Eskom	Monthly Report	Matla Power Station

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1. Introduction

MATLA POWER STATION MONTHLY EMISSIONS REPORT FOR THE MONTH OF JULY 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 July 2024 only.

2. Raw Materials and Products

Table 1- Quantity of Raw Materials and Products Consumption in 07/2024

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Consumption – 07/2024
	Coal	Tons/month	*1 475 000*	902 885
	Fuel Oil	Tons/month	*3 500*	962
Production Rates	**Product/ By-Product Name**	**Unit**	**Maximum Production Capacity Permitted (Quantity)**	Production Rate in Month of 07/2024
	Energy	GWh	*2 745*	1 596
	Ash Emitted	Tons/month	*471 000*	261 566

3. Abatement Technology

Table 2-Abatement Equipment Control Technology Efficiency in 07/2024

Associated Unit/Stack	Technology Type	Efficiency	ESP Utilization
South Stack (Unit 1, 2 and 3)	Electrostatic Precipitators (ESP)	99.225%	100%
	Electrostatic Precipitators (ESP)		
	Electrostatic Precipitators (ESP)		
Unit 4	Electrostatic Precipitators (ESP)	99.496%	100%
Unit 5	Electrostatic Precipitators (ESP)	99.710%	100%
Unit 6	Electrostatic Precipitators (ESP)	99.812%	100%

4. Energy Source Characteristics

Table 3: Energy Source Material Characteristics for 07/2024

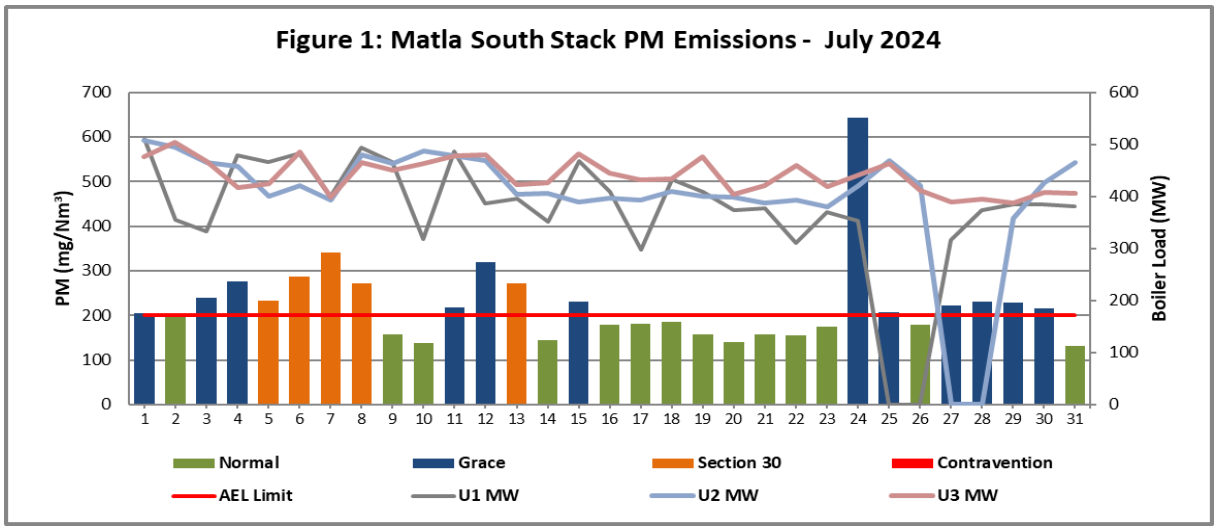
Characteristic	Stipulated Range (% by weight on a dry basis)	Monthly Average Content (% by weight on a dry basis)
	Coal	
Sulphur Content	0.8-1.1	1.00
Ash Content	21-40	28.97

5. Emissions Reporting

Table 4- Emission Limits are as follows:

