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Date:
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Dear Mr. Mahlangu

DUVHA POWER STATION'S ANNUAL EMISSIONS REPORT

This serves as the annual report required in terms of Section 7.6 in Duvha Power Station's Atmospheric Emission License (Ref No: NDM/AEL/MP312/11/07). The emissions are for Eskom's 2015/16 financial year which is from 01 April 2015 to 31 March 2016. Verified emissions of particulates and calculated gases (N₂O, CO₂, SO₂ and NO_x (as NO₂)) are also included.

The emissions in the table below are that of the 2015/2016 financial.

Table 1. General oversight of emissions at Duvha Power Station 2015/2016

Coal-fired emissions (tons/annum)	Fuel-oil emissions (tons/annum)			Total (tons/annum)
		FO 150	Catlight	
CO ₂ : 1 485 290 7	CO ₂ :	78 620	20 377	CO ₂ : 14 951 904
N ₂ O: 246 045				N ₂ O: 246 045
PM: 4502 00				PM: 4502 00
SO ₂ : 109 839	SO ₂ :	1496	3	SO ₂ : 111 338
NO ₂ : 61 459				NO _x : 61 459

Table 2: Pollutant Emission Trends for 2015/2016

Month	PM (tons)	SO ₂ (tons)	NO ₂ (tons)	CO ₂ (tons)	N ₂ O (tons)
April 2015	338	7 718	4 335	1 047 899	17
May 2015	328	7 063	3 526	855 422	14
June 2015	457	10 331	5 157	1 255 198	21
July 2015	321	8 382	5 380	1 302 007	22
August 2015	400	8 096	4 547	1 098 880	18
September 2015	431	7 663	4 303	1 044 103	17
October 2015	463	10 149	5 699	1 383 233	23
November 2015	390	10 626	5 967	1 453 771	24
December 2015	422	12 212	6 096	1 494 452	25
January 2016	225	8 874	4 430	1 069 231	18
February 2016	343	9 301	5 970	1 415 919	23
March 2016	384	9 425	6 049	1 432 791	23

Major trends were experienced during the months of June 2015, September 2015, October 2015, and December 2015. These high emissions were caused by various plant failures such as malfunctioning air lift vessels, faulty precipitator fields, and SO₃ plant trips. These malfunctions were reported in the respective month's monthly reports and as NEMA Section 30 incidents.

