

Nkangala District Municipality  
2A Walter Sisulu  
Middelburg  
1050

Date:  
2024.12.20

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

Dear Mrs Simelane

## **ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF OCTOBER 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 October 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 October 2024

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption/ Rate in Month of October 2024
	Coal	Tons/month	1 050 330	428 636.1
	Fuel Oil	Tons/month	10 000	2457.47
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of October 2024
	Energy	GWh	1 785 600	710.89
	Ash	Tons/month	421 000	93 014

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

## Abatement Technology

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

Associated Unit/Stack	Technology Type	Actual Efficiency (%) for the month of October 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 October 2024

Associated Unit/Stack	Technology Type	Utilisation October 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	94.1	99.1	98.8
Stack 2	100	94.4	94.4

## Energy Source Characteristics

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

Characteristic	Stipulated Range (Unit)	Monthly Average Content
Sulphur Content	0.5 to < 1 (%)	0.480
Ash Content	17 to < 40 (%)	21.70

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
North	30	0	0	0	0	29.5
South	30	0	0	0	0	36.5
SUM	60	0	0	0	0	

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

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
North	30	0	0	0	0	587.3
South	30	0	0	0	0	646.1
<b>SUM</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm³)
North	30	0	0	0	0	1269.4
South	30	0	0	0	0	1427.9
<b>SUM</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

### Emissions Reporting

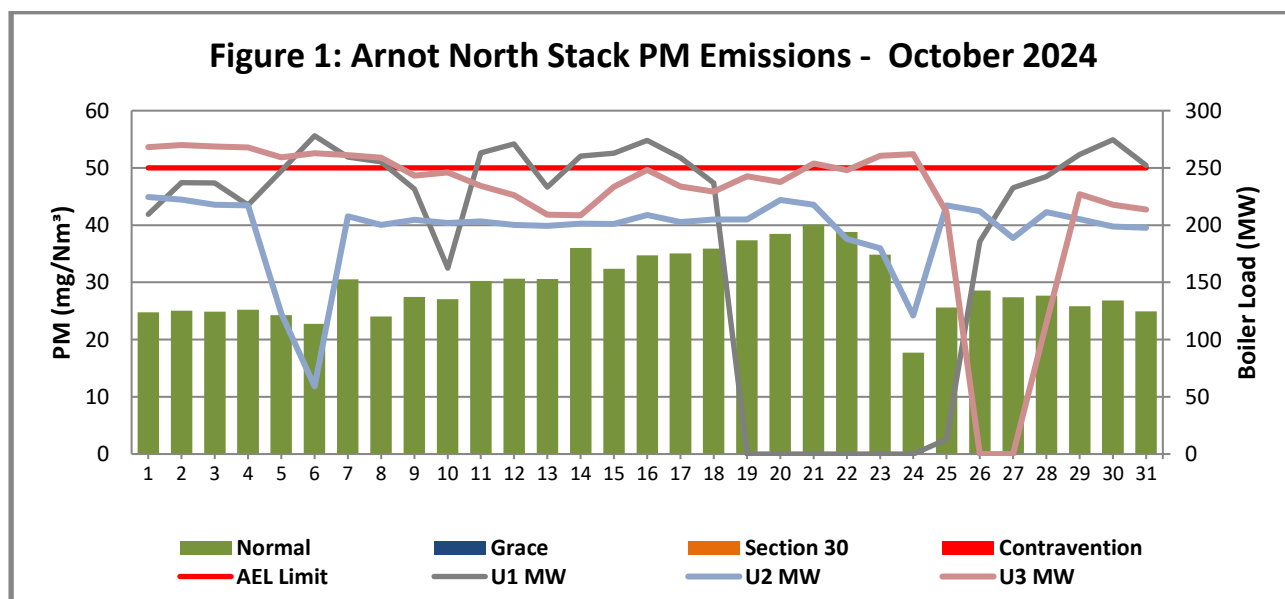


Figure 1: PM emissions (daily averages) for the month of October 2024 against the emission limit for the North Stack

