

	Monthly Report	Matla Power Station
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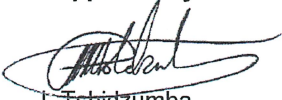
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Date: 28/10/2024	Date: 28/10/2024	Date: 28/10/2024	Date: 28/10/2024

# Matla Power Station Monthly Emissions Report

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## 1. Introduction

### MATLA POWER STATION MONTHLY EMISSIONS REPORT FOR THE MONTH OF SEPTEMBER 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 SEPTEMBER 2024 only.

## 2. Raw Materials and Products

Table 1- Quantity of Raw Materials and Products Consumption in 09/2024

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption – 09/2024
	Coal	Tons/month	1 475 000	832 580.00
	Fuel Oil	Tons/month	3 500	313.89
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate in Month of 09/2024
	Energy	GWh	2 745	1511
	Ash Emitted	Tons/month	471 000	1783.7

## 3. Abatement Technology

Table 2-Abatement Equipment Control Technology Efficiency in 09/2024

Associated Unit/Stack	Technology Type	Efficiency	ESP Utilization
South Stack (Unit 1, 2 and 3)	Electrostatic Precipitators (ESP)	98.557%	100%
	Electrostatic Precipitators (ESP)		
	Electrostatic Precipitators (ESP)		
Unit 4	Electrostatic Precipitators (ESP)	99.217%	100%
Unit 5	Electrostatic Precipitators (ESP)	99.784%	100%
Unit 6	Electrostatic Precipitators (ESP)	99.508%	100%

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#### 4. Energy Source Characteristics

Table 3: Energy Source Material Characteristics for 09/2024

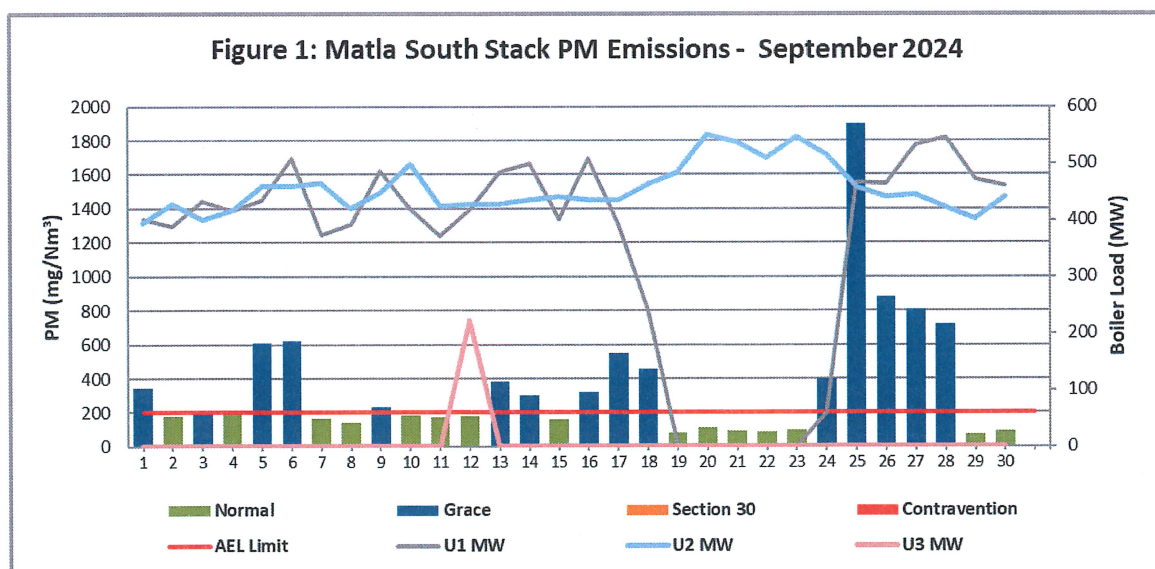
Characteristic	Stipulated Range (% by weight on a dry basis)	Monthly Average Content (% by weight on a dry basis)
<b>Coal</b>		
<b>Sulphur Content</b>	0.8-1.1	1.00
<b>Ash Content</b>	21-40	28.01

