



**Generation**

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**Date: 2021/08/22**

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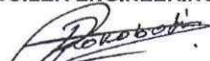
**MATLA POWER STATION**

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

  
BOILER ENGINEERING MANAGER

23/08/2021

DATE

  
ENVIRONMENTAL MANAGER

23/08/2021

DATE

  
ENGINEERING MANAGER

23/08/2021

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 Jul-2021
	Coal	Tons	1 475 000	968 693
	Fuel Oil	Tons	2 500	867
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Jul-2021
	Energy	GWh	2 567	1 685
	Ash	Tons	471 000	290 802
	RE PM	kg/MWh	not specified	0,627

**2 ENERGY SOURCE CHARACTERISTICS**

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.8-1.1	1,00
Ash Content	%	21-40	30,02

### 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 Jul-2021
South	<i>Electro Static Precipators (ESP)</i>	<i>99,716%</i>
Unit 4	<i>Electro Static Precipators (ESP)</i>	<i>99,340%</i>
Unit 5	<i>Electro Static Precipators (ESP)</i>	<i>99,226%</i>
Unit 6	<i>Electro Static Precipators (ESP)</i>	<i>99,761%</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>97,1</i>	<i>39,9</i>	<i>39,9</i>	<i>39,9</i>
Unit 4	<i>48,5</i>	<i>99,8</i>	<i>99,8</i>	<i>99,8</i>
Unit 5	<i>93,2</i>	<i>100,0</i>	<i>100,0</i>	<i>100,0</i>
Unit 6	<i>88,0</i>	<i>91,4</i>	<i>91,4</i>	<i>91,4</i>

### 6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM	SO <sub>x</sub>	NO <sub>x</sub>
Unit 1	136,6	2 602,3	1 572,9
Unit 2	103,8	2 318,4	1 402,4
Unit 3	140,0	2 636,4	1 592,9
Unit 4	337,5	2 007,5	577,2
Unit 5	225,1	3 048,1	1 870,9
Unit 6	113,9	3 061,3	1 438,1
<b>SUM</b>	<b>1 056,9</b>	<b>15 673,9</b>	<b>8 454,5</b>

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
South	28	3	0	0	3	88,3
Unit 4	4	6	10	0	16	315,7
Unit 5	15	5	8	0	13	147,5
Unit 6	28	3	0	0	3	78,3
<b>SUM</b>	<b>75</b>	<b>17</b>	<b>18</b>	<b>0</b>	<b>35</b>	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm <sup>3</sup> )
South	31	0	0	0	0	1 673,5
Unit 4	21	0	0	0	0	1 993,2
Unit 5	29	0	0	0	0	1 903,5
Unit 6	31	0	0	0	0	2 097,8
<b>SUM</b>	<b>112</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm <sup>3</sup> )
South	31	0	0	0	0	1 010,9
Unit 4	21	0	0	0	0	565,1
Unit 5	17	0	0	12	12	1 156,7
Unit 6	31	0	0	0	0	989,2
<b>SUM</b>	<b>100</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>12</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 - July 2021

