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Date
2023 11 07

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Dear Mr Mahlangu

ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF SEPTEMBER 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 September 2023, 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 September 2023

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption/ Rate in Month of September 2023
	Coal	Tons/month	1 050 330	335 050 21
	Fuel Oil	Tons/month	10 000	3785 19

Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of September 2023
	Energy	GWh	1 785 600	697119
	Ash	Tons/month	421 000	78 435 25

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

Abatement Technology

Table 2 1 (a) Abatement Equipment Control Technology for month of September 2023

Associated Unit/Stack	Technology Type	Actual Efficiency (%) for the month of September 2023
North Stack	Fabric Filter Bags	99.7%
South Stack	Fabric Filter Bags	99.9%

Table 2 1 (b) Abatement Equipment Utilisation (%) for the month of September 2023

Associated Unit/Stack	Technology Type	Utilisation September 2023
North	Fabric Filter Plant (FFP)	100 %
South	Fabric Filter Plant (FFP)	100 %

Table 2 1 (c) Monitor Reliability (%)

Associated Unit/Stack	PM	SO ₂	NO
Stack 1	95.3	96.8	99.3
Stack 2	100	98.5	98.1

Energy Source Characteristics

Table 3 Energy Source Material Characteristics for the month of September 2023

Characteristic	Stipulated Range (Unit)	Monthly Average Content
Sulphur Content	0.5 to < 1 (%)	0.700
Ash Content	17 to < 40 (%)	23.41

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
North	31	0	0	3	0	22.9
South	31	0	0	0	0	57.1
SUM	62	0	0	0	0	

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

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm ³)
North	31	0	0	0	0	679.6
South	31	0	0	0	0	728.9
SUM	62	0	0	0	0	

Table 6: Operating days in compliance to Sox AEL Limit –September 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm ³)
North	31	0	0	0	0	1424.5
South	31	0	0	0	0	1230.0
SUM	62	0	0	0	0	

Emissions Reporting

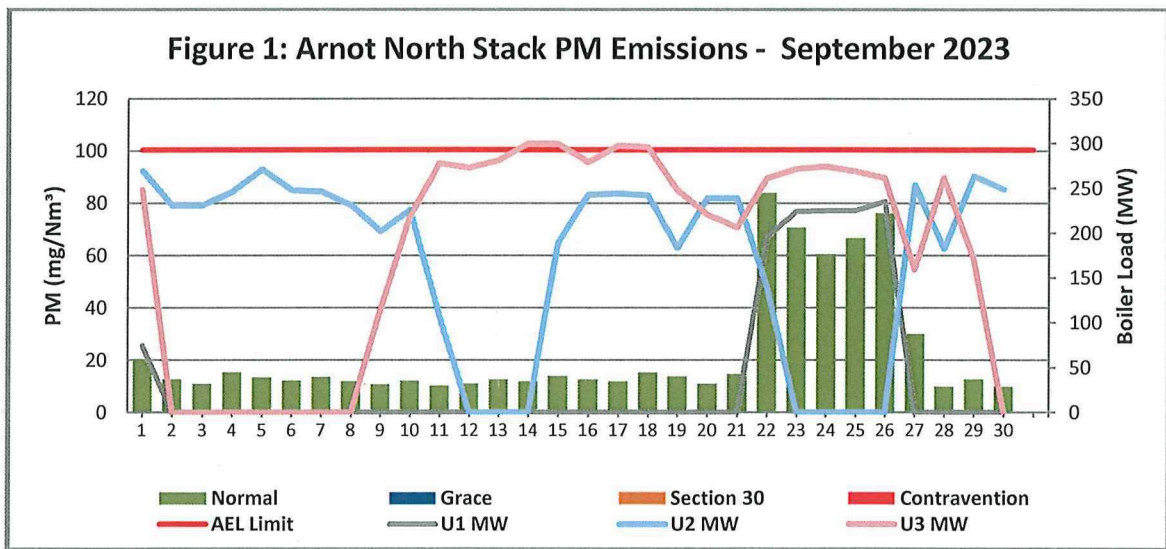


Figure 1: PM emissions (daily averages) for the month of September 2023 against the emission limit for the North Stack

