



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 Environmental Affairs
Private Bag X447
PRETORIA
0001
Tel: (012) 310 3263
Fax: (012) 320 0488

Date: 2022/05/15

Enquiries: Refilwe mokobodi -Matla Environmental
☎ +27 17 612 6263

Enquiries: Lindokuhle Ngobese
☎ +27 17 612 6291

Total number of pages:
13

Total number of annexes:

MATLA POWER STATION

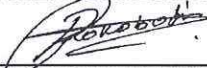
Atmospheric Emission License 17/4/AEL/MP312/11/14



BOILER ENGINEERING MANAGER

16/05/2022

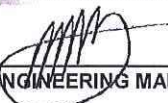
DATE



ENVIRONMENTAL MANAGER

16/05/2022

DATE



ENGINEERING MANAGER

17.05.2022

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-2022
	Coal	Tons	1 475 000	748 484
	Fuel Oil	Tons	3 500	2 029
Production Rates	Product / By-Product Name	Units	Max Production Capacity Permitted	Production Rate Apr-2022
	Energy	GWh	2 657	1 240
	Ash	Tons	471 000	228 737
	RE PM	kg/MWh	not specified	0,909

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.8-1.1	1,00
Ash Content	%	21-40	30,56

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-2022
South	<i>Electro Static Precipators (ESP)</i>	<i>99,467%</i>
Unit 4	<i>Electro Static Precipators (ESP)</i>	<i>99,265%</i>
Unit 5	<i>Electro Static Precipators (ESP)</i>	<i>99,519%</i>
Unit 6	<i>Electro Static Precipators (ESP)</i>	<i>99,462%</i>

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	<i>92,0</i>	<i>99,0</i>	<i>99,1</i>	<i>100,0</i>
Unit 4	<i>85,0</i>	<i>97,6</i>	<i>99,9</i>	<i>83,4</i>
Unit 5	<i>96,0</i>	<i>99,0</i>	<i>99,0</i>	<i>100,0</i>
Unit 6	<i>99,9</i>	<i>89,9</i>	<i>89,7</i>	<i>90,0</i>

6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of April-2022

Associated Unit/Stack	PM	SOx	NOx
Unit 1	201,5	1 821,3	1 058,0
Unit 2	222,1	2 226,6	1 240,9
Unit 3	128,6	1 679,1	847,5
Unit 4	192,9	1 835,3	948,1
Unit 5	218,2	2 827,7	1 205,6
Unit 6	164,6	1 731,7	604,1
SUM	1 127,8	12 121,7	5 904,2

Table 6.2: Operating days in compliance to PM AEL Limit - April 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
South	15	11	1	0	12	187,1
Unit 4	8	9	1	0	10	245,0
Unit 5	14	3	7	0	10	158,9
Unit 6	6	7	5	0	12	185,2
SUM	43	30	14	0	44	

Table 6.3: Operating days in compliance to SOx AEL Limit - April 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm³)
South	29	0	0	0	0	1 678,5
Unit 4	21	0	0	0	0	2 029,0
Unit 5	28	0	0	0	0	2 243,2
Unit 6	20	0	0	0	0	1 990,8
SUM	98	0	0	0	0	

Table 6.4: Operating days in compliance to NOx AEL Limit - April 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
South	29	0	0	0	0	994,2
Unit 4	19	0	0	2	2	1 082,0
Unit 5	28	0	0	0	0	928,9
Unit 6	20	0	0	0	0	700,3
SUM	96	0	0	2	2	

Note: NOx emissions is measured as NO in PPM. Final NOx 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 2022