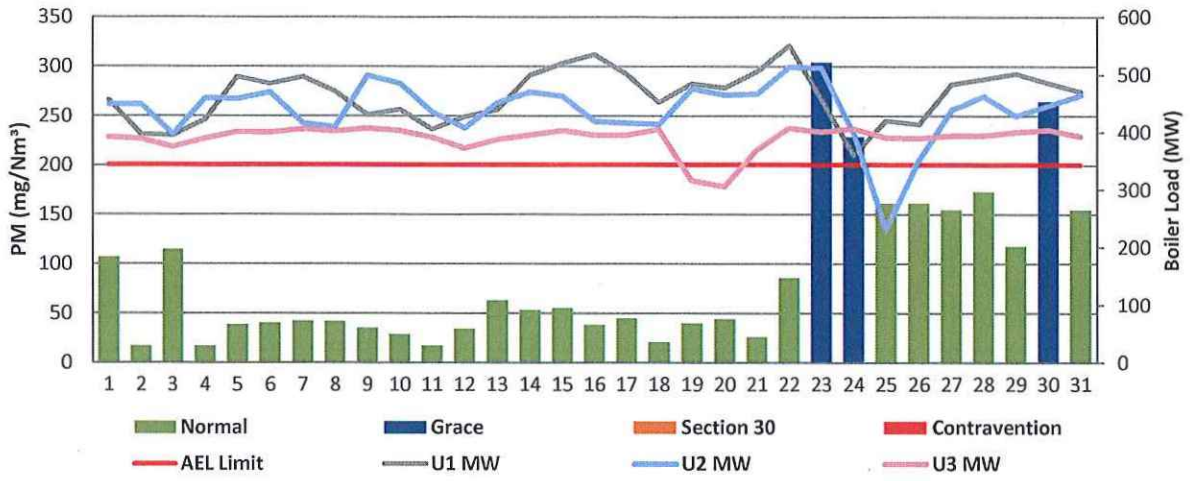


Figure 2: Matla Unit 4 PM Emissions - July 2021

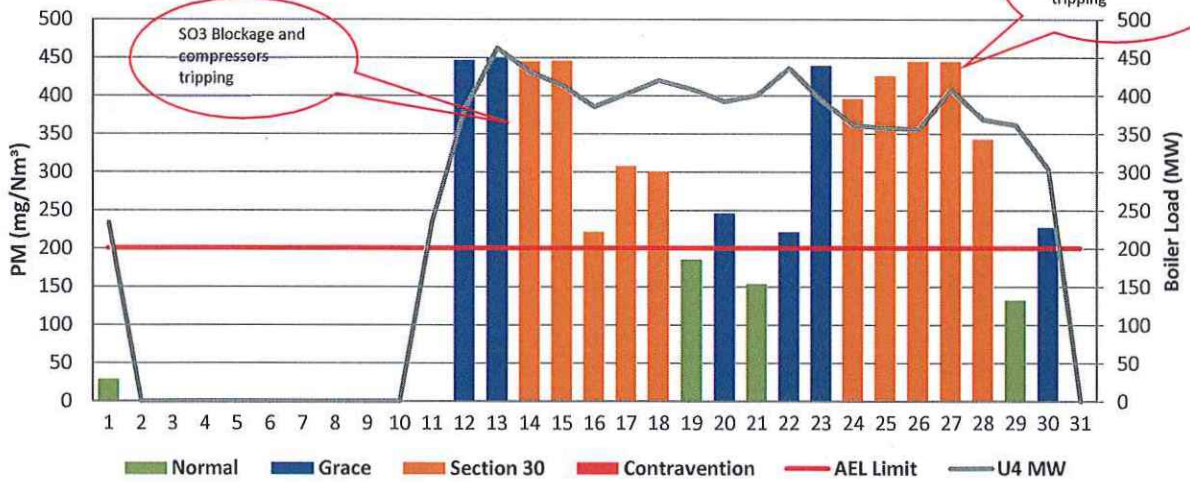


