



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

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ENVIRONMENTAL MANAGER



ENGINEERING MANAGER

25/04/2024

DATE

25/04/2024

DATE

26/04/2024

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 Mar-2024
	Coal	Tons	1 475 000	885 228
	Fuel Oil	Tons	3 500	1 321
Production Rates	Product / By-Product Name	Units	Max Production Capacity Permitted	Indicative Production Rate Mar-2024
	Energy	GWh	2 745	1 536
	Ash	Tons	471 000	256 362
	RE PM	kg/MWh	not specified	0.549

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	28.96

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 Mar-2024
South	Electro Static Precipators (ESP)	99.508%
Unit 4	Electro Static Precipators (ESP)	99.455%
Unit 5	Electro Static Precipators (ESP)	99.872%
Unit 6	Electro Static Precipators (ESP)	99.838%

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	97.2	100.0	100.0	100.0
Unit 4	97.8	85.5	85.5	100.0
Unit 5	100.0	100.0	99.8	97.8
Unit 6	100.0	89.5	90.8	100.0

6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM	SO ₂	NOx
Unit 1	0.0	Off	Off
Unit 2	295.7	4 066.5	1 619.4
Unit 3	169.8	2 364.5	935.8
Unit 4	244.2	3 029.8	862.6
Unit 5	51.5	2 256.3	665.5
Unit 6	82.8	2 323.5	676.5
SUM	844.0	14 040.6	4 759.8

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
South	26	5	0	0	5	131.0
Unit 4	27	4	0	0	4	145.6
Unit 5	24	1	0	0	1	45.8
Unit 6	26	4	0	0	4	62.9
SUM	103	14	0	0	14	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm³)
South	31	0	0	0	0	1 708.8
Unit 4	31	0	0	0	0	1 743.0
Unit 5	26	0	0	0	0	2 015.5
Unit 6	31	0	0	0	0	1 755.6
SUM	119	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm³)
South	31	0	0	0	0	680.1
Unit 4	31	0	0	0	0	495.6
Unit 5	26	0	0	0	0	594.0
Unit 6	31	0	0	0	0	501.1
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

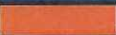
Condition	Colour	Description
Normal		Emissions below Emission Limit Value (ELV)
Grace		Emissions above the ELV during grace period
Section 30		Emissions above ELV during a NEMA S30 incident
Contravention		Emissions above ELV but outside grace or S30 incident conditions

