

Air Quality Officer  
DEDET  
Private bag X11215  
NELSPRUIT  
1200

Date:  
2024.04.23

Inquiries:  
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 2024

This serves as the monthly report required in terms of Section 6 in Arnot Power Station's Atmospheric Emission License. The emissions are for January 2024, verified emissions of particulates; SO<sub>2</sub> and NO<sub>x</sub> (as NO<sub>2</sub>) are also included.

### Raw Materials and Products

Table1: Quantity of Raw Materials and Products used/produced for the Month of January 2024

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption/ Rate in Month of January 2024
	Coal	Tons/month	1 050 330	456 798.99
	Fuel Oil	Tons/month	10 000	3899.44
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of January 2024
	Energy	GWh	1 785 600	819.62
	Ash	Tons/month	421 000	103 236

Generation Division  
Arnot Power Station  
N4 Nelspruit Road  
Private Bag X2 Rietkuil 1097 SA  
Tel +27 13 297 9111 Fax +27 13 297 9142 [www.eskom.co.za](http://www.eskom.co.za)

Eskom Holdings SOC Ltd Reg No 2002/015527/30

# ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JANUARY 2024

## Abatement Technology

Table 2.1 (a) Abatement Equipment Efficiency Control Technology for month of January 2024

Associated Unit/Stack	Technology Type	Actual Efficiency (%) for the month of January 2024
North Stack	Fabric Filter Bags	99.8%
South Stack	Fabric Filter Bags	99.7%

Table 2.1 (b) Abatement Equipment Utilisation (%) for the month of January 2024

Associated Unit/Stack	Technology Type	Utilisation January 2024
North	<i>Fabric Filter Plant (FFP)</i>	100 %
South	<i>Fabric Filter Plant (FFP)</i>	100 %

Table 2.1 (c) Monitor Reliability (%)

Associated Unit/Stack	PM	SO <sub>2</sub>	NO
Stack 1	100	84.3	84.4
Stack 2	97.2	91.8	91.3

## Energy Source Characteristics

Table 3: Energy Source Material Characteristics for the month of January 2024

Characteristic	Stipulated Range (Unit)	Monthly Average Content
Sulphur Content	0.5 to < 1 (%)	0.617
Ash Content	17 to < 40 (%)	22.59

Table 4 Operating days in compliance to PM AEL Limit – January 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	29.9
South	31	0	0	0	0	80.8
SUM	62	0	0	0	0	

## ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JANUARY 2024

Table 5: Operating days in compliance to NOx AEL Limit – January 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	900.7
South	31	0	0	0	0	483.2
<b>SUM</b>	<b>62</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Table 6: Operating days in compliance to Sox AEL Limit –January 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	1282.7
South	31	0	0	0	0	1209.8
<b>SUM</b>	<b>62</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

