

Mr. Vusi Mahlangu
Nkangala District Municipality

Address: PO Box 437
Middleburg
1050

Date:

May 2018

Enquiries: |

Ref: *Kusile Power Station AEL (17/4/AEL/MP312/11/12)*

Dear Mr. Mahlangu

**KUSILE POWER STATION'S ANNUAL EMISSIONS REPORT FOR THE FINANCIAL YEAR
2017/2018**

This serves as the annual report required in terms of Section 7.6 in Kusile Power Station's Provisional Atmospheric Emission License: 17/4/AEL/MP311/12/01. The emissions are for the financial year 2017/2018. Please note Kusile Power Station went into commercial operation on August 2017 and started reporting emission on November 2017 for Unit 1 only. The report will cover the time period from November until March 2018 for particulate emission, SO₂, NO_x as NO₂. Calculated figures for CO₂ and N₂O are also included.

Hoping the above will meet your satisfaction.

Yours sincerely

ACTING GENERAL MANAGER: KUSILE POWER STATION

DATE: 10 / 05 / 18

KUSILE POWER STATION'S ANNUAL EMISSIONS REPORT FOR THE FINANCIAL YEAR 2017/2018

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

Name of facility	Kusile Power Station
Description of facility	Power Generation
Reference number of plant	17/4/AEL/MP312/11/12

2. Emission tonnages

The emissions in table 1 below are that of 2017/2018 financial year. Fig 1 – 5 indicates the pollutant emission trends.

Month	PM (tons)	SO ₂ (tons)	NO ₂ (tons)	CO ₂ (tons)	CO (tons)	N ₂ O(tons)
Nov 2017	2.1	3555	331		20	8
Dec 2017	1.3	1764	173		11	4
Jan 2018	4.9	5772	437		19	17
Feb 2018	6.6	114	493		17	0
Mar 2018	4.1	0	464		14	0
Total	19	452	1898		81	29

