



Generation

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AND

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16


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### MATLA POWER STATION

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

  
BOILER ENGINEERING MANAGER

  
ENVIRONMENTAL MANAGER

  
ENGINEERING MANAGER

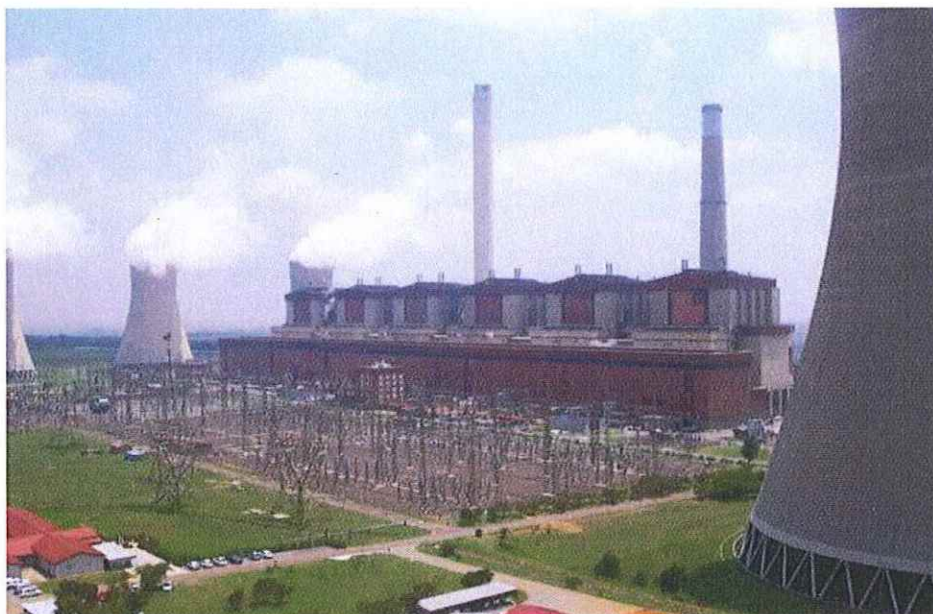
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15/11/2021  
DATE

**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 Oct-2021
	Coal	Tons	1 475 000	928 309
	Fuel Oil	Tons	2 500	508
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Oct-2021
	Energy	GWh	2 567	1 640
	Ash	Tons	471 000	265 682
	RE PM	kg/MWh	not specified	0,315

**2 ENERGY SOURCE CHARACTERISTICS**

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.8-1.1	1,00
Ash Content	%	21-40	28,62

### 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

### 4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Oct-2021
South	<i>Electro Static Precipators (ESP)</i>	<i>99,808%</i>
Unit 4	<i>Electro Static Precipators (ESP)</i>	<i>99,709%</i>
Unit 5	<i>Electro Static Precipators (ESP)</i>	<i>99,761%</i>
Unit 6	<i>Electro Static Precipators (ESP)</i>	<i>99,832%</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>97,7</i>	<i>94,8</i>	<i>94,6</i>	<i>100,0</i>
Unit 4	<i>95,1</i>	<i>99,2</i>	<i>96,9</i>	<i>99,5</i>
Unit 5	<i>95,9</i>	<i>99,4</i>	<i>99,5</i>	<i>99,4</i>
Unit 6	<i>93,0</i>	<i>91,7</i>	<i>91,7</i>	<i>91,7</i>

### 6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM	SO <sub>x</sub>	NO <sub>x</sub>
Unit 1	102,3	2 084,3	1 003,8
Unit 2	0,0	0,0	0,0
Unit 3	86,7	2 020,4	942,2
Unit 4	125,6	3 528,5	1 059,2
Unit 5	128,2	3 779,1	2 222,4
Unit 6	73,8	2 736,8	1 048,1
<b>SUM</b>	<b>516,6</b>	<b>14 149,1</b>	<b>6 275,8</b>

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
South	31	0	0	0	0	64,3
Unit 4	30	0	0	0	0	73,2
Unit 5	28	2	0	0	2	63,9
Unit 6	29	2	0	0	2	53,8
<b>SUM</b>	<b>118</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	



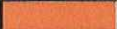

Table 6.3: Operating days in compliance to SOx AEL Limit - October 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm <sup>3</sup> )
South	31	0	0	0	0	1 240,8
Unit 4	31	0	0	0	0	2 071,7
Unit 5	31	0	0	0	0	1 889,0
Unit 6	31	0	0	0	0	1 981,9
<b>SUM</b>	<b>124</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

