



Generation

Nkangala District Municipality
P O Box 437
Middleburg
1050

Attention:

Mr V Mahlangu

AND

Directorate: Air Quality Management Services
The Director:
Mr Vumile Senene
Department of Forestry Fisheries and Environment
Private Bag X447
PRETORIA
0001
Tel: (012) 310 3263
Fax: (012) 320 0488

Date: 2024/07/17

Enquiries: Lufuno Tshidzumba-Matla Environmental
☎ +27 17 612 6269

Enquiries: Lindokuhle Ngobese
☎ +27 17 612 6291

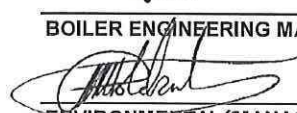
Total number of pages:
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Total number of annexes:

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 Apr-2023
	Coal	Tons	1 475 000	686 819
	Fuel Oil	Tons	3 500	574
Production Rates	Product / By-Product Name	Units	Max Production Capacity Permitted	Production Rate Apr-2023
	Energy	GWh	2 657	1 045
	Ash	Tons	471 000	189 699
	RE PM	kg/MWh	not specified	1.460

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.8-1.1	1.00
Ash Content	%	21-40	27.62

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: 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-2023
South	Electro Static Precipators (ESP)	99.336%
Unit 4	Electro Static Precipators (ESP)	99.660%
Unit 5	Electro Static Precipators (ESP)	99.447%
Unit 6	Electro Static Precipators (ESP)	

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	100.0	100.0	100.0	100.0
Unit 4	96.7	100.0	100.0	100.0
Unit 5	97.0	99.7	99.7	100.0
Unit 6				

6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM	SO _x	NO _x
Unit 1	111.0	1 528.0	366.4
Unit 2	448.6	5 503.8	1 319.8
Unit 3	0.0	0.0	0.0
Unit 4	753.3	4 516.1	1 606.1
Unit 5	212.7	2 462.4	939.8
Unit 6	0.0	0.0	0.0
SUM	1 525.6	14 010.4	4 232.1

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
South	16	4	0	10	14	207.8
Unit 4	5	6	0	19	25	390.5
Unit 5	16	9	0	3	12	165.2
Unit 6	0	0	0	0	0	
SUM	37	19	0	32	51	

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

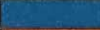
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm ³)
South	30	0	0	0	0	2 471.6
Unit 4	30	0	0	0	0	2 341.3
Unit 5	29	0	0	0	0	1 966.3
Unit 6	0	0	0	0	0	
SUM	89	0	0	0	0	

