Ordnance Factories and Services. There will be

a Member-Secretary of the Management Councils, who will be nominated by the CMDS/Chairmen of the DPSUs/OFB, as the case may be. The concerned DPSUs/OFB will seek nomination on these Councils from the associated laboratories of DRDO & Services and notify the Management Councils, indicating the powers to be exercised, which should be similar to the Board of Directors of the concerned DPSU/OFB.

The Management Councils shall address the following issues:

(a) Communication and interaction
(b) Technology transfer and obsorption
(c) Concurrent Engineering, production, schedules and priorities
(d) Development and documentation
(e) Selection of vendors
(f) Technology import by the Development Agencies (DAs) and PSUs
(g) Sharing of test facilities, trials and evaluation
(h) Product improvement and upgrades

3. DRDO will progressively focus on critical technologies in which expertise is neither available in the country nor can be procured from alternate sources. The concept of core/critical technologies will not be static but a dynamic one.

4. I order to provide secretarial support and an interface with the Services, an officer of the rank of Brigadier will be deputed and placed on tenure basis with the DRDO on the Naval model. The Service concerned will provide posts for the purpose.

5. The above arrangements for interaction/nationlisation would be reviewed after a period of two years by the Group of Officers mentioned in para 1.

6. This issues with the approval of Raksha Mantri.

Sd/-
Joint Secretary to Govt. of India

Distribution

As per list enclosed:

1. Defence Secretary
2. SA to Rm
3. Secretary (Defence Finance)
4. vice Chief of Army Staff, Army Headquarters
5. Vice Chief of Naval Staff, Naval Headquarters
6. Vice Chief of Air Staff, Air Headquarters
7. DGOA/DGAOA
8. CMDs of all DPSUs
9. Chairman, OFB, Kolkata

Copy for information to:–

1. PS to RM/RURM/RRM
2. Sr. PPS to Secretary (DP&S)
3. PPS to Addl. Secretary (DP&S)
4. All Joint Secretaries in the MOD

APPENDIX I

IRC (FOOD AND AGRICULTURE)

Quarter Master General.....Chairman

CCR&D (MLS).....Co-Chairman

DGST

DG (Remote Vet. Corps.)

DG, Military Farms

Reps. from Army, Air Force and Navy

Rep., Defence Finance

Director, Life Sciences

Directors, FRL, DARL, DFRL and DRL (T)

Coordinator at the rank of a Brigadier— Member Secretary

APPENDIX II

IRC (BIOMEDICAL TECHNOLOGY)

DGAFMS	—	Chairman
CCR&D (MLS)	—	Co-Chairman
DGMS (Army) or Rep.		
DGMS (Navy) or Rep.		
DGMS (Air Force) or Rep.		
DG (Recruitment)		
DDMS, Northern Command		
Director, Institute of Aviation Medicine		
Rep. of Defence Finance		
Director Life Sciences		
Directors DIPAS, INMAS, DEBEL, DIPR, DRDE & DRL (T)		
Coordinator at the rank of a Brigadier	—	Member Secretary

APPENDIX III

IRC (HIGH ALTITUDE LOGISTICS AND ENGINEERING)

MGO	—	Chairman
CC R&D (ACE)	—	Co-Chairman
CC R&D (NLS)		
GOC14 Corps.		
E-in-C		
ADG-QL		
DDMS Northern Command		
Rep. QMG (for high altitude food supply)		
Rep., Defence Finance		
Director of Materials		
Director of Combat Vehicle & Engineering		
Directors, R&D Engineers, SASE, FRL and DMSRDE		
Coordinator at the rank of a Brigadier—Member Secretary		

APPENDIX II

IRC (BIOMEDICAL TECHNOLOGY)

DGAFMS	—	Chairman
CCR&D (MLS)	—	Co-Chairman

DGMS (Army) or Rep.

DGMS (Navy) or Rep.

DGMS (Air Force) or Rep.