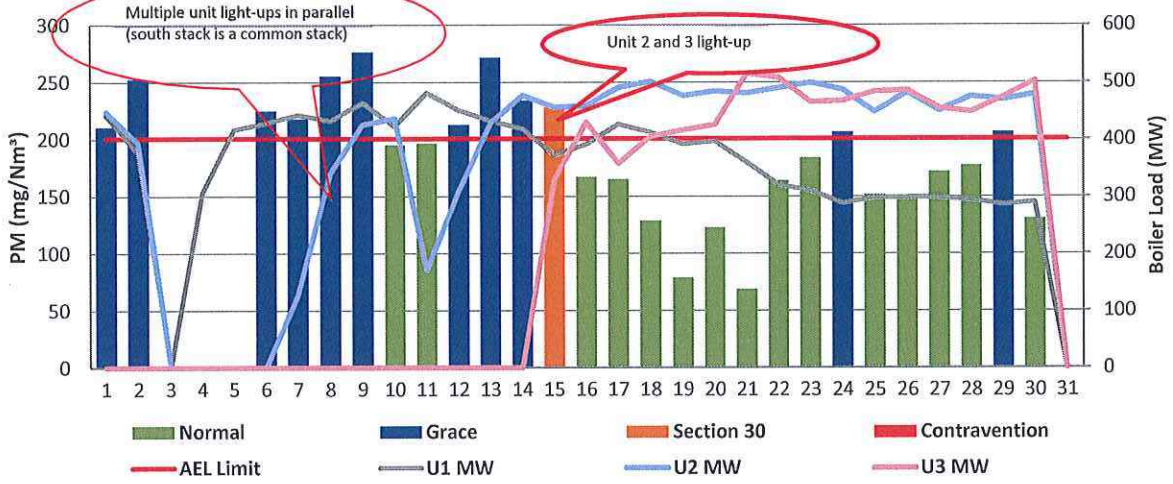


Figure 2: Matla Unit 4 PM Emissions - April 2022

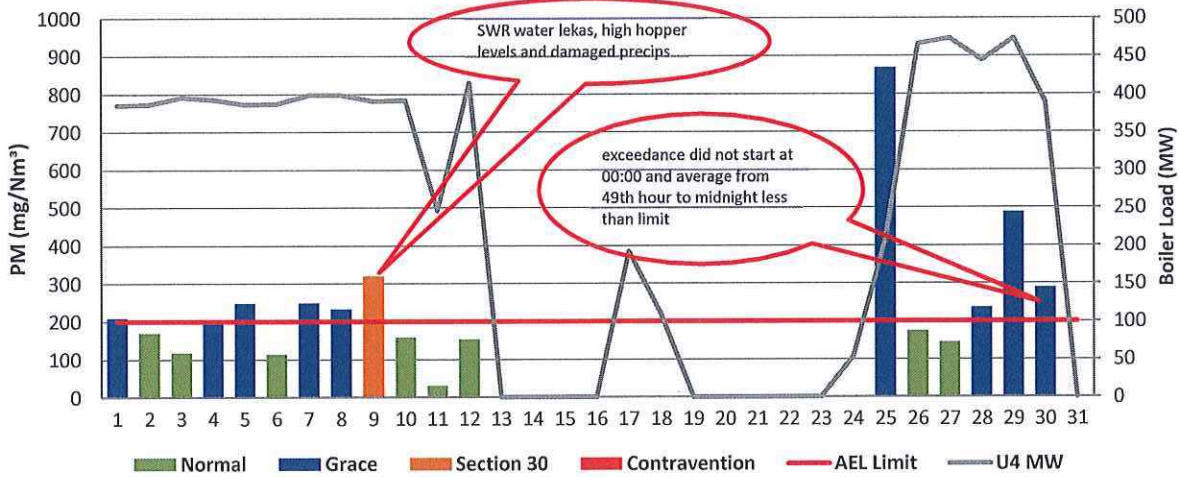


Figure 3: Matla Unit 5 PM Emissions - April 2022

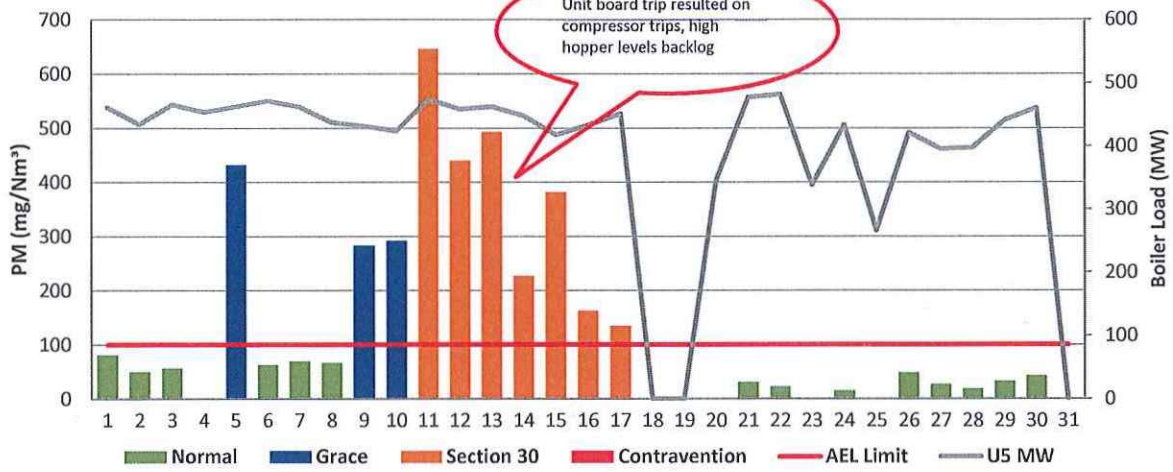


Figure 4: Matla Unit 6 PM Emissions - April 2022

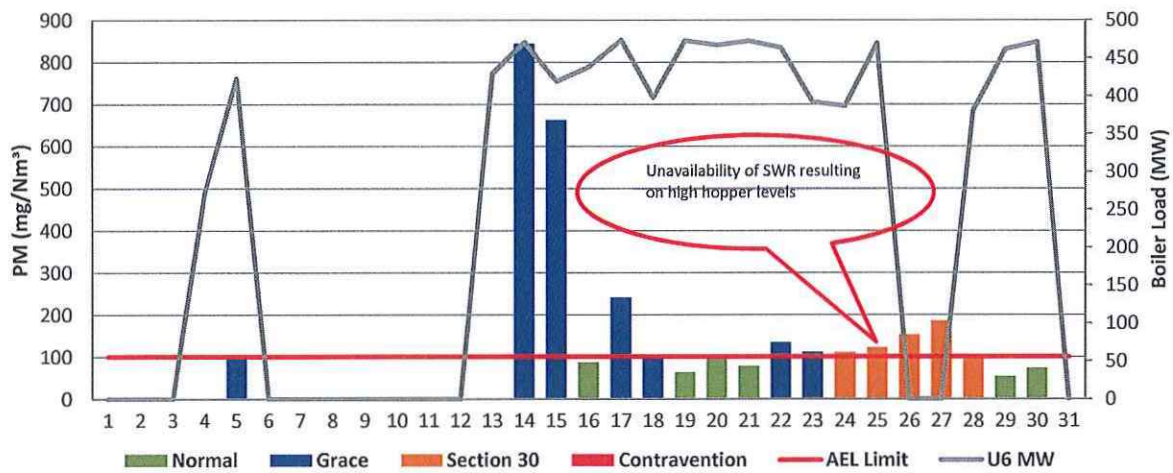


