CHAPTER 16
TECHNICAL INTERACTION WITH EXTERNAL AGENCIES

16.1 INTERACTION WITH OTHER AGENCIES

16.1.1 Bureau of Indian Standards (BIS)

- Shri R. Bhattacharya, Secretary, AERB is a member of BIS Occupational Safety & Health and Chemical Hazards Sectional Committee, CHD 8 and convener of its Sub-Committee CHD 8:2 and is involved in review and revision of BIS documents.
- Shri L.R. Bishnoi, Head, SSED, as a member of BIS sectional committees on Cement and Concrete (CED 2), Earthquake engineering (CED 39) and Structural safety (CED 37) is involved in review and revision of BIS documents. In addition, Shri Bishnoi is also member of subcommittees of BIS on Cement, Pozzolona and Cement additives (CED2:1), Concrete (CED 2:2) and Maps (CED 39:4)

16.1.2 National Disaster Management Authority (NDMA)

Shri R. Bhattacharya, Director ITSD & IPSD, AERB, is a member of Committee on Chemical Safety Analysis of Projects undertaken by NDMA.

16.1.3 Ministry of Environment & Forests (MoEF)

Shri R. Bhattacharya, Secretary, AERB is a member of Site Appraisal Committee of MoEF for Nuclear Facilities & Strategic Facilities.

16.2 PROJECT GUIDANCE

Technical divisions of AERB provided project guidance to undergraduate engineering students as well as M Tech students. In addition, PhD students registered from AERB are being guided at the respective divisions.

16.2.1 Guidance provided by IPSD

IPSD has been providing guidance to young engineering students to share its expertise in the field of Quantitative Risk Assessment, Hazard & Operability (HAZOP) studies, Fire Hazard Analysis/Modeling etc. During this year IPSD officers provided guidance on the following projects to the internship students from various Universities.
- A project on “Frequency Estimation of Process Equipment Failure in H2S Based Heavy Water Plants” was carried out by intern student from IIT Delhi, Chemical Engineering branch.
- A project on “Frequency Estimation of Process Equipment Failure in Ammonia Based Heavy Water Plants” was carried out by two intern students from IIT Kanpur, Chemical Engineering branch.
- A project on “Risk Based Inspection in Nuclear Fuel Complex” was carried out by Trainee Scientific Officer-NFC, Hyderabad.

16.2.2 Guidance provided by NSAD

NSAD has been providing guidance to students, research scholars and officers from various DAE institutions in the area of probabilistic safety assessment, thermal hydraulics, severe accident analysis, computational fluid dynamics, uncertainty analysis, reactor physics, structural analysis etc. During the present year, NSAD officers have guided five students from BITS Pilani and two employees from PM Dimensions on the following projects:
- Summer training projects on “Investigation on Safety Margin due to power profile changes”, “PSA based system/component classification – Case studies”, “Risk informed technical specifications optimization”, “Finding out the best fit from regression”, “Uncertainty analysis using Wilk’s method and Development of random sampling package” were carried out by BITS Pilani students.
- Summer training projects on “Simulation of stratification behavior in coolant channels of RD-14M test facility” and “Sensitivity studies related to thermal hydraulics of natural circulation small light water PWRs” were carried out by PM Dimensions employees.

16.2.3 Guidance provided by SRI

SRI-AERB has been providing project work and guidance to students and research scholars in science and engineering in the area of reactor physics, structural analysis, PSA and reliability, computational fluid dynamics, fire modeling, ground water flow and radionuclide migration etc. During the present year, SRI officers have guided research scholars and students on the following projects:
- An M. Tech project on “Steady State Reactor Physics
Analysis of European Pressurized Water Reactor (EPR) was carried out by intern student from Sastra University, Nuclear Engineering branch.

- National level training on “Ground Water Modeling Using Visual MODFLOW” was provided by SRI-AERB to research scholars and faculty members from various academic institutions at Annamalai University.

- Expert guidance and technical advice was provided to HBNI Research Scholar, IGCAR for Ph.D. research work on “Software reliability in Safety Critical Supervision and Control of nuclear Reactors.”