



Generation

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**MATLA POWER STATION**

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

  
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BOILER ENGINEERING MANAGER

22/09/2022  
DATE

  
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ENVIRONMENTAL MANAGER

22/09/2022  
DATE

  
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ENGINEERING MANAGER

22-09-2022  
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 Aug-2022
	Coal	Tons	1 475 000	879 077
	Fuel Oil	Tons	3 500	574
Production Rates	Product / By-Product Name	Units	Max Production Capacity Permitted	Production Rate Aug-2022
	Energy	GWh	2 745	1 472
	Ash	Tons	471 000	242 801
	RE PM	kg/MWh	not specified	0.478

**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/Nm<sup>3</sup>)

Associated Unit/Stack	PM	SO <sub>2</sub>	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 NO<sub>2</sub>

### 4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Aug-2022
South	<i>Electro Static Precipators (ESP)</i>	<i>99.614%</i>
Unit 4	<i>Electro Static Precipators (ESP)</i>	
Unit 5	<i>Electro Static Precipators (ESP)</i>	<i>99.719%</i>
Unit 6	<i>Electro Static Precipators (ESP)</i>	<i>99.830%</i>

Note: Abatement plant does not have bypass mode operation, hence plant 100% Utilised.

### 5 DATA RELIABILITY (%)

Associated Unit/Stack	PM	SO <sub>2</sub>	NO	O <sub>2</sub>
South	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>
Unit 4				
Unit 5	<i>99.7</i>	<i>93.1</i>	<i>93.0</i>	<i>100.0</i>
Unit 6	<i>99.7</i>	<i>100.0</i>	<i>100.0</i>	<i>100.0</i>

### 6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM	SOx	NOx
Unit 1	129.0	2 460.7	590.1
Unit 2	178.4	4 072.4	976.5
Unit 3	195.0	4 376.6	1 049.5
Unit 4	0.0	0.0	0.0
Unit 5	128.8	3 897.6	1 565.4
Unit 6	72.2	2 232.7	1 058.5
<b>SUM</b>	<b>703.4</b>	<b>17 040.0</b>	<b>5 239.9</b>

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
South	29	2	0	0	2	107.1
Unit 4	0	0	0	0	0	0.0
Unit 5	24	2	5	0	7	83.2
Unit 6	27	2	2	0	4	62.7
<b>SUM</b>	<b>80</b>	<b>6</b>	<b>7</b>	<b>0</b>	<b>13</b>	

Table 6.3: Operating days in compliance to SO<sub>2</sub> AEL Limit - August 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO <sub>2</sub> (mg/Nm <sup>3</sup> )
South	31	0	0	0	0	2 434.9
Unit 4	0	0	0	0	0	
Unit 5	31	0	0	0	0	2 528.5
Unit 6	31	0	0	0	0	1 957.8
<b>SUM</b>	<b>93</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Table 6.4: Operating days in compliance to NO<sub>x</sub> AEL Limit - August 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO <sub>x</sub> (mg/Nm <sup>3</sup> )
South	31	0	0	0	0	583.9
Unit 4	0	0	0	0	0	0.0
Unit 5	31	0	0	0	0	1 016.3
Unit 6	31	0	0	0	0	928.1
<b>SUM</b>	<b>93</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Note: NO<sub>x</sub> emissions is measured as NO in PPM. Final NO<sub>x</sub> value is expressed as total NO<sub>2</sub>

