

Air Quality Officer  
DEDET  
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NELSPRUIT  
1200

Date:  
2024.01.29

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Dear Mr. Mahlangu

## ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF NOVEMBER 2023

This serves as the monthly report required in terms of Section 6 in Arnot Power Station's Atmospheric Emission License. The emissions are for November 2023, 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 November 2023

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption/ Rate in Month of November 2023
	Coal	Tons/month	1 050 330	430 178.58
	Fuel Oil	Tons/month	10 000	5777.42
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of November 2023
	Energy	GWh	1 785 600	751.625
	Ash	Tons/month	421 000	103 931

# ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF NOVEMBER 2023

## Abatement Technology

Table 2.1 (a) Abatement Equipment Efficiency Control Technology for month of November 2023

Associated Unit/Stack	Technology Type	Actual Efficiency (%) for the month of November 2023
North Stack	Fabric Filter Bags	99.8%
South Stack	Fabric Filter Bags	99.6%

Table 2.1 (b) Abatement Equipment Utilisation (%) for the month of November 2023

Associated Unit/Stack	Technology Type	Utilisation November 2023
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	99.9	100	100
Stack 2	98.2	97.9	96.

## Energy Source Characteristics

Table 3: Energy Source Material Characteristics for the month of November 2023

Characteristic	Stipulated Range (Unit)	Monthly Average Content
Sulphur Content	0.5 to < 1 (%)	0.620
Ash Content	17 to < 40 (%)	24.16

Table 4 Operating days in compliance to PM AEL Limit –November 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	40.9
South	31	0	0	0	0	65.0
<b>SUM</b>	<b>62</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

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Table 5: Operating days in compliance to NOx AEL Limit – November 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	807.8
South	31	0	0	0	0	565.5
<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 –November 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	1421.8
South	31	0	0	0	0	1181.4
<b>SUM</b>	<b>62</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