#### 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



The exceedance 24 September 2024 to 28 September 2024 are within the grace period, Unit 1 was put on load on 24-Sep-24 23:45:00 and was from an opportunity outage for fixing the Electrostatic Precipitator Fields, this was a cold light up. Unit 1 tripped on 2024/09/26 02:40 and was on load on 26-Sep-24 06:55:00, hence the exceedance falls within Grace period, since they were due cold and Hot light ups as well as shutdowns.

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Figure 2: Matla Unit 4 PM Emissions - September 2024

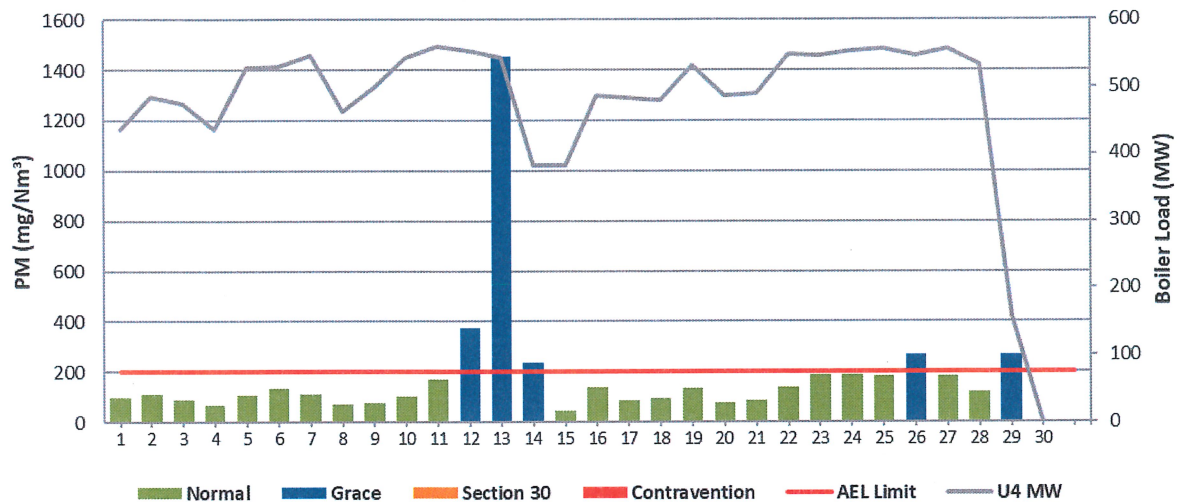
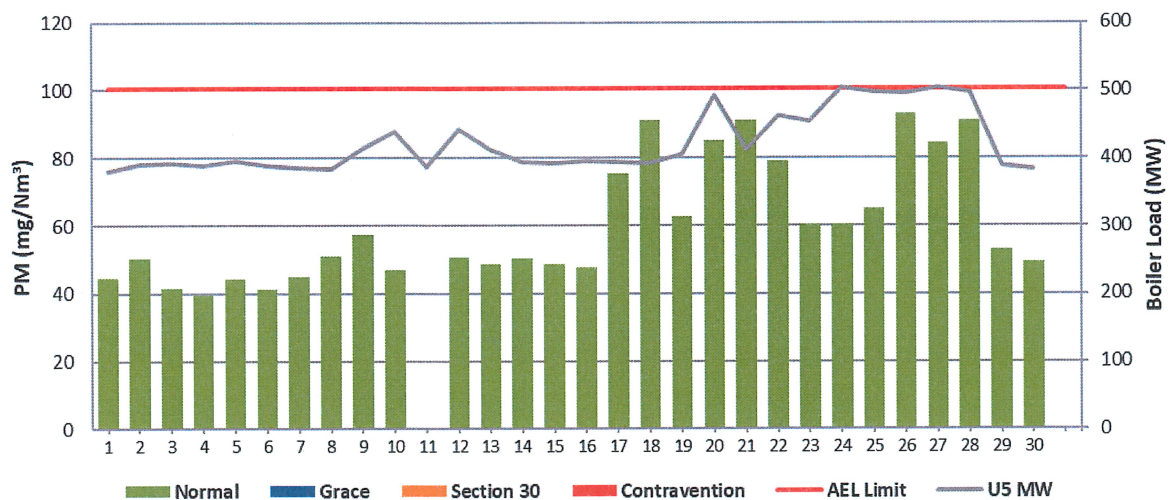


