



water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

MINISTRY OF WATER AND ENVIRONMENTAL AFFAIRS
2011 -10- 18
PRIVATE BAG X313
PRETORIA 0001 *LS*

[edke]

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Reference: 16/2/7/C231/R01

MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS

NATIONAL ASSEMBLY: QUESTION 3098 FOR WRITTEN REPLY

A draft reply to the above question asked by Mrs S V Kalyan (DA) is attached for your consideration.

[Signature]
ACTING DIRECTOR-GENERAL

DATE: 18/10/2011

A copy of the report by the CSIR dated 12 October 2011 is attached.

DRAFT REPLY APPROVED/AMENDED ✓

24/10. EP. Etzabee + Enrol Amend and send in. → Enrol!

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

DATE: 2011/10/23

NATIONAL ASSEMBLY

FOR WRITTEN REPLY

QUESTION NO. 3098

DATE OF PUBLICATION IN INTERNAL QUESTION PAPER: 14 OCTOBER 2011
(INTERNAL QUESTION PAPER NO. 31)

3098. Mrs S V Kalyan (DA) to ask the Minister of Water and Environmental Affairs:

- (1) Whether she has been informed of rising water levels in the Sterkfontein Caves; if not,
- (2) whether she will investigate the situation; if so,
- (3) whether her department is investigating the chemical composition of the water to determine if it is acid mine water drainage; if not, why not; if so, what are the relevant details?

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REPLY:

- (1) Yes, the Department is aware of a slight rise in the water level in the Sterkfontein Caves as indicated in the study conducted by the Council for Scientific and Industrial Research (CSIR) on behalf of the Department. The rise in the water level in the Sterkfontein Caves amounted to 1.9 m between early 2007 to mid 2010 and more recently (June 2011) the water level has reached a height of 2.8 m above the October 2007 level. The water level rise is, however, not attributable to decant of the acid mine drainage within the Western Basin.
- (2) Yes, the situation has been investigated by the CSIR on behalf of the Department and its findings have been included in the study report. However, the situation is being monitored with interventions planned should it be necessary.
- (3) Yes, the chemical composition of the water to determine if it is acid mine water drainage has also been investigated by the CSIR on behalf of the Department and its findings have been included in the study. The chemistry of the water shows negligible impact from the mine water over a time-span of 10 years, revealing very little fluctuation in chemical composition between four sampling events bracketed by the period from April 2001 and January 2011. A more complete comparison of cave water chemistry is provided by reviewing analytical records dated April 2001, April 2005, April 2010 and January 2011. Based on these results, there was a slight increase in sulphate from 58 mg/L in May 2010 to 71 mg/L in January 2011. This slight increase in sulphate level is not uncommon in groundwater. However, there was a decrease in electrical conductivity values from 62 to 56 mS/m which suggests an improvement in the water quality. The pH value changed from 7.1 and pH 7.8 and has become less acidic. The iron (Fe) and manganese (Mn) levels in the Cave water were below the respective detection limits of 0.020 mg/L and 0.005 mg/L.

The above results and the report referred to above confirm that the Sterkfontein Caves is not affected by the decanting of acid mine drainage from the Western Basin.

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