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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 OCTOBER 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 October 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 October 2021

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption/ Rate in Month of October
	Coal	Tons/month	1 050 330	361 051.6
	Fuel Oil	Tons/month	10 000	4120.38
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of October 2021
	Energy	GWh	1 785 600	635 000
	Ash	Tons/month	421 000	87 988.27

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Abatement Technology

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

Associated Unit/Stack	Technology Type	Actual Utilisation (%) for the month of October 2021
North Stack	Fabric Filter Bags	99.9%
South Stack	Fabric Filter Bags	99.9%

Table 2.1 Abatement Equipment Efficiency Utilisation (%) for the month of October 2021

Associated Unit/Stack	Technology Type	Efficiency October -2021
North	<i>Fabric Filter Plant (FFP)</i>	100%
South	<i>Fabric Filter Plant (FFP)</i>	100%

Energy Source Characteristics

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

Characteristic	Stipulated Range (Unit)	Monthly Average Content
Sulphur Content	0.5 to < 1 (%)	0.54
Ash Content	17 to < 40 (%)	24.37

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
North	30	0	0	0	0	15.9
South	30	0	0	0	0	23.8
SUM	60	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm ³)
North	30	0	0	0	0	587.2
South	30	0	0	0	0	713.5
SUM	60	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm ³)
North	30	0	0	0	0	1436.6
South	30	0	0	0	0	1336.2
SUM	60	0	0	0	0	

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Emissions Reporting

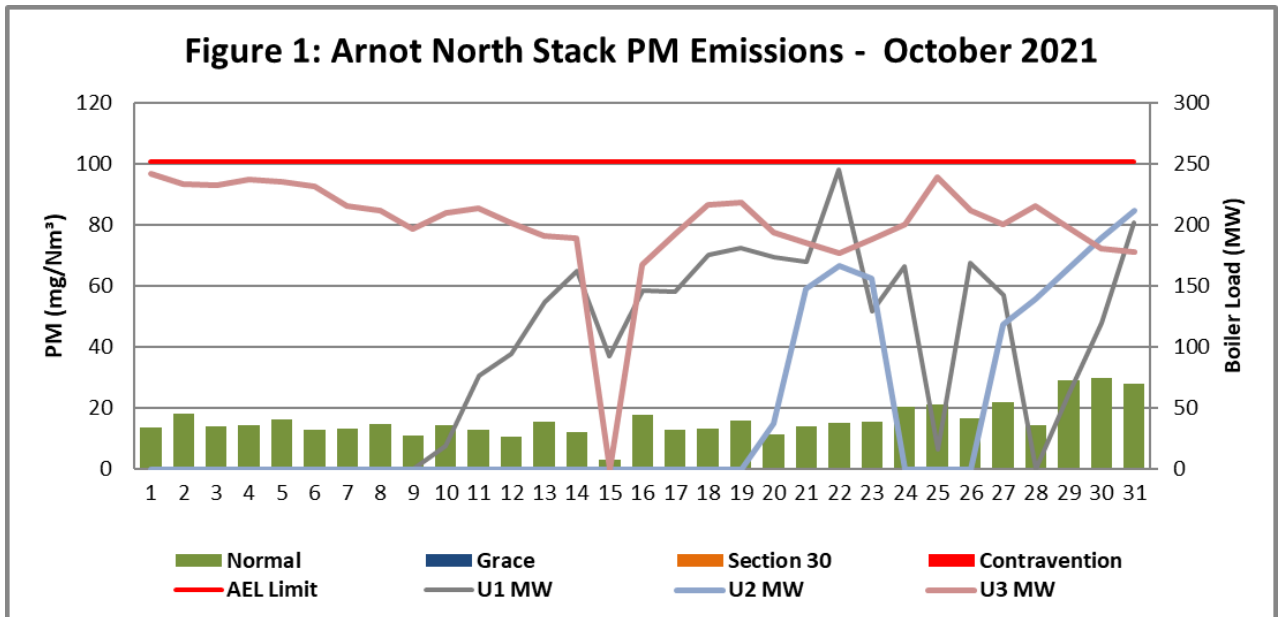


Figure 1: PM emissions (daily averages) for the month of October 2021 against emission limit for the North Stack

