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Date:
2021.10.12

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Dear Mr. Mahlangu

ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF SEPTEMBER 2021

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 2021, 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 2021

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption/ Rate in Month of September
	Coal	Tons/month	1 050 330	419 225.5
	Fuel Oil	Tons/month	10 000	2581.3
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of September 2021
	Energy	GWh	1 785 600	791.008
	Ash	Tons/month	421 000	104 093,69

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Abatement Technology

Table 2: Abatement Equipment Control Technology for month of September 2021

Associated Unit/Stack	Technology Type	Actual Utilisation (%) for the month of September 2021
North Stack	Fabric Filter Bags	100%
South Stack	Fabric Filter Bags	100%

Table 2.1 Abatement Equipment Efficiency for the month of September 2021

Associated Unit/Stack	Technology Type	Efficiency September -2021
North	<i>Fabric Filter Plant (FFP)</i>	99.9%
South	<i>Fabric Filter Plant (FFP)</i>	99.9%

Energy Source Characteristics

Table 3: Energy Source Material Characteristics for the month of September 2021

Characteristic	Stipulated Range (Unit)	Monthly Average Content
Sulphur Content	0.5 to < 1 (%)	0.54
Ash Content	17 to < 40 (%)	24.83

Table 4 Operating days in compliance to PM AEL Limit –September 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
North	30	0	0	0	0	17.6
South	30	0	0	0	0	23.4
SUM	60	0	0	0	0	

Table 5 Operating days in compliance to NOx AEL Limit – September 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm ³)
North	30	0	0	0	0	760.6
South	30	0	0	0	0	701.5
SUM	60	0	0	0	0	

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Table 6: Operating days in compliance to SOx AEL Limit –September 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm ³)
North	30	0	0	0	0	1358.9
South	30	0	0	0	0	1260.1
SUM	60	0	0	0	0	

