

CHAPTER VI : DEFENCE RESEARCH AND DEVELOPMENT ORGANISATION

6.1 Injudicious creation of assets

An expenditure of Rs 8.92 crore incurred by Defence Research and Development Organisation (DRDO) for creation of assets to draw power from a power supply corporation became infructuous due to DRDO's failure to assess the corporation's ability to supply stable and uninterrupted power required for operation of highly sensitive equipment and machines.

DRDO imported various sensitive equipment and machines for creation of technical facilities for a programme of strategic importance at a station. These facilities required uninterrupted and high quality stable power supply.

Based on the recommendations of a Board of Officers, Ministry of Defence accorded sanction in March 2000, as amended in December 2001, for provision of external electrification at the station at a total cost of Rs 9.54 crore, to be executed by a Chief Construction Engineer, Research and Development (CCE R&D). The CCE R&D completed the works for power supply receiving and distribution to each of the sites within the station, under the supervision of the State Power Supply Corporation, in November 2001 at a cost of Rs 9.15 crore including expenditure of Rs 0.23 crore for power distribution to living accommodation. The corporation had agreed to supply 4500 KVA of power, in a phased manner, as sought by DRDO.

However, before creating the assets for drawing power from the corporation, DRDO did not get firm assurance from the Power Corporation for supply of the quality of power required by DRDO for operation of the sensitive equipment/machines of the programme. Due to excessive variations in voltage/ frequency/current in the power supplied by the corporation, the imported equipment procured under the programme did not function properly. This along with frequent interruption in power supply forced DRDO to procure DG Sets, separately at a cost of Rs 3.57 crore for the facility. Only the living/ administrative accommodation which required meager quantity of power could use the power received from the corporation. The contract demand was therefore reduced from 4500 KVA to 600 KVA by September 2004 for the day to day operation of the site and other technical facilities including the living/administrative accommodation. Further, a sum of Rs 1.80 crore was spent during 2002-09 for maintenance of the 66 KV line and associated facilities to avoid deterioration. Thus the expenditure incurred on establishing a sub station to support the 66 KV line was rendered infructuous.

The Ministry admitted in September 2009 that DRDO had relied upon the State owned power corporation to adhere strictly to the quality specifications as laid down in the Indian Electricity Rules 1956, which they didn't do. The

Ministry also stated that such a complex technical facility, which is of strategic importance to nation's security, was being established for the first time in the country and DRDO could learn its complex requirements from this experience and argued that the expenditure should not be treated as wasteful as the experience learned from this project was utilized in the next project where they did not seek the provision of electricity from state Electricity Board and had commissioned required DG sets directly. The Ministry added in February 2010 that a new Radar system planned for Air Force requirement would be assembled at the station in a period of two to three years and there would therefore be higher usage of the substation in the future.

The Ministry's statement about the likely utilization of the assets when the planned radar system for the Air Force comes up in the next two-three years does not validate the creation of the assets in the year 2001 and keeping them idle for over a decade.

Thus, the failure of DRDO to assess the ability of state power corporation to supply to the required specifications for operation of sensitive equipment resulted in an infructuous expenditure of Rs 8.92 crore, besides burdening itself with a recurring liability of maintaining the redundant assets.

6.2 Loss due to damage to imported equipment

DRDO suffered a loss of Rs 6.91 crore as an imported equipment was damaged due to mishandling by the Air Consolidation Agent.

The Director of a Defence R&D Laboratory placed purchase order on a UK based firm in October 2006 for a machine required for a project at a cost of Rs 18.46 crore. As per terms of the purchase order, 70 *per cent* payment (Rs 12.23 crore) was made to the firm on shipment of the machine. Remaining 20 *per cent* of the amount was to be paid after installation and 10 *per cent* after the end of the warranty period. The machine was to be delivered by end of July 2007 at the laboratory premises through an Air Consolidation Agent (ACA)¹⁷ having Air Consolidation Contract with the Defence Research and Development Organisation (DRDO). As per terms and conditions of the contract, the ACA was responsible for all losses or damages to the equipment due to any cause whatsoever from the time they receive the shipment till delivery at consignee's end. It was also stipulated in the contract that in case of losses to stores occasioned on account of Agent's negligence, the amount spent on account of ACAs negligence will be recovered from the Agent's pending bills.

The machine arrived at Delhi Airport on 8 August 2007 and was locally transported by the ACA on 9 August 2007. One package consisting of the main equipment of heavy weight and size was damaged as it fell down while unloading at the laboratory premises due to mishandling for which the ACA was responsible.