Figure 3: Matla Unit 5 PM Emissions - July 2021

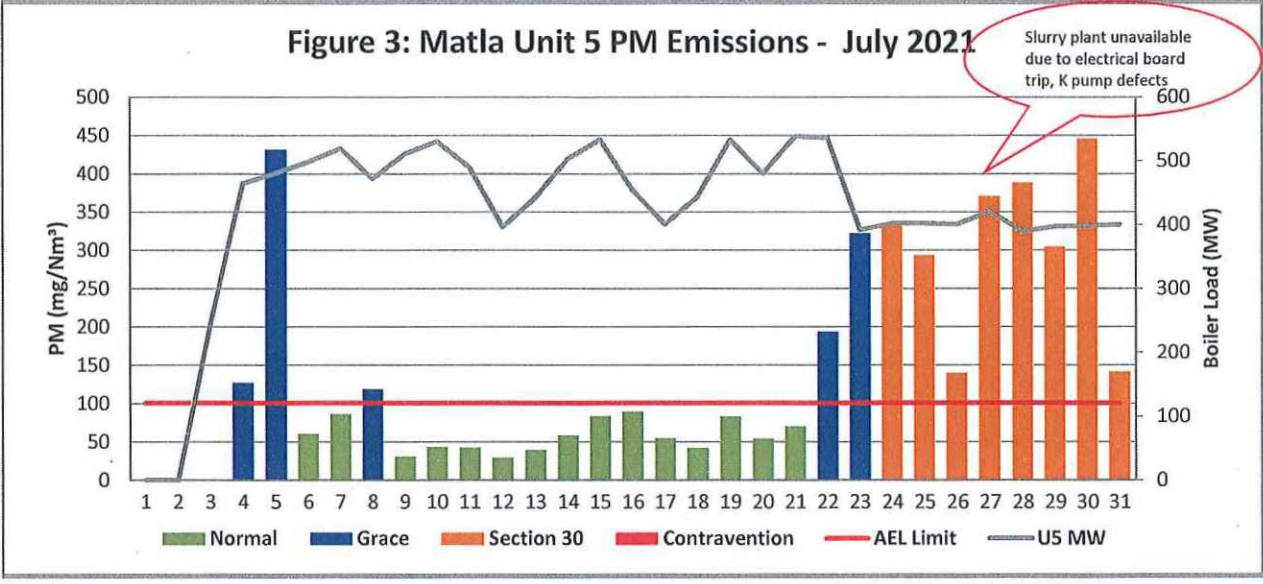


Figure 4: Matla Unit 6 PM Emissions - July 2021