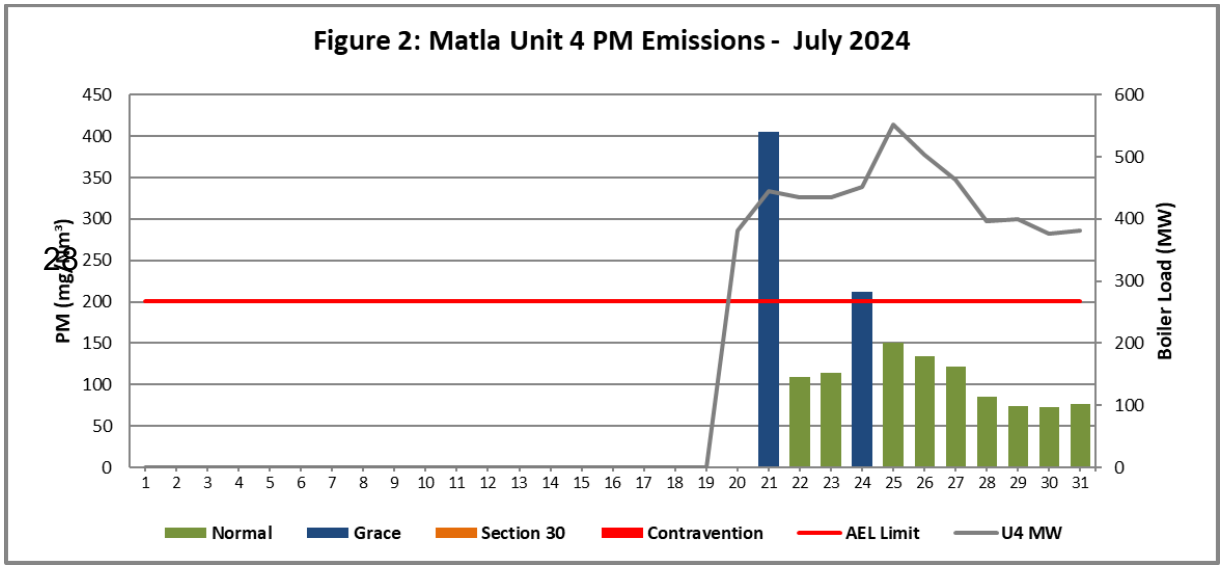
SO_2 Monthly = 3500 mg/Nm^3	Dust Daily= 200 mg/Nm^3 (South Stack and Unit 4) Dust Daily= 100 mg/Nm^3(Unit 5 and 6)	NO_2 Daily= 1200 mg/Nm^3