Figure 1: Matla South Stack PM Emissions - March 24

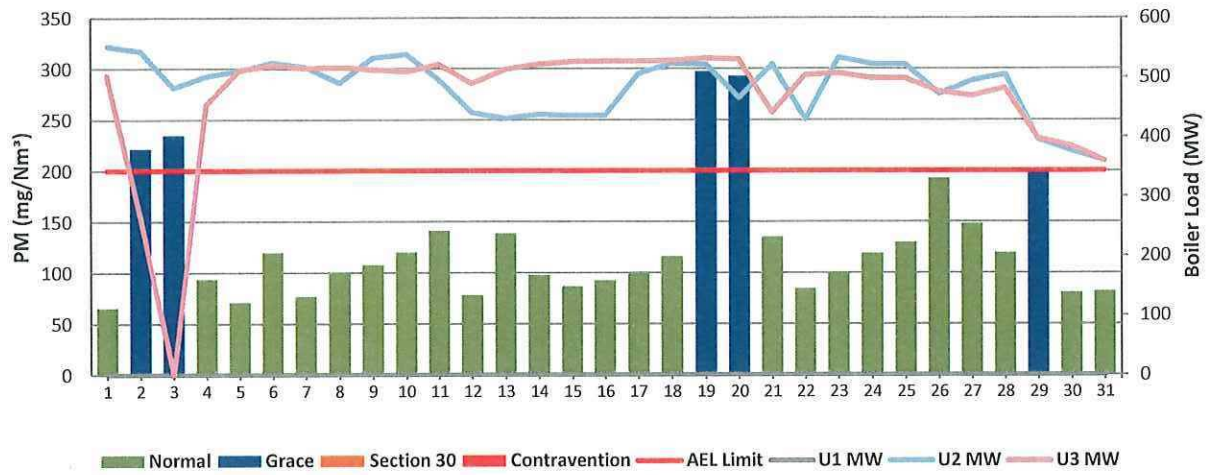


Figure 2: Matla Unit 4 PM Emissions - March 2024

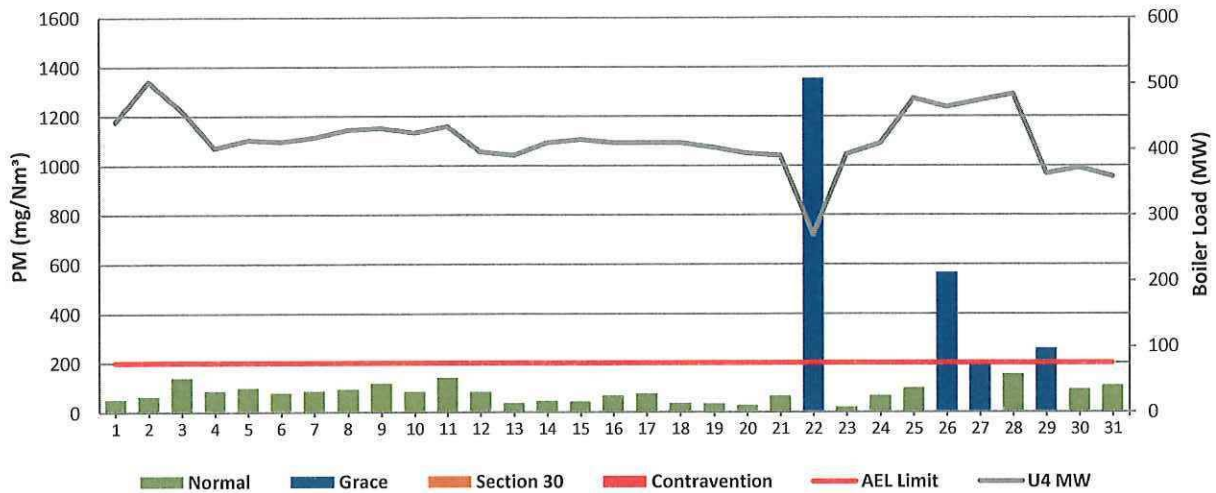


Figure 3: Matla Unit 5 PM Emissions - March 2024

