Planning, Monitoring and Evaluation Group (PME)

Contract R & D Projects, as Sponsored, Collaborative and Grant-in-Aid Projects are undertaken by the Laboratory with funding from External Agencies. Before submission of the project proposals to the outside agencies they are evaluated by the Group based on various criteria and conditions. Monitoring and developing of complete database for report generation on projects are done and project files are created and maintained. Similarly Major Laboratory Projects and other In-house Projects funded by CSIR & NPL undertaken in NPL are also monitored. Fund allocation and processing of indents is an important activity. The report on completed projects and refund of unspent balance to the funding agencies at the end of project are made by the group.

PME prepares Annual Plan and Five Year Plan for NPL. It organizes Research Council meetings and coordinates with Management Council meetings organized by administration. Time to time PME disseminates information on projects, performance reports and ECF reports to CSIR. PME is also involved in monitoring of Networking Projects. PME develops manpower data and maintains staff positions and disseminates the information to various authorities. The group also maintains and regulates the appointments of project staff under various externally funded projects.

PME has the additional responsibility of getting feedback on degree of customer satisfaction in a prescribed format from funding agencies who are funding the different contract research projects in NPL. The process is done at the end of each project. This function has been initiated by CSIR under the supervision of Customer Satisfaction Evaluation Unit (CSEU) at CSIR Headquarter, Rafi Marg, New Delhi – 110 001. The feedback received from the funding agencies are sent to CSEU, CSIR.

PME prepares many types of reports on Manpower in different formats as required from time-to-time and also does different type of Analysis for manpower planning of the laboratory.

Publication of Annual Report is another important activity of PME. On receiving inputs from various DUs’, DPs’ & other concerned groups, Text and Appendices of Annual Report are compiled, corrected and published in the form of annual Report each year.

Industrial Liaison Group (ILG)

This group undertakes two major areas viz marketing of developed technologies and consultancy and technical services. Besides this, the group is responsible for all matters connected with business development, open day function, wherein few thousand schools and college students with their teachers are invited to see the various scientific activities at NPL. Students are shown a film on NPL activities too. A technology day function is also observed where all licences are invited to deliberate with concerned PI of the technology for any suggestions. This group is also responsible for the dissemination of science through publication in CSIR news and in CSIR annual report, business and industrial magazines and their websites and through advertisements in newspapers, conferences, symposiums, various other events and their souvenirs and also through participation in exhibitions Processes applications for the awards pertaining to technology or consultancy services rendered. informs industries and licences for any new schemes. This group also takes care in the management of S & T outputs with other funding agencies viz. DST, CSIR, NRDC, AIMA, CDC, etc.. This group has recently initiated its efforts in setting-up an incubation Centre and possible knowledge Alliance with Moser Baer Photovoltaic Limited in Solar Energy area.
Human Resource Development Group (HRDG)

This Group organises Training Programmes for the benefit of NPL staff members as well as for the personnel belonging to Testing & Calibration Laboratories, S & T institutions and industries in various areas of core competence. It also supports organization of symposia, conferences, etc., at NPL. It also attends to various public relations activities, and follows up various MoUs with educational institutions in respect of doctoral, post graduates and summer training on reciprocal basis. Besides this, the Group also organizes the placement of JRFs, SRFs, Research Associates, etc., in suitable sections/divisions of the laboratory, and pursues other schemes of CSIR on EMR and HRD activities.

International Science and Technology Affairs Group (ISTAG)

International visits play an important part of scientific R & D. Processing of application of the laboratory scientists pertaining to international visits, bilateral exchange programmes, sabbatical leave / study leave for deputations abroad are handled by this group. It also arranges important lectures and invited talks. Arranging training programmes for international candidates is also the job of this group. It also organize the visit of foreign delegation at NPL. International collaborative projects, Bilateral International cooperation programmes & MoUs of NPL are also the areas of this group.

Library and Technical Information Services

NPL Library has been providing library and information support to scientists for R&D pursuits.

Over the years it has developed a rich collection of scholarly books and journals for the purpose, specifically in the field of physics and related sciences.

During the current year library subscribed to 109 scholarly journals (90 foreign journals and 19 Indian journals) and added 167 S & T books, 54 Hindi books. Library provides library services such as photocopying service, electronic document delivery service, inter library loan service, reference service and literature search.

The library offers online access to more than 4500+ full text journals under the e-consortium project of CSIR. It facilitate access to journals from various publishers i.e. Science Direct (Elsevier), Blackwell, Springer, AIP, APS (American Physical Society), Wiley Inter science, John Wiley and sons, Oxford University Press, Royal Society of Chemistry, American Chemical Society as well as to their archives going back to 1995 in case of Elsevier science and 2000 onwards in the case of other publishers. From this year, the Library has started providing access to intranet edition of Indian Standards.

This Service was made operational in NPL on 31st July 2002 with the access to Science Direct (Elsevier) group of journals and others w.e.f. February 2005 onwards.