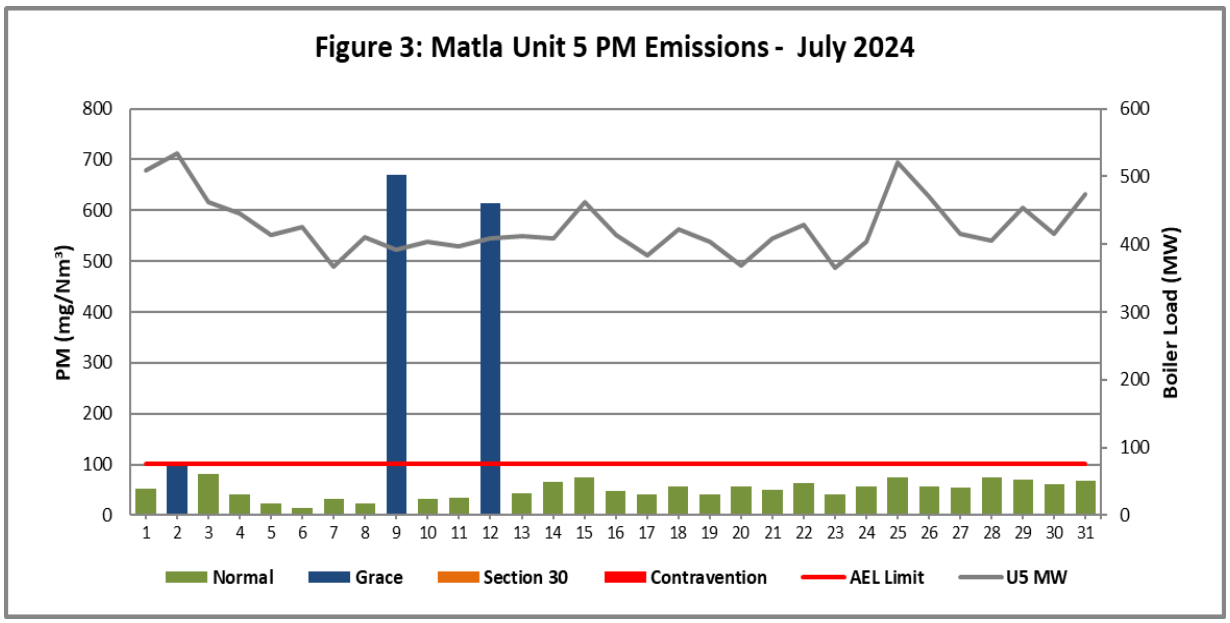
5.1 PM Daily Averages

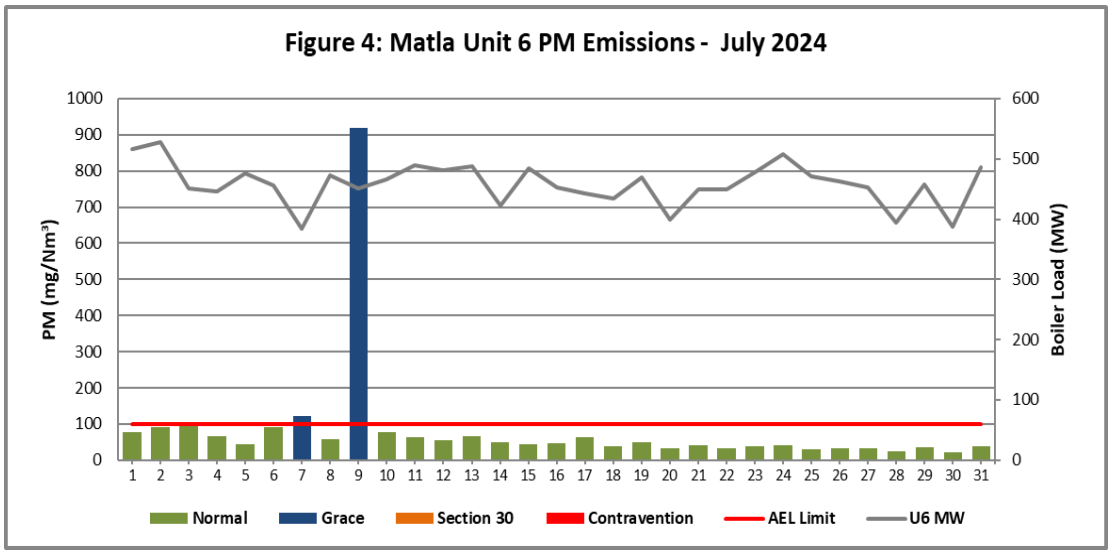


South Stack at Matla Power Station incurred PM emissions exceedances which exceeded the 48-hour upset conditions and resulted in Section 30 incident due to unit 1 post outage Defects. The post outage defects resulted into Precip field Poor performance. (RTS of unit 1 from 24 June 2024 -17:05). This poor Performance was not expected because the ESP Unit 1 was upgraded as part of a refurbishment project, however the ESP returned with several internal defects. The incident was reported to the department as Section 30 and a report was also submitted.

The exceedance from 27 July 2024 to 30 July 2024 were due to the light up activities at unit 1 and 2. Unit 1 was on cold light up and the unit 1 was on load on 27-Jul-2024 05:10:00 and unit 2 hot light up and the unit was on load on 29-July-2024 12:05:00, hence the exceedances fall within the grace period.







