



Generation

Nkangala District Municipality
P O Box 437
Middleburg
1050

Date: 2021/06/17

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

Attention:
Mr V Mahlangu

Enquiries: Lele Masote
☎ +27 17 612 6457

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

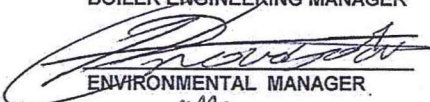
Total number of pages:
14

Total number of annexes: 1

MATLA POWER STATION

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


BOILER ENGINEERING MANAGER


ENVIRONMENTAL MANAGER


ENGINEERING MANAGER

18/06/2021

DATE

2021/06/17

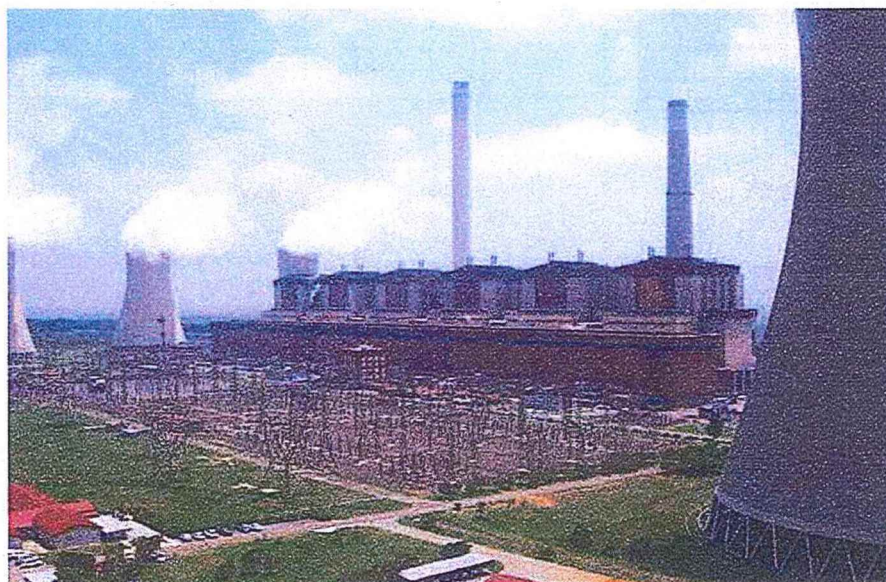
DATE

2021-06-21

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	Maximum Permitted Consumption Rate	Consumption Rate May-2021
	Coal	Tons	1 475 000	825 593
	Fuel Oil	Tons	2 500	672

Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate May-2021
	Energy	GWh	2 567	1 532
	Ash	Tons	471 000	259 566
	RE PM	kg/MWh	not specified	0,467

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.8-1.1	1,00
Ash Content	%	21-40	31,44

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

4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency May-2021
South	<i>Electro Static Precipators (ESP)</i>	<i>99,750%</i>
Unit 4	<i>Electro Static Precipators (ESP)</i>	<i>99,517%</i>
Unit 5	<i>Electro Static Precipators (ESP)</i>	<i>99,760%</i>
Unit 6	<i>Electro Static Precipators (ESP)</i>	<i>99,666%</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>97,4</i>	<i>9,7</i>	<i>9,7</i>	<i>9,7</i>
Unit 4	<i>99,7</i>	<i>99,3</i>	<i>99,3</i>	<i>99,4</i>
Unit 5	<i>99,3</i>	<i>100,0</i>	<i>100,0</i>	<i>100,0</i>
Unit 6	<i>95,6</i>	<i>98,4</i>	<i>98,5</i>	<i>98,7</i>

6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of May-2021

Associated Unit/Stack	PM	SO _x	NO _x
Unit 1	108,6	3 018,0	873,8
Unit 2	134,9	3 424,8	991,5
Unit 3	0,0	0,0	0,0
Unit 4	217,0	3 392,4	1 002,1
Unit 5	127,3	4 178,4	1 730,7
Unit 6	128,3	3 493,8	1 492,7
SUM	716,1	17 507,3	6 090,8

