

Mr. Vusi Mahlangu
 Air Quality Officer
 DEDET
 Private bag X11215
 NELSPRUIT
 1200

Date:
 22 February 2021

Enquiries:
 Mariam Joseph
 Tel +27 13 297 9828
 Fax + 27 86 661 7663

Dear Mr. Mahlangu

ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JANUARY 2021

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 2021, 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 2021

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption/ Rate in Month of January
	Coal	Tons/month	1 050 330	524 262.77
	Fuel Oil	Tons/month	10 000	2385.72
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of January 2021
	Energy	GWh	1 785 600	974.970
	Ash	Tons/month	421 000	126 295



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Abatement Technology

Table 2 Abatement Equipment Control Technology for month of January 2021

Associated Unit/Stack	Technology Type	Actual efficiency (%) for the month of January 2021
North Stack	Fabric Filter Bags	99.7%
South Stack	Fabric Filter Bags	99.8%

Table 2.1

Associated Unit/Stack	Technology Type	Actual Utilisation (%) for the month of January 2021
North Stack	Fabric Filter Bags	100%
South Stack	Fabric Filter Bags	100%

Energy Source Characteristics

Table 3 Energy Source Material Characteristics for the month of -January 2021

Characteristic	Stipulated Range (Unit)	Monthly Average Content
Sulphur Content	0.5 to < 1 (%)	0.690
Ash Content	17 to < 40 (%)	24.09

Table 4 Operating days in compliance to PM AEL Limit –January 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
North	31	0	0	0	0	59.0
South	31	0	0	0	0	44.0
SUM	62	0	0	0	0	

Table 5 Operating days in compliance to NOx AEL Limit –January 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm ³)
North	31	0	0	0	0	622.9
South	31	0	0	0	0	677.7
SUM	62	0	0	0	0	



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Table 6: Operating days in compliance to SOx AEL Limit –January 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm ³)
North	31	0	0	0	0	1183.7
South	31	0	0	0	0	1336.4
SUM	62	0	0	0	0	

Emissions Reporting

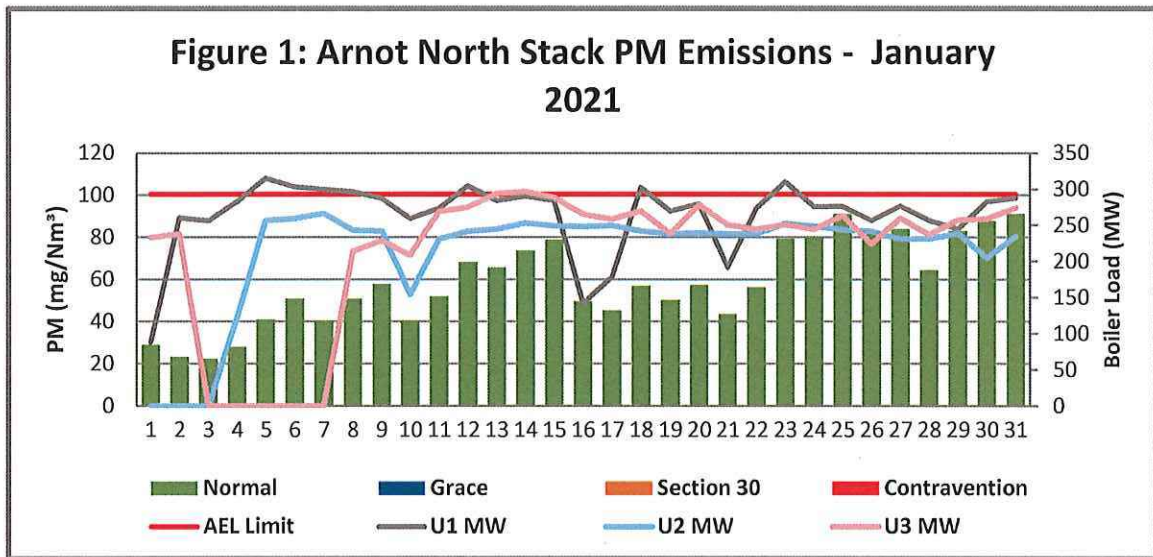


Figure 1: PM emissions (daily averages) for the month of January 2021 against emission limit for the North Stack