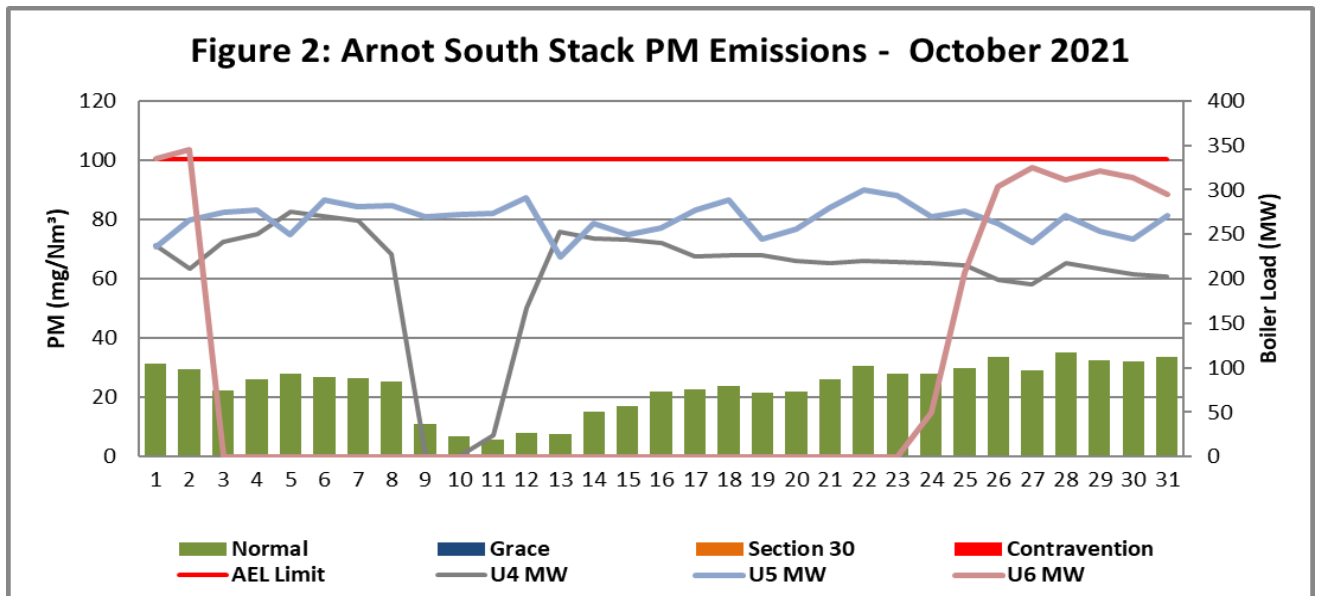


Figure 2: PM emissions (daily averages) for the month of October 2021 against emission limit for the South Stack

