ADDITIONAL COMMENTS ON THE PROPOSED DUST MANAGEMENT STRATEGY

This submission is made on behalf of the Federation for a Sustainable Environment (FSE). It augments the FSE’s previous submissions on the Draft National Dust Regulations and we recommend that this submission be read in conjunction with the FSE’s previous submissions. The FSE’s comments are limited to the impacts and management of dust pertaining to the Witwatersrand gold fields.

We wish to furthermore confirm that the FSE is part of the coalition of NGOs, represented by the Centre for Environmental Rights (CER), and endorses the CER’s submissions and decisions.

In this submission the FSE respectfully calls upon the DEA to take the following factors into consideration in its objective to improve the implementation of the Dust Regulations and to align them with current best practise.

1. Consideration of the Findings, Recommendations and Directives of the South African Human Rights Commission’s National Hearing on the Underlying Socio-Economic Challenges of Mining Affected Communities in South Africa

The directives of the Commission, which we subjoin hereunder are, we believe of relevance to the dust management strategy, since it will mitigate the risks of dust:

- The DEA together with the DMR are directed to amend the content guidelines to EIAs and EMPs to include comprehensive information on the quality of land and sustainable options for potential post-closure land use.
- The DEA (together with the DMR and DWS) must respectively, include in their annual reports the number of compliance notices or other sanctions imposed, including the proportion of successful interventions and/or criminal prosecutions undertaken against non-compliance.
- The DEA (in cooperation with COGTA and SALGA) is directed to conduct an audit of all provincial governments and municipalities to confirm:
Whether all municipalities have developed and incorporated an air quality management plan into their IDPs; and
Whether all provincial MECs and municipalities have appointed an air quality officer in line with NEMAQA.

- Noting the reported lack of certainty around the applicability of NEMAQA to mining activities, the DEA (together with the DMR) are directed to issue a formal notice clarifying the requirements. A copy of this public notice must be submitted to the SAHRC within three months from the release of the above Report and must be accompanied by a report outlining measures taken to ensure that all industry role players are adequately made aware of the requirements.

- The DEA (together with the DMR) must jointly report on the measures taken to streamline the control of the cumulative air pollution impacts of mining operations. This report must outline the mechanisms that have been put in place for collation, verification and dissemination of information between stakeholders in relation to impacts reported and/or interventions, undertaken in relation to air quality.

2. Protection of Communities: Buffer zone and unrestricted end land-uses

The development of housing on footprints of Tailings Storage Facilities (TSFs) and areas within the aerial zone of influence of TSFs and TSFs exposes communities to significant dust fallout during wind events. See the paper by Melanie A Kneen, Matthew E. Ojelede and Harold J. Annegarn titled “Housing and population sprawl near tailings storage facilities in the Witwatersrand: 1952 to current.”

Regulations 17(6) to 17(10) of the Mine Health and Safety Act Regulations, under the heading “Safety Precautions” prescribe that there should be a distance of 100m measured horizontally between residential developments and Tailing Storage Facilities. The DMR established a rule to extend the prescribed 100m to 2000m due to the encroachment of communities onto mine land. However, this is not a blanket rule, it is a case based rule. The rule is inferior to the regulations and is not adhered to.

The failure by the regulators to enforce suitable end land-uses and buffer zones within the Witwatersrand goldfields necessitates co-operation with the Department of Housing, stringent dust control management (not merely monitoring) and diligent enforcement of non-compliances.

3. Potential Health Effects – Precautionary Principle

The DEA in its objective to improve the implementation of the Dust Regulations should take cognisance of the asbestosis and silicosis catastrophes in South Africa in the application of precautionary principles in respect of the latent and chronic impacts of dust from TSFs.
As a consequence of the uraniferous nature of the ore, Witwatersrand tailings and other mining residues often contain significantly elevated concentrations of uranium and its daughter radionuclides, with the decay series of 238U being dominant. The DEA should consider the potential for health effects of inhaled uranium particles in determining the acceptable levels of dust, the frequency and management of dust fallout and enforcement of non-compliances:

- Small particles are carried by the inhaled air stream all the way into the alveoli. Here the particles can remain for periods from weeks up to years depending on their solubility.
- Highly insoluble uranium compounds may remain in the alveoli, whereas soluble uranium compounds may dissolve and pass across the alveolar membranes into the bloodstream, where they may exert systemic toxic effects.
- In some cases, insoluble particles are absorbed into the body from the alveoli by phagocytosis into the associated lymph nodes.
- “Insoluble” particles may reside in the lungs for years, causing chronic radiotoxicity to be expressed in the alveoli.


Due to the small particle size of the slimes, particulate matter can be transported over relatively long distances to agriculturally used land in his surroundings.