## Emissions Reporting

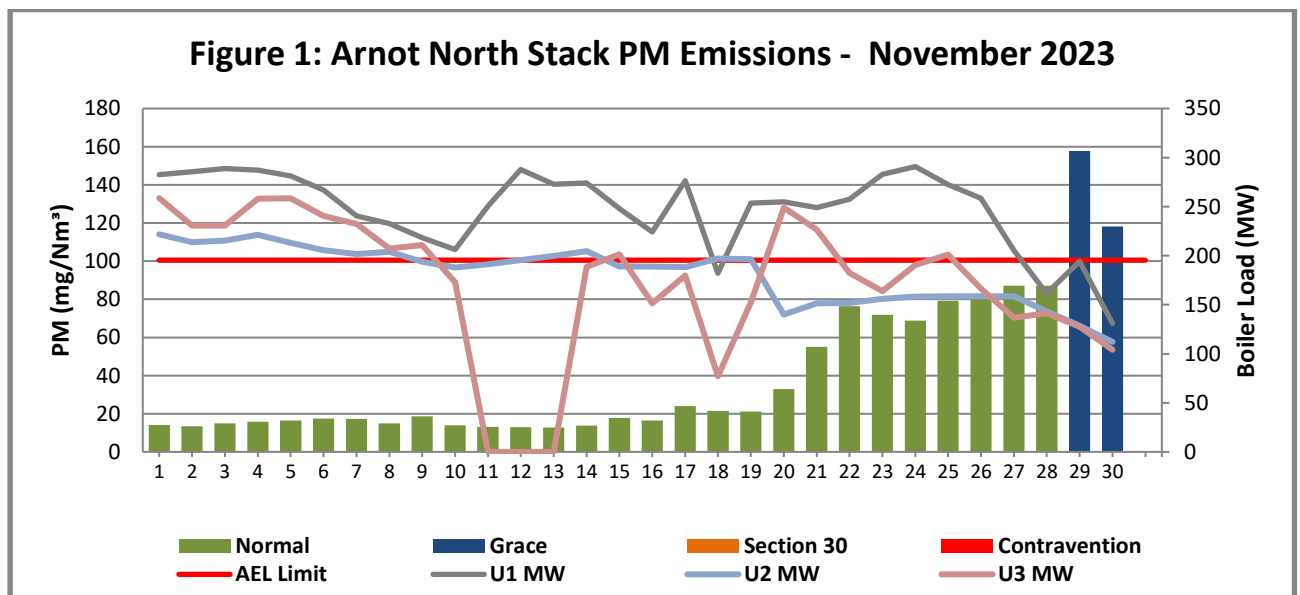