¹⁷ M/s Balmer Lawrie and Company Limited: responsible for Air Consolidation Services, custom clearance and carrying of machine/stores being imported by DRDO Laboratories.

The Court of Inquiry (COI) constituted by the Director of the laboratory, to assess the loss and circumstances leading to damage found that the damage to the equipment was caused by the ACA while unloading. It was also revealed that the machinery and tools used by ACA while unloading were insufficient. The COI further recommended that pending settlement of the claim for liability of loss, the damaged component be got replaced from the supplying firm. Accordingly, the Director of the laboratory placed order on the same firm in January 2009 for supply of a new equipment for replacing the damaged one at a cost of Euro 960,000 (Rs 6.21 crore) excluding customs duty of Rs 0.70 crore which was to be paid by the Laboratory separately. The equipment was to be delivered by October 2009. Audit observed that despite contractual obligations, the laboratory did not raise any claim for the loss against the ACA though on behalf of the laboratory the ACA had lodged a claim of Rs 9.04 crore in February 2008 with the Insurance Company. The Insurance claim had however, not been finalized by the Insurance Company as of October 2009.

The case reveals that DRDO has not only lost time but also suffered a loss of Rs 6.91 crore on account of damage to the equipment due to mishandling by ACA, which was yet to be made good as of October 2009 for which even the claim has not raised against the transporting agency.

In their reply of October 2009, the Ministry stated that they were making best efforts to recover the money to make good the loss.

6.3 Avoidable expenditure due to poor planning of a work service

Poor planning of a work service by the Programme Director and Chief Construction Engineer, led to an additional expenditure of Rs 1.39 crore towards payment of compensation to the contractor.

In January 2006, Chief Construction Engineer (CCE) Research & Development (R&D) Secunderabad entered into a contract with a firm for construction of accommodation for System and Test Integration RIG (STIR) at the cost of Rs 18.78 crore, to be completed by July 2007.

A Board of Officers had earlier assembled in May 2005 to consider the requirement of work services for STIR of a Defence Research and Development Programme at Bangalore and recommended construction of the facility on top priority and also that the work relating to the shifting of 66 KV power (HT) line running right through the middle of the selected site, be taken up and executed separately to facilitate the construction.

The Programme Director (PD), STIR was to make the site available to the contractor within four weeks of conclusion of the contract. However, action was not taken by the PD to get the HT line shifted. In March 2006, the PD and CCE decided that the work for shifting the line would be executed through the CCE. As clear work front was not made available to the contractor for eight months after the award of work in January 2006 the contractor could not proceed with the work. The CCE concluded a separate contract in June 2006

with the same contractor for shifting the line and got it completed in October 2006. The CCE granted extension of time for completion of work from July 2007 to March 2008. Against a compensation of Rs 3.67 crore claimed by the contractor to offset the expenditure incurred on idle machinery/manpower and increase in cost of material/labour due to the delay in commencement of work, DRDO had to pay an extra-contractual amount of Rs 1.39 crore.

On being pointed out, the CCE informed Audit in November 2007 that it was initially planned that the programme authorities would shift the HT line and make the site available for construction. The task was later transferred to CCE only in June 2006. After transferring the responsibility, the CCE concluded the contract in June 2006 without further loss of time for shifting the HT line. These statements of CCE were not totally correct as in March 2006 itself, the PD and the CCE had decided that the shifting of HT line would be undertaken by the CCE. However, the CCE took another three months to award the contract for shifting the HT line.

Thus due to poor planning of the work services by the PD and the CCE and their failure to ensure shifting of HT line before award of the contract for the work services resulted in an avoidable payment of Rs 1.39 crore to the contractor, besides delaying execution of the work. The case needs to be investigated so as to fix responsibility for the lapse.

The Ministry stated in January 2010 that partially clear site was made available to the contractor and the work on piling was commenced on date in the areas/locations other than 66 KV HT line shadow. It was further stated that delay of eight months was beyond the control of DRDO. The facts, however, remain that the contractor could not progress with the work for eight months due to non-shifting of HT line for which additional payment of Rs 1.39 crore had to be made to the contractor, which could have been avoided had the HT line been shifted in advance.

6.4 Loss due to lack of coordination in procurement of a life saving item

An expenditure of Rs 93.09 lakh incurred on procurement of drugs proved infructuous as the drugs could not be issued to users within their shelf life. Although the life saving item was accepted in September 2004 for use in the Army, it remained undistributed for nearly five years predominantly due to the lack of coordination between the developer and the user.

