	<b>Monthly Report</b>	<b>Matla Power Station</b>
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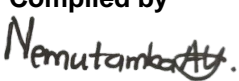

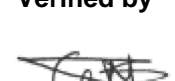
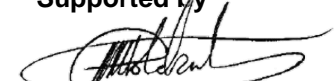
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## 1. Introduction

### MATLA POWER STATION MONTHLY EMISSIONS REPORT FOR THE MONTH OF NOVEMBER 2024

This document serves as the monthly emissions report required in terms of Section 7.6 of Matla Power Station Provisional Atmospheric Emission License (AEL), 17/4/AEL/MP312/11/14

This report reflects Unit 1 to Unit 6 gaseous and particulate emissions performance against the AEL limit for the month of NOVEMBER 2024 only.

## 2. Raw Materials and Products

Table 1- Quantity of Raw Materials and Products Consumption in 11/2024

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption – 11/2024
	Coal	Tons/month	1 475 000	792211
	Fuel Oil	Tons/month	3 500	1490.733
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of 11/2024
	Energy	GWh	2 745	1468
	Ash Emitted	Tons/month	471 000	1402.6

## 3. Abatement Technology

Table 2-Abatement Equipment Control Technology Efficiency in 11/2024

Associated Unit/Stack	Technology Type	Efficiency	ESP Utilization
South Stack (Unit 1, 2 and 3)	Electrostatic Precipitators (ESP)	98.800%	100%
	Electrostatic Precipitators (ESP)		
	Electrostatic Precipitators (ESP)		
Unit 4	Electrostatic Precipitators (ESP)	99.556%	100%
Unit 5	Electrostatic Precipitators (ESP)	99.788%	100%
Unit 6	Electrostatic Precipitators (ESP)	99.400%	100%

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## 4. Energy Source Characteristics

Table 3: Energy Source Material Characteristics for 11/2024

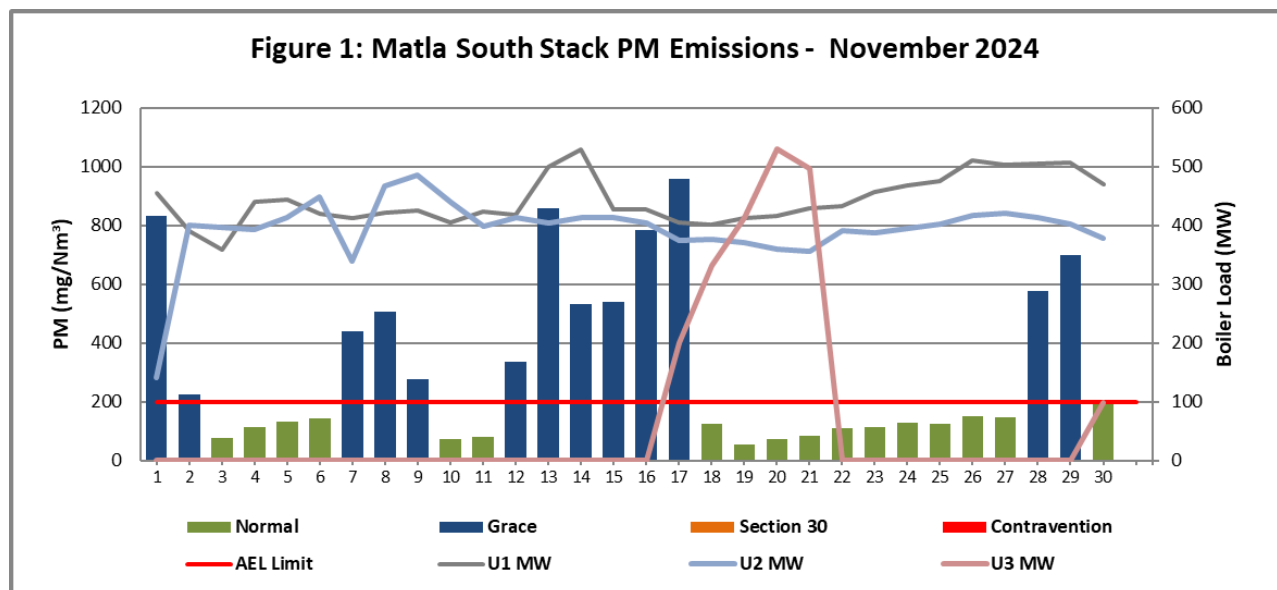
Characteristic	Stipulated Range (% by weight on a dry basis)	Monthly Average Content (% by weight on a dry basis)
Coal		
Sulphur Content	0.8-1.1	1.00
Ash Content	21-40	26.64

