



Generation

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Attention:

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AND

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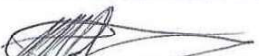
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MATLA POWER STATION

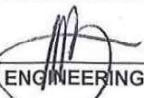
Atmospheric Emission License 17/4/AEL/MP312/11/14



BOILER ENGINEERING MANAGER



ENVIRONMENTAL MANAGER



ENGINEERING MANAGER

29/07/2024

DATE

29/07/2024

DATE

30/07/2024

DATE

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 Jun-2024
	Coal	Tons	1 475 000	888 260
	Fuel Oil	Tons	3 500	1 377
Production Rates	Product / By-Product Name	Units	Max Production Capacity Permitted	Indicative Production Rate Jun-2024
	Energy	GWh	2 657	1 476
	Ash	Tons	471 000	266 389
	RE PM	kg/MWh	not specified	1.217

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	29.99

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 Jun-2024
South	Electro Static Precipators (ESP)	98.901%
Unit 4	Electro Static Precipators (ESP)	99.162%
Unit 5	Electro Static Precipators (ESP)	99.595%
Unit 6	Electro Static Precipators (ESP)	99.733%

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	87.6	44.1	44.1	18.6
Unit 4	98.3	99.5	99.7	99.5
Unit 5	95.6	100.0	100.0	100.0
Unit 6	100.0	100.0	100.0	100.0

6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM	SO ₂	NOx
Unit 1	44.4	171.7	68.5
Unit 2	775.7	3 356.6	1 389.4
Unit 3	426.1	1 967.5	815.2
Unit 4	200.7	1 503.6	456.2
Unit 5	223.2	3 409.8	1 080.2
Unit 6	126.5	2 811.1	869.6
SUM	1 796.5	13 220.2	4 679.2

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
South	18	4	0	8	12	317.2
Unit 4	8	4	0	3	7	265.4
Unit 5	18	9	0	3	12	145.0
Unit 6	21	5	0	4	9	87.3
SUM	65	22	0	18	40	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm³)
South	30	0	0	0	0	1 395.3
Unit 4	17	0	0	0	0	1 928.1
Unit 5	30	0	0	0	0	2 203.2
Unit 6	30	0	0	0	0	1 938.5
SUM	107	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm³)
South	30	0	0	0	0	577.0
Unit 4	17	0	0	0	0	574.6
Unit 5	30	0	0	0	0	697.0
Unit 6	30	0	0	0	0	599.2
SUM	107	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	Green	Emissions below Emission Limit Value (ELV)
Grace	Blue	Emissions above the ELV during grace period
Section 30	Orange	Emissions above ELV during a NEMA S30 incident
Contravention	Red	Emissions above ELV but outside grace or S30 incident conditions