### Emissions Reporting

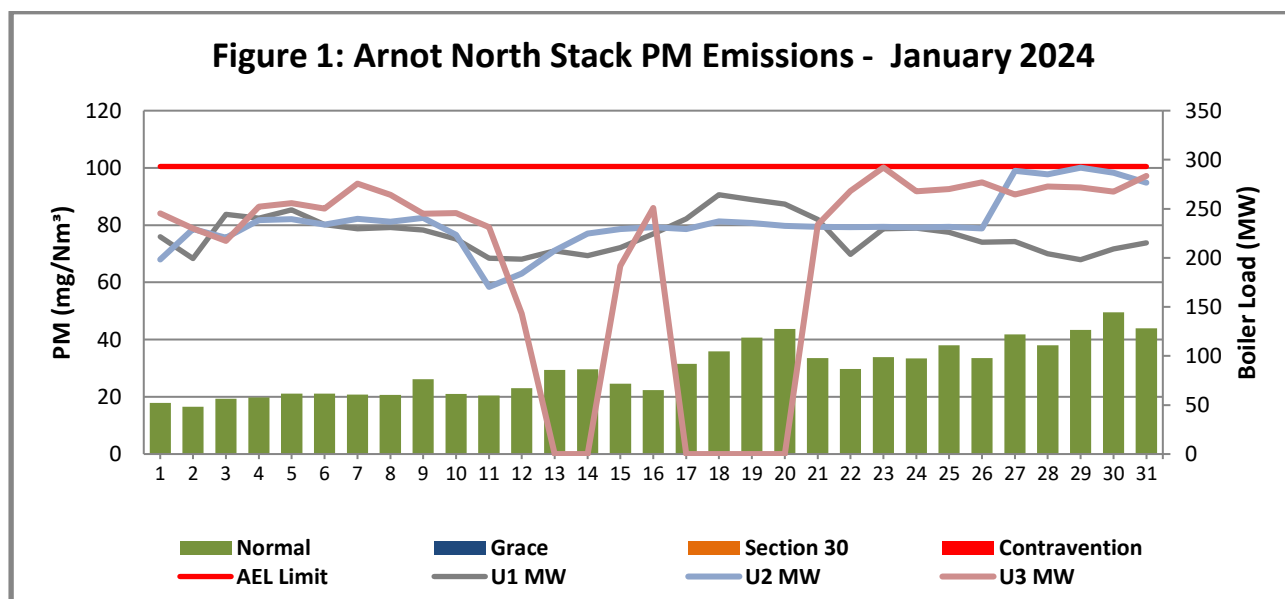


Figure 1: PM emissions (daily averages) for the month of January 2024 against the emission limit for the North Stack

## ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JANUARY 2024

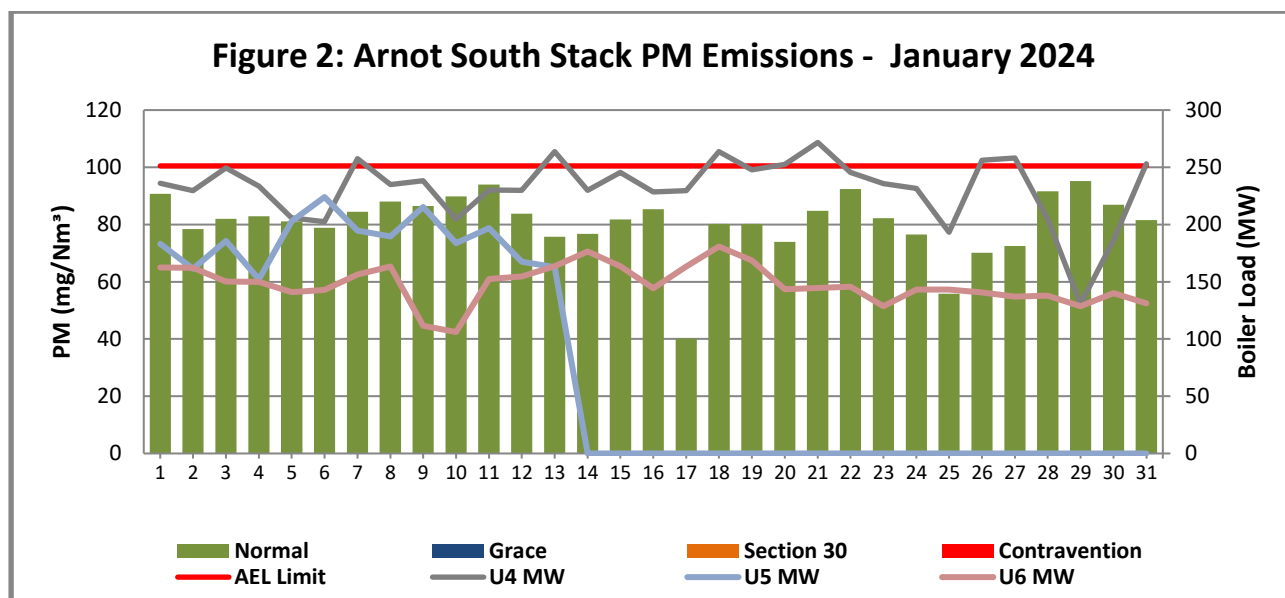


Figure 2: PM emissions (daily averages) for the month of January 2024 against emission limit for the South Stack