DG (Recruitment)

DDMS, Northern Command

Director,
Institute of Aviation Medicine

Rep. of Defence Finance
Director Life Sciences

Directors DIPAS, INMAS, DEBEL, DIPR, DRDE & DRL (T)

Coordinator at the rank of a Brigadier – Member Secretary

APPENDIX IV

AERONAUTICS R&D PANEL

VCAS/DCAS	—	Chairman
CC R&D (Tech)	—	Co-Chairman
DCNS		
DCOAS		
AOM		
Chairman		HAL
Chief Executive		CEMILAC
DGAQA		
Dir. Aeronautics		

Directors- ADE, GTRE, ADRDE, CABS, CASSA, DMRL and DARE

Coordinator at the rank of an Air Commodore—Member Secretary.

APPENDIX V

ELECTRONICS R&D PANEL
(RADARS, COMMUNICATION & EW)

DCOAS (P&S)	—	Chairman
CC R&D (Electronics)	—	Co-Chairman

SO-in-C

Rep. of DG Artillery

Rep. of DGAD Arty.

Rep. of DG (MF)

DCNS

DCAS

CMD, BEL

CMD, ITI

CMD, ECIL

DGQA (Electronics)/Rep.

DG DIA/Rep.

DG EME/Rep.

Director of Electronics

Directors - LRDE, DLRL, DEAL, CAIR, DARE, ADE and DTRL + MTRDC

SSTL(?)

SAG(?)

ANUPAG (?)

Coordinator at the rank of a Brigadier—Member Secretary

APPENDIX VI

ELECTRO OPTICS R&D PANEL

DCOAS (P&S)	—	Chairman
CC R&D (Electronics)	—	Co-Chairman

DG (Infantry)

Rep. of DG(MF)

DCNS

DCAS

CMD, BEL

DGQA/Rep.

Dir. of Electronics

Directors — IRDE, LASTEC, SSPL, DLRL, MTRDC and RCI

Coordinator at the rank of a Brigadier — Member Secretary

APPENDIX VII

ARMAMENT AND COMBAT ENGINEERING R&D PANEL

DCOAS (P&S)	—	Chairman
CC R&D (ACE)	—	Co-Chairman
DCNS		
DCAS		
E-in-C		
Rep. of DG EME		
Rep. of DG Infantry		
Rep. of DG(MF)		
Rep. of DGAD, Artly.		
Rep. of DG(Artillery)		
Member, OFB (Armaments)		
CMD, BEL		
DGA		
Dir. Armaments		
Director (Combat Vehicles & Engineering)		
Directors — ARDE, IIEMRL, PXE, TBRL, DMRL, GVRDE, VRDE, R&D Engineers, SASETBRI, ADRDI., and DIJ		
Coordinator at the rank of a Brigadier — Member Secretary		

APPENDIX VIII

NAVAL SYSTEMS R&D PANEL

COM	—	Chairman
CC R&D (MNS)	—	Co-Chairman
ACNS(P&P)		
ACOM(IT&S)		
DCOAS		
DCAS		
Directors—NPOL, NSTL and NMRL		
SA to CNS		
DNRD — Member Secretary		
Coordinator at the rank of a Commodore — Member Secretary		

APPENDIX IX

CLUSTER OF DRDO LABS

Sl. No.	Cluster Group	Laboratories
1.	Aeronautical	ADE, GTRE CABS, CEMILAC, DARE, ADRDE, CASSA
2.	Agricultural Sciences	FRL, DARL, DRL, DFRL
3.	Armaments	ARDE, HEMRL, PXE, TBRL
4.	Bio-sciences	DIPAS, DIPR, INMAS, DEBEL
5.	Combat Engineering	CVRDE, VRDE, R&D Engrs. SASE, DTRL
6.	Computer Science	ANURAG, ISSA, CAIR, SAG
7.	Electronics	DLRL, LRDE, DEAL, IRDE, MTRDC, LASTEC, SPL
8.	Material Sciences	DMRL, DMSRDE, DRDE, DLJ, CEES
9.	Missiles	DRDL, RCI, ASL, ITR
10.	Naval Sciences	NPOL, NSTL, NMRL

ANNEXURE-IV

No. 13984/2001-Def Secy/IC/2001
Govt. of India
Ministry of Defence
New Delhi, dated the 24th Aug, 2001
ORDER

SUBJECT: Defence Procurement Organisation

The broad structures and systems to be established in the Ministry of Defence (MoD) to deal with acquisitions on the Capital account, consequent upon the Group of Ministers recommendations on 'Reforming the National Security System' has been approved by the RM. The management structure and the roles & functions of the Defence Procurement Organisation are detailed in the succeeding paragraphs of this order.

