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Date:  
02 May 2018

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Ref: RT/240/021

Dear Mrs. Thivhafuni

## **MATIMBA POWER STATION'S ANNUAL EMISSIONS REPORT FOR FY 2017/2018**

This serves as the annual report required in terms of Section 7.7.3 in Matimba Power Station's Atmospheric Emission License "The License Holder must complete and submit to the Licensing Authority, an Annual Report as contemplated in paragraph 17 of Section 21 Notice (Government Notice No. 893) no later than thirty (30) days after the end of each reporting period. The report must include information for the year under review", as well as in terms other reporting requirements listed in the Minimum Emission Standards. The emissions are for Matimba's 2017/18 financial year, which is from 1 April 2017 to 31 March 2018. Verified emissions of particulates, SO<sub>2</sub> and NO<sub>x</sub> (as NO<sub>2</sub>), as measured by installed CEMS, and calculated greenhouse gas emissions (as CO<sub>2</sub> and N<sub>2</sub>O), are also included.

**Table 1:** Name, description and reference number of plant as specified in the AEL

<b>Name of facility</b>	Eskom Holdings SOC Limited Matimba Power Station
<b>Description of facility</b>	Electricity generation
<b>Enterprise registration number</b>	2002/015527/06
<b>AEL reference number</b>	12/4/12L-W4/A3

**Matimba Power Station**  
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Eskom Holdings SOC Ltd Reg No 2002/015527/30

## MATIMBA POWER STATION'S ANNUAL EMISSIONS REPORT FOR FY 2017/2018

### Emission Trends:

The emissions in the table below are that of the 2017/2018 financial year

**Table 2:** General overview of emissions at Matimba Power Station 2017/2018

Power Station	Coal-fired emissions (tons/annum)	Fuel-oil emissions (tons/annum)	Total (tons/annum)
Matimba Power Station	<b>SO<sub>2</sub>:</b> 450 306 614 <b>N<sub>2</sub>O:</b> 127 34 <b>PM:</b> 2 284 087 <b>NO<sub>x</sub>:</b> 78 509 072	<b>SO<sub>2</sub>:</b> 281 30	<b>SO<sub>2</sub>:</b> 450 587 914 <b>N<sub>2</sub>O:</b> 127 34 <b>PM:</b> 2 284 087 <b>NO<sub>x</sub>:</b> 78 509 072

**Table 3:** Pollutant Emission Trends

Month	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>x</sub> (tons)	CO <sub>2</sub> (tons)	N <sub>2</sub> O (tons)
April 2017	156 824	27279 521	5542 478		8
May 2017	231 398	35560 785	6978 854		10
June 2017	174 087	37422 525	6867 733		10
July 2017	150 75	38389 167	6707 387		9
August 2017	131 646	41730 183	7308 357		10
September 2017	167 509	38691 132	6055 291		10
October 2017	174 546	43412 991	6627 981		11
November 2017	171 939	43160 856	6841 630		11
December 2017	177 135	41208 251	6712 466		15
January 2018	285 624	40197 349	7628 811		12
February 2018	174 046	33556 816	5991 223		10
March 2018	288 577	29697 038	5246 861		10

PM emissions increased in May 2017, January 2018 and March 2018 due to failures on the dust handling plant at units 2, 3 and 4. No exceedances of the daily average PM limit occurred during these months.

SO<sub>2</sub> emissions increased gradually from April 2017 until November 2017 as a result of high sulphur content which is attributed to the naturally occurring high Sulphur coal in the Waterberg coals. Through implementing mitigation measures and constant collaboration with Exxaro Grooteegeluk mine the emissions decreased (as seen in figure 1 below), exceedances are discussed in detail in Annexure 3.