The Autoject Injector (AJI) set consisting of two individual autoject injectors, one containing Atropine Sulphate and the other containing PAM Chloride was developed by Defence Research and Development Establishment, Gwalior (DRDE) of Defence Research and Development Organisation (DRDO) to treat and counteract nerve agents poisoning. On exposure to nerve agents, these are to be used by individuals for immediate treatment by self administered injection.

Based on the requirement projected by Army HQ, the Ministry of Defence (MOD) issued sanction in September 2004 for production and supply of Autoject Injectors along with equal number of Atropine Sulphate and PAM Chloride drug through DRDO. The sanction stipulated that the terms of supply of equipment would be determined and monitored by Army HQ/MOD in consultation with DRDO.

DRDE procured from private sector firms 32,400 AJI for injecting Atropine Sulphate and 32,400 AJI for PAM Chloride along with 33,000 each of Atropine Sulphate drug cartridges and PAM Chloride drug cartridges at a cost of Rs. 2.80 crore, of which Rs 93.09 lakh was for the drug cartridges. Shelf life of AJIs was five years, that of Atropine Sulphate drug was two years, and it was only one year for PAM Chloride drug. The AJI and drug Cartridges were received during May/December 2005 and September 2005/January 2006 respectively. However, Army HQ did not intimate the consignee details to DRDE. In response to a request by DRDE, Army HQ (Additional Director General Weapons and Equipment) advised them in February 2006 to obtain consignee details from Dy. Director General Perspective Planning (Nuclear Biological and Chemical Warfare) and to deliver the consignments only after the items were duly inspected and certified fit in all respects by the representatives of the users. In the Joint Inspection, which was not attended by the user's representative, held in April 2006 it was found that 25700 AJIs of Atropine Sulphate and 27,689 AJIs of PAM Chloride were acceptable. The remaining were defective and therefore rejected. The date of expiry of the drug PAM Chloride varied from June 2006 to October 2006 and that of the Atropine Sulphate varied from May 2007 to October 2007. In view of the early expiry of the drugs, the Joint inspection team recommended that process be initiated to replenish the drug cartridges.

DRDE informed Army HQ in April 2006 about the acceptance in inspection of AJIs and sought consignee details. In July 2006, Army HQ asked DRDO HQ to send these to the Central Ordnance Depot Kandivli. Army HQ simultaneously informed DRDO HQ that the drug cartridges of PAM Chloride with balance shelf life of less than 75 *per cent* and Atropine Sulphate with shelf life expiring before 01 October 2007 should be replaced. In July 2006, DRDE issued 25,000 AJIs along with drug cartridges to Armed Forces Medical Store Depot Mumbai as later advised by Army HQ. However, the supplied stores could not be used due to non-availability of adequate shelf life of drug cartridges.

DRDE placed supply orders for 8000 each of for AJI (Atropine Sulphate and PAM Chloride) and drug Cartridge 33000 each at a cost of Rs 0.12 crore and at a cost of Rs 1.35 crore respectively.

Joint inspection was carried out for Atropine Sulphate and PAM Chloride drug cartridge received between July and September 2008. However, these were rejected by DGQA in October 2008 due to detection of butyl fragments in the injected content of drug, less injection of drug than the stipulated therapeutic dose making it ineffective and weak plastic bodies of reusable injectors.

Army HQ in June 2009 formed a study group to analyse the complex issue in its totality. Based on the recommendations of the Study Group suggestions of Director General Armed Forces Medical Services and reassurance of DRDO about the efficacy of the drugs, Army HQ agreed to accept the AJIs and the drugs in their present condition for use during emergencies only, with the condition that DRDE would develop improved version at the earliest. The overriding consideration for the acceptance of the AJI/drug was that the advantage of the AJI outweighed the potential risks associated with the deficiencies pointed out by DGQA in October 2008.

The Ministry of Defence stated in November 2009 that there was no loss since the Army had accepted the AJIs and drugs.

The fact remains that the procurement of drug cartridges at a cost of Rs 93.09 lakh during 2005-06 was clearly a loss since their shelf life expired before the AJIs were accepted for use by the Army. Although the sanction issued by the Ministry in September 2004 stipulated that the terms of supply of equipment would be determined and monitored by Army HQ/MOD in consultation with DRDO, the above events are symptoms of lack of coordination and understanding among DRDO HQ, Army HQ and DRDE. Resultantly, the AJIs and their drugs developed for use in emergencies as life saving items remained without any use for nearly five years with associated financial repercussions such as loss on account of expiry of their shelf life. The case points to the need for a better coordination and communication between the associated agencies to accomplish value for money and the Research and Development efforts.