

Air Quality Officer  
DEDET  
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NELSPRUIT  
1200

Date:  
2023.07.25

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Dear Mr. Mahlangu

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

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption/ Rate in Month of June 2023
	Coal	Tons/month	1 050 330	365 790.3
	Fuel Oil	Tons/month	10 000	4275.07
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of June 2023
	Energy	GWh	1 785 600	738 482
	Ash	Tons/month	421 000	91 155

### Abatement Technology

Generation Division  
Arnot Power Station  
N4 Nelspruit Road  
Private Bag X2 Rietkuil 1097 SA  
Tel +27 13 297 9111 Fax +27 13 297 9142 [www.eskom.co.za](http://www.eskom.co.za)

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

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

Associated Unit/Stack	Technology Type	Actual Efficiency (%) for the month of June 2023
North Stack	Fabric Filter Bags	99.8%
South Stack	Fabric Filter Bags	99.9%

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

Associated Unit/Stack	Technology Type	Utilisation June 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	100.0	94.9	86.7
Stack 2	98.6	91.8	92.8

## Energy Source Characteristics

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

Characteristic	Stipulated Range (Unit)	Monthly Average Content
Sulphur Content	0.5 to < 1 (%)	0.59
Ash Content	17 to < 40 (%)	24.92

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
North	31	1	0	0	0	41.2
South	31	0	0	0	0	46.5
<b>SUM</b>	<b>62</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	

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

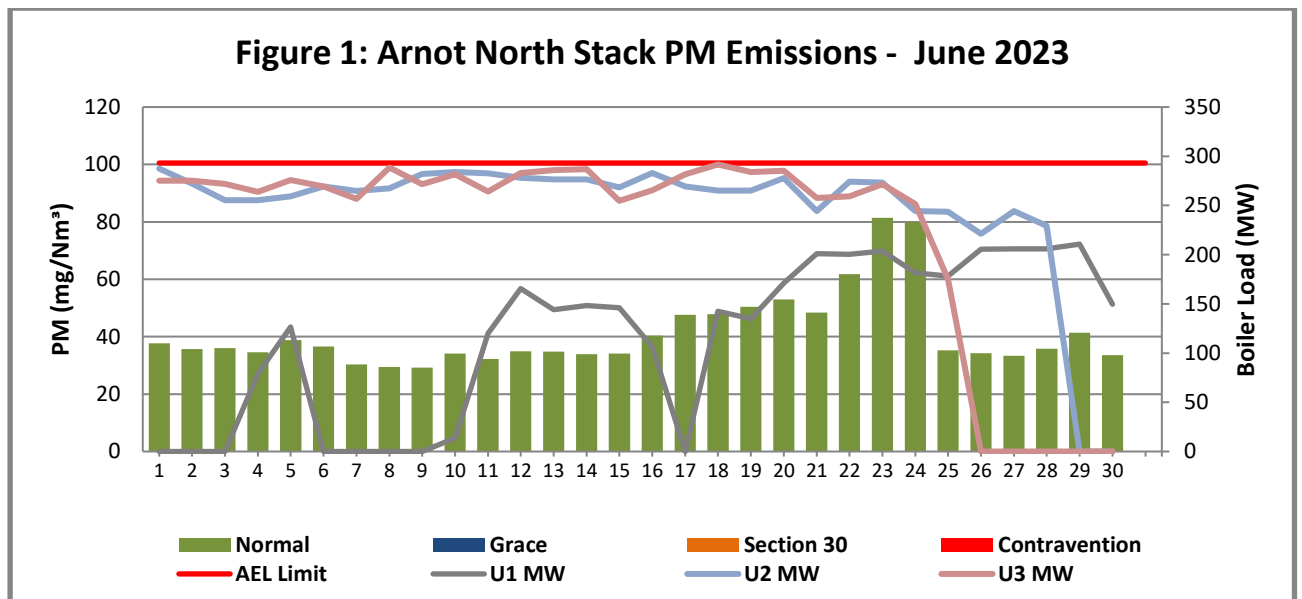
**ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JUNE 2023**

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	682.7
South	31	0	0	0	0	632.0
<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 –June 2023

