



Generation

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Attention:

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AND

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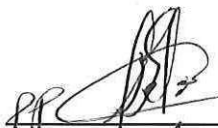
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Total number of pages:
16

Total number of annexes:

MATLA POWER STATION

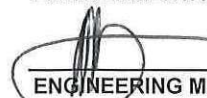
Atmospheric Emission License 17/4/AEL/MP312/11/14



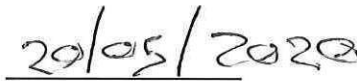
BOILER ENGINEERING MANAGER



ENVIRONMENTAL MANAGER



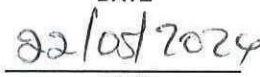
ENGINEERING MANAGER



DATE

2024/05/20

DATE



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 Apr-2024
	Coal	Tons	1 475 000	882 086
	Fuel Oil	Tons	3 500	1 414
Production Rates	Product / By-Product Name	Units	Max Production Capacity Permitted	Indicative Production Rate Apr-2024
	Energy	GWh	2 657	1 481
	Ash	Tons	471 000	256 775
	RE PM	kg/MWh	not specified	0.956

Note: Maximum energy rate is as per the maximum capacity stated in the AEL: $[3\,690\text{ MW}] \times 24\text{ hrs} \times \text{days in Month}/1000$ 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	29.11

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 Apr-2024
South	Electro Static Precipators (ESP)	99.543%
Unit 4	Electro Static Precipators (ESP)	98.306%
Unit 5	Electro Static Precipators (ESP)	99.674%
Unit 6	Electro Static Precipators (ESP)	99.780%

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	99.0	100.0	100.0	100.0
Unit 4	94.2	100.0	100.0	100.0
Unit 5	98.6	100.0	100.0	95.0
Unit 6	100.0	100.0	100.0	100.0

6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM	SO ₂	NOx
Unit 1	0.0	Off	Off
Unit 2	242.3	3 493.6	1 225.0
Unit 3	182.8	2 508.2	885.3
Unit 4	731.7	3 175.5	1 054.8
Unit 5	155.5	2 822.6	817.1
Unit 6	103.9	2 662.4	865.1
SUM	1 416.2	14 662.3	4 847.3

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
South	27	3	0	0	3	124.6
Unit 4	21	4	5	0	9	415.9
Unit 5	22	4	4	0	8	118.5
Unit 6	22	4	4	0	8	73.5
SUM	92	15	13	0	28	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm³)
South	30	0	0	0	0	1 686.4
Unit 4	30	0	0	0	0	1 786.1
Unit 5	30	0	0	0	0	2 093.1
Unit 6	30	0	0	0	0	1 864.8
SUM	120	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm³)
South	30	0	0	0	0	594.8
Unit 4	30	0	0	0	0	593.8
Unit 5	30	0	0	0	0	605.2
Unit 6	30	0	0	0	0	606.8
SUM	120	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 - April 2024