# MATIMBA POWER STATION'S ANNUAL EMISSIONS REPORT FOR FY 2017/2018

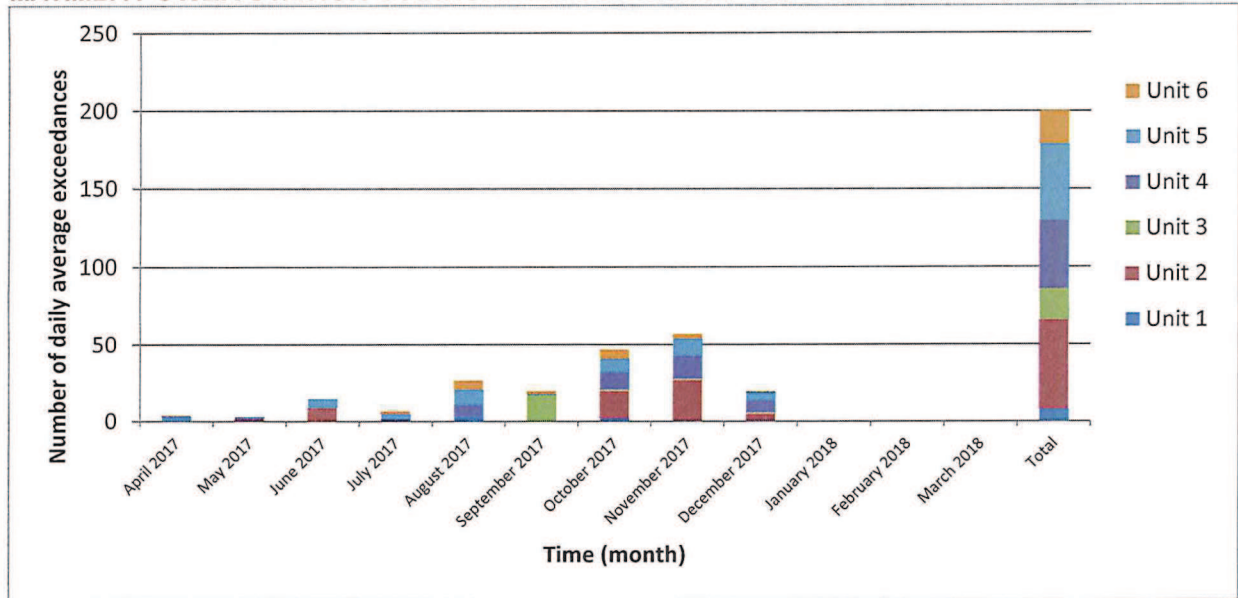


Figure 1: Number of daily exceedances per unit from April 2017 to March 2018