Figure 5: Matla South Stack SOx Emissions - April 2022

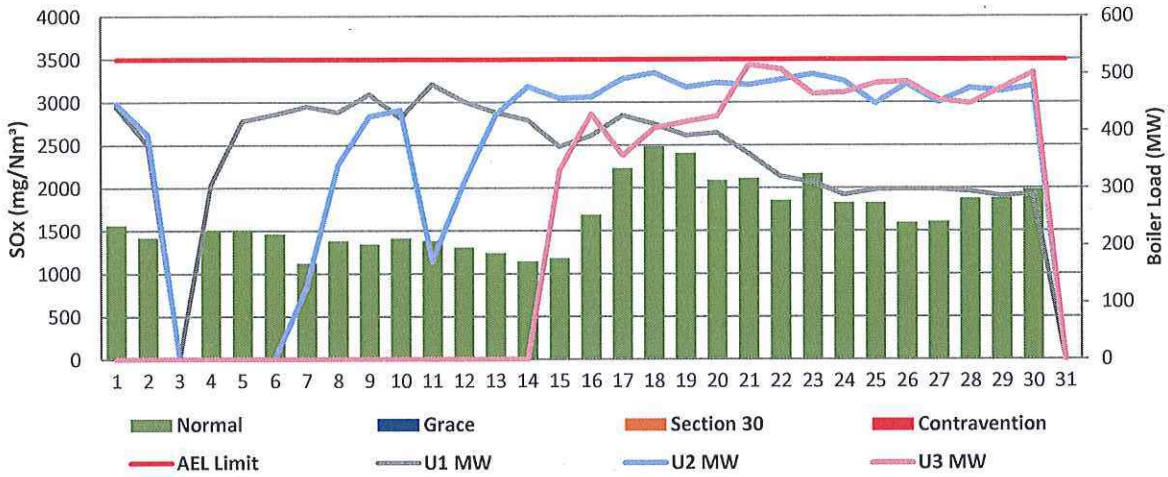


Figure 6: Matla Unit 4 SOx Emissions - April 2022

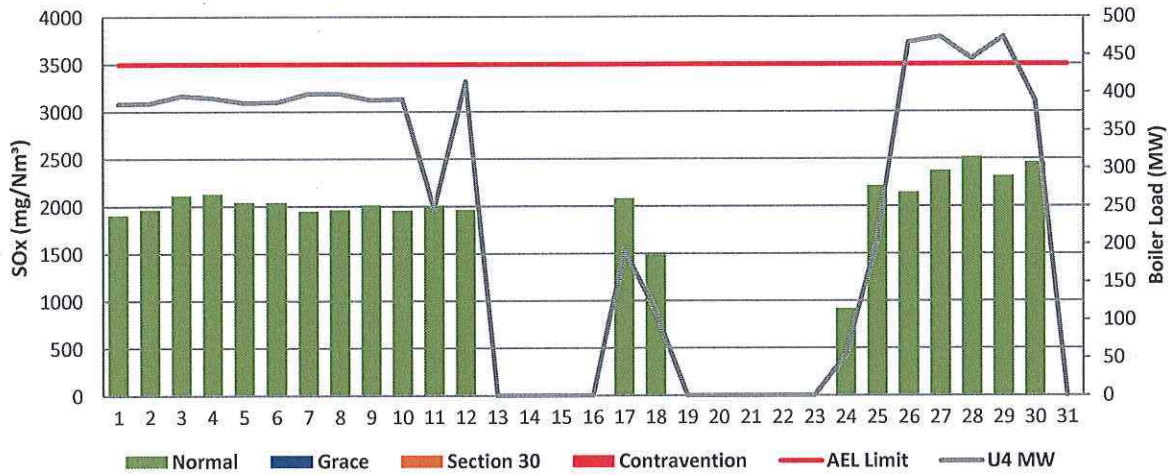


Figure 7: Matla Unit 5 SOx Emissions - April 2022

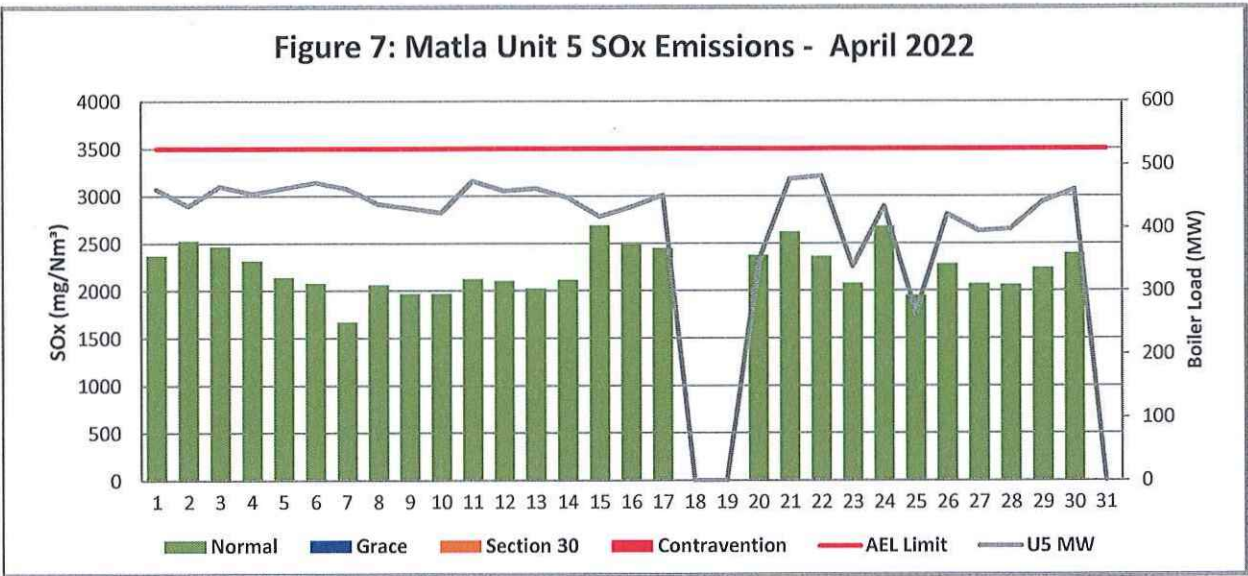


Figure 8: Matla Unit 6 SOx Emissions - April 2022