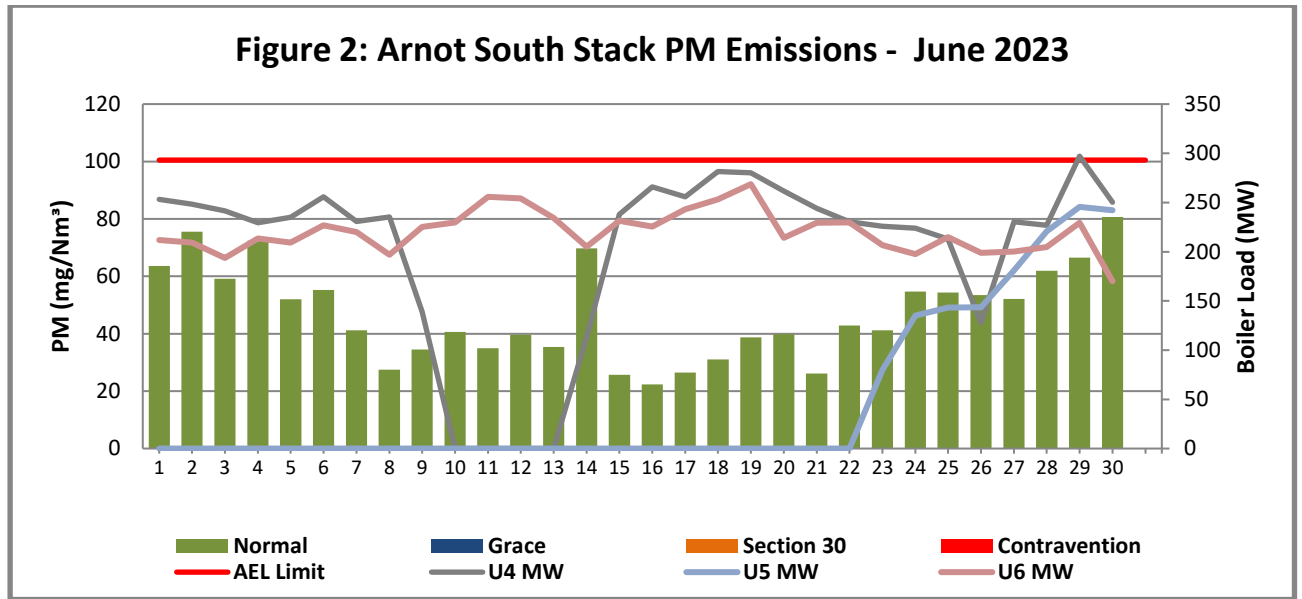
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	1395.5
South	31	0	0	0	0	1163.2
<b>SUM</b>	<b>62</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Emissions Reporting**