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 - August 2022

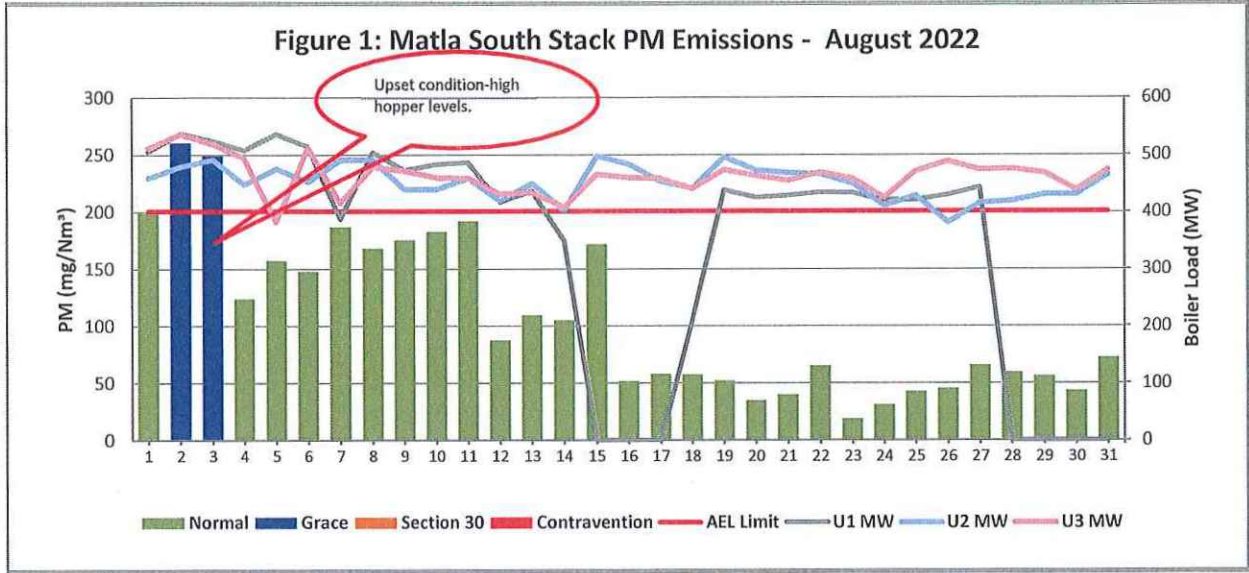


Figure 2: Matla Unit 4 PM Emissions - August 2022

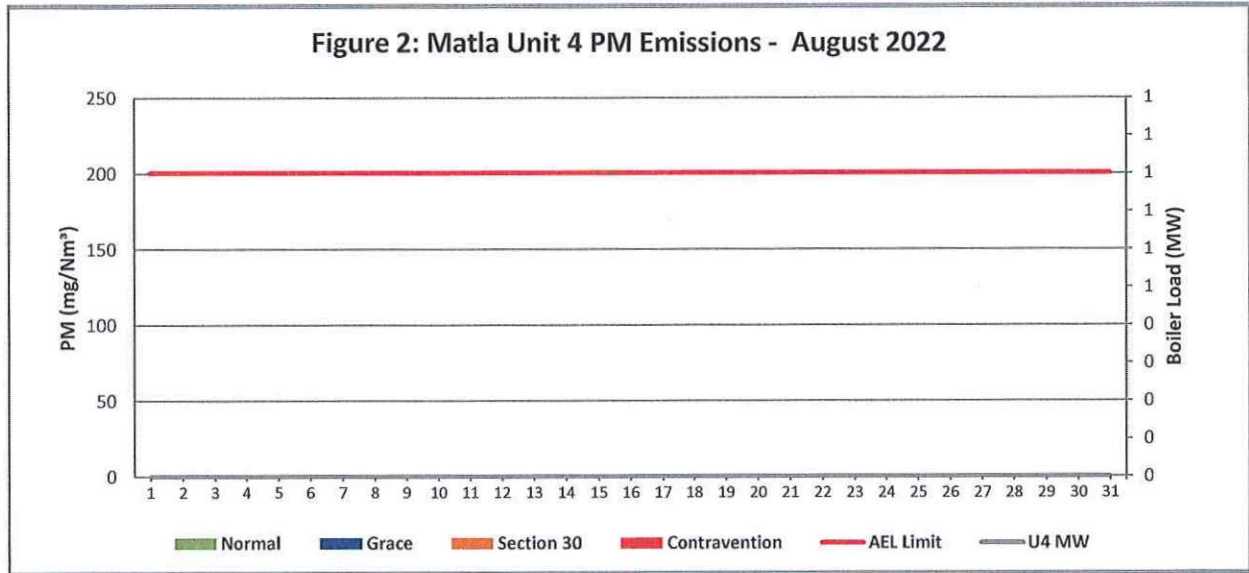