This year, library has also installed 7 (Seven) dedicated computers in the library reading hall to provide access to electronic journals for walk-in users (Who are mostly from the various educational & research institutes). Library Reading hall is also having the high-speed wireless internet area (hot spot) where one can have wireless connectivity for their wi-fi enabled laptops.

The Library has a KSK Library site on the NPL intranet providing latest information on its activities such as additions to its collection, current subscribed journals, new journals received during the week, links to electronic libraries, publishing houses, and papers published by NPL scientists. The library continued to update this site throughout the year.

The Library also maintains NPL website (http://www.nplindia.org) on Internet. It is provides latest information on activities of NPL such as its role; thrust areas of research, facilities, services and achievements.

Central Workshop:

Different types of machining facilities have been established in NPL’s Central workshop to
extend support to laboratorys R&D needs and to undertake external contract jobs. In addition to normal milling, lathe and welding machines etc. for normal fabrication jobs, work-shop is also under-taking a wide varieties of jobs of die making, sheet metals, plating and polishing and high quality carpentry works etc. The NPL workshop also has CNC milling facilities backed up by a CAD / CAM facility comprising a high precision German ‘DECKEL FP4A’ universal milling machine, with CNC rotary table and a GLIDEMESTER CT-200 CNC lathe machine capable of producing turned components. The workshop is also having a Auto CAD based drawing and tracing facilities. During the year the central workshop has completed more than 1095 jobs of in-house machining and fulfilled most of the requirements of high precision jobs of various Divisions/Sections. Total cost of work done during the year at Workshop was approx. Rupees. One crore thirty eight lacs thirty six thousand two hundred eighty eight only).

In addition to design, development and fabrication jobs, work-shop also undertakes a large number of maintenance jobs comprising different precision machines, pumps, compressors, gear boxes, machines of the Glass Technology Unit etc.

Glass Technology Unit:

This unit is having excellent facilities and expertise for design, development, fabrication and repair of scientific glass and quartz glass apparatus and equipments. It undertakes scientific glass instrumentation work for in-house as well as other institutions, industries and organisations. During the year Glass Technology Unit completed 176 jobs for NPL and 15 jobs for outside agencies and earned Rs 97898/- (Rs. Ninety seven thousand eight hundred and ninety eight only) as ECF. GTU has also provided a comprehensive technical training for various skills to one Technical Officer from University of MORATOWA Sri Lanka for two months and charged a sum of US $ 2000/-

Cryogenic Plants & Facilities:

NPL has excellent liquid Nitrogen & liquid Helium producing units. It is also having a 6000 litres capacity liquid Nitrogen storage vessel, making the availability of liquid Nitrogen round the clock for NPL’s scientific work. We are also maintaining and producing liquid Helium at NPL. Till 31st Dec, 2007, we have produced approximately 31200 litres of LN₂ & supplied approximately 2400 litres of liquid Helium and Helium gas. Efforts are being made to improve the productivity further.

The Central Computer Facility at NPL

(a) offers several network, computing and user-support facilities to NPL scientists and staff,
(b) is involved in software development for use at NPL and development of biomedical instruments, and
(c) conducts research in the areas of pattern formation and nonlinear physics and evolving networks and
(d) provides consultancy to other instutions and industry in the area of IT infrastructure and networking and automation and instrumentation.

IT Infrastructure and Facilities at NPL

A campus LAN (Local Area Network) has been set which connects together approximately 850 computers spread over the NPL campus. The network utilises a mixture of optical fibre, UTP cables and switches. The internet access is provided through a gateway to the external world via a 2 Mbps radio link and 2 Mbps leased line to the ERNET at the department of Electronics. Email and Internet services are thus brought to the user’s desktops.

CCF has established and is actively maintaining various servers namely Mail, Web, LTSP, Intranet, DHCP, DNS, Router, Bridge, Anti-virus, Backup, Database and Other Dept.
servers for providing networking, mailing and backup services. A schematic of the set up is shown in the figure below.

CCF has started the initiative to establish a new Data Center facility. Migration to improved infrastructure, with new servers to improve the quality of service has been already completed. Multi-layered firewall, anti-spam engine, antivirus solution have been implemented to enhance the overall network security.

Developmental Activities

- Development of Personnel Inventory System (PIR) to enable the employees to retrieve their PIR records. Its purpose is to help store personnel for maintaining and updating the PIR records online.

- CCF has developed the NPL intranet site (http://nplnet.ccf.npl) and is maintaining the same for providing information about latest circulars, notices, announcements etc. User friendly interfaces are also provided on the site for lodging PC/printer AMC related complaints and checking the status, to browse through the list of experts, personal inventory records, telephone directory, commonly used forms and open source softwares etc.

Research and Educational Activities

- Development of biomedical instruments like blood oxygenation monitor, ECG machine and brain oxymeter.

- Experimental, theoretical, and computer simulation research on formation of patterns in a layer of a solid at the melting transition.

- Research on models for prebiotic evolution using numerical methods.