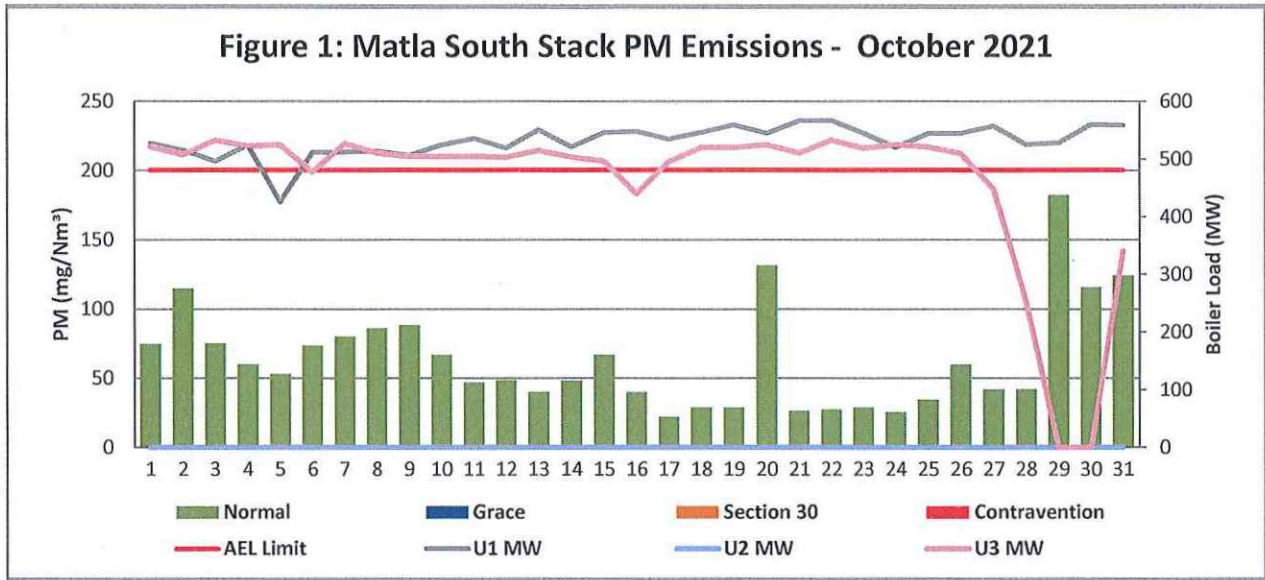
Table 6.4: Operating days in compliance to NOx AEL Limit - October 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm <sup>3</sup> )
South	31	0	0	0	0	604,4
Unit 4	31	0	0	0	0	614,8
Unit 5	31	0	0	0	0	1 098,8
Unit 6	31	0	0	0	0	758,4
<b>SUM</b>	<b>124</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