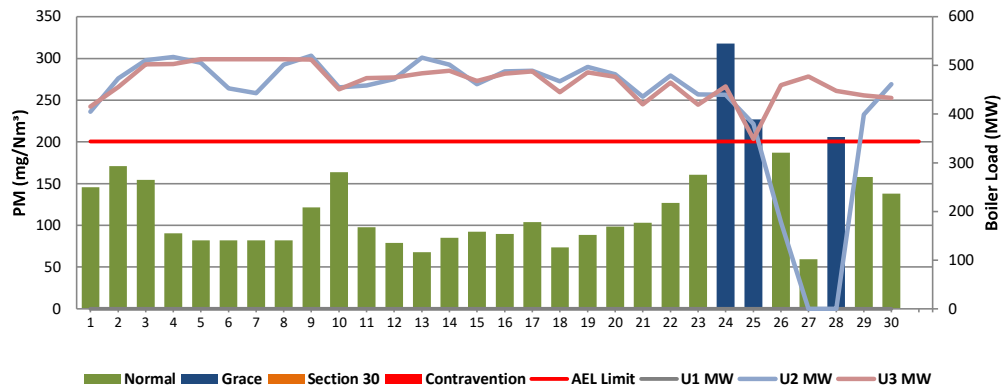


Figure 2: Matla Unit 4 PM Emissions - April 2024

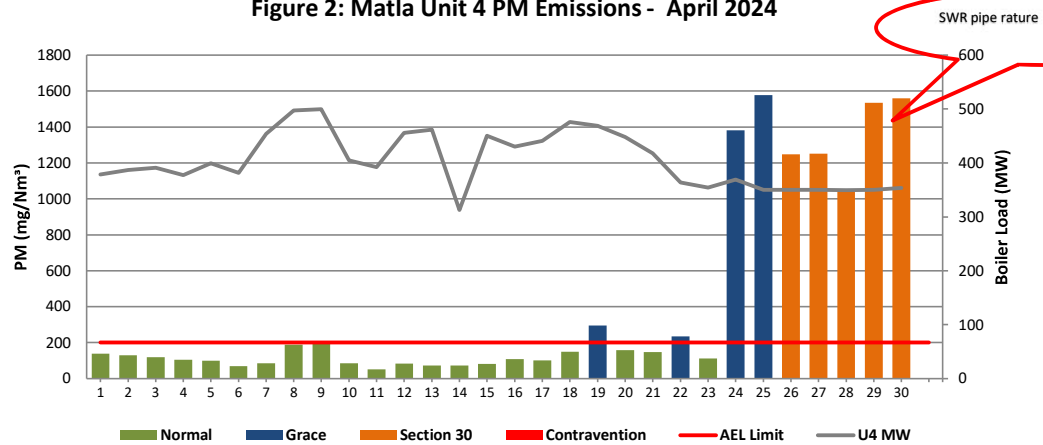


Figure 3: Matla Unit 5 PM Emissions - April 2024

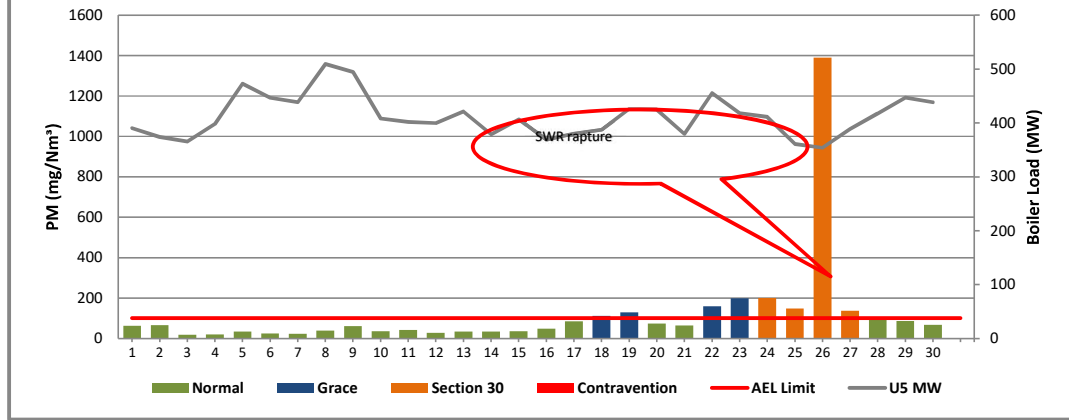


Figure 4: Matla Unit 6 PM Emissions - April 2024