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

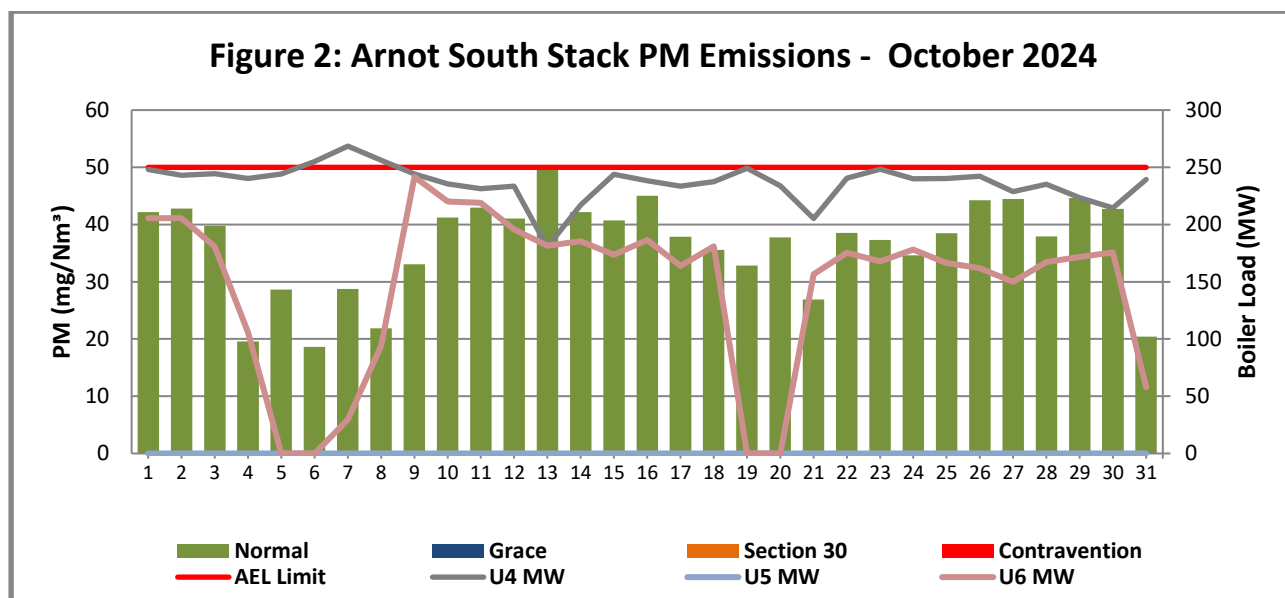


Figure 2: PM emissions (daily averages) for the month of October 2024 against emission limit for the South Stack

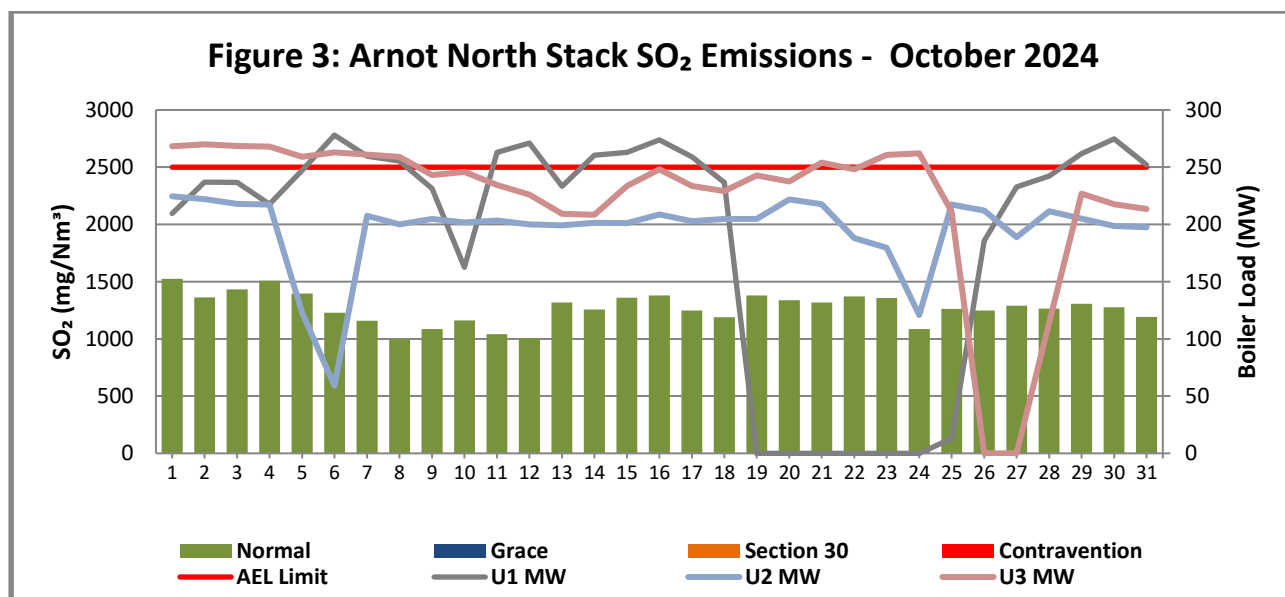


Figure 3: SO<sub>2</sub> emissions (daily averages) for the month of October 2024 against emission limit for the North Stack