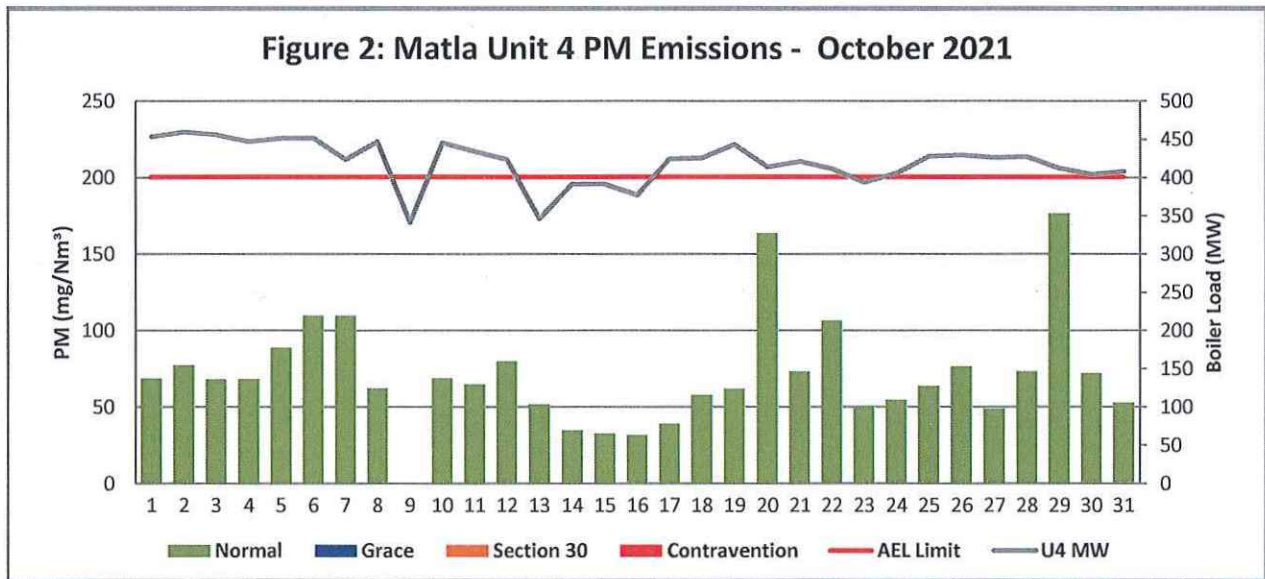
Table 6.5: Legend Description

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

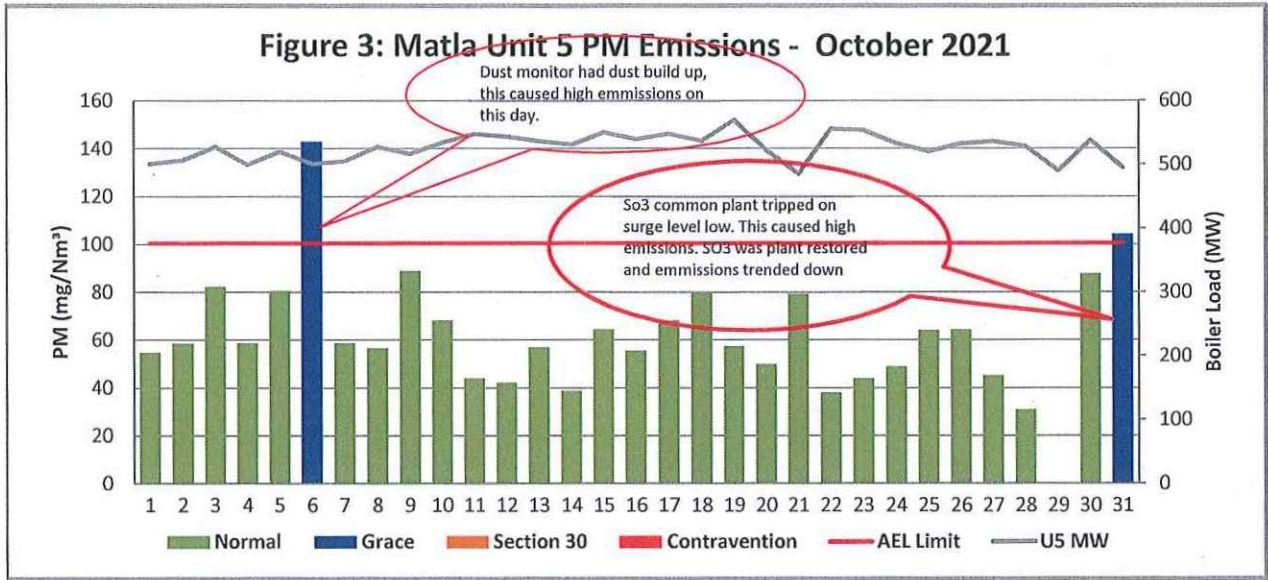
**Figure 1: Matla South Stack PM Emissions - October 2021**



