

Air Quality Officer  
DEDET  
Private bag X11215  
NELSPRUIT  
1200

Date:  
2022.08.22

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

Dear Mr. Mahlangu

## ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JULY 2022

This serves as the monthly report required in terms of Section 6 in Arnot Power Station's Atmospheric Emission License. The emissions are for the month of July 2022, 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 July 2022

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption/ Rate in Month of July 2022
	Coal	Tons/month	1 050 330	275 144.69
	Fuel Oil	Tons/month	10 000	3234.75
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of July 2022
	Energy	GWh	1 785 600	538 868
	Ash	Tons/month	421 000	67 905.7

### 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 JULY 2022

Table 2.1 (a) Abatement Equipment Control Technology for month of July 2022

Associated Unit/Stack	Technology Type	Actual Efficiency (%) for the month of July 2022
North Stack	Fabric Filter Bags	100%
South Stack	Fabric Filter Bags	100%

Table 2.1 (b) Abatement Equipment Utilisation (%) for the month of July 2022

Associated Unit/Stack	Technology Type	Utilisation July 2022
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%	99.5%	99.9%
Stack 2	100%	95.0%	91.5%

### Energy Source Characteristics

Table 3: Energy Source Material Characteristics for the month of July 2022

Characteristic	Stipulated Range (Unit)	Monthly Average Content
Sulphur Content	0.5 to < 1 (%)	0.593
Ash Content	17 to < 40 (%)	24.68

Table 4 Operating days in compliance to PM AEL Limit – July 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	7.6
South	31	0	0	0	0	12.2
<b>SUM</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Table 5 Operating days in compliance to NOx AEL Limit – July 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	475.4
South	31	0	0	0	0	0
<b>SUM</b>	<b>62</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JULY 2022**

Table 6: Operating days in compliance to SOx AEL Limit –July 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	1159.3
South	31	0	0	0	0	0
<b>SUM</b>	<b>62</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