Figure 3: Matla Unit 5 PM Emissions - August 2022

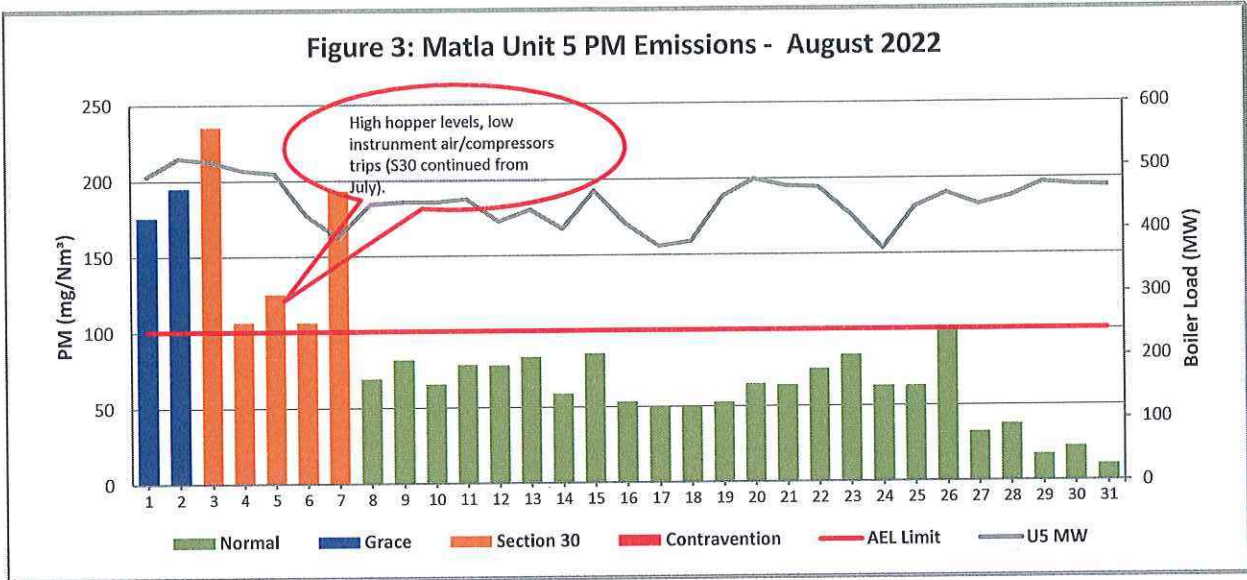


Figure 4: Matla Unit 6 PM Emissions - August 2022

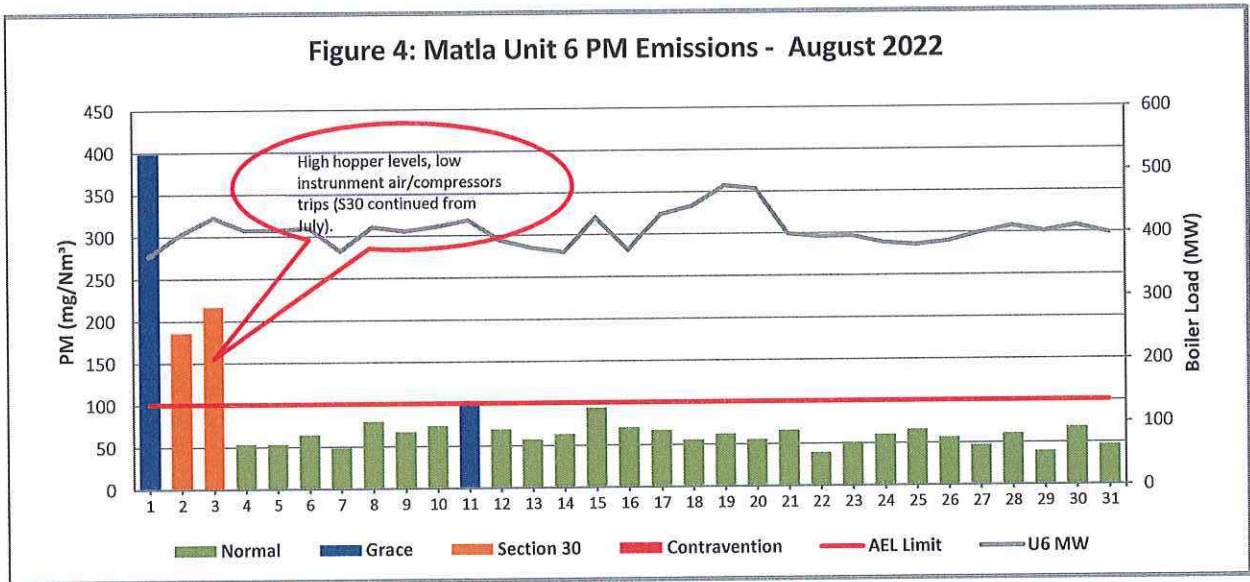