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

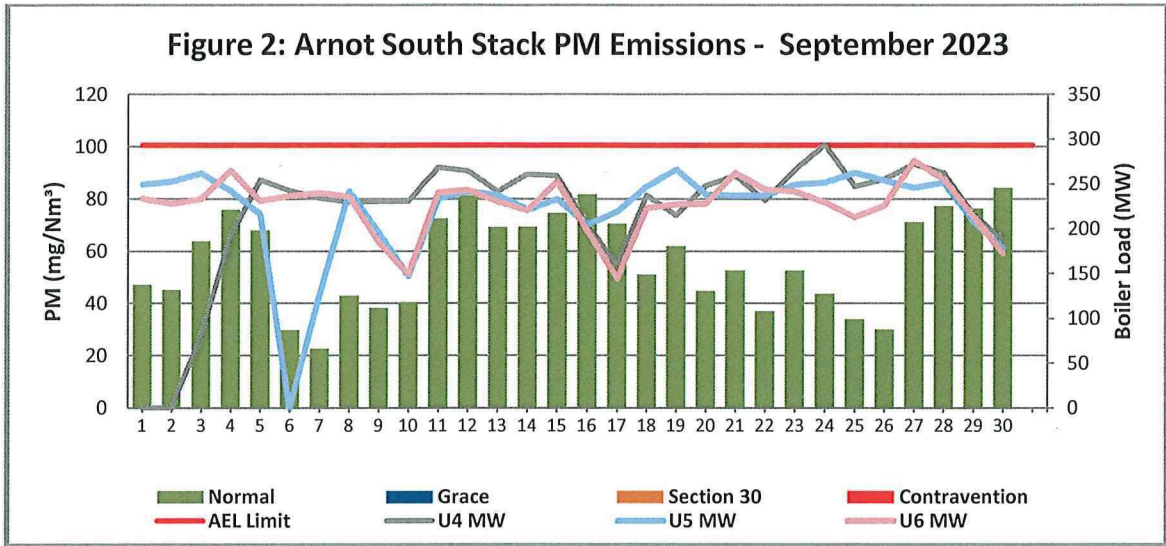


Figure 2: PM emissions (daily averages) for the month of September 2023 against emission limit for the South Stack

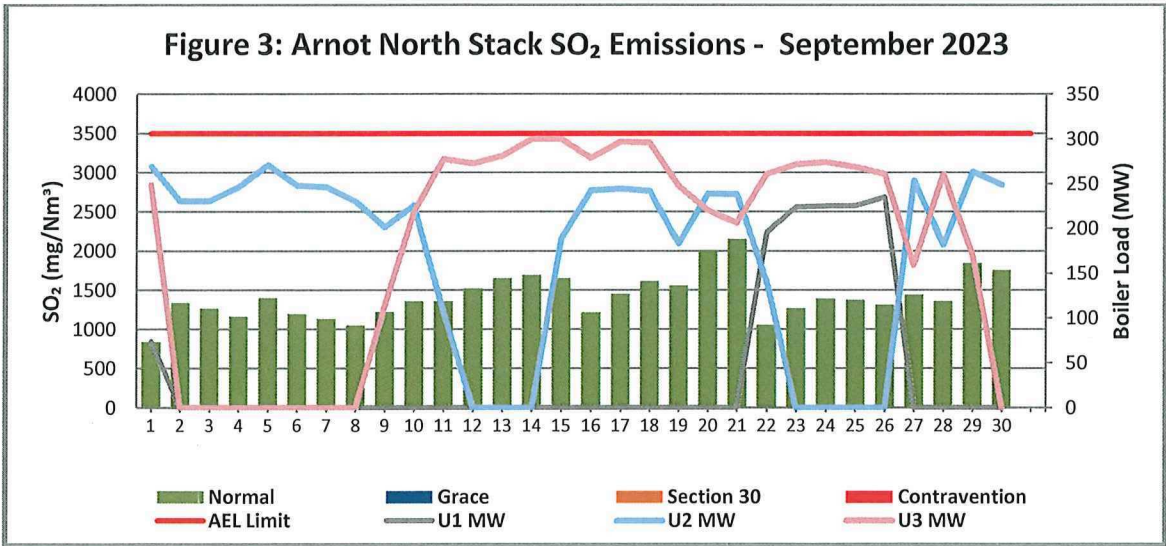


Figure 3: SO₂ emissions (daily averages) for the month of September 2023 against emission limit for the North Stack

