

Air Quality Officer  
DEDET  
Private bag X11215  
NELSPRUIT  
1200

Date:  
2024.10.06

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 SEPTEMBER 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 September 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 September 2024

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption/ Rate in Month of September 2024
	Coal	Tons/month	1 050 330	454 450.78
	Fuel Oil	Tons/month	10 000	2338.53
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of September 2024
	Energy	GWh	1 785 600	758.425
	Ash	Tons/month	421 000	98 206.81

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

## Abatement Technology

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

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

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

Associated Unit/Stack	Technology Type	Utilisation September 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	97.5	99.9	100
Stack 2	100	84.9	85.3

## Energy Source Characteristics

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

Characteristic	Stipulated Range (Unit)	Monthly Average Content
Sulphur Content	0.5 to < 1 (%)	0.448
Ash Content	17 to < 40 (%)	21.61

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
North	26	4	0	0	4	40.0
South	29	1	0	0	1	41.2
SUM	55	5	0	0	5	

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

Table 5: Operating days in compliance to NO<sub>x</sub> AEL Limit – September 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO <sub>x</sub> (mg/Nm <sup>3</sup> )
North	30	0	0	0	0	524.0
South	30	0	0	0	0	669.5
SUM	60	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO <sub>x</sub> (mg/Nm <sup>3</sup> )
North	30	0	0	0	0	1376.0
South	30	0	0	0	0	1442.7
SUM	60	0	0	0	0	

### Emissions Reporting

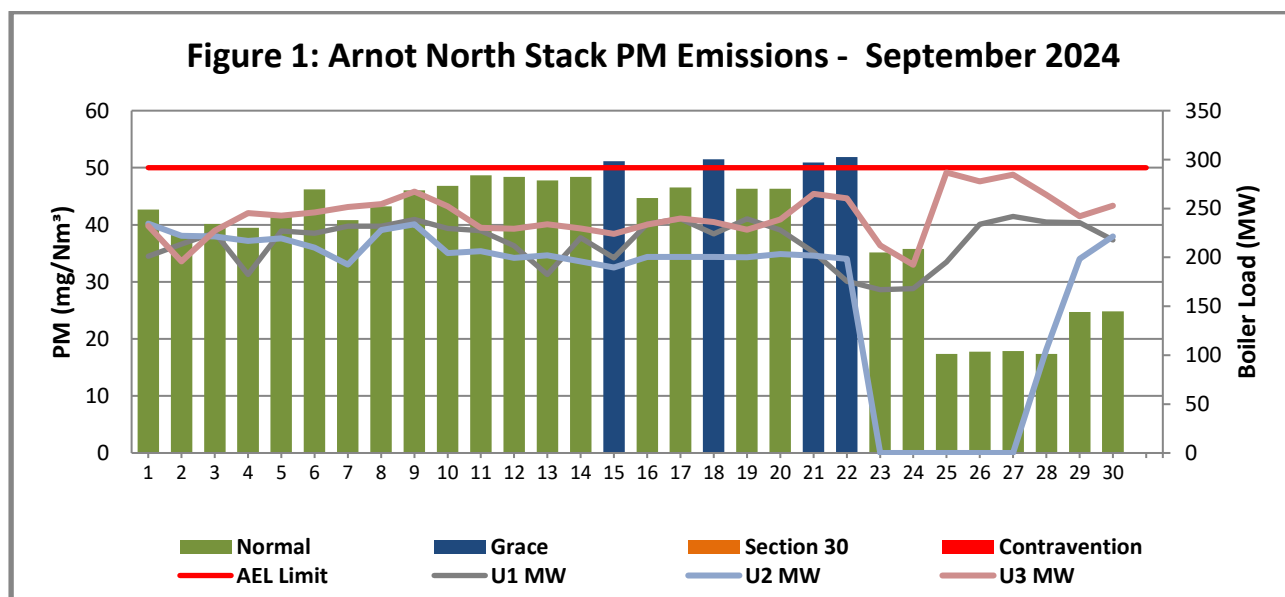


Figure 1: PM emissions (daily averages) for the month of September 2024 against the emission limit for the North Stack