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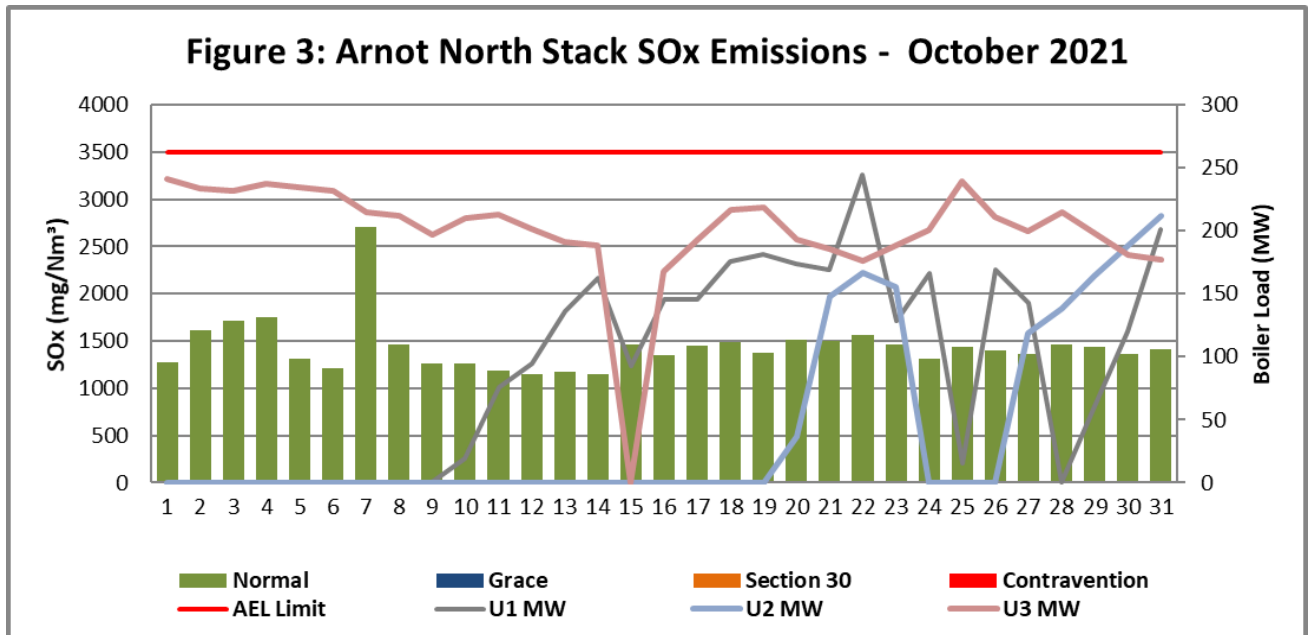


Figure 3: SO₂ emissions (daily averages) for the month of October 2021 against emission limit for the North Stack