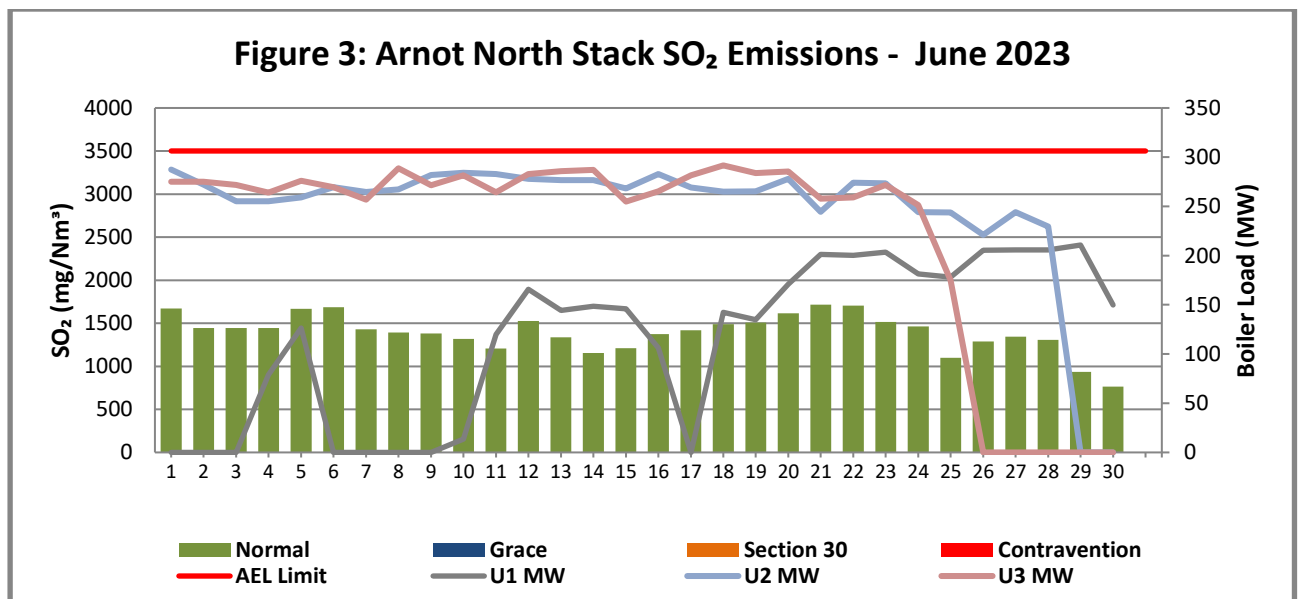


**Figure 1: PM emissions (daily averages) for the month of June 2023 against the emission limit for the North Stack**

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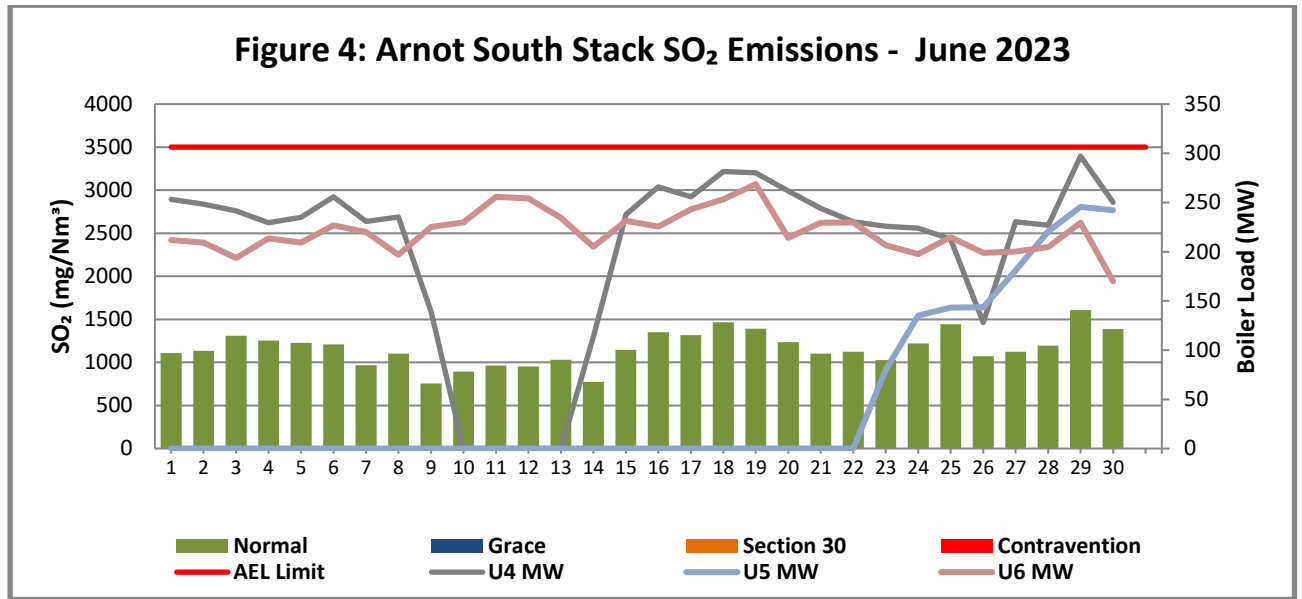