Emissions Reporting

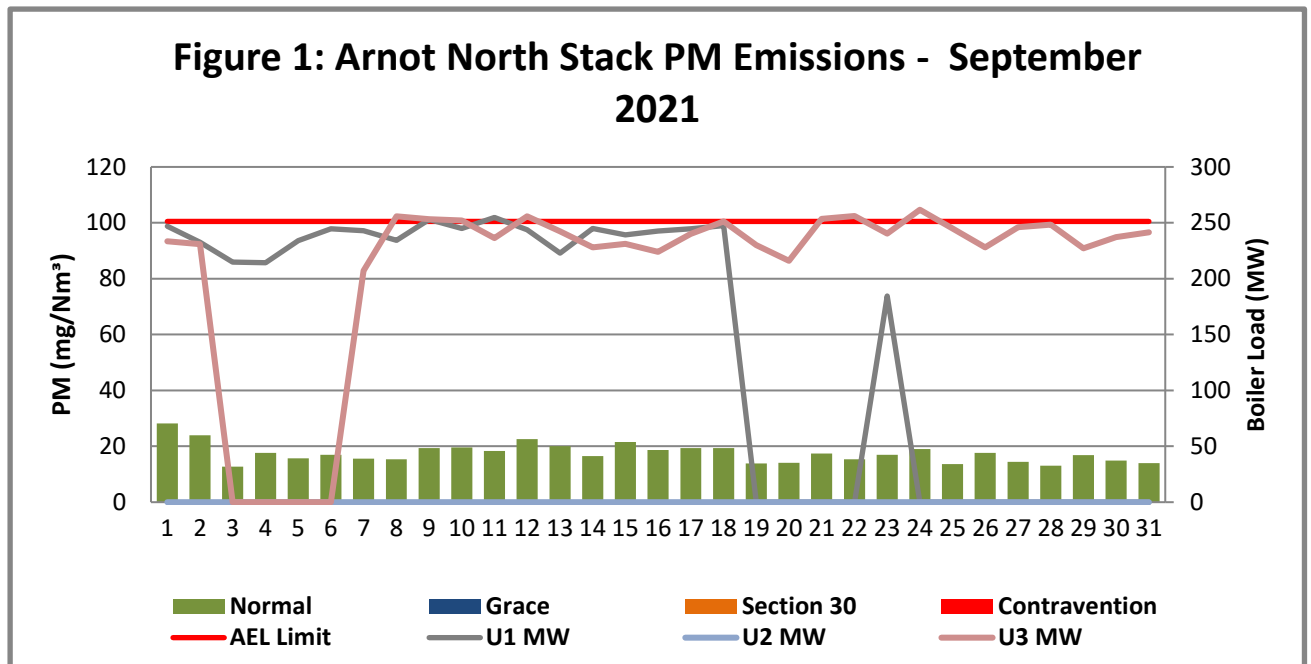


Figure 1: PM emissions (daily averages) for the month of September 2021 against emission limit for the North Stack

