

CSIR-NEERI's Progress Report of March 2011

1. MoUs / Agreements signed:

➤ National

Memorandum of Understanding (MoU) with A.E. Coal Technology India Ltd. (AECTIL) of the Abhijeet Group was signed on March 25, 2011 for the following objectives.

- R&D activities for Energy and Environment for identified projects
- Environmental studies for identified power sector projects
- Remediation of contaminated sites, if any
- Solid waste management and fly ash management
- Environmental studies for coal gasification / coal bed methane projects
- Preparation of Term of Reference (TOR) for Underground Coal, Gasification in Coal Block awarded / received by AECTIL through CIL
- Preparation of Term of Reference (TOR) for Underground Coal, Gasification in Coal Block awarded / received by AECTIL through RSPCL
- Preparation of Term of Reference (TOR) for Underground Coal Gasification in Coal Block awarded / received by AECTIL through GMDC

➤ International

MoU with Monash University, Australia for pursuing and promoting joint research and development activities of mutual interest in various aspects of environmental and water technologies in accordance with their respective needs and objectives (**March 9, 2011**).

2. S & T Services:

- The Ministry of Water Resources, Govt. of India has awarded a project to CSIR-NEERI for 'Preparation of Baseline Status of the Groundwater quality in NCT, Delhi'. Under this project, groundwater quality assessment at about 240 locations in NCT, Delhi is in progress (Project No. C-1-1822)
- Delhi Jal Board retained NEERI to carry out a study on surveillance of drinking water quality being supplied in the Delhi city. Under this project, water quality is being monitored at the seven treatment plants on fortnightly basis by its physico-chemical and bacteriological analysis. Bi-monthly water quality monitoring is also being done at these treatment plants and 10 locations in the distribution network to ascertain the levels of pesticides, heavy metals and tri-halomethane formation. Besides, the 25 groundwater samples were also analyzed for assessing heavy metals, fluoride and nitrate levels. The scheduled water quality monitoring for March 2011 was done. (Project .No. C-2-1728)
- Under the Summer Action Plan, the Delhi Jal Board retained NEERI to undertake the drinking water quality surveillance monitoring (bacteriological parameters – FC, TC & RC) in the distribution network of Delhi city. The monitoring was carried out on alternate days from different localities to cover the entire area of Delhi city – 15 samples were drawn from the consumer premises / PSPs in consultation with DJB. The surveillance work has been completed as per the project schedule. About 1350 samples have been analyzed under this study. The data is being compiled for further statistical analysis. The related reports have been submitted to Delhi Jal Board (Project .No. C-3-1532)
- NCR Planning Board (NCRPB) retained NEERI for appraisal of the DPR for water supply system in Kota city and SADA, Gwalior. The draft reports were submitted to NCRPB on the basis of appraisal carried out by NEERI (Project No. C-1-1557). The final appraisal report for Kota city water supply system is under preparation based on the appraisal of final report forwarded by NCRPB to the Institute.
- Under the CPCB sponsored NAAQM project, NEERI is monitoring the ambient air quality at three strategic locations – Residential, Commercial and Industrial, at six cities in India, i.e. Delhi, Chennai, Kolkata, Hyderabad, Mumbai and Nagpur. The parameters monitored include particulate matter (SPM & RSPM) and gases (SO₂, NO₂, NH₃ and H₂S). The monitoring and analytical work for March 2011 has been completed.

- NEERI is involved in the EMPOWER project entitled "Role of Ambient Ammonia in Formation of Aerosol over Indo-Gangetic Plain (IGP) of India: Implication on Its Chemical and Biological Properties" in collaboration with NPL.
- Provided technical inputs and information related to ongoing bio / phyto – remediation research activities to Dr. Dejene Ayele Tessema, Associate Professor, Environmental Analytical Chemistry, Jimma University, Ethiopia who has joined at Eco-Restoration Division under C V Raman Fellowship for African Researchers Programme
- The following (No.) environmental samples have been analyzed using the respective instruments at the Analytical Instruments Facility of the Institute

GCMS	292
HPLC	104
TOC	194
CHNS	40
AAS	235
PSA	6
DMA	15

3. Important Workshops / Seminars / Meetings / Conferences / Symposia Organized (brief details)

- Task Force Monitoring Committee Meeting to review the progress of CSIR XI Five Year Network Programme on "Remediation/Ecorestoration and Cleanup of Contaminated Sites, Water Sources and Groundwater (NWP-0019)" on 23rd March, 2011 at CSIR-NEERI, Nagpur
- A workshop on "Technology Commercialization and Transfer Specialists" was organized by Consultancy Development Centre (CDC), New Delhi at CSIR-NEERI Nagpur during March 3-5-2011. The faculty for this programme was Mr. Y.K. Pandey, Mr. N.K. Sharma, (Formerly Managing Director, NRDC) and Dr. Sunil Abrol, Director General, Consultancy Development Centre. 19 participants have attended the workshop.

4. New Facilities Added:

Global Positioning System (GPS) has been procured for recording the exact locations of sampling points for various environmental studies, particularly the ground water baseline water quality mapping work. The system has been installed and training has been imparted to the concerned

5. Honours /Awards:

- a. J K Bassin, Scientist & Head, Delhi Zonal Laboratory, CSIR-NEERI has been nominated as Member of the Expert Committee under the direction of Hon'ble High Court of Allahabad. Accordingly, the committee has examined the matter related to the sewerage work being implemented in Allahabad city and has submitted its report.
- b. J K Bassin, Scientist & Head, Delhi Zonal Laboratory, CSIR-NEERI has been nominated as Member of the Expert Committee constituted by NDMA, Min. of Home Affairs for inspection of Ghazi-ud-din Haider Canal and the bank of river Gomti for ecological and environmental status.

6. Any other item of significance:

- The MS-Excel workbook, a software package has been designed for checking the correctness of chemical analysis of water

7. Papers published

- Paunikar W N, Sanmukh S G, Ghosh T K, Computation, simulation and functionally search for hypothetical proteins in *Microbacterium lepra CiiT*, International Journal of Data Mining and Knowledge Engineering (published online, IF 0.621)
- Pardeshi Sushma, Kumar Anupama, Dhodapkar Rita, Mimicking Molecular Receptors for Antioxidants, Materials Science Forum, 521, 675-677 (2011)

8. Lectures delivered

- Ghosh, T K, Recycling of Select Wastes and Agro-products for Aquaculture, during Refresher Course in Life Sciences, organized by UGC-Academic Staff College of RTM Nagpur University, 9 March 2011
- Ghosh T K, Self Preservation of Ganga River Water, during Refresher Course in Life Sciences, organized by UGC-Academic Staff College of RTM Nagpur University, 9 March 2011
- Pote S S, Joshi C P, Moharil S V, Muthal P L and Dhopte S M, Luminescence in $\text{Ca}_{1-x}\text{Y}_x\text{F}_{2+x}$, *Physica B406*, 1308-1311 (2011)

9. Educational visits

261 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