Discussion Meet on "Engineering of Foundations for NPP Structures in Alluvial Soils" held at AERB on January 24, 2014

A discussion meet on "Engineering of foundations for NPP structures in alluvial soils" Engineering of foundations for NPP structures in alluvial site needs to be addressed comprehensively in design safety review of civil engineering structures. As of today, there is a limited experience of soil-structure interaction issues for heavy foundations in alluvial sites, particularly with respect to ground motion modification and soil-foundation-structure interaction effects. There are technological challenges, particularly if use of piles is necessitated along with raft in deep alluvium.

In this regard a discussion meeting on "Engineering of foundations for NPP structures in alluvial soils" was organized by AERB on January 24, 2014. Primary objective of this meet was to deliberate engineering challenges for foundations of NPP in alluvium compared to those in rock as to have regulatory focus on safety of NPP foundations in alluvium during the review process. Major topics of discussion included:

1) Evaluation of earthquake motion in alluvial sites.
2) Modelling and analysis for soil-structure interaction in alluvial sites.
3) Soil-pile-structure interactions.
4) Geotechnical investigations for NPPs on alluvial sites.
5) Static analysis and settlement behavior in design of raft/pile foundations in alluvial sites.

Around eighty five participants from AERB, DAE units (viz. BARC, IGCAR, BHAVINI, NPCIL, HWB and DCSEM), academic institutions (IIT Roorkee, IIT Bombay) and consultants (viz. TCE, STUP, L&T etc) participated in the discussions. Detailed presentations were made by experts, which was followed by a panel discussion. A report has been prepared based on the presentations/discussions and conclusions drawn from the panel discussion.