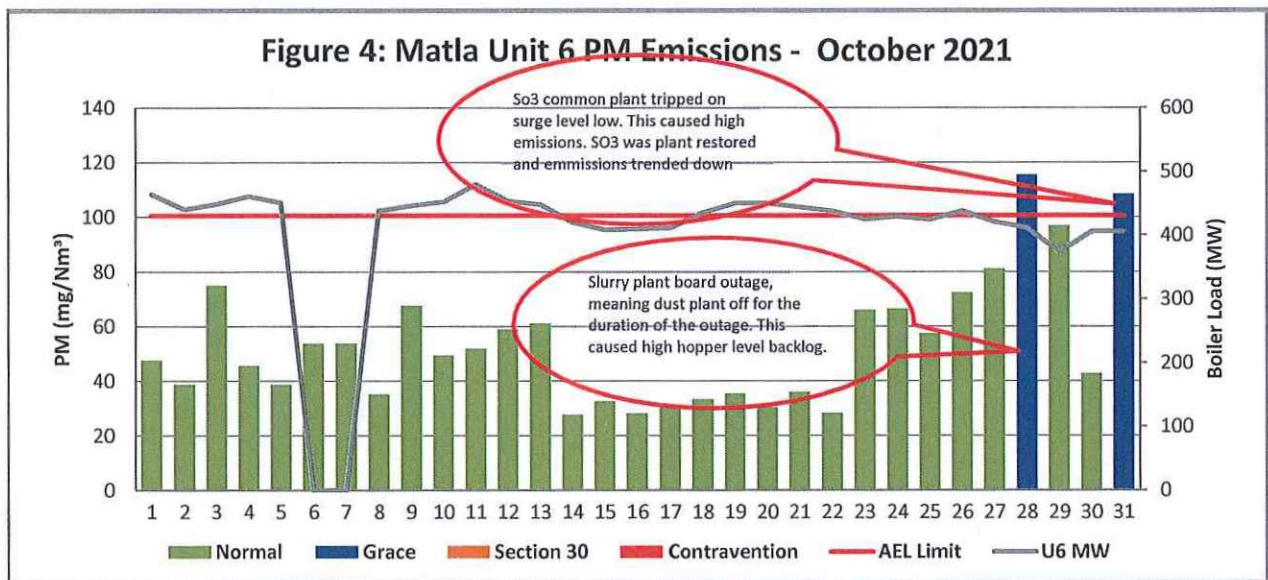
**Figure 2: Matla Unit 4 PM Emissions - October 2021**



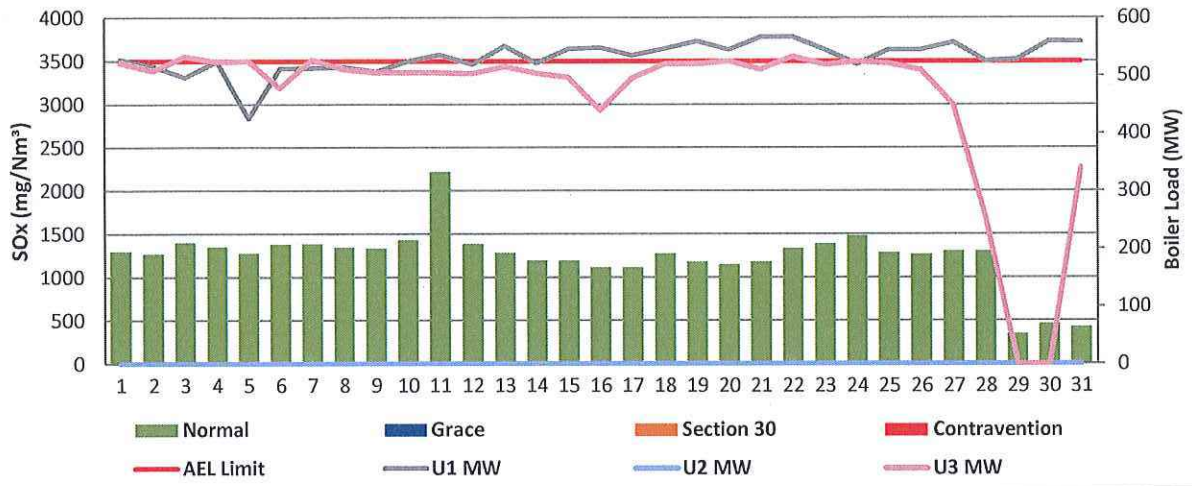
**Figure 3: Matla Unit 5 PM Emissions - October 2021**



