The Human Resource Development (HRD) Group of NPL is a constituent group of SASD 8 and represents a central group of the laboratory providing a wide range of HRD services. It undertakes several activities in various areas of core competence of the lab and also related to research scholars. All these activities eventually lead to the generation of the trained S&T manpower. The various activities of the Group are as follows:

1. Organisation of Industrial Training Courses

Organisation of Training Courses on various physical parameters in the area of Metrology / Standards, as well as on other specialized topics is an important activity of the HRD Group. These courses are primarily meant for the personnel belonging to various industries, Testing & Calibration laboratories and other S&T organisations. However, the NPL staff members are also encouraged to attend these courses, where ever found fit.

The Training Courses consist of theory lectures on various scientific & technical aspects of the training course, followed by practical demonstration and hands-on training on the related instruments / apparatus / machines.

Eight (08) training courses on diverse topics of Mass Metrology, Force, Torque & Hardness Measurements, Calibration of Glass Thermometers, Photometry & Colorimetry, Material Characterization Techniques, etc. were organized by NPL during 2010-11, which were attended by a large number of personal belonging to various national and international organizations, including many from NPL also.

This activity led to an ECF generation of Rs. 5.75 Lacs.

2. Organisation of Students’ Training at NPL

NPL provides Training to students pursuing M.Sc./M.Tech./MCA, or their equivalent degree programmes, from different educational institutions spread all over the country, including Students of IITs/IASc-Bangalore, etc., in the areas of research activities being carried out at NPL. The basic objective is to provide the students a feel and importance of the various activities, as well as to motivate them towards scientific research as the career.

During the year 2010-11, 102 students were provided training oriented towards the fulfillment of their academic degree requirements in different areas of research under the guidance of senior scientists.

This activity led to an ECF generation of Rs. 3.38 lacs.

3. Organization of Institutional Visits to NPL

Organization of institutional visits involving students / teachers / faculty members / personnel belonging to schools / colleges / universities / technical institutes / S&T organisations is an important activity of the HRD Group. The basic objective is to provide the visitors a glimpse of the NPL activities and achievements, and thus enhance NPL’s visibility in the society.

During 2010-11, Nine institutional visits were organised by NPL, which involved around 250 persons and included prestigious institutions like, IILM Ranchi, Vivekanand Kendriya Vidyala Schools (Assam & Nagaland), INSPIRE Internship Programme (DST) etc.

4. Dissemination of HRD-Related Information to NPL Staff Members

Dissemination of HRD-related information to the NPL staff members is another important task performed by the HRD Group. The information generally refers to conferences / symposia / workshops, or special training programmes conducted by DST, HRDC (Ghaziabad) or other such organisation, or awards instituted by various agencies.

More than 150 different types of HRD-related papers were displayed at 4-5 prominent places of the laboratory each, during the year 2010-2011.
5. Deputation of NPL Staff Members to Attend Conferences / Similar Events

NPL encourages and supports its staff members, including the floating members like JRFs, SRFs, PAs, RIs, RAs, SRAs, etc., to attend and present papers at national / international conferences / symposia / seminars / workshops, organised by different agencies in areas relevant to research activities being carried out at NPL. This is primarily meant to enable the staff members to put forward their views and research results before the leading national / international experts and interact with them on the latest developments in their research areas.

A large number of NPL scientists and other staff members (210 cases) were deputed to participate in various conferences / similar events and different Training Courses held across the country during the year 2010-11.

6. Placement, Ph.D. Registration and other Support to Research Fellows

One of the most prominent activities of the HRD Group is to provide help and support to Research Fellows (JRFs / SRFs), starting from the time they join NPL till the time they leave NPL. This includes their placement in a suitable Division / Group and helping them in getting Hostel accommodation, if required. This also includes their Ph.D. registration, assessment for continuance / upgradation, deputation to attend conferences in India & abroad etc. Sometimes, the help to the Research Fellows starts even before they join NPL. This refers to the cases wherein they are invited and inspired to join NPL for their Ph.D. programme.

During 2010 -11, 38 research fellows (JRFs/ SRFs) were inspired to join NPL, resulting in a total strength of Research Fellows (JRFs+SRFs) in NPL to be 91 as on 31.03.2011.

7. Orientation of Newly-Recruited Scientists

Co-ordination is done for the newly-recruited scientists for undergoing a 2-week Orientation Programme. This consists of meeting with senior scientists, including all Divisional Heads and interacting with them on their research activities. The basic aim of the Orientation Programme is to provide the freshly-inducted scientists an opportunity to have a glimpse of all the research activities being carried out at NPL, right in the very beginning of joining the NPL. This awareness could be very helpful in their proper placement by the authorities as well as in their pursuit of research activities in the future.

8. Formulation of NPL Training Calendar

The formulation of ‘NPL Training Calendar’ and its communication to the prospective industries / laboratories / scientific institutions is the very first step towards the organization of Training Courses by the NPL. The NPL Training Calendar for the year 2011-2012 was formulated by the HRD Group in consultation with a committee approved by the Director, NPL & Technical Coordinators and sent to all the relevant parties. These training courses, while benefiting the concerned personnel and thus contributing towards the generation of trained S&T manpower in the country, are beneficial to NPL also in terms of its image / visibility enhancement and ECF generation.
OTHER IMPORTANT ACTIVITIES OF THE HRD GROUP

