

Air Quality Officer
DEDET
Private bag X11215
NELSPRUIT
1200

Date:
2024.05.20

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Dear Mr. Mahlangu

ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF APRIL 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 April 2024, 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 April 2024

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption/ Rate in Month of April 2024
	Coal	Tons/month	1 050 330	447 440.13
	Fuel Oil	Tons/month	10 000	1793.95
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of April 2024
	Energy	GWh	1 785 600	778 249
	Ash	Tons/month	421 000	104 835

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Abatement Technology

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

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

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

Associated Unit/Stack	Technology Type	Utilisation April 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 ₂	NO
Stack 1	100	87.2	90.0
Stack 2	97.1	99.0	96.4

Energy Source Characteristics

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

Characteristic	Stipulated Range (Unit)	Monthly Average Content
Sulphur Content	0.5 to < 1 (%)	0.570
Ash Content	17 to < 40 (%)	23.43

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
North	30	0	0	0	0	49.5
South	29	1	0	0	1	57.7
SUM	59	1	0	0	1	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
North	30	0	0	0	0	630.4
South	30	0	0	0	0	577.3
SUM	60	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm³)
North	30	0	0	0	0	1153.0
South	30	0	0	0	0	983.7
SUM	60	0	0	0	0	

Emissions Reporting

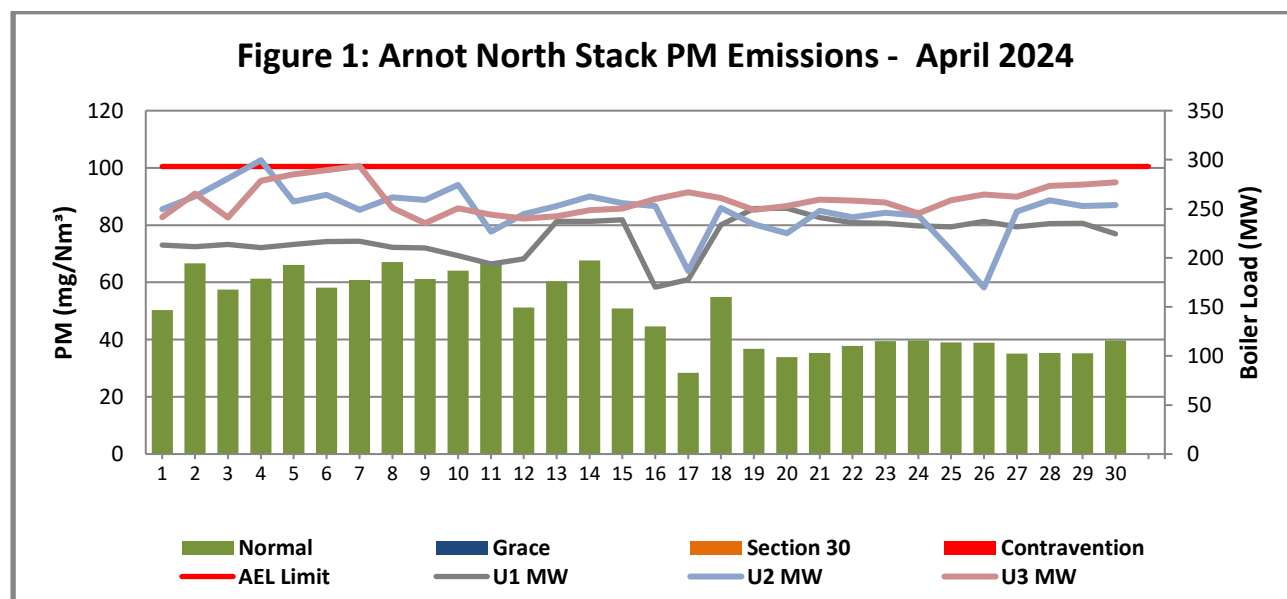


Figure 1: PM emissions (daily averages) for the month of April 2024 against the emission limit for the North Stack

