



Generation

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AND

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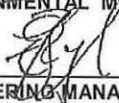
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MATLA POWER STATION

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



BOILER ENGINEERING MANAGER


ENVIRONMENTAL MANAGER
pp 

ENGINEERING MANAGER

26/07/2024

DATE
2024/07/29

DATE
2024/08/13

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 May-2023
	Coal	Tons	1 475 000	836 981
	Fuel Oil	Tons	3 500	4 651
Production Rates	Product / By-Product Name	Units	Max Production Capacity Permitted	Production Rate May-2023
	Energy	GWh	2 745	1 243
	Ash	Tons	471 000	273 023
	RE PM	kg/MWh	not specified	5.468

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.8-1.1	1.00
Ash Content	%	21-40	32.62

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

4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency May-2023
South	Electro Static Precipators (ESP)	96.640%
Unit 4	Electro Static Precipators (ESP)	97.313%
Unit 5	Electro Static Precipators (ESP)	98.679%
Unit 6	Electro Static Precipators (ESP)	97.052%

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	3.5	96.7	96.7	96.7
Unit 4	73.9	99.6	100.0	99.6
Unit 5	85.0	99.5	99.5	100.0
Unit 6	45.7	0.0	76.6	100.0

6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of May-2023

Associated Unit/Stack	PM	SO _x	NO _x
Unit 1	873.5	2 110.9	506.2
Unit 2	2 134.6	5 158.5	1 237.0
Unit 3	1 245.9	3 010.8	722.0
Unit 4	1 317.6	4 303.6	1 372.4
Unit 5	681.1	2 854.5	997.4
Unit 6	546.5	767.3	246.6
SUM	6 799.1	18 205.7	5 081.5

Table 6.2: Operating days in compliance to PM AEL Limit - May 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
South	0	0	0	31	31	1 000.0
Unit 4	10	4	0	17	21	743.3
Unit 5	7	9	0	15	24	478.7
Unit 6	0	4	0	12	16	1 393.2
SUM	17	17	0	75	92	

Table 6.3: Operating days in compliance to SO₂ AEL Limit - May 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm ³)
South	31	0	0	0	0	2 416.7
Unit 4	31	0	0	0	0	2 355.3
Unit 5	31	0	0	0	0	2 083.2
Unit 6	18	0	0	0	0	1 985.4
SUM	111	0	0	0	0	

Table 6.4: Operating days in compliance to NO_x AEL Limit - May 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm ³)
South	31	0	0	0	0	579.5
Unit 4	31	0	0	0	0	751.5
Unit 5	31	0	0	0	0	728.6
Unit 6	18	0	0	0	0	637.9
SUM	111	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 2023

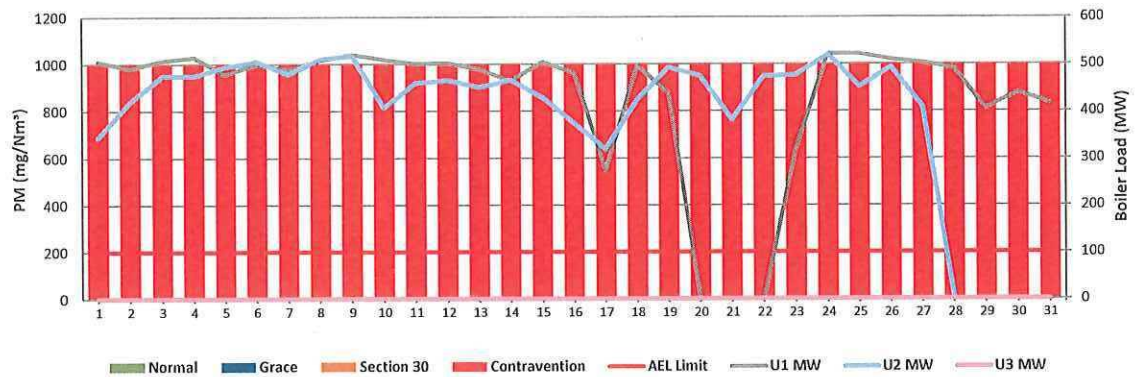
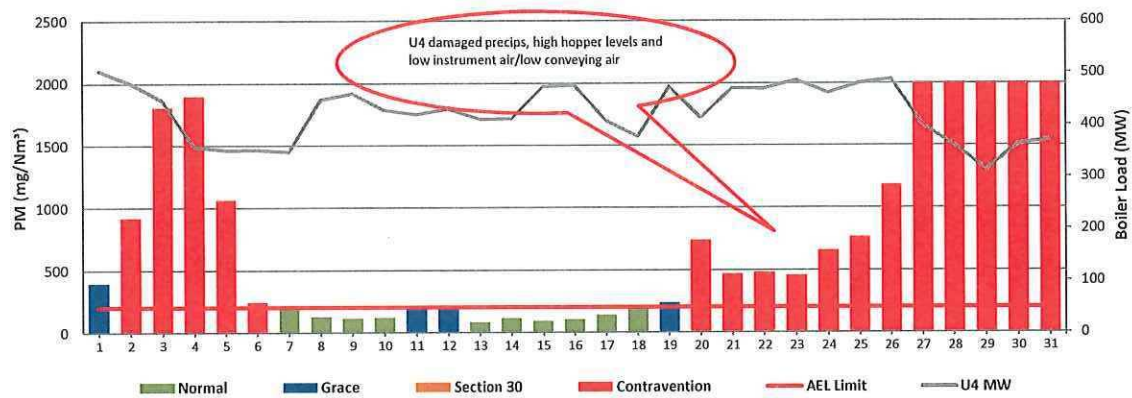


