CHAPTER VI: DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION

6.1 Avoidable extra expenditure in procurement of stores

Incorrect decision by the Tender Purchase Committee to re-float tender when there was enough scope to finalise the L-I offer within the validity period resulted in an avoidable extra expenditure of ₹ 4.56 crore.

Based on the requirement projected by the Defence Metallurgical Research Laboratory (DMRL), Hyderabad, the Defence Research & Development Organisation (DRDO) HQ approved (May 2005) procurement of die blocks and die stack parts for development of High Pressure Compressor Discs, at an estimated cost of ₹ 1.70 crore. DMRL issued a global tender (June 2005), inviting quotations under the two-bid system i.e. the technical bid and the commercial bid. The Technical Evaluation Committee (TEC) after evaluating all the technical specifications, including mechanical properties, testing, inspection warranty, etc. recommended (October 2005) two firms 'X' and 'Y'.

On opening of the price bids (November 2005), the offer of firm 'X' was found the lowest (L1) at $ 153,080 (₹ 70.29 lakh) against firm 'Y''s offer of Euro 565,013 (₹ 3.05 crore). Despite 'X' being the L1 offer, the TPC headed by the Director DMRL, without recording any reasons/ justification, recommended that the L1 firm be advised to send its final "best offer".

DMRL accordingly asked (December 2005) firm 'X' to send its final 'best lowest offer' stating that their "price was slightly higher than the budgetary estimates". In response, firm 'X' revised (January 2006) the rate to $ 718,600 (₹ 3.30 crore), which was higher than the offer of ₹ 3.05 crore quoted by the L-2 firm 'Y'. The TPC recommended re-float of the tender as upward revision in prices was unacceptable.

After obtaining approval from DRDO HQ (May 2006), DMRL re-floated the tenders (June 2006). Of the three quotes, the TEC accepted the technical bid of firm 'Y' only. DMRL, with the approval of DRDO HQ, placed (June 2007) an order on firm 'Y' for supply of the items at a cost of Euro[11] 907,992 (₹ 5.26 crore) and received the items (September 2009) at a final cost of ₹ 6.04 crore.

The decision of the TPC to call for "best lowest offer" from L1 bidder even though the price quoted was way below the approved estimated cost and much lower than the second higher offer was unjustified. Eventually the items were finally procured from the L2 firm at a much higher cost.

The Ministry of Defence stated (June 2012) that the TPC had followed the prevailing guidelines and collectively decided to seek the "best offer" presuming that the L1 firm had not fully understood the requirements and the

[11] 1 Euro = ₹ 57.91

technical specifications of the item keeping in view the wide variations in the prices quoted by L1 and L2 firms. The contention of the Ministry was not tenable as the TPC had recommended the firms 'X' and 'Y' as having met all technical specifications after due evaluation. Furthermore, while seeking the 'Final Best Offer' from the L1 bidder the TPC had not recorded any justification in support of its decision. Hence the averment of the Ministry "on the presumptions made by the TPC" is at best an afterthought and, therefore, unacceptable.

Thus an imprudent decision of the TPC resulted in the procurement at an avoidable extra expenditure of ₹ 4.56 crore, besides delaying the availability of the items to the user.

6.2 Unfruitful investment by Defence Research and Development Organisation

An investment of ₹ 3.25 crore by Defence Research and Development Organisation (DRDO) in May 2001 for creation of facilities in Central Glass and Ceramic Research Institute, Kolkata for production of a critical material remained idle for over six years. DRDO could not obtain any benefit from the investment.

The Defence Research and Development Organisation (DRDO), through a Society, procured 200 each of low thermal expansion glass blocks from a local supplier in Hyderabad during May 2007 and February 2008 at a cost of ₹ 6370 per unit to meet its research and development requirement. As an earlier initiative by DRDO by making an investment ₹ 3.25 crore had borne no result the matter was examined by us in 2009. The investment had been channeled to the Central Glass and Ceramic Research Institute, Kolkata (CGCRI) through Society for manufacture and supplies of the required number of this item from 2003 onwards.