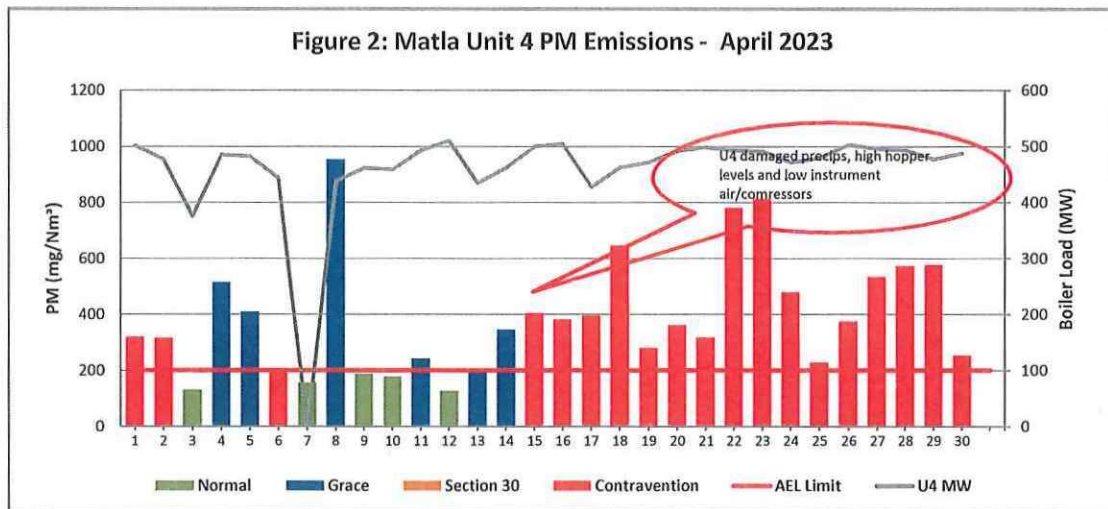
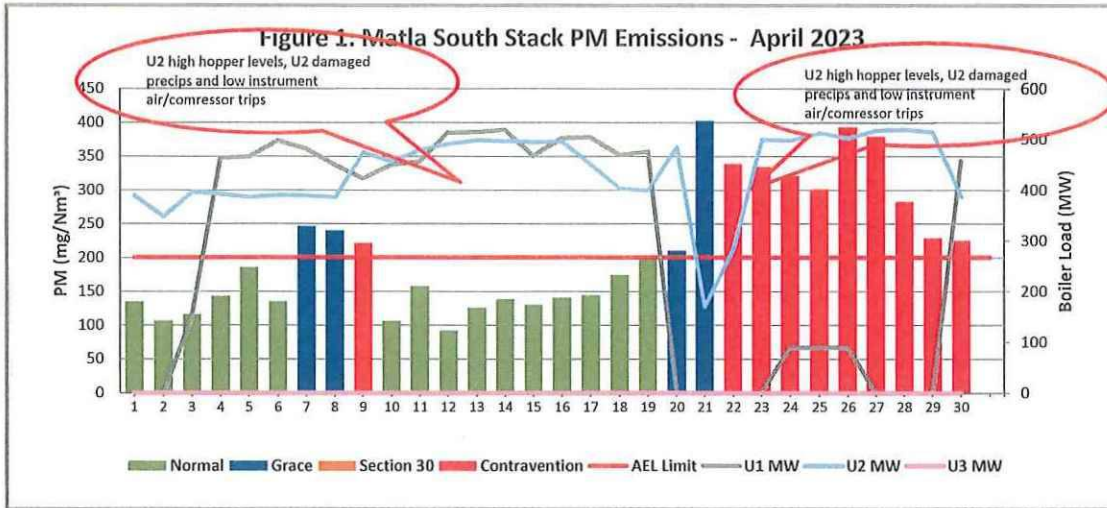
Table 6.4: Operating days in compliance to NO_x AEL Limit - April 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm ³)
South	30	0	0	0	0	592.7
Unit 4	30	0	0	0	0	832.7
Unit 5	29	0	0	0	0	749.6
Unit 6	0	0	0	0	0	
SUM	89	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