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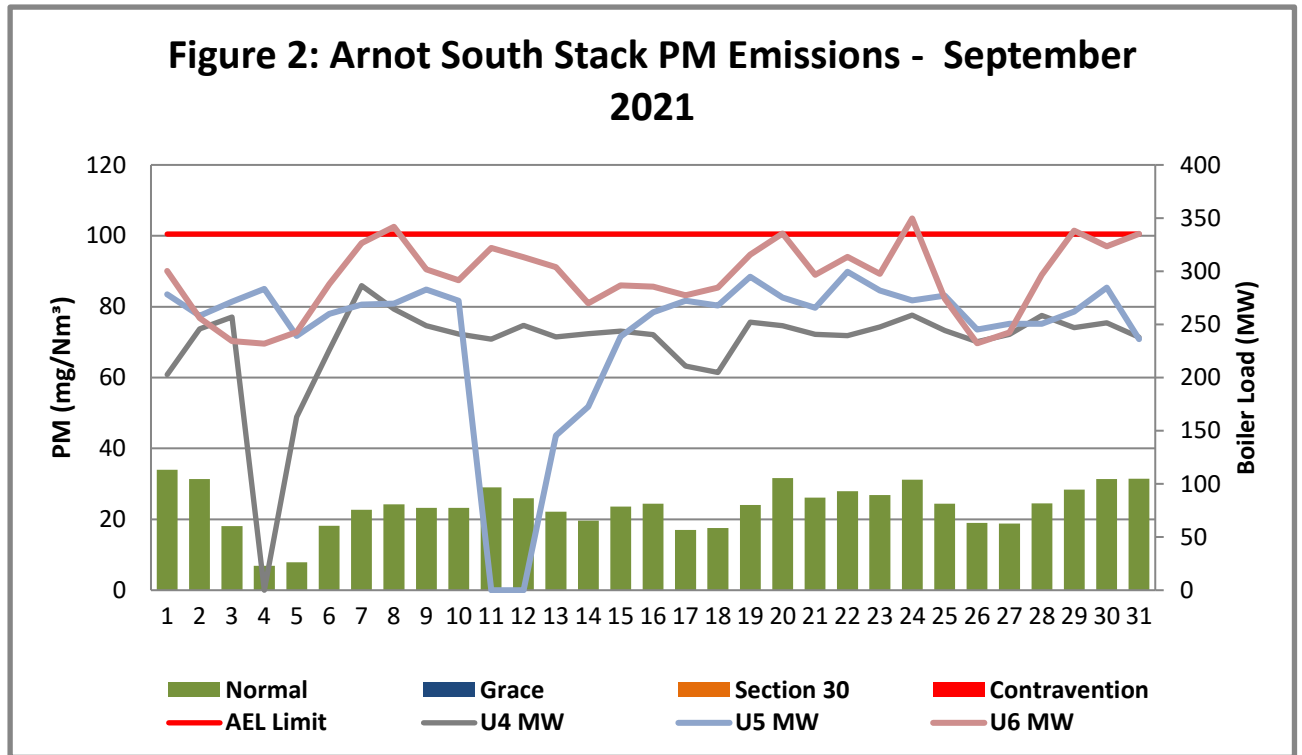
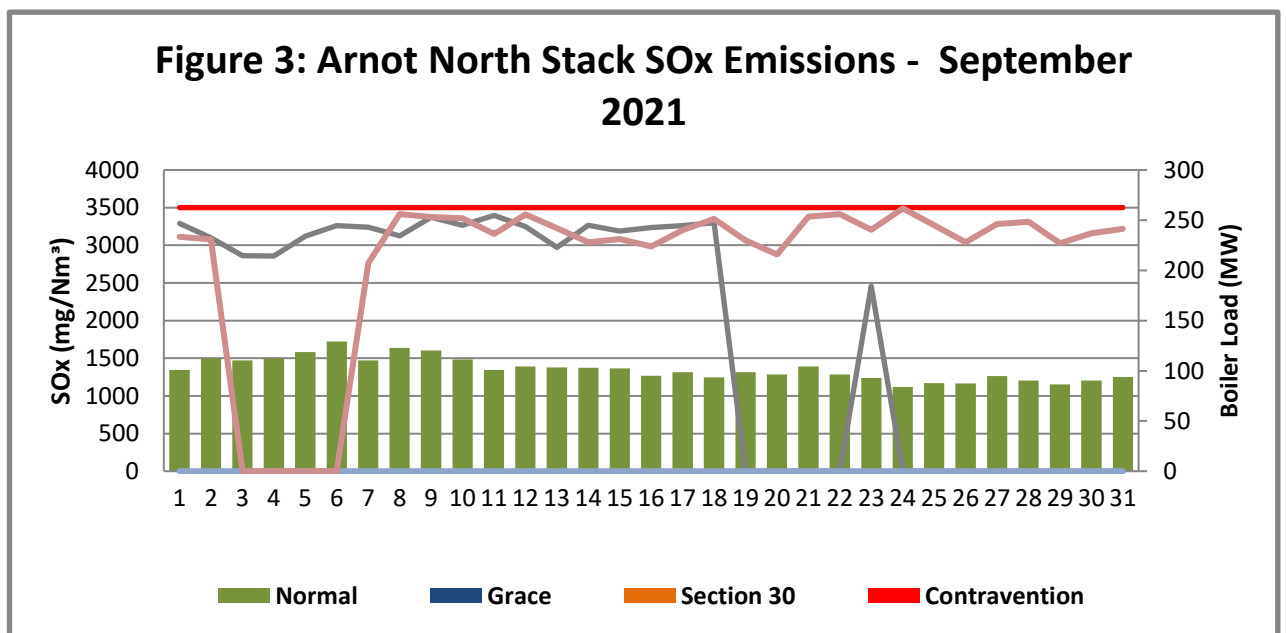


