

Mr. Vusi Mahlangu
 Air Quality Officer
 DEDET
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 NELSPRUIT
 1200

Date:
 12 February 2020

Enquiries:

Dear Mr. Mahlangu

**ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF
 JANUARY 2020**

This serves as the monthly report required in terms of Section 6 in Arnot Power Station's Atmospheric Emission License. The emissions are for the month of January 2020, Verified emissions of particulates; SO₂ and NO_x (as NO₂) are also included.

Raw Materials and Products

Table1: Quantity of Raw Materials and Products used/produced for the month of January 2020

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption/ Rate in Month of January 2020
	Coal	Tons/month	1 050 330	482 772.0
	Fuel Oil	Tons/month	10 000	3128.12
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of January 2019
	Energy	GWh	1 785 600	915.952
	Ash	Tons/month	421 000	106 144

**ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF
JANUARY 2020**

Abatement Technology

Table 2 Abatement Equipment Control Technology for month of January 2020

Associated Unit/Stack	Technology Type	Actual Utilisation (%) for the month of October
North Stack	Fabric Filter Bags	99.9 %
South Stack	Fabric Filter Bags	99.6 %

Energy Source Characteristics

Table 3 Energy Source Material Characteristics for the month of January 2020

Characteristic	Stipulated Range (Unit)	Monthly Average Content
CV Content	18-22 (MJ/kg)	
Sulphur Content	0.5 to < 1 (%)	0.707
Ash Content	17 to < 40 (%)	22.17

Table 4 Operating days in compliance to PM AEL Limit – January 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
North	31	0	0	0	0	29.5
South	31	1	0	0	0	66.1
SUM	62	1	0	0	0	

Table 5 Operating days in compliance to NOx AEL Limit – January 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm ³)
North	31	0	0	0	0	864.8
South	31	0	0	0	0	699.7
SUM	62	0	0	0	0	

Table 6 Operating days in compliance to SOx AEL Limit – January 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm ³)
North	31	0	0	0	0	1644.7
South	31	0	0	0	0	1325.2
SUM	62	0	0	0	0	

ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JANUARY 2020

Emissions Reporting

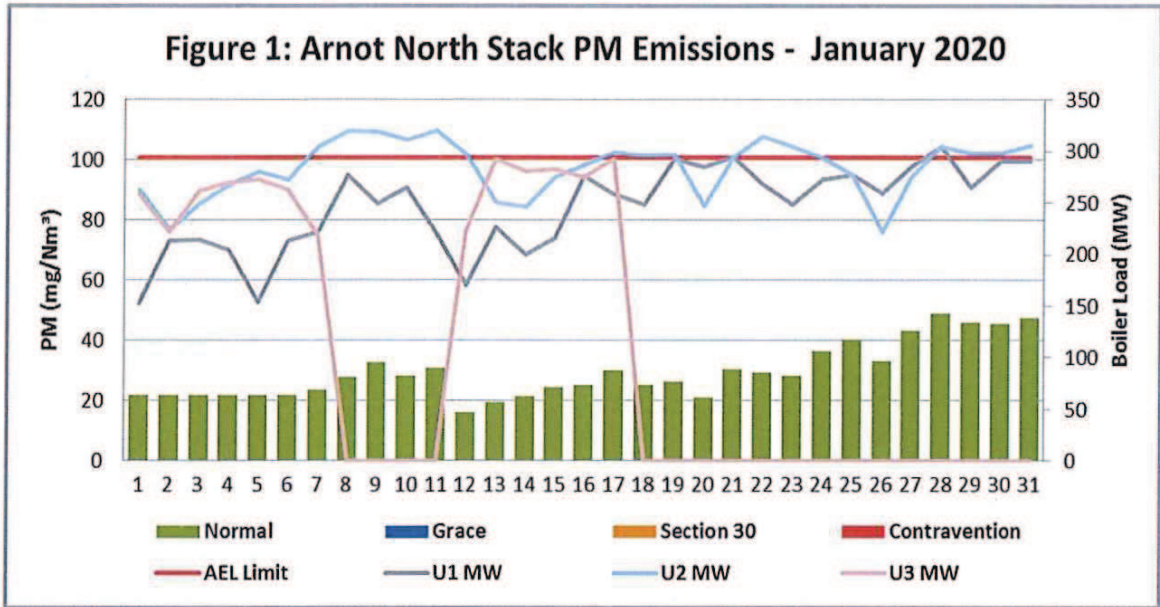


Figure 1: PM emissions (daily averages) for the month of January 2020 against emission limit for the North Stack