5.2 Sox Daily Averages

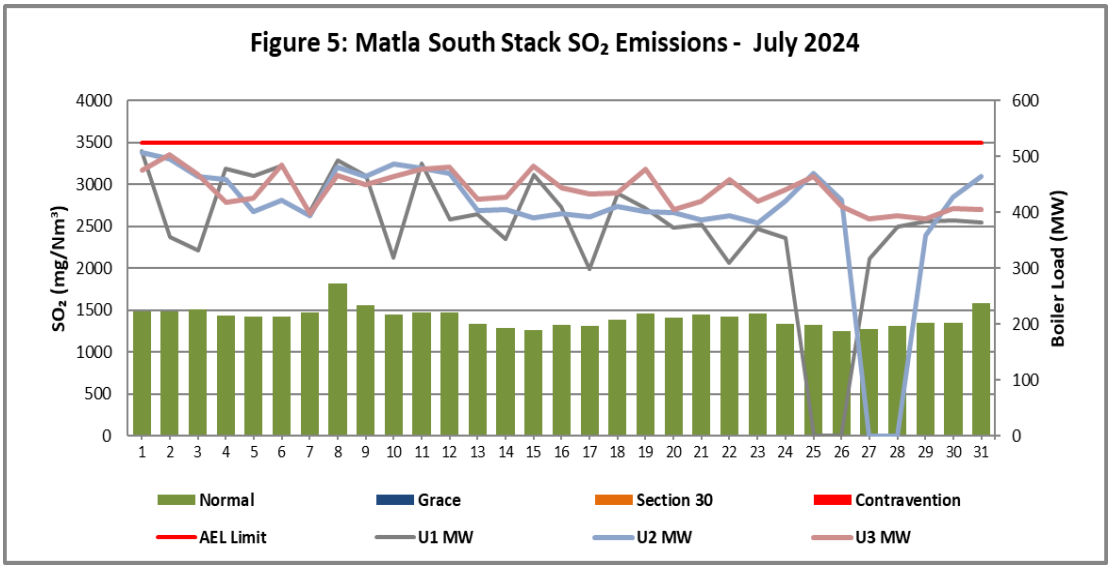


Figure 6: Matla Unit 4 SO_2 Emissions - July 2024

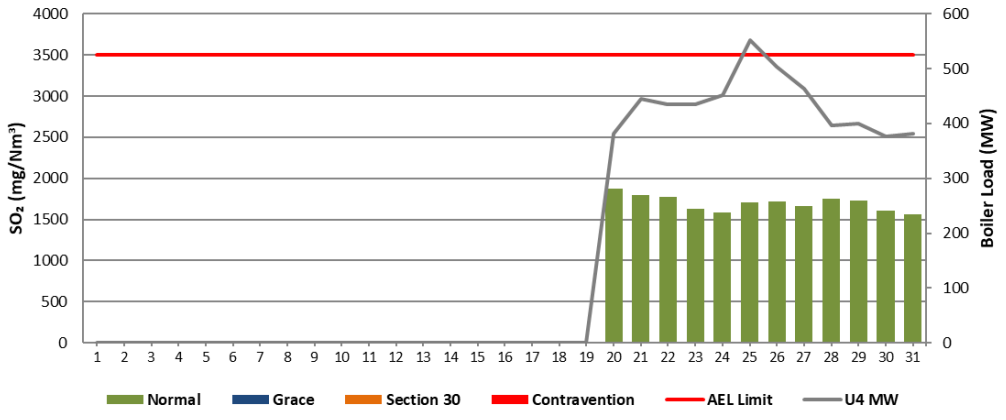


Figure 7: Matla Unit 5 SO_2 Emissions - July 2024