Figure 1: Matla South Stack PM Emissions - June 2024

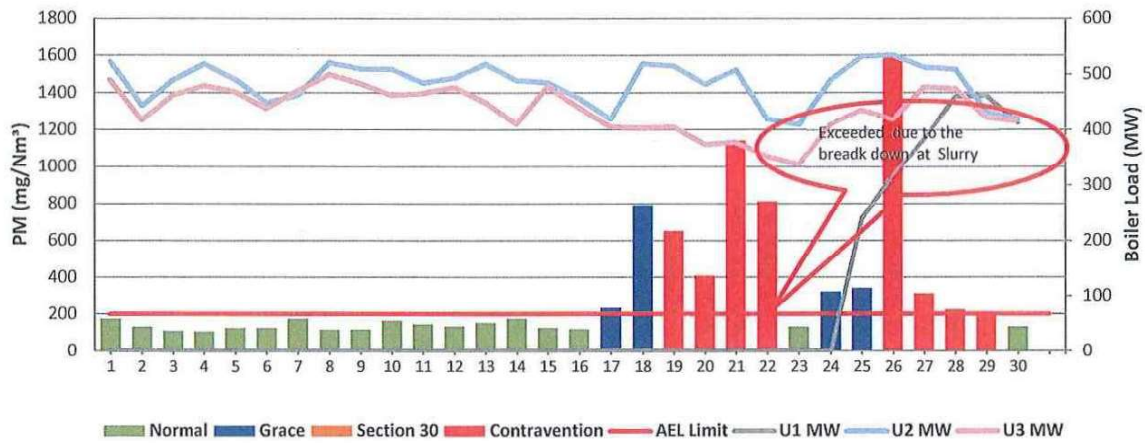


Figure 2: Matla Unit 4 PM Emissions - June 2024

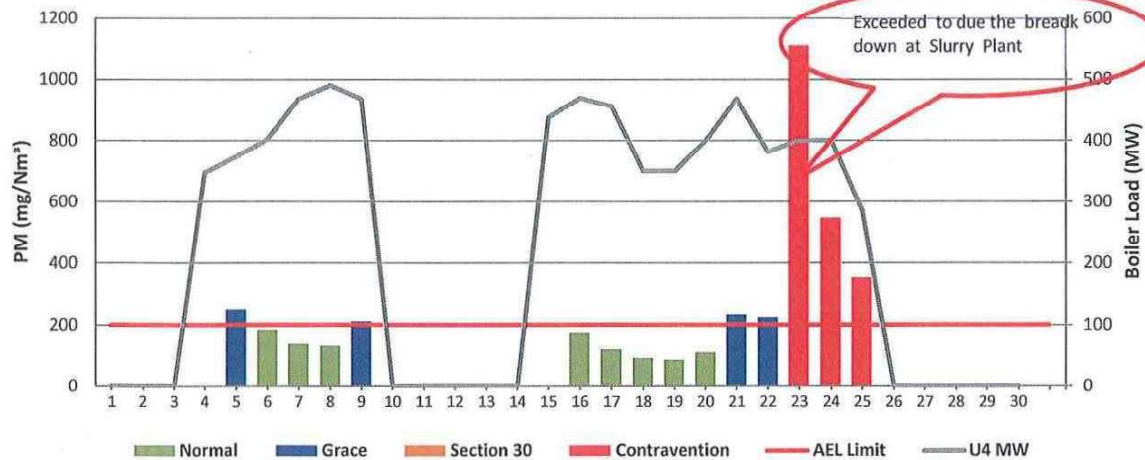


Figure 3: Matla Unit 5 PM Emissions - June 2024

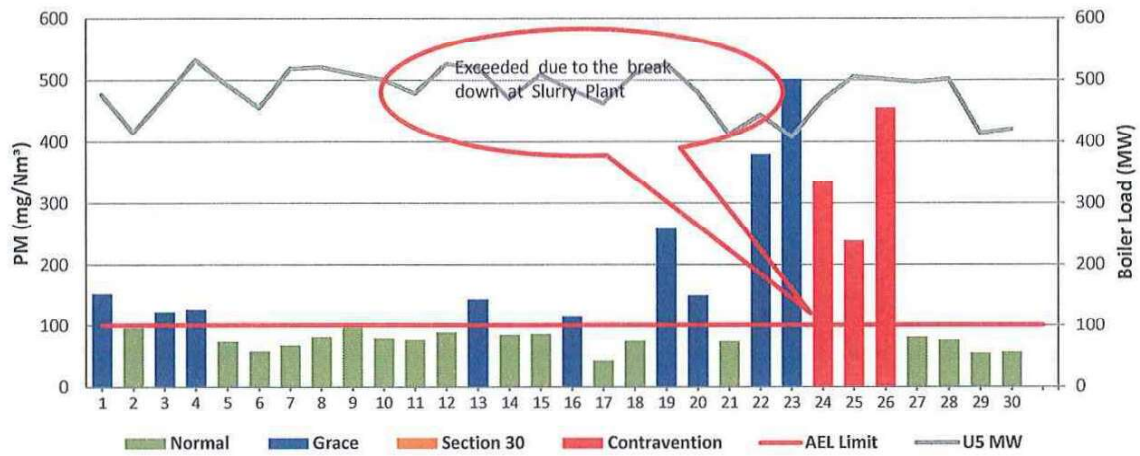


Figure 4: Matla Unit 6 PM Emissions - June 2024

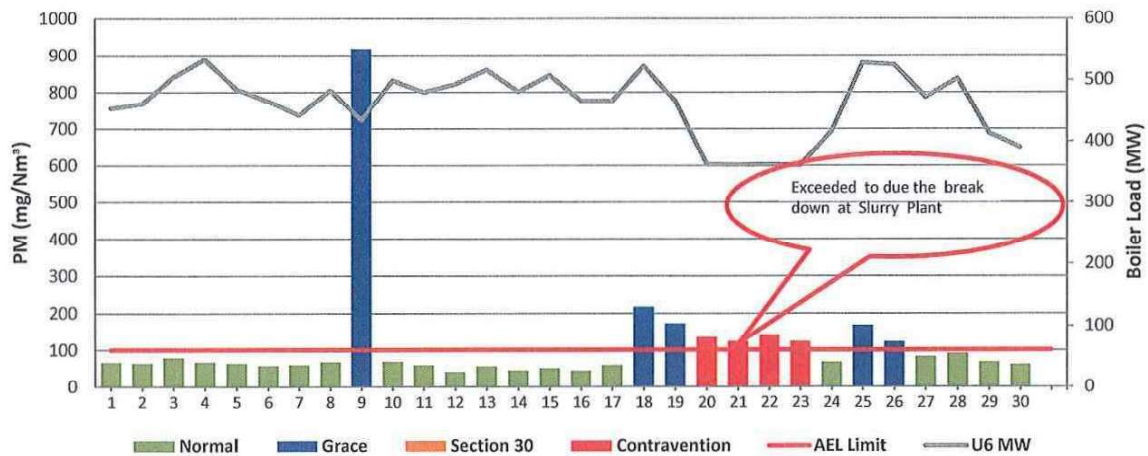


Figure 5: Matla South Stack SO₂ Emissions - June 2024

