



water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

MINISTRY OF WATER AND
ENVIRONMENTAL AFFAIRS

2010 -12- 09

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MINISTER OF WATER AND ENVIRONMENTAL AFFAIRS


NATIONAL ASSEMBLY: QUESTION 3300 FOR WRITTEN REPLY

A draft reply to the above-mentioned question asked by Mrs H Lamoela (DA); is attached for your consideration.


DIRECTOR-GENERAL (Acting)

DATE: 8/12/2010

DRAFT REPLY APPROVED/AMENDED


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

DATE: 2010/12/14

NATIONAL ASSEMBLY

FOR WRITTEN REPLY

QUESTION NO 3300

DATE OF PUBLICATION IN INTERNAL QUESTION PAPER: 12 NOVEMBER 2010
(INTERNAL QUESTION PAPER NO. 37)

3300. Mrs H Lamoela (DA) to ask the Minister of Water and Environmental Affairs:

- (1) (a) What was the general water quality status, as determined by Rand Water, of the sample point at the Standerton sewage works on each of the last three occasions that sampling was done and (b) on what dates were these tests conducted;
- (2) what were the measurements of the above tests with regard to (a) ammonia, (b) alkalinity, (c) phosphate, (d) chemical oxygen demand and (e) conductivity;
- (3) how does each of these measurements compare with the guideline for in-stream water quality management in the Vaal Dam catchment;
- (4) whether the quality of water at this sample point poses any health risk to the quality of drinking water withdrawn in the vicinity of this point; if not, how was this conclusion reached; if so, what are the relevant details;
- (5) whether she will put any measures in place to improve the quality of water at this sample point; if not, why not; if so, what measures?

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REPLY:

- (1)(a) Rand Water takes samples at Standerton and the summary of these results are then provided on a quarterly basis to the Vaal Dam Catchment Forum. These results are also reflected against the in-stream water quality guidelines as established by this department for the Vaal catchment (a copy of these guidelines is presented in a table in annexure A). The results can be summarized as follows:
- Nitrate and pH levels classified as "ideal".
 - Chloride, Fluoride and Sulphate levels can be classified as "acceptable."
 - Conductivity (as an indication of salinity) is "tolerable" and from time to time tends to become "unacceptable"
 - Ammonia, M-Alkalinity, Phosphate and Chemical Oxygen Demand classified as "unacceptable".
 - E. coli: no samples or results available
- (1)(b) Although the specific sampling dates are not known the general water quality status over this 3 month period (1 July 2010 to 30 September) is given in the attached table in Annexure A.

- (2) In addition to the sampling done by Rand Water, the following are results from sampling done by my Department:

Done by Water Affairs	
Sample dates and times	Dates Analysed
29/07/2010	02-03/08/2010
16/09/2010, 07:15	17-27/09/2010
05/10/2010, 07:25	06-20/10/2010

Done by Water Affairs			
Determinant	29/07/2010	16/09/2010	05/10/2010
Ammonia Nitrogen mg/l	29,4	32,8	33,1
Alkalinity mg/l			
Phosphate mg/l	5,1	5,1	5,6
COD mg/l	367	479	948
Conductivity mS/m	80	81	74

Done by Rand Water			
Determinant	1 Jan-31 Mar 2010	1Apr-30 Jun 2010	1 Jul-30 Sep 2010
Ammonia Nitrogen mg/l	17.00	30	28
Alkalinity mg/l	160	240	250
Phosphate mg/l	5.30	4.9	5
COD mg/l	135	230	295
Conductivity mS/m	73	70	81

Note: the Department does not have information on the sample dates; times and dates analysed for Rand Water. The measurements of the determinants are for the average of 3 months as indicated above.

- (3) The above measurements for ammonia, alkalinity, phosphate, COD and conductivity as mentioned in paragraph 2 are unacceptable as compared with the limits according to the in-stream Water Quality Guidelines for the Vaal Dam Catchment (attached as annexure A)
- (4) There will always be a health risk if people drink water directly from a stream or river and communities are warned against this but all river water can be treated to potable standards for safe use. It is for this very reason that Government has spent billions of Rands since 1994 to provide access to safe drinking water to millions of our population.
- (5) Due to constant pressure from officials of my department in executing their regulatory role, the municipality has embarked on a process to refurbish and upgrade the Waste Water Treatment Works. The municipality is also in the process of applying for a water use license and in terms of the license, the requirements for effluent discharge will be specified and form a platform for improved compliance monitoring and enforcement.

In-stream Water Quality Guidelines for the Vaal Dam Catchment

Variables	Measured as	Ideal Catchment Background	Acceptable Management Target	Tolerable Interim Target	Unacceptable
Physical					
Conductivity	mS/m	< 10	10 - 30	30 - 45	> 45
pH	pH units	6.5 - 8.5			< 6.5; > 8.5
Organic					
Chemical					
Oxygen Demand (COD)	mg/l	< 10	10 - 15	15 - 20	> 20
Macro Elements					
Ammonia (NH ₄)	mg/l	< 0.2	0.2 - 0.5	0.5 - 1.0	> 1
Chloride (Cl)	mg/l	< 25	25 - 50	50 - 75	> 75
Fluoride (F)	mg/l	< 0.05	0.05 - 0.20	0.2 - 0.4	> 0.4
Alkalinity	CaCO ₃ mg/l	< 40	40 - 75	75 - 120	> 120
Nitrate (NO ₃)	mg/l	< 0.1	0.1 - 0.2	0.2 - 0.3	> 0.3
Phosphate (PO ₄)	mg/l	< 0.05	0.05 - 0.25	0.25 - 0.50	> 0.5
Sulphate (SO ₄)	mg/l	< 20	20 - 45	45 - 70	> 70
Bacteriological					
Faecal coliforms	counts/100ml	< 10	10 - 60	60 - 120	> 120