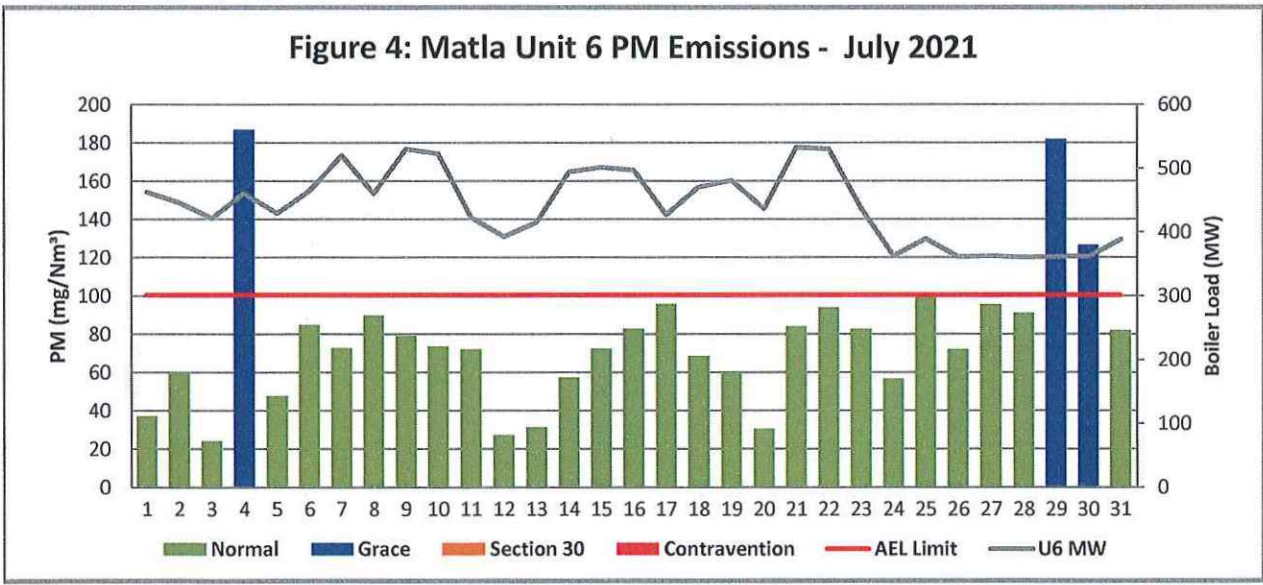


Figure 5: Matla South Stack SOx Emissions - July 2021

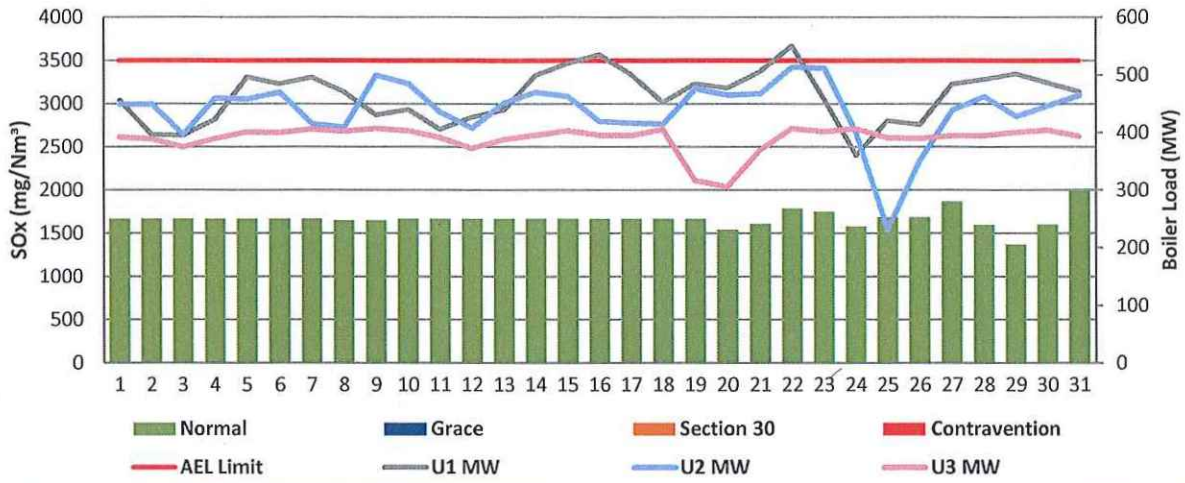