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

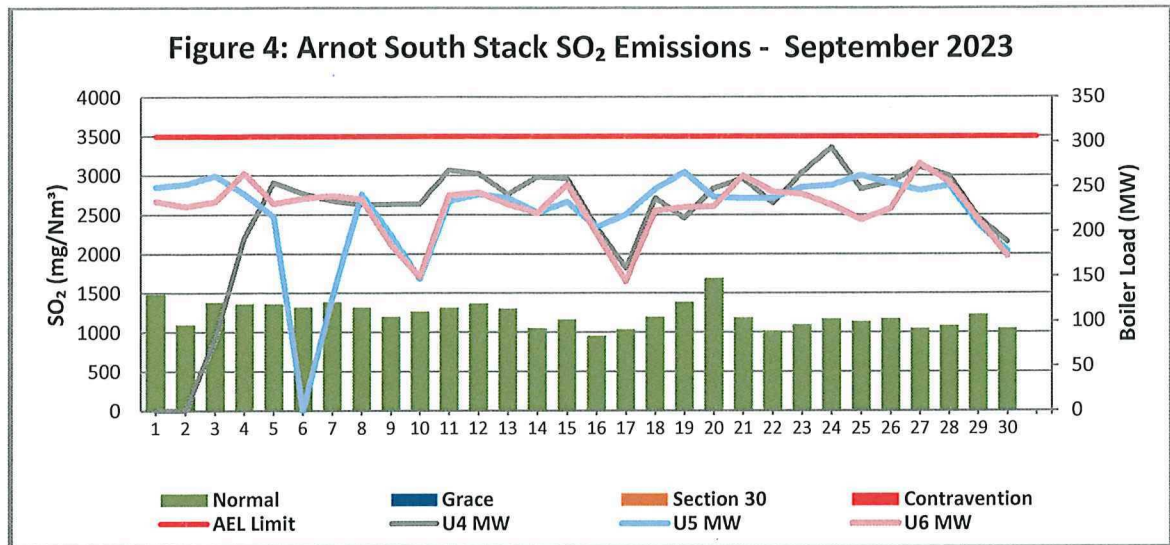


Figure 4: SO₂ emissions (daily averages) for the month of September 2023 against emission limit for the South Stack