Figure 5: Matla South Stack SO<sub>2</sub> Emissions - August 2022

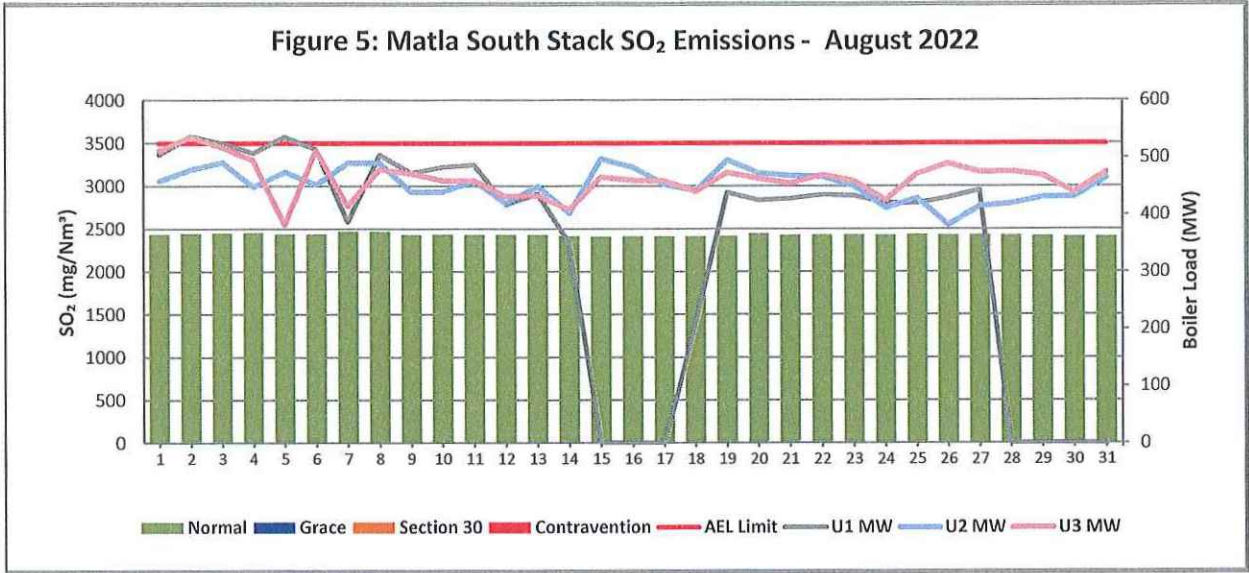


Figure 6: Matla Unit 4 SO<sub>2</sub> Emissions - August 2022