Figure 6: Matla Unit 4 SOx Emissions - July 2021

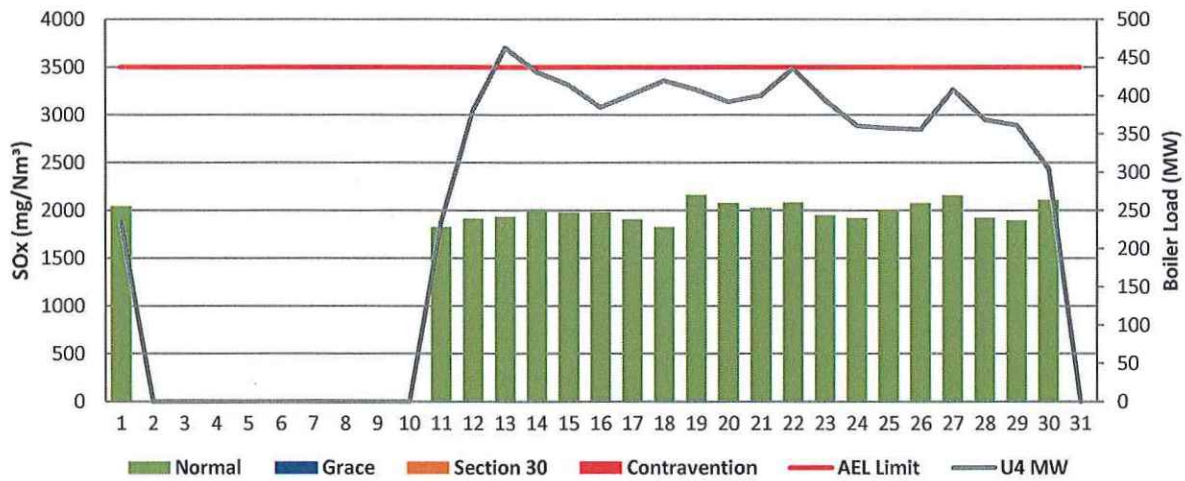


Figure 7: Matla Unit 5 SOx Emissions - July 2021

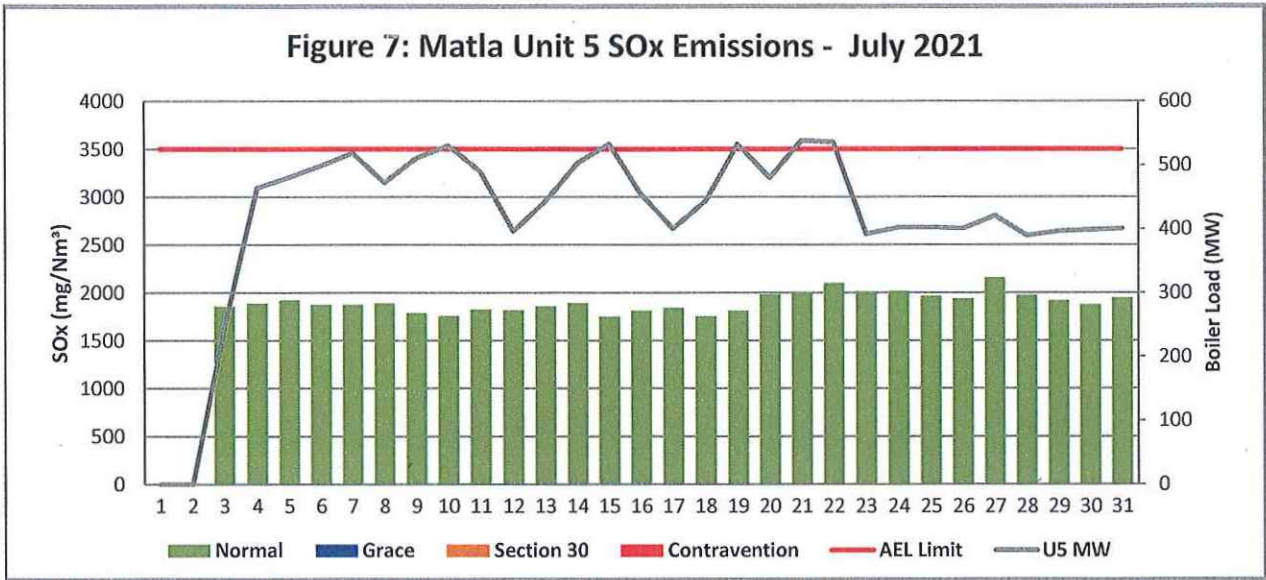