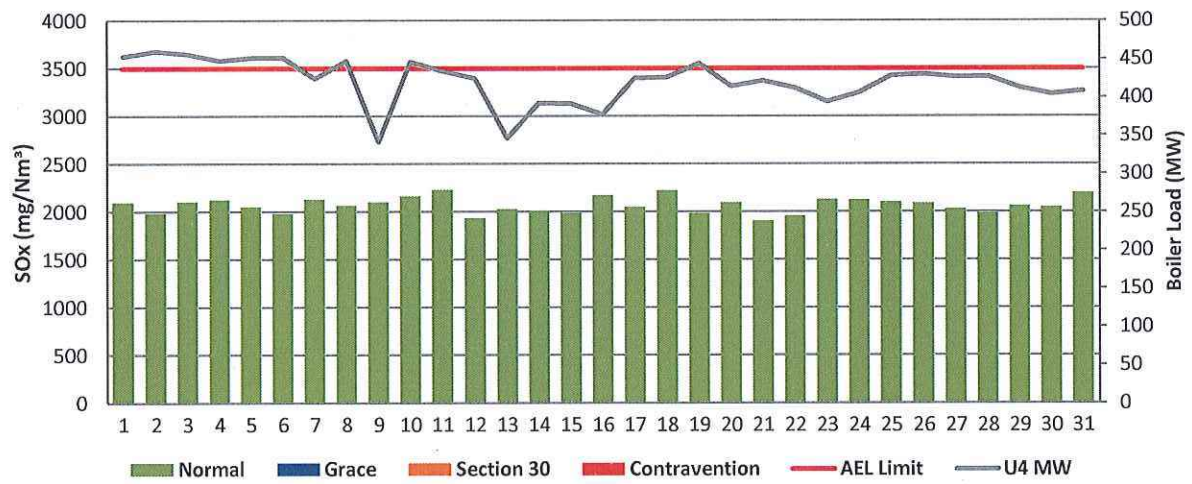
**Figure 4: Matla Unit 6 PM Emissions - October 2021**



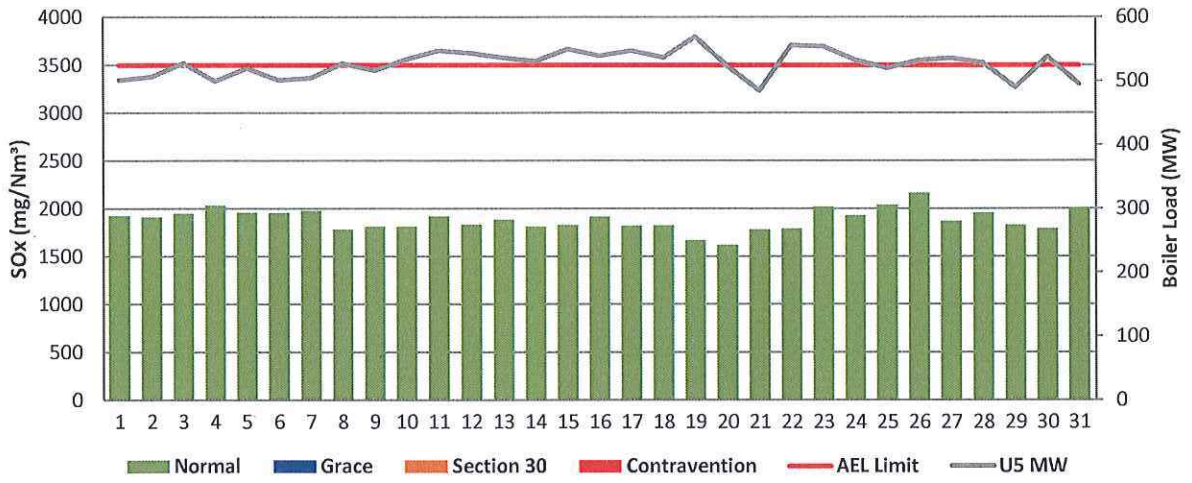
**Figure 5: Matla South Stack SOx Emissions - October 2021**



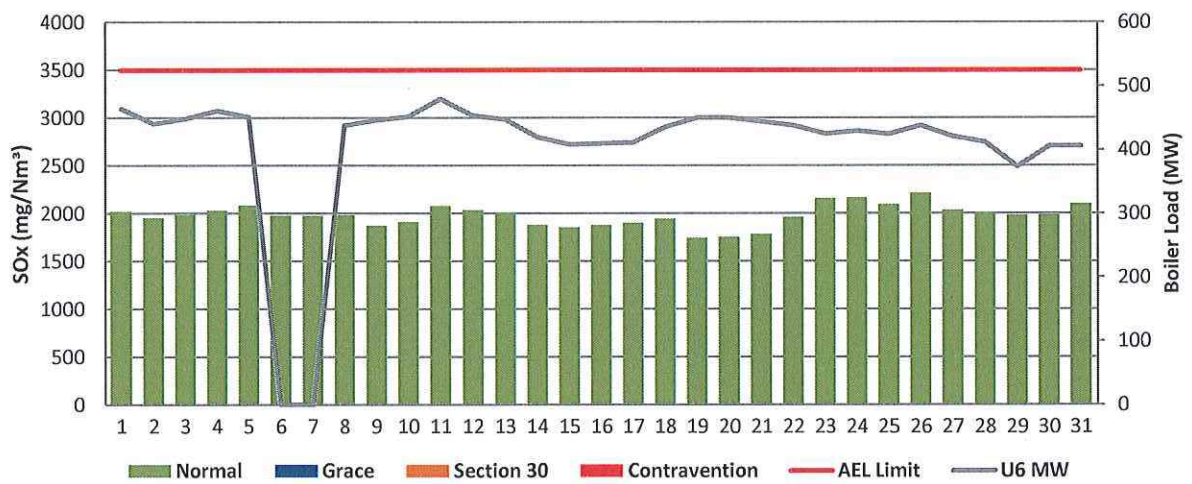
**Figure 6: Matla Unit 4 SOx Emissions - October 2021**