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

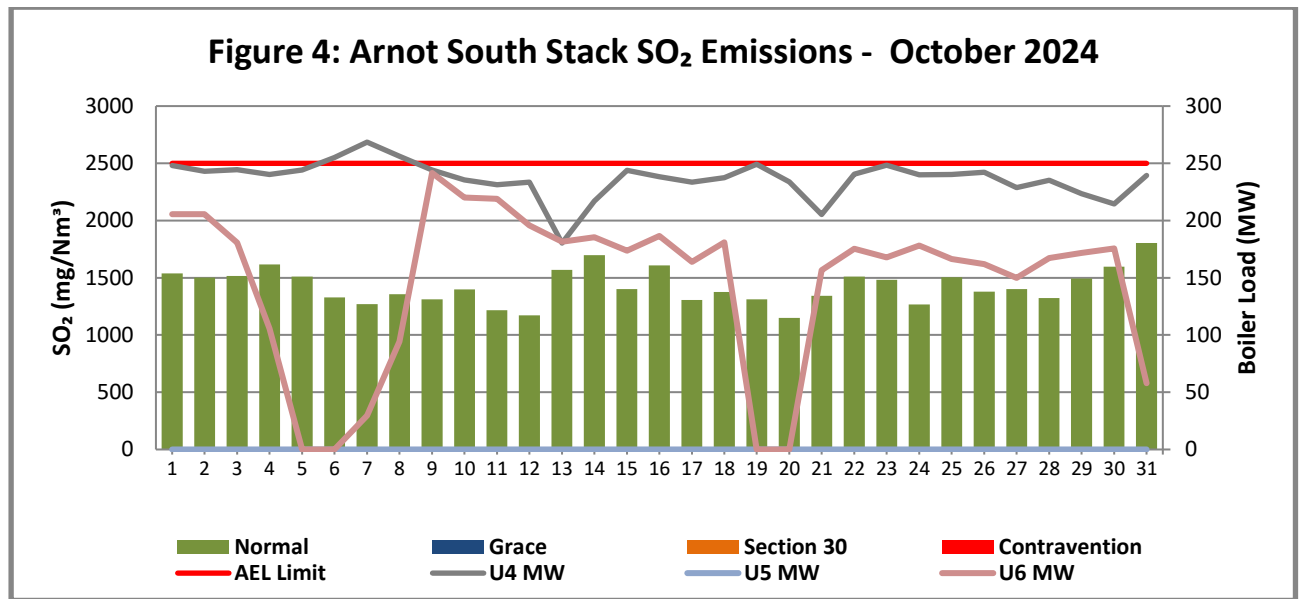


Figure 4: SO<sub>2</sub> emissions (daily averages) for the month of October 2024 against emission limit for the South Stack