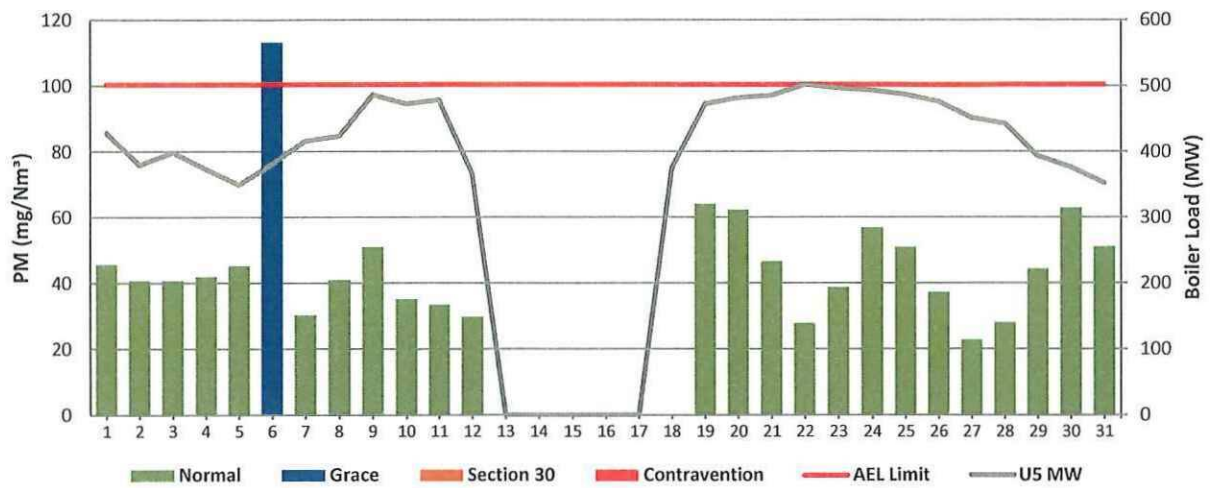


Figure 4: Matla Unit 6 PM Emissions - March 2024

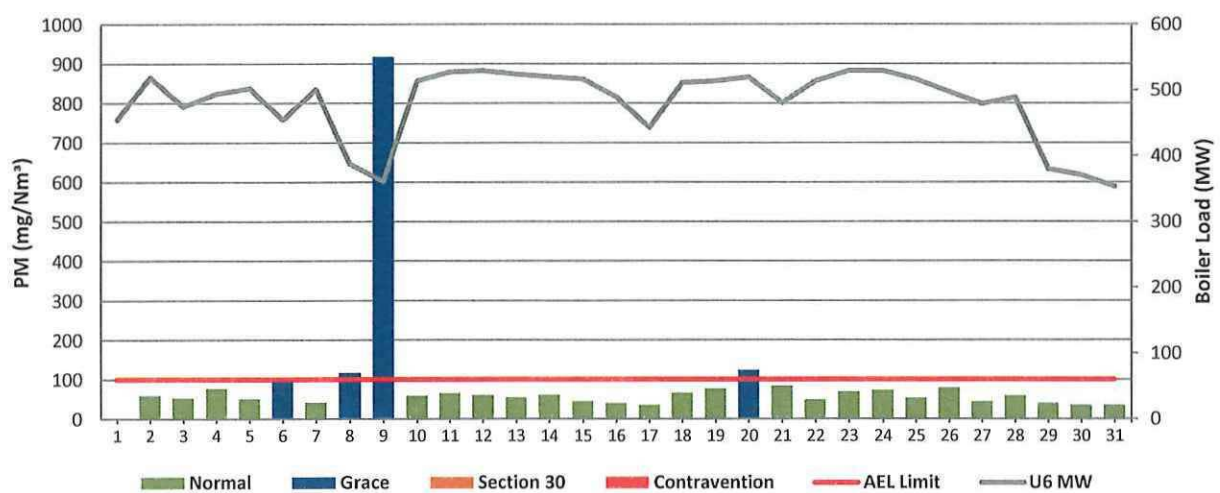


Figure 5: Matla South Stack SO₂ Emissions - March 2024