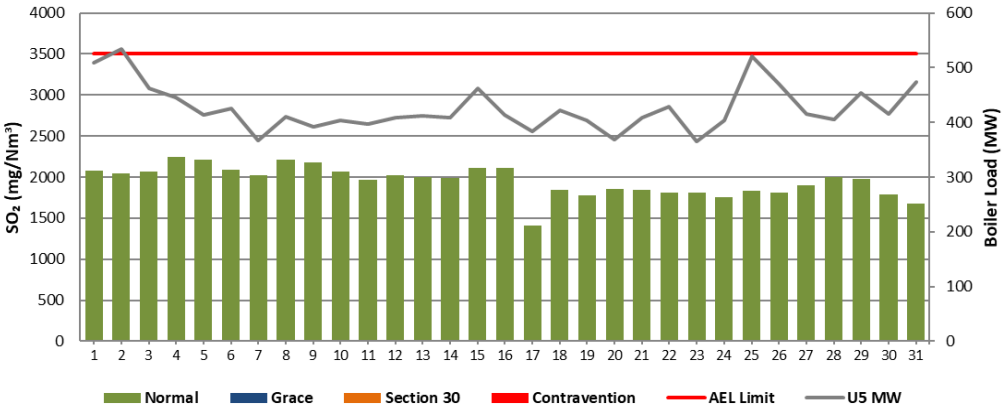
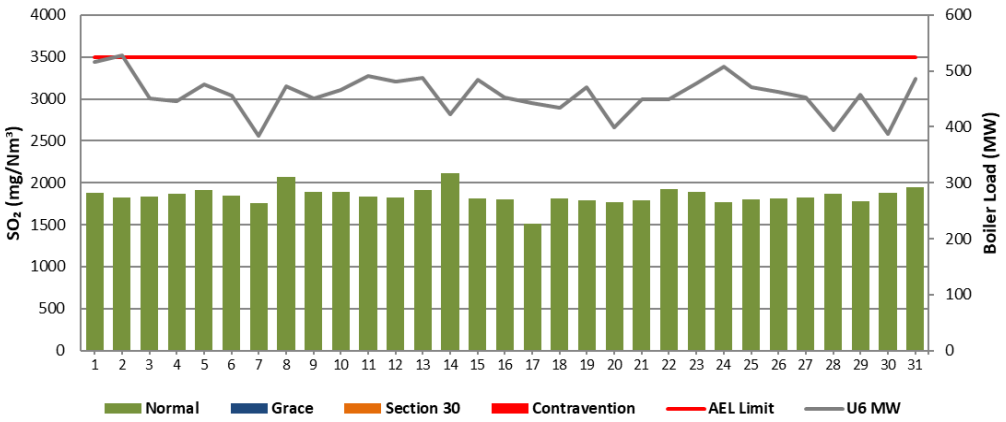
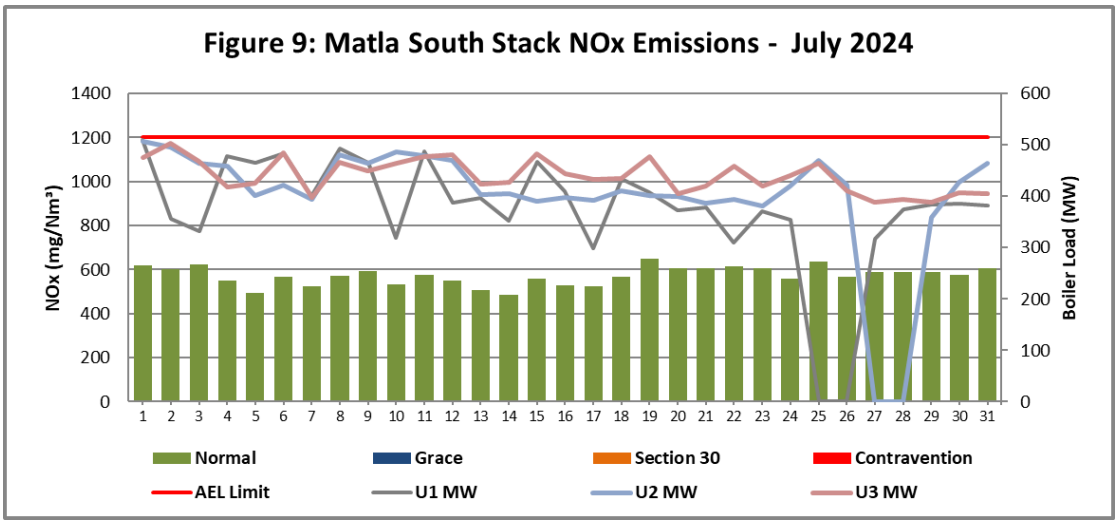
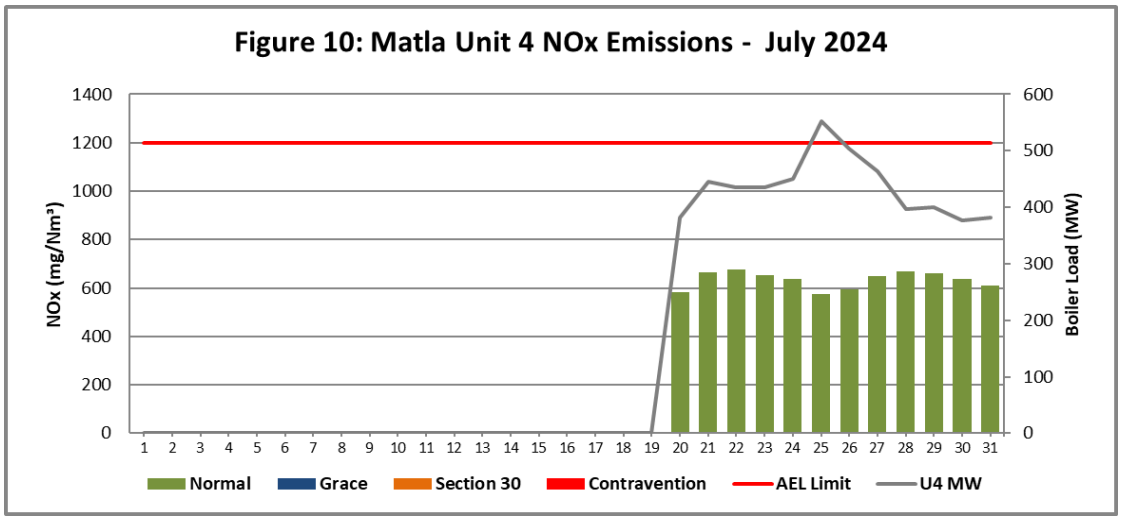