## 5. Emissions Reporting

Table 4- Emission Limits are as follows:

SO <sub>2</sub> Monthly = 3500 mg/Nm <sup>3</sup>	Dust Daily= 200 mg/Nm <sup>3</sup> (South Stack and Unit 4) Dust Daily= 100 mg/Nm <sup>3</sup> (Unit 5 and 6)	NO <sub>2</sub> Daily= 1200 mg/Nm <sup>3</sup>
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### 5.1 PM Daily Averages



Matla Common South Stack Exceeded PM AEL limit of 200 from 7 -9, this was due to unit trip and light up of Unit 2, the unit tripped at 07-Nov-24 10:50:00 (07-Nov-24 13:00 Hourly emissions were above limit) and the unit was on load at 07-Nov-24 15:15:00. The emissions hourly figure was within limit at 09-Nov-24 19:00 hence the emissions are within grace.

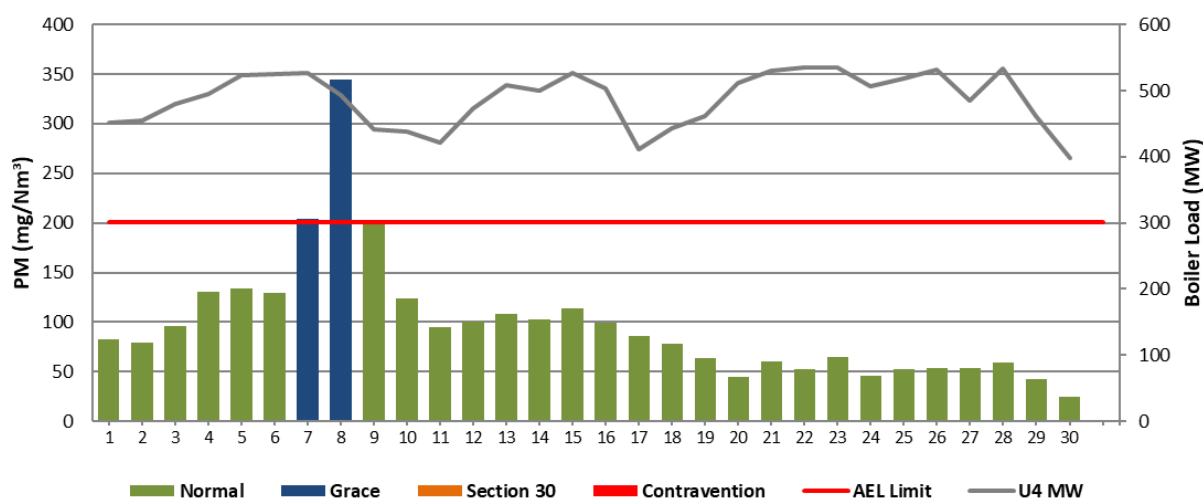
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Matla Common South Stack Exceeded PM AEL limit of 200 from 12-17 November 2024. Matla Unit 3 was on GO outage and as statutory requirements, there are tests that should be conducted, tests such as valve floating (Boiler safety valves) and electrical tests. Safety valve floating and electrical are done under light-up conditions where boiler is on load with one mill in service. This start up condition significantly increase emission while unit is not synchronised on load. These tests resulted on a prolonged light-up conditions which caused emissions exceedance on south stack.

**See below sequence of events:**

Date	Activity	Conditions	Reason for exceedance
12/11/2024	Safety valve floating	Boiler on load with one mill (start-up condition)	Safety valve floating
13/11/2024	Safety valve floating	Boiler on load with one mill (start-up condition)	Safety valve floating
14/11/2024	Safety valve floating	Boiler on load with one mill (startup condition)	Safety valve floating
15/11/2024	Safety valve floating	Boiler on load with one mill (start-up condition)	Safety valve floating
15/11/2024	Safety valve floating	Boiler on load with one mill (startup condition)	Safety valve floating and electrical test
16/11/2024	Electrical statutory test after GO	Boiler on load with one mill (startup condition)	
17/11/2024	Electrical statutory test after GO. Unit light-up and synchronised 06:50	Boiler on load with one mill (startup condition)	Start-up condition
18/11/2024	06:50 1 <sup>st</sup> 24 hours on load	Grace period	emissions within limit

**Figure 2: Matla Unit 4 PM Emissions - November 2024**



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Figure 3: Matla Unit 5 PM Emissions - November 2024