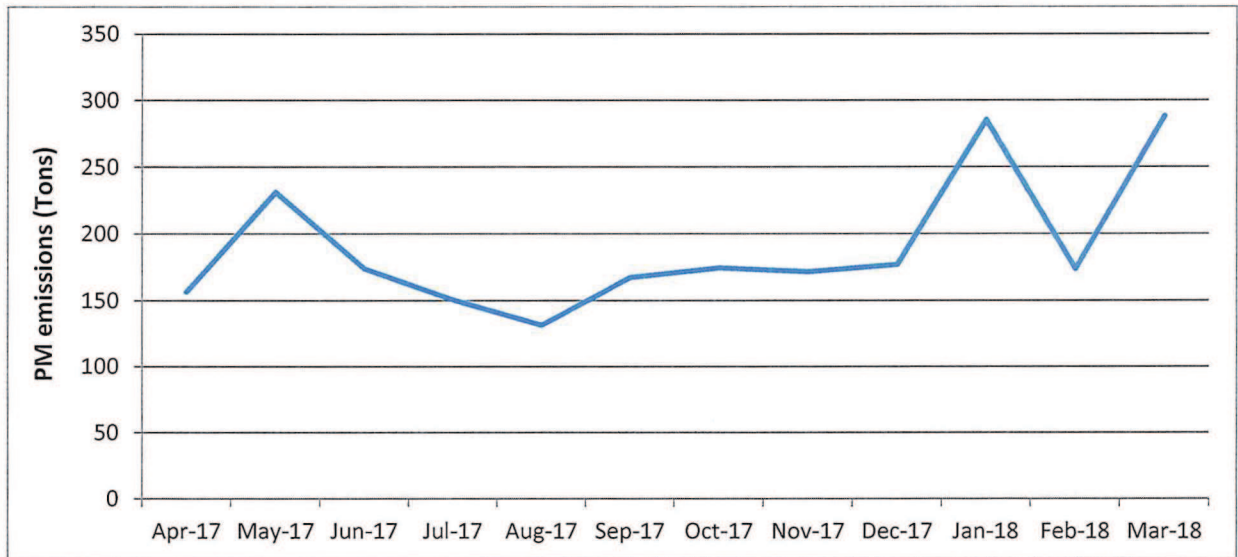
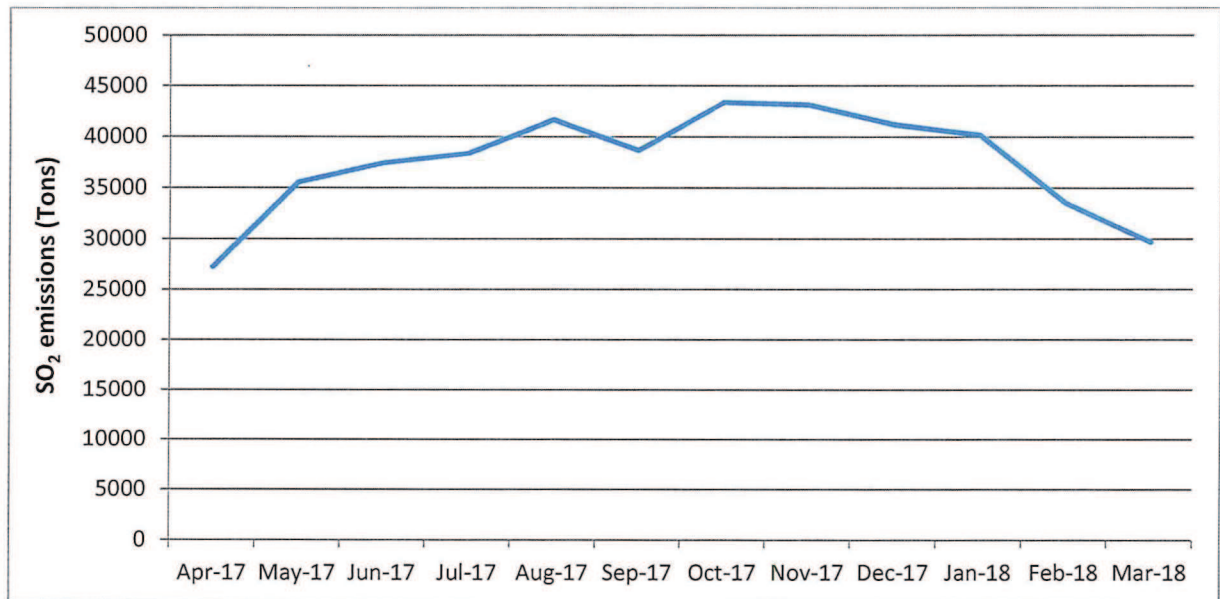
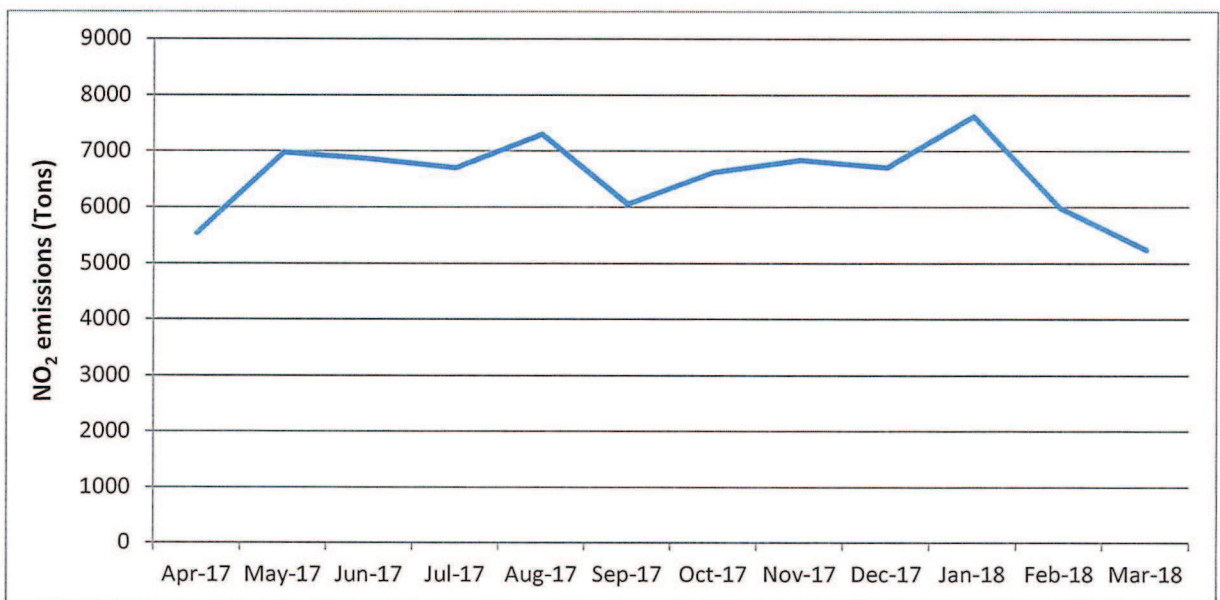


Figure 2: Monthly Particulate Emissions in tons from Matimba Power Station 2017/2018