Figure 2: Matla Unit 4 PM Emissions - May 2023



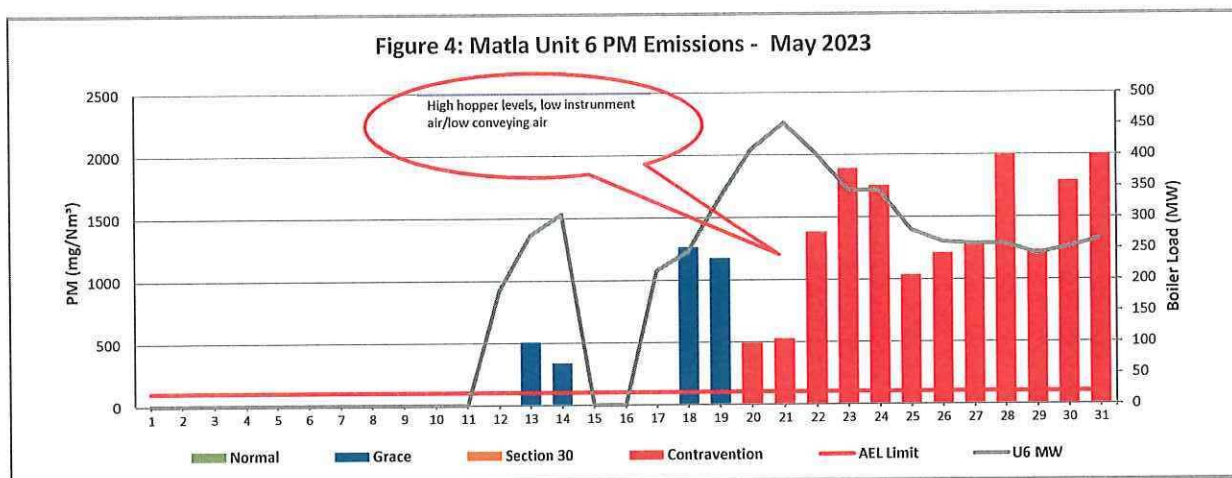
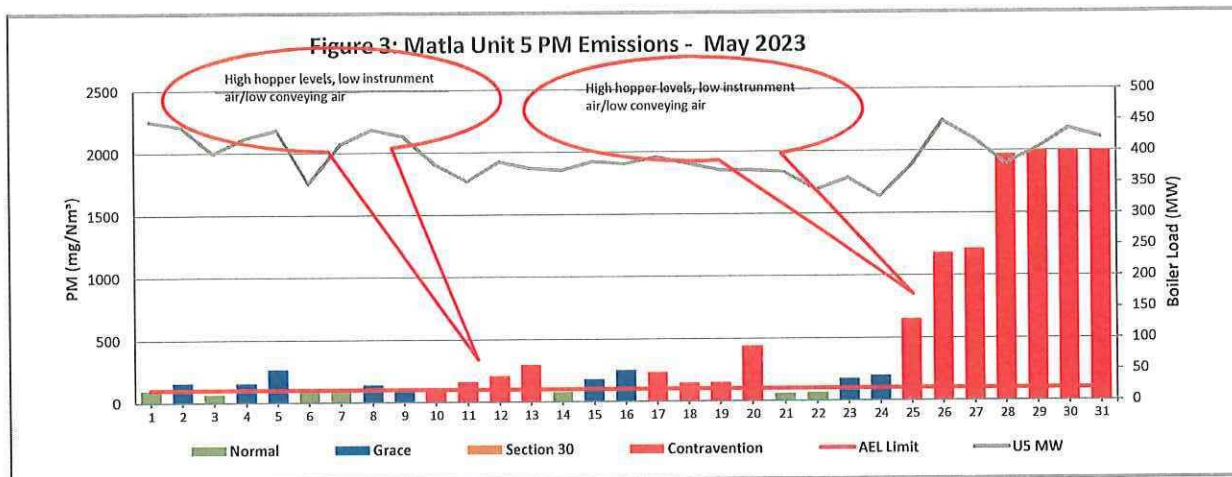