Defence Acquisitions Council (DAC):

2. An overarching structure, the DAC, **under the RM** with the following composition, will come into force with immediate effect:—

Member: RRM
CDS (when appointed)
COAS
CNS
CAS
Defence Secretary
Secretary, DDP&S
Secretary, Defence R&D
Secretary Defence Finance
VCDS (when appointed)
Special Secretary — (Acquisition)
Member Secretary: DCDS (PP&FD)/DGDPS till appointment of DCDS(PP&FD).

3. *Secretariat*. Defence Staff/DGDPS till establishment of Defence Staff.

4. The DAC will take following decisions in relation to the totality of new planning process:—

(a) Give in principle approval to Capital acquisition in the Long Term Perspective Plan (LTPP) covering a 15 year time span at the beginning of a Five Year Plan

period. **(This approval will in particular identify the 'Make' projects in the Perspective Plan where long gestation periods are involved).**

(b) Give acceptance of necessity in principle to each Capital acquisition project in excess of RM's powers in the forthcoming Five Year Plan at least nine months before the commencement of the first year of that Plan. **This approval will involve the identification of**

Either - 'Buy' Projects (outright purchase)

Or - 'Buy and Make" projects (purchase followed by licensed production/indigenous development)

Or - 'Make' Projects (Indigenous Production and R&D)

(c) Monitor the progress of major projects on a feedback from the Defence Procurement Board which is charged with setting out annual acquisition plans.

5. In examining all these issues, the DAC will take adequate note of the provisions relating to the remaining period of the Long-Term Perspective Plan and the impact of those on the present decisions. The DAC will meet as required.

6. DAC decisions will flow down for implementation to Defence Procurement Board, Defence Production Board and Defence R&D Board.

Defence Procurement Board (DPB)

7. The DPB is constituted as follows:

Chairman: **Defence Secretary**

Members: Secretary DDP&S

Secretary, D(R&D)

Secretary (Defence Finance)

VCDS/Coordinating DCDS ex Defence Staff till VCDS is appointed

VCOAS

VCNS

VCAS

Special Secretary (Acquisition)

Member Secretary: **Financial Advisor (DPB)**

DGQA/DGAQA will attend meetings as special invitees as required. DCOAS (P&S), DCAS(Plans) and ACNS (Policy & Plans) will attend meetings related to their respective Integrated HQs' acquisition proposals. The Board may co-opt other PSOs and any other persons(s) as required.

8. *Secretariat.* Finance Division of Acquisition Wing/DoD.

9. The DPB will oversee all activities related to acquisition on the Capital account in the Department of Defence flowing out of the 'Buy' and 'Buy & Make' decisions of the DAG , Integrated Services HQs will exercise delegated powers w.r.t. Revenue Account. The DPB will function as the body responsible for the coordination, supervision and monitoring of the acquisition process and will also take decisions on such procedural aspects of revenue purchases which are brought to its attention by Members on the Board including such areas as processess and commissioning of specialist studies etc. The DPB should meet as required to carry out these functions. The major roles and functions of the DPB will be:—

(a) Set out the annual acquisition plan for the three Services (based on approval of the Five Years Capital Acquisition Plan by DAC) for incorporation in next Annual Budget. The DPB will consolidate acquisition proposals to arrive at the annual figure taking into account acceptance of necessity by various entities of MoD including Integrated Services HQs for the year ahead, carry overs, operational exigencies and proposed changes in priority. This process is to be completed by 30 Sept. of each year.