Figure 2: PM emissions (daily averages) for the month of September 2021 against emission limit for the South Stack



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Figure 3: SO₂ emissions (daily averages) for the month of September 2021 against emission limit for the North Stack

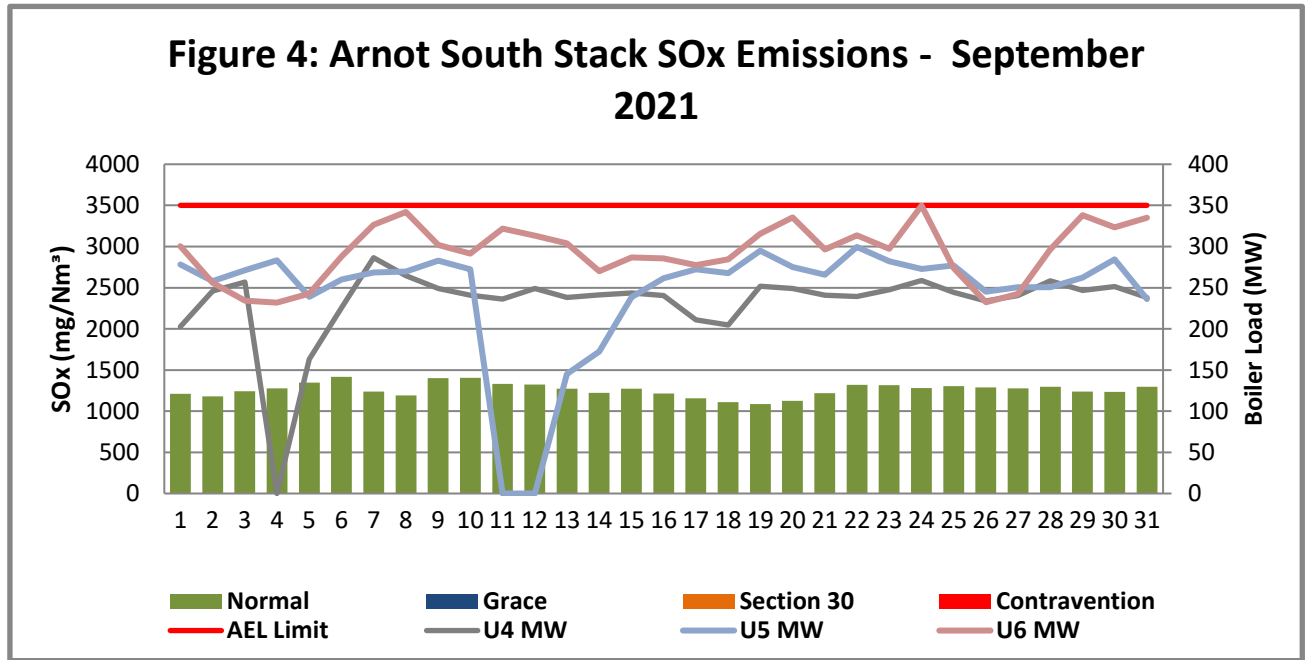


Figure 4: SO₂ emissions (daily averages) for the month of September -2021 against emission limit for the South Stack

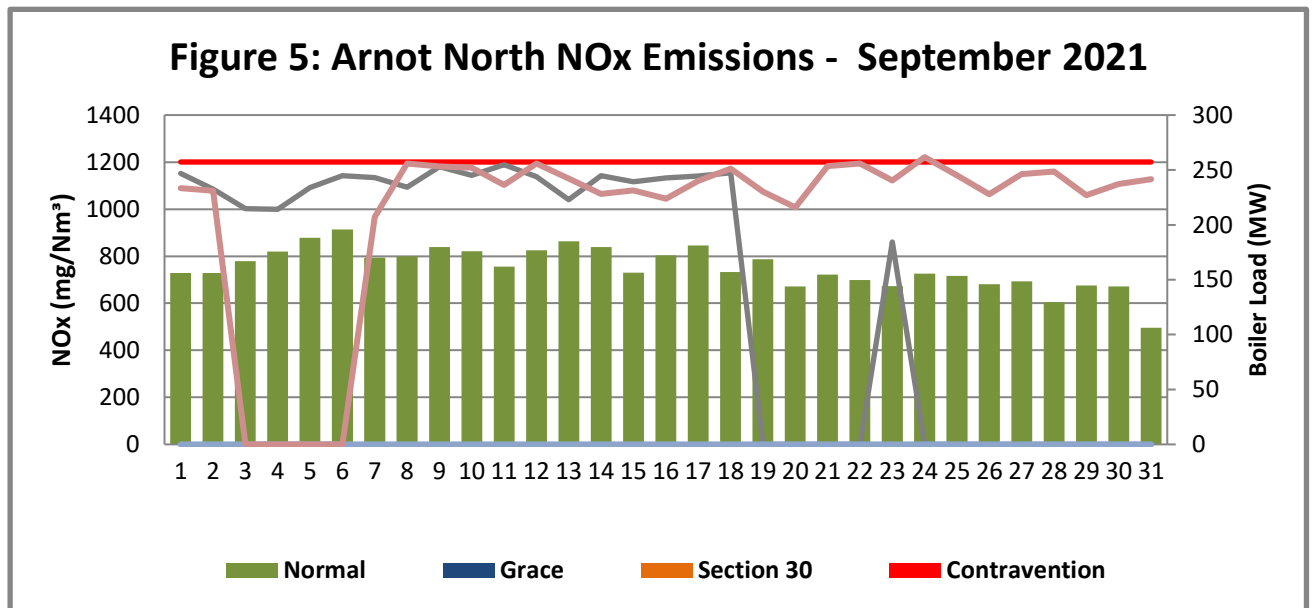


Figure 5: NO₂ emissions (daily averages) for the month of September -2021 against emission limit for the North Stack