Table 1: Emission tonnages

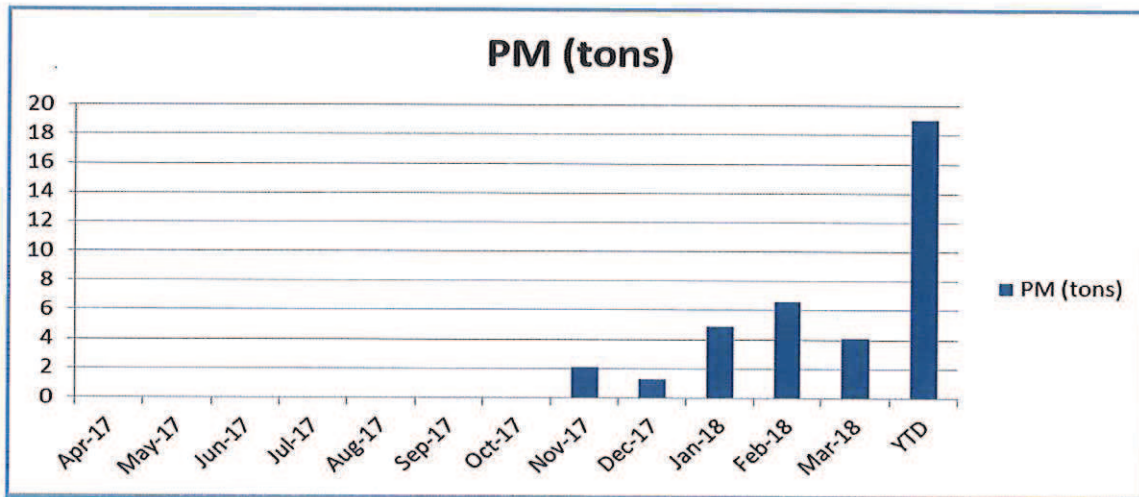


Figure 1: Monthly particulate emissions in tons for financial year 2017/2018

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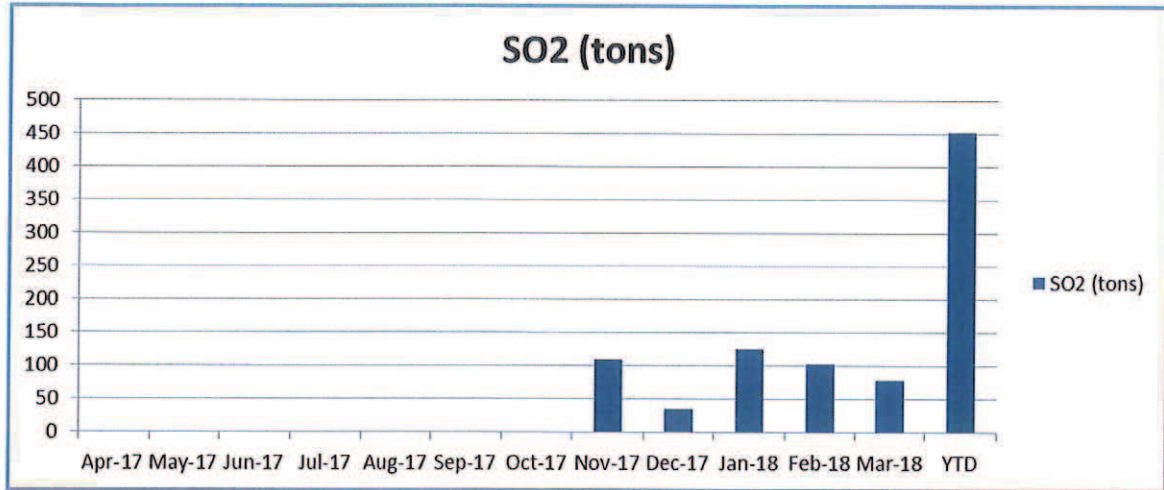


Figure 2: MonthlySO₂ emissions in tons for financial year 2017/2018

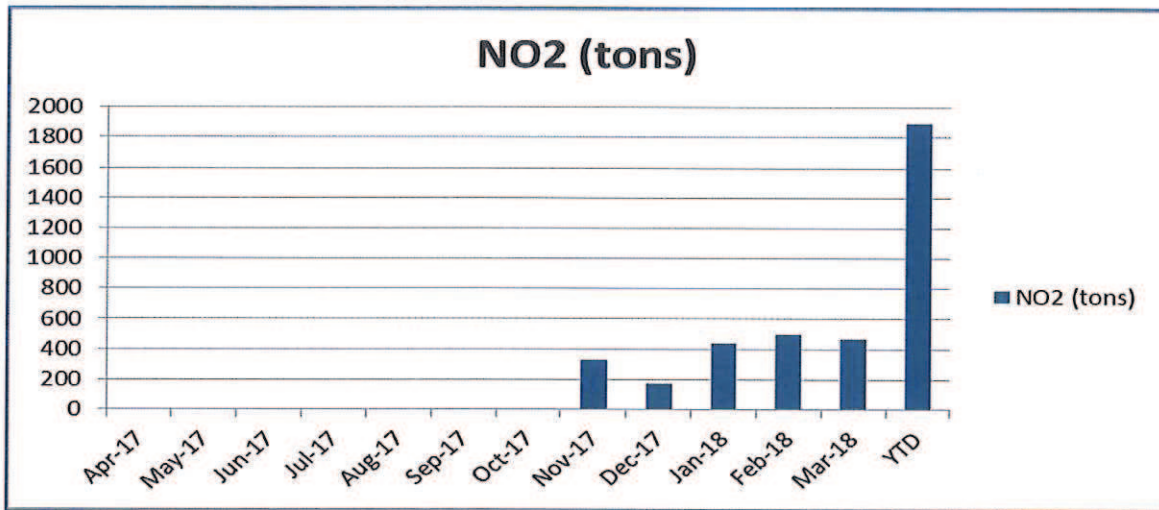


Figure 3: NO₂ emissions in tons for financial year 2017/2018

Figure 4: CO₂ emissions in tons for financial year 2017/2018

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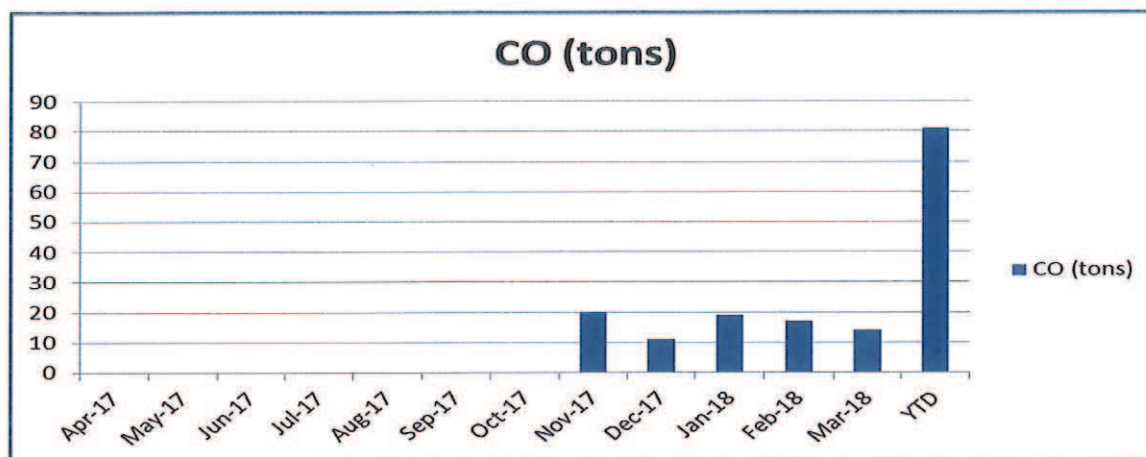


