

NATIONAL ASSEMBLY

FOR WRITTEN REPLY

QUESTION NO 525

DATE OF PUBLICATION IN INTERNAL QUESTION PAPER: 20 MARCH 2008
(INTERNAL QUESTION PAPER NO 10)

525. Mr M M Swathe (DA) to ask the Minister of Water Affairs and Forestry:

- (1) Whether there are any particular concerns about the health of the Crocodile River; if not, how was this conclusion reached; if so, what are the relevant details;
- (2) whether any studies have been conducted to test whether there is radioactive contamination of sediments in the river; if not, why not; if so, what are the relevant details;
- (3) whether the water from the Crocodile River is safe for (a) human consumption and (b) irrigation; if not, what measures are being taken to warn stakeholders of the dangers; if so, how was this conclusion reached;
- (4) whether low-level radioactive waste is discharged into the Crocodile River; if not, how was this conclusion reached; if so, (a) what entity is permitted to discharge this waste, (b) how much waste is permitted to be discharged, (c) what norms and standards govern the discharge of such waste into a river and (d) how is the discharge monitored?

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REPLY:

- (1) Yes, the Department of Water Affairs and Forestry is concerned about the health of the Crocodile River, especially from the effect of the mining activities in the upper part of the Tweelopies Spruit, a tributary of the Crocodile River.

My Department's concerns are mainly addressed through partaking in the Western Basin Void Technical Group that was specifically established to address the mine water decanting in the Randfontein/Mogale areas and to monitoring the impacts of the discharge to the Tweelopies Spruit.

- (2) Water analysis for gross alpha and beta radioactive screening shows very low levels of radioactivity that are within the Drinking Water Quality Guidelines for uranium.

(3)(a)
and

(3)(b) Drinking untreated river water is generally not advisable in South Africa. From a domestic use point of view, the only attribute of concern would appear to be high turbidity from time to time. From an agricultural use point of view, there should be no concern. This conclusion is reached by evaluating the water quality monitoring data done by the Department in the Crocodile River.

Water in the Tweelopies Spruit is not fit for either domestic or irrigation purposes. Stakeholders have been notified and the Department is taking the necessary steps to ensure compliance.

- (4)(a) The Department does not allow discharges of radioactive waste in the Tweelopies Spruit which flows through the Krugersdorp Game Reserve. However, the National Nuclear Regulator (NNR) permitted the South African Nuclear Energy Corporation (Necsa) at Pelindaba to discharge treated effluent to the Crocodile River in accordance with limits approved by the NNR.
- (4)(b) The quantity of effluent is authorised by the NNR under a system called Annual Authorised Discharge Quantities (AADQ). The quantity is calculated using a dose assessment model which would limit the dose effects of the released radioactive material to a level much lower than the public dose limits.
- (4)(c) The norms and standards which are applied are those specified in the National Nuclear Regulator Act, 1999 (Act No 49 of 1999) and the associated Regulations on Safety Standards and Regulatory Practices as was published in Government Gazette no 28755 on 28 April 2006 (No R. 388). These standards are in line with those recommended by the International Atomic Energy Agency (IAEA) in their safety requirements, as a matter of fact, they are more stringent than those applied in most countries.
- (4)(d) All effluent is treated before released into the river. A sample is taken by Necsa and the amount of activity of the batch to be released is determined. The potential dose due to that release is calculated in accordance with NNR approved methodology, and added to the amount already released. If this complies with the dose criteria, the effluent is released. Necsa submits a report to the NNR on a quarterly basis in order to demonstrate compliance with the requirements of the dose limits.