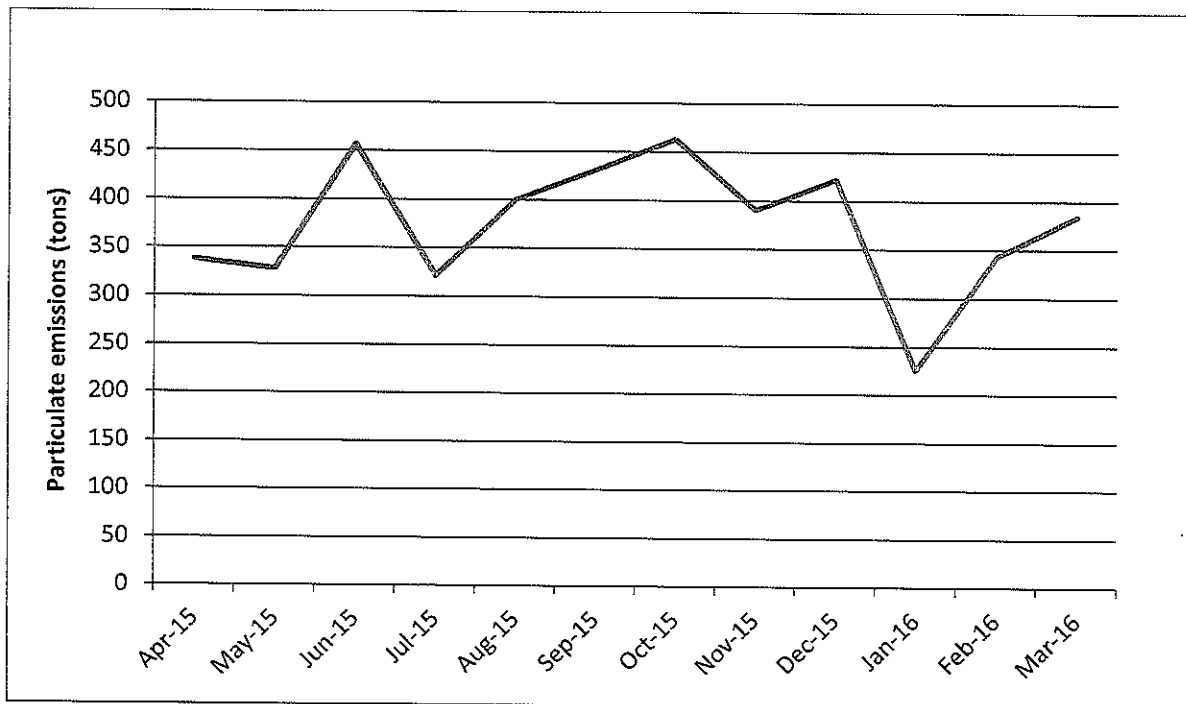


Figure 1: Monthly Particulate Emissions in tons from Duvha Power Station 2015/2016