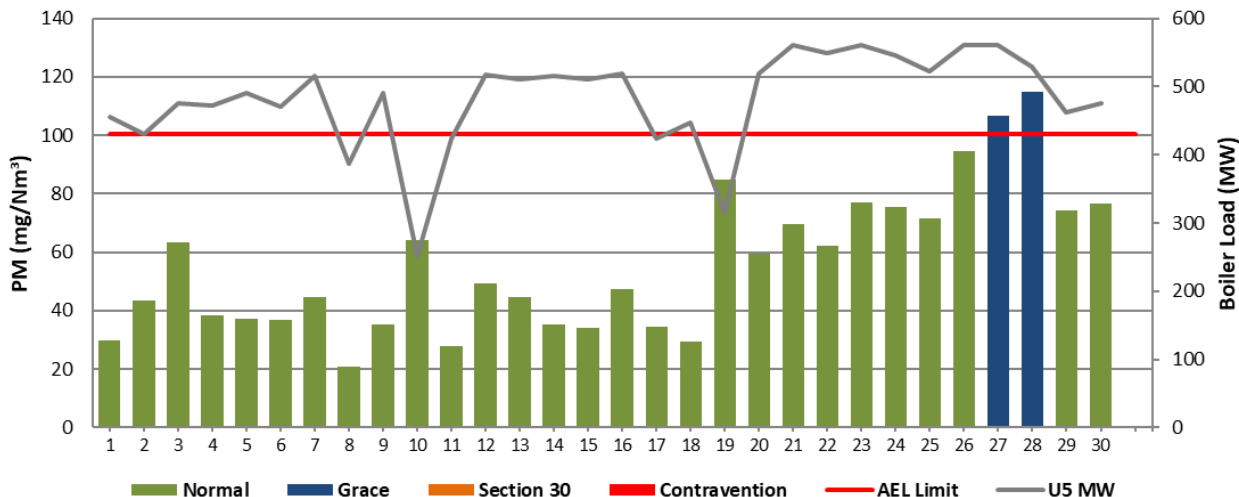
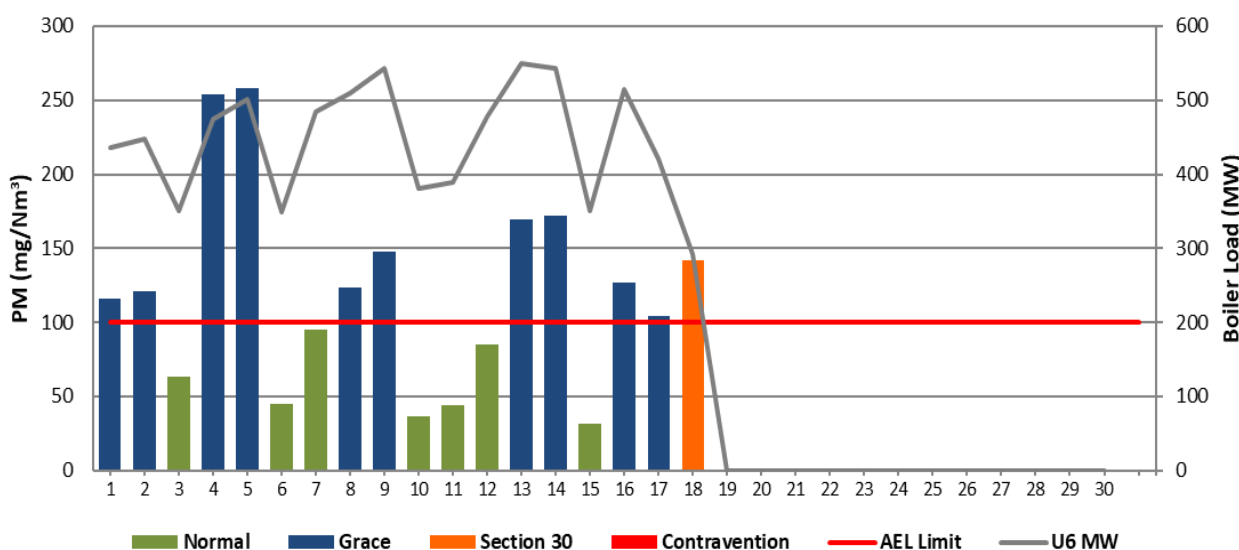


Figure 4: Matla Unit 6 PM Emissions - November 2024



Matla Unit 6 exceeded the PM limit on 18 November 2024. This incident was due to the defective rapping system that caused precipitator to fail, similar issue was reported to the department on 28 October 2024 16:21. Matla Unit 6 was switched off on 18 November 2024 which also led to high emissions during the Unit force cooling. The unit was switched off to inspect and repair the defective rapping system as highlighted as a corrective action on the investigation report sent to the department on Monday, 11 November 2024 17:21.