Figure 5: Matla South Stack SO₂ Emissions - May 2023

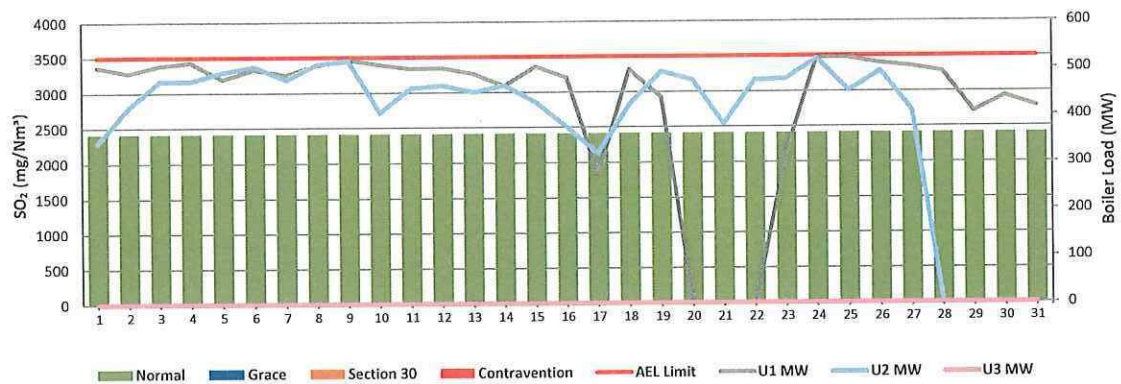


Figure 6: Matla Unit 4 SO₂ Emissions - May 2023

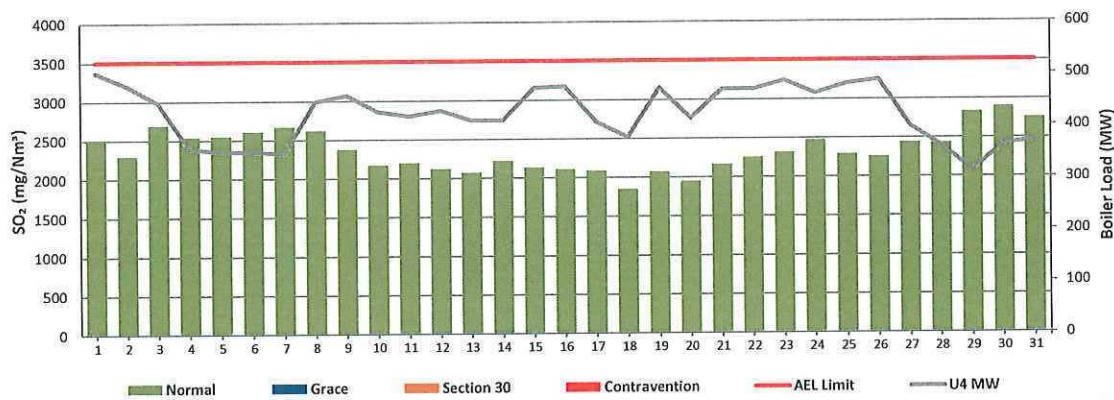