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

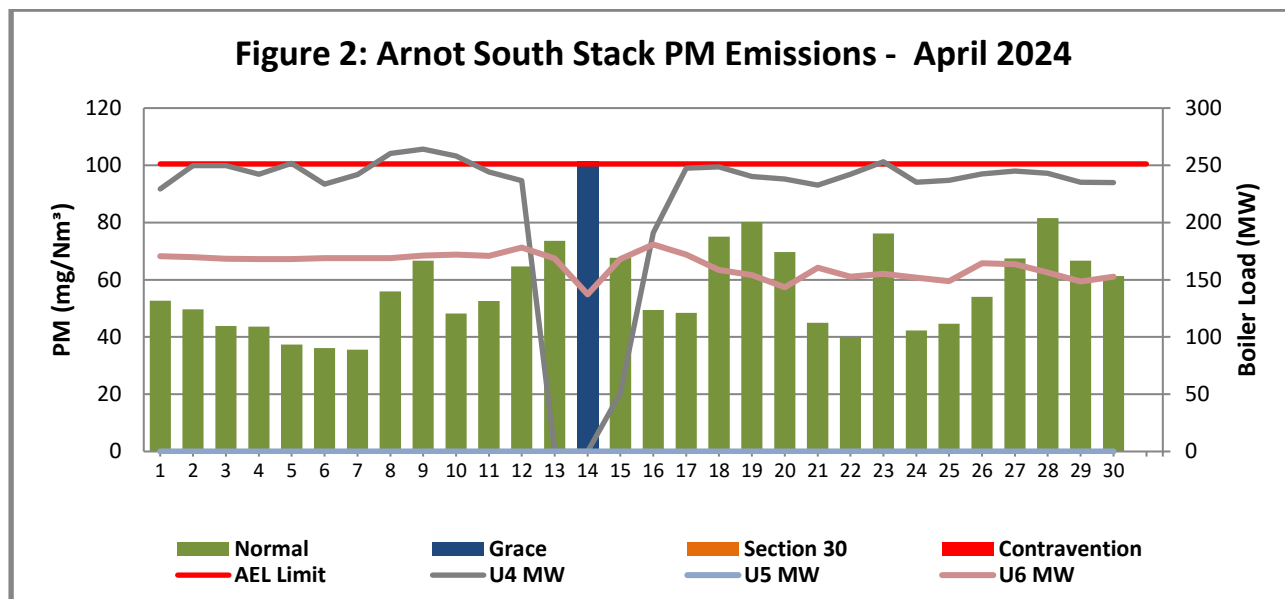


Figure 2: PM emissions (daily averages) for the month of April 2024 against emission limit for the South Stack

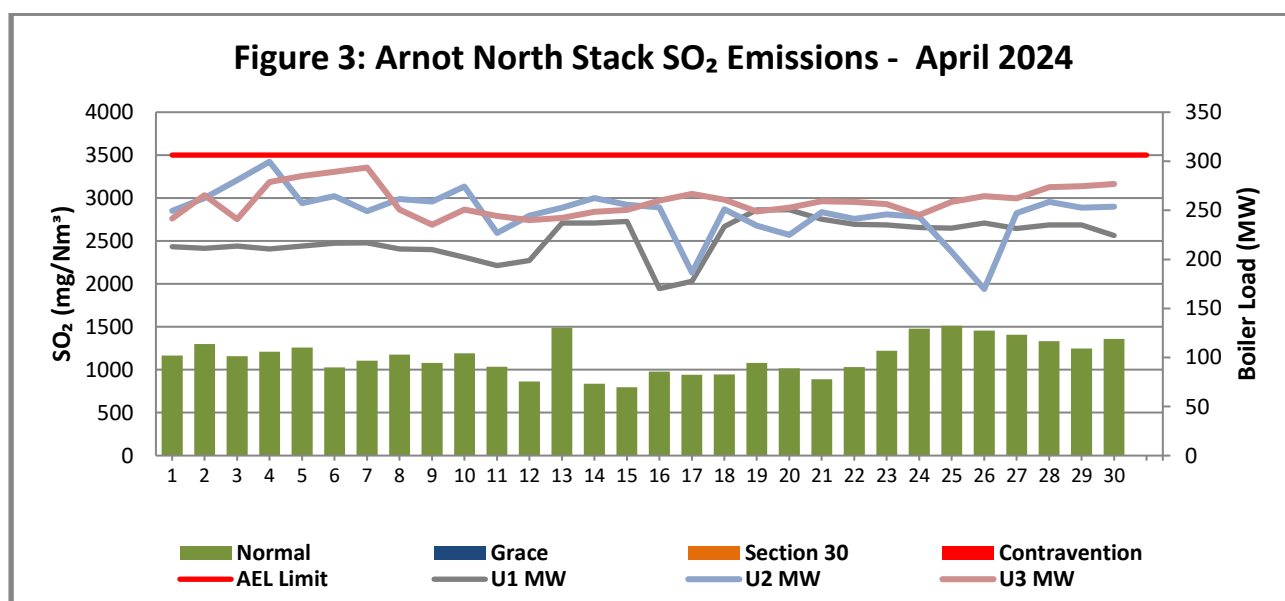


Figure 3: SO₂ emissions (daily averages) for the month of April 2024 against emission limit for the North Stack

