

## **Toxicologists conclude health risk assessment of Shongweni Landfill**

A specialist report on the human health risks arising from the Shongweni Landfill has found the primary air contaminant contributing to odour in the Upper Highway area is present at levels not linked with major health issues.

The contaminant is hydrogen sulfide (H<sub>2</sub>S), which is not associated with a risk of cancer.

The community health risk assessment by professional scientific company INFOTOX took four months to complete and considered all potential sources of hazardous substances in air released from the Shongweni Landfill operations. The work included air samples being sent to accredited laboratories in the United Kingdom for analysis, detailed dispersion modelling by Airshed Planning Professionals as well as direct readings taken on the site with calibrated instruments.

The community health risk assessment, which will be presented to the authorities in due course, concluded that:

- There is an odour contribution emanating from the landfill in the community, caused by H<sub>2</sub>S and organic sulfur compounds, which can be smelled at particularly low concentrations;
- International health studies were done at higher and lower concentrations of these compounds. The Shongweni landfill study fit in with relatively low concentrations;
- According to the available health information, among others nose bleeding, cardiovascular effects and breathing problems in asthmatics cannot be linked with exposure to H<sub>2</sub>S at the levels found in the communities;
- Considering the multitude of chemical substances investigated, no others were found to be of health concern;
- According to currently available information, Shongweni is not the only source of H<sub>2</sub>S in the study area. This affects the health risk interpretations, because Shongweni is not the major contributor to H<sub>2</sub>S;
- There is no concern about a cancer risk linked to emissions from the landfill;
- The investigation confirmed that it is unlikely that the reported “refinery” odour is associated with the Shongweni landfill activities.





The sulfur dioxide (SO<sub>2</sub>) emissions recorded in KwaNdengezi and Plantations by EnviroServ's real-time air monitors, which provided data recently reported to the authorities, were not included in the health risk assessment. "This is because SO<sub>2</sub> is not formed at the landfill as there are no combustion activities," said EnviroServ Group Technical Specialist Dr Johan Schoonraad. Sulfur dioxide health effects include asthma attacks and other airway problems and as a result, INFOTOX has recommended a further investigation.

"EnviroServ remain fully committed to our own corrective measures which will be implemented by the end of August," said EnviroServ Group CEO Dean Thompson.

INFOTOX believes the study to be the biggest source characterisation, modelling and health risk assessment which has been done at any landfill in South Africa. "We are confident the report has captured everything related to the landfill which could be of potential health concern to the community," said Thompson.