**Figure 7: Matla Unit 5 SOx Emissions - October 2021**

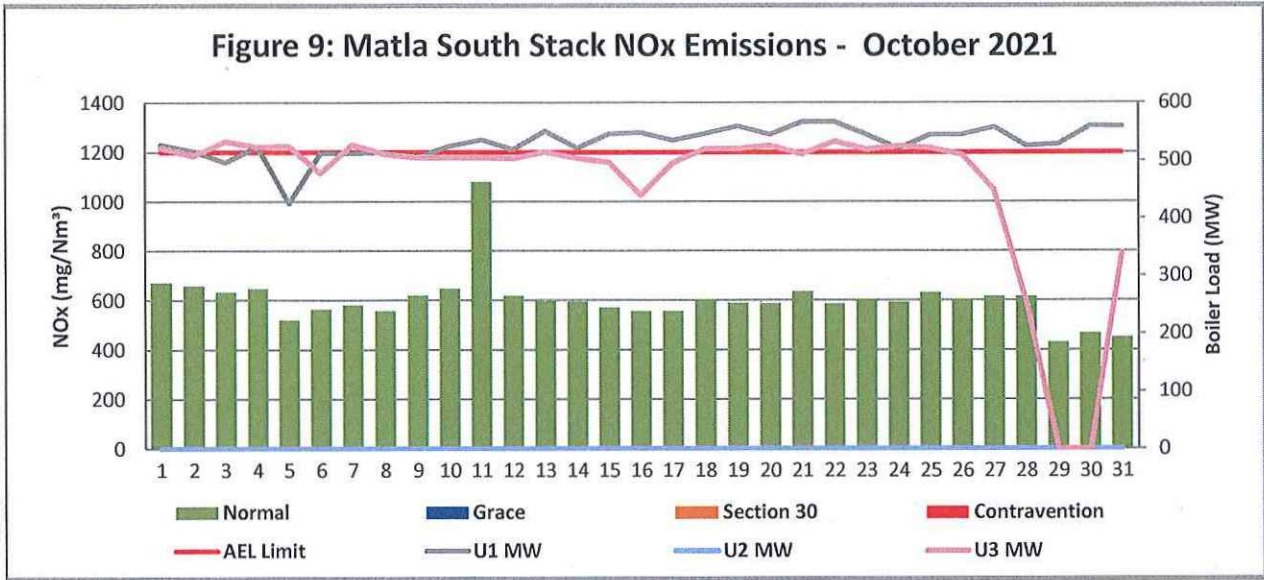


**Figure 8: Matla Unit 6 SOx Emissions - October 2021**





**Figure 9: Matla South Stack NOx Emissions - October 2021**



**Figure 