CGCRI had established the facility by commissioning a plant in November/December 2003, using funds provided by DRDO. As per the terms of the Memorandum of Understanding (MOU) signed (May 2001) between Society and CGCRI, the latter was required to supply 225 pieces of the glass blocks per annum for a period of 10 years to DRDO. However, after supplying merely 10 pieces up to May 2004, CGCRI stopped operating the plant due to failure of different units on different occasions. After its commissioning a total of four trial runs were carried out and the plant produced 16 units out of which 10 having achieved the desired specifications were found to be acceptable to DRDO. Despite this, the DRDO (Research Centre Imarat, the associated DRDO laboratory) declared that the 'preparation of the material as per the specification had been achieved' and indicated that CGCRI will fulfill the contractual obligation of supplying 225 units per year for 10 years.

In November 2006, the plant became completely non-operational. Although the MOU had clearly spelt out that the DRDO's liability would be limited to ₹ 3.25 crore, yet CGCRI, in December 2009, sought additional financial

assistance of ₹ 5.25 crore from DRDO to make the plant operational in addition to a commitment to pay ₹ 0.80 crore at a later date. DRDO declined (June 2012) to pay any more funds to CGCRI.

Our scrutiny indicated that DRDO had, in 2001, justified the investment of ₹ 3.25 crore stating that item was being imported at a unit rate of ₹ 25,000 and that creation of a national facility would make the country self reliant in this field. Subsequent sourcing of the item from local suppliers, however, make it apparent that even if DRDO had purchased its entire requirement of 2250 units of the item from local suppliers, the expenditure would have been only about ₹ 1.43 crore, which was just a fraction (44 *per cent*) of the investment of ₹ 3.25 crore made by it. Thus the investment decision of DRDO was flawed *ab initio* and betrayed lack of due diligence in committing public funding for a venture of doubtful merit.

The Ministry, in reply to our audit observation, stated in June 2012 that the purpose of investment was not solely the purchase of 2250 units, but to establish a national facility to achieve self-reliance in area of strategic missions and the failure was purely accidental. While the objective of achieving self reliance in critical aspects is laudable, DRDO had neither made a realistic assessment of the techno-economic feasibility of the venture nor ensured its successful execution by the partner institute. Resultantly, investment of ₹ 3.25 crore made during 2001 had became unfruitful and the objective of achieving self-reliance remained a distant possibility.

The case underscores the need for the Department of Defence Research and Development to be more diligent in making investment decisions in other organisations.

6.3 Irregularities in sanction of Defence Research Development Organisation projects

Audit scrutiny of project sanctions issued by the Defence Research and Development Organisation revealed procedural irregularities relating to misleading nomenclature of sanction issuing authorities, absence of data base of sanctions, splitting of sanctions etc.

Expenditure out of public funds is regulated by the provisions of General Financial Rules. Such expenditure is invariably authorised through specific sanctions issued by the competent authorities at various levels in the government, in accordance with financial powers delegated to each level. Since each such sanction authorises spending of public money for public purposes these are invariably endorsed, *inter-alia* to the designated principal audit office for scrutiny and validation. For proper accountability each sanction must indicate clearly the name of the authority issuing the sanction, purpose of expenditure, conditions subject to which such expenditure can be incurred, the head of account under which it must be classified and the reference under which the concurrence of the Ministry of Finance or the relevant associated or integrated finance division has been secured.