Table 6.2: Operating days in compliance to PM AEL Limit - May 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
South	29	2	0	0	2	82,7
Unit 4	25	2	0	0	2	148,3
Unit 5	28	3	0	0	3	70,6
Unit 6	23	7	1	0	8	93,6
SUM	105	14	1	0	15	

Table 6.3: Operating days in compliance to SOx AEL Limit - May 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm ³)
South	31	0	0	0	0	2 087,8
Unit 4	30	0	0	0	0	2 265,2
Unit 5	31	0	0	0	0	2 290,5
Unit 6	31	0	0	0	0	2 522,8
SUM	123	0	0	0	0	

Table 6.4: Operating days in compliance to NOx AEL Limit - May 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm ³)
South	31	0	0	0	0	605,3
Unit 4	30	0	0	0	0	661,2
Unit 5	31	0	0	0	0	949,8
Unit 6	27	0	0	4	4	1 078,1
SUM	119	0	0	4	4	

Table 6.5: Legend Description

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

Figure 1: Matla South Stack PM Emissions - May 2021

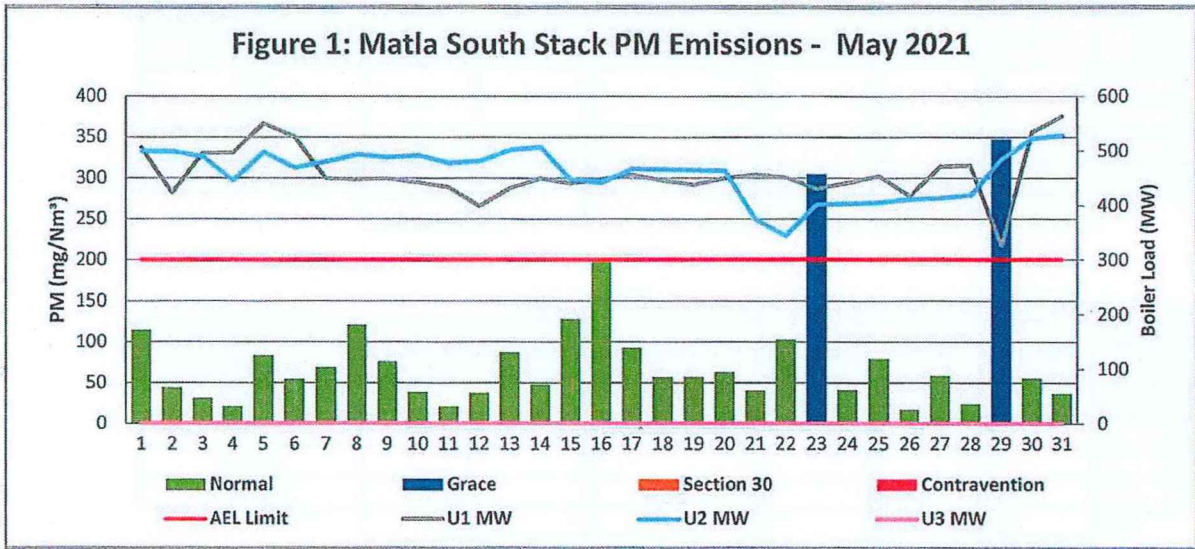


Figure 2: Matla Unit 4 PM Emissions - May 2021

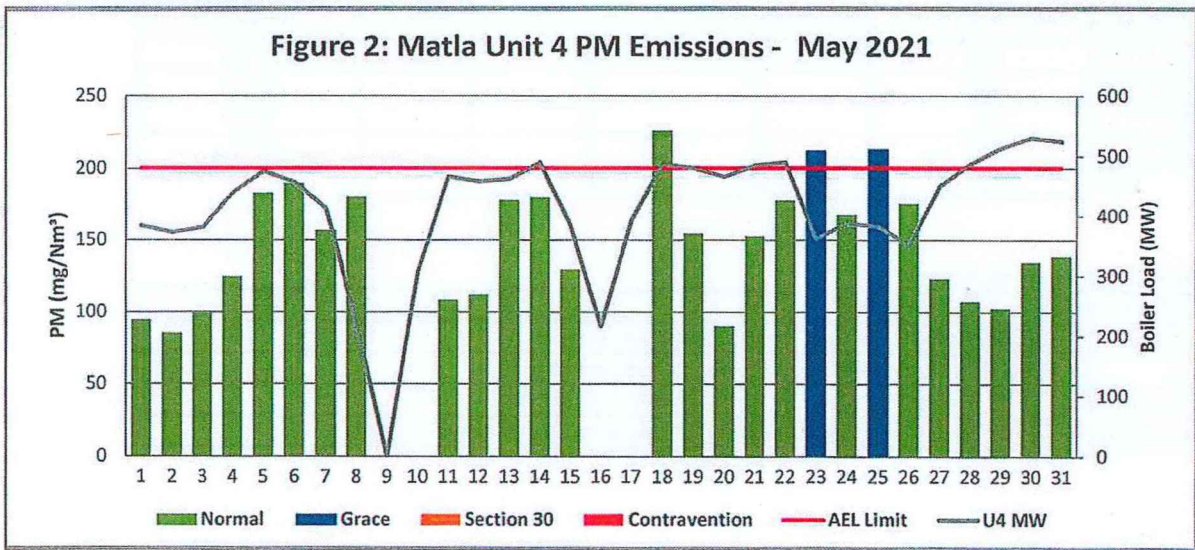