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## 5.2 Sox Daily Averages

Figure 5: Matla South Stack SO<sub>2</sub> Emissions - November 2024

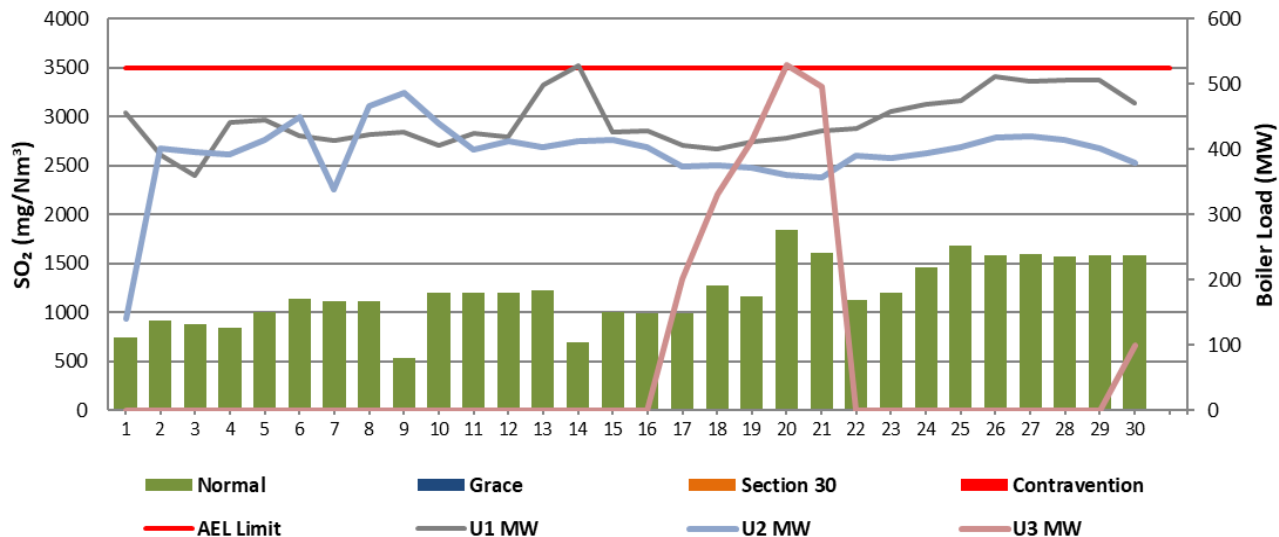
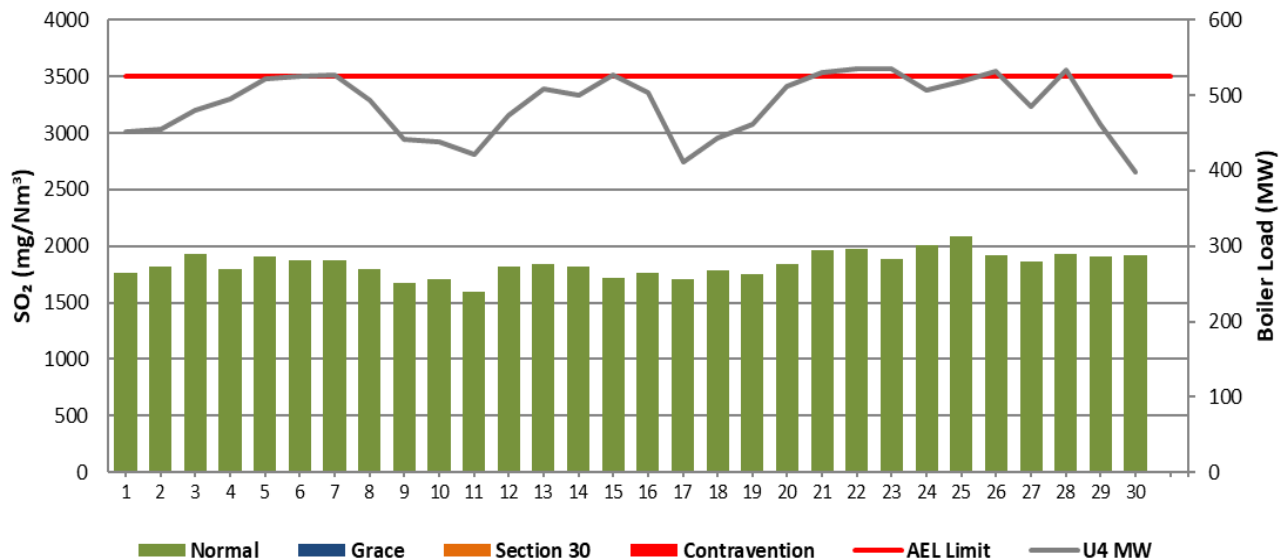