The Ministry of Defence, in July 2010 sharply enhanced the delegated financial powers, which were already revised in April 2010, within the Department of Defence Research and Development [DD(R&D)] across the board, as indicated below:

Item of expenditure	CFA	Financial powers prior to April 2010	Financial powers as revised in April 2010	Extent of financial powers delegated in July 2010	Concurrence levels, as per the delegation of July 2010
Sanction for undertaking a new project	Chief Controller R&D (CCR&D)	₹ 10 lakh	₹ 8 crore with approval of Defence Research Council	Above ₹ 5 crore and up to ₹ 25 crore	Integrated Financial Adviser (IFA)
	Director General Defence Research and Development Organisation (DG DRDO)	₹ 50 lakh	₹ 12 crore	Above ₹ 25 crore and up to ₹ 50 crore	IFA
	Secretary, Defence R&D	₹ 15 crore	₹ 15 crore	Above ₹ 50 crore and up to ₹ 60 crore	JS and Additional FA
				Above ₹ 60 crore and up to ₹ 75 crore	Financial Adviser Defence Services (FADS)/ Secretary (Defence-Finance)

Between April 2010 and July 2011, a total of 72 sanctions were issued by the Secretary DD(R&D) in his capacity as head of DD(R&D) or as Director General Defence Research and Development Organisation (DG DRDO), authorising expenditure on new projects, which included 43 sanctions issued under the enhanced financial powers devolved in July 2010. Of the 72 sanctions, we identified 33 sanctions for our examination. Of these, we audited 32 sanctions during October-December 2011. The main objectives of audit were to ascertain whether these sanctions conformed to General Financial Rules, 2005 in ensuring proper accountability in financial decision making and whether the sanctions were amenable to reasonable internal controls. Files relating to one sanction issued in 2010 and involving an expenditure of ₹ 18.10 crore were not produced to us for our scrutiny.

Our audit of the sanctions revealed non-adherence with established norms and procedures for issue, circulation and recording of sanctions authorising expenditure out of public funds for various purposes. These deficiencies noticed by us were as follows:

1. Non-communication of sanctions to Audit

Rule 29 of the General Financial Rules, 2005 (GFR) stipulates that all financial sanctions issued by a competent authority shall be communicated to

Audit. As per Regulation 50 of the Regulations on Audit and Accounts, Heads of Department shall also send to the audit office quarterly statements on the 15th day of each of the months of July, October, January and April, of all sanctions issued in respect of their department during the preceding quarter. However, we did not receive such quarterly statements for audit from the DD (R&D) and DRDO HQ and as such we could not get an assurance as to whether copies of all the sanctions issued by the DD(R&D) and DG DRDO were being received by us. Our audit in DRDO HQ confirmed that all the copies of sanctions issued were not being sent to us as required under the GFR.

2. Non-maintenance of database of sanctions issued

DRDO HQ did not maintain a control register of sanctions issued and there existed no mechanism to track the number and total amount of sanctions issued in a year. Even the Technical Directorates at DRDO HQ were not maintaining database/registers of sanctions issued for projects. In the absence of the above mentioned minimum control records, the possibility of sanctions being issued in excess of funds, splitting of sanctions, issue of multiple sanctions for the same objective, etc. could neither be ruled out nor noticed in the normal course.

3. Misleading nomenclature of sanction issuing authority

In some of the sanctions issued by DRDO HQ, due to incorrect mention of sanctioning authority, it appeared as if the sanction had been issued by the Ministry of Defence, DD (R&D). Such a practice equates DRDO HQ, which is a subordinate organisation, to DD(R&D), a department of the Ministry. Clearly, this obfuscation of financial powers delegated at different levels of authority has been caused by in built duality of the position of Secretary DD (R&D)-cum-DG, DRDO. As the sanctions of the Ministry of Defence are to be issued only with the financial concurrence of the Defence (Finance), such wrong nomenclature in the sanctions was misleading as to the level of the CFA issuing the sanction. After our pointing out, the Secretary DD(R&D) has however, mitigated the position by issuing directives, in August 2011, to review the sanction orders issued since July 2010 and rectify the errors.