Figure 5: CO emissions in tons for financial year 2017/2018

3. Monitoring reliability (%)

Table 2: Monitoring reliability in percentages

Months	PM	SOx	NOx	CO ₂
Nov 17	90.3	88.8	89.4	
Dec 17	100	100	100	
Jan 18	100	100	99.8	
Feb 18	100	100	100	
Mar 18	100	100	99.8	

4. Raw Materials

The AEL limits the consumption of raw materials and allowable production capacity of products. Table 3 below indicated material consumption for financial year 2017/2018 and figure 6 – 7 indicate the trends thereof.

Month	Coal (tons)	Limestone (tons)	Fuel oil (tons)
Nov 2017	243 355	1 039	873
Dec 2017	123 399	2 975	1 231
Jan 2018	215 419	6 454	2 044
Feb 2018	226 966	7 256	1 334
Mar 2018	178 859	7 428	3 905
Maximum permitted consumption rate tons/annum	21,817,000	875,000	66,400
Total	992 153	25 152 26	9 387

Table 3: Raw material consumption for the FY 2017/2018

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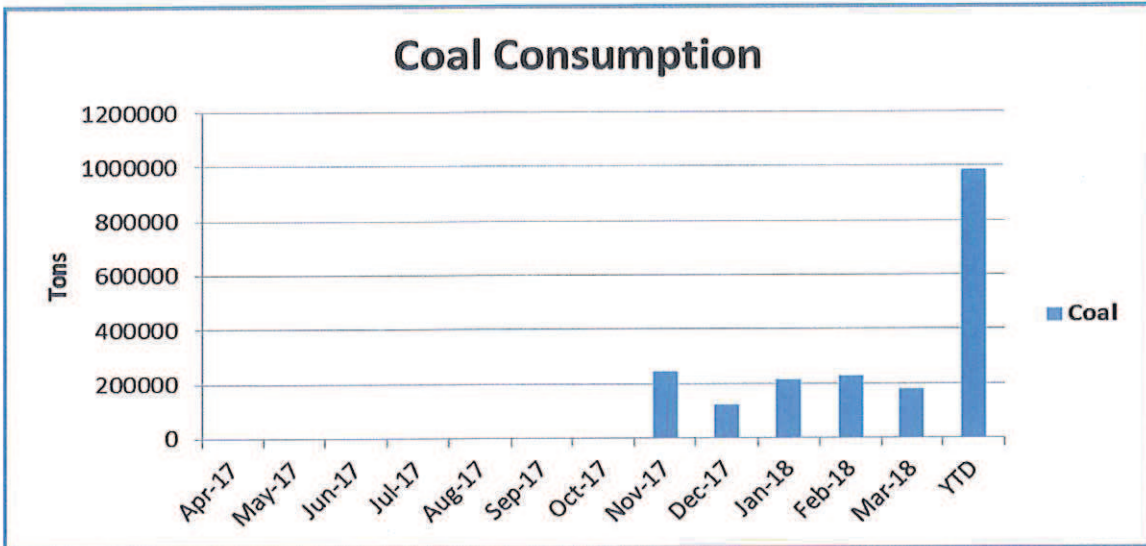