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

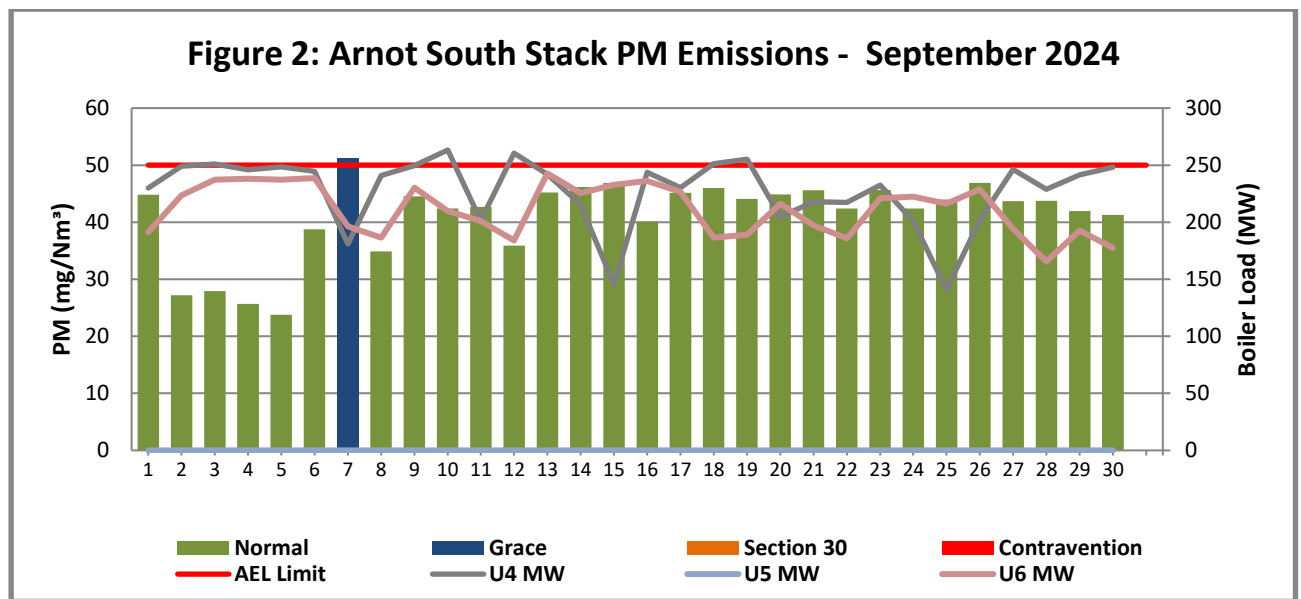


Figure 2: PM emissions (daily averages) for the month of September 2024 against emission limit for the South Stack

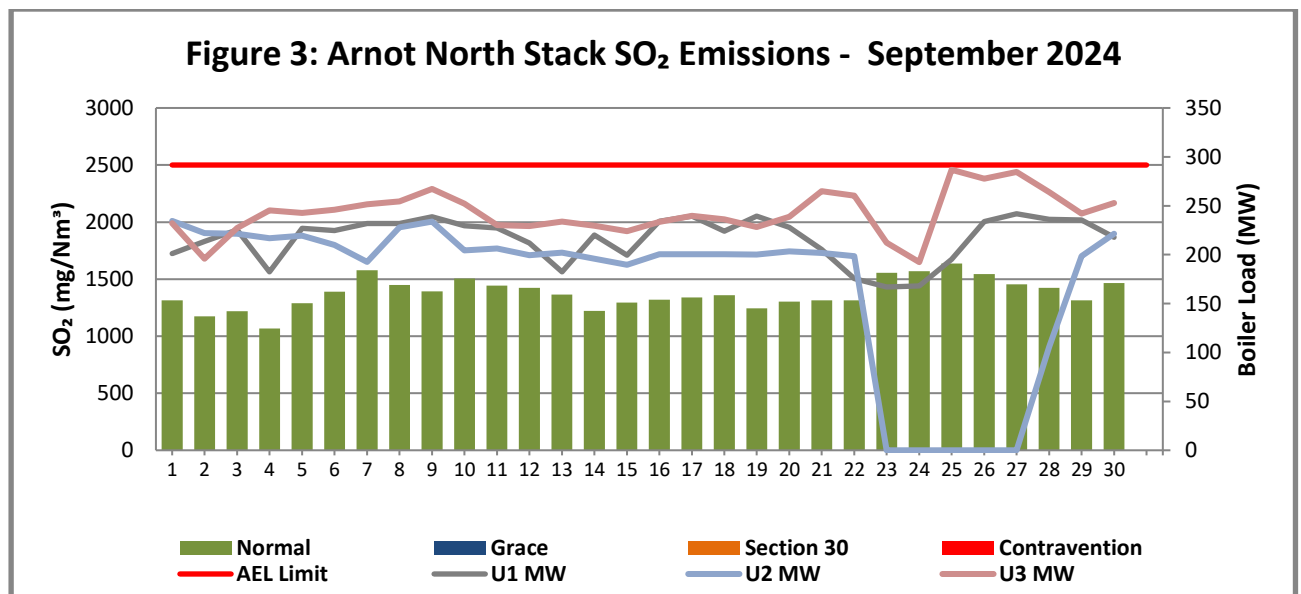


Figure 3: SO<sub>2</sub> emissions (daily averages) for the month of September 2024 against emission limit for the North Stack

