



Generation

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Attention:

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AND

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MATLA POWER STATION

Atmospheric Emission License 17/4/AEL/MP312/11/14



BOILER ENGINEERING MANAGER



ENVIRONMENTAL MANAGER



ENGINEERING MANAGER

25/06/2024

DATE

2024/06/25

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MATLA POWER STATION MONTHLY EMISSIONS REPORT

Atmospheric Emission License 17/4/AEL/MP312/11/14



1 RAW MATERIALS AND PRODUCTS

Raw Materials and Products	Raw Material Type	Units	Max Permitted Consumption Rate	Consumption Rate May-2024
	Coal	Tons	1 475 000	835 558
	Fuel Oil	Tons	3 500	638
Production Rates	Product / By-Product Name	Units	Max Production Capacity Permitted	Indicative Production Rate May-2024
	Energy	GWh	2 745	1 484
	Ash	Tons	471 000	248 913
	RE PM	kg/MWh	not specified	0.773

Note: Maximum energy rate is as per the maximum capacity stated in the AEL: [3 690 MW] x 24 hrs x days in Month/1000 to convert to GWh

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.8-1.1	1.00
Ash Content	%	21-40	29.79

3 EMISSION LIMITS (mg/Nm³)

Associated Unit/Stack	PM	SO ₂	NO
South	200	3500	1200
Unit 4	200	3500	1200
Unit 5	100	3500	1200
Unit 6	100	3500	1200

Note: NOx emissions is measured as NO in PPM. Final NOx value is expressed as total NO₂

4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency May-2024
South	<i>Electro Static Precipators (ESP)</i>	<i>99.453%</i>
Unit 4	<i>Electro Static Precipators (ESP)</i>	<i>99.045%</i>
Unit 5	<i>Electro Static Precipators (ESP)</i>	<i>99.853%</i>
Unit 6	<i>Electro Static Precipators (ESP)</i>	<i>99.662%</i>

Note: Abatement plant does not have bypass mode operation, hence plant 100% Utilised.

5 DATA RELIABILITY (%)

Associated Unit/Stack	PM	SO ₂	NO	O ₂
South	<i>99.5</i>	<i>85.2</i>	<i>84.3</i>	<i>85.2</i>
Unit 4	<i>97.1</i>	<i>98.4</i>	<i>98.4</i>	<i>99.9</i>
Unit 5	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Unit 6	<i>99.0</i>	<i>99.6</i>	<i>99.6</i>	<i>100.0</i>

6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of May-2024

Associated Unit/Stack	PM	SO ₂	NOx
Unit 1	0.0	Off	Off
Unit 2	312.2	3 602.9	1 326.5
Unit 3	208.7	2 429.2	884.4
Unit 4	421.9	2 974.4	956.5
Unit 5	63.0	2 591.3	818.2
Unit 6	140.8	2 403.9	730.3
SUM	1 146.6	14 001.6	4 715.9

Table 6.2: Operating days in compliance to PM AEL Limit - May 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
South	27	4	0	0	4	139.4
Unit 4	24	7	0	0	7	244.4
Unit 5	25	2	0	0	2	50.0
Unit 6	19	9	0	0	9	114.3
SUM	95	22	0	0	22	

Table 6.3: Operating days in compliance to SO₂ AEL Limit - May 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm³)
South	31	0	0	0	0	1 628.4
Unit 4	31	0	0	0	0	1 743.2
Unit 5	28	0	0	0	0	2 098.8
Unit 6	29	0	0	0	0	1 863.3
SUM	119	0	0	0	0	

Table 6.4: Operating days in compliance to NO_x AEL Limit - May 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm³)
South	31	0	0	0	0	592.7
Unit 4	31	0	0	0	0	564.4
Unit 5	28	0	0	0	0	658.2
Unit 6	29	0	0	0	0	577.9
SUM	119	0	0	0	0	

Note: NO_x emissions is measured as NO in PPM. Final NO_x value is expressed as total NO₂

Table 6.5: Legend Description

Condition	Colour	Description
Normal		Emissions below Emission Limit Value (ELV)
Grace		Emissions above the ELV during grace period
Section 30		Emissions above ELV during a NEMA S30 incident
Contravention		Emissions above ELV but outside grace or S30 incident conditions