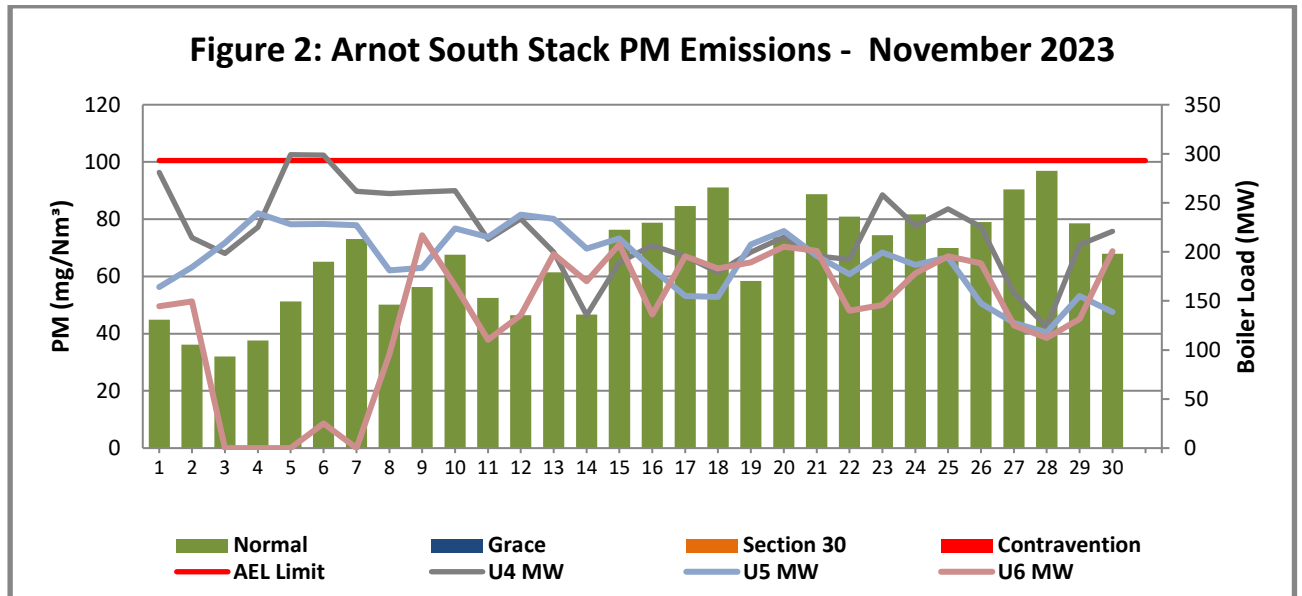
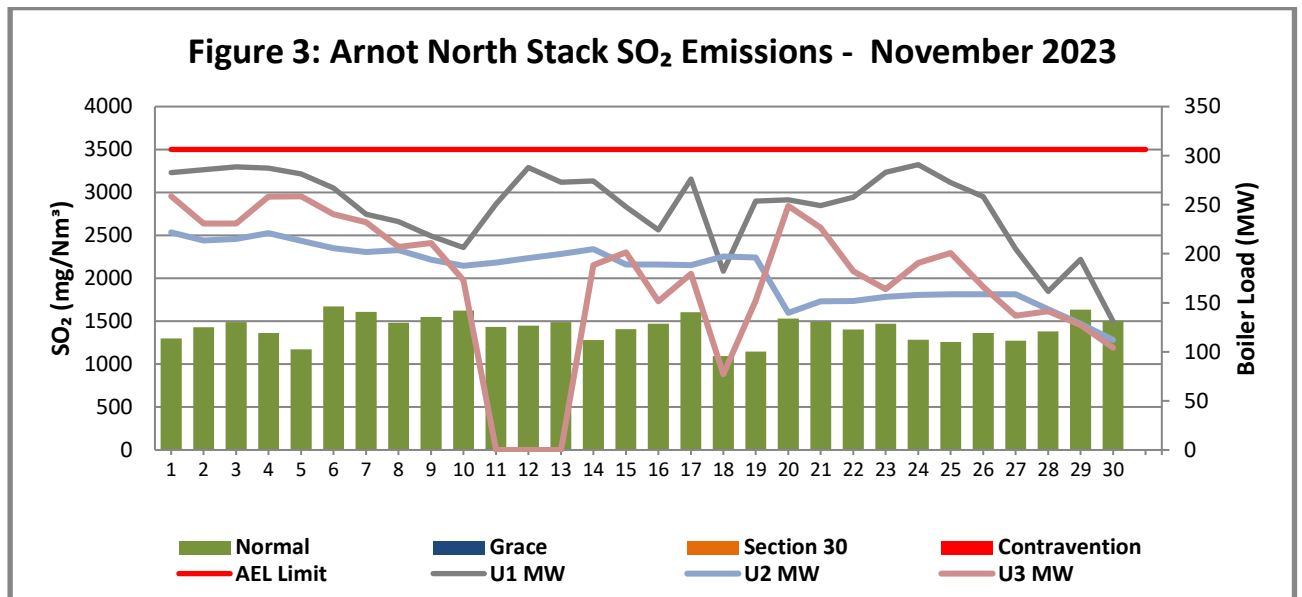