4. Splitting of sanctions to keep sanctioned amount within delegated powers

We observed that after the enhanced delegation of financial powers in July 2010, the sanctions were split up to bring them within the delegated financial powers of the DG R&D, i.e. up to ₹ 50 crore in consultation with the IFA. Since the same person holds the position of Secretary DD(R&D) and DG, DRDO such splitting up of sanctions is tantamount to pre-selecting the financial advisor which clearly erodes the integrity and independence of financial scrutiny of expenditure proposals. In four cases narrated below we observed that similar projects were undertaken for the identical technologies earlier. Instead of obtaining revised sanction for existing projects by approaching the appropriate Competent Financial Authority (CFA) at the next higher level, fresh projects were sanctioned. Even in the fresh sanctions issued

we observed that the project cost was kept low, by reducing scope of the work so as to bring them within the delegated financial powers of DG DRDO.

Case I

While the development of Aerostat Platform (Project AKASHDEEP) sanctioned by the Ministry (March 2005) at a cost of ₹ 13.85 crore was in progress, DG DRDO sanctioned (July 2011) another project NAKSHATRA also for development of the same item at a cost of ₹ 48.8 crore.

Procurement of "Aerial Access Platform" which was originally a component of Project NAKSHATRA was deleted and was procured from Project AKASHDEEP. Similarly a sub-activity 'Electro-Optical Payload System for Aerostat' was also delinked from NAKSHATRA and sanctioned (January 2011) under another project 'Design and Development of Electro-Optical Sensors for Air-borne Platforms' at a cost of ₹ 49.82 crore. We further observed that the project proposal for 'Design and Development of Electro-Optical sensors for Air-borne Platforms' was submitted by the lab (Aerial Delivery Research Development Establishment) in January 2010 at a cost of ₹ 68.40 crore. However, the cost of the project was brought down to ₹ 49.82 crore by reducing the number of deliverables and curtailing its scope enabling the DG DRDO to issue the sanction within his delegated powers. Clearly projects were being split to keep the sanction below ₹ 50 crore.

The DRDO (November 2011) stated that AKASHDEEP was taken up under Technology Demonstration (TD) mode for limited payload while NAKSHATRA was taken up based on draft Joint Staff Qualitative Requirement for higher pay load, also under TD with new technologies. This, however, does not address our concern that the technical specifications of both the projects were similar and should have been brought under a single project by obtaining approval of the appropriate CFA.

Case II

The Ministry had sanctioned (June 2003) the project ADITYA for development of Vehicles Mounted High Power Laser Directed Energy System at a cost of ₹ 97.40 crore for completion by June 2010. The DG DRDO sanctioned (October 2010) another Project for creation of 'Electro Optical System Testing' at a cost of ₹ 35 crore for completion within 24 months despite the fact that the scope of the project ADITYA initially included creation of such a test facility. This led to splitting up of sanction- one for the main project and another for testing facility.

DRDO stated (November 2011) that test range was planned to be pursued separately in view of different requirements for testing of various system and the issues related to land acquisition for test range. The reply is unacceptable as the components of the projects were required to be sanctioned as a whole. DRDO could well have pursued the creation of the test range separately, this, however, was related to managing the project and not necessarily related to its sanction.

Case III

The Ministry sanctioned (August 2007) a project titled Development of Fixed Wing Micro Air Vehicle for completion in three years at a cost of ₹ 13.68 crore. To meet some additional requirements, i.e. to develop 2 kg class mini UAV, CCR&D sanctioned (July 2010) a new project at a cost of ₹ 7.48 crore instead of issuing corrigendum and increasing the scope of the original project.

The DRDO stated (January 2012) that 2 kg class mini UAVs were technically found more appropriate and hence separate sanction was accorded. This is not tenable because if a more appropriate technology is found during project execution stage, enhancement should have been included by way of corrigendum and approvals of the sanctioning authority taken.

Case IV

One of the laboratories of DRDO proposed a project (April 2010) to develop two sets of radars of three types (i) Ground Penetrating Radar (GPR) for detection of buried and hazardous objects, (ii) Through Wall Imaging Radar (TWIR) for detection of humans behind thick wall and (iii) Portable Ground Based Foliage Penetration Radar (GB-FPR) for detection of moving objects behind foliage. The initial proposal for sanction of the project at a cost of ₹ 48 crore excluded ₹ 5 crore for testing charges.