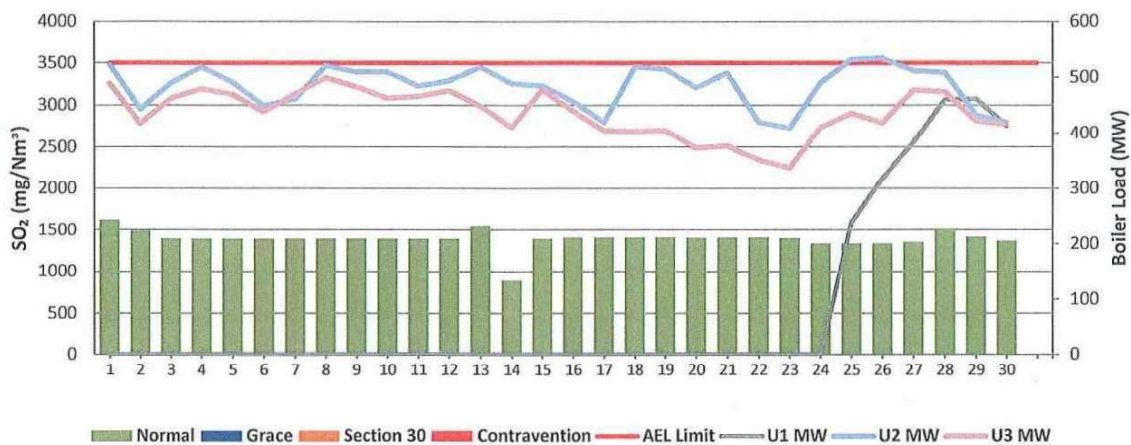


Figure 6: Matla Unit 4 SO₂ Emissions - June 2024

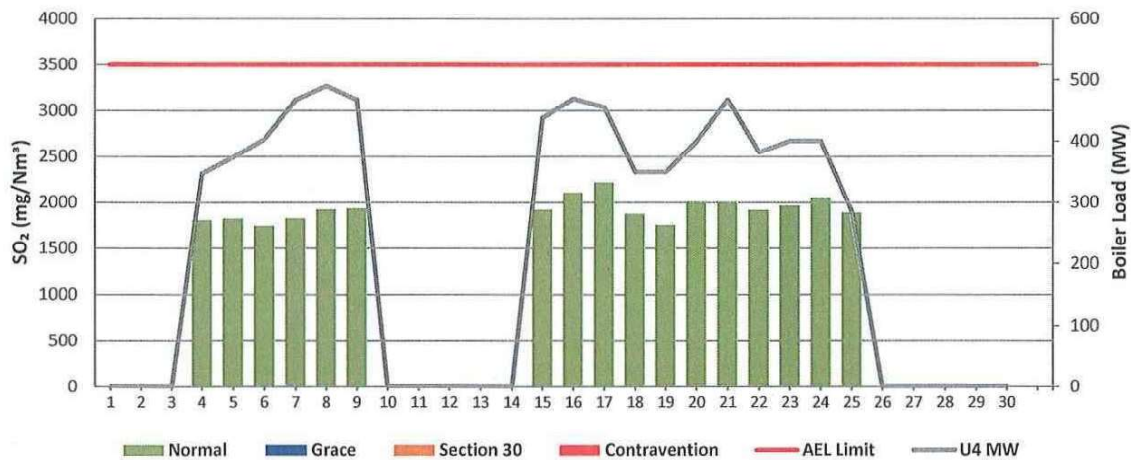


Figure 7: Matla Unit 5 SO₂ Emissions - June 2024

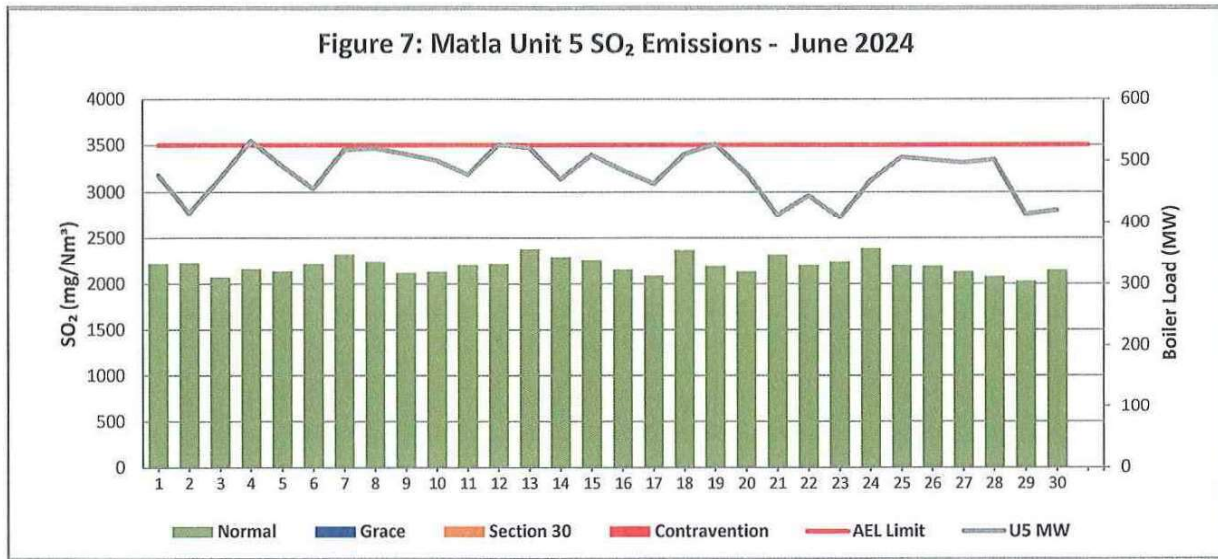


Figure 8: Matla Unit 6 SO₂ Emissions - June 2024

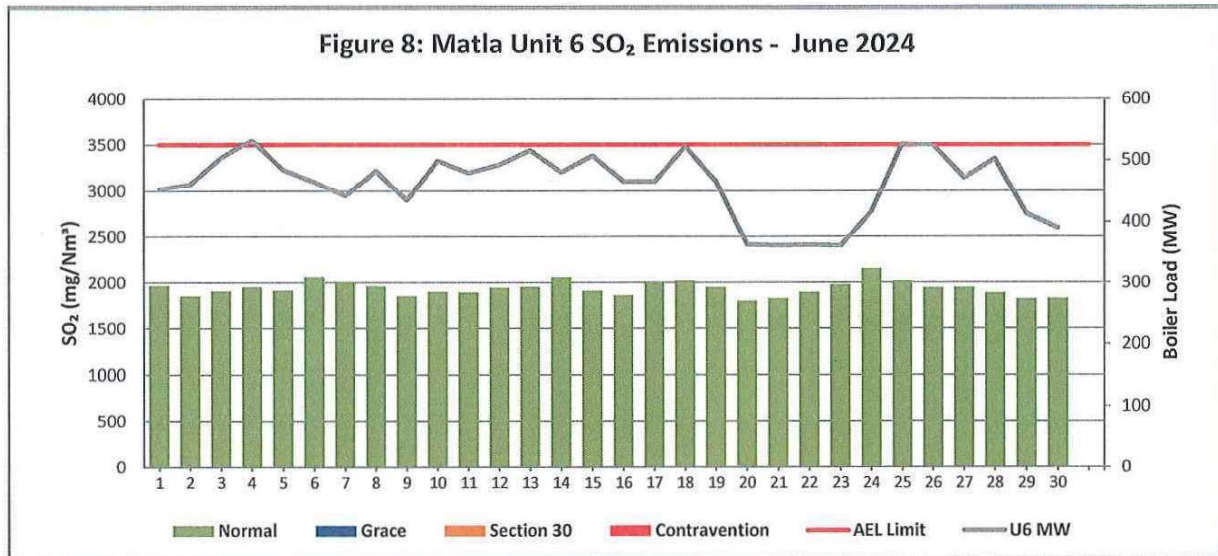


Figure 9: Matla South Stack NO_x Emissions - June 2024

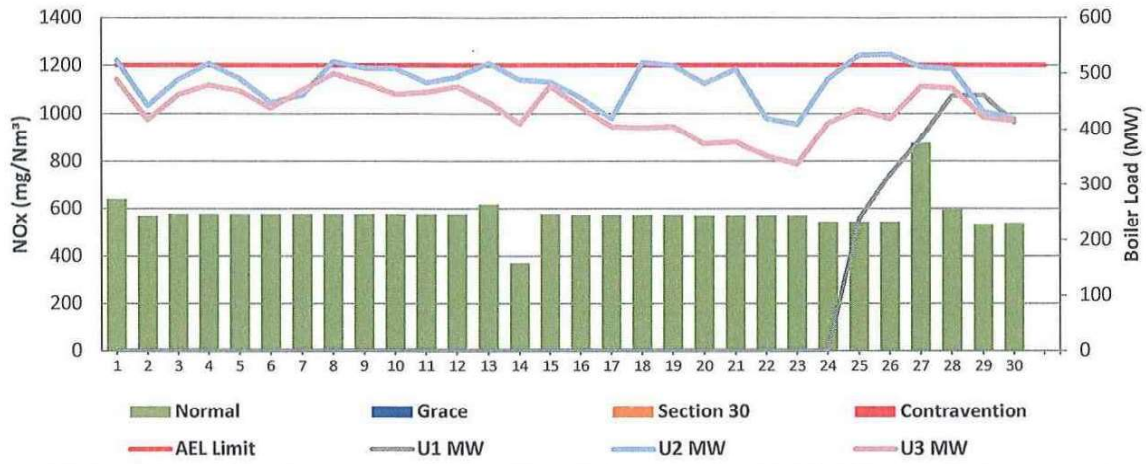