Figure 1: Matla South Stack PM Emissions - May 2024

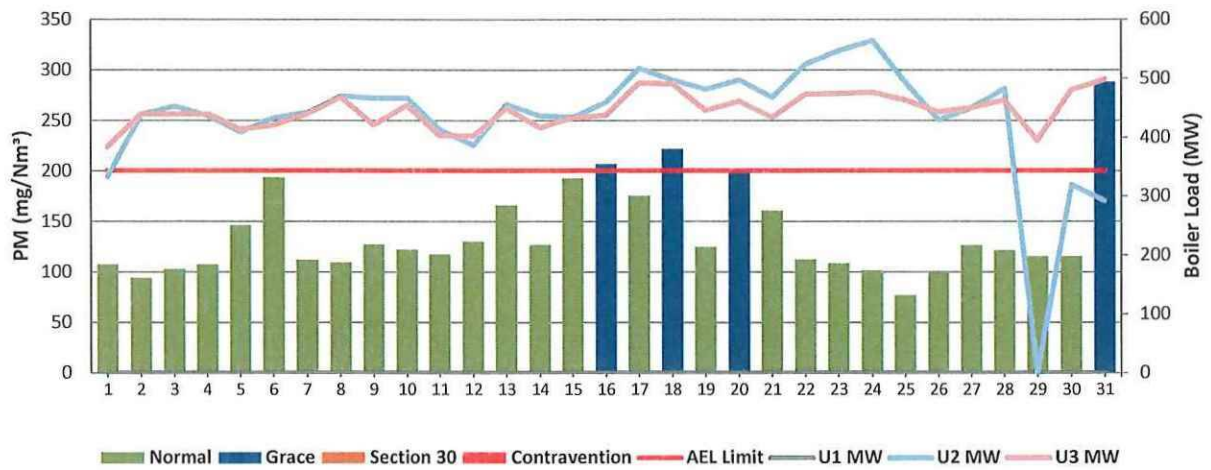


Figure 2: Matla Unit 4 PM Emissions - May 2024

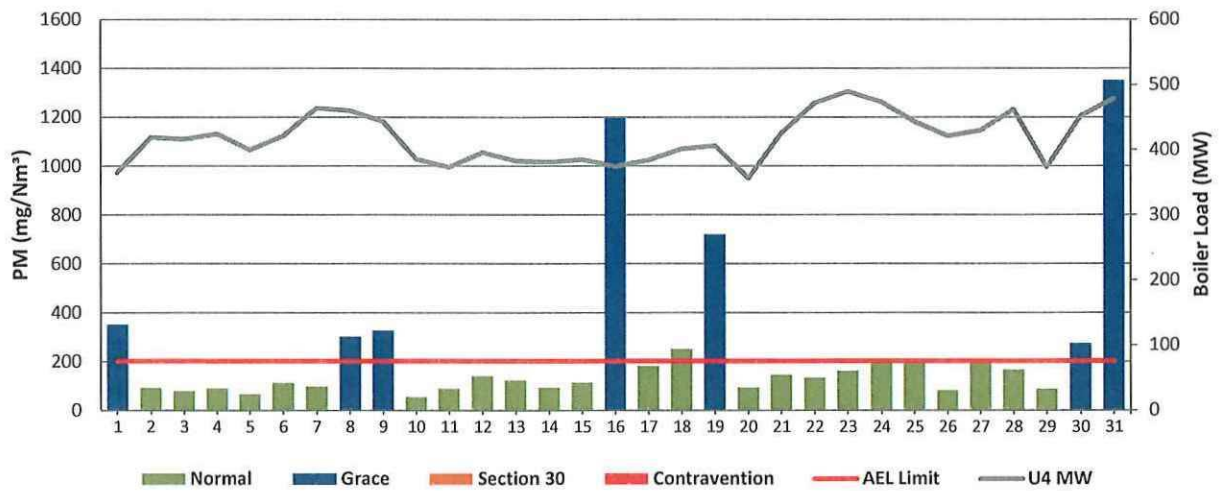


Figure 3: Matla Unit 5 PM Emissions - May 2024

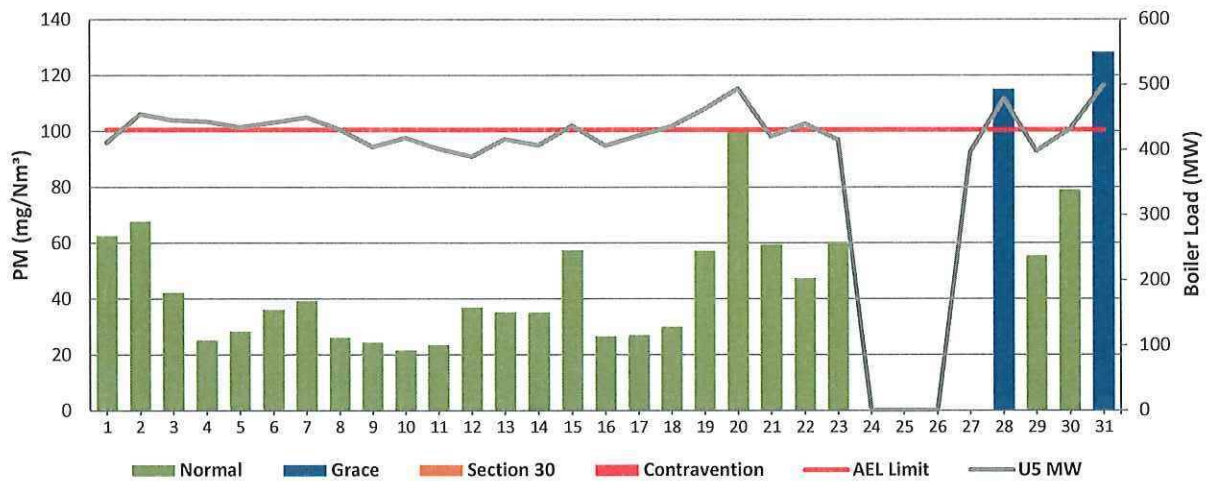


Figure 4: Matla Unit 6 PM Emissions - May 2024

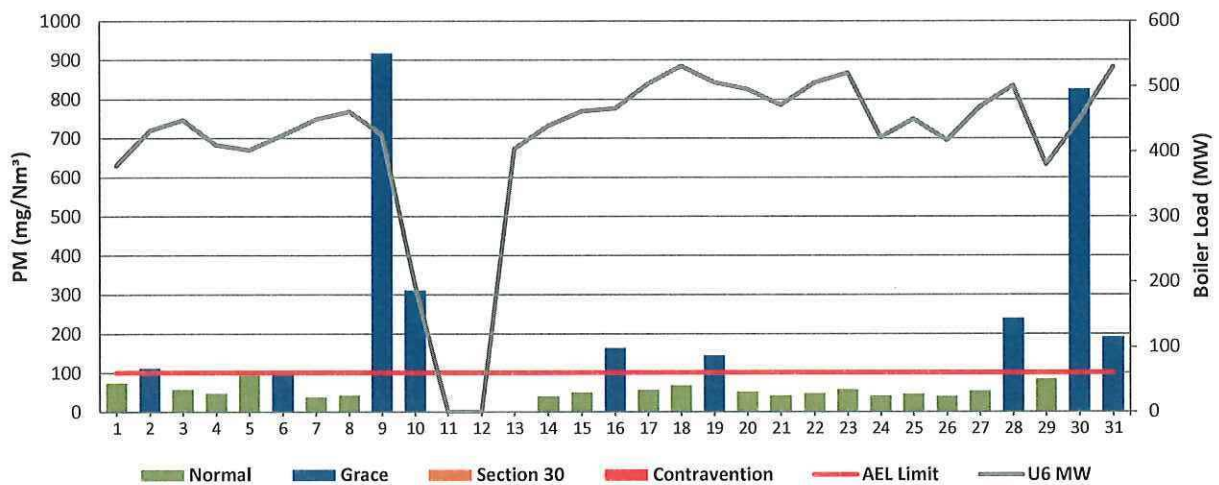


Figure 5: Matla South Stack SO₂ Emissions - May 2024