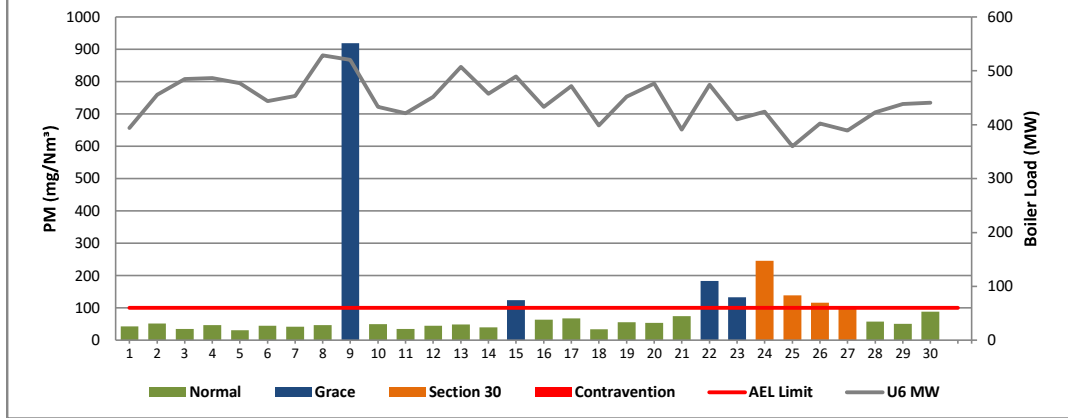


Figure 5: Matla South Stack SO₂ Emissions - April 2024

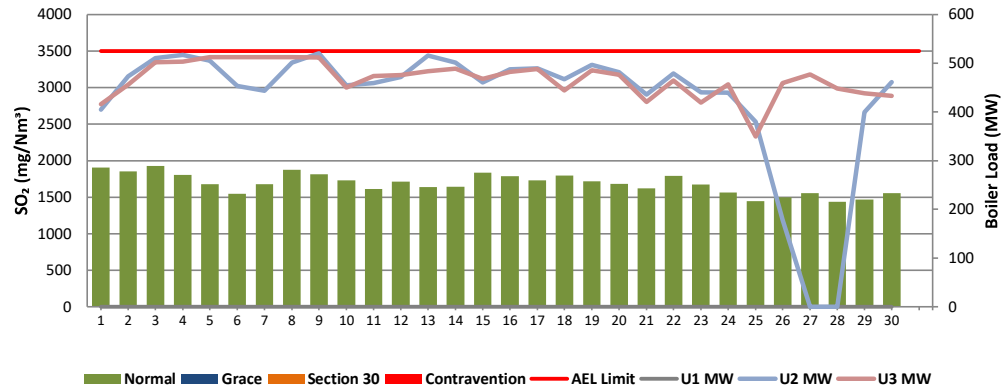


Figure 6: Matla Unit 4 SO₂ Emissions - April 2024

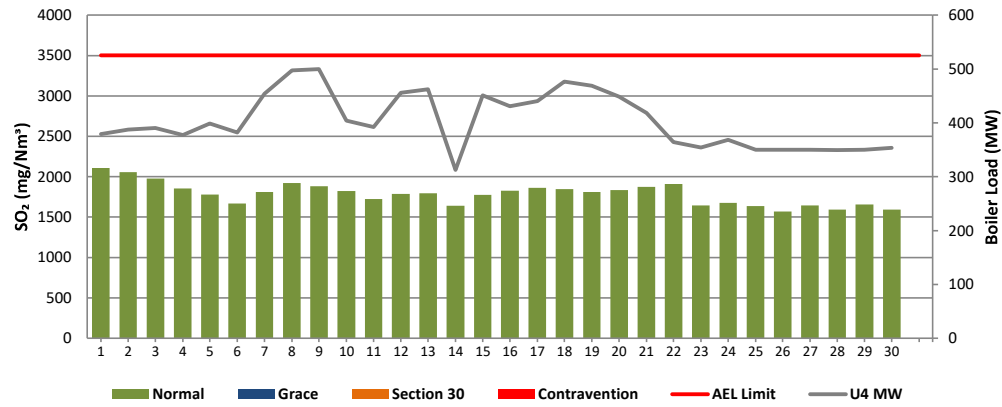