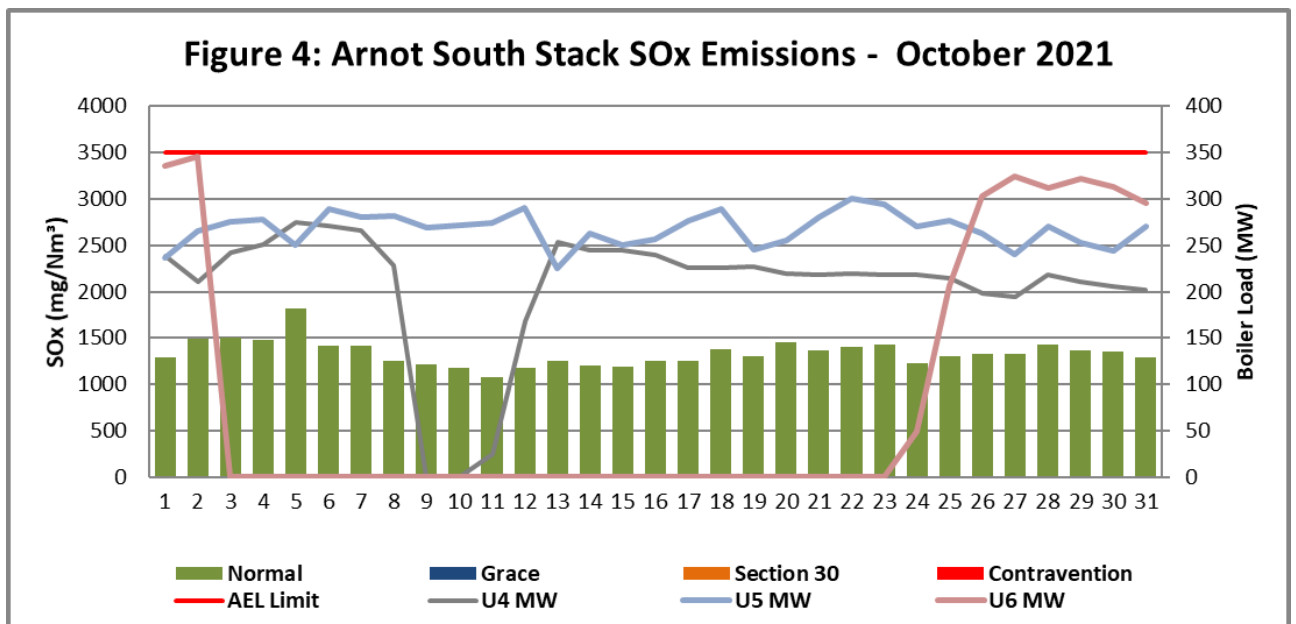


Figure 4: SO₂ emissions (daily averages) for the month of October -2021 against emission limit for the South Stack

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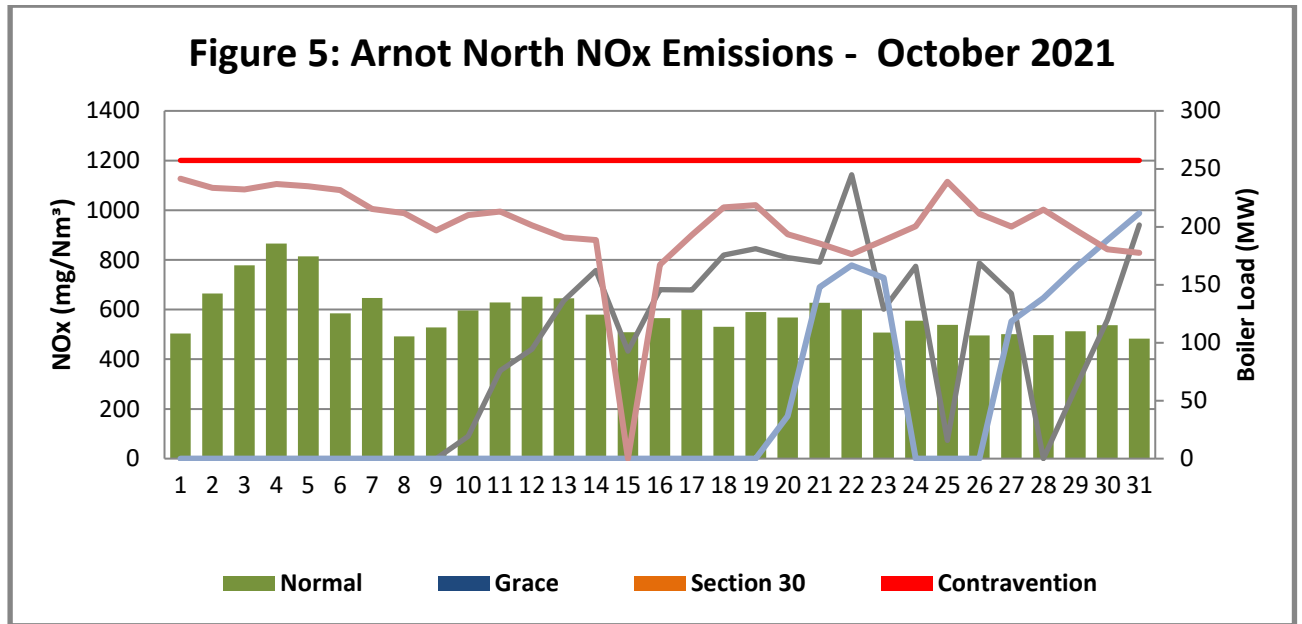


Figure 5: NO₂ emissions (daily averages) for the month of October -2021 against emission limit for the North Stack