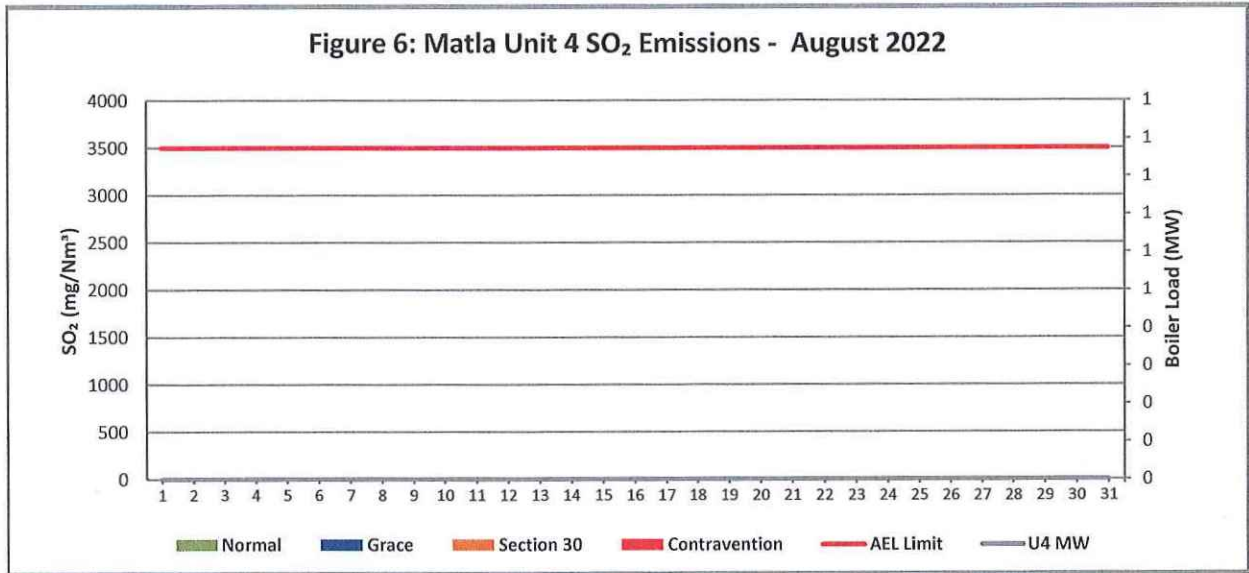


Figure 7: Matla Unit 5 SO<sub>2</sub> Emissions - August 2022

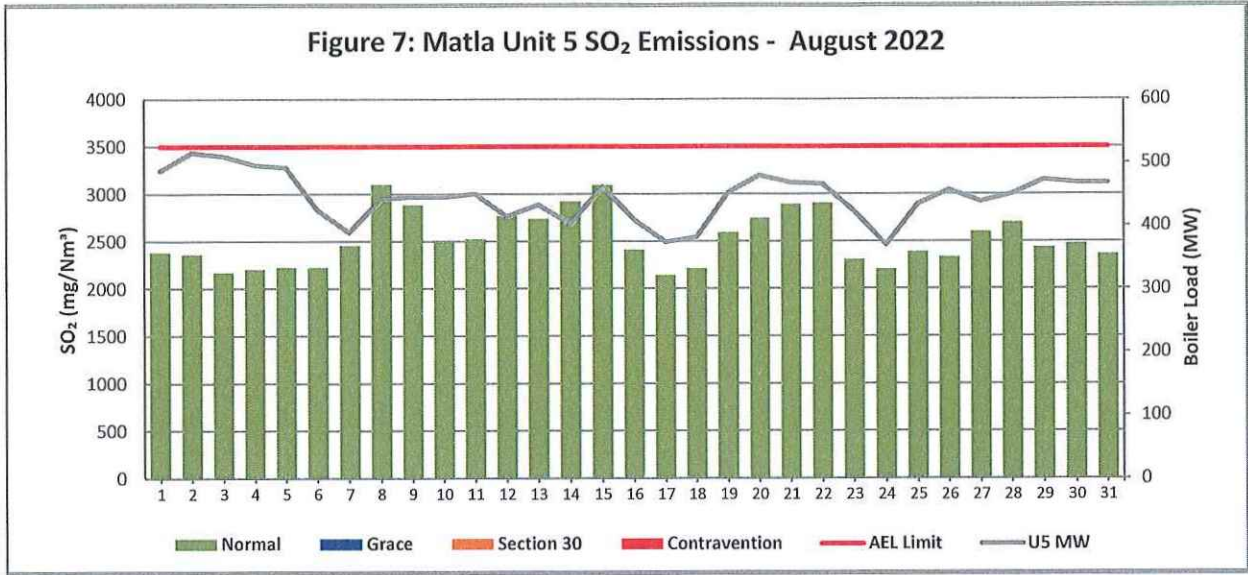


Figure 8: Matla Unit 6 SO<sub>2</sub> Emissions - August 2022