Figure 3: Matla Unit 5 PM Emissions - May 2021

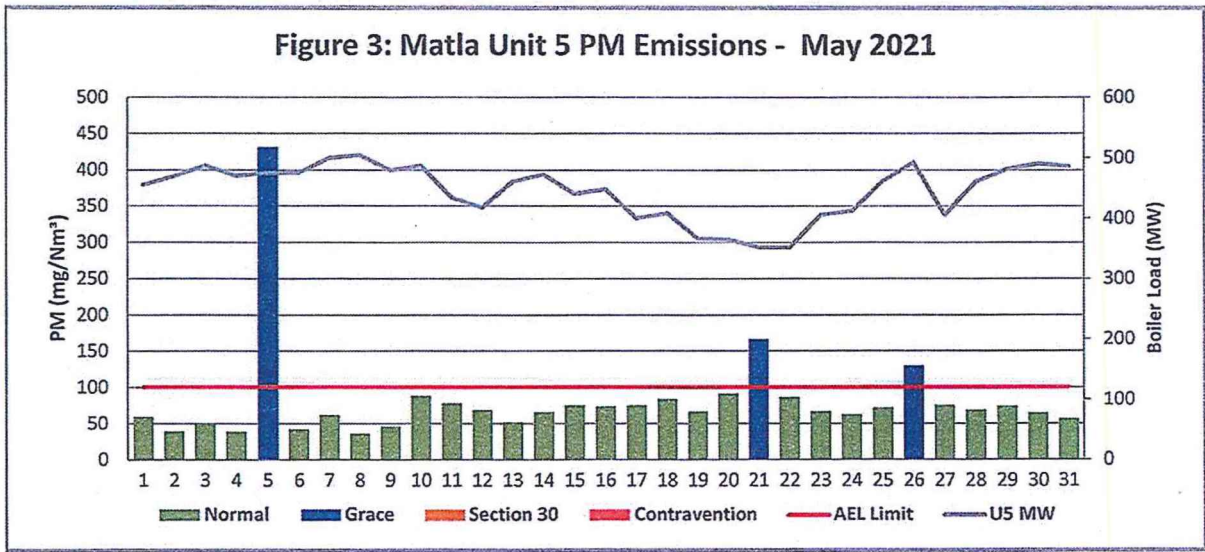


Figure 4: Matla Unit 6 PM Emissions - May 2021

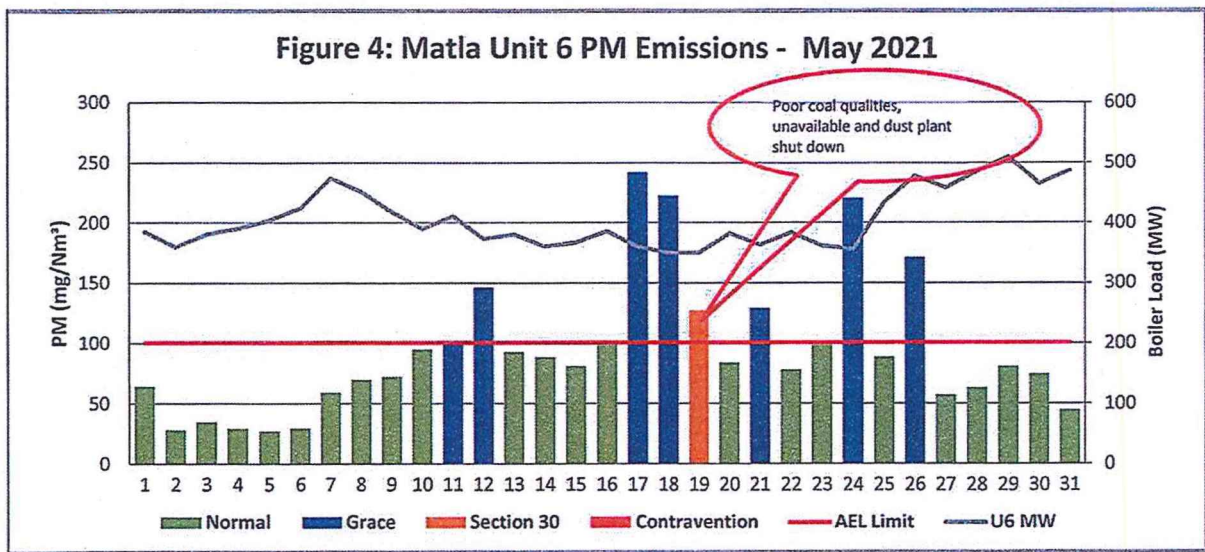


Figure 5: Matla South Stack SOx Emissions - May 2021

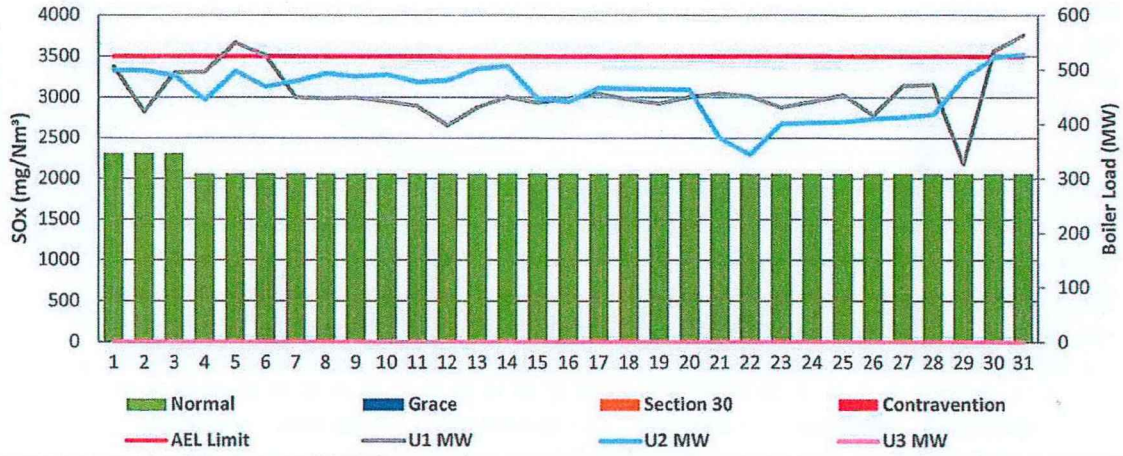


Figure 6: Matla Unit 4 SOx Emissions - May 2021

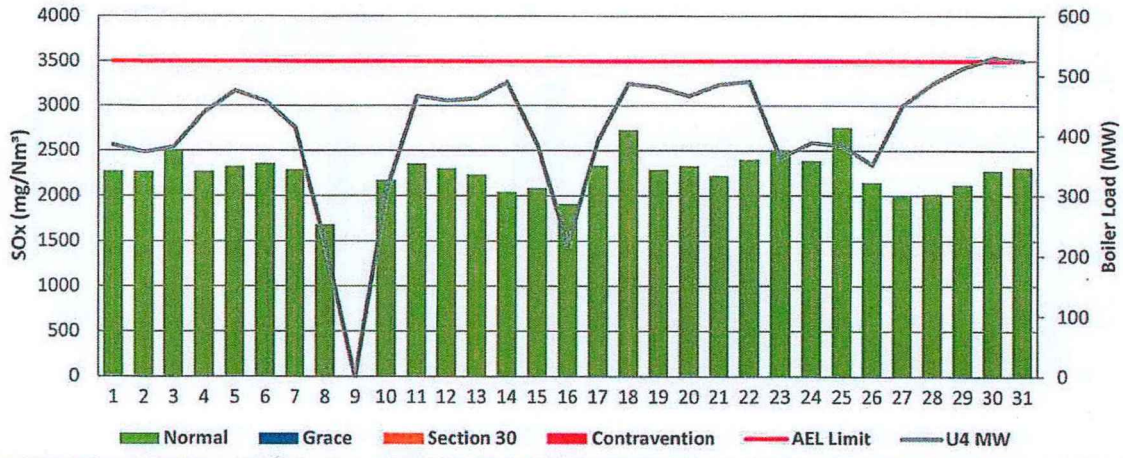


Figure 7: Matla Unit 5 SOx Emissions - May 2021

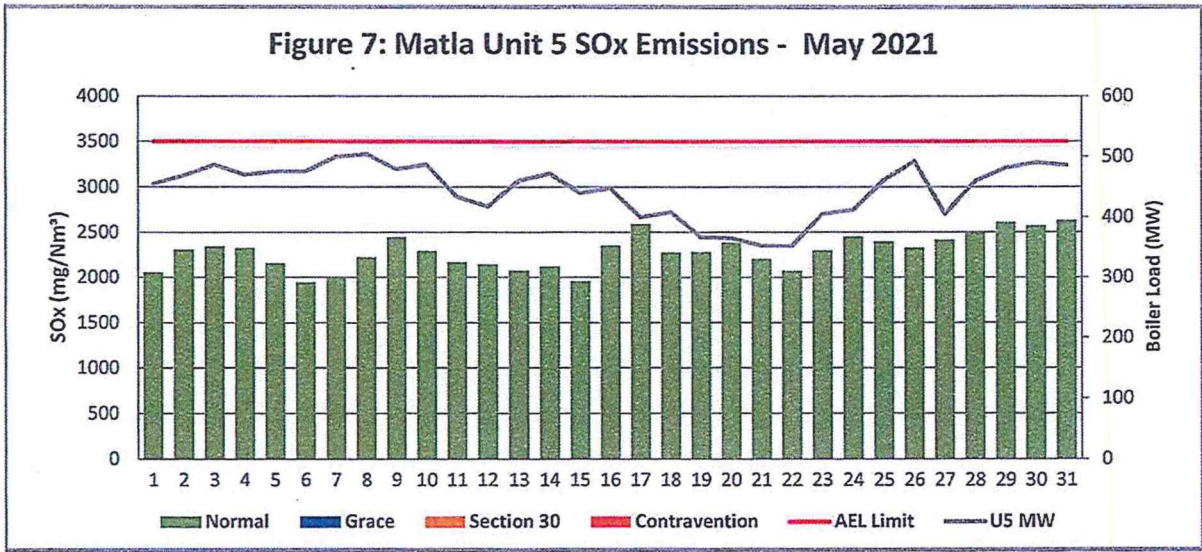


Figure 8: Matla Unit 6 SOx Emissions - May 2021