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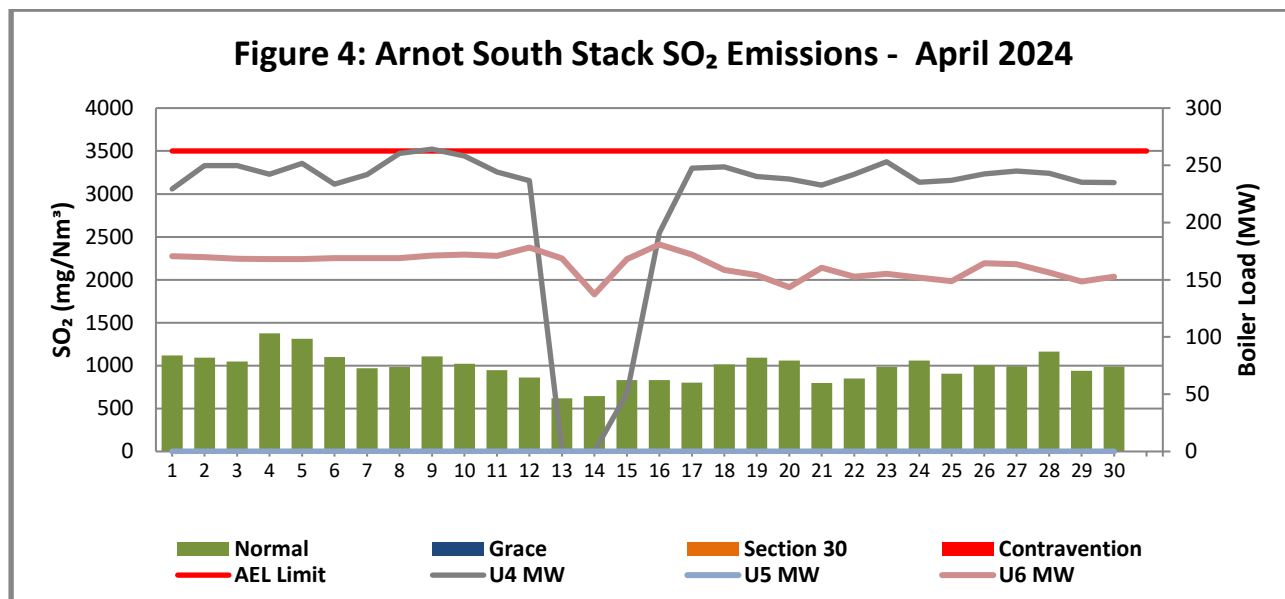


Figure 4: SO₂ emissions (daily averages) for the month of April 2024 against emission limit for the South Stack