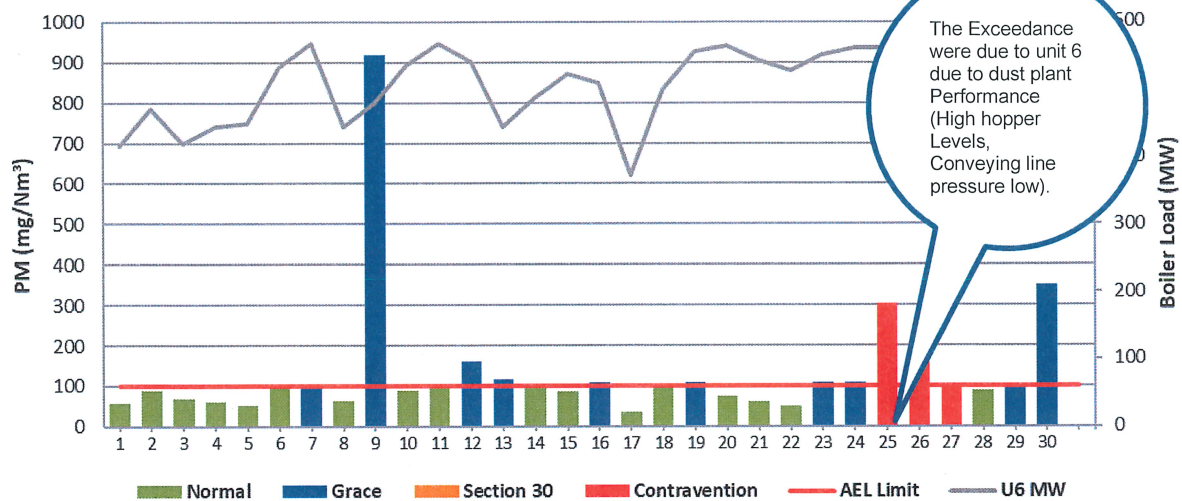
Figure 3: Matla Unit 5 PM Emissions - September 2024

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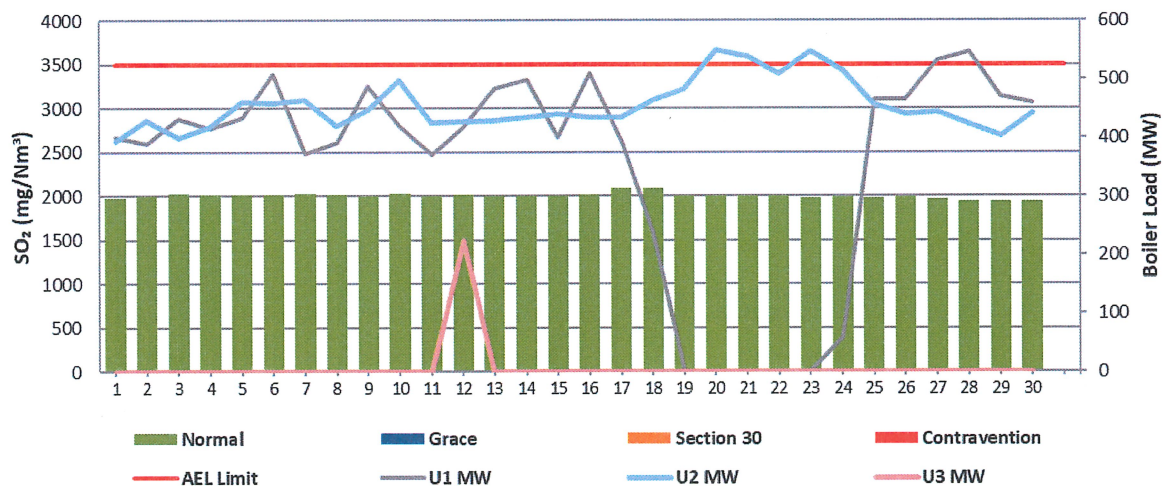
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Figure 4: Matla Unit 6 PM Emissions - September 2024