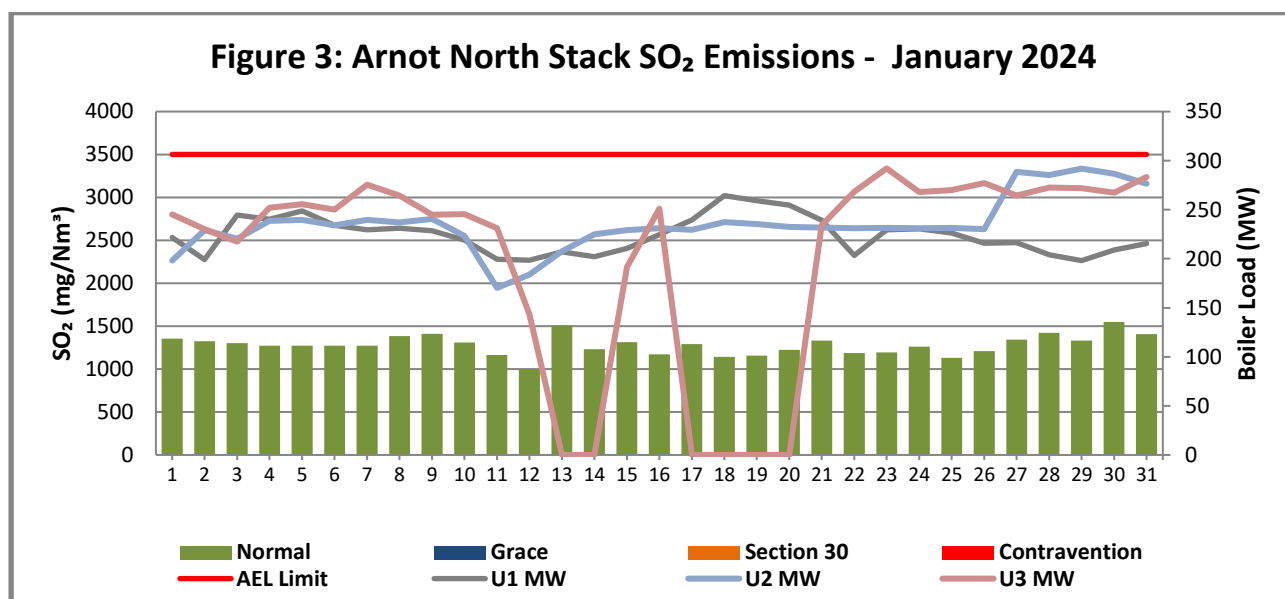


Figure 3: SO<sub>2</sub> emissions (daily averages) for the month of January 2024 against emission limit for the North Stack

## ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JANUARY 2024

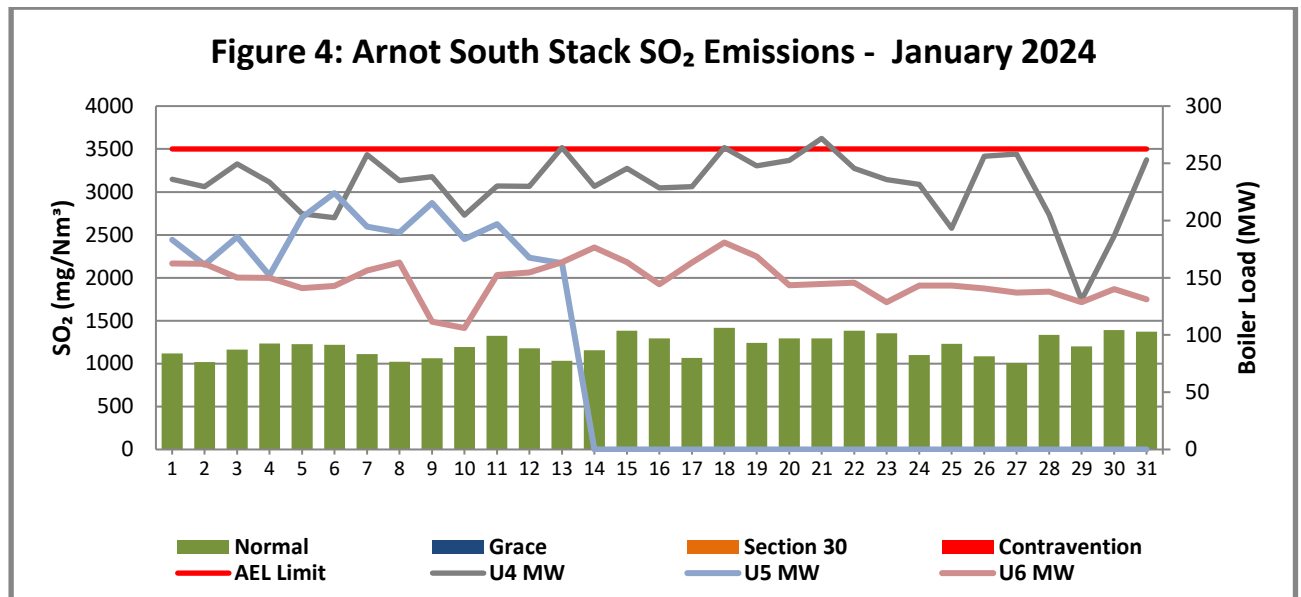


Figure 4: SO<sub>2</sub> emissions (daily averages) for the month of January 2024 against emission limit for the South Stack

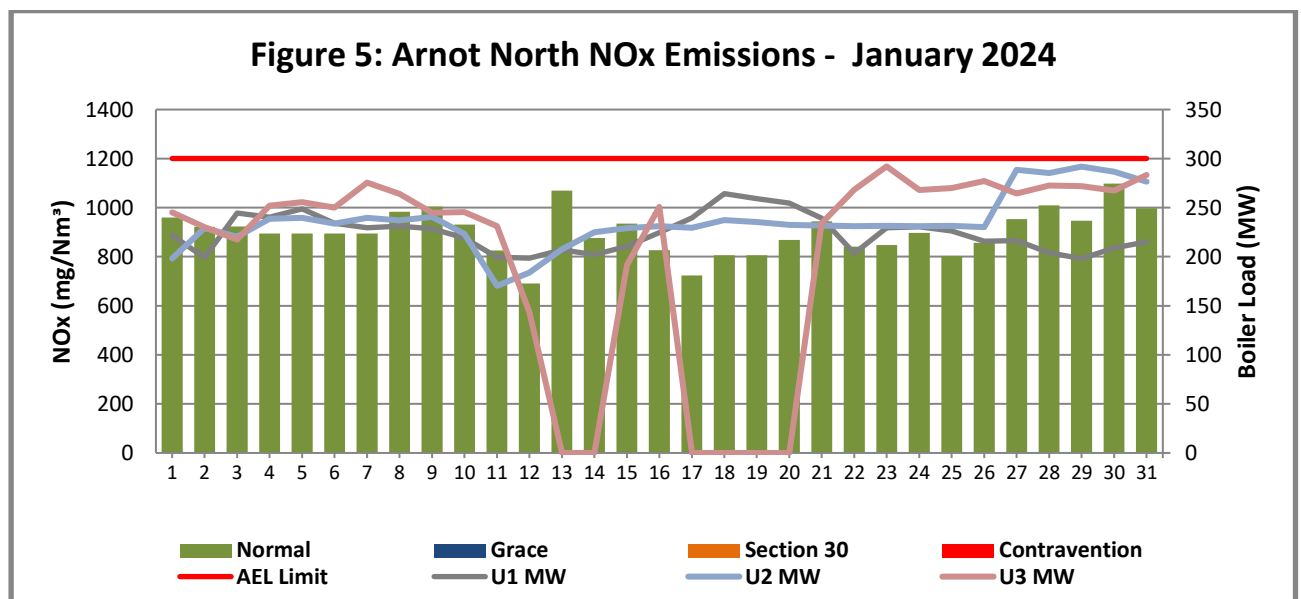
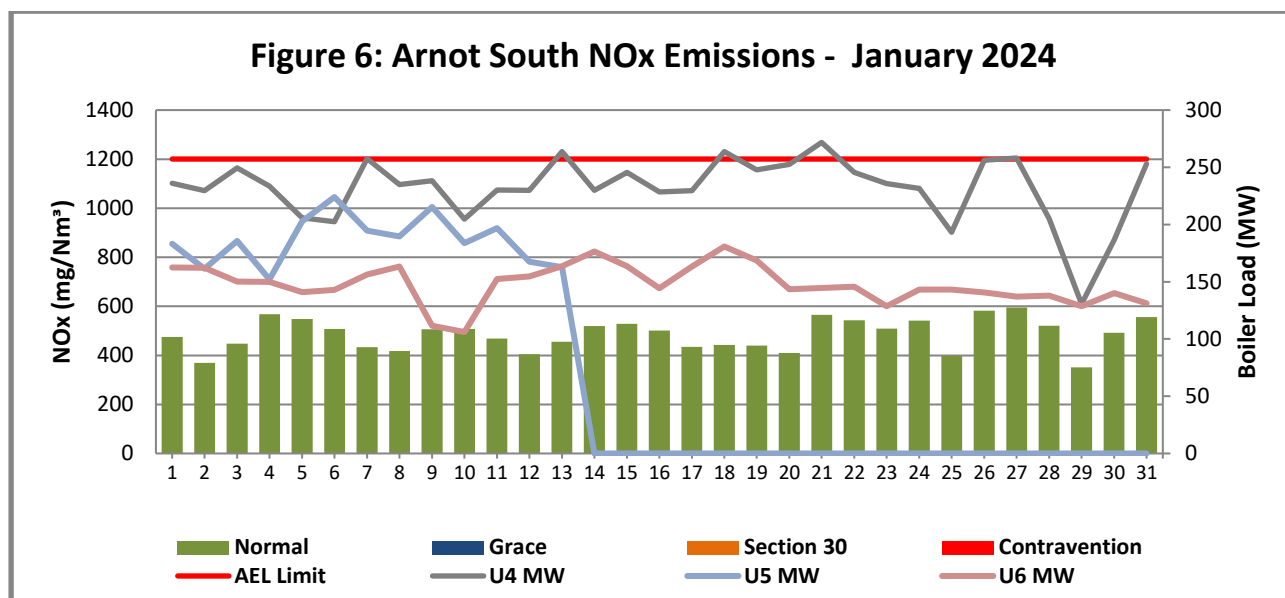