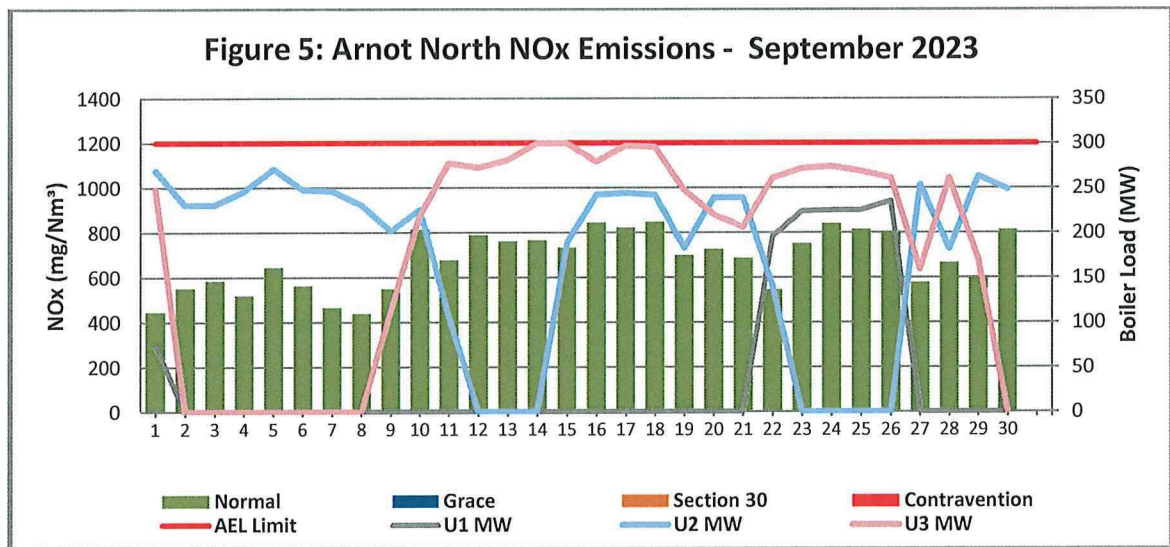


Figure 5: NO₂ emissions (daily averages) for the month of September 2023 against emission limit for the North Stack

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

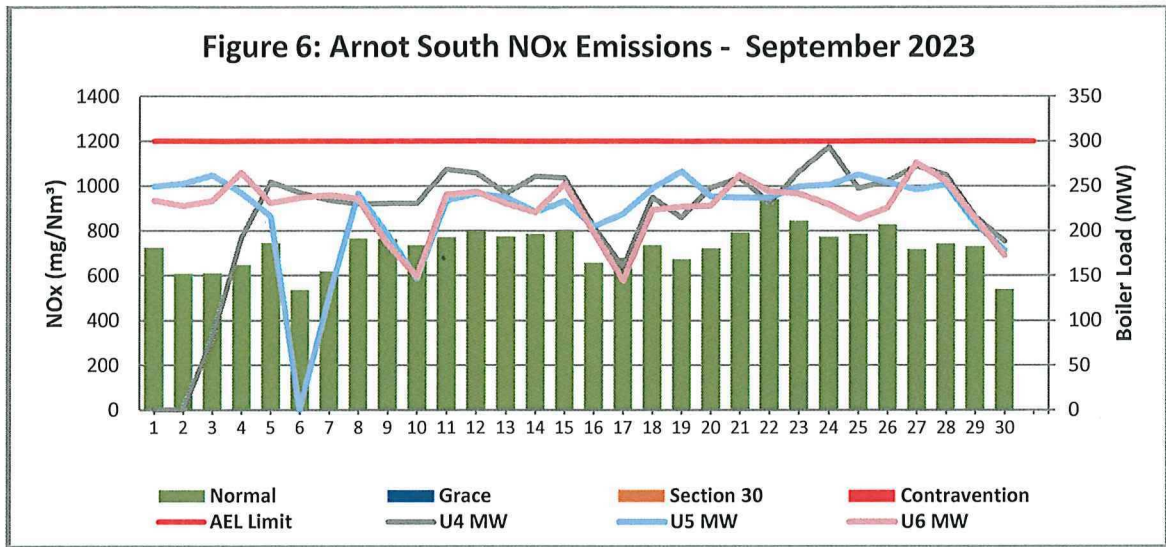


Figure 6: NO₂ emissions (daily averages) for the month of September 2023 against emission limit for the South Stack

Table 4: Monthly tonnages for the month of September 2023

Unit	PM (tons)	SO ₂ (tons)	NO ₂ (tons)
Total Tons (North & South Stack)	146.7	5508	2904

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

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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 September 2023

No Noise, dust and offensive odors complaints registered in the month of September 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 test has expired, the test will be completed on the 08 January 2024 Data will be back fitted and reported at the licensing office once the process is finalized

Correlation Test have expired, and the station has conduct the test and the implementation will be on the 10 November 2023 Data will be back fitted and reported at the licensing office in case there might be any changes

Hoping the above will meet your satisfaction

Compiled by

Date 2023 11 03



Lawrence Machebe

ENVIRONMENTAL OFFICER: ARNOT

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

Verified by

Date 2023 11 03




Sandile Mbuyazi

SYSTEM ENGINEER: ARNOT

Supported by

Date 2023 11 03



Rofhiwa Tshikovha

SENIOR ENVIRONMENTAL ADVISOR: ARNOT

Yours sincerely



Marcus Nemadodzi

Date 2023-11-06

GENERAL MANAGER: ARNOT POWER STATION