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

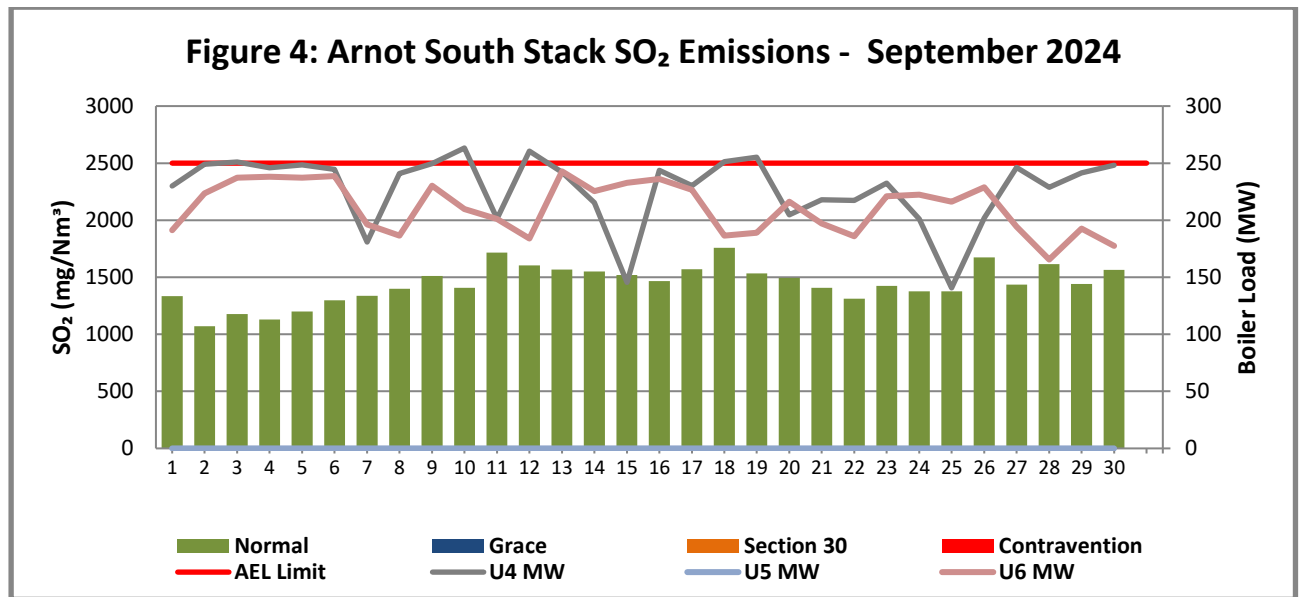


Figure 4: SO<sub>2</sub> emissions (daily averages) for the month of September 2024 against emission limit for the South Stack

