



## MEDIA RELEASE

### New approaches discussed in managing mine residue stockpiles

IMMEDIATE RELEASE

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*Caption: The Risk Based Approach to planning and management of residue stockpiles and deposits on mines was discussed at a workshop hosted by the Institute of Waste Management of Southern Africa (IWMSA) Central Branch on Wednesday, 24 May 2017, in Rustenburg in the North West Province.*

The workshop provided a valuable opportunity for participants to better understand the proposed amendments to the National Environment Management Waste Act of 2008. Jonathan Shamrock, Vice President of the IWMSA explains: “The changes, presented late last year by the Minister of Environmental Affairs, Edna Molewa, favour a risk-based approach that should be followed when managing residue stockpiles and deposits on mines. The main aim of this approach is to allow for a pollution control barrier system to be determined on a case by case basis, based on a risk analysis conducted by a competent person.”

Industry leaders gathered to discuss the proposed amendments and learn from experts in the field of mine residue deposits and stockpiles management. The morning proved to be insightful with stimulating discussion time for all those attending.

Marius van Zyl, Technical Director at Jones & Wagener, explained the new Risk-Based Approach which makes use of the Source – Pathway – Receptor Concept: “The model starts with the source; where the pollution comes from. This can be anything from vehicle exhaust emissions to drums that leak oil.” Van Zyl further explained that ‘Pathway’ is the term given to “the medium by which the pollution will travel through the environment, such as air, land or water” and the Receptor is who or what could be affected by the pollution emanating from the source.

James Lake, Principle Scientist at SRK Consulting presented on the planning and management of residue stockpiles and residue deposits. He noted that “The proposed amendments require one to determine the leakage rates through barrier systems, but they do not specify acceptable leakage rates. Once the leakage rate is known, one needs to establish how the environment will be impacted as this will differ from site to site.”

Also from Jones & Wagener was Riva Nortje, Associate in waste and tailings, who spoke about how to estimate leakage rates through pollution control barrier systems. She highlighted how leakage rates can be increased by orders of magnitude through uninformed design and specification, poor construction quality control, and operational issues. The importance of competent, experienced specialists determining reasonable leakage rates, and ensuring that the assumptions made in determining such leakage rates are achieved in design, construction, operation and rehabilitation stages was stressed.

Dr Heidi Snyman, Technical Director from Golder Associates spoke about source pathway receptor modelling and James Lake from SRK spoke about the regulations that govern planning and management of residue stockpiles and deposits. Also attending the workshop was Albert van Zyl, owner at Terrasim Earth Technologies who discussed unsaturated flow modelling and soil covers for stockpiles.

“The workshop proved to be a great opportunity to gather waste management experts to discuss the implications of the regulations on the mining industry, which makes up over 80% of the waste generated in South Africa per year. We will continue to facilitate learning opportunities like this workshop to grapple with amendments to waste management legislation,” concludes Shamrock.

For more information about the Institute of Waste Management Southern Africa visit [www.iwmsa.co.za](http://www.iwmsa.co.za). You can also follow IWMSA on Facebook (<https://www.facebook.com/iwmsa>) and Twitter (<https://twitter.com/IWMSA>).

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