

**Submission by the trade union UASA
to the Portfolio Committee on Water and Environmental Affairs
about Acid Mine Drainage**

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Advocate J de Lange
Chairperson
Portfolio Committee on Water and Environmental Affairs
PO Box 15
Cape Town
8000

By email: tmadubela@parliament.gov.za

URGENT

Dear Advocate de Lange

Your communication in respect of public hearings to be held on Acid Mine Drainage has reference.

Introduction:

The trade Union UASA, which – among various sectors – organizes workers in the Mining, Metal and Engineering industries as well as the Water Utilities, resolved at its 2008 congress to investigate the current state of water quality in South Africa and to propose measures that will ensure that South Africans have access to *clean* and *safe* water and that the environment is preserved for generations to come.

UASA consequently arranged a series of three Water Security Seminars with the aim of achieving two main objectives, namely to sensitize the public about the severity of the water situation in general, and secondly, to identify pockets of excellence that could assist with compiling a plan that could remedy the poor state of water security in our country.

In respect of Acid Mine Drainage, participants in the seminars included *inter alia* Mr. Francois van Wyk, a water specialist from Rand Water, Professor Terence McCarthy from the School of Geosciences at Wits University, Mr Jaco Schoeman, Managing Director of

Western Utilities Corporation, and Mr Adrian Viljoen, Director of Keyplan (Pty) Ltd, a subsidiary of the Aveng Group who built and are operating the plant at Emalahleni which pumps and treats AMD. Mrs Mariette Liefferink from FSE and Mr Helgard Muller from the Department of Water Affairs (DWAF) also presented papers on the subject matter.

UASA consequently compiled a document entitled *Responding to Realities: H₂O 4 LIFE* and submitted it to Nedlac through the good offices of FEDUSA as “reasons and demands for a Section 77 application” in terms of the Labour Relations Act, 1995, as amended. The application is receiving the attention of the relevant Nedlac structures at present.

Acid Mining Drainage

Environmentalists have termed acid mine drainage (AMD) the single most significant threat to South Africa’s environment.

By virtue of the evidence thus far heard by your committee, it is trite that:

The Witwatersrand contains porous dolomitic rock which naturally contains large quantities of water. Underneath the Witwatersrand there are three basins, namely the Western Basin, Central Basin the Eastern Basin. Historically, water had to be pumped to the surface in huge quantities during mining operations.

With 120 years of mining activity behind us, mining operations within the three basins have either ceased or are nearing the end of their economic lives. As a consequence, the pumping of water was stopped, which causes the large underground voids to naturally fill with water.

An unintended consequence is that sulphide-bearing minerals (pyrite), are being exposed to oxygen and the water, resulting in the formation of Acid Mining Drainage, commonly referred to as AMD. **The consequence of these mine voids filling, AMD presents a threat to ground and surface water sources.**

The **Western Basin** started decanting in 2002 near the Black Reef Incline (BRI) at 15 megalitre per day. Emergency measures have been taken from time to time to treat the AMD to neutralise the acidity and remove most heavy metals. The impacts of AMD on the Sterkfontein Caves, Krugersdorp Nature Reserve, Cradle of Humankind and downstream users are well known.

The **Central Basin** will decant next within about 12 months or less. The level of AMD is ever rising and the magnitude of AMD decanting from the Central Basin will be 60 megalitre per day, four times the magnitude of the Western Basin.

The stopping of pumping activities owing to the ill-fated Grootvlei mine of Aurora investments will mean that decanting will start within 24 months or less at a rate of 82 megalitre per day from the **Eastern Basin**.

The sword of sinkholes hangs above densely populated areas if AMD is allowed to rise to the level of the Dolomite layer.

AMD is not limited to the Witwatersrand and/or to gold mining. The worst is yet to come from open cast coal mining operations. In addition, if mining operations are going to be permitted in the upper Vaal region, the destruction already experienced in the Olifants catchment area will be duplicated.

Certain commentators argue that South Africa sits with the unique problem of AMD having to be pumped and treated for centuries to come. The cost of pumping and treatment of AMD contain a two-pronged challenge, namely:

1. It adds a huge cost to mining operations
2. Potential massive costs to be incurred by Government in instances where mining operations have been abandoned

Submissions

We subscribe to what the Water for Growth and Development Framework (WGDF) explains – that AMD from abandoned mines poses a threat and an obstacle to securing water for growth and development.

We agree with DWAF that, in the Central and Western basins of the Witwatersrand mine systems, this threat of AMD is “present and immediate”, and requires urgent intervention.

Potable water resources in and around the Witwatersrand basin are under increasing threat of contamination from AMD.

The core of the debate has now crystallised, namely, AMD has to be pumped, neutralised and all the harmful elements removed, but who will be held responsible to carry the cost of the actual process?

The whole nation benefitted from mining operations over the past 120 years; hence there can be no sides in this debate. Looking back will not deliver a solution. **We need a collaborative effort to grab the opportunity to turn this environmental threat into a sustainable opportunity.** In order for this to happen, a new paradigm will have to be adopted.

Mine operators must continue to accept full responsibility for the pumping and treatment of AMD for the life of a particular mine.

The current AMD threat is the ideal opportunity for the Development Bank of South Africa as administrator of the recently announced Job Creation Fund to invite entrepreneurs such as e.g. the Aveng Group to replicate the Emalahleni plant elsewhere where needed. This will have the following benefits:

- Job creation
- GDP growth
- Additional potable water
- Enhancement of the fiscus through taxes
- Burden removed from Government
- Removal of burden from mining operators post life of mine
- Removal of the threat of AMD

In conclusion we submit that any form of private/public partnership should be avoided at all costs since the establishment of such a partnership will be time consuming and counterproductive – commodities that can be ill afforded to adequately address the AMD problem with the required urgency.

We wish to express our appreciation for the opportunity to submit our views to the Committee.

Yours faithfully

JPL Bezuidenhout
CEO: UASA