



Mr. Vusi Mahlangu
Air Quality Officer
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NELSPRUIT
1200

Date:
2020/09/07

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Dear Mr. Mahlangu

ARNOT POWER STATION'S ANNUAL EMISSIONS REPORT: 2019/20 FINANCIAL YEAR

1. EXECUTIVE SUMMARY.

This serves as the annual report required in terms of Section 7.6 in Arnot Power Station's Atmospheric Emission License. The emissions are for Eskom Arnot Power Station's 2019/2020 financial year, which is from 1 April 2019 to 31 March 2020. Verified measured emissions of particulates, SO₂ and NO_x (as NO₂) and calculated greenhouse gas emissions are included. Conditions 7.2.1 require the License Holder to report its operational performance against the conditions of license on a regular basis and at least on a bi-annual basis, to the licensing authority. This annual report will cover the following: Daily particulate emissions, Gaseous emissions (NO_x and Sox) in mg/Nm³ for 2019/2020 financial year.

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Table 1: Pollutants Emissions Trends for 2019-2020

Month	Arnot PM (tons)	Arnot SO ₂ (tons)	Arnot NO ₂ (tons)	Arnot CO ₂ (tons)	GWh (COAL FIRED)	N ₂ O tons (Coal Fired)
April 19	275	6233	4374	1003492	868	5
May 19	197	5561	3804	881709	771	5
June 19	174	5487	3633	834106	682	4
July 19	175	6342	4659	1082635	945	6
August 19	183	4938	3970	910401	816	5
September 19	196	5011	4335	1012148	939	5
October 19	314	4930	4972	1154980	1052	6
November 19	305	4763	4307	994633	879	5
December 19	232	6346	4707	1107365	942	6
January 20	264	5720	4240	993990	916	5
February 20	312	6274	4598	1080380	939	6
March 20	356	7257	5239	1219922	965	6
Total	2983	68862	52838	12275761	10714	64

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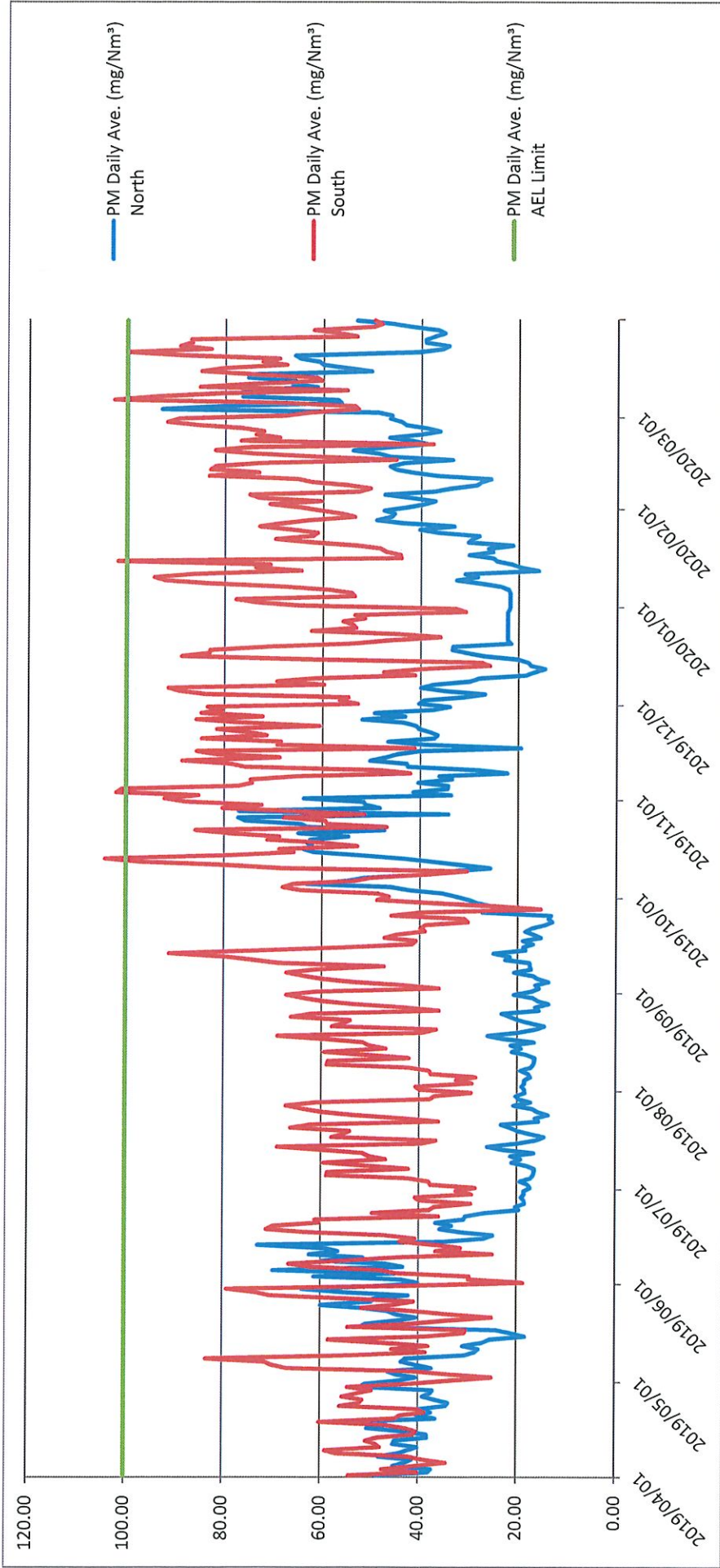