Figure 7: Matla Unit 5 SO₂ Emissions - April 2024

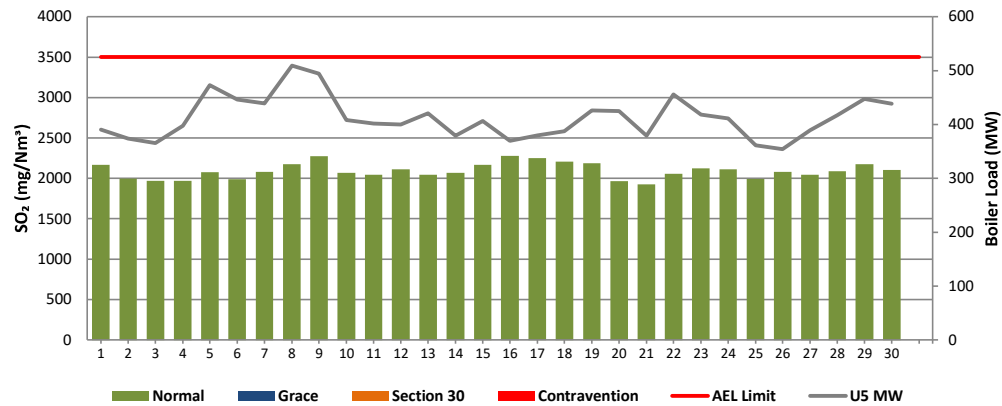


Figure 8: Matla Unit 6 SO₂ Emissions - April 2024

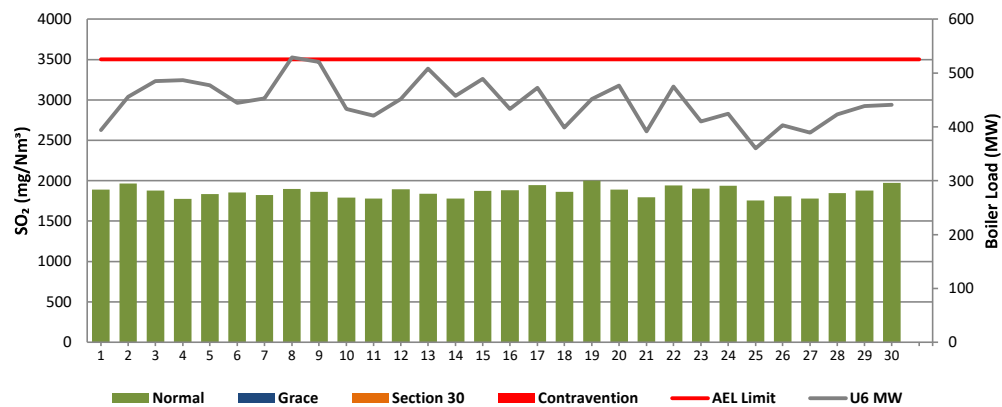


Figure 9: Matla South Stack NOx Emissions - April 2024