(b) Carrying out such amendments in the annual plan as deemed necessary on account of operational urgencies, budgetary provisions or any other exigencies, based on recommendations made by Integrated Services HQs/ Defence Staff.

(c) Confirm/modify the inter-se and intra-se priorities of the acquisition proposals of the Services and recommend modifications for approval by RM in the pattern of resource sharing on the Capital account related to acquisition of weapons, equipment and weapon systems among the Services based on such exigencies as operational necessity, changes in priorities, pace of expenditure etc. Recommendations for the inter-se prioritization will flow from Defence Staff and for intra-se prioritization from respective Integrated Services HQs.

(d) Accord approval/recommend the scales of authorisation and usages within RM's powers or those requiring approval of Ministry of Finance/CCS based on projections from Integrated Services HQs and recommended by the Defence Staff to the Board and from DoD/DDP&S to the Board.

(e) Monitor progress of major schemes and decide on creation of 'Equipment Induction Cells' in Integrated Services HQs. for specific projects in consultation with Integrated Services Headquarters.

(f) Accord approval for procurement on 'Single Vendor' basis for acquisition in excess of Rs. 50 Crores based on recommendations from Integrated Services HQs and comments of the Acquisition Wing. Other cases will be processed on the present model.

(g) All QRs from Integrated Services Headquarters will be divided into 'essential' and 'desirable' categories. DPB will approve waiver/amendment of essential QRs, both for acquisition and production, after suitable analysis in the Acquisition Wing, if so requested by the concerned Integrated Services

HQs. Waiver/amendments of 'Desirable' categories can be done by concerned Headquarters before completion of technical evaluation by the Technical Managers. Any subsequent modifications will be placed before DPB for approval. All suggestions for waiver/amendment arising from DDP&S/DRDO must first flow for discussions at the Integrated Services HQs. after which, concerned Integrated Services HQs may approach the DPB.

(h) Approve emergency purchases when necessary within RM's delegated powers.

(i) Examine proposals from the Acquisition Wing and Integrated Services HQs and forward recommendations to Defence (Finance) for enhancement in delegation of financial powers on the 'Capital' account relating to acquisition of weapons, equipment and weapon systems. Such proposal after due examination by Defence (Finance) will be put up for RM's approval through Defence Secretary.

(j) Perform any other functions as may be allotted by the DAC/RM from time to time.

9. DPB will examine proposals from the Acquisition Wing regarding procurement procedures and will make the necessary changes in the procurement process after approval by RM.

10. The procurement process to be followed shall be as laid down in the Defence Procurement Procedure of 1992, as amended from time to time.

Defence Production Board

11. The Defence Production Board is constituted as follows:

Chairman:	Secretary DP&S
Members:	Defence Secretary
	Secretary, D(R&D)
	Secretary (Defence Finance)
	VCDS/Coordinating DCDS ex-defence Staff till VCDS is appointed
	VCOAS
	VCNS
	VCAS
	Chairman, OFB
	CMD, DPSU (as required)
Member Secretary:	Director P&C in DDP.
	DCOAS (P&S), ACNS (Policy & Plans) and ACAS (Plans) and other PSOs will be co-opted, when required.

12. *Secretariat.* DDP&S

13. The Defence Production Board will oversee all activities related to indigenous manufacture under the Department of Defence Production flowing from the 'Buy & Make' and 'Make' decisions of the DAC covering those based on Import + ToT; ToT (including limited indigenous R&D involvement in both public and private industries).

14. Price Negotiation for all 'Buy and Make' projects will be led by the Acquisition Wing supported by DDP&S.

15. The Production Board will monitor progress of all Make projects and will revert to the DAC with recommendations relating to alterations of the original decisions where so warranted.

16. The Defence Production Board will provide such planning and other support to the Defence Acquisitions Council as will enable the DAC to arrive at the optimum decision on Licensed Production. Transfer of Technology and ab-initio production/ development.