Fig 6 Unit 1 Coal consumption from Nov 17 until March 18

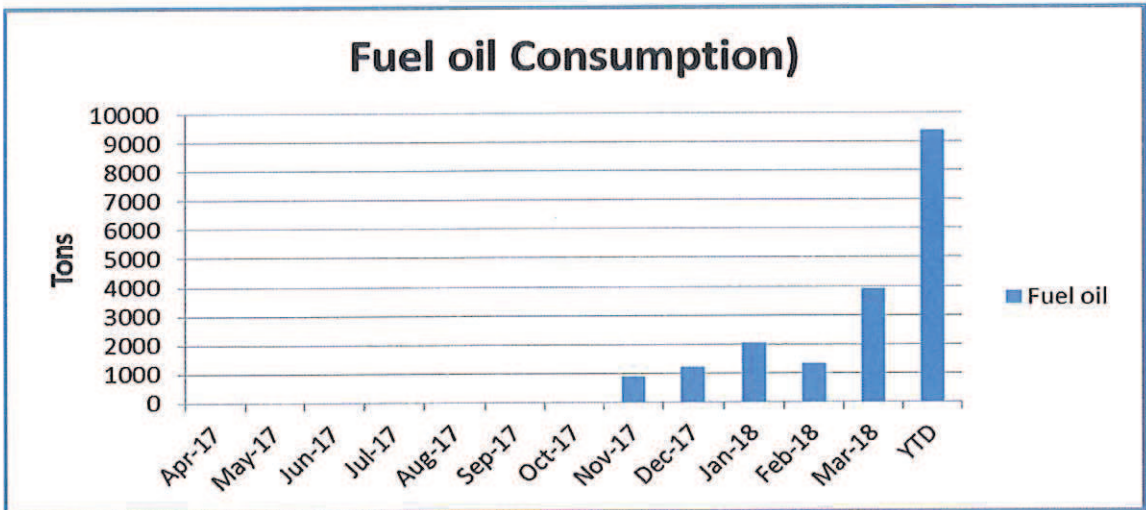


Fig 7 Fuel oil consumption from Nov 17 until March 18

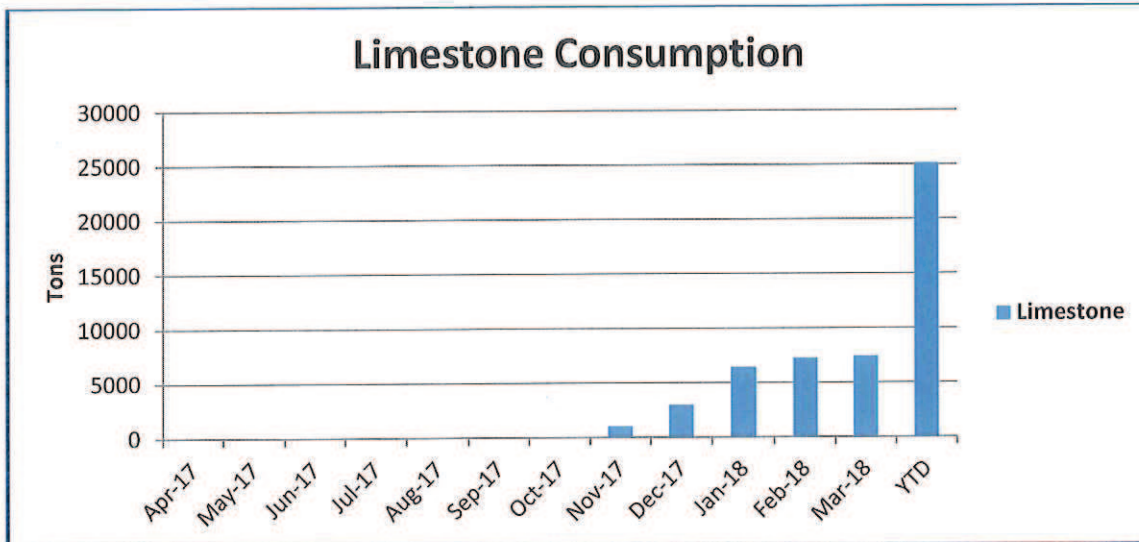


Fig 8 Limestone consumption from Nov 17 until March 18

5. Compliance Audit Report

An external environmental legal compliance audit was conducted by Nema Consulting on 26 – 28 February 2018 at Kusile Power Station. Compliance to the Atmospheric Emission Licence was audited during this period. The report will be submitted to your office upon receipt.

6. Major Upgrades project

No major upgrades have been undertaken at Kusile Power Station during financial year 2017/2018, other than those that form part of the station's construction process. Kusile is still under construction, and only one of its units is commercially operational.

7. Emission monitoring verification tests

Particulate matter correlation tests and combustion gas stratification and parallel tests were conducted on unit 1 at Kusile Power Station between 14 – 20 January 2018. The final report was received on 18 April 2018. The correction factors will be implemented from 1 May 2018. Attached is the resulting report (Appendix A).

8. Greenhouse gas emission

The greenhouse gas emissions figures (CO₂ and N₂O) are reported in tables 1 above.

9. Complaints

No complaints were received during FY 2017/2018.

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10. NAEIS reporting:

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

11. Conclusion

The rest of the information demonstrating compliance with the emission license conditions is supplied in the month emission reports sent to your office. This includes daily average emissions.