water affairs
Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

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MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS

NATIONAL ASSEMBLY: QUESTION 1816 FOR WRITTEN REPLY

A draft reply to the above mentioned question asked by Mr G R Morgan (DA) is attached for your consideration.

ACTING DIRECTOR-GENERAL

DATE: 11/07/2011

DRAFT REPLY APPROVED/AMENDED

MRS B E E MOLEWA, MP
MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS

DATE: 12·07·2011

NATIONAL ASSEMBLY

FOR WRITTEN REPLY

QUESTION NO 1816

DATE OF PUBLICATION IN INTERNAL QUESTION PAPER: 01 JULY 2011
(INTERNAL QUESTION PAPER NO. 19)

1816. Mr G R Morgan (DA) to ask the Minister of Water and Environmental Affairs:

(1) What are the locations of all current decant points of acid mine drainage (AMD) on the West Rand;

(2) what was the (a) pH and (b) sulphate level of the water during the decant of AMD from the property of Rand Uranium in 2002;

(3) what is the (a) pH and (b) sulphate level of the AMD decanting from the property of Rand Uranium as at the latest specified date for which information is available;

(4) whether there is a difference in the pH and sulphate levels of the current decant and the 2002 decant; if not, what is the position in this regard; if so, what is the reason for the difference?

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REPLY

(1) The Acid Mine Drainage (AMD) decant onto surface in the West Rand (Krugersdorp), this occurs largely from the Black Reef Incline (BRI) adit (a horizontal opening to the underground mine used for access or ventilation purposes) and the abandoned mine shafts, 17 Winze and 18 Winze. There is also some nominal decant / seepage from adjacent spots on the same property which belongs to the Rand Uranium Pty Ltd. All water from the aforementioned decant / seepage sites are diverted into the BRI dam (a lined mine water pollution control dam).

(2)(a) During the first decant on the property of the Rand Uranium Pty Ltd, the pH was initially around neutral (pH 7), but subsequently decreased to pH 3.7 becoming acidic.

(2)(b) Sulphate level at the time of the initial decant was around 5000 mg/L.

(3)(a) As at May 2011, the decanting AMD (untreated) is of pH 5.2 (measured at the BRI dam).

(3)(b) As at May 2011, the decanting AMD (untreated) has a sulphate level of 3700 mg/L (measured at the BRI dam).

(4) Yes, differences in pH and sulphate levels have been observed due to the following:

- The pH has increased from a relatively strongly-acidic zone to a less acidic reading. This improvement in pH may be attributed to the current deposition of mine tailings into the West Wits Pit (in close proximity to the decant sites) as strongly alkaline water is employed in the tailings deposition process.

- The decrease in sulphate levels may be ascribed to the recent high rainfall, which produced a dilution effect. Mine tailings deposition into the West Wits Pit may produce reactions with sulphate that form insoluble solids thereby reducing sulphate levels.

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