Acquisition Wing:

17. The DPB shall be assisted in its functioning by an Acquisition Wing in the DoD to be headed by Special Secretary (Acquisition) reproting to the Defence Secretary. SS(A) will be delegated such financial powers, within powers delegated to RM as approved by the Ministry of Finance from time to time. He will discharge these delegated powers with integrated financial advice from Financial Adviser (DPB).

18. Detailed order on management structure of the Acquisition Wing, financial powers and other related issues will be issued separately.

Sd/-
(Yogendra Narain)
Defence Secretary

Chairman COSC,	COAS	CNS,	CAS
Secretary (DP&S),	Secretary(DR&D),		Secretary
Special Secretary (Acquisition)			(Def/Finance)

Copy to All Additional Secretaries, Joint Secretaries, Directors/Deputy Secretaries/ DFAs/Under Secretaries in the Ministry of Defence

Copy for kind information to:RRM, Special Adviser (Defence)

PART-II

MINUTES OF THE THIRD SITTING OF THE PUBLIC ACCOUNTS COMMITTEE (2004-2005) HELD ON 28 SEPTEMBER, 2004

The Committee sat from 1600 hrs. to 1745 hrs. on 28 September, 2004 in Room No. "139", Parliament House Annexe, New Delhi.

PRESENT

Prof. Vijay Kumar Malhotra — *Chairman*

Lok Sabha

2. Shri Ramesh Bais
3. Shri Khagen Das
4. Shri Raghunath Jha
5. Shri Brij Bhushan Sharan Singh
6. Shri Ram Lakhan Singh
7. Shri Tarit Baran Topdar

Rajya Sabha

8. Shri Prasanta Chatterjee
9. Shri R.K. Dhawan
10. Shri V. Narayanasamy
11. Shri C. Ramachandraiah
12. Shri Jairam Ramesh
13. Prof. R.B.S. Varma

SECRETARIAT

1. Shri S.K. Sharma — *Joint Secretary*
2. Shri Ashok Sarin — *Director*
3. Shri N.S. Hooda — *Under Secretary*
4. Smt. Anita B. Panda — *Under Secretary*

Office of C&AG of India

1. Smt. Anusua Basu — *ADAI*
2. Dr. A.K. Banerjee — *Director General*
3. Shri Roy S. Mathrani — *Pr. Director of Audit*

2. xxxx xxxx xxxx

3. xxxx xxxx xxxx

4. Before the evidence, the Committee took up for consideration and adoption of the following reports:—

(i) Action Taken on the recommendations contained in 22nd Report of PAC (13 Lok Sabha) relating to "Delay in Operational Deployment of Imported Systems and Development-cum-Production of a System".

(ii) xxxx xxxx xxxx

5. The Committee adopted these draft reports without any modifications/ amendments. The Committee authorized the Chairman to finalise the draft reports in the light of changes suggested by Audit through factual verification, if any, or otherwise and to present the same to the Parliament.

6. xxxx xxxx xxxx

7. xxxx xxxx xxxx

The Committee then adjourned.

APPENDIX

OBSERVATIONS AND RECOMMENDATIONS

Sl. No.	Para No.	Ministry/Deptt. Concerned	Observations/Recommendations
1	2	3	4
1	4	Defence	As per the prescribed procedure, the Ministry of Defence were required to furnish the requisite Action Taken Notes on the observations/ recommendations contained in the 22nd Report of PAC within six months of presentation of the Report i.e. by 23 January, 2002. In the instant case, despite constant follow-up, the Action Taken Notes were only furnished by the Ministry on 3 February 2004 i.e. after a lapse of more than two years. It may be mentioned here that the Committee in their original Report had taken strong exception to the slackness on the part of the Ministry in responding to draft audit paragraphs as well as abnormal delay in furnishing the desired information on the subject. The Committee had, therefore recommended that the Ministry of Defence should entrust specific responsibilities to designated nodal officers in the respective Departments so as to ensure that audit Paragraphs and follow-up action thereon is processed, coordinated and responded to properly and expeditiously within the stipulated time frame. In their Action Taken Note, the Ministry stated that necessary instructions were issued to all concerned on 23 April, 2002 emphasizing the urgency to expedite Action Taken Notes. The Committee however, regret to note that despite issuance of instructions there was recurrence of delay in the action taken stage also and obviously the system in place is still found to be lacking and needs further refinement. Taking a serious note of the prevalent state of affairs, the Committee urge the Ministry to strengthen their monitoring mechanism in order to ensure that the laid down procedures and instructions issued from time to time are followed scrupulously by the authorities