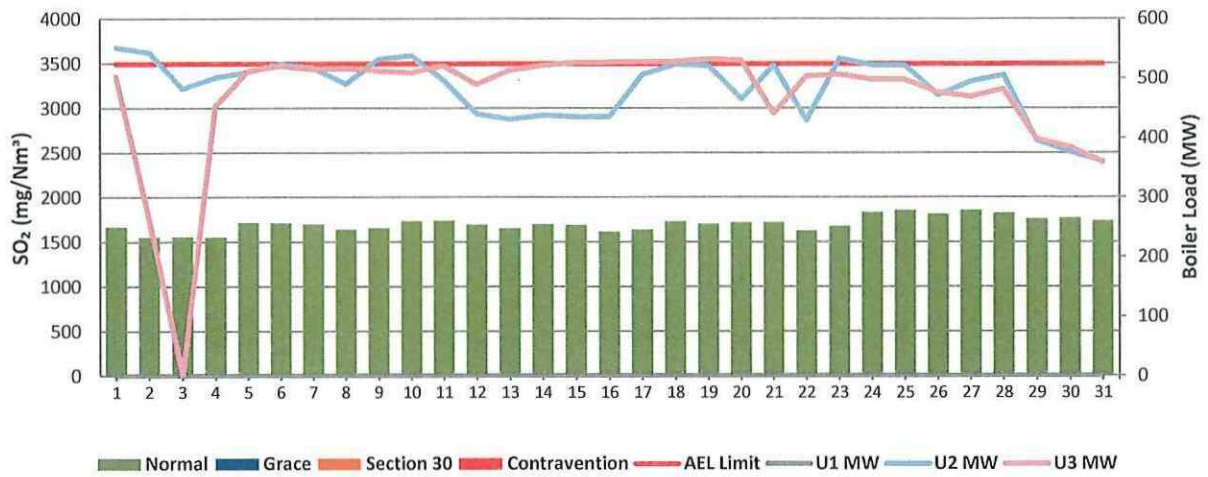


Figure 6: Matla Unit 4 SO₂ Emissions - March 2024

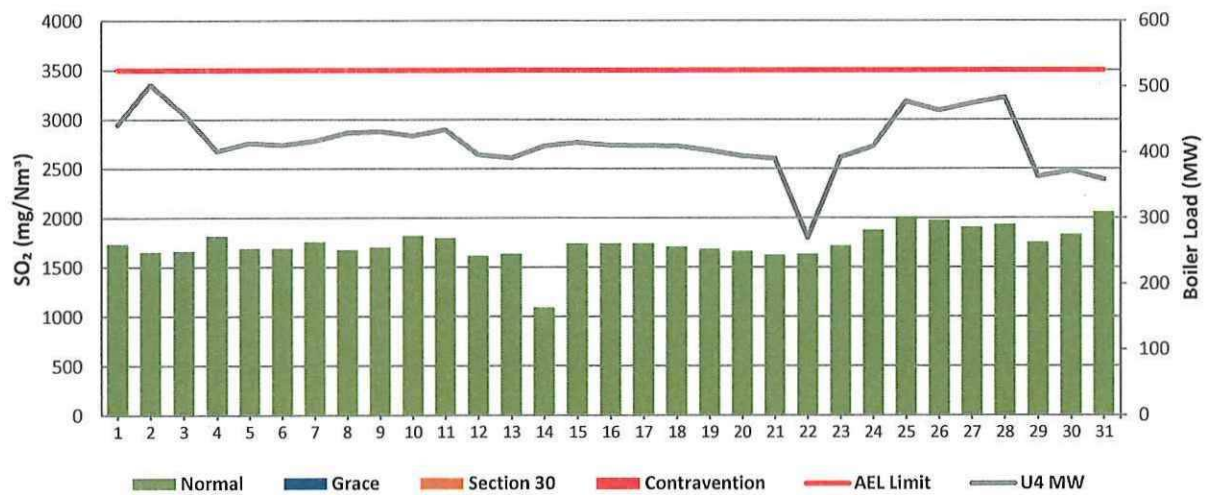


Figure 7: Matla Unit 5 SO₂ Emissions - March 2024

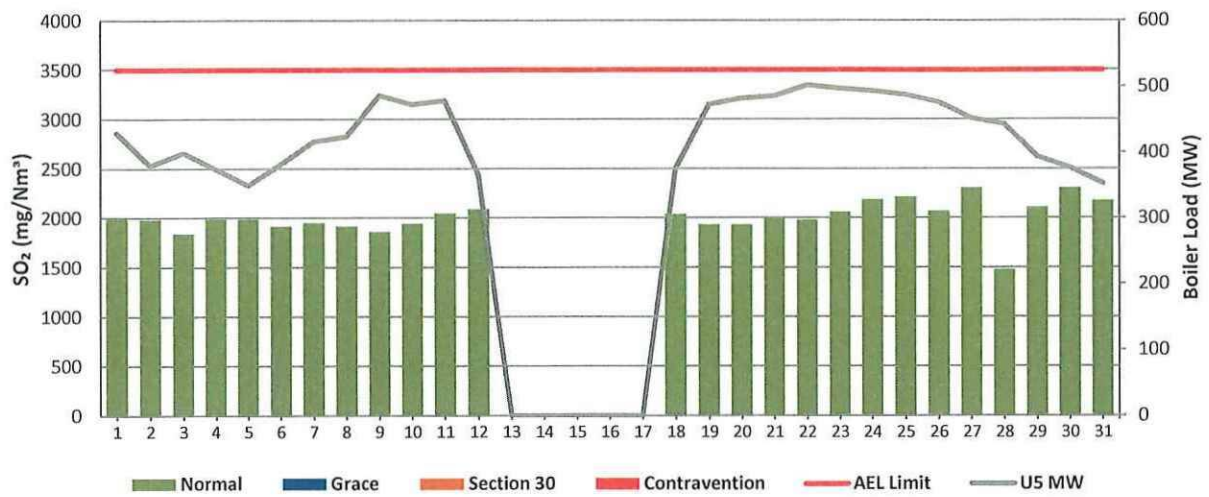


