

## **Trace element emissions from coal burning power plants in India**

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The efforts put into describing the occurrence and distribution of trace elements in coal for the past 3 decades has turned to the "humanistic" question of total trace element content of coals and the environmental impact associated with their use. As of 1998, these data for coal burning power plants are being compiled in the Toxic Release Inventory (TRI) in the US. Any power plant which "produces" more than approximately 11 metric tons (25,000 lb./yr.) of a toxic substance must report this release to the TRI.

During coal combustion the trace elements contained in the coal are all released in one form or another (bottom ash, fly ash, stack ash, gaseous emissions). Total trace element releases from 11 major coal burning power plants in India have been calculated based, on concentrations in the feed coal and yearly consumption, and compared with reportable TRI values. Using Cr as an example, the reportable values are (in MTY): Neyveli - P1 (57), P2 (46); Talcher (44); Delhi - IP (30), B1 (94); Korba -NTPC1 (144), NTPC2 (32), MPEBE1 (41), MPEBE1 (41), MPEBW1 (14), PEBW2 (34), BCPP1 (44). All these data exceed TRI values (from 1.3 to 13 times). Similar information has been compiled for Ba, Co, Mn, Ni and Zn. Comparisons are made with coals from Thailand (Mae Moh) and the Western US (Wyoming and Utah).