10: Matla Unit 4 NOx Emissions - October 2021**

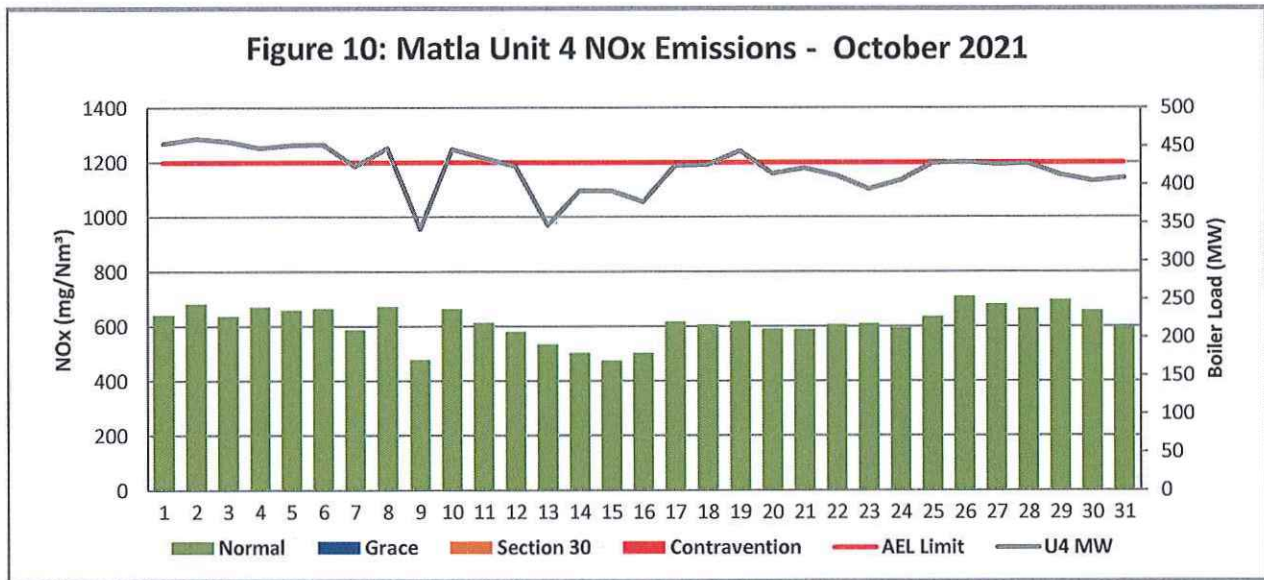


Figure 11: Matla Unit 5 NOx Emissions - October 2021

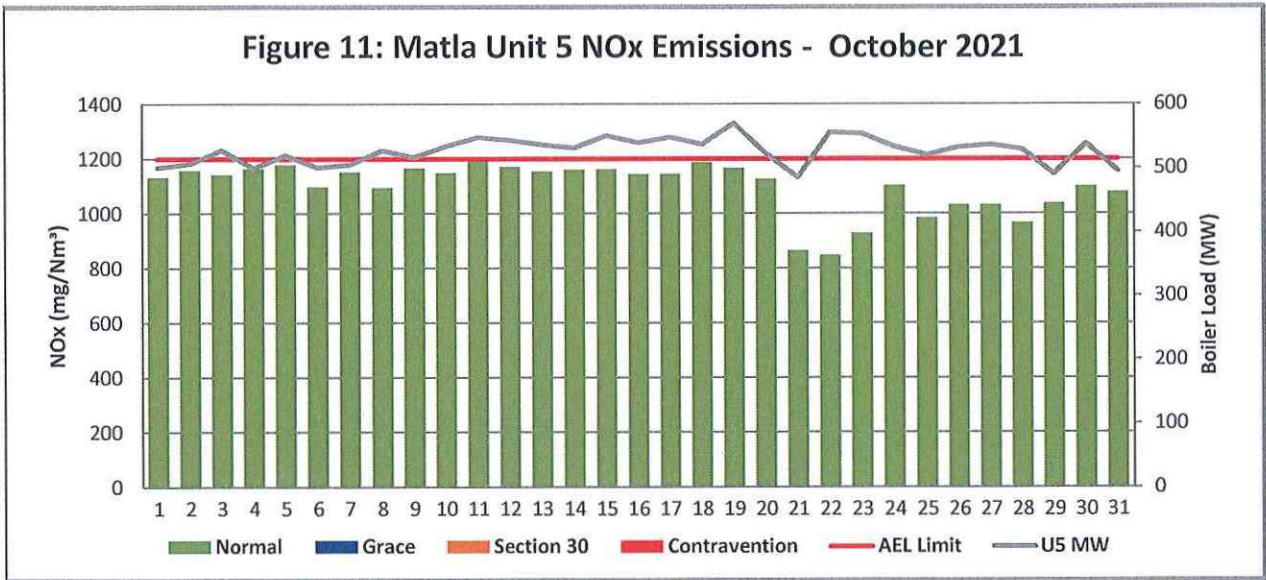
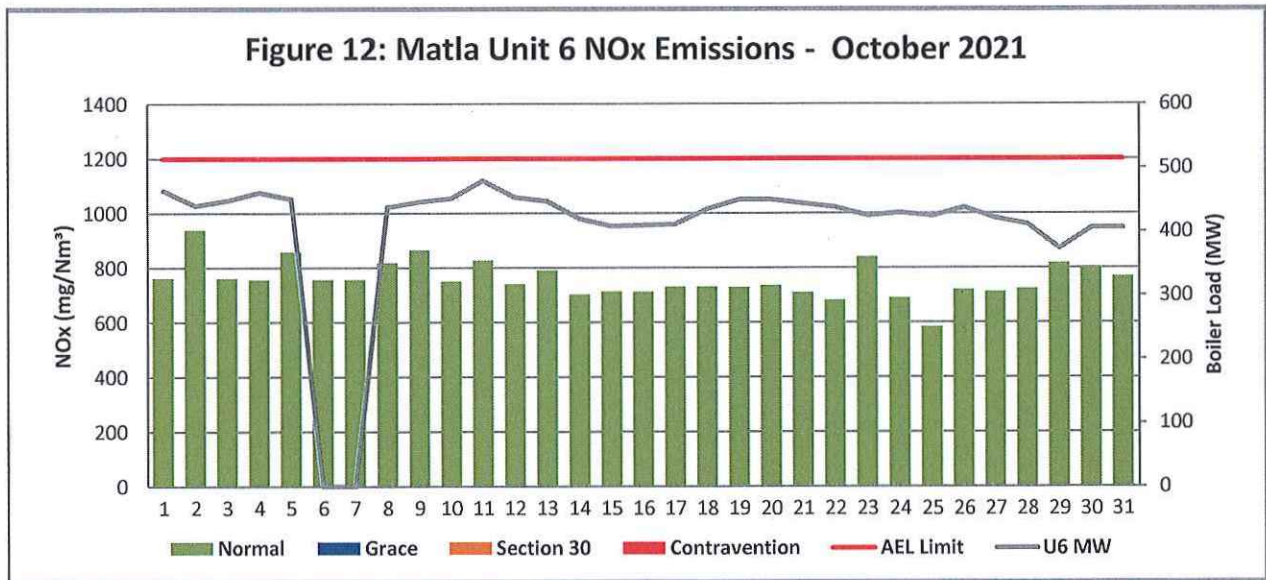


