

PARAMOUNT CONSULTANTS CC

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30 September 2013

CAMDEN POWER STATION

Routine Monitoring Phase 13 July 2013 – September 2013

ENVIRONMENTAL DUST ASSESSMENT REPORT

For

ESKOM CAMDEN POWER STATION

By

PARAMOUNT CONSULTING

Project team leader

W.Barwise

REF : EDM / Cam – 2013-09 Rev 0
Current phase 14

Start date : 02 July 2013
This report : 30 September 2013

REPORT ON BACKGROUND DUST DEPOSITION MONITORING FOR CAMDEN POWER STATION 02 July 2013 – 24 September 2013

1. OBJECTIVE OF THE SURVEY:

Paramount consultants CC was requested by Camden Power Station to conduct a dust deposition monitoring programme within the perimeters of the operations, in order to obtain background environmental data as part of an ongoing environmental impact assessment programme.

2. STUDY METHODOLOGY:

2.1 Dust deposition:

In order to cover the potentially affected areas 12 strategically placed static dust precipitation samplers were deployed. The locations of the samplers are indicated in Table no.1 and on the aerial photo attached.

2.2 Weather data and temperatures:

Wind speed, direction and temperatures for the survey period was obtained from a Oregon Scientific Professional Weather Centre, Model WM 200 with data logger, erected on site at co-ordinates S 26° 37° - E 30° 5° - (at Tsalanang Contractor's Office.)

2.3 Analysis of dust:

Samples were submitted to a SANAS Accredited Laboratory for elemental analysis. Composite samples coinciding with the four main directions from the station were analyzed. Dust precipitation concentrations were calculated from data obtained from weighing the collected dust on a Mettler Toledo calibrated five decimal correct electronic balance. (Please note: Results to follow as soon as received from laboratory).

3. RESULTS

3.1 Dust deposition concentrations:

Average dust deposition rates for the sampling period are reflected in Table no. 1.

3.2 Wind speed and direction:

The prevailing wind direction for the survey period was West-South West with a at a average speed of 2.9 m/s. (Please note that recorded weather data could be made available at request.)

4. DISCUSSION OF RESULTS AND CONCLUSIONS:

4.1 Dust deposition:

Dust deposition rates inside of the operation's perimeters are slight at all positions. The maximum allowable ambient dust deposition rates recommended by the Dep. of The Environment and Tourism are as follows:

Slight	<250 mg/m ² /day
Moderate	250-500 mg/m ² /day
Heavy	500-1200 mg/m ² /day
Very heavy	>1200 mg/m ² /day

5. RECOMMENDATIONS FOR FUTURE STUDIES:

5.1 Dust deposition / environmental impact:

In order to obtain further background information and determine the effect of existing operations on the environment, as well as to obtain correlation data for potential dispersion modeling that could be performed, the recommended monthly dust deposition monitoring will be continued.

We trust the information provided meets your expectations. Should you, however, require any further inputs from us; please do not hesitate to contact us.

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Willem Barwise

TABLE 1
AVERAGE DUST DEPOSITION RATES (mg/m²/day)
30 September 2013

<u>POSITION NUMBER</u>	<u>DESCRIPTION</u>	<u>COORDINATES</u>	<u>DEPOSITION RATE</u>
A	North West	S 26°35.866 E 30°4.835	39.68
B	North	S 26°36.182 E 30°5.089	Stolen
C	North West	S 26°36.291 E 30°4.178	131.8
D	West (Stolen)	S 26°37.478 E 30°4.269	77.46
E	West North West	S 26°37.512 E 30°5.555	54.73
F	South West	S 26°37.562 E 30°4.727	75.92
G	South	S 26°37.578 E 30°5.644	115.11
H	South East	S 26°37.426 E 30°5.791	301.73
I	South South East	S 26°37.361 E 30°6.540	107.92
J	North South East	S 26°36.927 E 30°5.932	48.27
L	North East	S 26°36.778 E 30°5.083	64.68
M	Reference in yard	S 26°37.076 E 30°5.136	47.84

Slight

<250 mg/m²/day

Moderate

250-500 mg/m²/day

Heavy

500-1200 mg/m²/day

Very heavy

>1200 mg/m²/day