Figure 1: PM emissions (daily averages) for the month of November 2023 against the emission limit for the North Stack

**ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF NOVEMBER 2023**

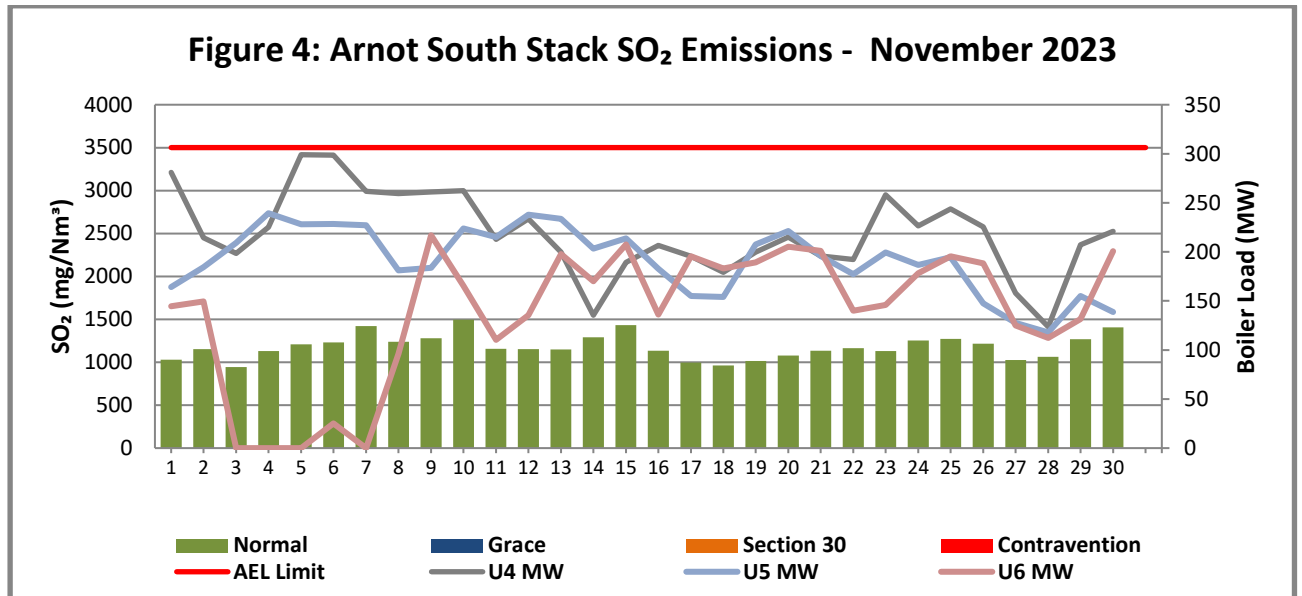


**Figure 2: PM emissions (daily averages) for the month of November 2023 against emission limit for the South Stack**

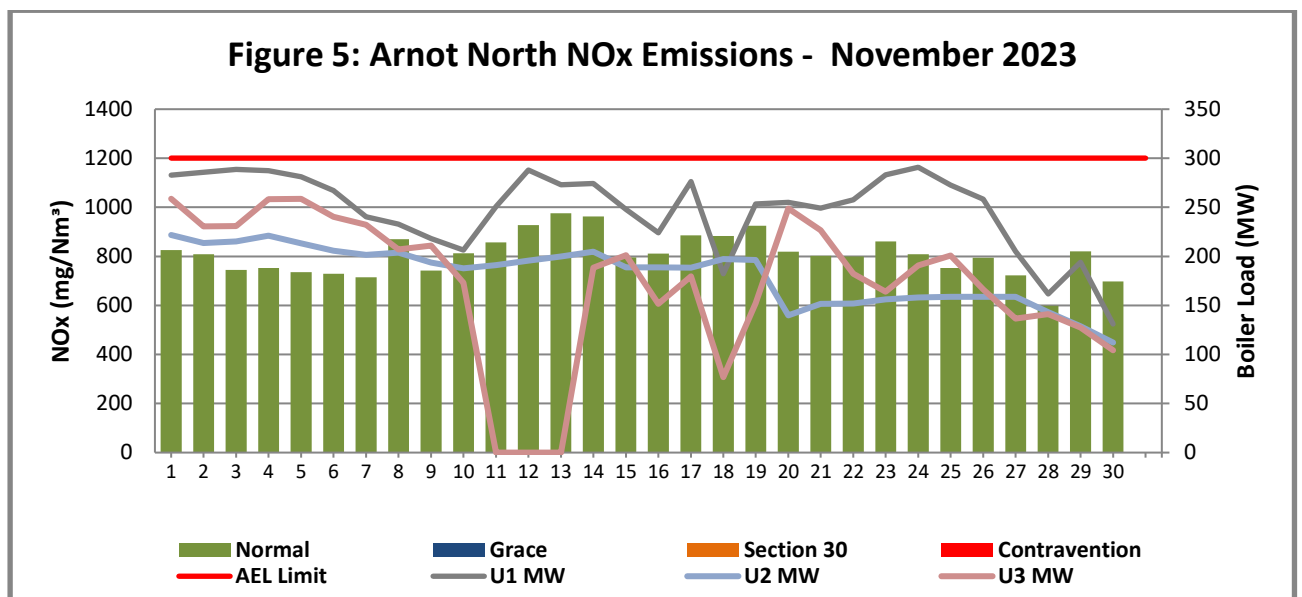


**Figure 3: SO<sub>2</sub> emissions (daily averages) for the month of November 2023 against emission limit for the North Stack**