Figure 12: Matla Unit 6 NOx Emissions - October 2021



## 7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1. PM Start-up information for the month of October-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>Unit 3</i>		<i>no event</i>		<i>no event</i>	
Breaker Open (BO)	<i>1:05 AM</i>	<i>2021/10/31</i>	<i>7:00 PM</i>	<i>2021/10/26</i>				
Draught Group (DG) Shut Down (SD)	<i>1:06 AM</i>	<i>2021/10/31</i>	<i>12:00 AM</i>	<i>2021/10/29</i>				
BO to DG SD (duration)	<i>00:00:01</i>	DD:HH:MM	<i>02:05:00</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time			<i>1:55 AM</i>	<i>2021/10/31</i>				
Synch. to Grid (or BC)			<i>4:35 PM</i>	<i>2021/10/31</i>				
Fires in to BC (duration)		DD:HH:MM	<i>00:14:40</i>	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)		DD:HH:MM	<i>n/a</i>	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)	10:15 PM	2021/10/08						
Draught Group (DG) Shut Down (SD)	10:15 PM	2021/10/08						
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	10:15 PM	2021/10/08						
Synch. to Grid (or BC)	3:00 AM	2021/10/09						
Fires in to BC (duration)	00:04:45	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

Unit No. 5	Event 1		Event 2		Event 3		Event 4	
Breaker Open (BO)	9:00 AM	2021/10/21	6:35 PM	2021/10/28				
Draught Group (DG) Shut Down (SD)	9:00 AM	2021/10/21	6:35 PM	2021/10/28				
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	9:00 AM	2021/10/21	8:20 PM	2021/10/28				
Synch. to Grid (or BC)	2:00 PM	2021/10/21	12:05 AM	2021/10/29				
Fires in to BC (duration)	00:05:00	DD:HH:MM	00:03:45	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. 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 October-2021 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

South stack gases CO2 and O2 were not working properly, these gases are affected by air leaks which the station is addressing. QAL 2 averages were used for CO2 and O2.

  
Boiler Engineering                      14/11/2021  
Date

  
Environmental Department                      15.11.2021  
Date

  
General Manager                      15/11/2021  
Date

Compiled by: Boiler Engineering Department

For: Department of Environmental Affairs and Tourism

Copies: Eskom Environmental Management

Group Technology Engineering

Matla Power Station:

ESP & SO<sub>2</sub> System Engineer

Chief Air Pollution Control Officer

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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