

# **Monitoring hydrogen sulfide at the receptor as a measure of the impact of a bituminous conglomerate mill**

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## **Abstract**

The activity of collecting and reprocessing citizens' reports of the presence of unpleasant odors cannot be successfully applied in sparsely populated residential contexts. Therefore, ARPAB activated continuous monitoring at the receptor of the hydrogen sulphide to measure the olfactory pollution produced by a bituminous conglomerate mill.

Measurements at low concentrations of hydrogen sulfide were conducted with the AF22-E fluorescence analyzer (Envea) between November and December 2023. The daily amount of times the olfactory perception threshold of 1.4 µg/m<sup>3</sup> (1.005 parts per billion) was exceeded has been measured.

Law no. 39/2021 of the Basilicata Region (Italy) established that the overall duration of odor episodes must not exceed 2% of the monitoring duration.

Throughout the measuring period, the overall duration of odor episodes that exceeded the olfactory perception threshold was less than 2% (15 hours/month). So, the disturbance perceived by the resident population is to be considered acceptable.

It is believed that the low temperatures of the monitoring period may have limited the release of volatile substances and therefore olfactory pollution. On the other hand, in the summer period with the increase in temperatures and the days in which bitumen production takes place, it is to be expected that the presence of an olfactory nuisance to the receptors may be recorded.