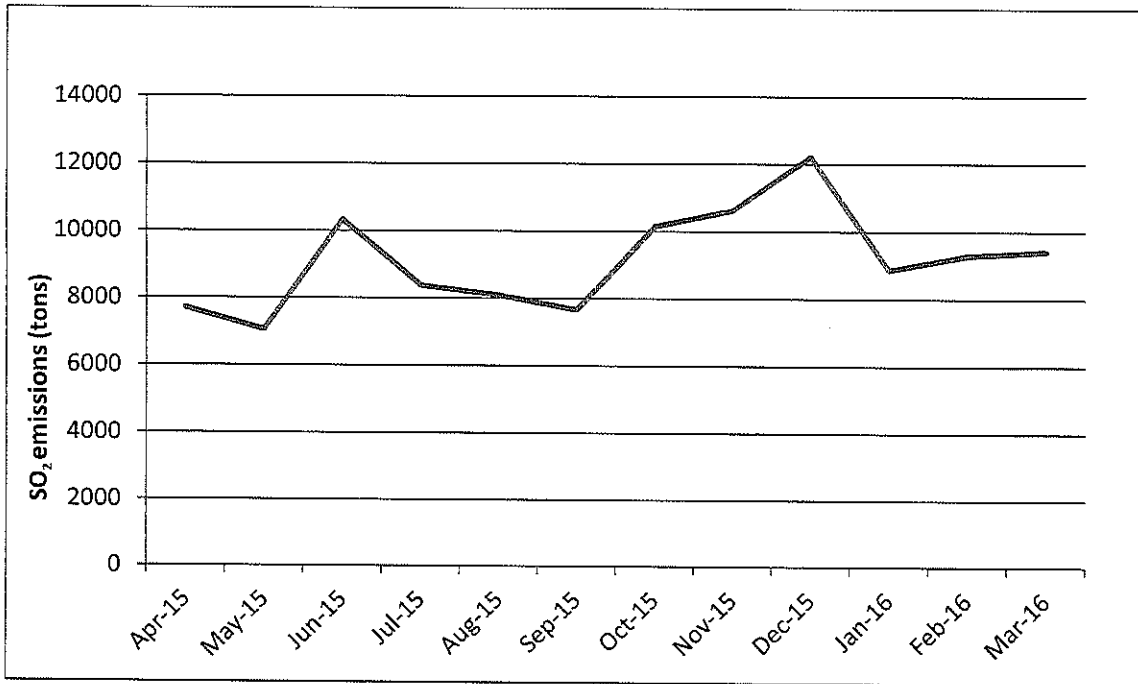


Figure 2: Monthly SO₂ Emissions in tons from Duvha Power Station 2015/2016

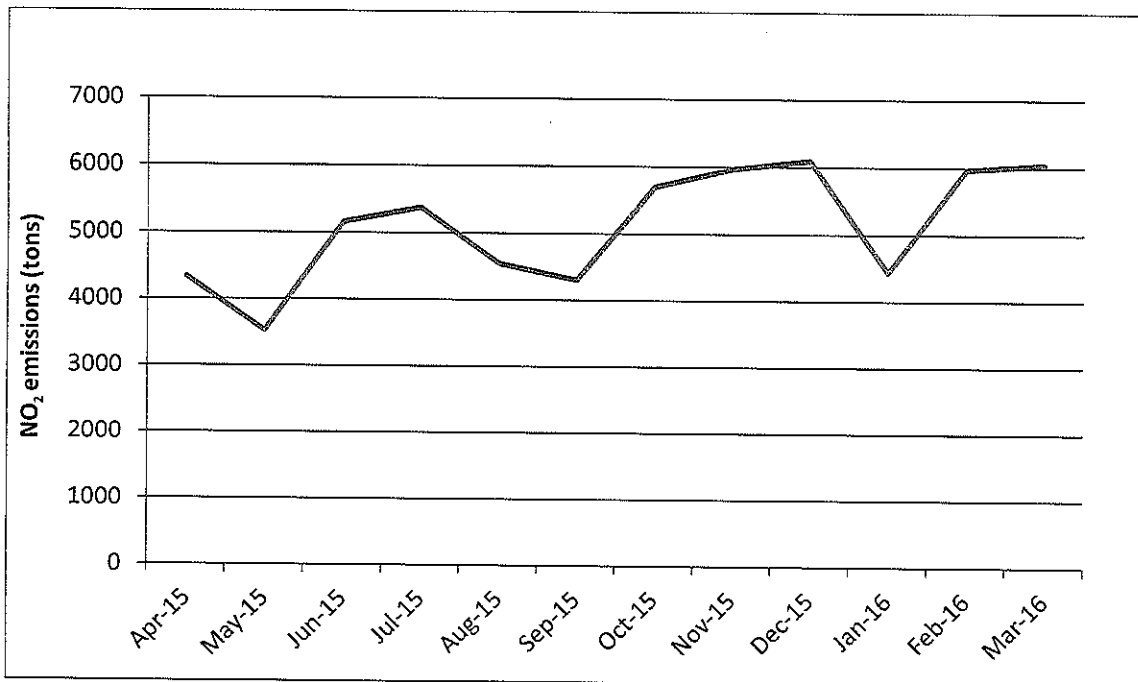


Figure 3: Monthly NO₂ Emissions in tons for Duvha Power Station 2015/2016

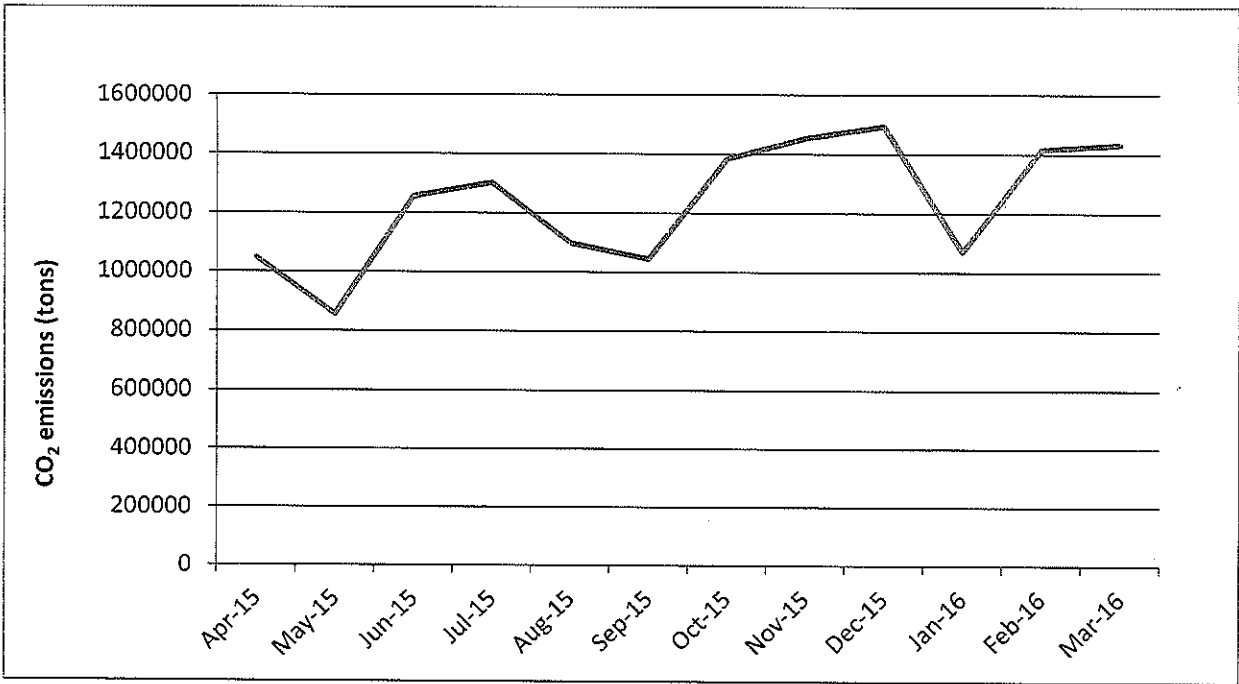


Figure 4: Monthly CO₂ Emissions in tons from Duvha Power Station 2015/2016

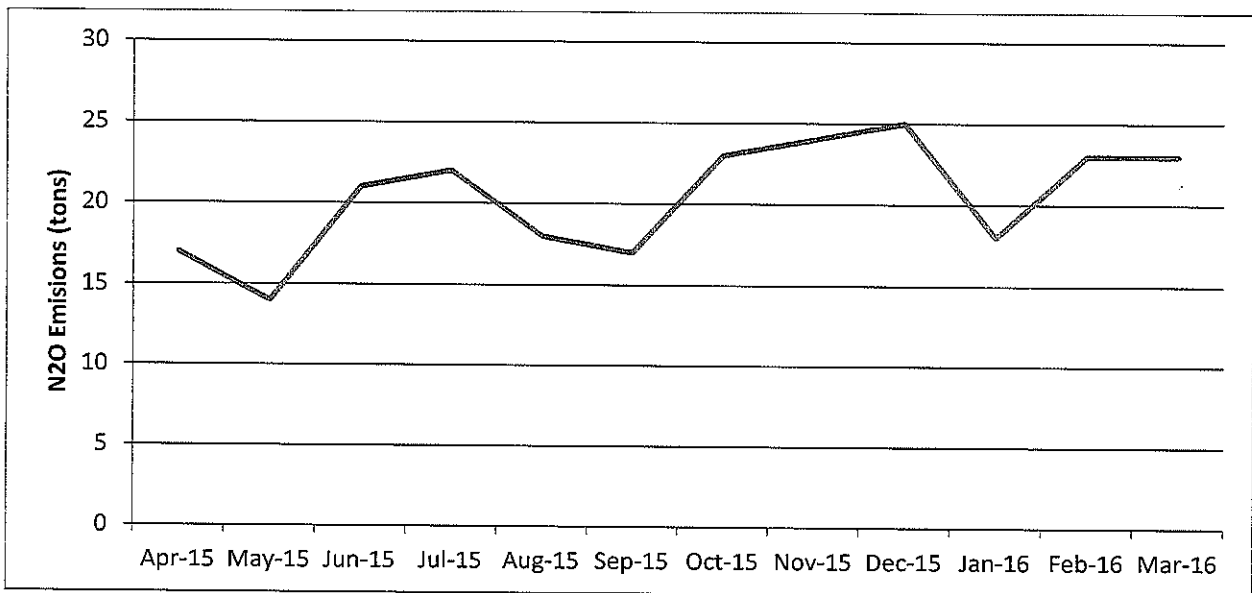


Figure 5: Monthly N₂O Emissions in tons from Duvha Power Station 2015/2016

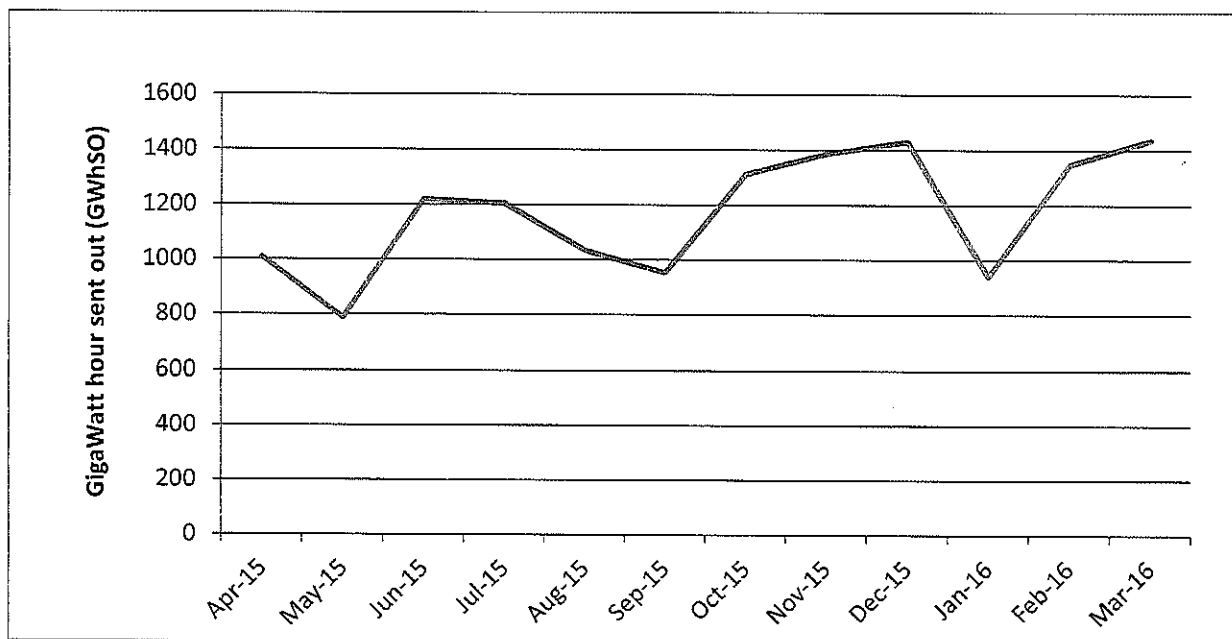


Figure 6: Monthly Energy sent out in GWh at Duvha Power Station 2015/2016

Monitoring data availability

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
PM	100%	100%	Off	100%	100%	100%
SO ₂	58%	58%	Off	83%	75%	75%
NOx	58%	58%	Off	83%	75%	75%

Compliance Audit Report(s):

There was one compliance audit conducted at Duvha Power Station during the 2015\2016 financial year. The external legal compliance review report is attached as appendix 1.

Major upgrades projects:

A test project involving the installation of High Frequency Transformers (HFT's) in one of the units currently using Electrostatic Precipitator abatement equipment (Unit 4,5, or 6) is planned. This is aimed at testing the effectiveness of this technology in order to reduce PM emissions. If it is found successful, it will be implemented at the remaining two units.

This project further aims at determining emissions improvement or reduction achievability at the station utilizing Frequency Supply technology.

Greenhouse gas emissions:

The greenhouse gas emissions figures are reported in table 2, whereas trends are indicated in Figures 2, 3, 4 and 5.

Correlations:

The correlations on monitors were only done for Unit 1 during the financial year 2015\2015. Correlations were done on the 10th March 2016 and new curves were plotted on the

11th March 2016. Attached on Appendix 2 is the summary of the correlation equations on the particular unit.

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

A handwritten signature in black ink, appearing to read 'A Kuzelj', with a stylized flourish extending from the end.

A Kuzelj
POWER STATION MANAGER: DUVHA