**Emissions Reporting**

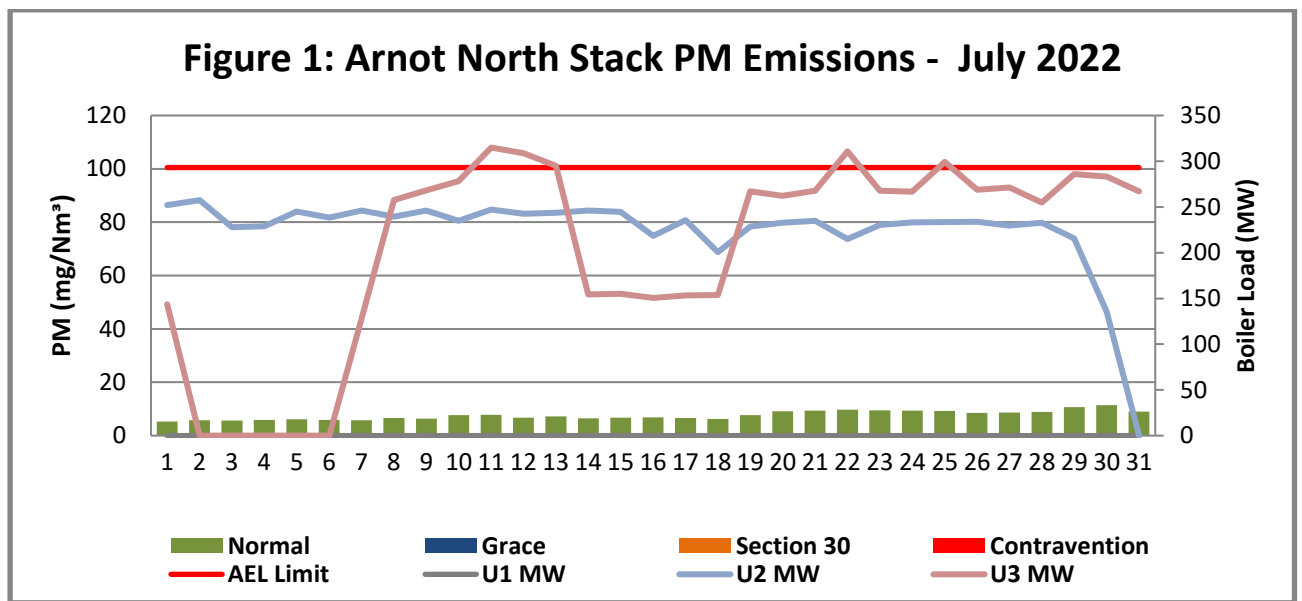