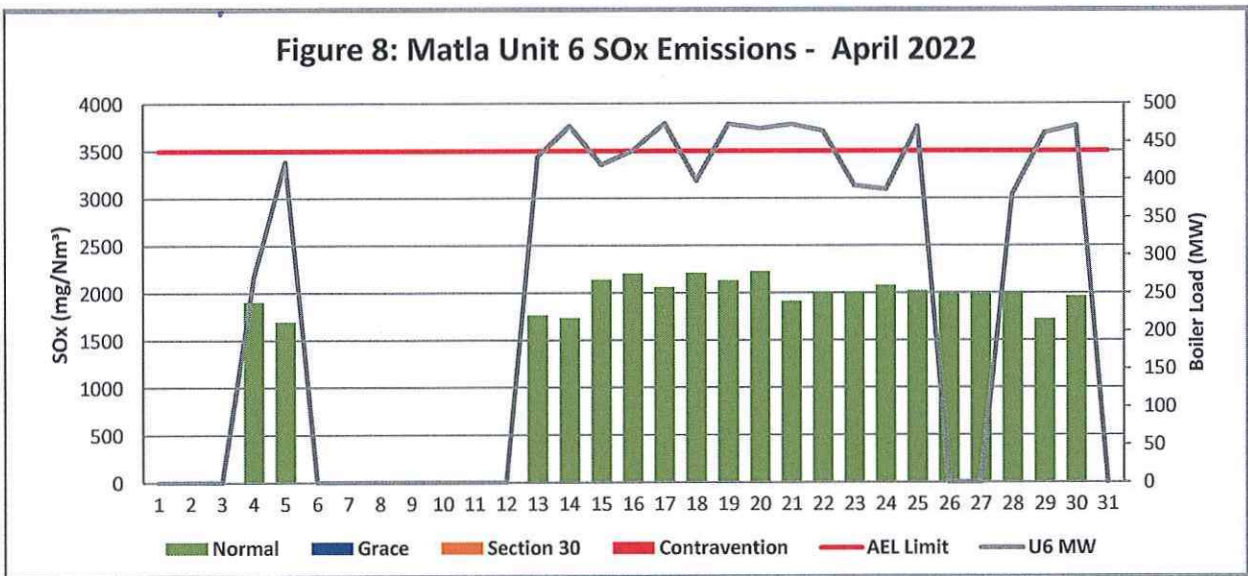


Figure 9: Matla South Stack NOx Emissions - April 2022

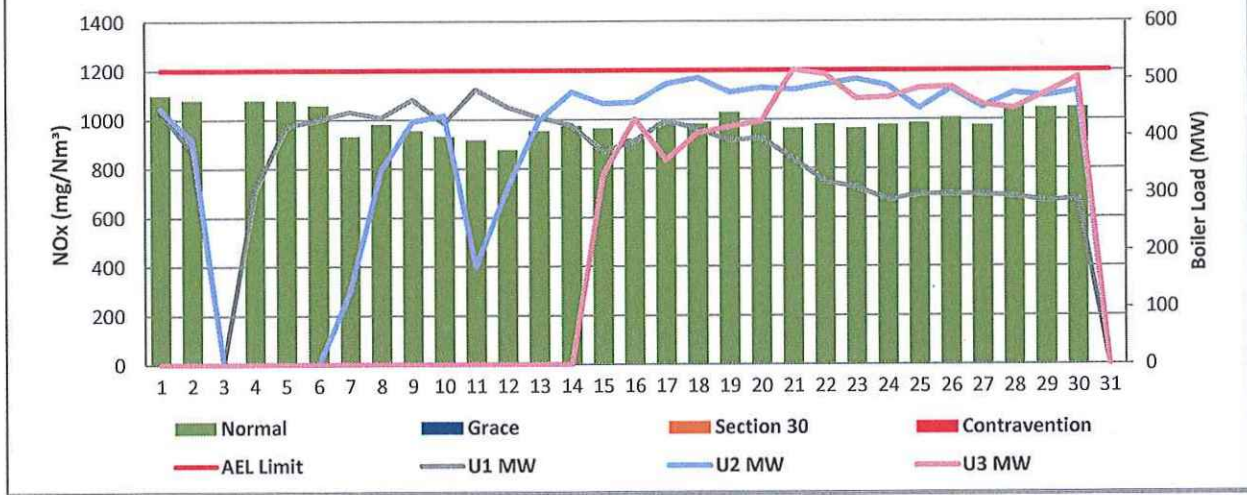


Figure 10: Matla Unit 4 NOx Emissions - April 2022

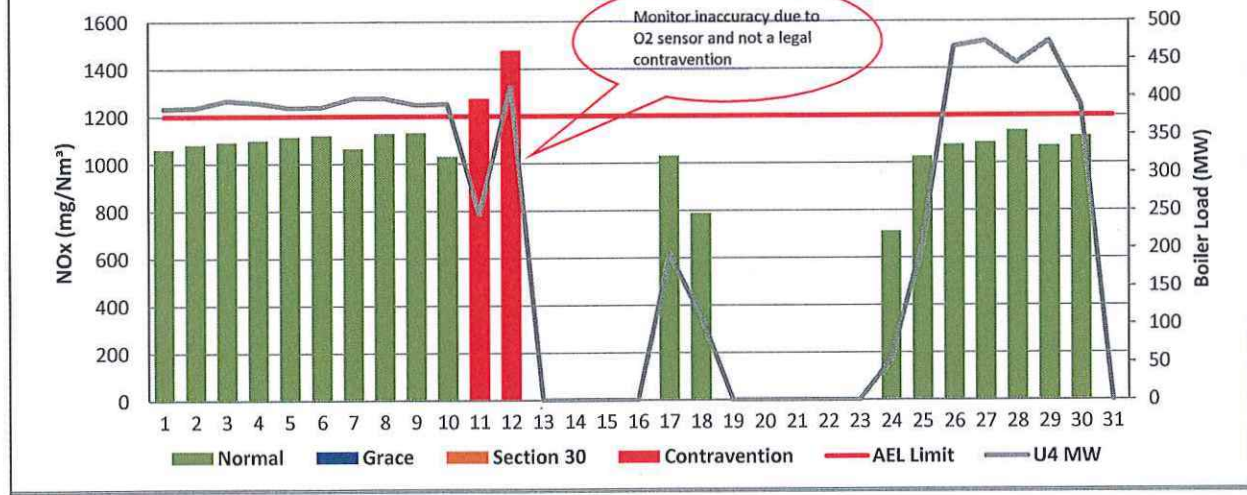


Figure 11: Matla Unit 5 NOx Emissions - April 2022