Figure 8: Matla Unit 6 SOx Emissions - July 2021

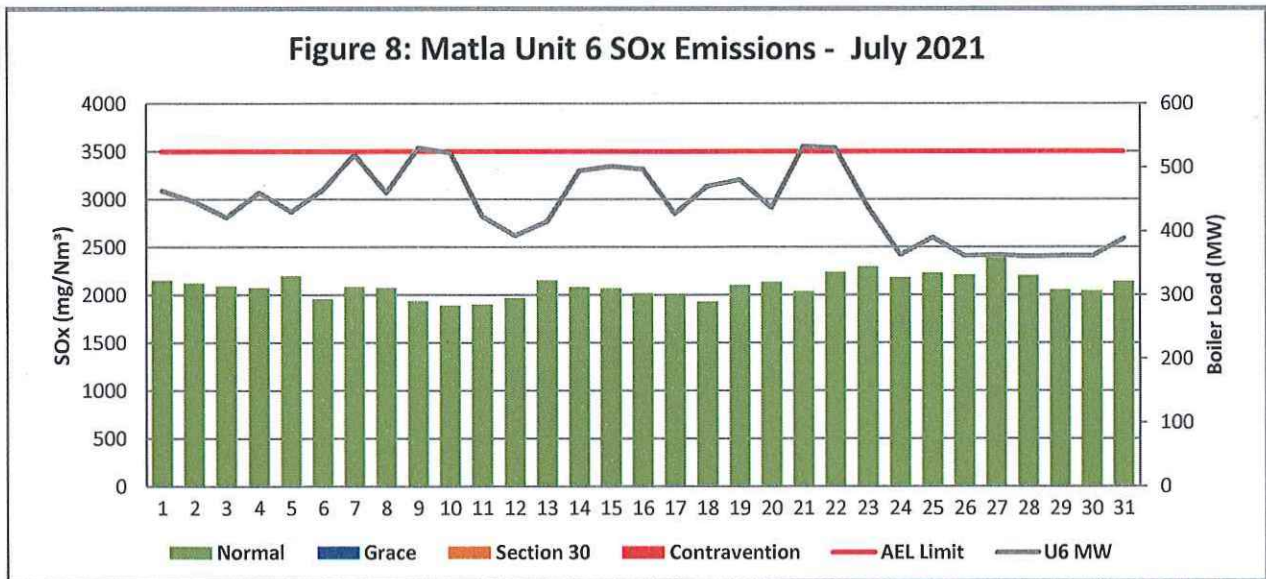




Figure 9: Matla South Stack NOx