## MATIMBA POWER STATION'S ANNUAL EMISSIONS REPORT FOR FY 2017/2018



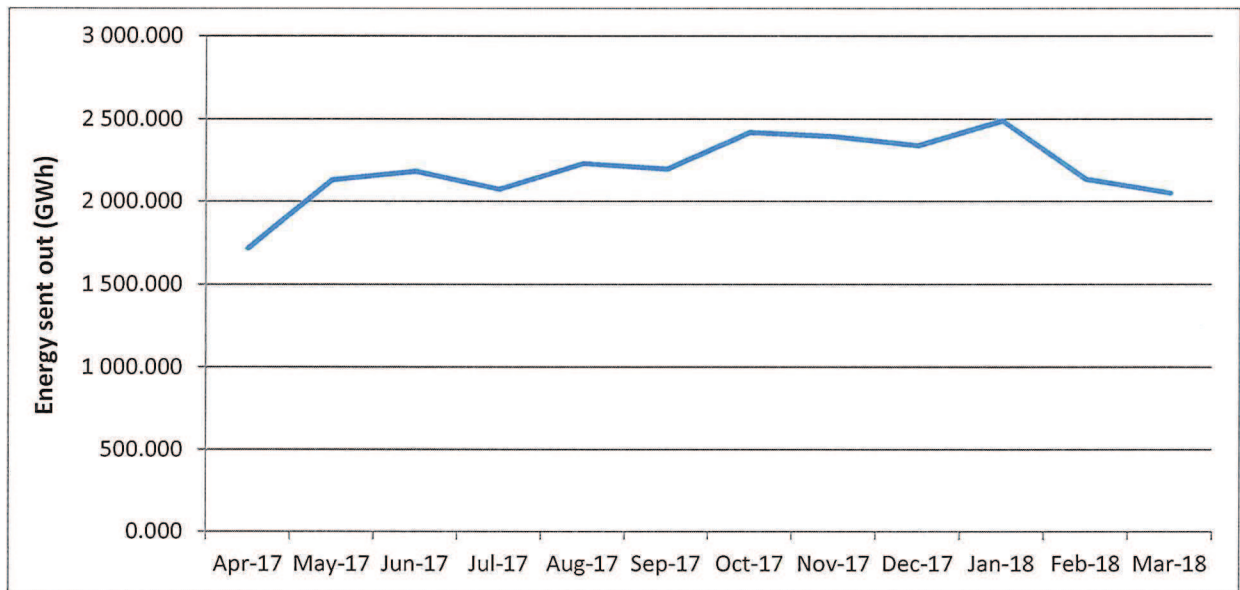
**Figure 3:** Monthly SO<sub>2</sub> Emissions in tons from Matimba Power Station 2017/2018



**Figure 4:** Monthly NO<sub>2</sub> Emissions in tons from Matimba Power Station 2017/2018



**Figure 5: Monthly CO2 Emissions in tons from Matimba Power Station 2017/2018**



**Figure 6: Monthly Energy Sent out GWh at Matimba Power Station 2017/2018**

Data indicating compliance with the daily average emission limits of the respective pollutants is presented in the monthly emission reports sent to the Department.

## MATIMBA POWER STATION'S ANNUAL EMISSIONS REPORT FOR FY 2017/2018

### Monitoring Data availability

**Table 4:** General overview of monitoring data availability for Matimba Power Station 2017/2018 represented in percentages over the twelve (12) months period

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
PM (%)	100	99 97	100	100	99 87	100
SO <sub>2</sub> (%)	97 02	98 64	96 09	99 92	98 49	99 92
NO <sub>x</sub> (%)	96 56	98 59	95 48	99 86	98 46	99 91
CO <sub>2</sub> (%)						

Unit 3 CO<sub>2</sub> monitor's availability was below the required in the License Maintenance contracts are in place for speedy attendance to equipment malfunctions

### Major upgrades projects:

No major upgrades were done for 2018 financial year

### Greenhouse gas emissions:

Greenhouse gas emissions as CO<sub>2</sub> and N<sub>2</sub>O have been reported on in the above sections. The data reported is based on calculated values.

### Results of spot measurements or correlation tests:

**Table 5:** Overview of dates of last conducted CEMS verification tests for PM, SO<sub>2</sub> and NO<sub>x</sub> (Please see Annexure 1 and Annexure 2 for the verification test results)

Stack/ Unit	PM	SO <sub>2</sub>	NO <sub>x</sub>	CO <sub>2</sub>
1	October 2016	December 2017	December 2017	December 2017
2	October 2016	December 2017	December 2017	December 2017
3	October 2016	December 2017	December 2017	December 2017
4	October 2016	December 2017	December 2017	December 2017
5	October 2016	December 2017	December 2017	December 2017
6	October 2016	December 2017	December 2017	December 2017

## MATIMBA POWER STATION'S ANNUAL EMISSIONS REPORT FOR FY 2017/2018

An explanation of all instances where minimum emission standards were exceeded:

**Table 6:** Overview of daily average limit exceedances for 2017/2018 financial year

Exceedance	Stack/unit and pollutant	Exceedance date	Reason for exceedance	Remediation measure and effectiveness
1	Refer to Annexure 3 – Financial Year 2017/2018 SO <sub>2</sub> limit exceedances			
2				
3				
5				
6				

### NAEIS reporting:

Matimba Power Station submitted its annual report on the NAEIS system by the 31 March 2018

The rest of the information demonstrating compliance with the emission license conditions is supplied in the monthly emission reports sent to your office

Hoping the above will meet your satisfaction

Yours sincerely

**GENERAL MANAGER: MATIMBA POWER STATION**