It has to be mentioned that the deposition of radioactively contaminated dust on leaves of vegetable and forage plants can cause radiation exposures exceeding those from the “inhalation of contaminated dust” substantially.


Significant radiation exposure can occur in the surroundings of mining legacies, due to:

- Inhalation of Rn-222 daughter nuclides from radon emissions of desiccated water storage dams (e.g. Tudor dam) and slimes dams.
- The inhalation of contaminated dust generated by wind erosion from these objects, and
- The contamination of agricultural crop (pasture, vegetables) by the deposition of radioactive dust particles, which can cause considerable dose contributions via ingestion.


4. Reclamation of Dumps
The current dump reclamation practices are resulting in significant dust fallout and in many cases the remining of the dumps are not completed due to a lack of funding by the mining company or due to the heterogeneity of the which were mined. The selective extraction of value from portions of a site without concurrent rehabilitation has resulted in the exacerbation of dust fallout.

5. Business Rescue, Care and Maintenance and Liquidation

During the Business Rescue process, Care and Maintenance and Liquidation, there is no mitigation or management of dust and no enforcement. The duty of the Business Rescue Practitioners and Liquidators is to protect the interest of creditors and shareholders and not to act in the interest of the environment or mining affected communities and to mitigate or manage impacts such as dust fallout.

We refer in this regard to of mining companies such as the Pamodzi Group, the Mintails Group and Blyvooruitzicht Gold Mining Company.

Of relevance are the findings of the Parliamentary Portfolio Committee on Mineral Resources namely:

- It is clear that some mining companies are still operating without adequate financial provision for repairing damage caused to the environment by mining activities, if they suddenly close.
- Mintails Mining SA (Pty) Ltd failed to save all the money they were supposed to set aside under the law to pay for environmental rehabilitation. The shortfall is R460-million for Mintails.
- The state will inherit these liabilities if the mines are finally liquidated.
- The DMR has failed to implement effectively and carry out the intentions of Parliament to ensure that all mines rehabilitate the damage they cause.
- Changes to the mining law were made by Parliament after 2002 to ensure that in mining, as elsewhere, the polluter must pay.
- The new laws have not proven effective in avoiding this situation where the state and the taxpayer still ends up paying for the environmental harm caused by mining.
- There is a lack of clarity on the rules for the Department of Mineral Resources when it comes to Business Rescue Practitioners. It seems there is non-application of the law resulting in a free for all.
- The DMR allowed Mintails to operate between 2012 and 2018, despite the fact that the Department had never approved the environmental management plans of the mine and had never issued the company with a mining right under the law.
- There is a huge regulatory gap regarding the financial provision of environmental rehabilitation of a mine during the process of business rescue.
- There is a lack of standardization by the DMR on how to relax environmental obligations of a mine during the business rescue stage.
Subjoined hereunder are photographs adducing authentic evidence of the abandonment of duties and responsibilities during the business rescue process, care and maintenance and liquidation and the near certainty of significant dust fallout during wind events. The photographs pertain to the Mintails Group.

Mintails’ operations within the West Rand gold fields, with partially reclaimed tailings storage facilities, unrehabilitated footprints, overburden stockpiles, which are resulting in significant dust fallout during wind events. Mintails is liquidated with an unfunded environmental liability of R460million. There is no dust management or mitigation.
Open pits (Princess Cluster) in close proximity to residential housing. There is no dust control of the stockpile overburdens.

Open pits (Emerald and Monarch Cluster) with no dust control of the stockpile overburden.
Open pits adjacent to Kagiso with no dust control or management of the stockpile overburden or unrehabilitated footprints
North Sands Dump which was partially reclaimed. During the reclamation the vegetation cover was removed which is resulting in significant dust fallout during wind events. Tailings Spillages in the foreground contribute to the dust fallout during wind events.
6. **Access to Mine Sites**

In terms of the Regulations on Use of Water for Mining and Related Activities aimed at the Protection of Water Resources (GN. R. 704 of 4 June 1999) “any impoundment or dam containing any poisonous, toxic or injurious substance” must be “effectively fenced-off so as to restrict access thereto”, and “warning notice boards at prominent locations” must be erected “so as to warn persons of the hazardous contents thereof.” In many cases this is not done and allows communities direct access to mine sites. As a result it exposes the public to risks due to inhalation and ingestion of dust containing radionuclides and chemotoxic metals.
Unvegetated and partially reclaimed tailings storage facilities, which are unfenced with no warning signs, are used for recreational activities. The inhalation and ingestion of radioactive dust can result in significant radiation exposure.

7. **Intergovernmental co-operation**
   The FSE recommends the co-operation with the Department of Mineral Resources, the Department of Water and Sanitation, the Department of Health and the Department of Human Settlement in order to improve the implementation of the Dust Regulations.

**SUBMITTED BY:**
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