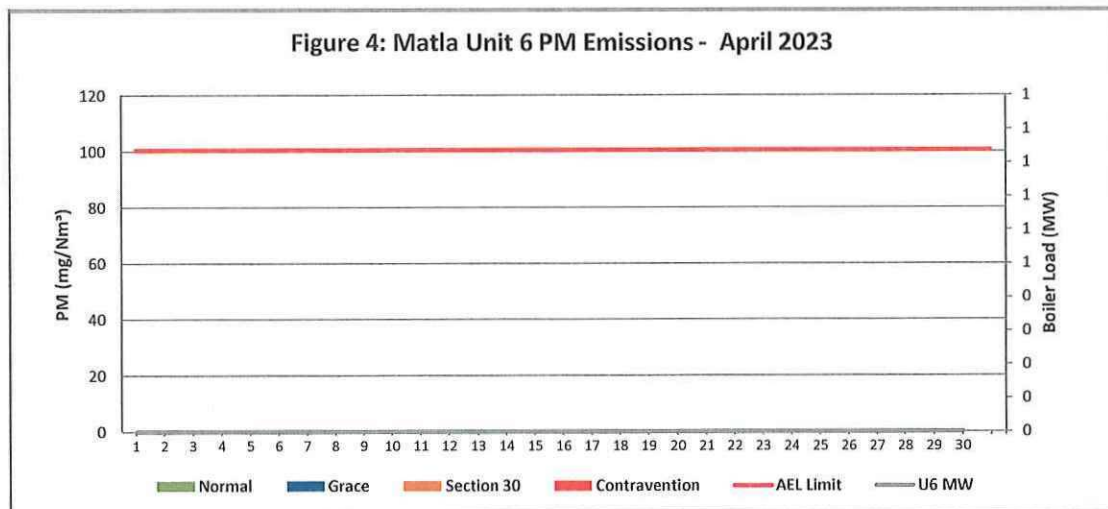
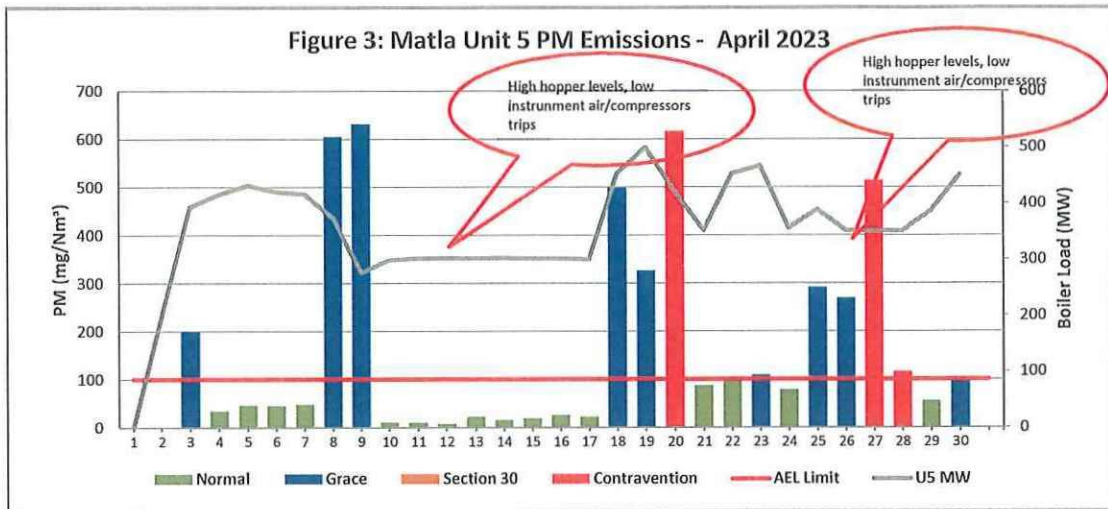


