

Study finds Poisonous Dust in Perambur MLAs house near Kodungaiyur Dumpyard

27 October 2012, Chennai: High levels of toxic heavy metal laden dust were found in an air sample taken at Kodungiyur MLA Mr. A. Soundararajan's house in February 2012. Two air samples taken from two homes including the MLA's in the vicinity of the dumpyard revealed high levels of respirable dust, manganese and lead. The Respirable Particulate Matter (PM2.5) in the sample taken from MLA's house was two times in excess of CPCB's National Ambient Air Quality Standards. Respirable dust levels in the sample collected from another home in March 2012, during a dumpyard fire, closer to the dumpyard was three times above CPCB standards. Both samples were also tainted with nerve-damaging lead and manganese, and detectable levels of carcinogenic nickel. Lead in the sample from the MLA's house was above safe levels for long-term exposure set by the US Environmental Protection Agency.

"The measured levels of PM-2.5 would constitute an air pollution emergency if they were in the United States," said Dr. Mark Chernaik, staff scientist at ELAW US, an expert who analysed the results of the air samples. Dr. Chernaik warned that the levels found in Kodungaiyur would prompt the US Environmental Protection Agency to "declare a very unhealthy air alert and advice that people with respiratory or heart disease, the elderly and children should avoid any outdoor activity; everyone else should avoid prolonged exertion."

The areas in the vicinity of the Kodungaiyur dumpyard have a high concentration of working class people, and many small businesses dependent on strenuous manual labour. The high concentration of toiling workers, large resident population and the large number of schools means a higher than normal number of people considered most vulnerable to dust pollution.

According to the U.S. EPA, "Particles less than 2.5 micrometers in diameter (PM 2.5) are referred to as "fine" particles and are believed to pose the largest health risks. Because of their small size (less than one-seventh the average width of a human hair), fine particles can lodge deeply into the lungs. Health studies have shown a significant association between exposure to fine particles and premature mortality. Other important effects include aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and cardiac arrhythmia. Individuals particularly sensitive to fine particle exposure include older adults, people with heart and lung disease, and children."¹

The three heavy metals, lead, manganese and nickel found in the air sample are highly toxic. Lead and manganese cause neurological damage and nickel is known to cause cancer. According to US Environmental Protection Agency, "Children are particularly vulnerable to the effects of lead. Exposures to low levels of lead early in life have been linked to effects on IQ, learning, memory, and behavior. There is no known safe level of lead in the body."²

Two 24-hr air samples, using a low volume air-sampler, were taken from the residential locality near Kodungaiyur waste dump in the months of February and March 2012. The first sample was taken on the terrace of the MLA's house in February and second sample was taken on the terrace of Mr. Ganesan during a major landfill fire in March this year.

The dust sampling exercise was conducted by Chennai based environmental organisation Community Environmental Monitoring upon invitation from the MLA and the local residents of Kodungaiyur.

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www.sipcotcuddalore.com and www.no-burn.org

¹ http://www.epa.gov/ttn/naaqs/pm/pm25_index.html

² <http://www.epa.gov/air/lead/pdfs/20081015pbfactsheet.pdf>