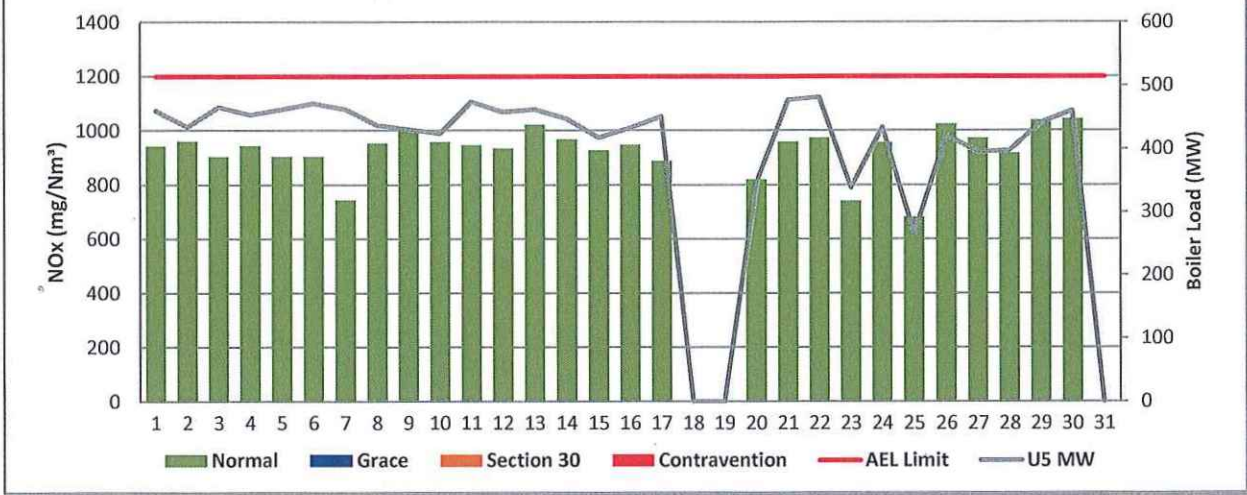
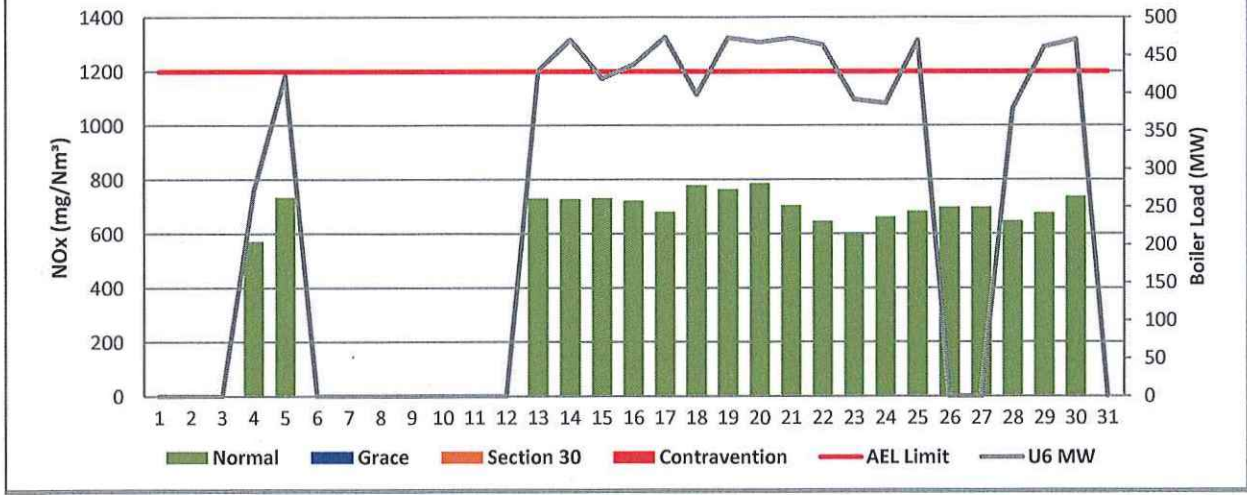


Figure 12: Matla Unit 6 NOx Emissions - April 2022



7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1. PM Start-up information for the month of April-2022

South Stack	Event 1		Event 2		Event 3		Event 4	
Unit No.	Unit 1		Unit 2		no event		Unit 2	
Breaker Open (BO)	4:45 AM	2022/04/02	11:20 AM	2022/04/02	12:00 AM	2022/04/04	12:55 AM	2022/04/11
Draught Group (DG) Shut Down (SD)	4:55 PM	2022/04/03	8:40 AM	2022/04/03	1:55 PM	2022/04/05	DG did not trip or SD	DG did not trip or SD
BO to DG SD (duration)	01:12:10	DD:HH:MM	00:21:20	DD:HH:MM	01:13:55	DD:HH:MM	n/a	DD:HH:MM
Fires in time	2:45 PM	2022/04/05	6:40 AM	2022/04/07			12:55 AM	2022/04/11
Synch. to Grid (or BC)	11:25 PM	2022/04/05	4:55 PM	2022/04/07			6:45 PM	2022/04/11
Fires in to BC (duration)	00:08:40	DD:HH:MM	00:10:15	DD:HH:MM		DD:HH:MM	00:17:50	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		DD:HH:MM	n/a	DD:HH:MM