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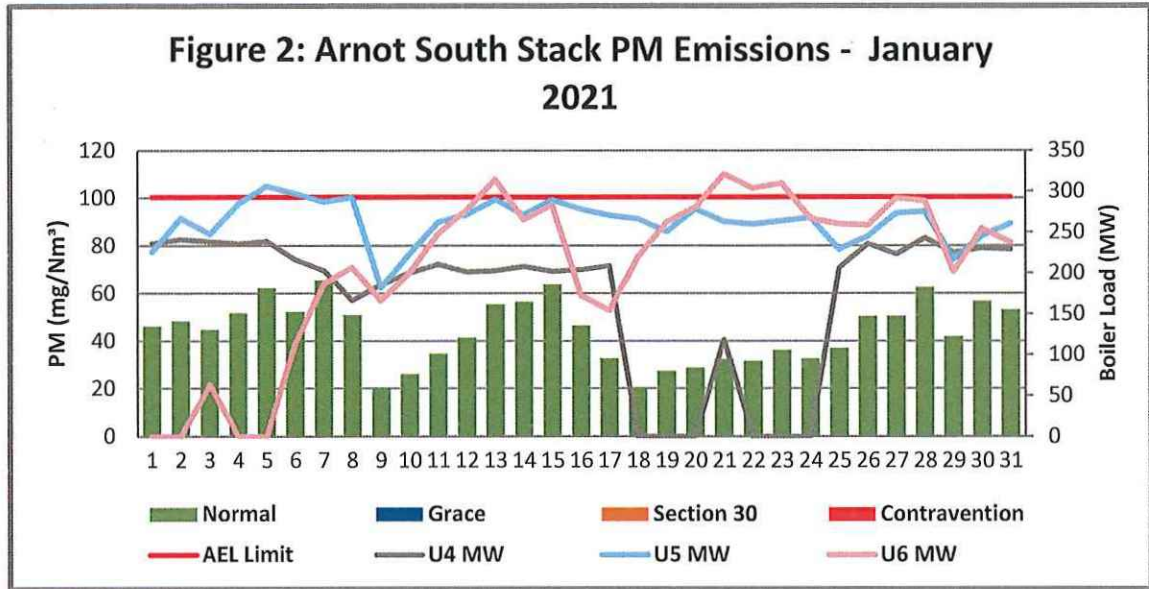


Figure 2: PM emissions (daily averages) for the month of January 2021 against emission limit for the South Stack

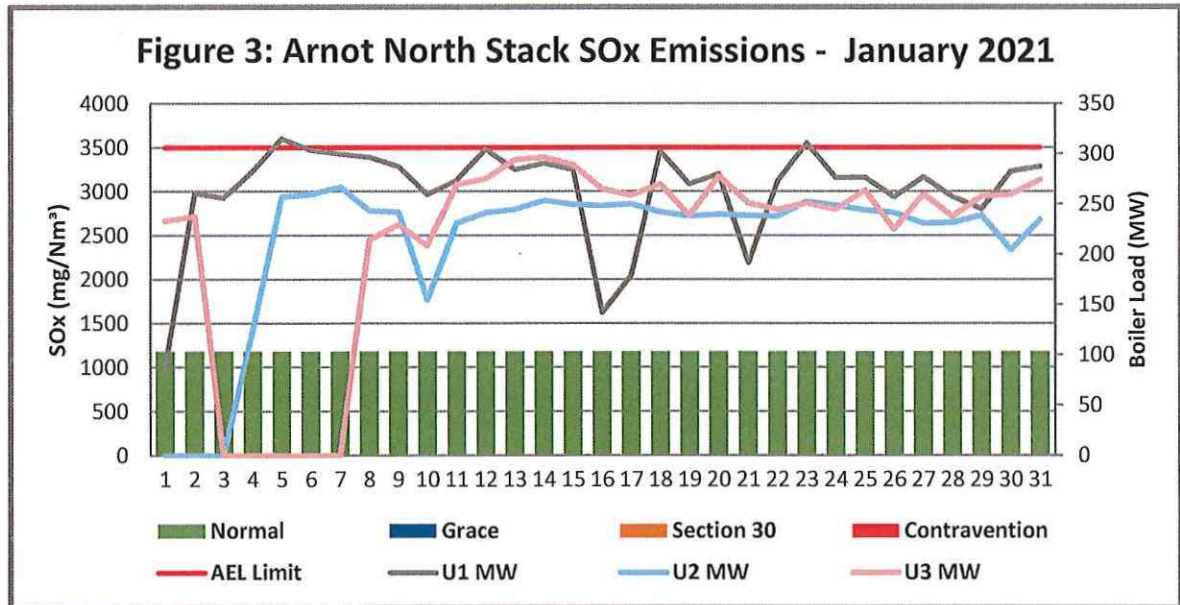


Figure 3: SO₂ emissions (daily averages) for the month of January 2021 against emission limit for the North Stack