## 5.2 Sox Daily Averages

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

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

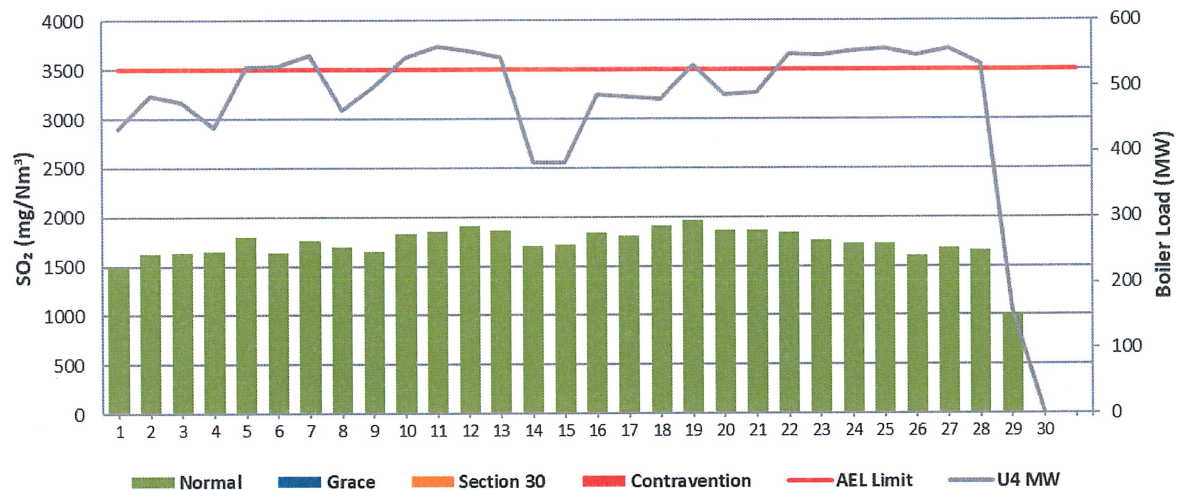
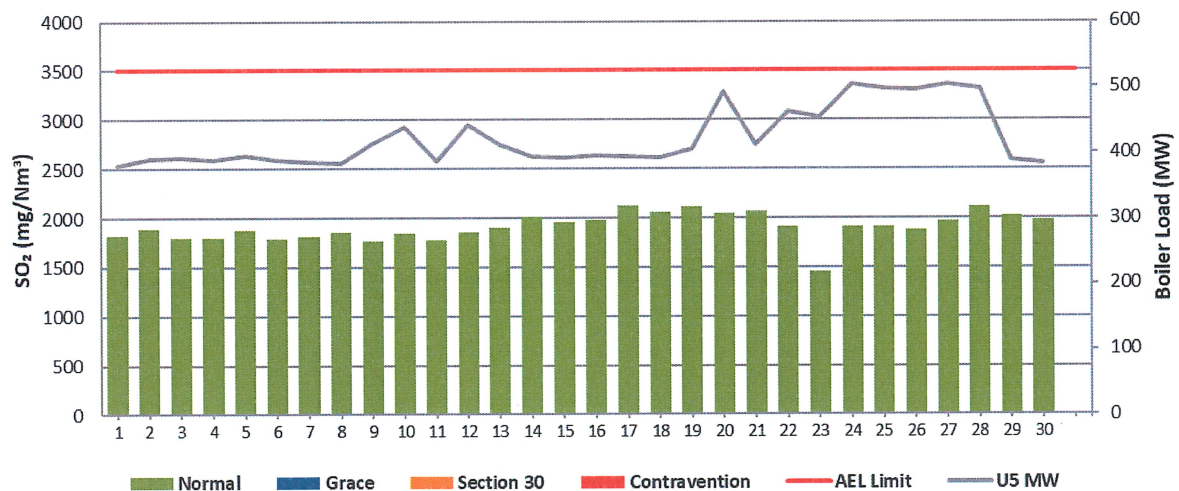