South Stack ...cont.	Event 5		Event 6		Event 7		Event 8	
Unit No.	Unit 3		no event		no event		no event	
Breaker Open (BO)	BO previously	BO previously						
Draught Group (DG) Shut Down (SD)	n/a	n/a						
BO to DG SD (duration)	n/a	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	9:40 PM	2022/04/14						
Synch. to Grid (or BC)	10:55 AM	2022/04/15						
Fires in to BC (duration)	00:13:15	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. 4	Event 1		Event 2		Event 3		Event 4	
Breaker Open (BO)	12:05 AM	2022/04/11	12:00 AM	2022/04/13				
Draught Group (DG) Shut Down (SD)	12:05 AM	2022/04/11	8:05 PM	2022/04/13				
BO to DG SD (duration)		DD:HH:MM	00:20:05	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	12:05 AM	2022/04/11	9:50 AM	2022/04/24				
Synch. to Grid (or BC)	5:55 PM	2022/04/11	11:45 PM	2022/04/24				
Fires in to BC (duration)	00:17:50	DD:HH:MM	00:13:55	DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	5:00 PM	2022/04/26	5:00 PM	2022/04/26				
Emissions below limit from BC (duration)	14:23:05	DD:HH:MM	01:17:15	DD:HH:MM		DD:HH:MM		DD:HH:MM

Unit No. 5	Event 1		Event 2		Event 3		Event 4	
Breaker Open (BO)	7:55 PM	2022/04/03	1:55 PM	2022/04/17	2:25 PM	2022/04/22	10:20 PM	2022/04/24
Draught Group (DG) Shut Down (SD)	7:55 PM	2022/04/03	1:55 PM	2022/04/17	2:25 PM	2022/04/22	10:20 PM	2022/04/24
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	7:55 PM	2022/04/03	1:55 PM	2022/04/17	2:25 PM	2022/04/22	10:20 PM	2022/04/24
Synch. to Grid (or BC)	1:35 AM	2022/04/04	2:15 AM	2022/04/20	2:40 PM	2022/04/23	7:30 AM	2022/04/25
Fires in to BC (duration)	00:05:40	DD:HH:MM	02:12:20	DD:HH:MM	01:00:15	DD:HH:MM	00:09:10	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

Unit No. 6	Event 1		Event 2		Event 3		Event 4	
Breaker Open (BO)			8:30 PM	2022/04/05				
Draught Group (DG) Shut Down (SD)			8:55 PM	2022/04/06				
BO to DG SD (duration)		DD:HH:MM	01:00:25	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	6:05 PM	2022/04/03	3:45 PM	2022/04/12				
Synch. to Grid (or BC)	5:35 PM	2022/04/04	12:40 AM	2022/04/13				
Fires in to BC (duration)	00:23:30	DD:HH:MM	00:08:55	DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	7:00 PM	2022/04/20	7:00 PM	2022/04/20				
Emissions below limit from BC (duration)	16:01:25	DD:HH:MM	07:18:20	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-2022 in mg/Nm³

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

Remember to add attachments here; see ReportAddendum Tab

Reserved for Addendum XXXX

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 2022

	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 2022

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 source)</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>

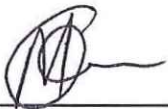
10 S30 INCIDENT OR LEGAL CONTRAVENTION REGISTER


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.
4	25/03/2022	11/04/2022	SWR, Silo levels, damaged precips and hopper level backlog	unit shut down for precips repairs	Yes				Final report submitted
5	11/04/2022	17/04/2022	Unit board trip, compressors, sulphur fluctuations and high hopper levels	Alternative supply and recovered hopper levels	Yes				Final report submitted
6	24/04/2022	28/04/2022	Unavailability of SWR resulting on high hopper levels	recovered hopper levels	Yes				
South stack	14/04/2022	15/05/2022	Unit 2 and unit 3 light-ups	Unit stabilized after light-up	Yes				Final report submitted

11 General

Gases on QAL2 averages are used for reporting where monitor is unreliable . South stack, unit 4 and 6 correlation are over due and the station is in process to re-test.


Boiler Engineering 16-05-2022
Date


Environmental Department 15.05.2022
Date


General Manager 17/05/2022
Date

Compiled by: Boiler Engineering Department

ESP & SO₂ System Engineer

For: Department of Environmental Affairs and Tourism

Chief Air Pollution Control Officer

Copies: Eskom Environmental Management

D Herbst
B Mccourt

Group Technology Engineering

R Rampiar
E. Patel

Matla Power Station:

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