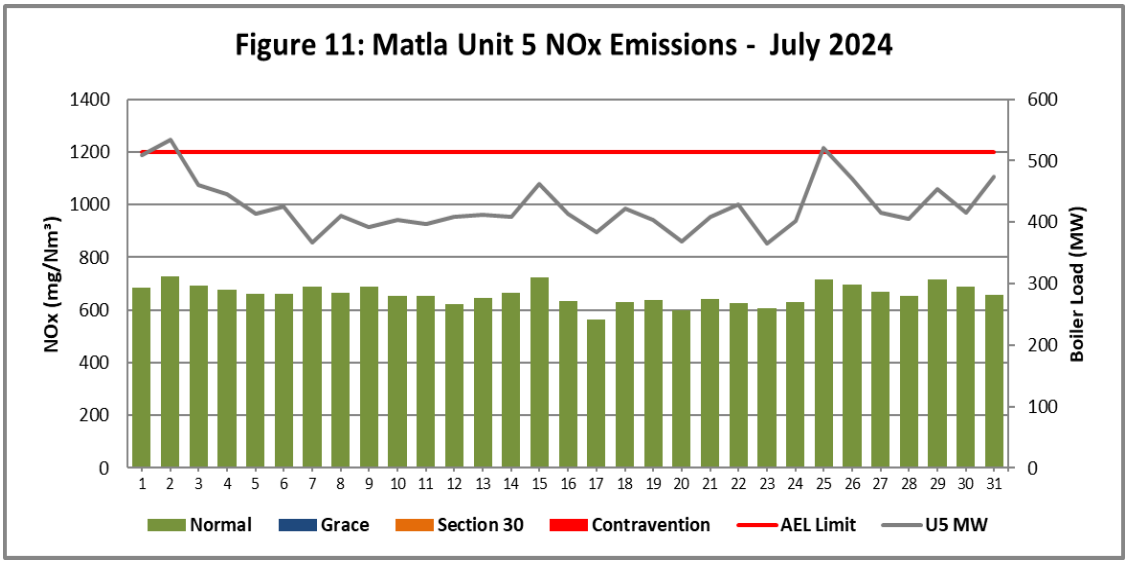
Figure 8: Matla Unit 6 SO_2 Emissions - July 2024