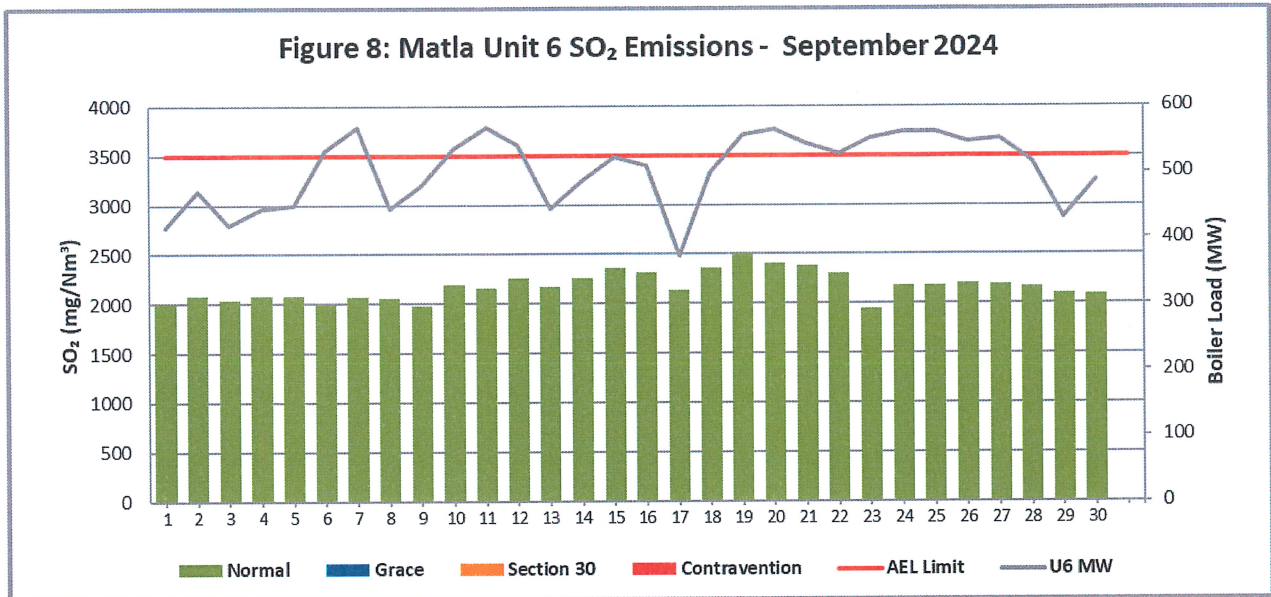
Figure 7: Matla Unit 5 SO<sub>2</sub> Emissions - September 2024