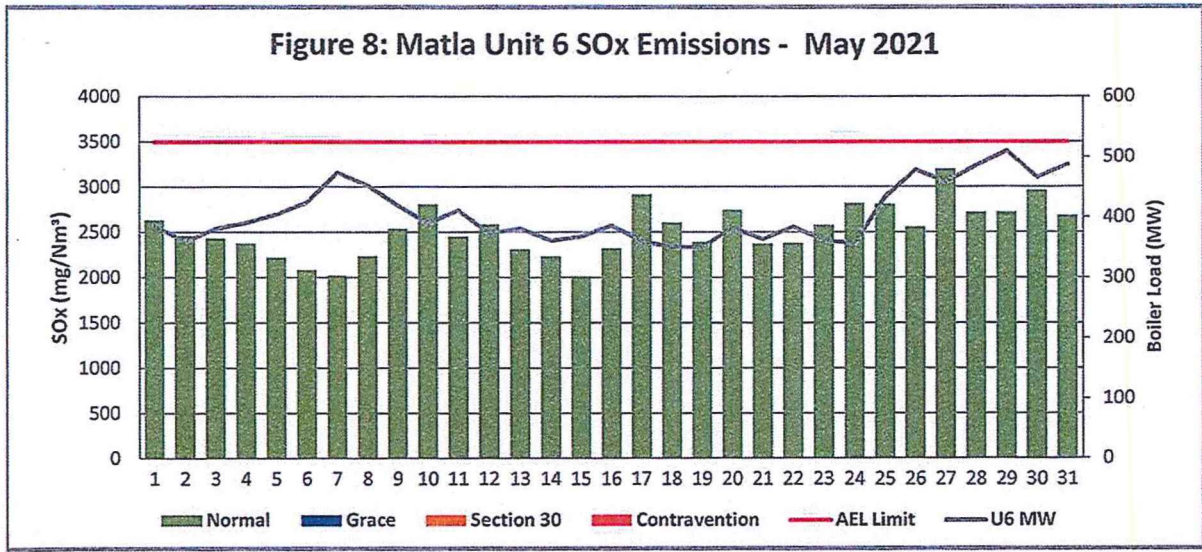


Figure 9: Matla South Stack NOx Emissions - May 2021

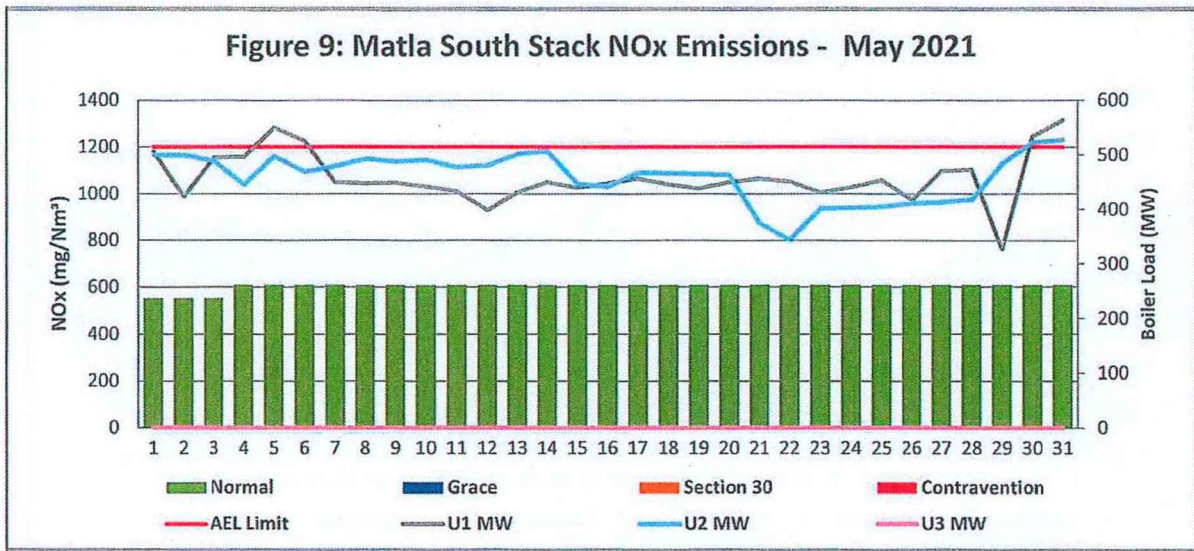


Figure 10: Matla Unit 4 NOx Emissions - May 2021

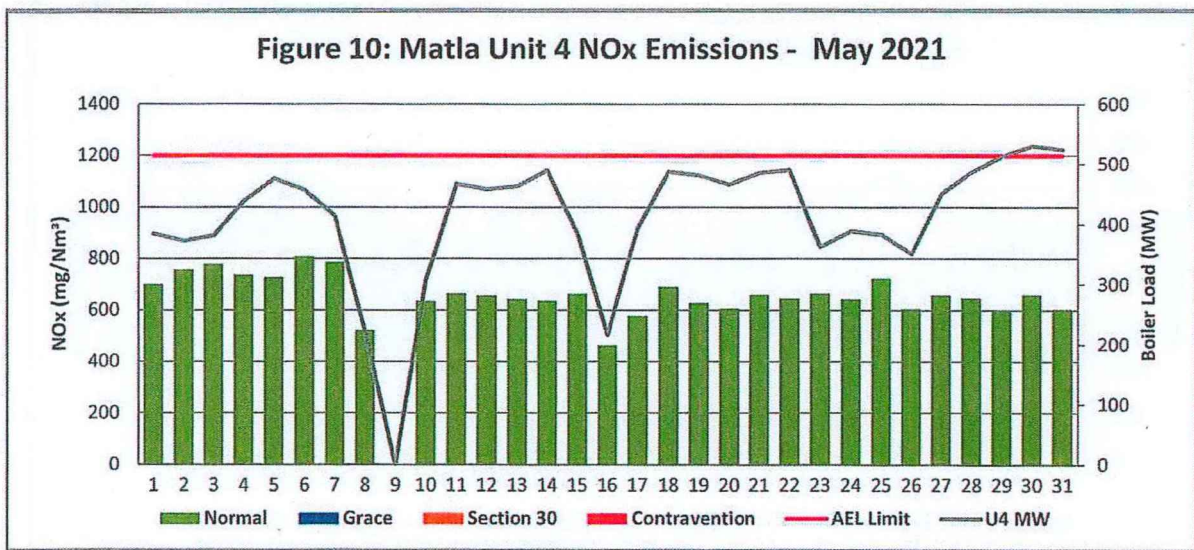


Figure 11: Matla Unit 5 NOx Emissions - May 2021

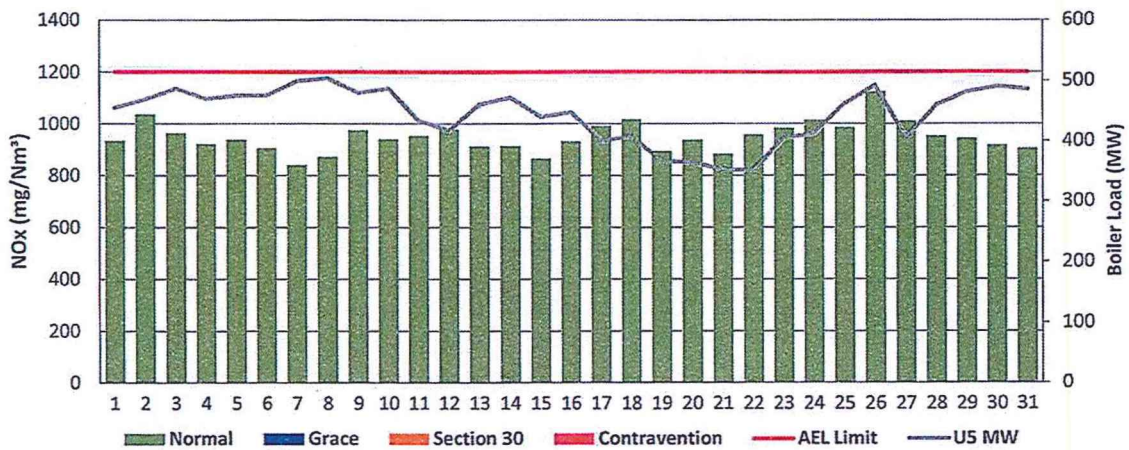
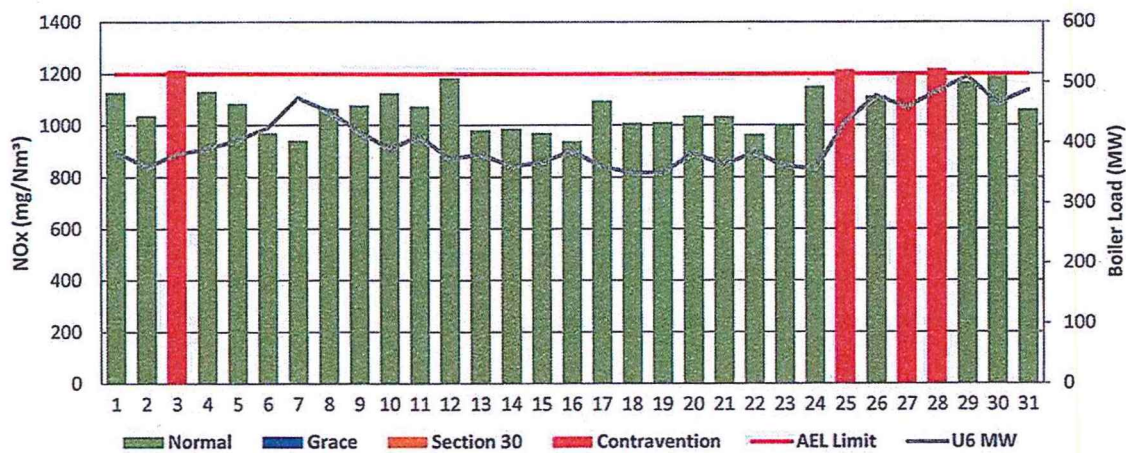


Figure 12: Matla Unit 6 NOx Emissions - May 2021



7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1. PM Start-up information for the month of May-2021