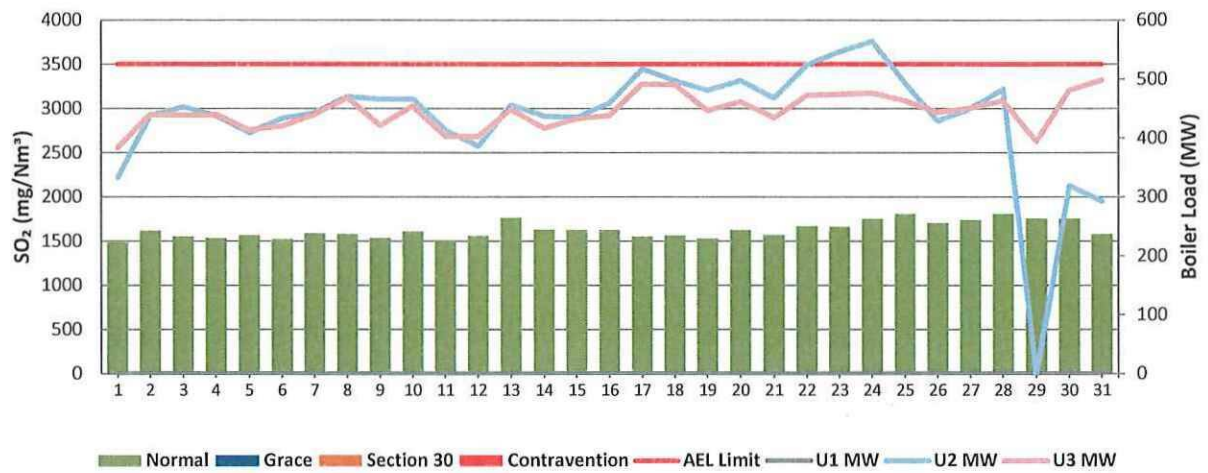


Figure 6: Matla Unit 4 SO₂ Emissions - May 2024

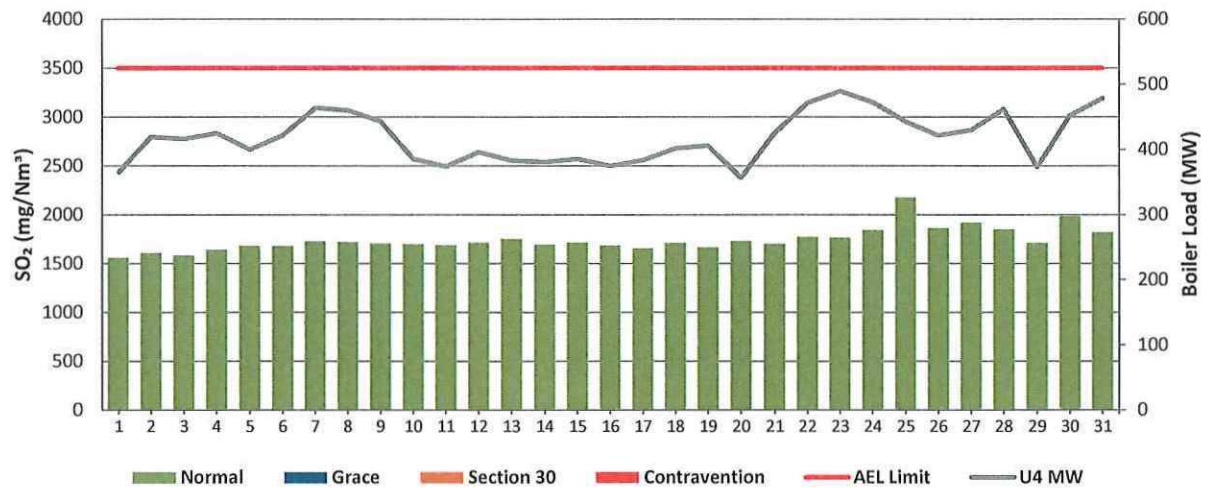


Figure 7: Matla Unit 5 SO₂ Emissions - May 2024

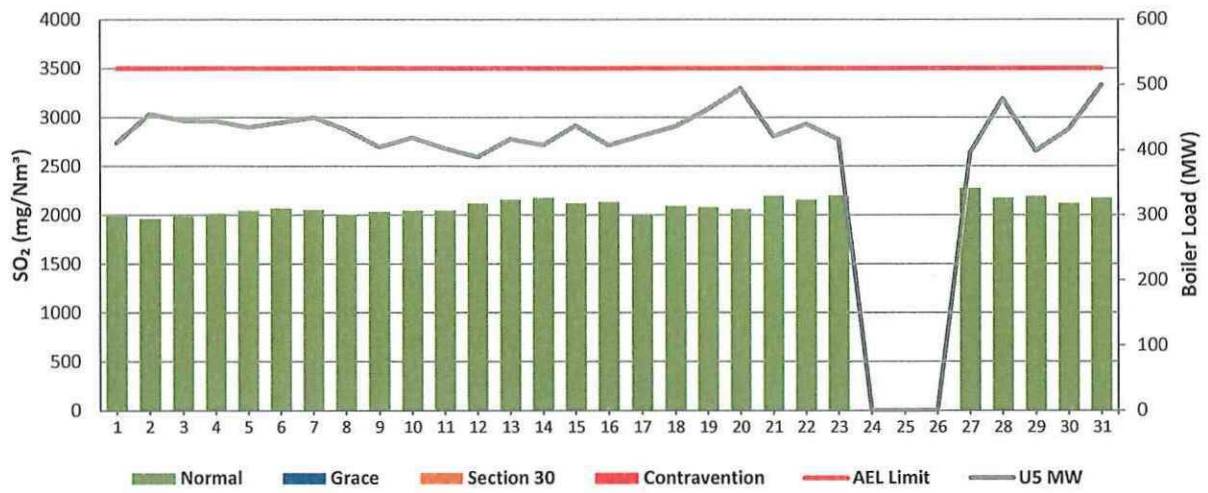


Figure 8: Matla Unit 6 SO₂ Emissions - May 2024

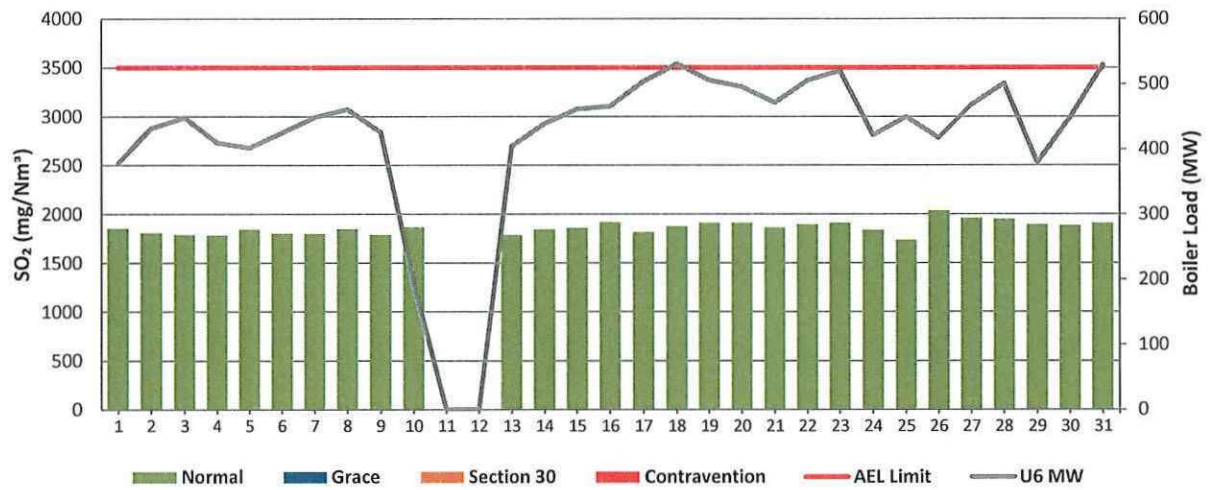


Figure 9: Matla South Stack NOx Emissions - May 2024

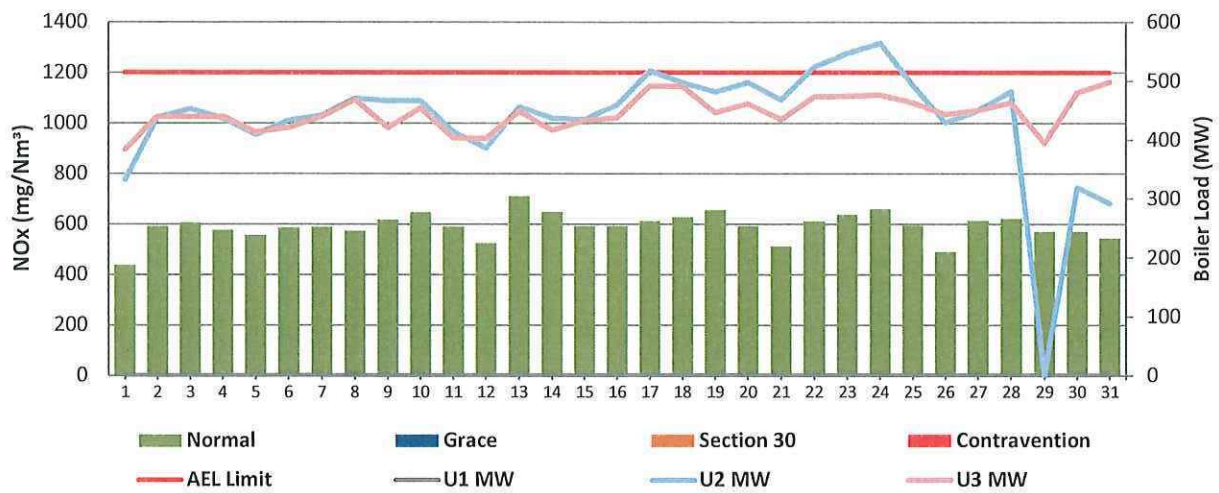