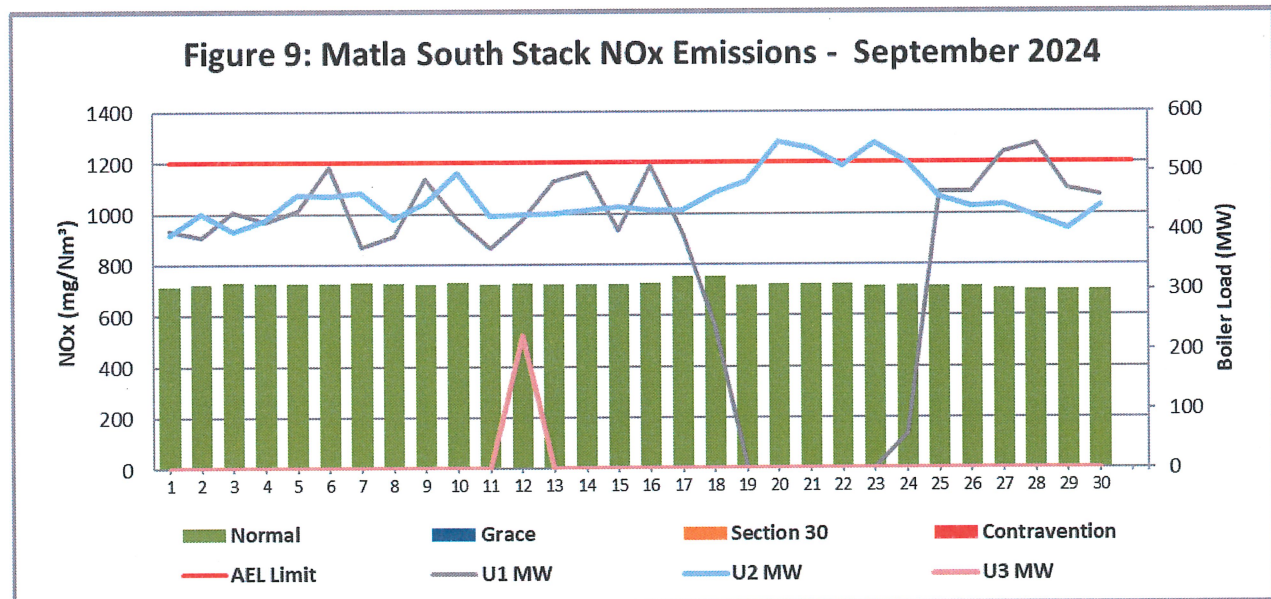
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Figure 8: Matla Unit 6 SO<sub>2</sub> Emissions - September 2024

### 5.3 NO<sub>x</sub> Daily Averages

Figure 9: Matla South Stack NO<sub>x</sub> Emissions - September 2024

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Figure 10: Matla Unit 4 NOx Emissions - September 2024