Figure 5: NO<sub>2</sub> emissions (daily averages) for the month of January 2024 against emission limit for the North Stack

# ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JANUARY 2024



**Figure 6: NO<sub>2</sub> emissions (daily averages) for the month of January 2024 against emission limit for the South Stack**

**Table 4: Monthly tonnages for the month of January 2024**

Unit	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>2</sub> (tons)
<b>Total Tons (North &amp; South Stack)</b>	272.2	6818	3961

**Table 5: 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

## ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JANUARY 2024

### Light up information

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

### Complaints Register

Table 6. Complaints for the month of January 2024

No Noise, dust and offensive odors complaints registered in the month of January 2024.

Source Code/ Name	Root Cause Analysis	Calculation of Impacts/ emissions associated with the incident and dispersion modelling of pollutants, where applicable	Dispersion modeling of pollutants where applicable	Measures implemented to prevent reoccurrence	Date by which measure will be implemented
None	0	0	0	0	0

### General

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

South Stack Parallel test for gaseous emission expired on the 10<sup>th</sup> of September 2022. New test was conducted on the 02-05 April 2024. Still awaiting for the final report. Once the report is received calculations will be implemented on the report. Any possible changes the facility will backfit the data and report the changes to the licensing authorities.

North Stack- Parallel tests not yet conducted due the lift not functioning. Currently awaiting the availability of the services provider to give a date for the tests.

### Note:

Hoping the above will meet your satisfaction.

**ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF  
JANUARY 2024**

Compiled by

Date: 2024.04.25



Lawrence Machebe

**ENVIRONMENTAL OFFICER: ARNOT POWER STATION**

Verified by

Date: 2024.04.24

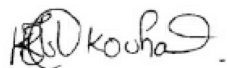


Sandile Mbuyazi

**SYSTEM ENGINEER: ARNOT POWER STATION**

Supported by:

Date: 2024.04.24



Rofhiwa Tshikovha

**SENIOR ENVIRONMENTAL ADVISOR: ARNOT POWER STATION**

Yours sincerely



Marcus Nemadodzi

**GENERAL MANAGER: ARNOT POWER STATION**

Date: 26 April 2024