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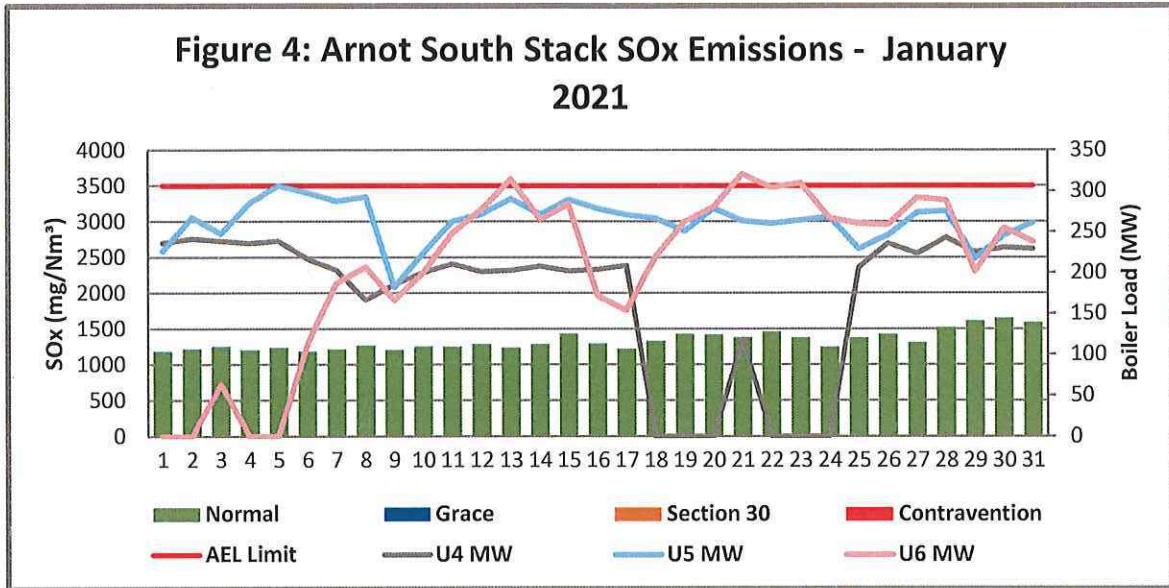


Figure 4: SO₂ emissions (daily averages) for the month of January -2021 against emission limit for the South Stack

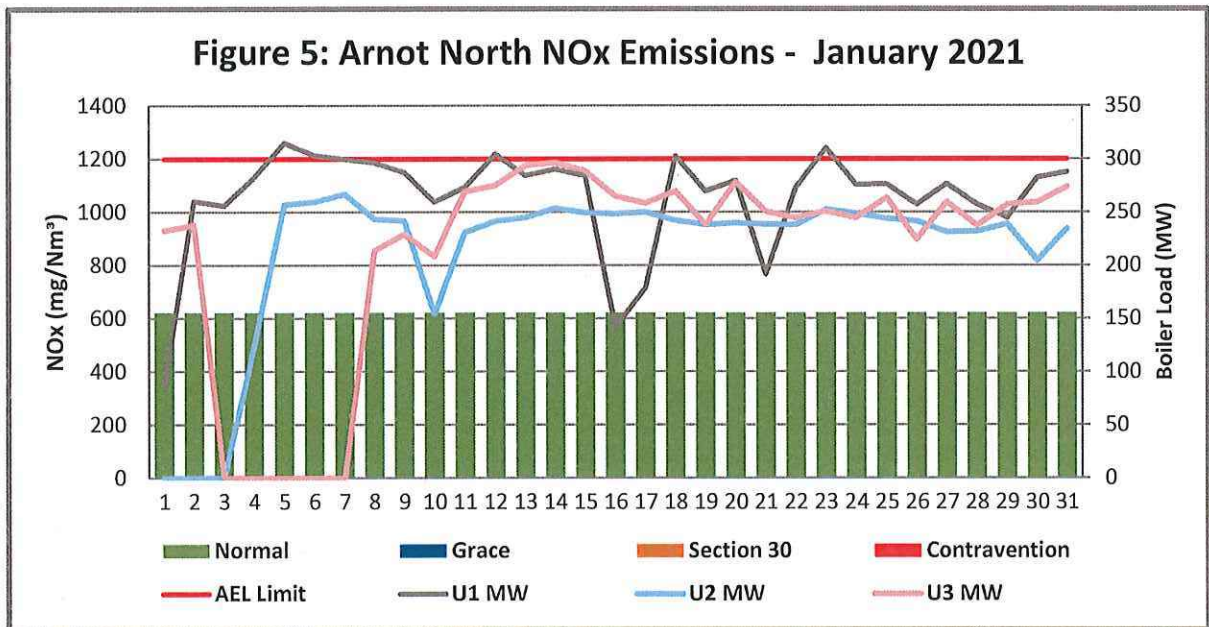


Figure 5: NO₂ emissions (daily averages) for the month of January -2021 against emission limit for the North Stack