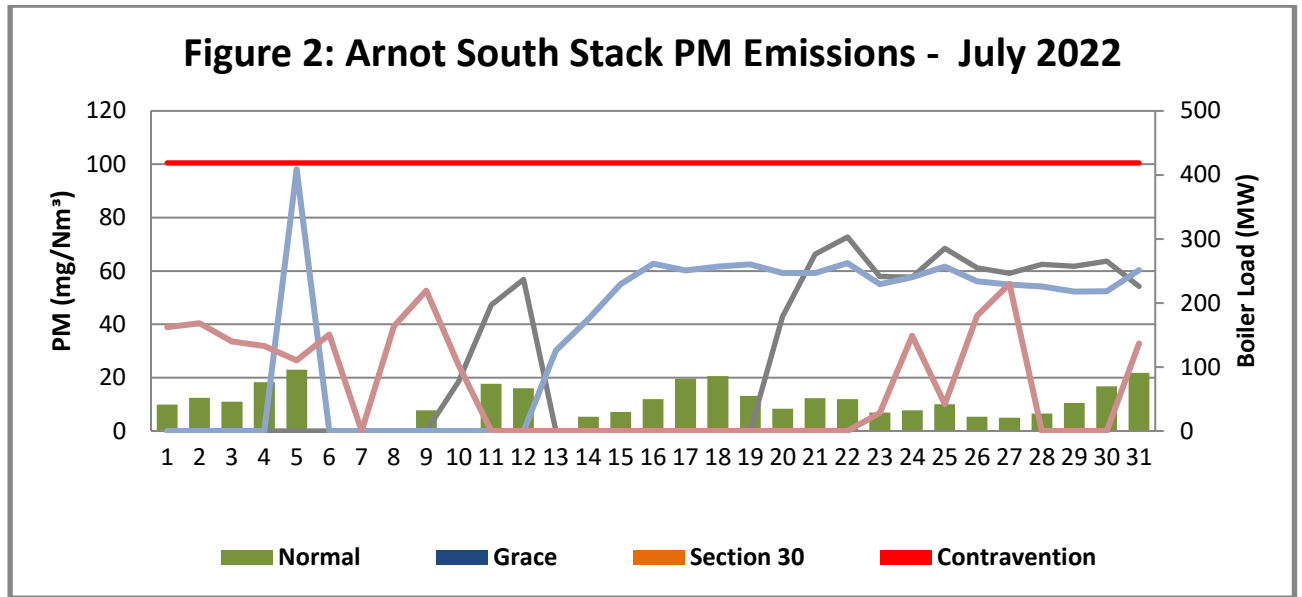
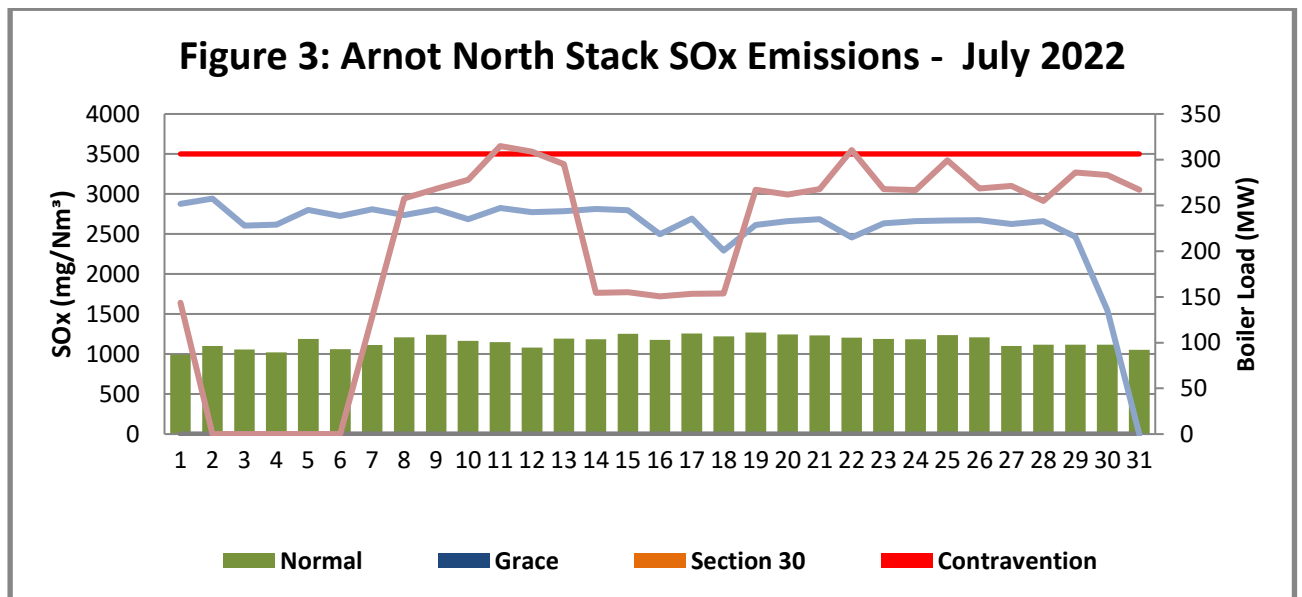


