

## **Dust (SPM) Problem in Open Cast Coal Mines and Their Management**

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The air quality in coal mine is characterized by suspended particulate matter (SPM) and gaseous pollutants (NO<sub>x</sub>, SO<sub>2</sub>, CO, CH<sub>4</sub> etc). Among these SPM is a pollutant in the mine air the characterization of SPM in terms of shape, size, and mineralogical composition. Whether dust particles in solid or liquid, they behave similarly where air-borne. Dust particle size less than 5 micrometers is called respirable dust. Respirable dust is physiologically very harmful. Radiological studies indicated that nearly fifteen percent of mine workers were suffering from pneumoconiosis. Therefore respirable dust sampling on a routine basis is a must for every mine. Different control measures for SPM have different control efficiencies. Water spraying is also not effective for all minerals due to different physio-chemical characteristics of SPM.