

## Progress Report (July 2011)

### S & T Services

Three new prototypes of improved cook stove have been designed and fabricated for evaluations, under the CSIR – 800 project RSP - 0032

### New R&D projects acquired

1. “Biotechnological approach for capture of CO<sub>2</sub> for generation of PUFA using algae”, sponsored by DBT, New Delhi
2. “Climate change and plant –microbes interaction consequences for phyto-remediation of crude oil contaminated soils”, under Ramllingaswami Fellowship of DST for 5 years
3. “Quantification and characterization of municipal solid waste for Aizawl City”, sponsored by State Investment Programme Management Implementation Unit (SIPMIU), Government of Mizoram.

### Reports submitted

1. Technical Evaluation of the Bid Offers for Technology Selection for Construction of 1.5 and 5.0 MLD Sewage Treat Plants in Kerala, Submitted to Kerala Water Authority.
2. Technical Evaluation of Feasibility Report for the Proposed Sewage Treatment Facilities for Domestic Sewage Generated from Lonar Town, Submitted to Municipal Corporation, Lonar.

### Samples analyzed

- |     |                                    |                              |
|-----|------------------------------------|------------------------------|
| 1.  | In Atomic Absorption Spectrometer: | 184 samples                  |
| 2.  | In Fluorescence Spectrophotometer: | 49 samples                   |
| 3.  | In TOC Analyzer:                   | 103 samples                  |
| 4.  | In CHNS analyzer:                  | 10 samples                   |
| 5.  | In ICP-AES/OES:                    | 523 samples, Analytes – 4989 |
| 6.  | In GC                              | 502 samples                  |
| 7.  | In UV-Vis-NIR                      | 89 samples                   |
| 8.  | In GC-MS                           | 163 samples                  |
| 9.  | In HPLC                            | 86 samples                   |
| 10. | In Particle size Analyzer          | 3 samples                    |

- |                                |             |
|--------------------------------|-------------|
| 11. In Direct Mercury Analyzer | 238 samples |
| 12. In FTIR                    | 7 samples   |

### **Important Workshops / Seminars / Meetings / Conferences / Symposia Organized (brief details)**

- Seminar on “Nanoparticle Characterization by Using SZ-100”, organized on 25 July 2011. The lecture was delivered by Dr. Tetsuji Yamaguchi, Horiba Ltd. Japan
- “Open Defense Seminar” was organized by PGRPE students on the following topics on 25-26 July 2011 respectively
  - “Integrated Hydrogeological and Modelling Studies in the Koradi Ash Ponds”, the lecture was delivered by Ms. Siva Ramya Sanam
  - “Study of Dispersion in Street Canyon”, the lecture was delivered by Mr. Abhinav Sharma

### **New Facilities Added:**

Nanosizer has been installed at Environmental Materials Division, NEERI

### **Significant contributions**

- Dr. N. N. Rao attended Task Force Review Meeting of NWP-45 in connection with future activities under MiC program of CSIR-NEERI.
- Dr. Rita Dhodapkar delivered an Invited Lecture on Solar Photocatalytic Disinfection of Water: NEERI's Experiences, at the Nano for Clean Technology Workshop Series on "Solar Photocatalytic Reactor Engineering for Water Disinfection" on 22nd June, 2011 at Nanotechnology and Integrated Bioengineering Center, University of Ulster, Belfast, UK.
- Dr. Nitin Labhsetwar, Principal Scientist was invited as Visiting Professor and delivered a talk on “Energy and Environment” for NCRS Intensive Course, at Kyushu University, Fukuoka, Japan during 26 June – 19 July 2011
- One month training on the following research topics were given to the following students / trainees

Ms. Vaishali Singh      Biodegradation of endosulphan

Ms. Ruchita Pal          CO<sub>2</sub> sequestration through microalgae

Ms. Alka Singh Bind    CO<sub>2</sub> sequestration through microalgae

Ms. Sonal Kesari        Biodegradation of endosulphan

Ms. Mili Pal              Isolation and screening of bacteria

### **Dr. Ashok S. Juwarkar Memorial Lecture**

CSIR-NEERI organized "Dr. Ashok S. Juwarkar Memorial Lecture" on 14th July 2011 (Thursday) in the NEERI Auditorium. Dr. P.B. Nandkar, Prof. & Head, Department of Botany, RTM Nagpur University delivered the Dr. Ashok S. Juwarkar Memorial Lecture on "Biological Nitrogen Fixation and Its Impact on Crops".

### **Educational visits**

213 students from various Institutes / Universities visited the Institute and were briefed about the ongoing / significant R&D activities of the Institute in Marathi / Hindi / English