Figure 1. PM (Daily Average) 01 April 2019 - 30 March 2020

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Arnot Power Station
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Events of Daily Average emissions above the limit

1. Filter bags changes.
2. Units Light ups.

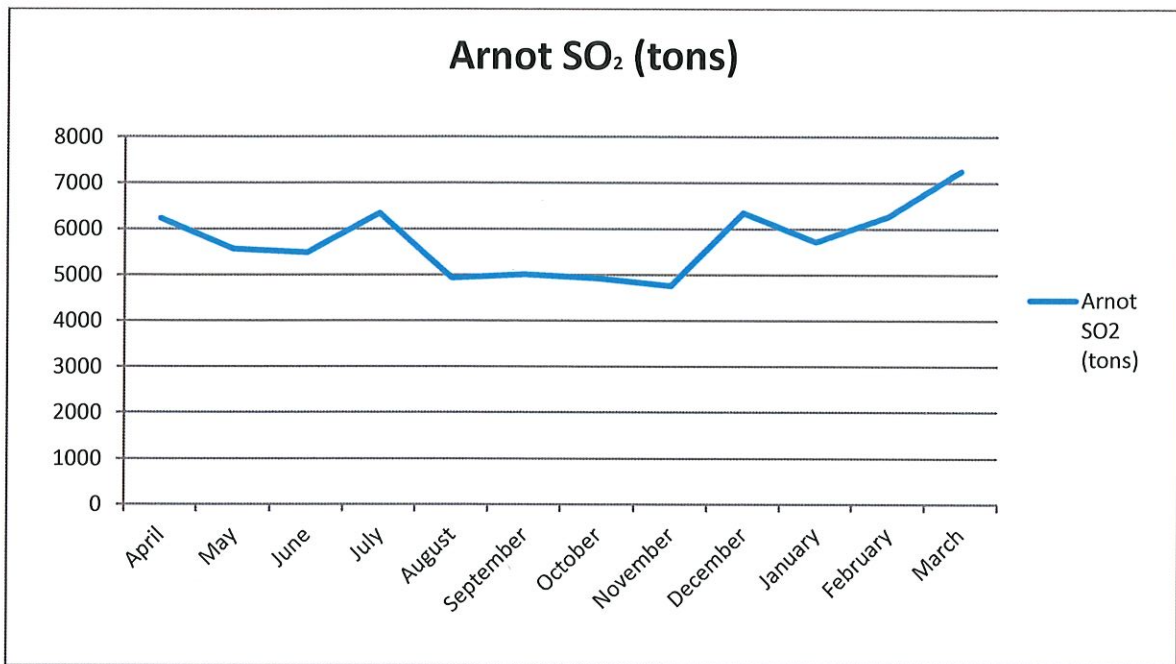


Figure 2. SO2 (tons) 01 April 2019- 31 March 2020

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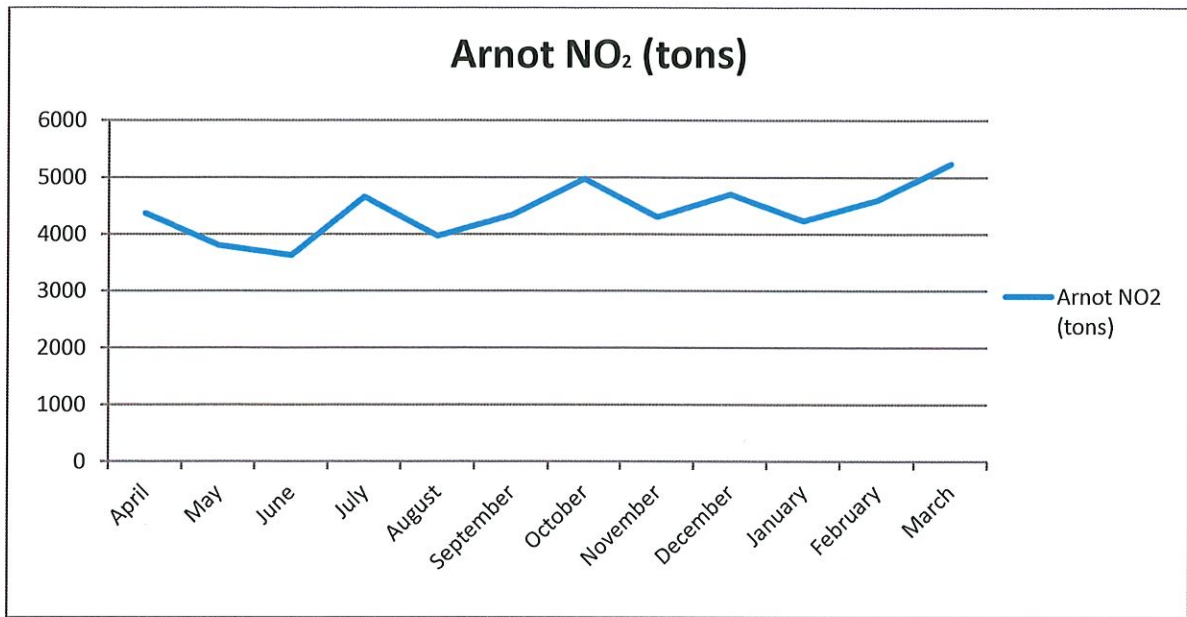