The DG DRDO sanctioned (January 2011) the project at a cost of ₹ 48 crore including the cost of testing but with scope reduced to develop only two types of radars i.e., GPR and TWIR. Thus the scope of the project was reduced to develop only two types of radars to keep it within the limit of ₹ 50 crore.

The DRDO HQ stated (December 2011) that the scope of the project was reduced by deleting development of one of the three radars since it was decided that with the limited manpower of the lab it would not be able to complete all the three development works within the tight time frame. The cost of development was reduced by ₹ 6 crore and the cost of testing of ₹ 5 crore was added to the project. Thus by excluding the third type of radar with cost implication of ₹ 6 crore from the scope of the project the testing facilities were included in the project scope enabling the DGDRDO to keep the overall cost of the project within ₹ 50 crore and to sanction it within his delegated powers.

5. Sanctioning of projects without establishing viability

As per the procedure for 'Project Formulation and Management' in DRDO, to independently determine the viability of projects costing more than ₹ 2 crore these have to be peer reviewed by an expert committee chaired by an eminent person preferably from outside the DRDO. The Committee is to be appointed by the competent authority, i.e., Lab Director in consultation with Technical Director for projects costing ₹ 2 crore and above but less than ₹ 5 crore; Chief Controller concerned for projects costing ₹ 5 crore and above but less than ₹ 15 crore; and Scientific Adviser to the RM for those of ₹ 15 crore and above.

However two projects, one for development of 'Mine Protected Vehicle (MPV)-KAVACH' at a cost of ₹ 8 crore and another for 'Development of Vehicle Mounted Laser Dazzler' for crowd control applications at a cost of ₹ 5 crore, were sanctioned in February 2011 and April 2011 respectively, by CC (R&D) (MS & LIC) without getting these peer-reviewed as envisaged. The concurrence granted to the project by IFA was, therefore, irregular and reflected insufficient scrutiny of the proposals.

The DRDO HQ stated (January 2012) that the necessity of the Peer review was not felt as these projects had already been reviewed by a senior officer from the Directorate of DRDO and G-Fast. The reply is not tenable because the Projects are to be peer reviewed by eminent persons outside DRDO i.e. academicians and industry experts which was not done in the above cases.

6. Inadequate control of sanctions by the IFA R&D

The Ministry of Finance, in June 2006, introduced a new scheme of IFA. The aim of the scheme was to make the role of IFA akin to the role of the Chief Financial Officer in a corporate structure with specific responsibilities for ensuring fiscal prudence and sound financial management by involving him in budget formulation. However, in contravention of the Ministry's orders it was seen that IFA R&D was not maintaining the requisite documents such as serially numbered sanctions register, details of budget, actual expenditure on projects, committed liability etc. While furnishing reply in December 2011 to audit observation, the IFA (R&D) has not clearly explained how in the absence of requisite appropriate records due control was being exercised by him over the sanctioning process. However, the IFA stated that the implementation of IFA system was yet to fully take off and that in the years to come when the Financial Advisers are posted in DRDO laboratories across the country, the system of internal control would become more effective. The reply is not specific because budgetary control in DRDO is not necessarily dependant on the positioning of IFAs in all the laboratories in the country, and could have been achieved within the existing set up.

7. Conclusion

We are of the opinion that the enhancement of delegated financial powers and introduction of IFA system in DRDO had in its immediate aftermath actually resulted in concentration of financial powers with DRDO HQ through the IFA R&D owing to a tendency to split the projects to avoid reference to higher CFAs. Neither the CFAs nor the IFA were maintaining a control register to watch the sanctions issued by them nor were they ensuring mandatory submission of copies of the sanctions to Audit. The above audit findings underscore that the efforts of the Ministry to bring in transparency and objectivity in the functioning of its departments remain unachieved as of now.

The matter was referred to the Ministry in May 2012; their reply was awaited as of July 2012.