

## ANNEXURE 11

EXTRACTS OF AUDIT OBSERVATIONS BY C&AG  
COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH**4.1 Infructuous expenditure of Rs.2.08 crore\***

Central Electro Chemical Research Institute failed to ensure availability of requisite infrastructure which resulted in non achievement of the objectives of a project for development of batteries with a cycle life of 350 charge-discharge cycles. This led to infructuous expenditure of Rs.2.08 crore.

**4.2 Blockage of funds\***

The Indian Institute of Chemical Biology, Kolkata failed to ask the supplier to replace the equipment despite its unsatisfactory performance within the warranty period. As a result, it was saddled with a defective equipment for which expenditure of Rs.98.88 lakh has already been incurred.

**4.3 Non-commercialisation of technology developed for monitoring of toxic gases\***

Failure of Central Institute of Mining and Fuel Research to conduct further studies on the shortcomings noticed in the system developed at a cost of Rs.33.24 lakh resulted in non-commercialisation of the system.

Performance Audit on National Aerospace Laboratories, Bangalore#  
(Highlights)**Financial support for research activities**

NAL's dependence on CSIR/Governmental funding increased during the last five years. Out of the total funds of Rs.602.70 crore received by NAL, only Rs.154.26 crore were generated through external sources during 2002-07 accounting for mere 26 per cent against the target of 50 per cent to be achieved by 2001.

[Para 1.6.1]

**Research Management**

NAL's success in transferring and commercialising technologies developed was abysmally low. Of the 146 projects test checked, NAL developed knowledgebase in 75 projects of which only 25 knowledgebases (33 per cent) were transferred to the end users. Of the 25 knowledgebases transferred, NAL could commercialise only one knowledgebase for general industrial application in April 2007.

[Para 1.6.2.2]

NAL earned only Rs.0.37 crore during 2002-07 from transfer and commercialisation of technologies, which was 98 per cent short of the target of Rs.15 crore set by its Performance Appraisal Board (PAB). NAL also failed to achieve the targets fixed by PAB in respect of filing of foreign patents and impact factor of research papers.

[Para 1.6.2.3, 1.6.2.4 and 1.6.2.5]

\* *Union Audit Reports Scientific Departments (Compliance Audit - Report No. 3 of 2008) 2006-2007*

# *Union Audit Reports Transaction Audit, (Performance Audit - Report No. 2 of 2008) 2006-2007*

#### **Manpower Management**

While there was shortage of 17 to 26 per cent staff in scientific cadre, NAL employed excess technical staff to the extent of 56 to 83 per cent incurring irregular expenditure of Rs.15.83 crore during 2002-07.

[Para 1.6.3]

#### **Project Management**

NAL could not ensure timely completion of projects as per original approved schedule. 50 per cent of 163 projects test checked showed time overrun between one month to 83 months.

[Para 1.7]

In respect of sponsored projects, NAL suffered a loss of Rs.5.17 crore due to undercharging on account of intellectual fee and service tax in violation of the norms fixed by CSIR.

[Para 1.7.4.1]

NAL did not maintain a balanced portfolio of projects by laying adequate emphasis on in-house projects to develop general aerospace technology base for general industrial application.

[Para 1.7.2.1]

The documentation in a large number of projects was deficient as project proposals, project expenditure, completion reports etc, were not maintained adequately to ensure transparency and facilitate subsequent review.

[Para 1.7.2.3]

#### **HANSA and SARAS Projects**

Two-seater trainer aircraft, HANSA, developed by NAL after significant time and cost overruns did not find buyers in the market after the initial order for 10 aircrafts. NAL is also yet to develop its components indigenously.

[Para 1.8.1]

Development of SARAS, a light transport 9-14 seater aircraft, also suffered from delays and deficient project management. Even after a lapse of eight years and cost overrun of Rs.22.53 crore, NAL is awaiting certification of airworthiness for SARAS aircraft from Director General of Civil Aviation (DGCA) as NAL failed to bring down its weight within the permissible limit and is yet to carry out various tests and generate documentation. As per DGCA, flight certification is expected only after 2010 and NAL may have to make a third prototype as well.

[Para 1.8.2]