Figure 8: Matla Unit 6 SO₂ Emissions - March 2024

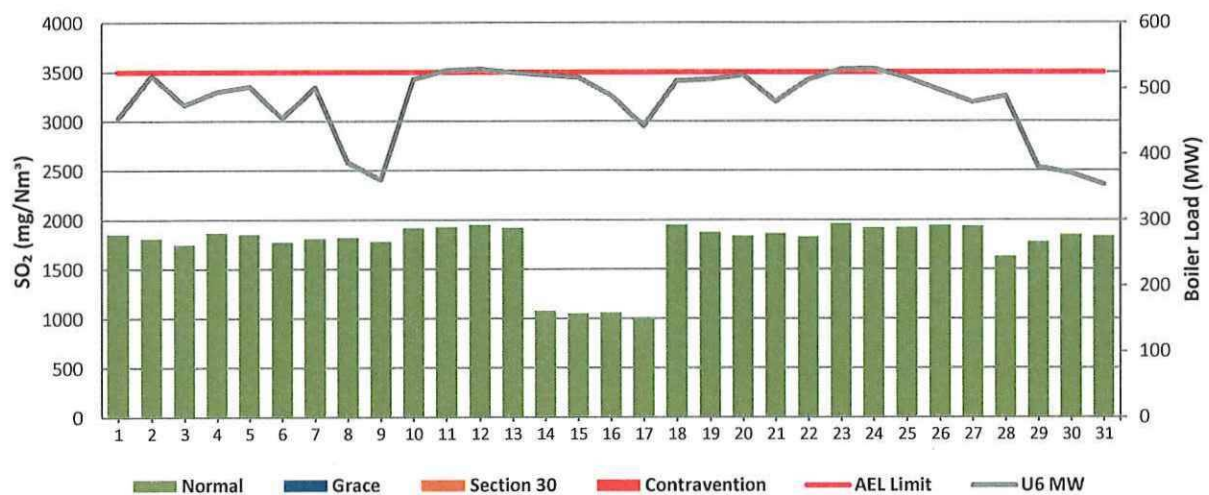


Figure 9: Matla South Stack NOx Emissions - March 2024

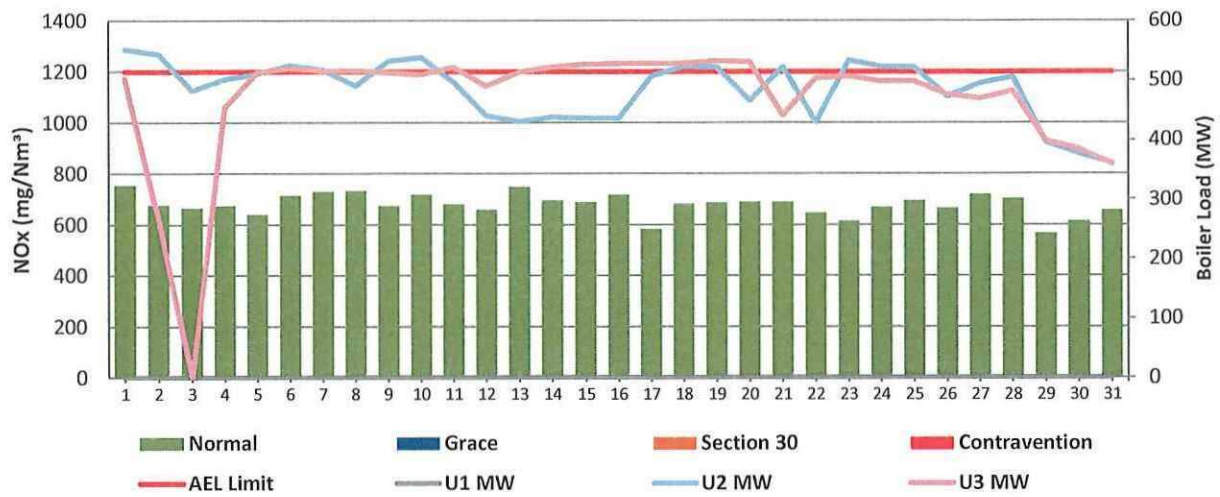