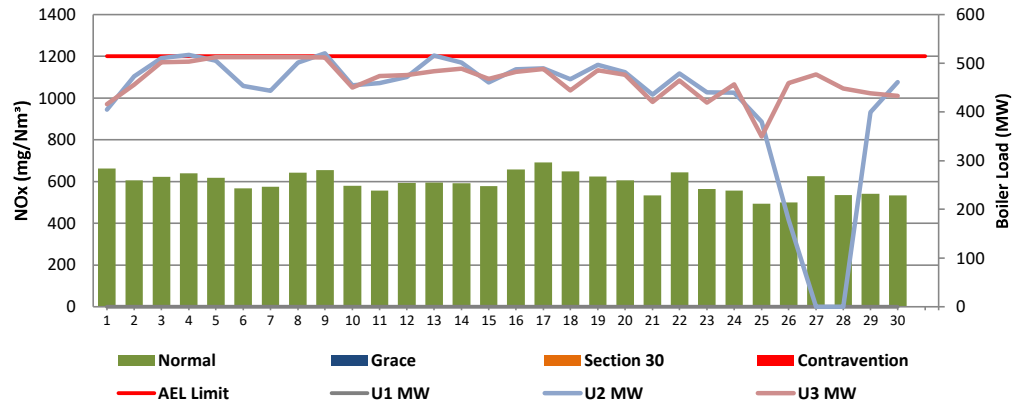


Figure 10: Matla Unit 4 NOx Emissions - April 2024

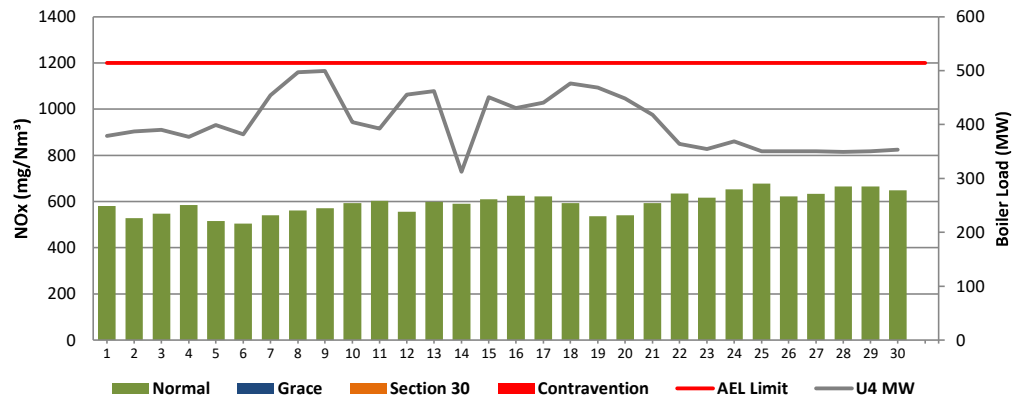


Figure 11: Matla Unit 5 NOx Emissions - April 2024

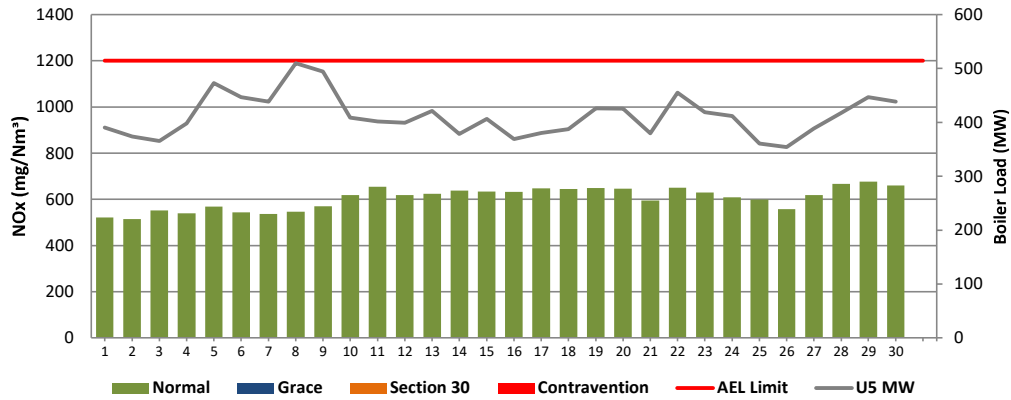
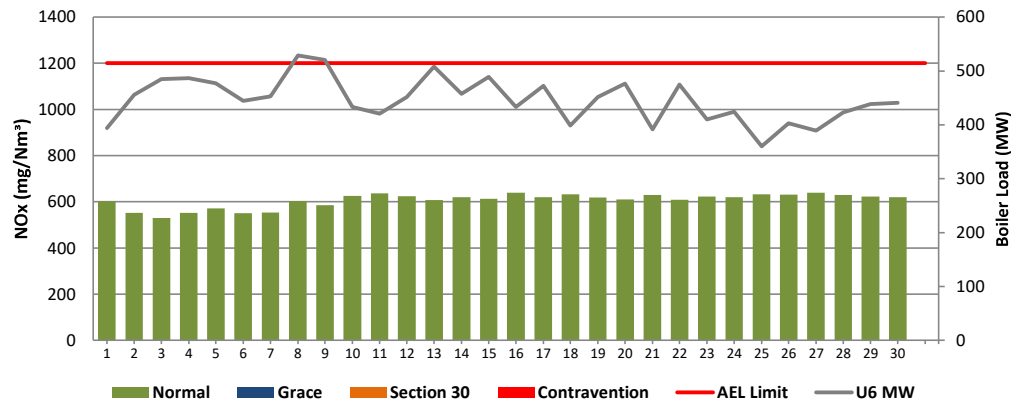