Figure 5: Matla South Stack SO₂ Emissions - April 2023

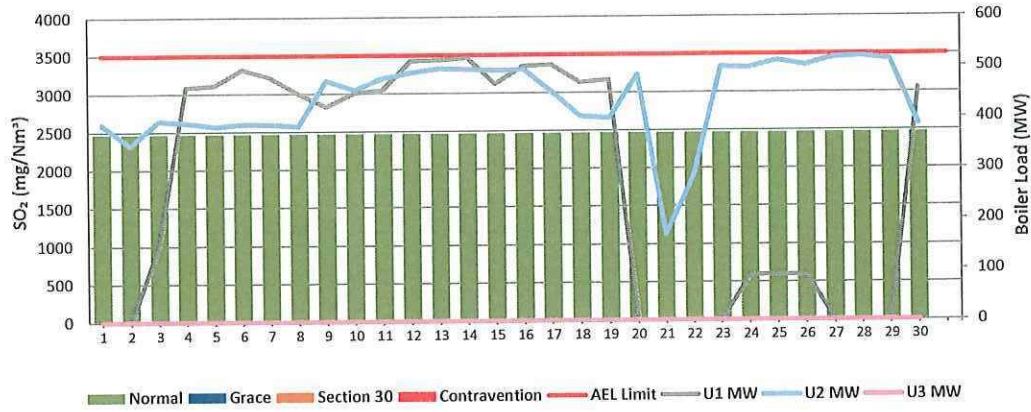


Figure 6: Matla Unit 4 SO₂ Emissions - April 2023

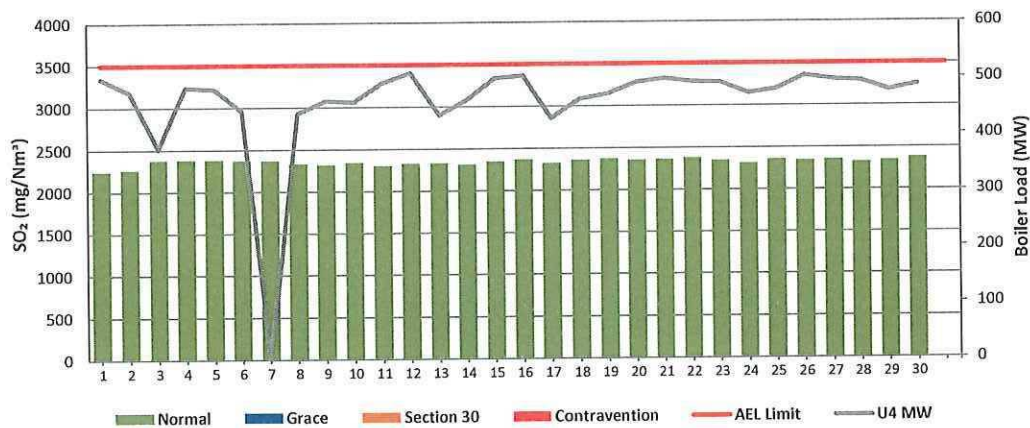


Figure 7: Matla Unit 5 SO₂ Emissions - April 2023

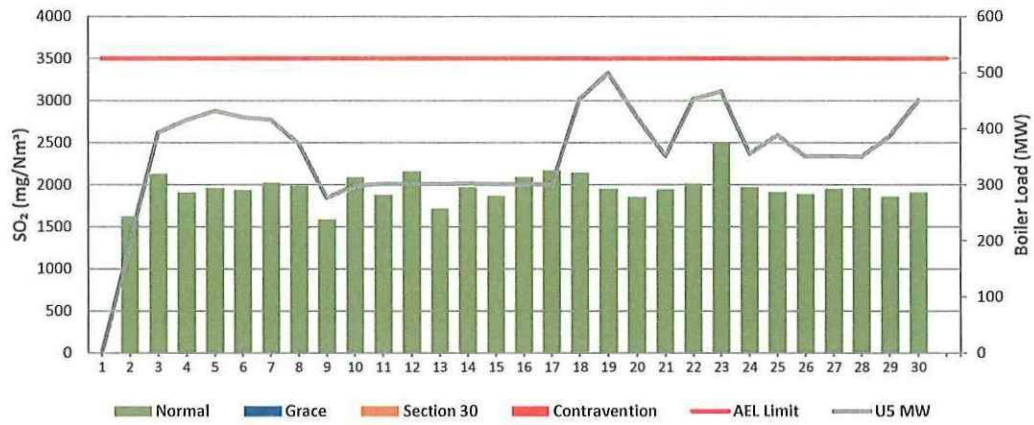


Figure 8: Matla Unit 6 SO₂ Emissions - April 2023

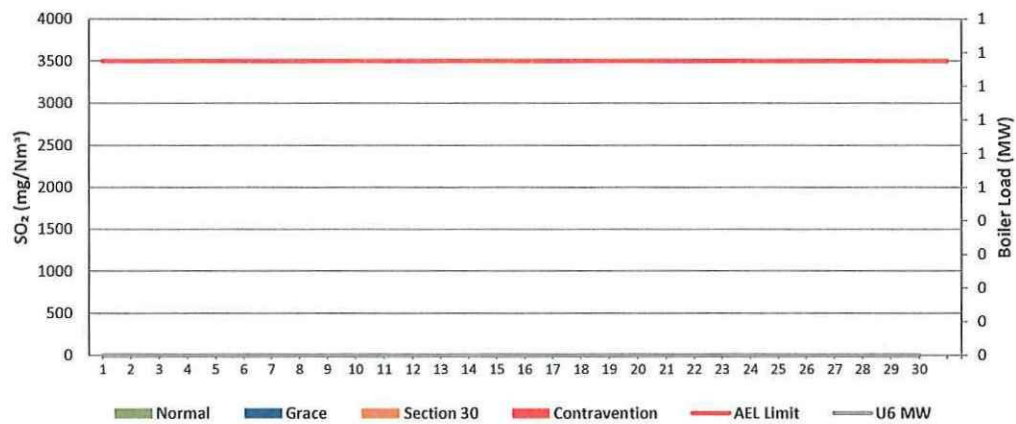


Figure 9: Matla South Stack NOx Emissions - April 2023

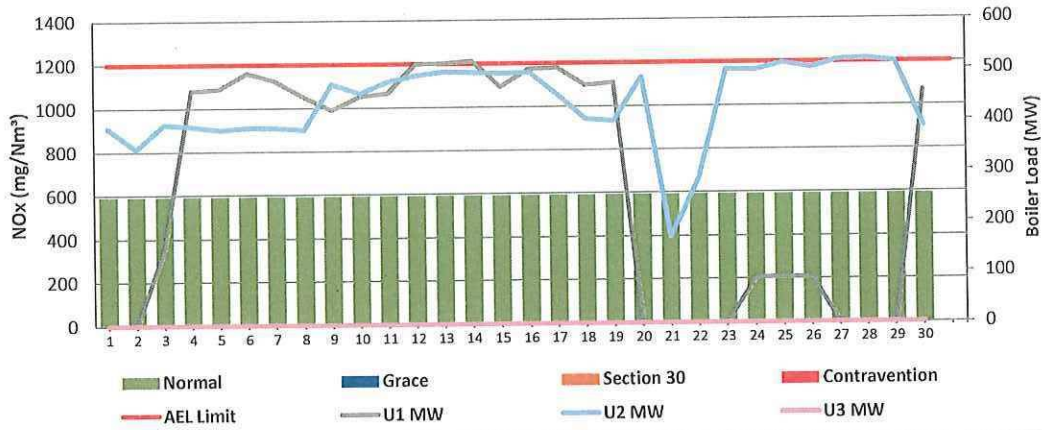


Figure 10: Matla Unit 4 NOx Emissions - April 2023

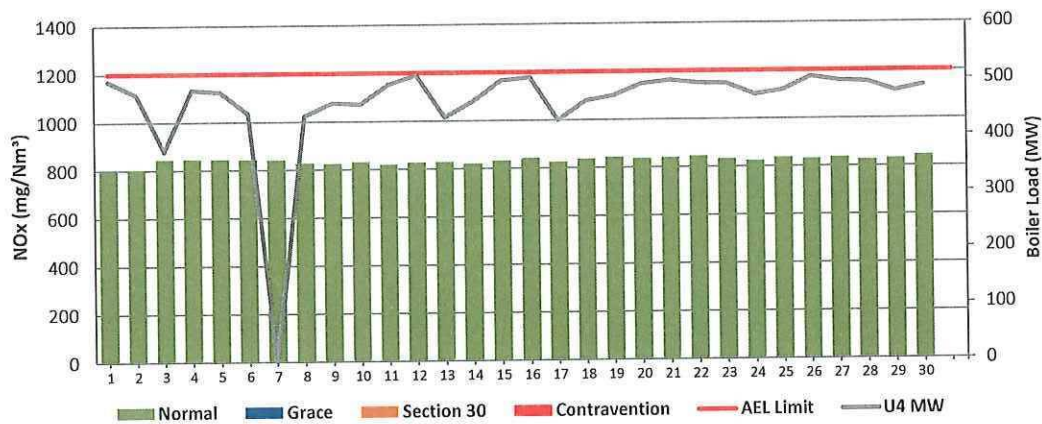


Figure 11: Matla Unit 5 NOx Emissions - April 2023

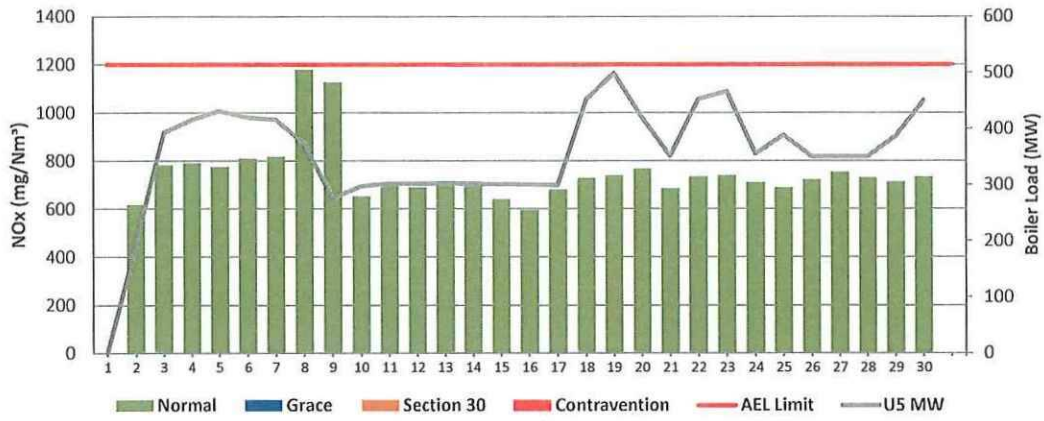
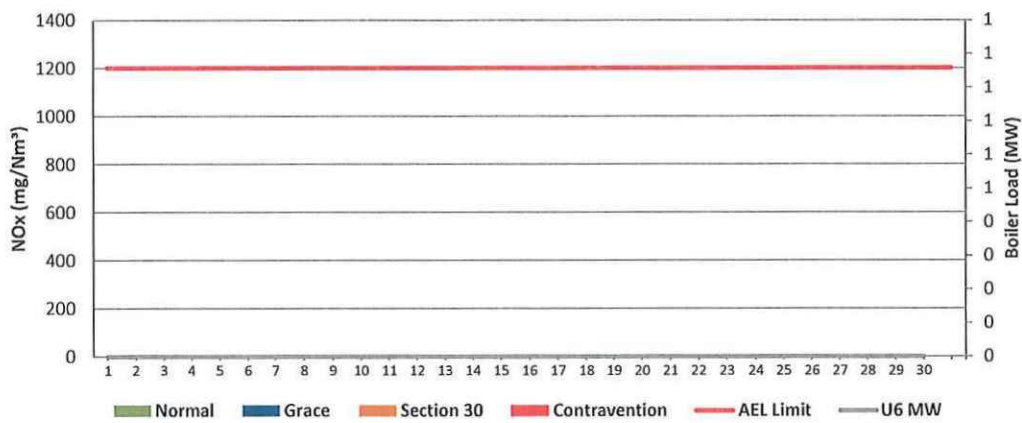


Figure 12: Matla Unit 6 NOx Emissions - April 2023



7 SHUT DOWN AND LIGHT UP INFORMATION

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

South Stack	Event 1		Event 2		Event 3		Event 4	