1	2	3	4
			concerned and any aberration thereto be looked into with a view to fixing responsibility. The Committee trust that the Ministry would initiate appropriate measures to obviate recurrence of such delays in future.
2.	12	Defence	The Government concluded two contracts with a foreign firm 'A' in 1979 and 1985 respectively for procurement of five Electronic Warfare Systems (EWS) to meet operational requirements of Navy. In their earlier Report, the Committee found several glaring irregularities/deficiencies in the execution of the contract by the Ministry of Defence. These broadly included, lack of proper spadework in selection of the supplier, preferential treatment and undue indulgence shown to the firm, questionable procurement of technologically obsolescent EW systems and above all inaction on the part of the Ministry of Defence to probe into the matter with a view to fixing responsibility. Having regard to the fact that the import contract in question dated back to early eighties, the Committee thought it prudent to leave the matter to the Government to explore the feasibility of taking any punitive action against the guilty officials for various acts of omission and commission. Focusing their attention on the macro aspect of the case with a futuristic outlook for obviating such grave incidents, the Committee had *inter-alia* recommended that the whole system of projecting defence requirements of the Navy, their import and contract management warranted a thorough overhauling to ward off such incidents in future. While viewing with grave concern and anxiety the vulnerability of defence procurements to extraneous considerations, the Committee further desired that all such strategic defence procurements should be examined threadbare invariably by a core group of users and professionals before taking a decision as to the necessity and modalities of the procurement. The Committee also urged upon the Ministry to evolve foolproof institutional mechanisms for negotiating and finalising defence deals with a note of transparency so as to safeguard the national security.

1	2	3	4
			As regards fixing responsibility for the reported irregularities in the instant case, though the Ministry of Defence had decided in 1994 to conduct a special internal audit, the formal order for instituting the same was not given till January 1996. The Committee in their earlier Report had expressed strong dissatisfaction over the delay in probing into the matter. The Ministry in their Action Taken Note have now regretted the delayed issuance of formal order. According to them, the Controller of Defence Accounts, Navy (CDA) carried out a special audit and the report submitted by them had corroborated the known facts. However, according to the Ministry, no individual was held accountable for any wrong doing at any stage. Pertinently, an outside agency i.e. Economic Investigation Bureau (EIB) also enquired into the case. The Committee are perturbed to find that the Ministry are yet to obtain a report from EIB. What is further disquieting to note is the fact that even without obtaining the Report from EIB, the Ministry chose to inform the Committee that EIB did not observe any irregularity in the case. The Ministry owe an explanation to the Committee for this unusual act. The Committee desire that the Ministry should obtain a copy of the report from EIB expeditiously and submit the same to the Committee alongwith a copy of the special audit report submitted by CDA (Navy). In respect of corrective and remedial action taken to obviate recurrence of such cases, the Ministry stated that a comprehensive defence procurement procedure has been promulgated with effect from June 2003, which is periodically reviewed for high value/high technology procurements. According to the Ministry, these procedures have been implemented to bring transparency in defence procurement. The Committee welcome the measures taken in the direction of structural and systematic refinements in the defence procurement management and trust that the envisaged objective behind this rejuvenated procedure will be observed and implemented in letter and spirit in the best interest of defence preparedness and supreme concern of national security.

1	2	3	4
			The Committee have been informed that a similar procedure covering shipbuilding activities was also being examined in the Ministry of Defence. The Committee desire that a copy of the approved procedure may be furnished to them in due course.

MGIPMRND—2732LS—8-12-2004.