Figure 7: Matla Unit 5 SO₂ Emissions - May 2023

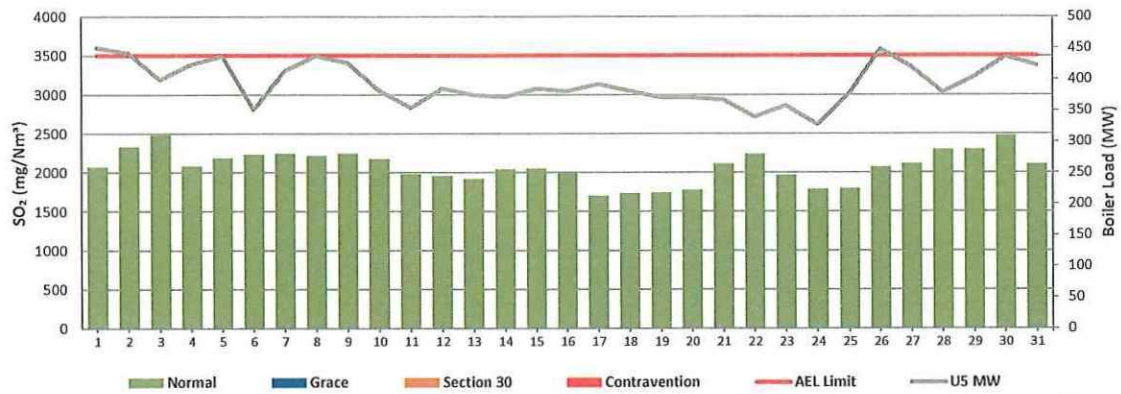


Figure 8: Matla Unit 6 SO₂ Emissions - May 2023

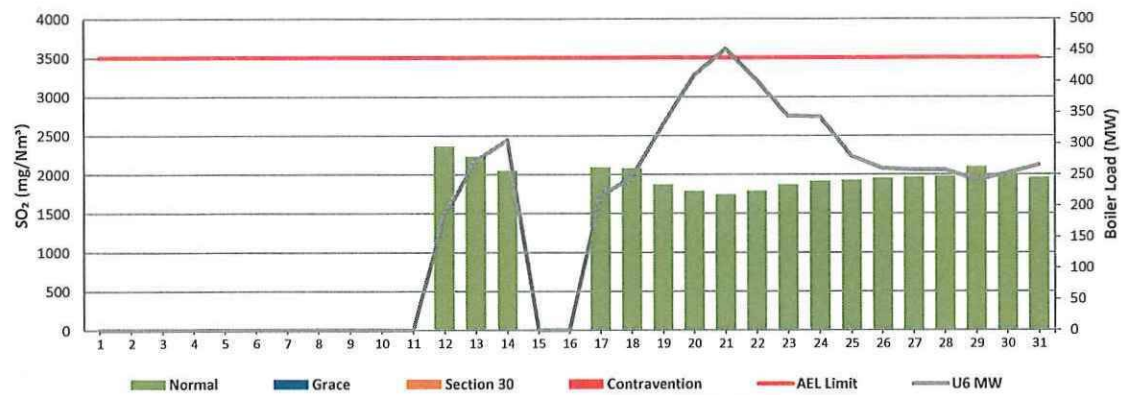


