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FOR ATTENTION:

The Honourable Chairperson

Adv. Johnny de Lange

Parliamentary Portfolio Committee on Water and Environmental Affairs

COMMENTS ON "STRENGTH ENING OF THE WORK OF THE WEATHER SERVICE THROUGH THE SOUTH AFRICAN WEATHER SERVICE AMENDMENT BILL, 2011

Honourable Chairperson and Members of the Parliamentary Portfolio Committee on Water and Environmental Affairs,

INTRODUCTION

Our comments are submitted with modesty and with the blemishes caused by unavoidable haste. Our comments are limited to the restrictions placed by the South African Weather Service Amendment Bill, 2011 upon the disclosing of air pollution related warnings by the public to the news media without written permission from the weather service. We refer to the proposed insertion of Section 30A in Act 8 of 2001:

—12. The following section is hereby inserted in the principal Act after section 30:

__Offences and penalties

30A. (1) No person may—

(a) issue a severe weather or air pollution -related warning without the necessary written permission from the Weather Service; ...

(2) A person who contravenes any provisions of subsection (1), is guilty of an offence and is liable, in the case of a first conviction, to a fine not exceeding five million rand or imprisonment for a period not exceeding five years, and in the case of a second or subsequent conviction, to a fine not exceeding ten million rand or imprisonment for a period not exceeding 10 years, or in both instances to both such fine and such imprisonment, respectively.

(3) Whenever any person is convicted of an offence under subsection (2) and it appears that such person has by that offence caused loss or damage to any organ of state or other person, the court may in the same proceedings at the written request of the Minister or other organ of state or other person concerned, and in the presence of the convicted person, inquire summarily and without pleadings into the amount of the loss or damage so caused.

(iv) the Human Rights Commission

(v) any attorney-general or his or her successor;

(vi) more than one of the bodies or persons referred to in subparagrap hs (i) to (v)

*(b) **disclosed the information concerned to one or more news media and on clear and convincing grounds believed at the time of the disclosure -***

*(i) **that the disclosure was necessary to avert an imminent and serious threat to the environment, to ensure that the threat to the environment was properly and timeously investigated** or to protect himself or herself against serious or irreparable harm from reprisals; or*

*(ii) **giving due weight to the importance of open, accountable and participatory administration**, that the public interest in disclosure of the information clearly outweighed any need for non-disclosure.....*

*(8) **No person may threaten to take any action contemplated by subsection (4) against a person because that person has exercised or i ntends to exercise his or her right in terms of subsection (4).**"* (Emphasis added.)

CONCERNS

1.Is it to be inferred that research findings of academic reports or Government Reports on air pollution related risks or hazards and the impacts upon communities may not be published, and if published, diligent non-governmental organizations or civil society groups or the public may not have access to the research findings and may not disseminate the information contained in the reports or create awareness of the e nvironmental and health risks amongst communities, particularly the disempowered, voiceless and vulnerable members of affected communities?

To exemplify:

possible health impacts. There is furthermore a lack of horizontal and vertical co-operation between organs of state to implement the recommendations of Government Reports and peer reviewed academic reports. In substantiation: It was found by the authors of the Gauteng Department of Agriculture and Rural Development's document, titled "Feasibility study on reclamation of mine residue areas for development purposes: Phase II strategy and implementation plan" that "*the level of interaction between national government departments that administer environmental legislation is lacking, especially between the Department of Water Affairs (DWA), Department of Environmental Affairs (DEA), Department of Mineral Resources (DMR) and the National Nuclear Regulator (NNR). There is thus a lack of responsibility and will to act from government departments and an attempt to place the onus on other departments or directorates. Directorates and departments are thus not working together. There are cases where mandates between various departments or directorates overlap, where no work is being undertaken due to each department thinking that the other is doing it. In addition, there are issues of limited capacity: government staff are under-trained and overstretched, and high staff turnover is also common. In institutions such as the NNR and Council of Geosciences (CGS), capacity and skills are dying out*".[2]

The relevant organs of state failed to disclose to affected or potentially affected communities the findings of the above-mentioned report as well as findings of inter alia:

1. 1960. Final Report, Interdepartmental Committee on Dolomitic Mine Water: Far West Rand. DWAF.
2. 1963. Council for Scientific and Industrial Research (CSIR). "Commentary on the Final Report of the Interim Departmental Committee on Dolomitic Mine Water: Far West Rand". 28.2.1963/10.2.1964.
3. 1995. Screening surveys of Radioactivity in the Mooi River Catchment by the Institute of Water Quality Studies of the DWAF.
4. 1996. "An Integrated Strategic Water Management Plan for the Gauteng Gold Mines".
5. 1999."Radioactivity Monitoring Programme in the Mooi River (Wonderfonteinspruit) Catchment". Institute for Water Quality Studies. DWAF, April.
6. 2002. "Radioactivity study on sediments in a dam on the Wonderfonteinspruit Catchment." Conducted by the Council for Geoscience and commissioned by the DWAF. Wade *et al*. (2002) (WRC).
7. 2002. "Tier 1 Risk Assessment of Selected Radionuclides in Sediments of the Mooi River Catchment." WRC Report 1095/1/02 by P. Wade.
8. 2002. Coetzee *et al*. (2002) of the Council for Geoscience reported on "Uranium and heavy metals in sediments in a dam on the farm Blaauwbank" area.
9. 2005.WRC Report: "Impacts of gold-mining activities on water availability and quality in the Wonderfonteinspruit Catchment."

[2] GDARD, Final report, 788/06/02/2011, Umvoto Africa (Chris Hartnady, Andiswa Mlisa) in association with TouchStone resources "Feasibility study on reclamation of mine residue areas for development purposes: Phase II strategy and implementation plan", July 2011.Page 11.

meetings or consultation processes with affected communities pertaining to the findings and recommendations of the said Report at the time of writing.

The following rights in the Bill of Rights may be compromised by the failure to timeously and diligently disseminate information pertaining to environmental risks or hazards and possible environmental impacts and inappropriate developments.

–Section 11. Everyone has the right to life.

Section 16. Freedom of expression.

(1) Everyone has the right to freedom of expression which includes

(a) the freedom of the press and other media;

(b) freedom to receive or impart information or ideas

(c) academic freedom and freedom of scientific research

Section 24. Environment.

Everyone has the right-

(a) To an environment that is not harmful to their health or well-being: and

(b) To have the environment protected, for the benefit of present and future generations, through reasonable legislative and ***other measures*** *that –*

(i) Prevent pollution and ecological degradation;

(ii) Promote conservation; and

(iii) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.//

2. It begs the question whether the proposed insertion in the above-mentioned Bill pertains to the airborne radio active and toxic dust fallout from gold mine residue dep osits within the Witwatersrand? If the insertion places restrictions on the dissemination of information regarding

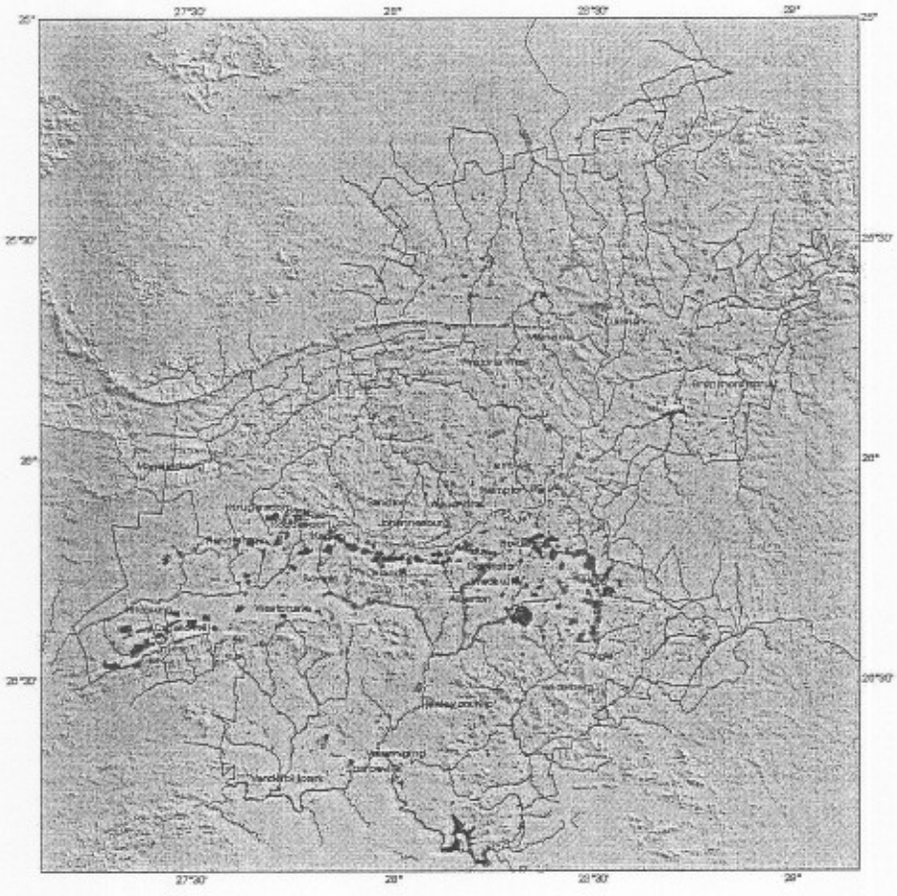

Figure 1-2: Radioactive (red), non-radioactive (green) and undetermined (blue-very few) MRAs in Gauteng, on sun-shaded SRTM topography with the main drainages (blue streams), dams/lakes (blue) and catchment divides (brown). The concentration of radioactive MRAs in the Witwatersrand headwater areas of the Vaal catchment is evident, with some overlap into the Limpopo (Crocodile West) headwaters near Krugersdorp.

