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## Status of ground water contamination by land filling of coal combustion residue: An overview

Radha Rani and Manish Kumar Jain  
Indian School of Mines, India

In India, large quantity of coal combustion residue is being generated, as most of our energy demand is met through coal based thermal power stations. Its generation in the country has increased from 40 Mn T/yr. in 1994 to about 220 Mn T/yr in 2012. It is projected to be 350 Mn T/yr in 2017. Coal Combustion Residue (CCR) is generated during the combustion of pulverized coal in coal-fired power stations. They contain toxic metals much higher concentrations than soil background levels that can be released into the underground water through leaching processes. Due to generation in large value, its utilisation is a major challenge to the scientist world. Availability of land is also limited for land disposal. Mine fill is an area where one can utilise the CCR in large volume. Before such utilisation, its leaching behaviour towards toxicity of metal needs to be clarified. Therefore this presentation tries to review an extensive look at the extent to which major and trace elements are leached from CCR during mine filling. The alkalinity of CCR attenuates the release of a large number of elements of concern such as Cd, Co, Cu, Hg, Ni, Pb, Sn or Zn among others, but at the same time, it enhances the release of oxyanionic species such as As, B, Cr, Mo, Sb, Se, V and W.

### Biography

Radha Rani has registered for PhD at Indian School of Mines, Dhanbad, Jharkhand, India, 2013, under the supervision of Dr. Manish Kumar Jain. Her research topic is "Environmental Evaluation of Fly Ash from Selected Thermal Power Plants with Reference to Mining Filling." She has presented two papers, one in national conference and other in international conference on the same topic.

[radhaenviro@gmail.com](mailto:radhaenviro@gmail.com)