Figure 3. NO₂ (tons) 01 April 2019 - 31 March 2020

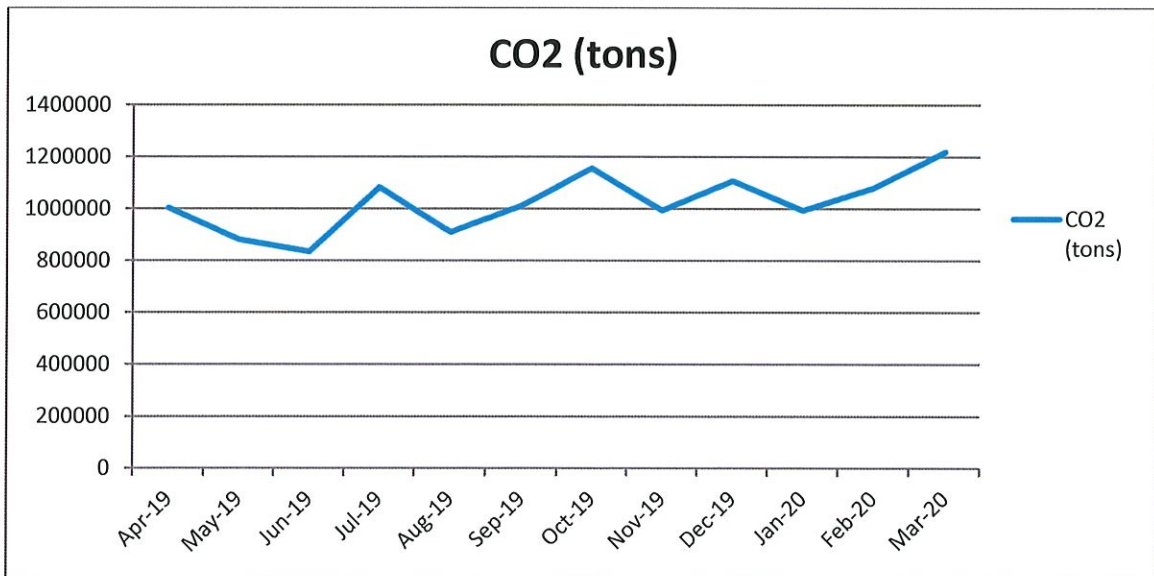


Figure 4. CO₂ (tons) 01 April 2019- 31 March 2020

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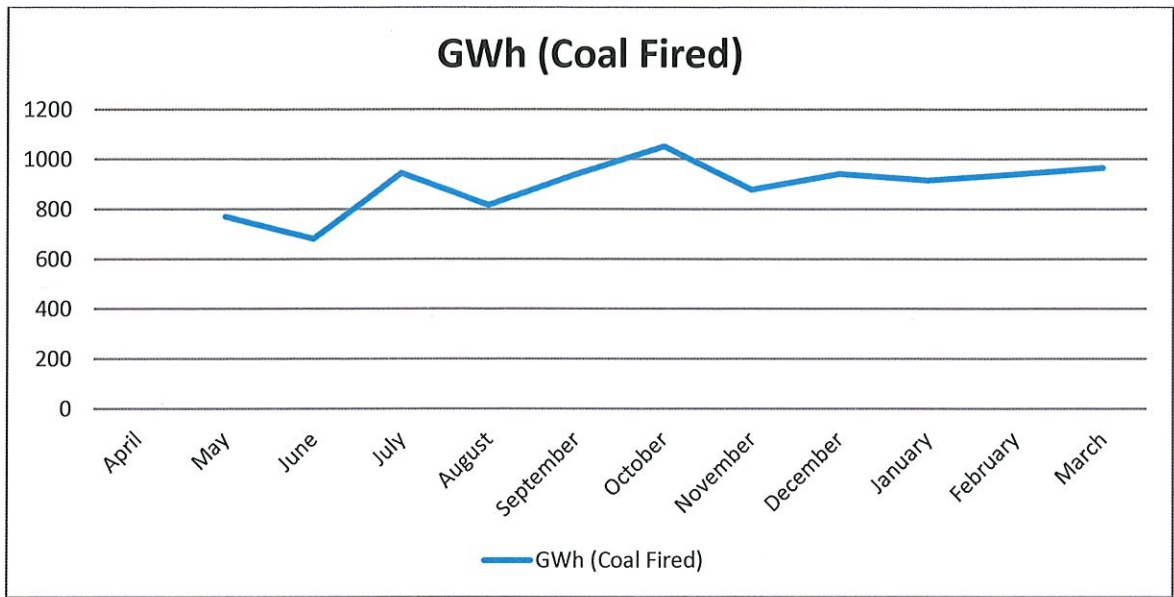