Figure 10: Matla Unit 4 NOx Emissions - March 2024

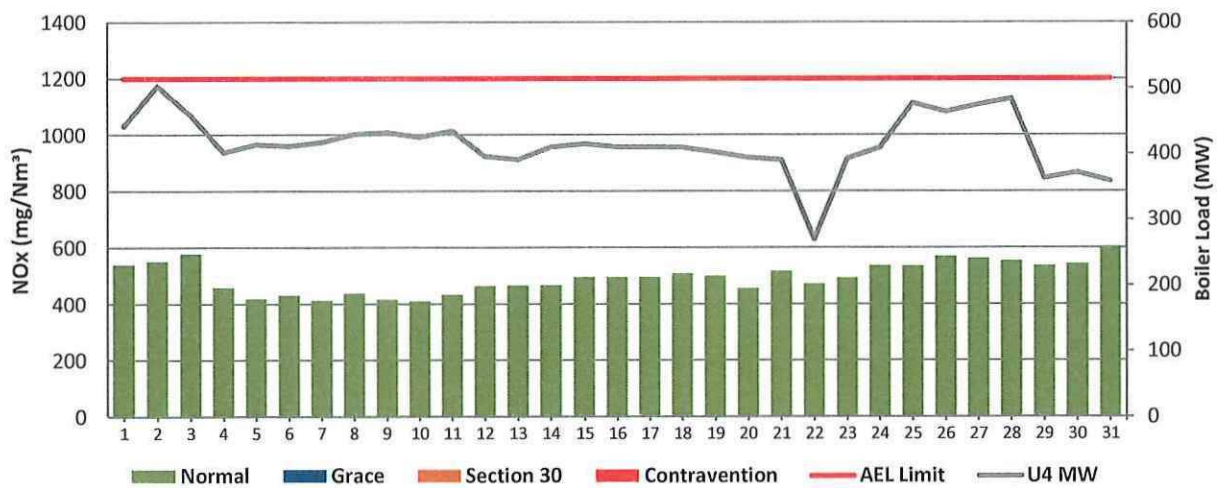


Figure 11: Matla Unit 5 NOx Emissions - March 2024

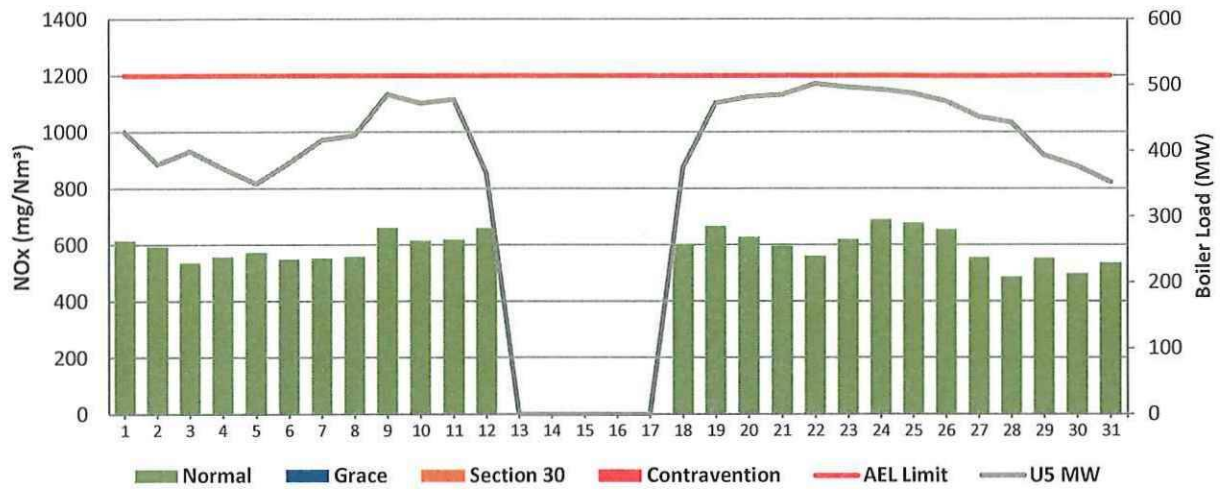
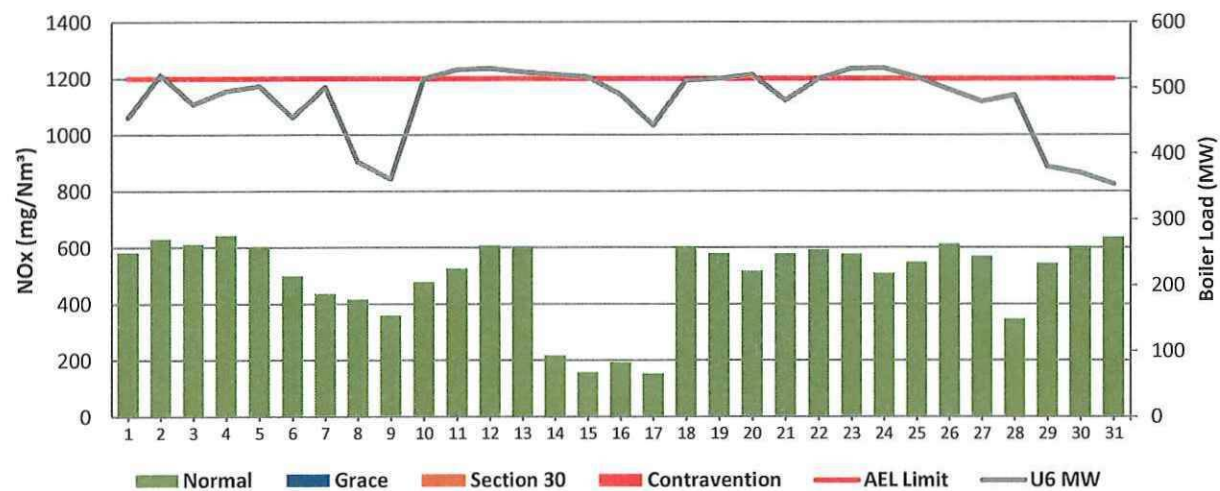