Figure 6: Matla Unit 4 SO<sub>2</sub> Emissions - November 2024



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Figure 7: Matla Unit 5 SO<sub>2</sub> Emissions - November 2024

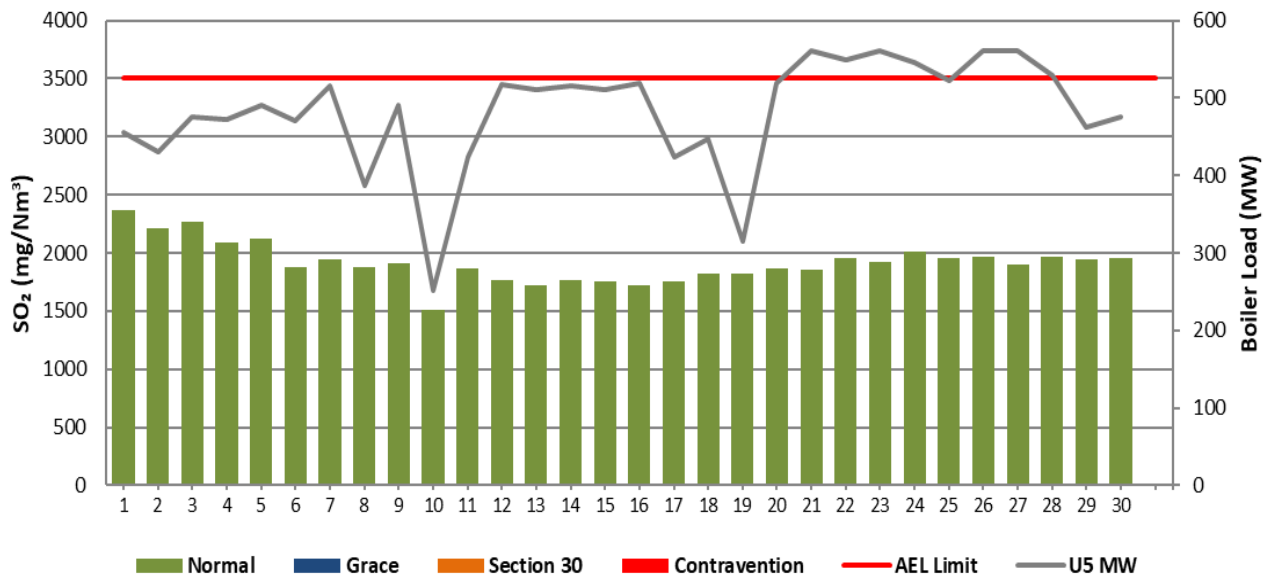
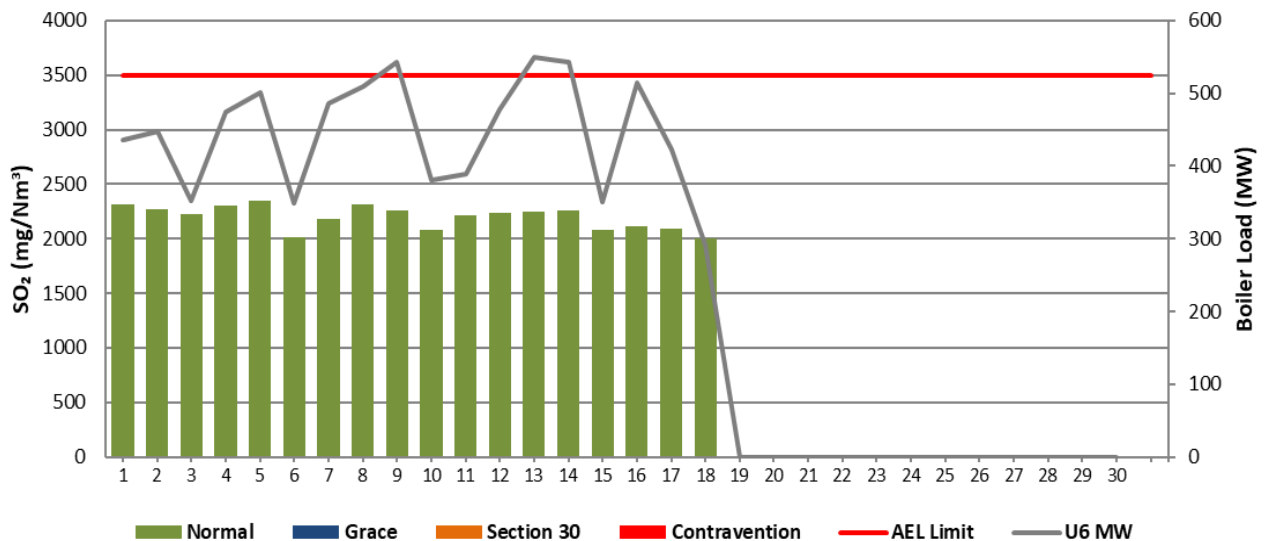