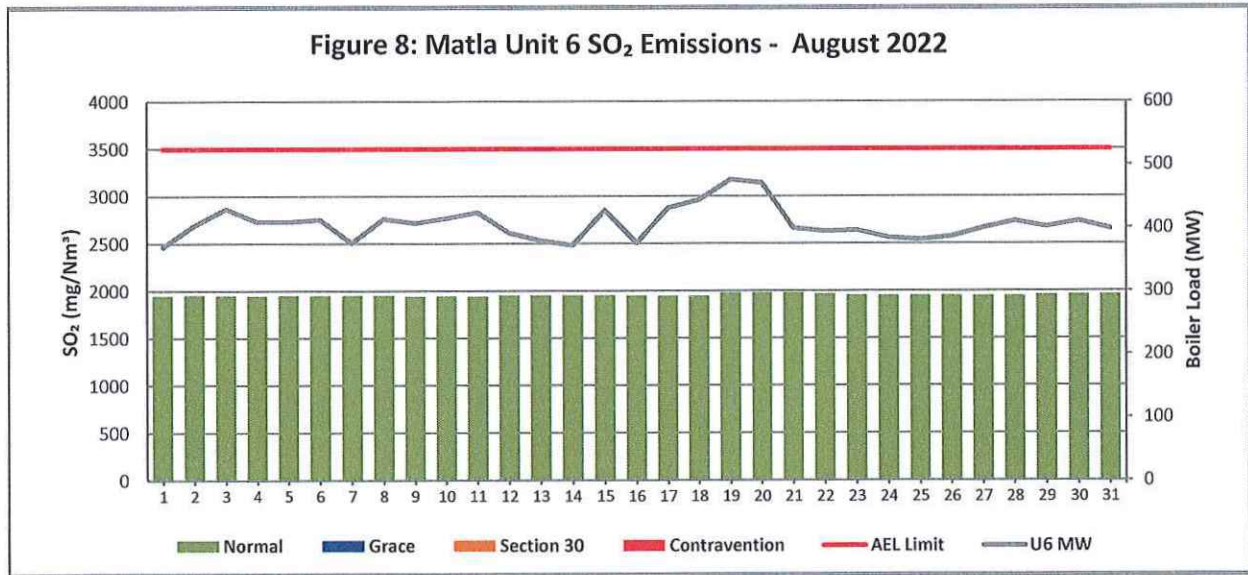




Figure 9: Matla South Stack NOx Emissions - August 2022

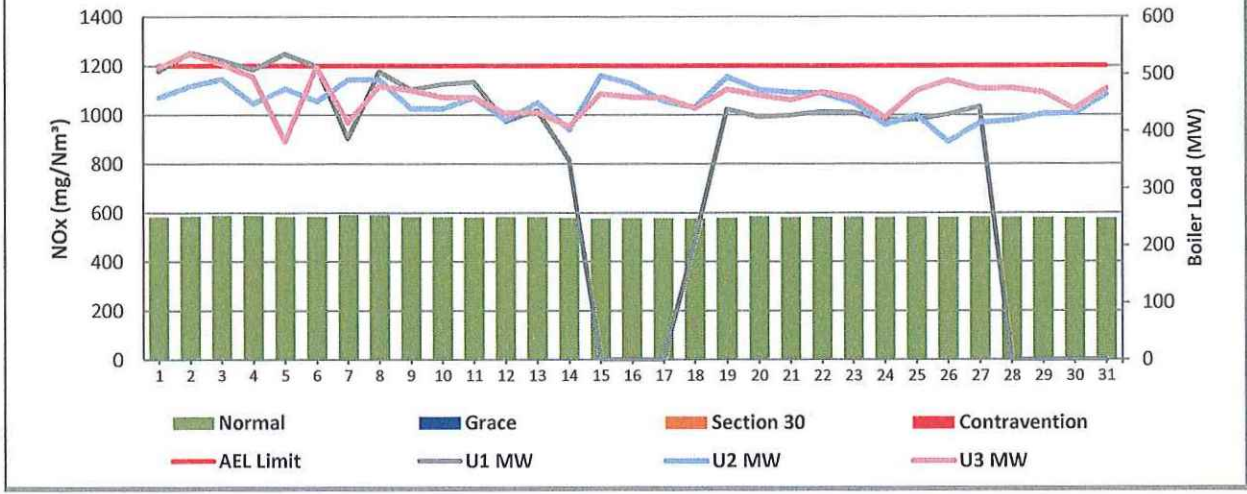


Figure 10: Matla Unit 4 NOx Emissions - August 2022