Figure 12: Matla Unit 6 NOx Emissions - March 2024



7 SHUT DOWN AND LIGHT UP INFORMATION

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

South Stack	Event 1		Event 2		Event 3		Event 4	
Unit No.	Unit 2		Unit 3		Unit 3		no event	
Breaker Open (BO)	4:50 PM	2024/03/19	1:20 AM	2024/03/02	5:35 PM	2024/03/20		
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD	5:30 AM	2024/03/02	11:05 PM	2024/03/20		
BO to DG SD (duration)	n/a	DD:HH:MM	00:04:10	DD:HH:MM	00:05:30	DD:HH:MM		DD:HH:MM
Fires in time	4:50 PM	2024/03/19	4:10 PM	2024/03/03	12:00 AM	2024/03/21		
Synch. to Grid (or BC)	12:45 AM	2024/03/20	12:25 AM	2024/03/04	12:10 AM	2024/03/21		
Fires in to BC (duration)	00:07:55	DD:HH:MM	00:08:15	DD:HH:MM	00:00:10	DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	not > limit	not > limit	not > limit	not > limit	not > limit	not > limit		
Emissions below limit from BC (duration)	n/a	DD:HH:MM	n/a	DD:HH:MM	n/a	DD:HH:MM		DD:HH:MM

South Stack ...cont.	Event 5		Event 6		Event 7		Event 8	
Unit No.	no event		no event		no event		no event	
Breaker Open (BO)								
Draught Group (DG) Shut Down (SD)								
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		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

Unit No. 4	Event 1		Event 2		Event 3		Event 4	
Breaker Open (BO)								
Draught Group (DG) Shut Down (SD)								
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		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

Unit No. 5	Event 1		Event 2		Event 3		Event 4	
Breaker Open (BO)	3:00 AM	2024/03/12						
Draught Group (DG) Shut Down (SD)	5:15 AM	2024/03/13						
BO to DG SD (duration)	01:02:15	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	12:10 AM	2024/03/14						
Synch. to Grid (or BC)	9:25 AM	2024/03/18						
Fires in to BC (duration)	04:09:15	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. 6	Event 1		Event 2		Event 3		Event 4	
Breaker Open (BO)	3:05 PM	2024/03/06	3:20 AM	2024/03/08				
Draught Group (DG) Shut Down (SD)	3:05 PM	2024/03/06	3:50 AM	2024/03/08				
BO to DG SD (duration)		DD:HH:MM	00:00:30	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	3:05 PM	2024/03/06	1:55 PM	2024/03/09				
Synch. to Grid (or BC)	9:30 PM	2024/03/06	7:15 PM	2024/03/09				
Fires in to BC (duration)	00:06:25	DD:HH:MM	00:05:20	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

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

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

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11 General

Unit 5 and 6 operating with an expired curve and schedule for testing 30 April 2024



19-04-2024

Boiler Engineering

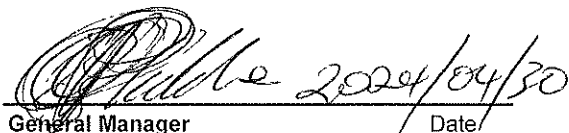
Date



19-04-2024

Environmental Department

Date



General Manager

Date

Compiled by Boiler Engineering Department

For Department of Environmental Affairs and Tourism

Copies Eskom Environmental Management

Group Technology Engineering

Matla Power Station

ESP & SO₂ System Engineer

Chief Air Pollution Control Officer

D Herbst
B Mccourt

R Rampiar
E Patel

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