Figure 5. GWh (tons) 01 April 2019- 31 March 2020

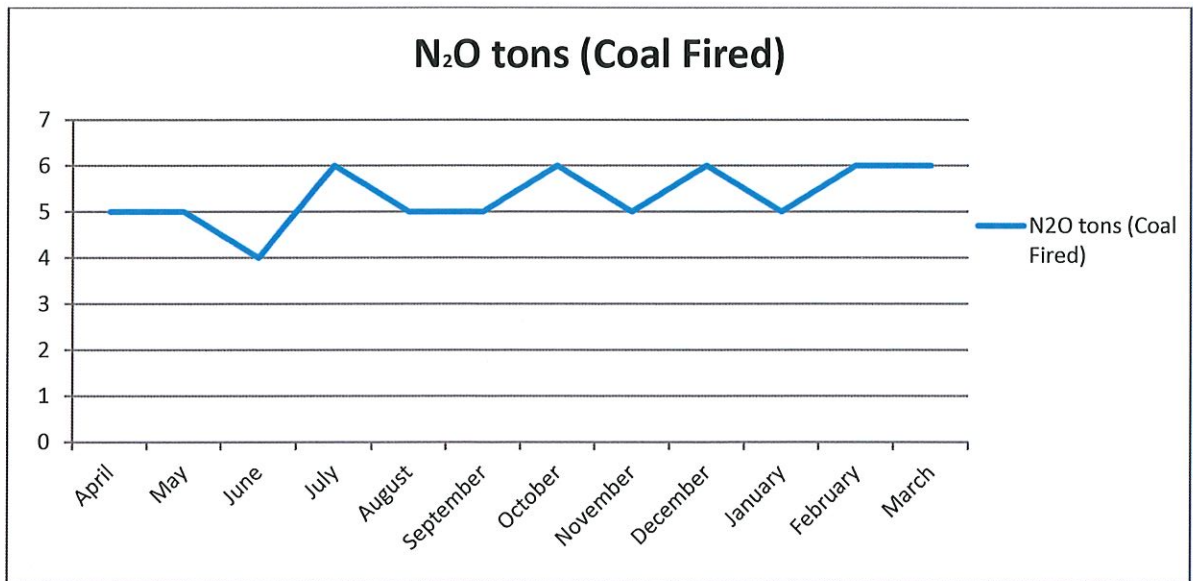


Figure 6. N2O (tons) 01 April 2019- 31 April 2020

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3. Compliance Audit Report(s):

No compliance audit was carried out during this reporting period.

4. Major upgrades projects:

No major projects related to the atmospheric emissions license were done for the financial year.

5. Greenhouse gas emissions:

Please refer to table 1.1 and figure 8-9

6. Gaseous and Particulate Monitoring Data availability

The Table below indicates the availability of the PM and Gaseous monitors on both the south and north stack for each month between 01 April 2019 and 31 March 2020

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Table 2. Monitoring System Availability (%)

Month	Associated Unit/Stack	PM	SO ₂	NO
April	Stack 1	97.6	97.3	97.3
	Stack 2	97.6	96.0	96.1
May	Stack 1	99.6	97.4	97.8
	Stack 2	100.0	99.2	100.0
June	Stack 1	99.0	76.3	78.8
	Stack 2	100.0	99.7	99.7
July	Stack 1	99.7	85.9	90.2
	Stack 2	100.0	99.9	99.9
August	Stack 1	99.7	85.9	90.2
	Stack 2	100.0	99.9	99.9
September	Stack 1	100.0	96.8	99.3
	Stack 2	100.0	99.6	99.9
October	Stack 1	100.0	99.1	100.0
	Stack 2	100.0	99.6	99.6
November	Stack 1	100.0	97.2	100.0
	Stack 2	100.0	99.9	99.9
December	Stack 1	100.0	97.8	99.9
	Stack 2	100.0	99.3	99.7
January	Stack 1	100.0	99.3	99.5
	Stack 2	100.0	98.7	98.8
February	Stack 1	100.0	99.9	99.7
	Stack 2	100.0	99.9	99.9
March	Stack 1	100.0	99.9	99.3
	Stack 2	100.0	98.8	98.4

For instances in case the gaseous monitors were performing below 80%, it was due to the analyzers being out of commission. The station has a contract with SI Analytics who are responsible for the maintenance, repairs; when monitors are found to be out of commission the supplier is called out to do repairs.