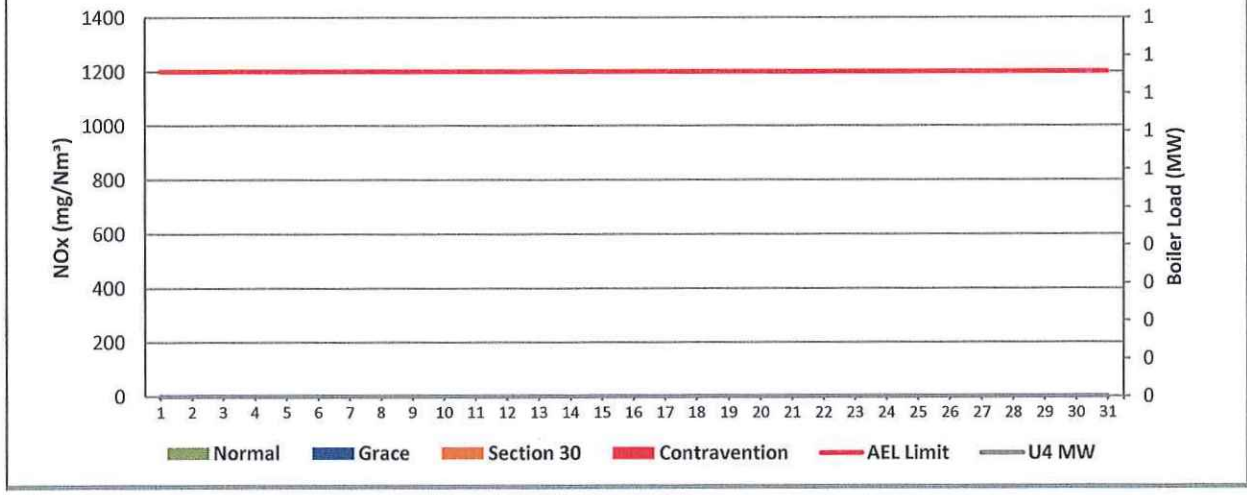


Figure 11: Matla Unit 5 NOx Emissions - August 2022

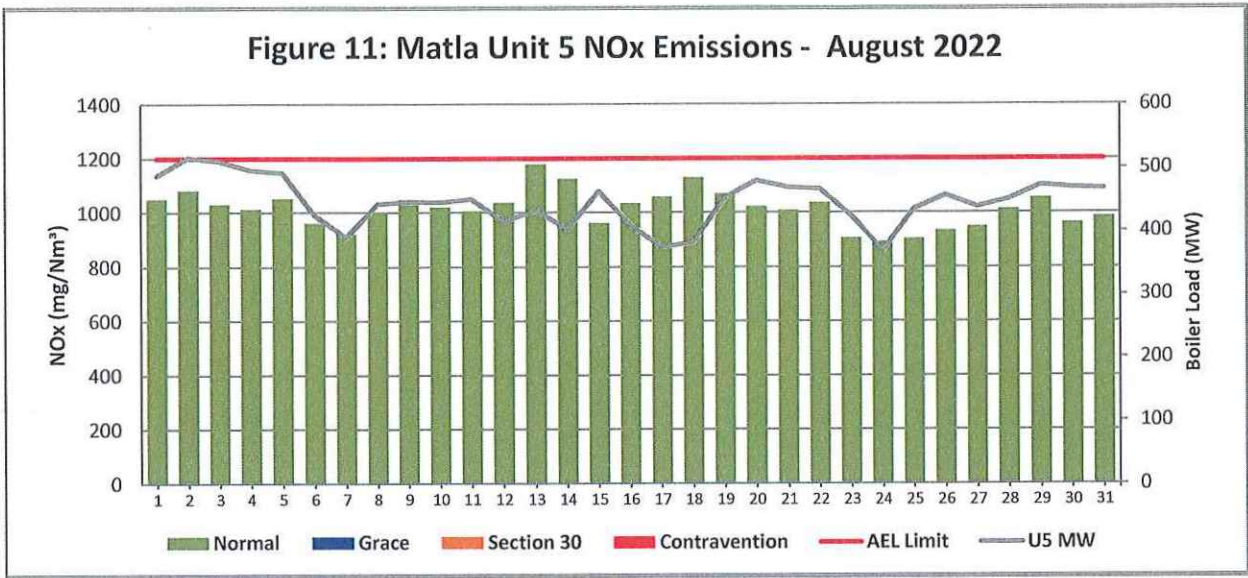
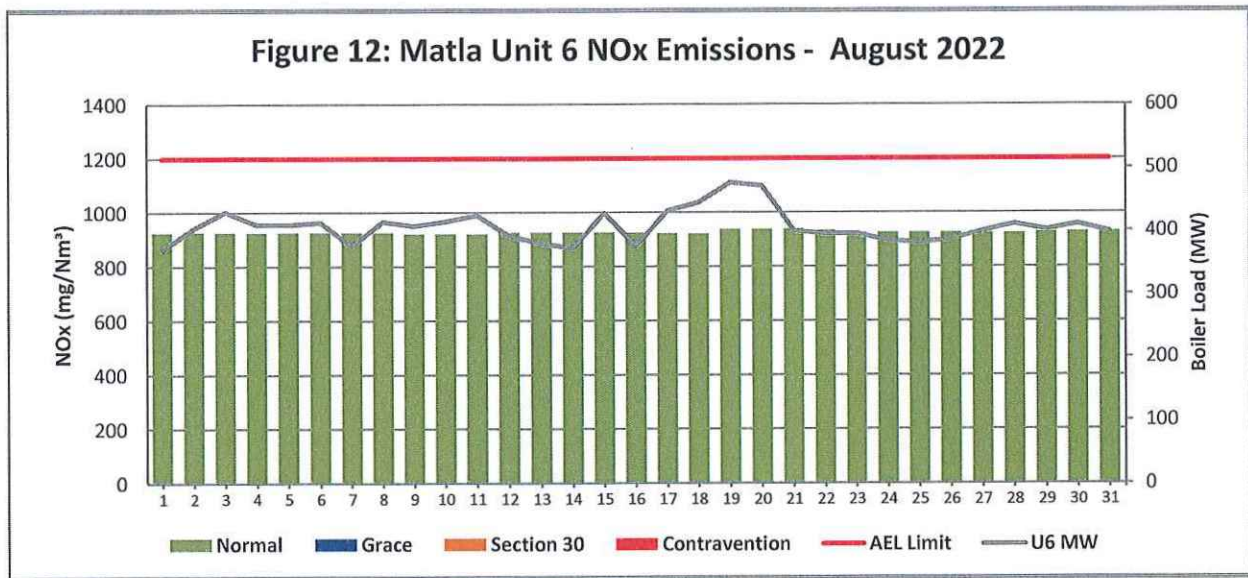