Figure 10: Matla Unit 4 NOx Emissions - May 2024

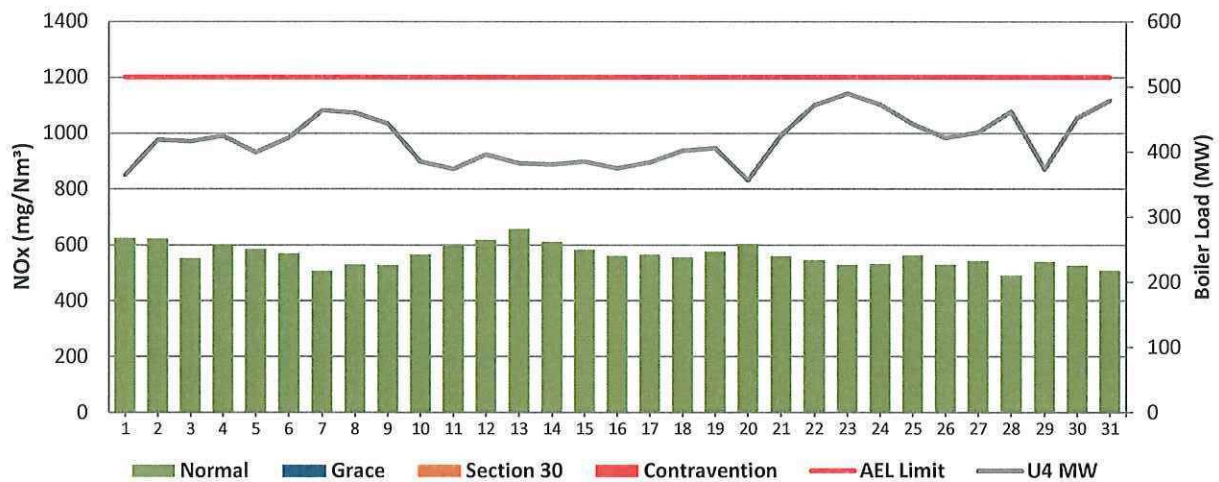


Figure 11: Matla Unit 5 NOx Emissions - May 2024

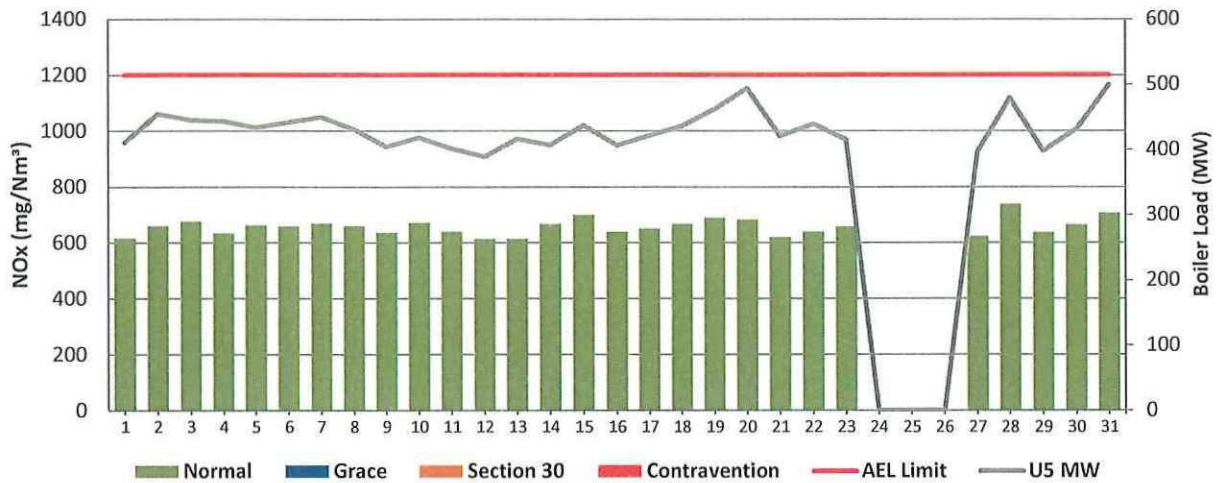
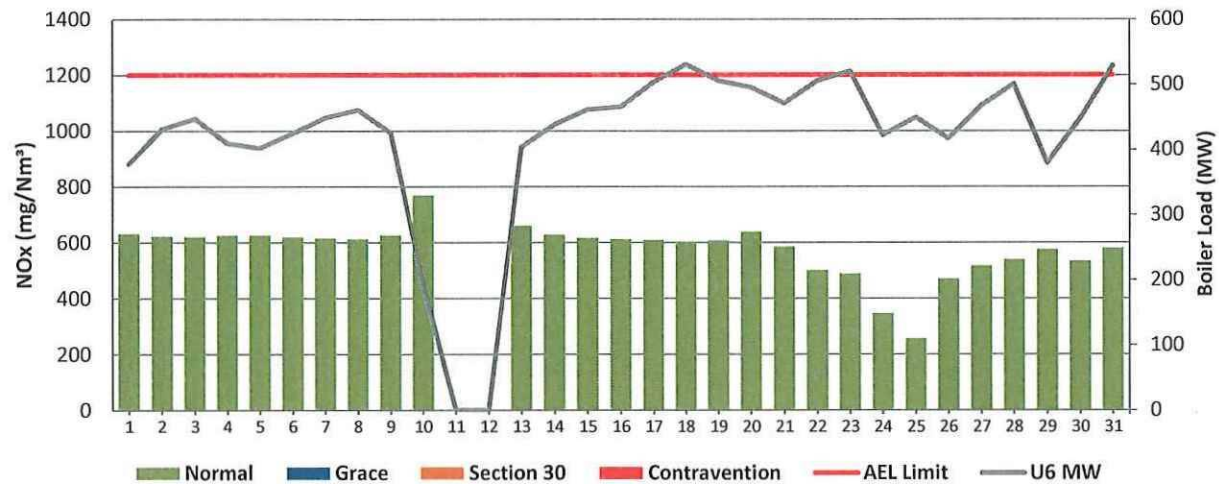


Figure 12: Matla Unit 6 NOx Emissions - May 2024



7 EMERGENCY GENERATION

Table 7. Emergency Generation per unit for the month of May 2024

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Emergency Generation hours declared by national Control						
Emergency Hours declared including hours after stand down						
Hours over the Limit during Emergency Generation						

Table 8. Complaints for the month of May 2024

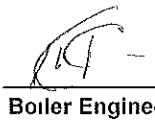
Source Code / Name	Root Cause Analysis	Calculation of Impacts / emissions associated with the incident	Dispersion modeling of pollutants where applicable	Measures implemented to prevent reoccurrence	Date measure will be implemented
					(insert date of implementation of

To be completed in the case of a S30 incident or a legal contravention:

[illegible]

10 General

Unit 6& 5 PM curve expired Testing Planned to complete 30/06/2024

 25/06/2024
Boiler Engineering Date

 25/06/2024
Environmental Department Date

 2024/06/28
General Manager Date

Compiled by Boiler Engineering Department

ESP & SO₂ System Engineer

For Department of Forestry Fisheries and Environment

Chief Air Pollution Control Officer

Copies Eskom Environmental Management

D Herbst
B Mccourt

Group Technology Engineering

R Rampiar
E Patel

Matla Power Station

Engineering Manager
Operating Manager
Maintenance Manager
Unit Production Manager
Boiler Engineering Manager
System Engineer
Environmental Officer
Performance and Test
Production Manager