Pollution related to the Witwatersrand mines poses a number of haza rds to surrounding communities. **One of the major primary pathways by which contamination can enter the environment from a mine site are the airborne pathway, where radon and windblown dust disperse outwards from sites** and by living in settlements directly adjacent to mines or in some

- The contamination of agricultural crop (pasture, vegetables) by the deposition of radioactive dust particles, which can cause considerable dose contributions via ingestion.

(Reference: NNR Report – TR-RRD-07-0006 – "Radiological Impacts of the Mining Activities to the Public in the Wonderfonteinspruit Catchment Area." 12 July 2007.)

It should be borne in mind that one of the primary pathways for the intake of dust is by ingestion, rather than inhalation. A significant volume of research has been performed regarding the intake of lead by children on contaminated . It should also be borne in mind that one of the primary pathways for the intake of dust is by ingestion, rather than inhalation. A significant volume of research has been performed regarding the intake of lead by children on contaminated sites. This can be used to derive realistic rates of dust ingestion for the determination of risk due to uranium in dust. The Technical Review Workgroup for Lead of the United States' Environmental Protection Agency (1999) has published guide values for the ingestion rates of dust by children, which are typically of the order of 0.1 g per day although this can be increased by an additional 0.2 g per day for certain recreational land-uses. A conservative value of 0.3 g per day can therefore be used for dust ingestion. The World Health Organization (2005) recommends Tolerable Daily Intake (TDI) for Uranium of 0.6 µg/day per kilogram of body weight, based on chemical toxicity. At a uranium concentration in windblown tailings of 50µg/g (ppm) a 20 kg child consuming 0.3 g of dust would therefore ingest 15µg of uranium, which, normalized to body weight would come to 0.75 µg/kg/d, exceeding the recommended rate of intake. A World health Organization study (2001) on the toxicity of depleted uranium has come to similar conclusions and has calculated the radiological dose which would be associated with ingestion of a similar amount of uranium at around 0.01 mSv/a, which is much less than the South African public dose limit of 1mSv/a or dose constraint of 0.25 mSv/a. The radiotoxicity of ingested uranium in windblown dust is therefore significantly lower than the chemical toxicity. Other radioactive components of the dust, in particular the radioactive progeny of uranium, may still have to be considered from a radiological viewpoint. ^{222}Rn in air may also constitute a radiological risk to nearby communities. (Reference: Radiometric surveying in the Vicinity of Witwatersrand Gold Mines. H. Coetzee. Council of Geoscience. Mine Closure 2008. A.B.

The health effects of uranium particles inhaled are:

- 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.

(Reference: "An Assessment of Sources, Pathways, Mechanisms and Risks of Current and Potential Future Pollution of W ater and Sediments in Gold -Mining Areas of the Wonderfonteinspruit Catchment." Report, WRC, H Coetzee *et al*, Council for Geosience. 2004. Report No 1214/1/06. 2006)

The authors of the National Nuclear Regulator's Report, entitled *–Radiological Impacts of t he Mining Activities to the Public in the Wonderfonteinspruit Catchment Area"* stated that *"during the sampling strong dust emissions from slimes dams during wind events were observed.//*

The authors found that : *" 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 radia tion exposures exceeding those from the –inhalation of contaminated dust// substantially, being in the order of dose contribution of the so-called _water pathways' //.*

(Reference: NNR Report – TR-RRD-07-0006 – "Radiological Impacts of the Mining Activities to the Public in the Wonderfonteinspruit Catchment Area." 12 July 2007.)

The monitoring of the pollution and the risks to communities, not merely in the Witwatersrand but in the Mpumalanga Coalfields and Vaal Triangle, has been cheaply outsourced to civil society groups and non-governmental organisations. The proposed amendments will curtail the awareness creation endeavours and dissemination of information of pollution hotspots, risks and hazards by diligent non-governmental organisations and civil society groups. The impacts and costs, including health costs, will be borne by communities.

SUBMITTED BY:

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17 January, 2012.