South Stack	<i>Event 1</i>		<i>Event 2</i>		<i>Event 3</i>		<i>Event 4</i>	
Unit No.	<i>no event</i>		<i>no event</i>		<i>no event</i>		<i>no event</i>	
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.	<i>Event 5</i>		<i>Event 6</i>		<i>Event 7</i>		<i>Event 8</i>	
Unit No.	<i>no event</i>		<i>no event</i>		<i>no event</i>		<i>no event</i>	
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)	12:50 AM	2021/05/08	11:50 AM	2021/05/15				
Draught Group (DG) Shut Down (SD)	12:50 AM	2021/05/08	11:50 AM	2021/05/15				
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	4:45 AM	2021/05/10	11:50 AM	2021/05/15				
Synch. to Grid (or BC)	2:10 PM	2021/05/10	10:15 AM	2021/05/17				
Fires in to BC (duration)	00:09:25	DD:HH:MM	01:22:25	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

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 May-2021 in mg/Nm³


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

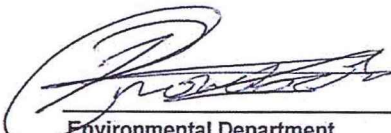
Remember to add attachments here; see ReportAddendum Tab


Reserved for Addendum XXXX

11 General

that is defective and obsolete. The station is in a process to modify the latest available I/O unit to be compactable to the old unit. Target date to modify is 30 October 2021. QAL2 averages are used for reporting while addressing South stack gas monitor.


Boiler Engineering 17/06/2021
Date


Environmental Department 20/06/21
Date


General Manager 21/06/2021
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