Unit No.	Unit 1		Unit 1		Unit 1		Unit 2	
Breaker Open (BO)			9:25 pm	2023/04/19	10:35 pm	2023/04/26	12:00 pm	2023/04/21
Draught Group (DG) Shut Down (SD)			12:00 am	2023/04/21	10:35 pm	2023/04/26	1:45 am	2023/04/22
BO to DG SD (duration)		DD:HH:MM	01:02:35	DD:HH:MM	00:00:00	DD:HH:MM	00:13:45	DD:HH:MM
Fires in time	12:05 am	2023/04/03	5:55 pm	2023/04/23	5:20 pm	2023/04/29	8:10 am	2023/04/22
Synch. to Grid (or BC)	9:15 pm	2023/04/03	8:00 am	2023/04/24	2:10 am	2023/04/30	6:05 pm	2023/04/22
Fires in to BC (duration)	00:21:10	DD:HH:MM	00:14:05	DD:HH:MM	00:08:50	DD:HH:MM	00:09:55	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

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	9:45 am	2023/04/01						
Synch. to Grid (or BC)	5:15 am	2023/04/02						
Fires in to BC (duration)	00:19:30	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)								
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-2023 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 April 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 April 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>

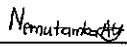
10 S30 INCIDENT OR LEGAL CONTRAVENTION REGISTER

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	09/04/2023 22/04/2023	09/04/2023 30/04/2023	High Ash hopper levels	Empty the Hoppers	N/A	N/A			Legal Contravention
Unit 4	01/04/2023 06/04/2023 15/04/2023	02/04/2023 06/04/2023 30/04/2023	High ash hopper levels	Empty the Hoppers	N/A	N/A			Legal Contravention
Unit 5	20/04/2023 27/04/2023	20/04/2023 28/04/2023	Poor Coal Qualities	Sourcing of Quality Coal	N/A	N/A			Legal Contravention

11 General

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 Environmental
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