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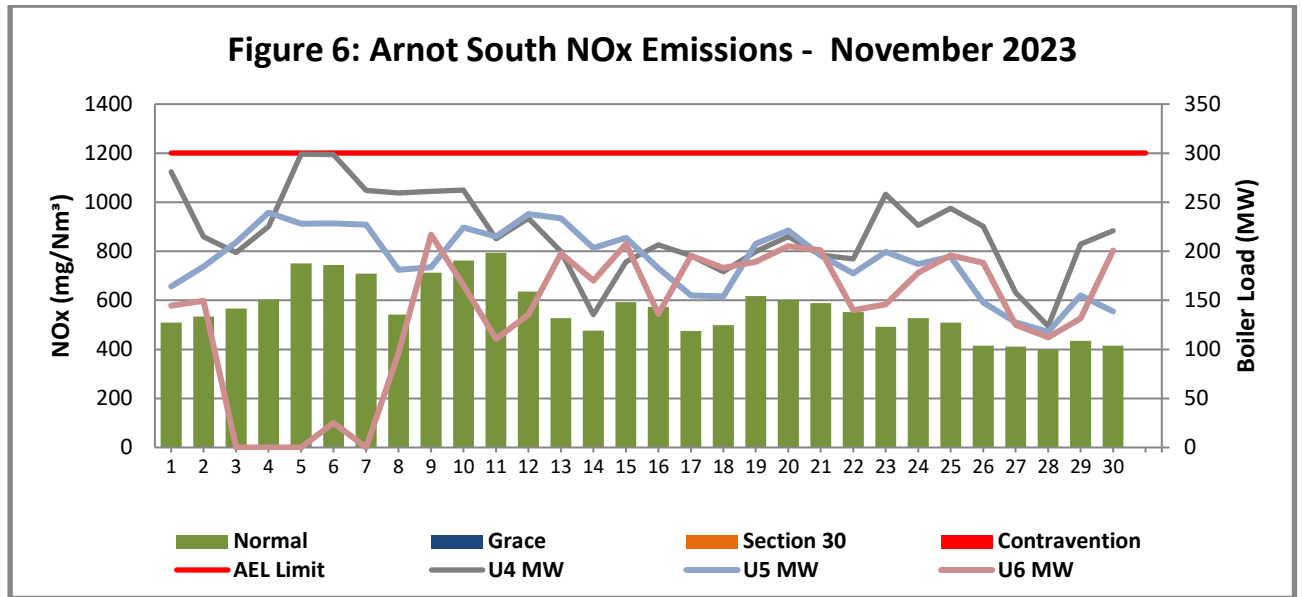


**Figure 4: SO<sub>2</sub> emissions (daily averages) for the month of November 2023 against emission limit for the South Stack**



**Figure 5: NO<sub>2</sub> emissions (daily averages) for the month of November 2023 against emission limit for the North Stack**

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**Figure 6: NO<sub>2</sub> emissions (daily averages) for the month of November 2023 against emission limit for the South Stack**

**Table 4: Monthly tonnages for the month of November 2023**

Unit	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>2</sub> (tons)
<b>Total Tons (North &amp; South Stack)</b>	268.3	7096	3733

**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 NOVEMBER 2023**

**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 November 2023

No Noise, dust and offensive odors complaints registered in the month of November 2023.

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.

**Note:**

Parallel Tests expired, Data will be back fitted and reported at the Licensing Authority office.

Hoping the above will meet your satisfaction.

Compiled by

Date:



Lawrence Machebe

2024.02.02

**ENVIRONMENTAL OFFICER: ARNOT POWER STATION**

**ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF  
NOVEMBER 2023**

Verified by

Date: 2024.02.02



Sandile Mbuyazi

**SYSTEM ENGINEER: ARNOT POWER STATION**

Supported by:

Date: 2024.02.02



Rofhiwa Tshikovha

**SENIOR ENVIRONMENTAL ADVISOR: ARNOT POWER STATION**

Yours sincerely

pp 

Marcus Nemadodzi

Date: 08 February 2024

**GENERAL MANAGER: ARNOT POWER STATION**