Figure 10: Matla Unit 4 NO_x Emissions - June 2024

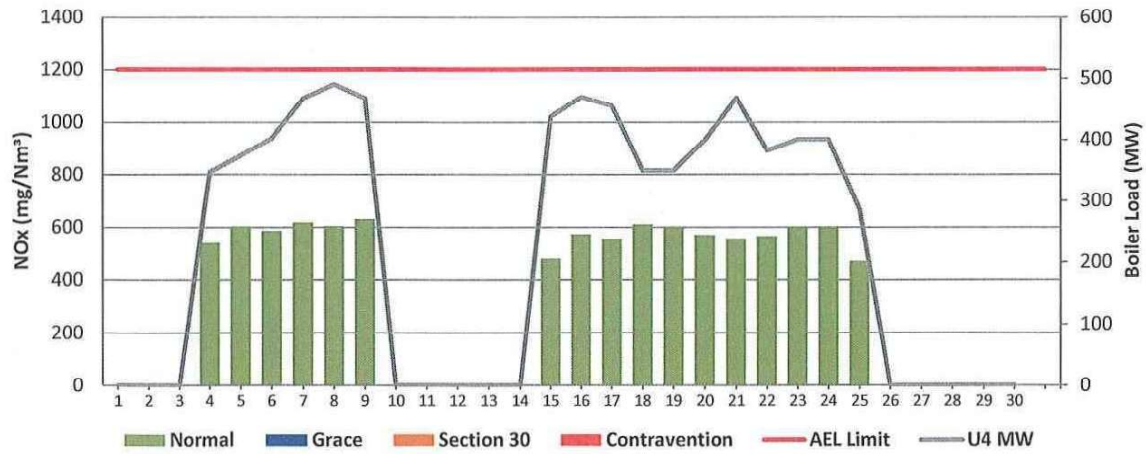


Figure 11: Matla Unit 5 NOx Emissions - June 2024

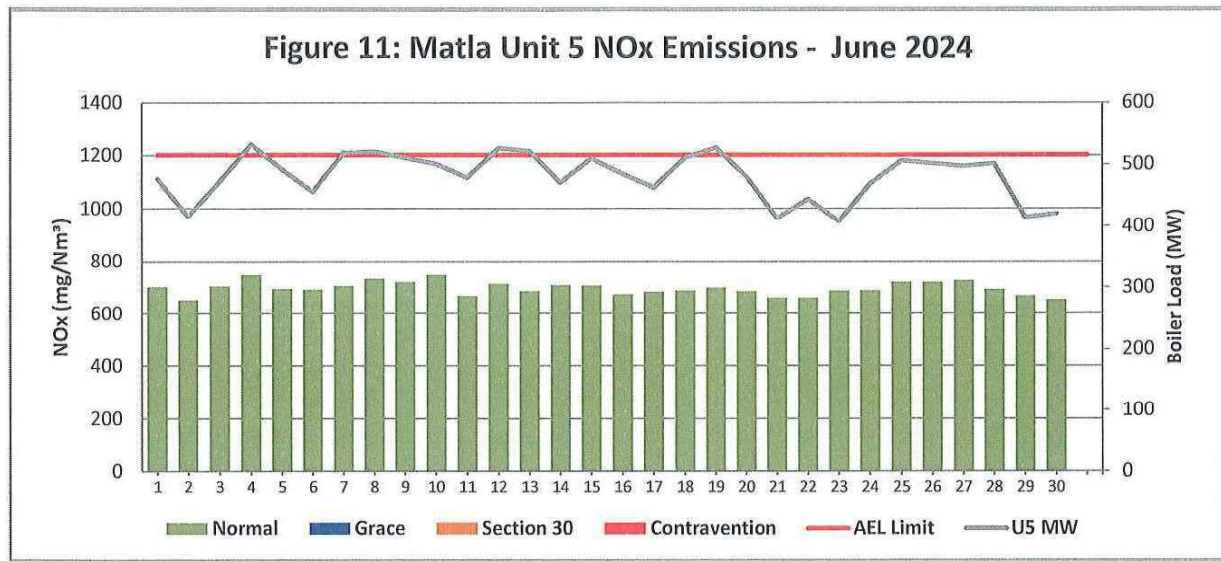
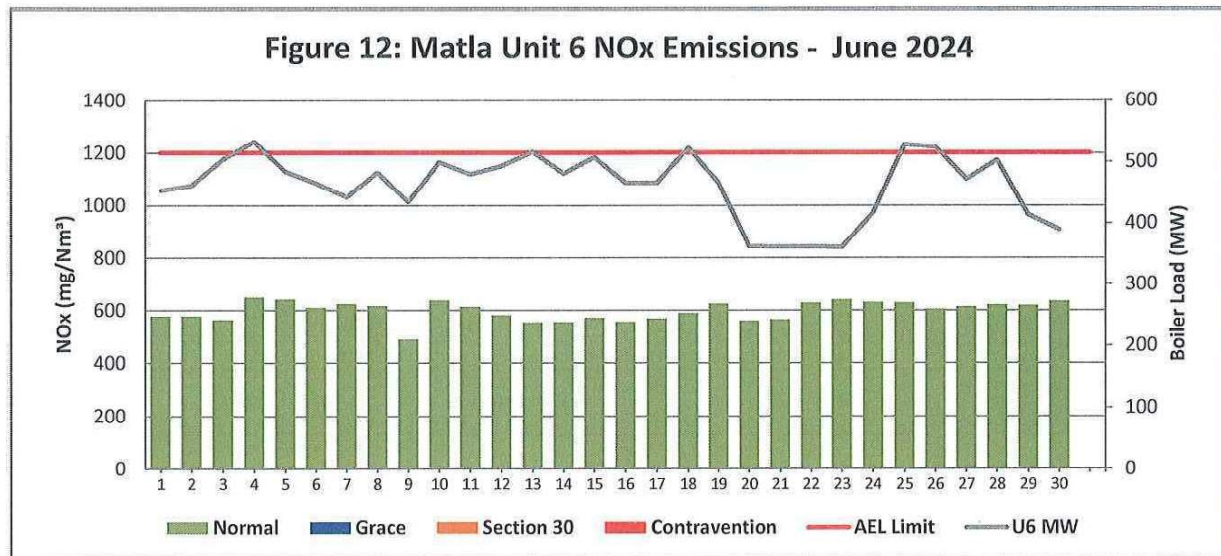


Figure 12: Matla Unit 6 NOx Emissions - June 2024



7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1. PM Start-up information for the month of June-2024