5.3 NOx Daily Averages







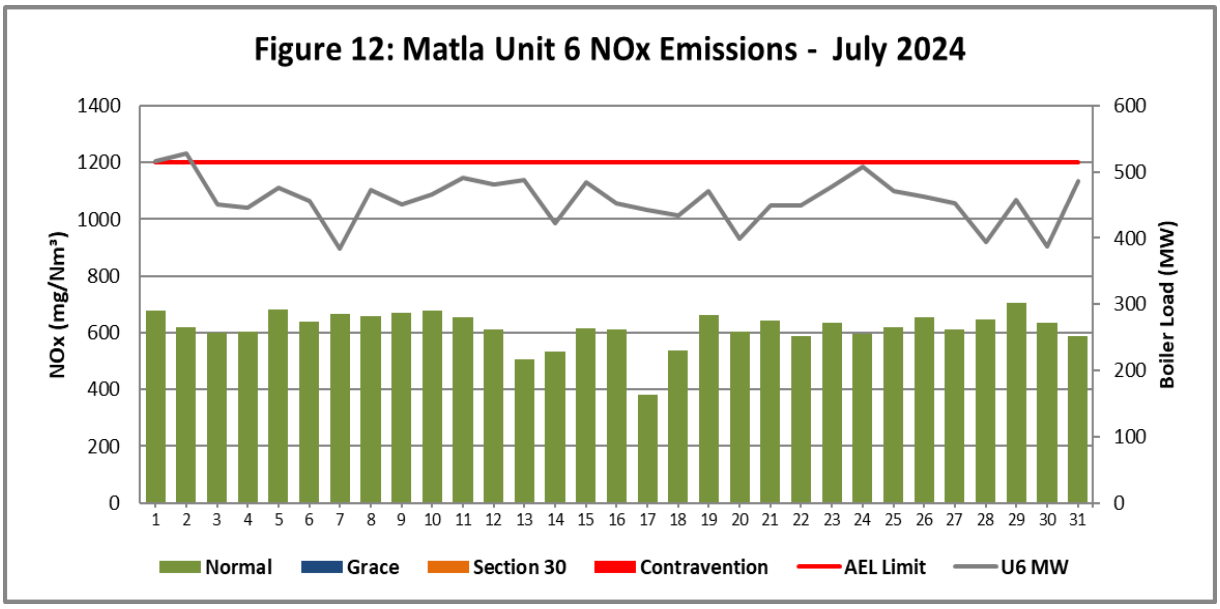


Table 5-Monthly Tonnages for 07/2024

Associated Unit/Stack	PM	SO_2	NO_2
Unit 1	192.0	1 179.2	467.4
Unit 2	478.3	3 038.6	1 215.3
Unit 3	334.2	2 100.1	850.0
Unit 4	83.1	1 021.5	386.8
Unit 5	130.0	2 834.1	961.8
Unit 6	83.5	2 883.2	962.7
SUM	1 301.0	13 056.7	4 844.1

Table 6-Monthly Averages Concentration for 07/2024 in mg/Nm^3

Associated Unit/Stack	PM	SO_2	NO_2
South Stack	225.6	1 416.8	573.8
Unit 4	141.6	1 699.8	634.3
Unit 5	90.9	1 951.3	660.7
Unit 6	53.3	1 846.1	616.7

6. Continuous Emissions Monitoring System (CEMS)

Table 7- Periods during which was inoperative/malfunctioning.

Date	CEMS status	Comments
16 July 2024 to 08 August 2024	Malfunctioning	Matla Unit 5 Dust Monitor was malfunctioning from 16 July 2024 to 08 August 2024. The monitor was changed on the 25th of July 2024; however, the new install monitor was still malfunctioning. Upon investigation it was found that that when monitor shutter failed, the shutter seal slightly peeled off (tear off). The seal slightly protruded into monitor measuring path and this seal was seen by the monitor as constant dust. This seal was removed to clear the measuring path and restarted the monitor. A Spot check Measurement was done on the 06/08/2024 and the results of the spot check were back fitted to the July 2024 data.

Table 8-CEMS Monitor Reliability Percentage

Associated Unit/Stack	PM	SO_2	NO_2	O_2
South Stack	93.5	99.2	99.2	99.7
Unit 4	99.6	99.4	99.0	99.4
Unit 5	89.9	99.3	99.2	99.9
Unit 6	100.0	98.9	98.5	99.9

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_2, CO_2, O_2, SO_2)
South Stack	Valid until 30 August 2024	Valid until 30 October 2025
Unit 4	Valid until 30 July 2025	Valid until 30 April 2025
Unit 5	Invalid – Spot measurement was done 06/08/2024 and Valid for 3 months	Valid until 30 April 2025
Unit 6	Invalid- Correlation test conducted in July 2024, awaiting the report.	Valid until 30 June 2025

9. Complaint Register

Table 10-Complaints for the month of 07/2024

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