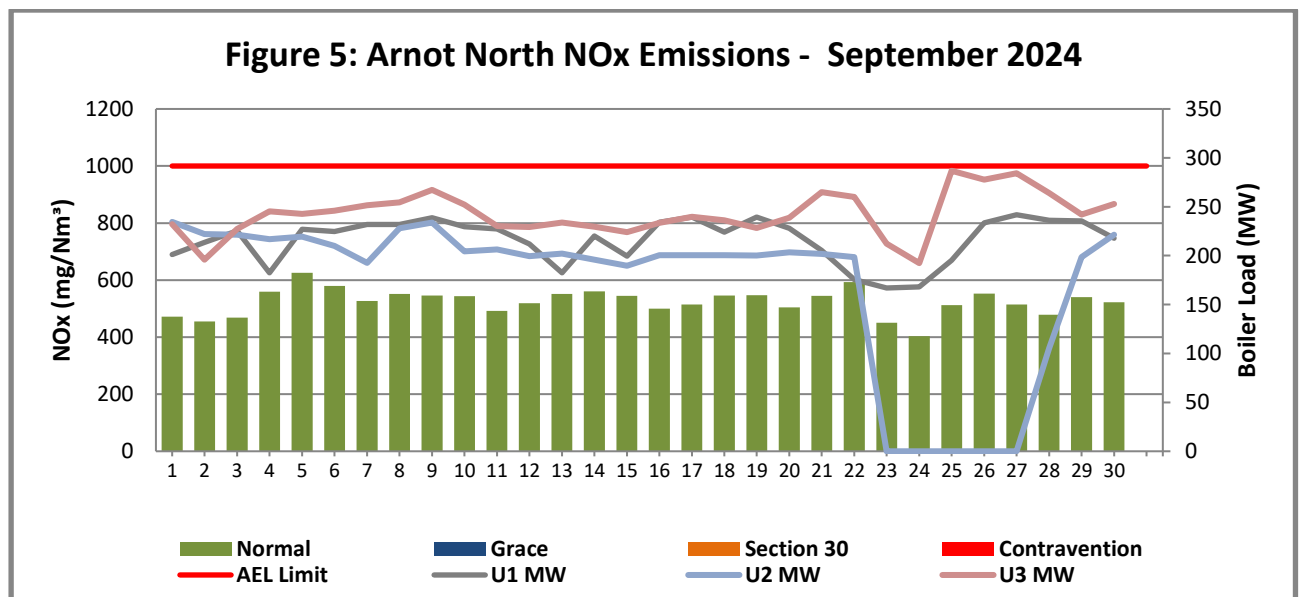
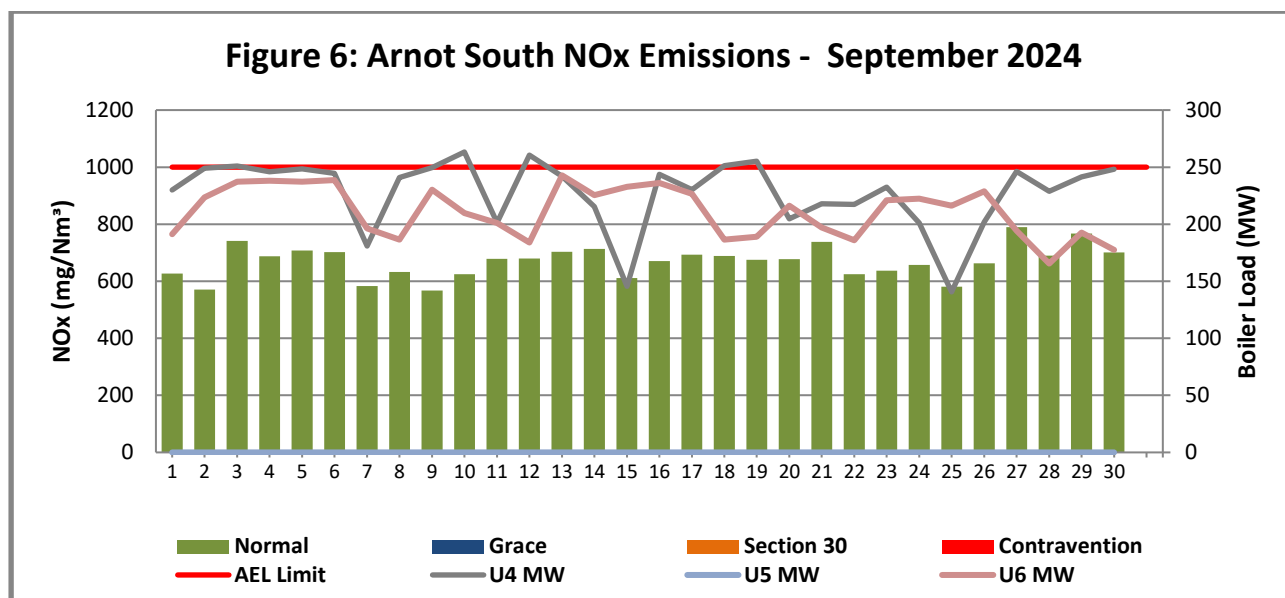


Figure 5: NO<sub>2</sub> emissions (daily averages) for the month of September 2024 against emission limit for the North Stack

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



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

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

Unit	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>2</sub> (tons)
<b>Total Tons (North &amp; South Stack)</b>	207.1	7 394	3 081

**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	30	0	0
2	30	0	0
3	30	0	0
4	30	0	0
5	30	0	0
6	30	0	0

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

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

Hoping the above will meet your satisfaction.

Compiled by

Date:

Lawrence Machebe

**ENVIRONMENTAL OFFICER: ARNOT POWER STATION**

Verified by

Date:

Jan Louis Human

**SYSTEM ENGINEER: ARNOT POWER STATION**

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

Supported by:

Date: 16 October 2024



Rofhiwa Tshikovha

**SENIOR ENVIRONMENTAL ADVISOR: ARNOT POWER STATION**

Yours sincerely



Marcus Nemadodzi

Date: 21-10-2024

**GENERAL MANAGER: ARNOT POWER STATION**