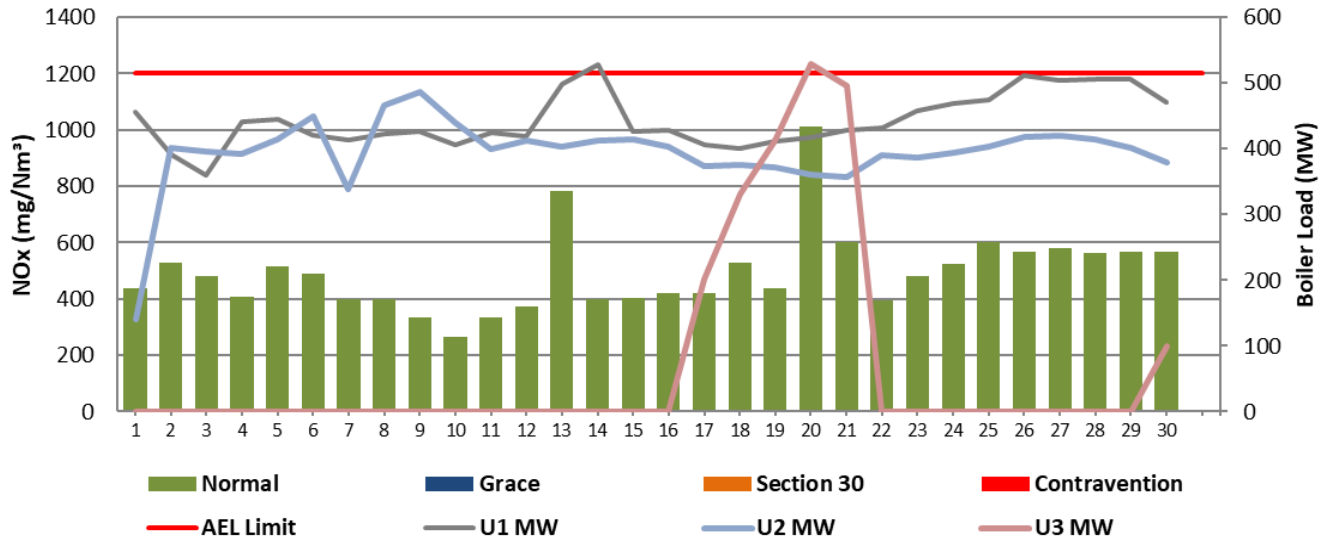
Figure 8: Matla Unit 6 SO<sub>2</sub> Emissions - November 2024