South Stack	Event 1		Event 2		Event 3		Event 4	
Unit No. 1	no event		no event		no event		no event	
Breaker Open (BO)	2:30 pm	2024/06/16	2:00 am	2024/06/19	10:55 am	2024/06/20	5:05 pm	2024/06/24
Draught Group (DG) Shut Down (SD)	11:05 pm	2024/06/18	12:30 pm	2024/06/19	5:50 am	2024/06/23	11:55 pm	2024/06/24
BO to DG SD (duration)	02:08:35	DD:HH:MM	00:10:30	DD:HH:MM	02:18:55	DD:HH:MM	00:06:50	DD:HH:MM
Fires in time								
Synch. to Grid (or BC)								
Fires in to BC (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)								
Emissions below limit from BC (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM

South Stack ...cont.	Event 5		Event 6		Event 7		Event 8	
Unit No. 1	Unit 1		no event		no event		no event	
Breaker Open (BO)	BO previously	BO previously	2:50 am	2024/06/27				
Draught Group (DG) Shut Down (SD)	n/a	n/a	2:51 am	2024/06/27				
BO to DG SD (duration)	n/a	DD:HH:MM	00:00:01	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	11:55 pm	2024/06/24						
Synch. to Grid (or BC)	2:00 pm	2024/06/25						
Fires in to BC (duration)	00:14:05	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	not > limit	not > limit						
Emissions below limit from BC (duration)	n/a	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM

Unit No. 4	Event 1		Event 2		Event 3		Event 4	
Breaker Open (BO)	9:45 pm	2024/05/31	12:20 pm	2024/06/09	12:55 am	2024/06/25		
Draught Group (DG) Shut Down (SD)	3:30 am	2024/06/02	1:55 am	2024/06/10	6:25 pm	2024/06/26		
BO to DG SD (duration)	01:05:45	DD:HH:MM	00:13:35	DD:HH:MM	01:17:30	DD:HH:MM		DD:HH:MM
Fires in time	6:15 pm	2024/06/03	2:20 pm	2024/06/14				
Synch. to Grid (or BC)	7:00 am	2024/06/04	1:50 am	2024/06/15				
Fires in to BC (duration)	00:12:45	DD:HH:MM	00:11:30	DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	not > limit	not > limit	not > limit	not > limit				
Emissions below limit from BC (duration)	n/a	DD:HH:MM	n/a	DD:HH:MM		DD:HH:MM		DD:HH:MM

Unit No. 6	Event 1		Event 2		Event 3		Event 4	
Breaker Open (BO)	5:55 am	2024/06/09						
Draught Group (DG) Shut Down (SD)	5:55 am	2024/06/09						
BO to DG SD (duration)	00:00:00	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	5:55 am	2024/06/09						
Synch. to Grid (or BC)	1:45 pm	2024/06/09						
Fires in to BC (duration)	00:07:49	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	not > limit	not > limit						
Emissions below limit from BC (duration)	n/a	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM

7.2: Point Source emissions released during start-up (fires-in) and Shut-down (SD) for the month of June-2024 in mg/Nm³

[Include reference to once off test showing typical emissions rates during fires in and SD]

ADDENDUM TO MONTHLY EMISSIONS REPORT

8 EMERGENCY GENERATION

Emergency Generation [This is only required for stations that are requested to report on this information]
Table 8. Emergency Generation per unit for the month of June 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						

9 COMPLAINTS REGISTER

Table 9. Complaints for the month of June 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 recurrence	Date measure will be implemented
<i>(Insert name of process)</i>	<i>(Insert root cause for incident)</i>	<i>(Insert emissions associated with incident)</i>	<i>(Insert dispersion model information where applicable)</i>	<i>(Insert mitigation measures taken)</i>	<i>(Insert date of implementation of)</i>

10 S30 INCIDENT OR LEGAL CONTRAVENTION REGISTER

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

Unit no	Incident Start Date	Incident End Date	Incident Cause	Remedial action	S30 initial notification sent	Date S30 investigation report sent	Date DEA Acknowledgement	Date DEA Acceptable	Comments / Reference No.
SS			Unavailability slurry plant trains due to plant break downs	Fixing of the Pinch Valve on Train C Replace gear Box on Train B Fix for the Pinch valve controls on C train	No				Legal contravention
4	2024/06/19 2024/06/26	2024/06/22 2024/06/29	Unavailability slurry plant trains due to plant break downs	Clear the Ash hoppers (Continuous) Empty the Bulk silo using Truck	No				Legal contravention
5	2024/06/23 2024/06/24	2024/06/25 2024/06/26	Unavailability slurry plant trains due to plant break downs	Load reduction	No				Legal contravention
6	2024/06/20 2024/06/27		Unavailability slurry plant trains due to plant break downs	Slide gates adjustment	No				Legal contravention

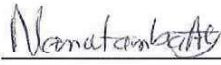
11 General

South Stack Gas Monitor reliability was below 80% , the Monitor was Faulty from 03 June 2024 to 26 June 2024 (The monitor has been Fixed).

Correlation Test for Unit 5 and 6 Inprogress planned to complete 15 August 2024 , the tests were delayed due to the plant Performance in the month of June 2024 that was caused by the Slurry Plant Break down.


Boiler Engineering
26/07/2024
Date


General Manager
30/07/2024
Date


Environmental Department
26/07/2024
Date

Compiled by: Boiler Engineering Department

For: Department of Forestry Fisheries and Environment

Copies: Eskom Environmental Management

Group Technology Engineering

Matla Power Station:

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