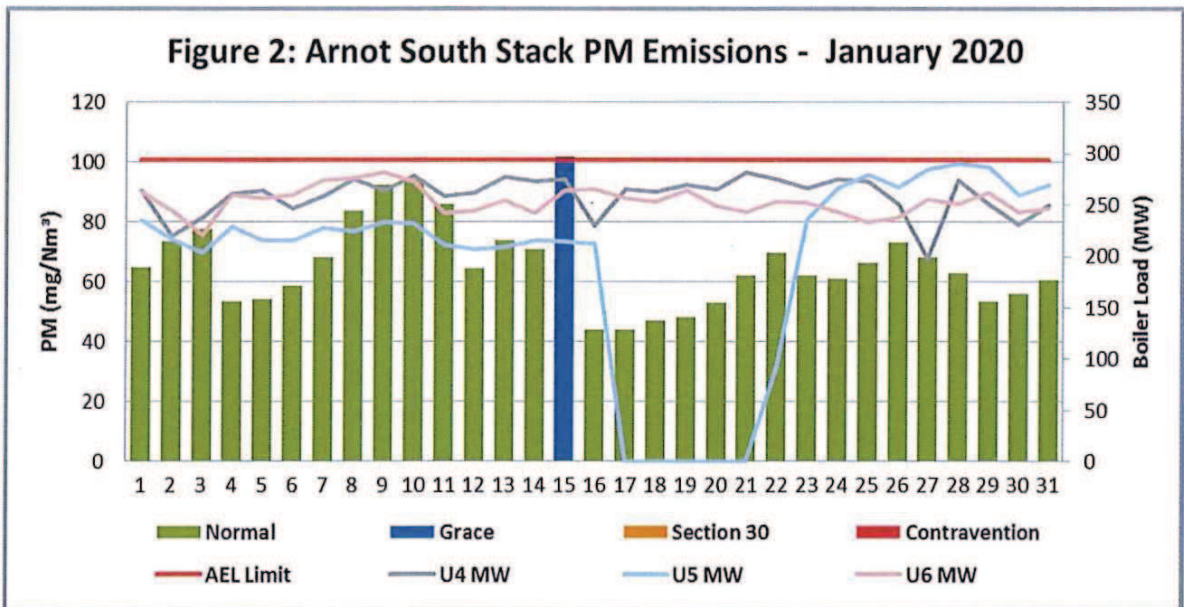


Figure 2: PM emissions (daily averages) for the month of January-2020 against emission limit for the South Stack

ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF
JANUARY 2020

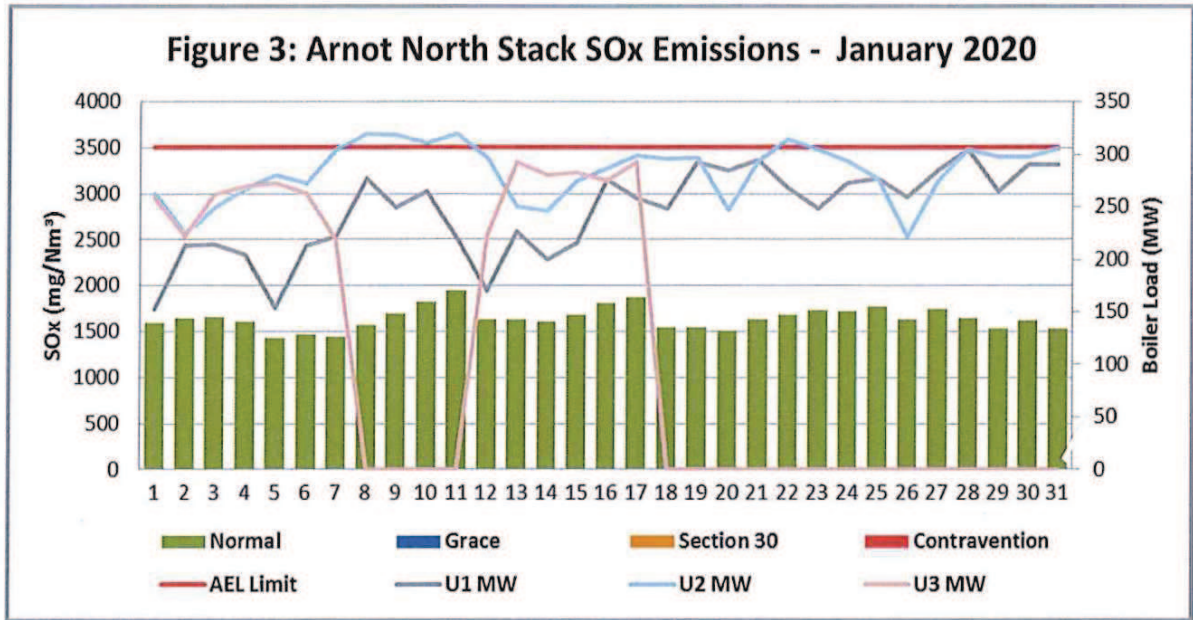


Figure 3: SO₂ emissions (daily averages) for the month of January-2020 against emission limit for the North Stack