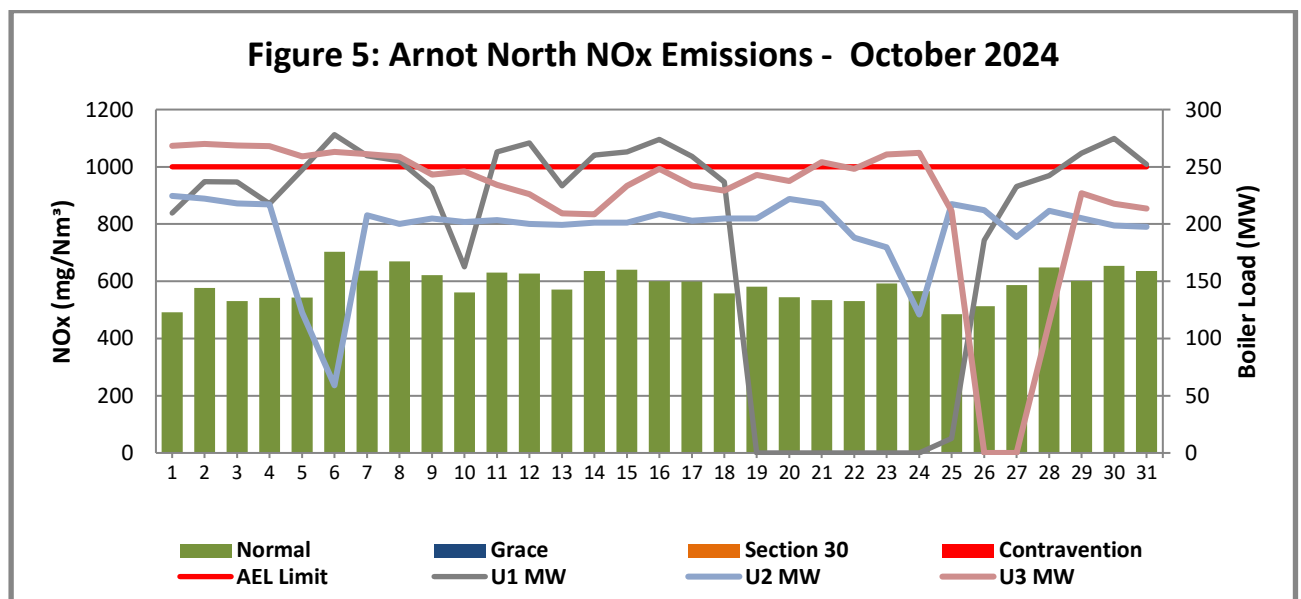
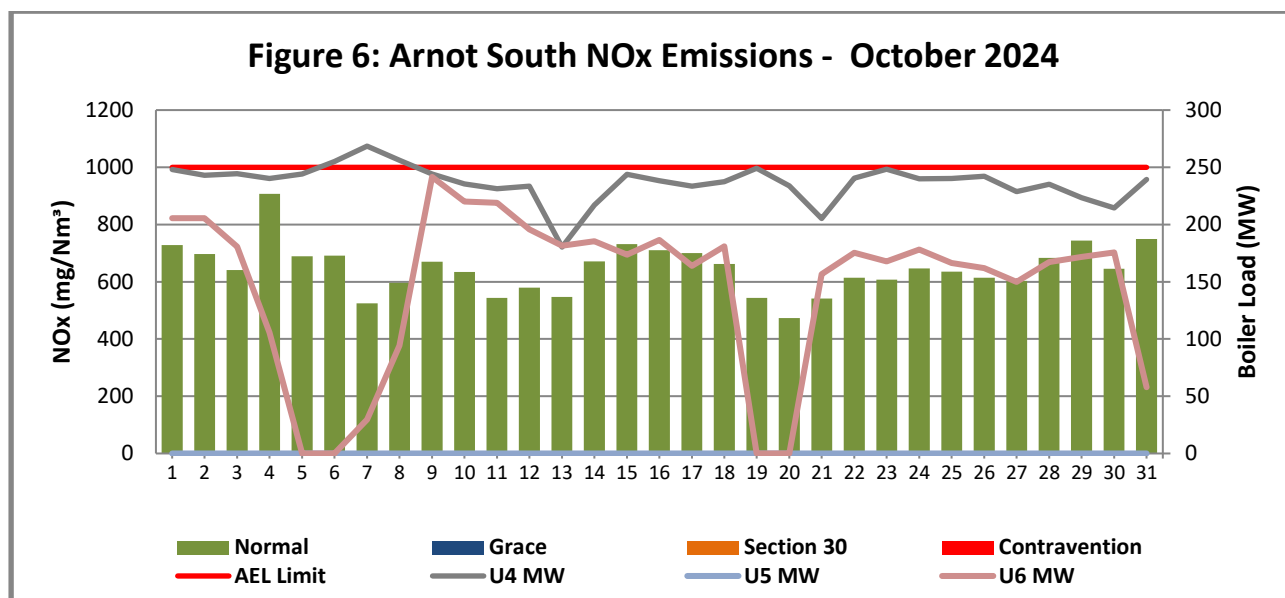


Figure 5: NO<sub>2</sub> emissions (daily averages) for the month of October 2024 against emission limit for the North Stack

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



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

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

Unit	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>2</sub> (tons)
<b>Total Tons (North &amp; South Stack)</b>	150.2	6654	3075

**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 OCTOBER 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 October 2024

No Noise, dust and offensive odors complaints registered in the month of October 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: 2024.12.20




Lawrence Machebe

**ENVIRONMENTAL OFFICER: ARNOT POWER STATION**

Verified by

Date: 20-12-2024



Jan-Louis Human

**SYSTEM ENGINEER: ARNOT POWER STATION**

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

Supported by:

Date: 20 December 2024

A handwritten signature in black ink, appearing to read 'Rofhiwa Tshikovha'.

Rofhiwa Tshikovha

**SENIOR ENVIRONMENTAL ADVISOR: ARNOT POWER STATION**

Yours sincerely

A handwritten signature in black ink, appearing to read 'Marcus Nemadodzi'.

Marcus Nemadodzi

**GENERAL MANAGER: ARNOT POWER STATION**

Date: 2024-12-23