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7. Complaints Register

Table 3. Complaints for 01 April 2019- 31 March 2020

There were no emissions related complaints registered for the past financial year.

Source Code/ Name	Date complaint Received	Root Cause Analysis	Calculation of Impacts/ emissions associated with the incident	Dispersion modeling of pollutants where applicable	Measures implemented to prevent reoccurrence	Date by which measure will be implemented
No Emissions related complaints received from April 2019- March 2020						

8. Most recent correlation/ spot tests

The most recent correlation and verification tests were conducted on the:

- 16-19 of May 2019 for the South Stack.
- 12-17 of December 2019 for the North Stack.

9. NAIES

Arnot Power Station has submitted its annual NAIES report on the system for the 2019 reporting period in March 2020

10. Air Quality Plan Implementation Task Team Meeting

Arnot Power Station complies with condition 4.5 (Statutory obligations) by attending Highveld Priority Area Air Quality meeting in Nkangala District Municipality pertaining to the priority area.

11. Offset Project updates

An updated version of Eskom's offset plan for Nkangala District Municipality was submitted to DEFF on the 08 September 2020

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General

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.

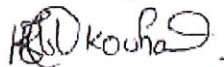
Compile by



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Approved By



Mariam Joseph

ENVIRONMENTAL MANAGER

Yours sincerely



Ashwin Rampersad

GENERAL MANAGER: ARNOT