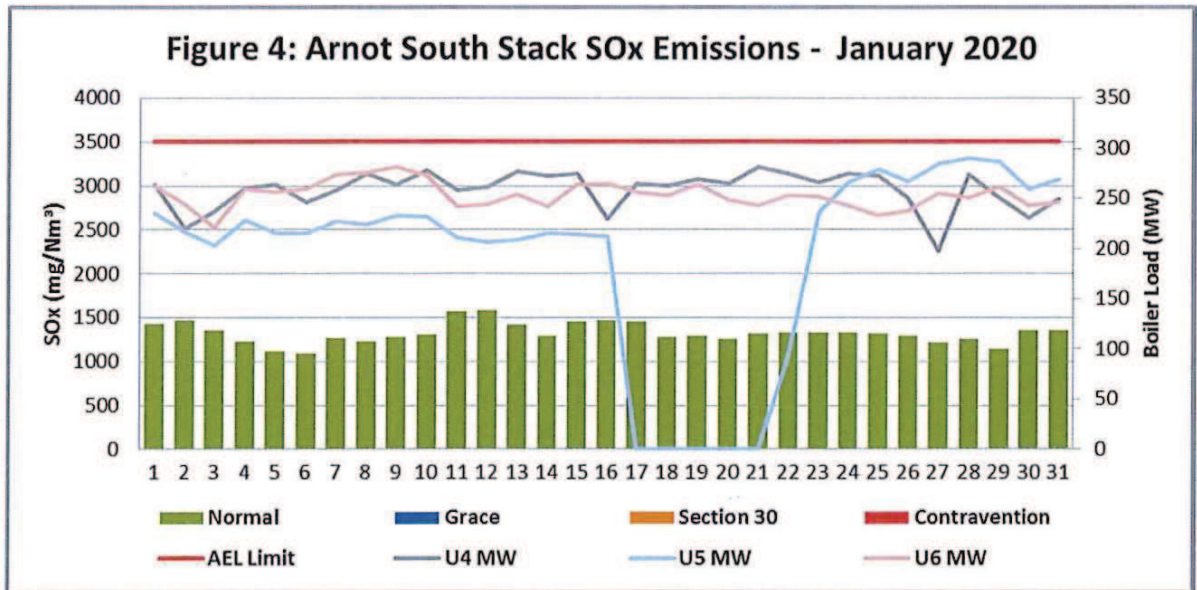


Figure 4. SO₂ emissions (daily averages) for the month of January -2020 against emission limit for the South Stack.

ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF
JANUARY 2020

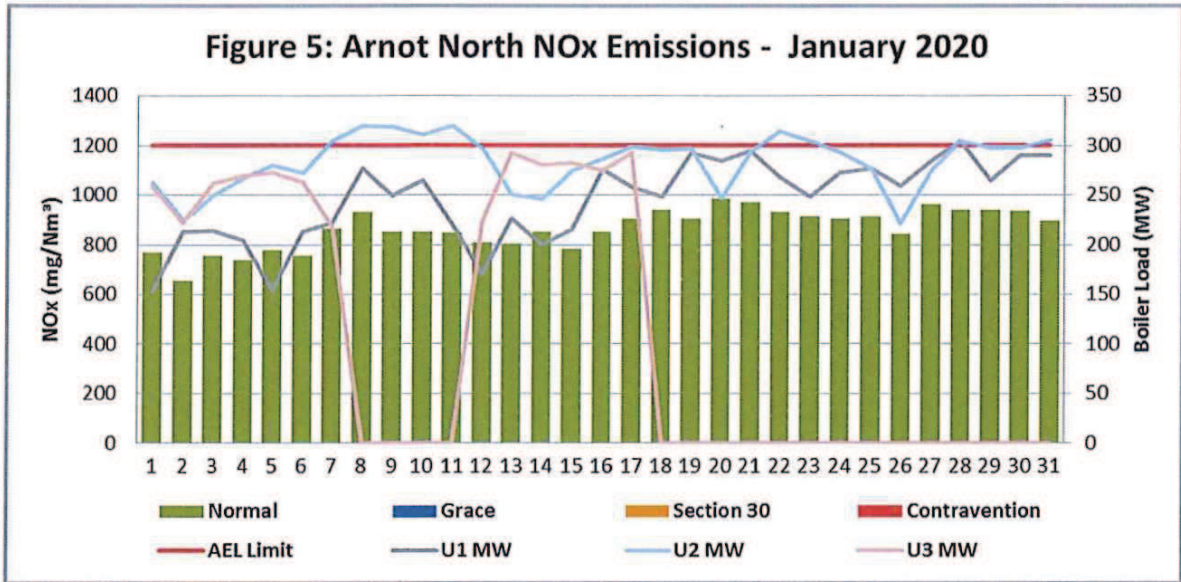


Figure 5: NO₂ emissions (daily averages) for the month of January-2020 against emission limit for the North Stack

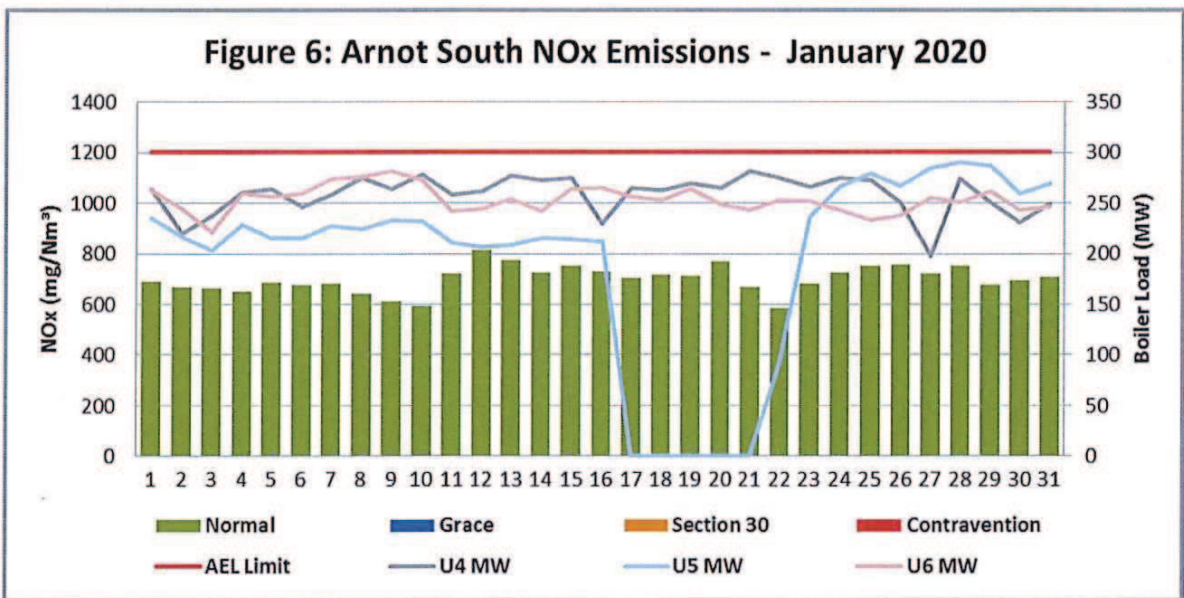


Figure 6: NO₂ emissions (daily averages) for the month of January-2020 against emission limit for the South Stack

**ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF
JANUARY 2020**

Table 4: Monthly tonnages for the month of January 2020

Unit	PM (tons)	SO ₂ (tons)	NO ₂ (tons)	CO ₂ (tons)
Total Tons (North & South Stack)	263.8	7308.3	3849.9	

Table 5 Monitor Availability

Unit	PM (%)	SO ₂ (%)	NO ₂ (%)
North Stack	100	99.5%	99.6%
South Stack	100	98.8%	98.7%

Table 6 Each unit and respective days operating under normal operation, days in grace period, and section 31 days respectively

Unit	Days operating under normal operation	Days operating in grace period	Days operating under S 30
1	31	0	0
2	31	0	0
3	31	0	0
4	31	0	0
5	31	0	0
6	31	0	0

Light up information

Continuous reporting is being done even during start-ups, emissions were not affected

Complaints Register

Table 7 Complaints for the month of January 2020

Source Code/ Name	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
None					

General

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

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Hoping the above will meet your satisfaction

Compiled by

ENVIRONMENTAL OFFICER: ARNOT

Verified by

SENIOR TECHNOLOGIST: ARNOT

Supported by

SENIOR ENVIRONMENTAL ADVISOR: ARNOT

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JANUARY 2020**

Yours sincerely

(" **ACTING GENERAL MANAGER: ARNOT**