Alan Law

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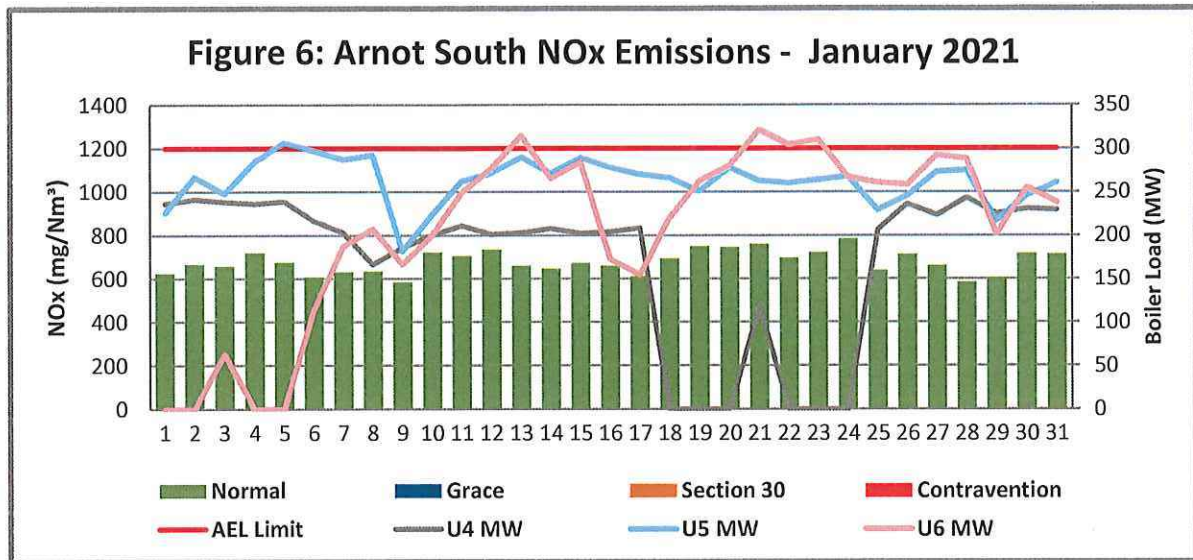


Figure 6: NO₂ emissions (daily averages) for the month of January -2021 against emission limit for the South Stack

Table 4: Monthly tonnages for the month of January 2021

Unit	PM (tons)	SO ₂ (tons)	NO ₂ (tons)
Total Tons (North & South Stack)	271.1	6678.6	3430.0

Table 5: Monitor Availability

Unit	PM (%)	SO ₂ (%)	NO ₂ (%)
North Stack	100	0	0
South Stack	99.3	99.5	99.5

As of 11th December 2020 the North stack was reading errors on the gaseous pollutants. Upon further investigation by Control and Instrumentation Department it was found that the monitor was struck by lightning. The monitor was found to be burnt out and the station is in the process of replacing the monitor. Average readings were used to report on the SO₂ and NO₂.

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Table 6 Each unit and respective days operating under normal operation, days in grace period, and section 30 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 2021

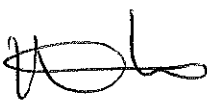
Source Code/ Name	Root Cause Analysis	Calculation of Impacts/ emissions associated with the incident	Dispersion modeling of pollutants where applicable	Measures implemented to prevent reoccurrence	Date by which measure will be implemented
None					

General

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

Hoping the above will meet your satisfaction

Compiled by

PP 

Lawrence Machebe

ENVIRONMENTAL OFFICER: ARNOT



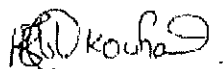
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Verified by



Nomathemba Mpulo
SENIOR TECHNOLOGIST: ARNOT

Supported by



Rofhiwa Tshikovha
SENIOR ENVIRONMENTAL ADVISOR: ARNOT

Yours sincerely



Tsoro Samuel Mashao
ACTING GENERAL MANAGER: ARNOT