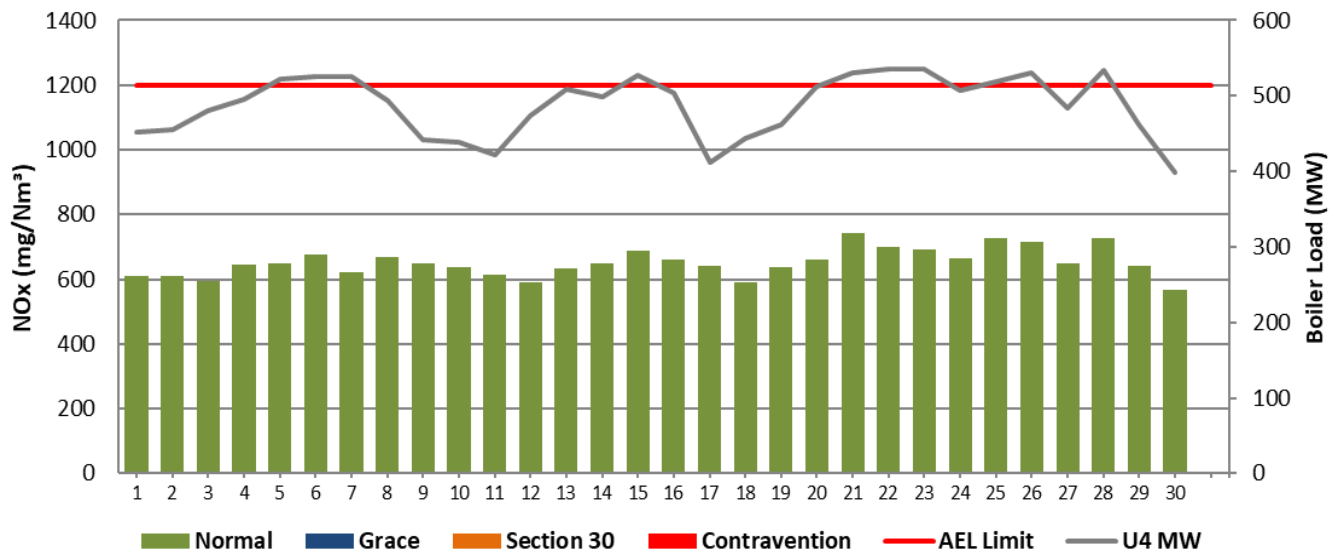
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### 5.3 NOx Daily Averages

**Figure 9: Matla South Stack NOx Emissions - November 2024**



**Figure 10: Matla Unit 4 NOx Emissions - November 2024**



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Figure 11: Matla Unit 5 NOx Emissions - November 2024

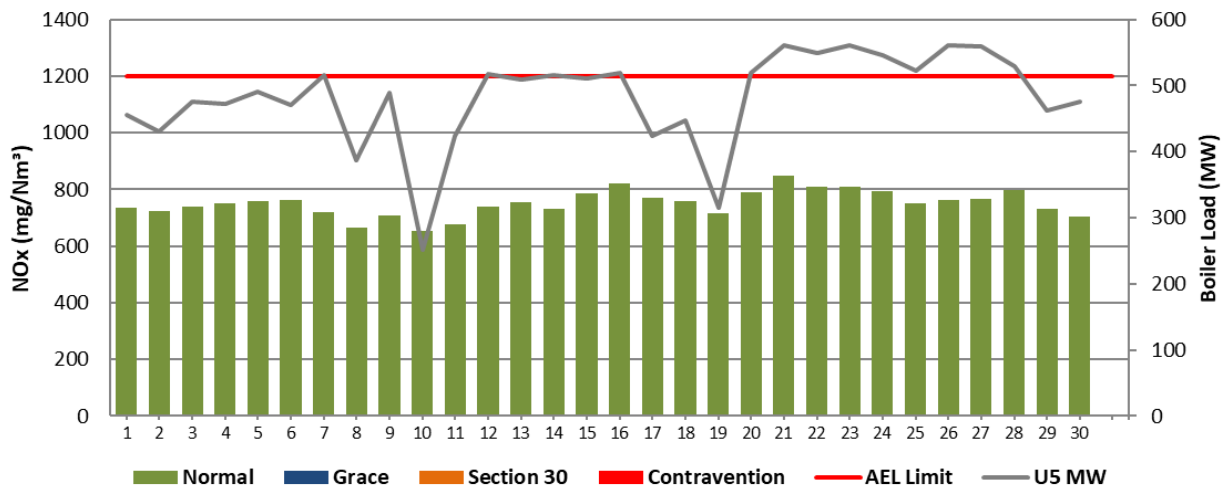
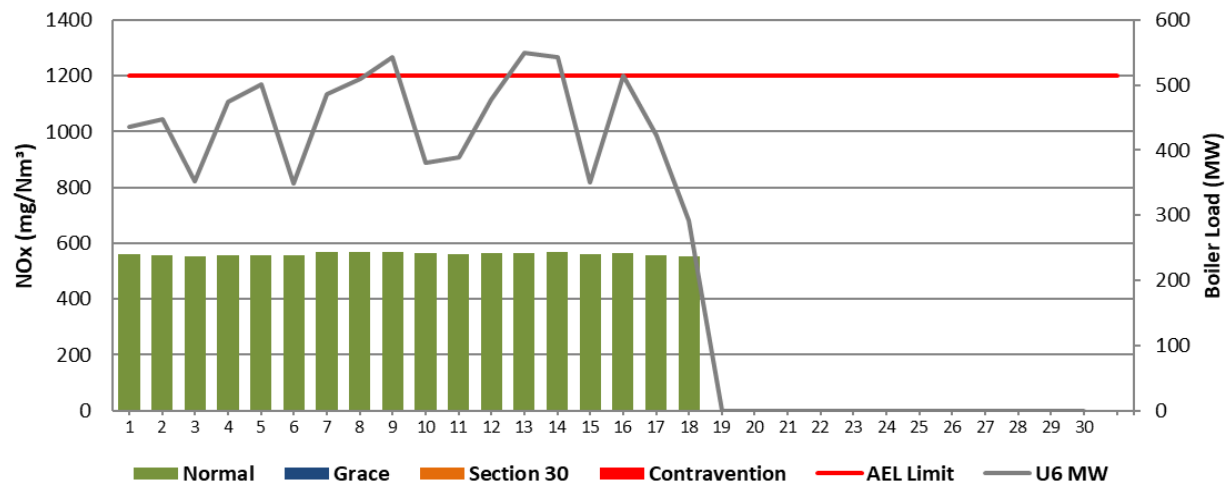


