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ABSTRACT

ODOURS EMISSION IN AN URBAN AND INDUSTRIALIZED AREA

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In industrialized cities, there are many possible sources of odorant compounds, such as wastewater treatment plants, steel and pelletizing industries, landfills, airports, and harbors. Hitherto, for most of these sources, limited data is available on odours emission in emission inventories, mainly SO_2 and Volatile Organic Compounds (VOCs). To estimate the presence of odorant gases in VOC emissions from industries it is necessary to 1) Identify which VOCs are being emitted and 2) identify which of those VOCs are odorant. Although reasonably simple there are few papers addressing either area. Thus, this study aimed to categorize chemically the VOCs emission from major activities in an industrialized urban area of Brazil, crossing references with U.S. EPA - AP 42 documents, SPECIATE 4.5 database, and literature available. The results provide a list of 467 odorant compounds identified by name and chemical formula. Key odorant compounds were also classified by potential harm, relationship with the emission activity and odour characteristics. Furthermore, with the integration of those results with the current VOC emission inventory, it was possible to estimate how much odorant gases go to the atmosphere every year. This paper can assist further studies addressing industry VOC and odour emissions, moreover dispersion modelling studies.

Indicate preference of kind of presentation
   X Oral Communication

Indicate session in which authors propose to present their work:
   X Session III. Calculation of the odour impact. Odour dispersion modelling.