Figure 9: Matla South Stack NOx Emissions - May 2023

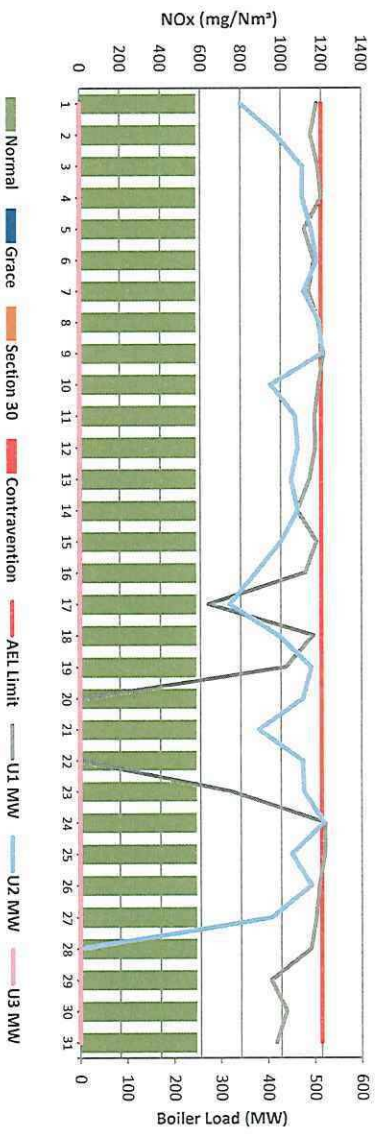
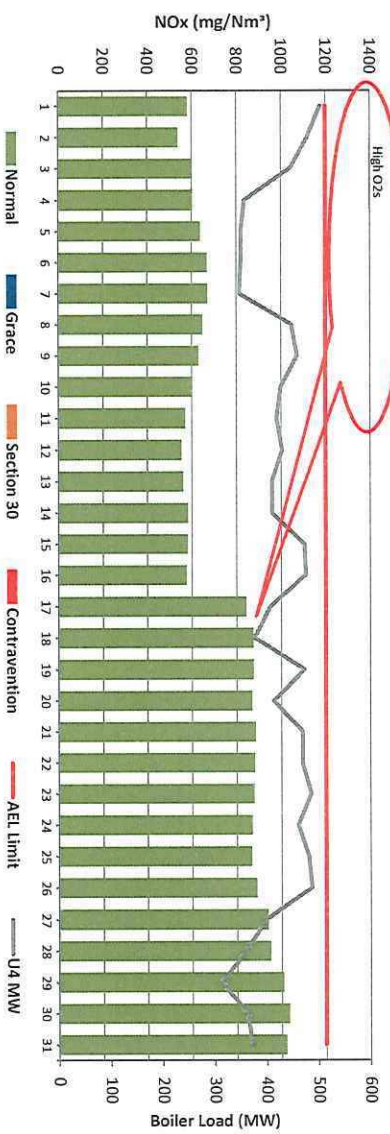
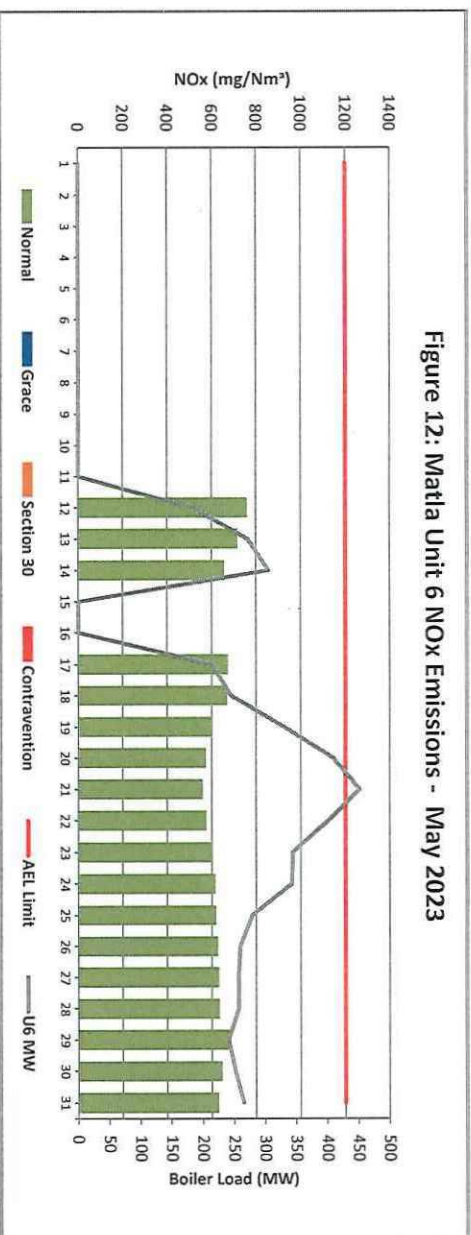
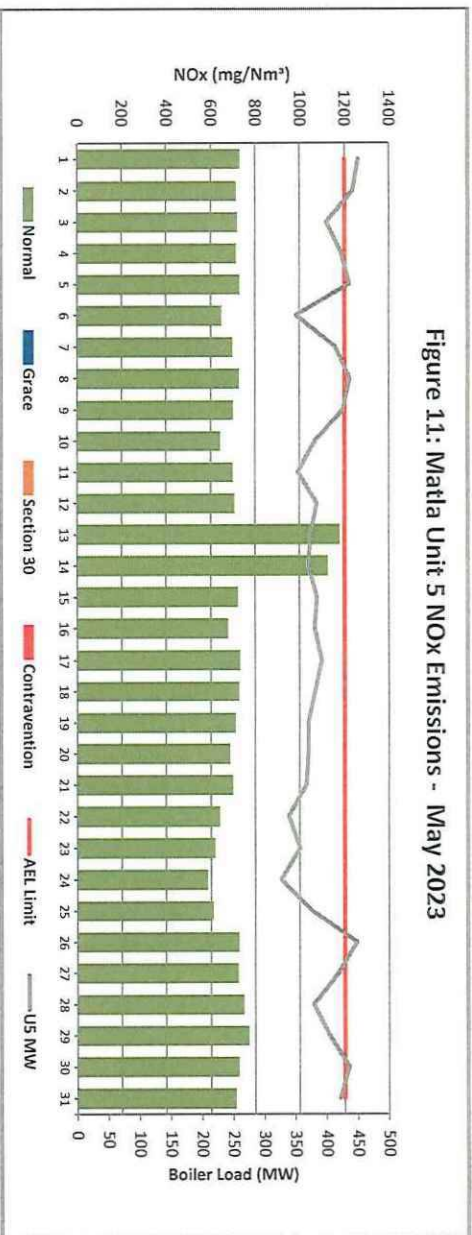