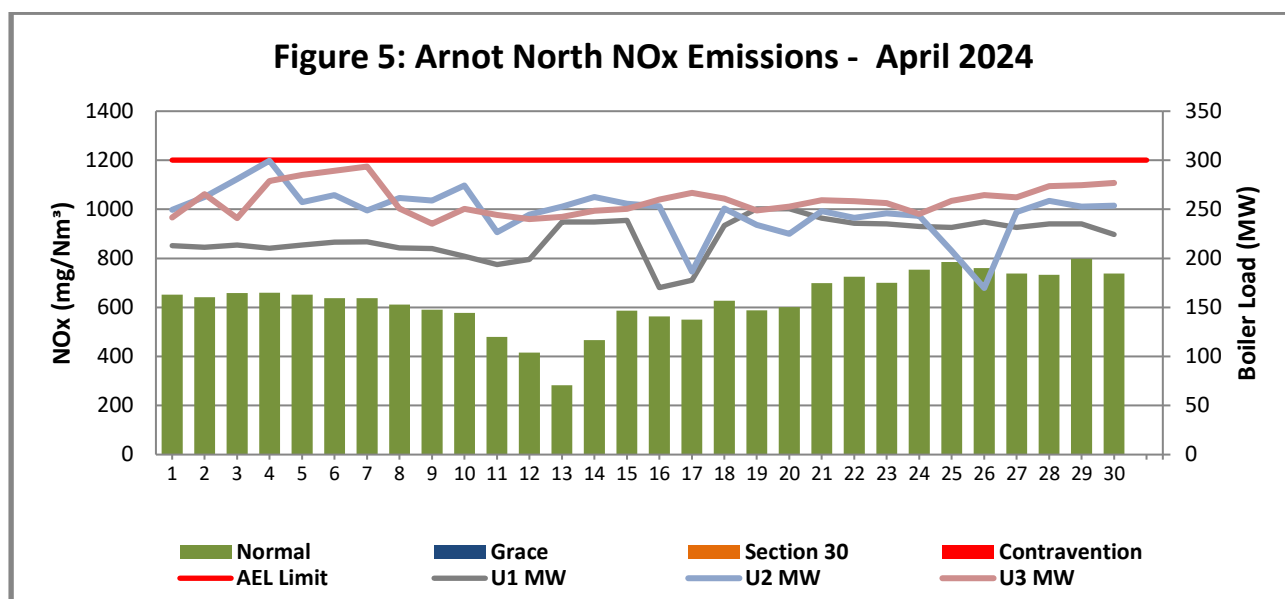


Figure 5: NO₂ emissions (daily averages) for the month of April 2024 against emission limit for the North Stack

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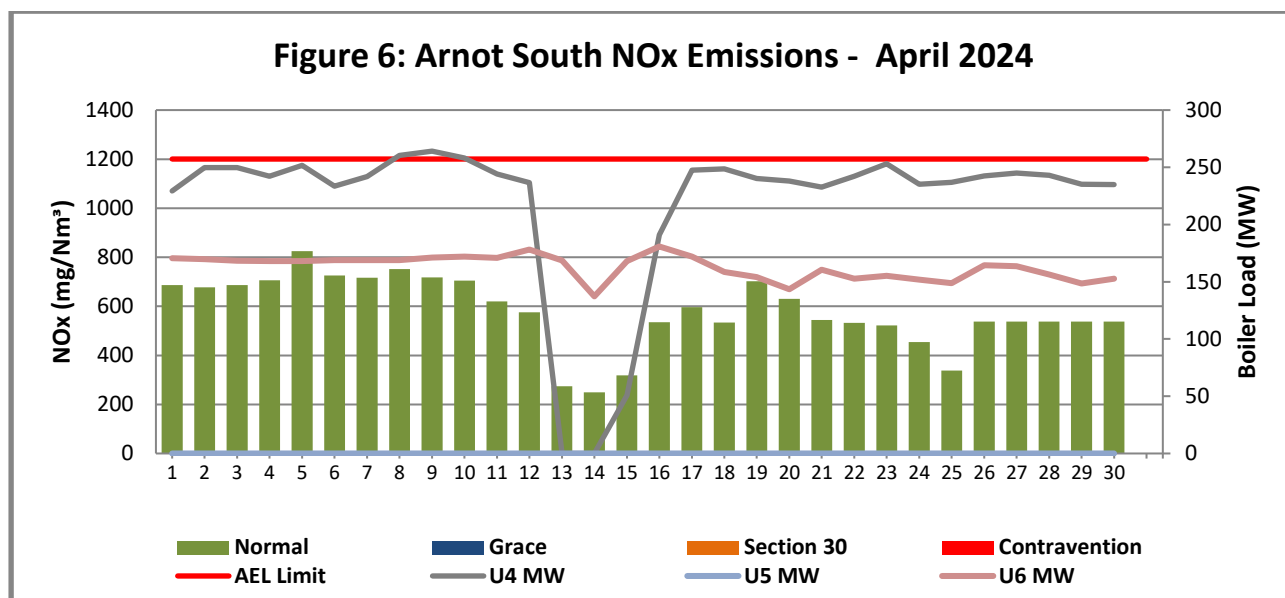


Figure 6: NO₂ emissions (daily averages) for the month of April 2024 against emission limit for the South Stack

Table 4: Monthly tonnages for the month of April 2024

Unit	PM (tons)	SO ₂ (tons)	NO ₂ (tons)
Total Tons (North & South Stack)	261.6	5715	3217

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

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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 April 2024

No Noise, dust and offensive odors complaints registered in the month of April 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 10th of September 2022. New test was conducted on the 02-05 April 2024, the station is still awaiting 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.

Hoping the above will meet your satisfaction.

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

Compiled by

Date:



2024.05.20

Lawrence Machebe

ENVIRONMENTAL OFFICER: ARNOT POWER STATION

Verified by

Date:

31-05-2024



Jan Louis Human

SYSTEM ENGINEER: ARNOT POWER STATION

Supported by:


Date: 2024.05.20



Rofhiwa Tshikovha

SENIOR ENVIRONMENTAL ADVISOR: ARNOT POWER STATION

Yours sincerely

pp 

Marcus Nemadodzi

Date: 31 May 2024

GENERAL MANAGER: ARNOT POWER STATION