**Figure 2: PM emissions (daily averages) for the month of June 2023 against emission limit for the South Stack**

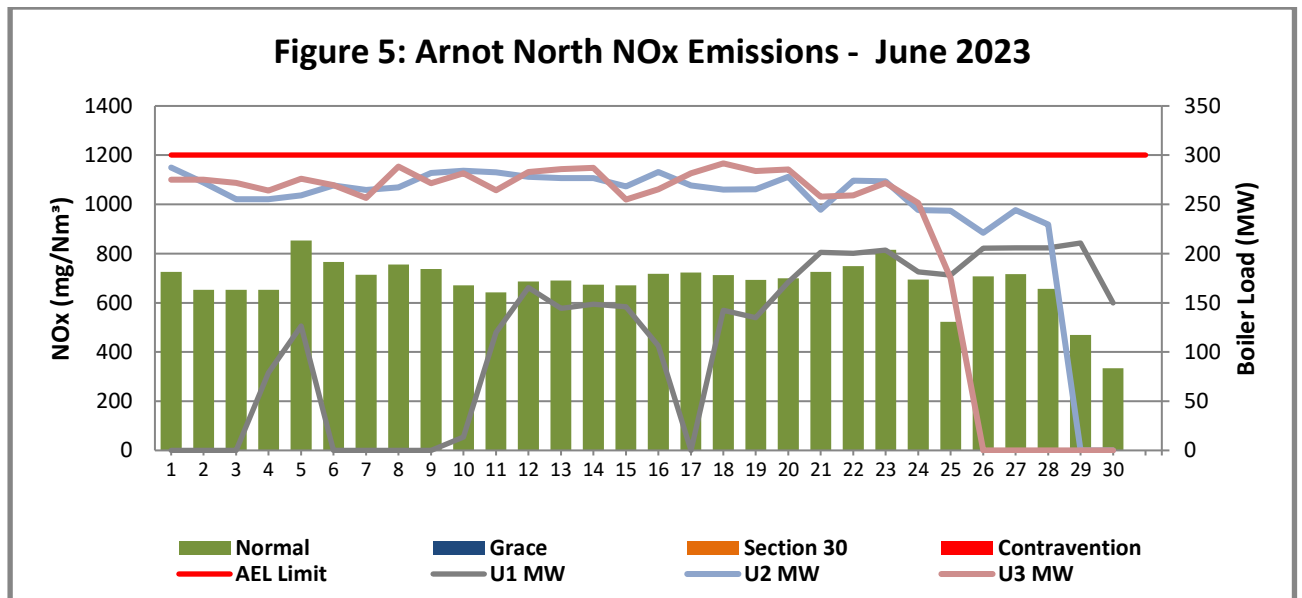


**Figure 3: SO<sub>2</sub> emissions (daily averages) for the month of June 2023 against emission limit for the North Stack**

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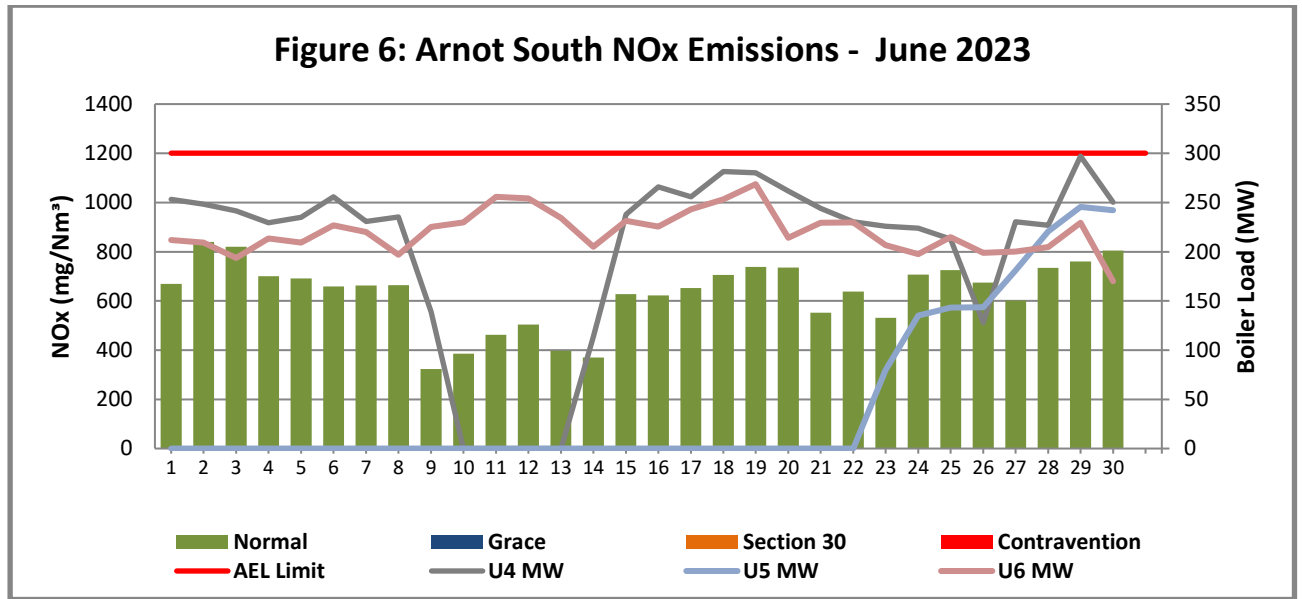


**Figure 4: SO<sub>2</sub> emissions (daily averages) for the month of June 2023 against emission limit for the South Stack**



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

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

Unit	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>2</sub> (tons)
<b>Total Tons (North &amp; South Stack)</b>	152.5	4920	2485

**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 JUNE 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 June 2023

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

1. North and South Parallel test have expired, Data will be back fitted and reported at the licensing office once the process is finalized.
2. Correlation Test have expired, and the station will be conducting the new test Data will be back fitted and reported at the licensing office.

Hoping the above will meet your satisfaction.

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

Compiled by

Date: 2023.07.25



Lawrence Machebe

**ENVIRONMENTAL OFFICER: ARNOT**

Verified by

Date: 2023.08.01



Sandile Mbuyazi

**FLUE GAS SYSTEM ENGINEER: ARNOT**

Supported by:

Date: 2023.07.25



Rofhiwa Tshikovha

**SENIOR ENVIRONMENTAL ADVISOR: ARNOT**

Yours sincerely



Marcus Nemadodzi

Date: 2023-08-03

**GENERAL MANAGER: ARNOT POWER STATION**