Figure 12: Matla Unit 6 NOx Emissions - April 2024



7 SHUT DOWN AND LIGHT UP INFORMATION

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

South Stack	Event 1		Event 2		Event 3		Event 4	
Unit No.	Unit 2		no event		no event		no event	
Breaker Open (BO)	12:30 am	2024/04/26						
Draught Group (DG) Shut Down (SD)	9:00 pm	2024/04/26						
BO to DG SD (duration)	00:20:30	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	11:00 pm	2024/04/28						
Synch. to Grid (or BC)	8:20 am	2024/04/29						
Fires in to BC (duration)	00:09:20	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

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)								
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. 6	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

7.2: Point Source emissions released during start-up (fires-in) and Shut-down (SD) for the month of April-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
Table 8. Emergency Generation per unit for the month of April 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 April 2024

Source Code / Name	Root Cause Analysis		Dispersion modeling of pollutants where applicable	Measures implemented to prevent reoccurrence	Date measure will be implemented
N/A	N/A	N/A			

10 S30 INCIDENT OR LEGAL CONTRAVENTION REGISTER

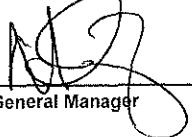
To be completed in the case of a S30 incident or a legal contravention:

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.
4	26/04/2024	30/04/2024	Failure of SWR line SO ₃ plant Failure	Blank SWR lines from the mine side to prevent AWR and Unit 7 from flowing to SWR dam and reclaim water from Unit 7 and AWR to assist with conveying of Ash. Construction of SWR pipe (re-routing) Utilise trucks to assist with emptying the hoppers. Clean SO ₃ catalyst Change SO ₃ flow meter. Replace SO ₃ blow off valve.	2024/04/27	2024/05/13			SAP EHS NO-127848
5	4/04/2024	27/04/2024	Failure of SWR line	•Blank SWR lines from the mine side to prevent AWR and Unit 7 from flowing to SWR dam and reclaim water from Unit 7 and AWR to assist with conveying of Ash. •Construction of SWR pipe (re-routing) •Utilise trucks to assist with emptying the hoppers.	2024/04/25	2024/05/13			SAP EHS NO-127893
6	24/04/2024	27/04/2024	Failure of SWR line	•Blank SWR lines from the mine side to prevent AWR and Unit 7 from flowing to SWR dam and reclaim water from Unit 7 and AWR to assist with conveying of Ash. •Construction of SWR pipe (re-routing) •Utilise trucks to assist with emptying the hoppers.	2024/04/25	2024/05/13			SAP EHS NO-127882

11 General

PM reliability on unit 5 and unit 6 below 80% due emissions at maxing out
Unit 6 PM curve expired and postponed to August due to plant breakdown Testing completed awaiting for the report 08/09/2023
Gases inaccurate and are reported using QAL 2 averages
South stack and unit 6 QAL 2 curves expired Sout stack gas monitor faulty and repairs in progress Target date 30/09/2023
Unit 6 testing completed and awaiting for a report to be issued however it is delayed New target date 05/09/2023


Boiler Engineering
20/05/2024
Date


General Manager
20/05/2024
Date

L A Murovhi
Environmental Department
20/05/2024
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
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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