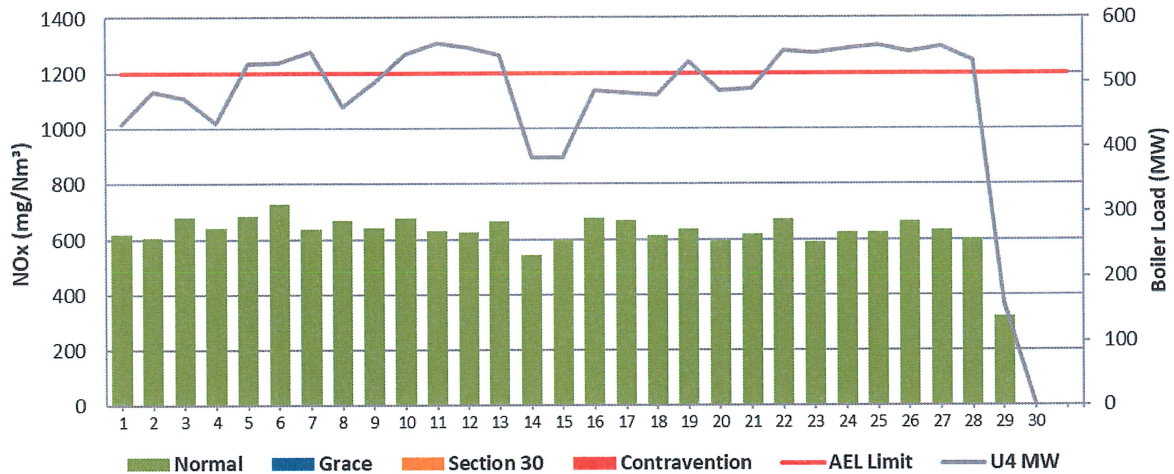
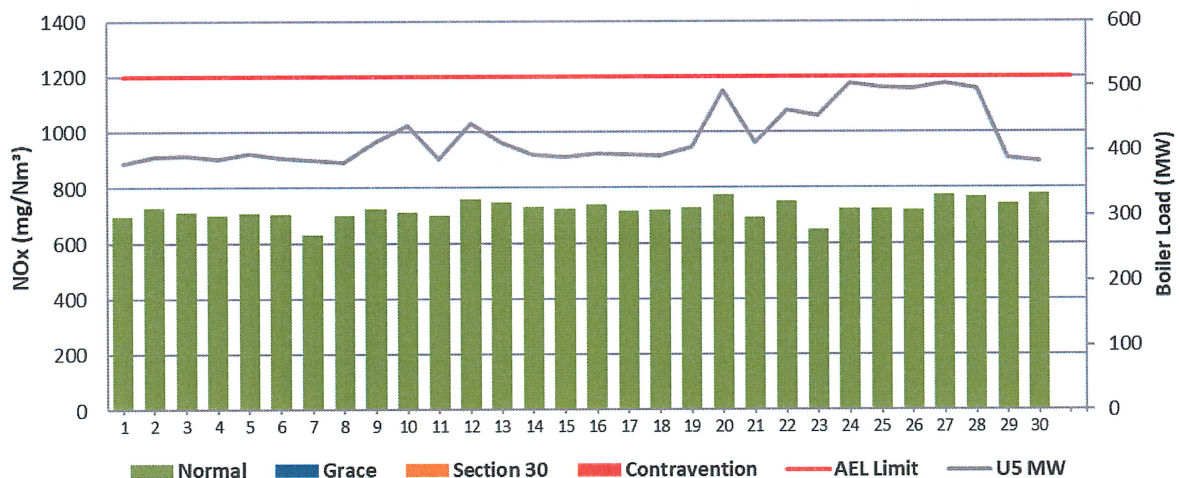


Figure 11: Matla Unit 5 NOx Emissions - September 2024



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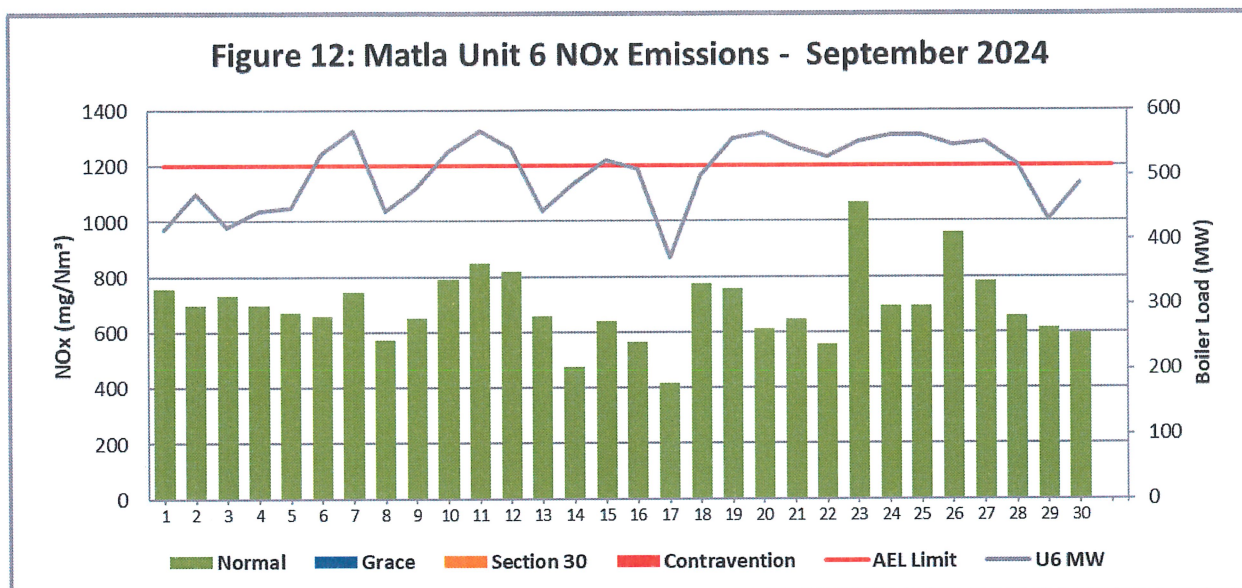