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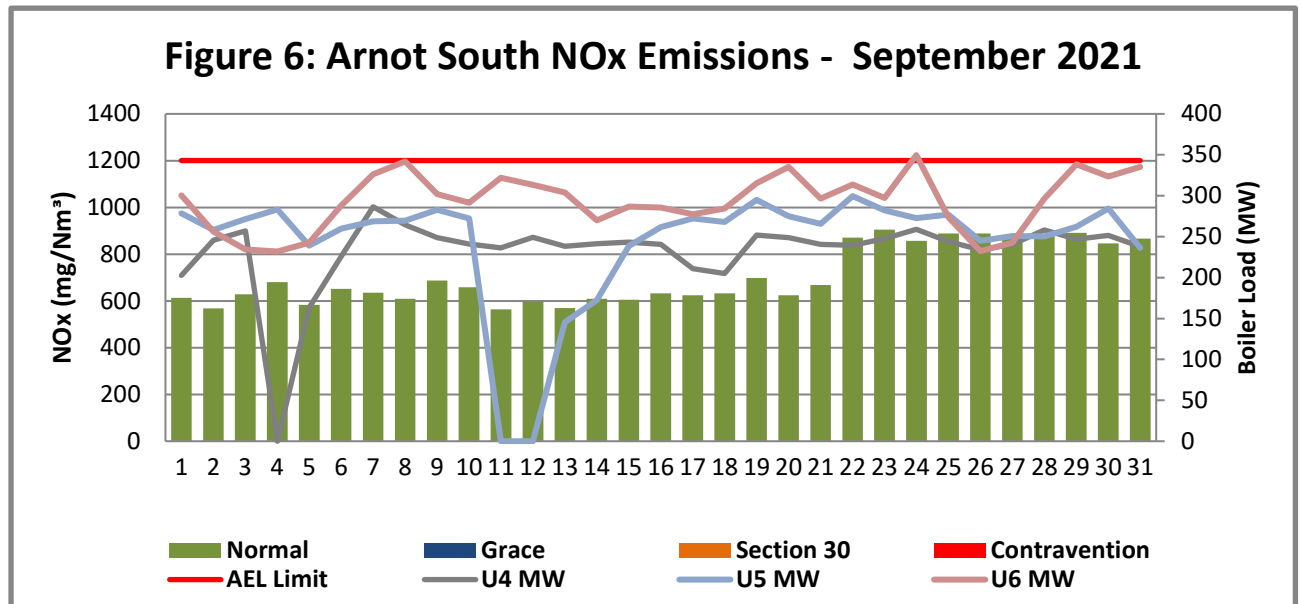


Figure 6: NO₂ emissions (daily averages) for the month of September -2021 against emission limit for the South Stack

Table 4: Monthly tonnages for the month of September 2021

Unit	PM (tons)	SO ₂ (tons)	NO ₂ (tons)
Total Tons (North & South Stack)	59.3	3670.8	2063.2

Table 5: Monitor Availability

Unit	PM (%)	SO ₂ (%)	NO ₂ (%)
North Stack	100	98.8	99.2
South Stack	100	98.6	99.0

Table 6: 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 7. Complaints for the month of September 2021

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					

General

The rest of the information demonstrating compliance with the emission license conditions is supplied in the annual emission reports sent to your office.

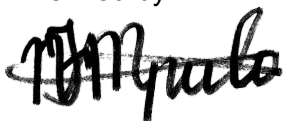
Hoping the above will meet your satisfaction.

Compiled by

Lawrence Machebe

ENVIRONMENTAL OFFICER: ARNOT

Verified by



Nomathemba Mpulo

SENIOR TECHNOLOGIST: ARNOT

**ARNOT POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF
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Supported by



Rofhiwa Tshikovha

SENIOR ENVIRONMENTAL ADVISOR: ARNOT

Yours sincerely

Tsoro Samuel Mashao

ACTING GENERAL MANAGER: ARNOT