Figure 12: Matla Unit 6 NOx Emissions - August 2022



## 7 SHUT DOWN AND LIGHT UP INFORMATION

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

South Stack	<i>Event 1</i>		<i>Event 2</i>		<i>Event 3</i>		<i>Event 4</i>	
Unit No.	<i>Unit 1</i>		<i>no event</i>		<i>no event</i>		<i>no event</i>	
Breaker Open (BO)	<i>6:20 PM</i>	<i>2022/08/14</i>	<i>9:10 PM</i>	<i>2022/08/27</i>				
Draught Group (DG) Shut Down (SD)	<i>6:05 AM</i>	<i>2022/08/15</i>	<i>6:00 PM</i>	<i>2022/08/28</i>				
BO to DG SD (duration)	<i>00:11:45</i>	DD:HH:MM	<i>00:20:50</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	<i>1:45 AM</i>	<i>2022/08/18</i>						
Synch. to Grid (or BC)	<i>5:10 PM</i>	<i>2022/08/18</i>						
Fires in to BC (duration)	<i>00:15:25</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	<i>not &gt; limit</i>	<i>not &gt; limit</i>						
Emissions below limit from BC (duration)	<i>n/a</i>	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)								
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)	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	3:20 PM	2022/08/04						
Synch. to Grid (or BC)	10:05 PM	2022/08/04						
Fires in to BC (duration)	00:06:45	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

7.2: Point Source emissions released during start-up (fires-in) and Shut-down (SD) for the month of August-2022 in mg/Nm<sup>3</sup>

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

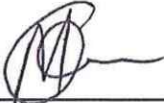
Remember to add attachments here; see ReportAddendum Tab

Reserved for Addendum XXXX




11 General

Gases are reported using parallel tests averages. South stack and unit 6 correlation curve have expired. South stack correlations were done and awaiting report. Unit 6 correlations are scheduled for the 01-11-2022

  
Boiler Engineering                      20-09-2022  
Date

  
Environmental Department                      20.09.2022  
Date

  
General Manager                      22.09.2022.  
Date

Compiled by: Boiler Engineering Department

ESP & SO<sub>3</sub> 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