Table 5-Monthly Tonnages for 09/2024

Associated Unit/Stack	PM	SO <sub>2</sub>	NO <sub>2</sub>
Unit 1	246.2	1 558.9	562.2
Unit 2	876.9	4 883.0	1 760.9
Unit 3	0.0	0.0	0.0
Unit 4	346.1	3 213.8	1 169.7
Unit 5	89.2	2 786.6	1 054.1
Unit 6	230.4	4 581.5	1 469.6
SUM	1 788.8	17 023.9	6 016.5

Table 6-Monthly Averages Concentration for 09/2024 in mg/Nm<sup>3</sup>

Associated Unit/Stack	PM	SO <sub>2</sub>	NO <sub>2</sub>
South Stack	358.0	2 003.3	722.4
Unit 4	186.0	1 728.5	627.4
Unit 5	60.3	1 908.4	722.3
Unit 6	107.5	2 176.2	693.4

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## 6. Continuous Emissions Monitoring System (CEMS)

Table 7- Periods during which was inoperative/malfunctioning.

Date	CEMS status	Comments
22 September 2024 to 25 September 2024	Malfunctioning	<p>The 11KV sub-station west board breaker tripped on master trip and earth fault. The power cut has affected Unit 4, 5 &amp; 6 leading to loss of power on the CEMS during this period of the 22nd of September 2024 to 23rd of September 2024 at 13:30.</p> <p>On the 24th of September 2024 at 00:35, the Station lost Unit 4 lighting board which affected the CEMS at Unit 4, 5 &amp; 6. However, the power was restored on the 25th of September 2024 at around 06:30.</p> <p>Upon restoration of power on the 25th of September 2024, it was discovered that the Dust Monitor Main Control Unit (MCU) for Unit 6 was damaged, rendering the station unable to monitor the emission performance of Unit 6. It is important to note that the station does not have an Uninterrupted Power Supply (UPS) system for the CEMS system therefore, the lost data cannot be restored.</p> <p>The Matla Power station Particulate matter Emissions from Unit 4, 5 and 6 from the 22(20:25) to 25(16:00) September 2024 were calculated using the monthly Average from the Emission Reporting Tool.</p> <p>The gaseous Emissions during the Period of Power Failure were also calculated using the Monthly Average from the Emission Reporting tool.</p>

Table 8-CEMS Monitor Reliability Percentage

Associated Unit/Stack	PM	SO <sub>2</sub>	NO <sub>2</sub>	O <sub>2</sub>
South Stack	90.5	100.0	100.0	100.0
Unit 4	88.8	86.8	86.9	100.0
Unit 5	90.2	87.2	87.4	100.0
Unit 6	85.4	87.2	87.5	100.0

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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 30 October 2024	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 09/2024

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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