I. Seminar on Advanced Materials & Quantum Metrology for NET-qualified JRFs

A 1-Day Seminar on Advanced Materials & Quantum Metrology was organized on 28th May, 2010. The objective of the Seminar was to give an exposure of the activities being pursued at NPL in the area of Advanced Materials & Quantum Metrology to the NET-qualified JRFs, to attract them to join NPL for their Ph.D. work. The seminar started with welcome by Dr. R.K. Kotnala, Chairman, NPL Academic Committee, followed by the Inaugural address by Prof. R.C. Budhani, Director, NPL. Prof. Budhani delivered a very fascinating lecture emphasizing why the students (JRFs) should join NPL for their Ph.D. work. The various points which he covered, included ‘state-of-the-art facilities & infrastructure’, ‘global visibility of NPL’, ‘the CSIR connection’, ‘comfortable hostel accommodation’ and ‘living in Nation’s capital’, besides others. After the Inaugural address, there were five lectures by the learned scientists of NPL in the areas of their activities. This was followed by visits to various Laboratories, namely, Quantum Standards, Nano Science & Technology, Surface Physics & Nanostructured Group, Liquid Nitrogen & Liquid Helium Plants, Organic Electronics Laboratory, Time & Frequency Group, and Magnetic Ferro-fluids Laboratory. The ended with lively interaction between the students and the scientist of the NPL. A copy of the technical programme alongwith copies of the Power Point Presentation by the different scientist are attached herewith.

The programme was attended by 32 NET-qualified JRFs. All these students were extremely pleased to see the various activities of NPL and felt interested in joining NPL for their Ph.D. work. These efforts proved fruitful in the joining of 10 students for their Ph.D. work at NPL, in the month of July.

II. CSIR Foundation Day Celebrations

The HRD Group was actively involved in the organisation of this function, in association with all the divisions of NPL. The CSIR Foundation Day – 2010 was celebrated by NPL on 26th Sept., 2010, in a very vibrant and enthusiastic manner. Dr. R.S. Bisht, former Joint Director General, Archeological survey of India, was the Chief Guest, who delivered the CSIR Foundation Day Lecture, entitled “Ideology and Science in the Harappan Town Planning with Special Reference to Dholavira”. Various competitions such as drawing & painting competitions, essay competitions, and quiz competitions etc. were organized for the children of NPL staff members and prizes distributed to the winners. The cultural programme, including a skit & songs, was also organised by the NPL Ladies Club, staff & students of NPL, on this occasion. Prof. R.C. Budhani, Director, NPL, gave away the mementoes to staff members who had completed 25 years of service and shawl & mementoes to those who had retired during last one year. Studentship Awards to children of NPL staff members, including scholarships instituted by the NPL Former Scientists’ Forum, were also presented by Dr. R.S. Bisht amid loud applause.

As a part of the CSIR Foundation Day Celebrations, an Open Day was also observed by NPL on 28th Sept. for school & college students and teachers as well as general public. Around 1500 visitors from 24 schools and colleges visited NPL on this occasion. Each of the students was also given a memento (NPL Cap), which was liked by all. The smiles on these young faces won the hearts and minds of the NPL staff members, who were busy attending to Open Day Activities all morning. The happy enthusiasm of the school children made the entire Open Day programme a big success.

III. Organization of CSIR Programme on Youth for Leadership in Science (CPYLS)

The Annual CSIR Program on Youth for Leadership in Science (CPYLS) was organized by NPL at its campus on 25th & 26th November, 2010 and was attended by bright young school children of various schools, specially chosen by the CSIR for this programme. The programme started with an inaugural address by the Director, Prof. R.C. Budhani followed by a very informative and fascinating lecture by Prof. Kehar Singh of IIT, Delhi. The programme included two
other lectures on different topics, namely, “Liquid Crystal Display Devices” and “Nanoscience & Nanomagnetics in Industrial Applications” by the senior scientists of NPL, Dr. A.M. Biradar and Dr. R.K. Kotnala, Chairman- Academic Committee, respectively. The programme also involved visits of the school children to various Research Groups of NPL involving different R&D activities, namely, Pressure and Vacuum Standards, Force & Hardness Standards, Liquid Nitrogen Plant, Time & Frequency Standards, Superconductivity, Mass Standards, Luminescent Materials, Physics & Engineering of Carbon, Organic & Inorganic LEDs, Microcrystalline Silicon Solar Cells, Magnetic Standard, Ozone Calibration System, Nano-Science Lab, to have a glimpse of scientific research being carried out.

The basic objective behind the whole programme was to inspire and motivate the talented school children towards Science and Scientific Research as the Career.

IV. Organisation of National Science Day Function

In honor of Sir C.V. Raman for his legacy and discovery of the Raman Effect on February 28, 1928, the National Science Day 2011 was celebrated at NPL on 28th Feb, 2011, in coordination with the Academic Committee. Prof. Samir K. Brahmachari, DG, CSIR was the chief guest of the function. A Poster Presentation Symposium involving the presentation of the work by the research fellows of NPL was organised at NPL. All NPL staff members along with others invited dignitaries visited the posters showing the research work of the students. To recognize and encourage the students for their research work, six best poster awards under two categories, namely Basic Sciences & Technology, were awarded to the students by the Prof. Samir K. Brahmachari, DG, CSIR. The awardees were duly selected by the jury of eminent scientist, specially constituted by DNPL. The main function started in the afternoon with the lighting of lamp by DG, CSIR at NPL auditorium followed by remarks by the Director NPL, Prof. R.C. Budhani. Prof. Brahmachari delivered the inaugural address namely “CSIR Journey to the Future” in which he emphasized the need to change our vision towards the science. He also talked about the CSIR Vision 2022 & roadmap for deployment of CSIR-800 technologies for the society. The DG, CSIR also informed the audience about the newly opened Academy of Scientific & Innovative Research (AcSIR). While telling about history of science in India, he mentioned how the different fields of science had changed from ‘personnel excellence’ to ‘global S & T leadership’ during the last few years. Prof. Brahmachari along with DNPL & senior scientists, visited most of the posters. The DG, CSIR had a very lively interaction with the students and suggested them to take advantage of the modern facilities for their research work.