Figure 1: PM emissions (daily averages) for the month of July 2022 against emission limit for the North Stack

**ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JULY 2022**

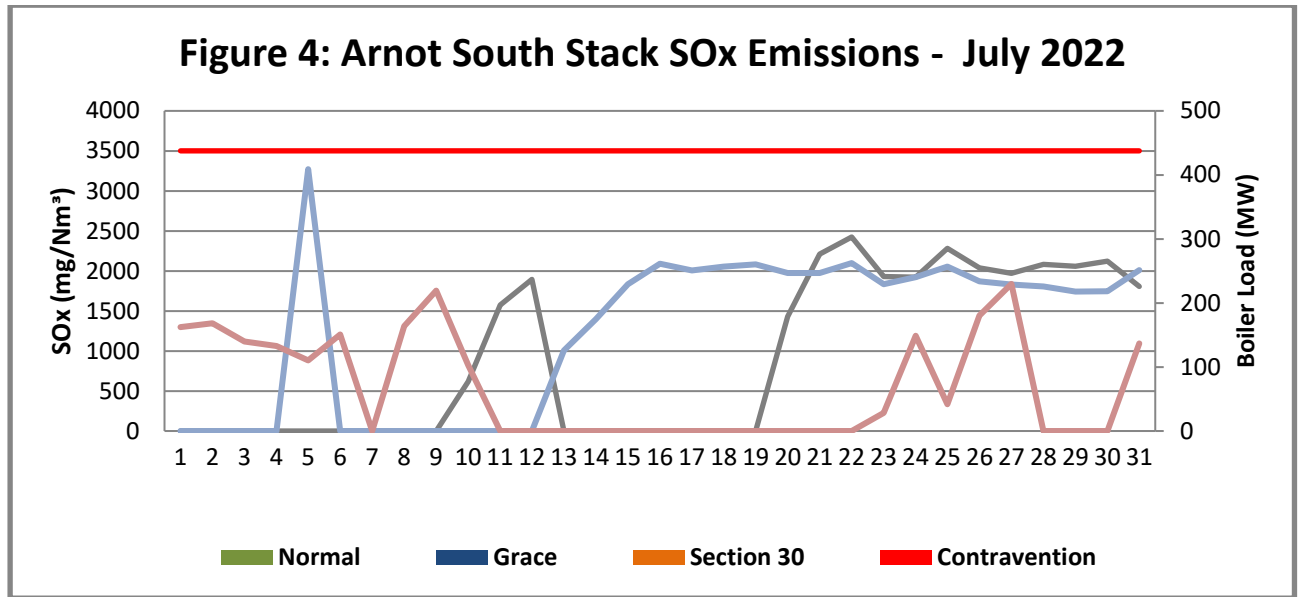


**Figure 2: PM emissions (daily averages) for the month of July 2022 against emission limit for the South Stack**

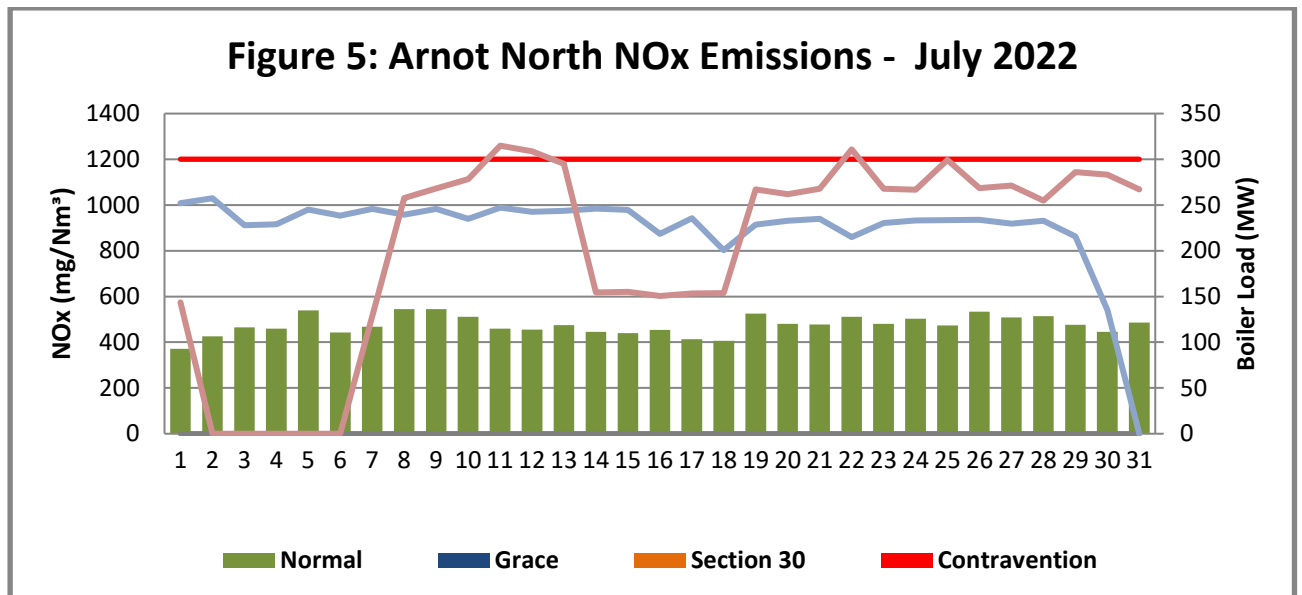


**Figure 3: SO<sub>2</sub> emissions (daily averages) for the month of July 2022 against emission limit for the North Stack**

**ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JULY 2022**

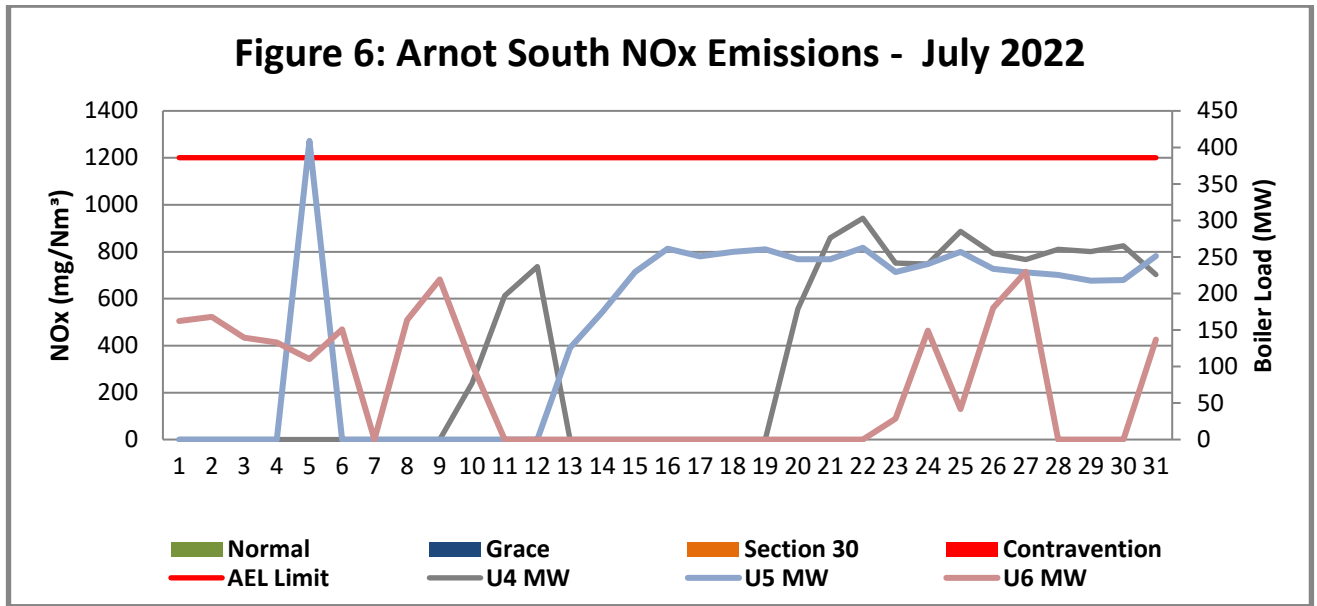


**Figure 4: SO<sub>2</sub> emissions (daily averages) for the month of July 2022 against emission limit for the South Stack**



**Figure 5: NO<sub>2</sub> emissions (daily averages) for the month of July 2022 against emission limit for the North Stack**

**ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JULY 2022**



**Figure 6: NO<sub>2</sub> emissions (daily averages) for the month of July 2022 against emission limit for the South Stack**

**Table 4: Monthly tonnages for the month of July 2022**

Unit	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>2</sub> (tons)
<b>Total Tons (North &amp; South Stack)</b>	21.1	2226.3	912.9

**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

**Light up information**

Continuous reporting is being done even during start-ups emissions were not affected.

**ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JULY 2022**

**Complaints Register**

Table 6. Complaints for the month of July 2022

Source Code/ Name	Root Cause Analysis	Calculation of Impacts/ emissions associated with the incident	Dispersion modeling of pollutants where applicable	Measures implemented to prevent reoccurrence	Date by which measure will be implemented
None	0	0	0	0	0

**ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JULY  
2022**

---


**General**

Correlation test on the North Stack has been conducted on 3<sup>rd</sup> – 7<sup>th</sup> June 2022. O<sub>2</sub> analyzer that was affecting South stack gaseous emissions has been installed and calibrated on 16<sup>th</sup> August 2022. Correct data for gaseous emission will be presented on August report.

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


  
Lawrence Machebe

2022.08.24

**ENVIRONMENTAL OFFICER: ARNOT**

Verified by

Date: 25-08-2022

  
Jan-Louis Human

**SYSTEM ENGINEER: ARNOT**

Supported by:

Date: 23.08.2022



Rofhiwa Tshikovha

**SENIOR ENVIRONMENTAL ADVISOR: ARNOT**

Yours sincerely

  
Marcus Nemadodzi

Date:

**GENERAL MANAGER: ARNOT POWER STATION**