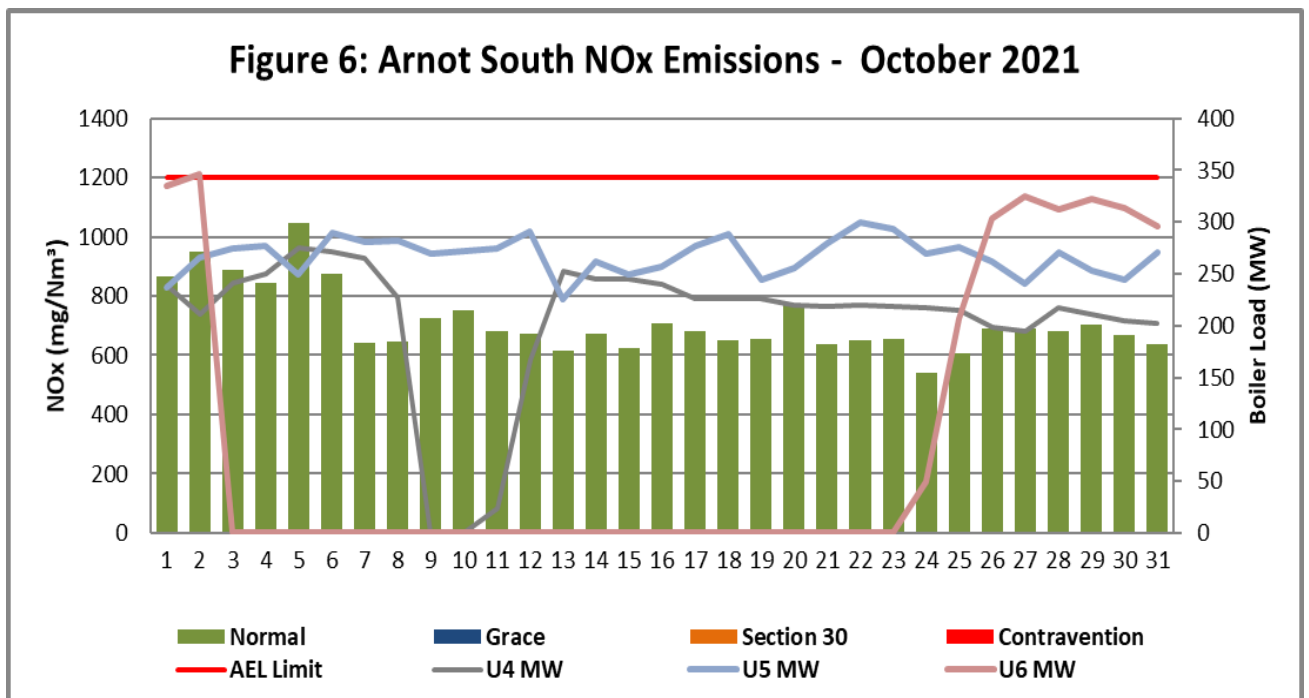


Figure 6: NO₂ emissions (daily averages) for the month of October -2021 against emission limit for the South Stack

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Table 4: Monthly tonnages for the month of October 2021

Unit	PM (tons)	SO ₂ (tons)	NO ₂ (tons)
Total Tons (North & South Stack)	47.2	3 385.4	1 592.3

Table 5: Monitor Availability

Unit	PM (%)	SO ₂ (%)	NO ₂ (%)
North Stack	93.3	98.8	98.4
South Stack	100.0	99.1	98.9

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	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.

Complaints Register

Table 7. Complaints for the month of October 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					

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General

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

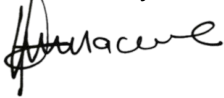
Hoping the above will meet your satisfaction.

Compiled by

Lawrence Machebe

ENVIRONMENTAL OFFICER: ARNOT

Verified by

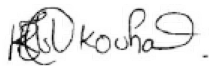


Nomathemba Mpulo

SENIOR TECHNOLOGIST: ARNOT



Supported by



Rofhiwa Tshikovha

SENIOR ENVIRONMENTAL ADVISOR: ARNOT

Yours sincerely



01 December 2021

Tsoro Samuel Mashao

ACTING GENERAL MANAGER: ARNOT