Figure 10: Matla Unit 4 NOx Emissions - May 2023





7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1. PM Start-up information for the month of May-2023

South Stack	Event 1		Event 2		Event 3		Event 4	
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

South Stack ...cont.	Event 5		Event 6		Event 7		Event 8	
Unit No.	Unit 2		no event		no event		no event	
Breaker Open (BO)	11:35 am	2023/05/27						
Draught Group (DG) Shut Down (SD)	6:45 am	2023/05/28						
BO to DG SD (duration)	00:19:10	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	10:05 am	2023/06/01						
Synch. to Grid (or BC)	9:10 pm	2023/06/01						
Fires in to BC (duration)	00:11:05	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)								
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)	5:15 pm	2023/05/24						
Draught Group (DG) Shut Down (SD)	5:16 pm	2023/05/24						
BO to DG SD (duration)	00:00:01	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	5:17 pm	2023/05/24						
Synch. to Grid (or BC)	1:15 am	2023/05/25						
Fires in to BC (duration)	00:07:58	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)	BO previously	BO previously	5:55 am	2023/05/14	1:40 pm	2023/05/24	8:45 pm	2023/05/28
Draught Group (DG) Shut Down (SD)	n/a	n/a	10:15 pm	2023/05/14	2:41 pm	2023/05/24	9:47 pm	2023/05/28
BO to DG SD (duration)	n/a	DD:HH:MM	00:16:20	DD:HH:MM	00:01:01	DD:HH:MM	00:01:02	DD:HH:MM
Fires in time	10:25 am	2023/05/11	6:10 am	2023/05/17	2:41 pm	2023/05/24	9:47 pm	2023/05/28
Synch. to Grid (or BC)	5:55 pm	2023/05/12	11:55 pm	2023/05/18	5:25 pm	2023/05/24	5:25 am	2023/05/29
Fires in to BC (duration)	01:07:30	DD:HH:MM	01:17:45	DD:HH:MM	00:02:44	DD:HH:MM	00:07:38	DD:HH:MM
Emissions below limit from BC (end date)	not > limit	not > limit	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	n/a	DD:HH:MM

7.2: Point Source emissions released during start-up (fires-in) and Shut-down (SD) for the month of May-2023 in mg/Nm³

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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 May 2023

	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 May 2023

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
<i>(insert name of affected)</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:

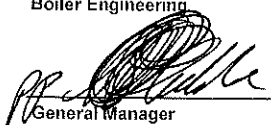
Unit no	Incident Start Date	Incident End Date	Incident Cause	Remedial action	S30 initial notification sent	Date S30 investigation report sent	Date DEA Acknowledgment	Date DEA Acceptable	Comments / Reference No.
SS	01/05/2023	31/05/2023	High hopper levels, low instrment and conveying air	Hired additional compressors	No				Legal contravention
4	02/05/2023 20/05/2023	06/05/2023 31/05/2023	High hopper levels, low instrment and conveying air	Hired additional compressors	No				Legal contravention
5	10/05/2023 17/05/2023 25/05/2023	13/05/2023 20/05/2023 31/05/2023	High hopper levels, low instrment and conveying air	Hired additional compressors	No				Legal contravention
6	19/05/2023	31/05/2023	High hopper levels, low instrment and conveying air	Hired additional compressors	No				Legal contravention

11 General

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Mzwandile Gcaleka  19/07/2024
Boiler Engineering Date

Lutendo Murovhi  19/07/2024
Environmental Department Date

 2024/08/27
General Manager Date

Compiled by Boiler Engineering Department

For Department of Forestry Fisheries and Environment

Copies Eskom Environmental Management

Group Technology Engineering

Matla Power Station

ESP & SO₃ 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