Figure 12: Matla Unit 6 NOx Emissions - November 2024



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Table 5-Monthly Tonnages for 11/2024

Associated Unit/Stack	PM	SO <sub>2</sub>	NO <sub>2</sub>
Unit 1	356.0	1 350.2	553.9
Unit 2	618.7	2 579.8	1 047.0
Unit 3	13.1	246.5	109.3
Unit 4	188.2	3 539.1	1 253.8
Unit 5	90.0	3 059.0	1 201.9
Unit 6	136.6	2 429.3	617.7
SUM	1 402.6	13 203.8	4 783.6

Table 6-Monthly Averages Concentration for 11/2024 in mg/Nm<sup>3</sup>

Associated Unit/Stack	PM	SO <sub>2</sub>	NO <sub>2</sub>
South Stack	316.7	1 203.7	493.8
Unit 4	97.4	1 842.1	651.6
Unit 5	56.1	1 915.6	751.1
Unit 6	116.5	2 195.9	560.9

## 6. Continuous Emissions Monitoring System (CEMS)

Table 7- Periods during which was inoperative/malfunctioning.

Date	CEMS status	Comments

Table 8-CEMS Monitor Reliability Percentage

Associated Unit/Stack	PM	SO <sub>2</sub>	NO <sub>2</sub>	O <sub>2</sub>
South Stack	79.4	-	-	-
Unit 4	98.8	-	-	-
Unit 5	99.6	-	-	-
Unit 6	100.0	-	-	-

Note: Parallel tests averages were used for the purpose of accurate reporting of the gases. The station is in a process of sourcing some of components for the gas monitors such Lenses, Zirconium cells for O<sub>2</sub> and Heater gaskets to improve the Monitor reliability and CO<sub>2</sub>+O<sub>2</sub> relationship hence the Monitor reliability is not reported on the table above .

South stack PM was affected by high emissions that led to maxing out of monitor and mostly during the tests like valve floating conducted on 3 after general overhaul.

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## 7. CEMS Calibration and Equipment Used for Calibration

Calibration certificates to be made available upon request.

## 8. Validity of Correlation and Parallel Test

Table 9-Validity of Correlation and Parallel Test.

Associated Unit/Stack	Correlation Test (PM)	Parallel Test (NO <sub>2</sub> , CO <sub>2</sub> , O <sub>2</sub> , SO <sub>2</sub> )
South Stack	Invalid Since 31 August 2024, Target completion Date for the Test is 31 January 2025 . Delayed due to poor emissions performance on South Stack Units .	Valid until 30 October 2025
Unit 4	Valid until 30 July 2025	Valid until 30 April 2025
Unit 5	Valid Until 25 August 2026	Valid until 30 April 2025
Unit 6	Valid until 02 August 2026	Valid until 30 June 2025

## 9. Complaint Register

Table 10-Complaints for the month of 11/2024

Source Code/ Name	Air pollution complaints received	Calculation of Impacts/ emissions associated with the incident	Date of complaint and date of response by the license holder	Action taken to resolve the complaint	Date when the action was implemented.
N/A	N/A	N/A	N/A	N/A	N/A

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