Emissions - July 2021

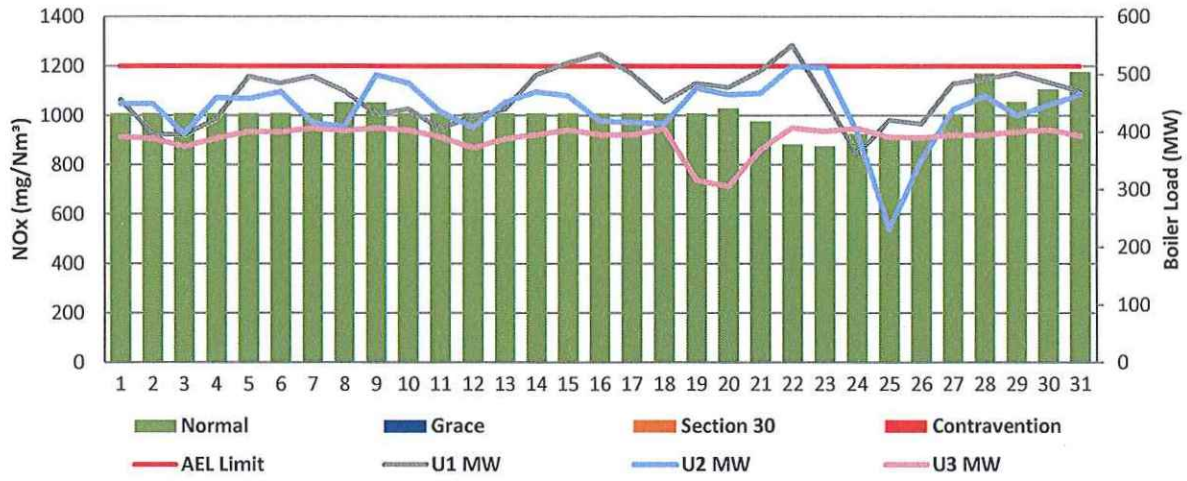
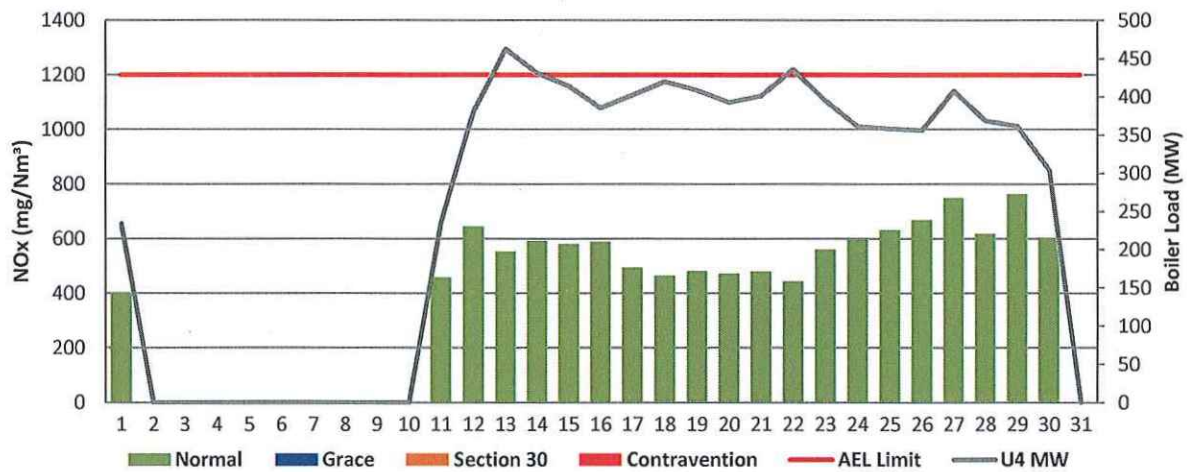
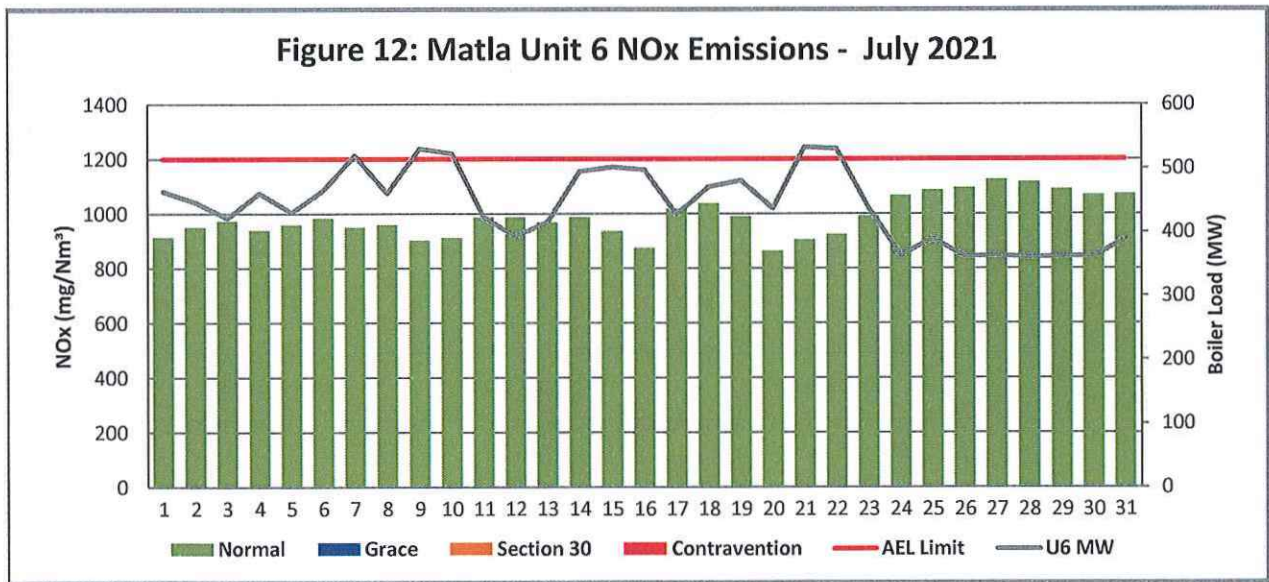
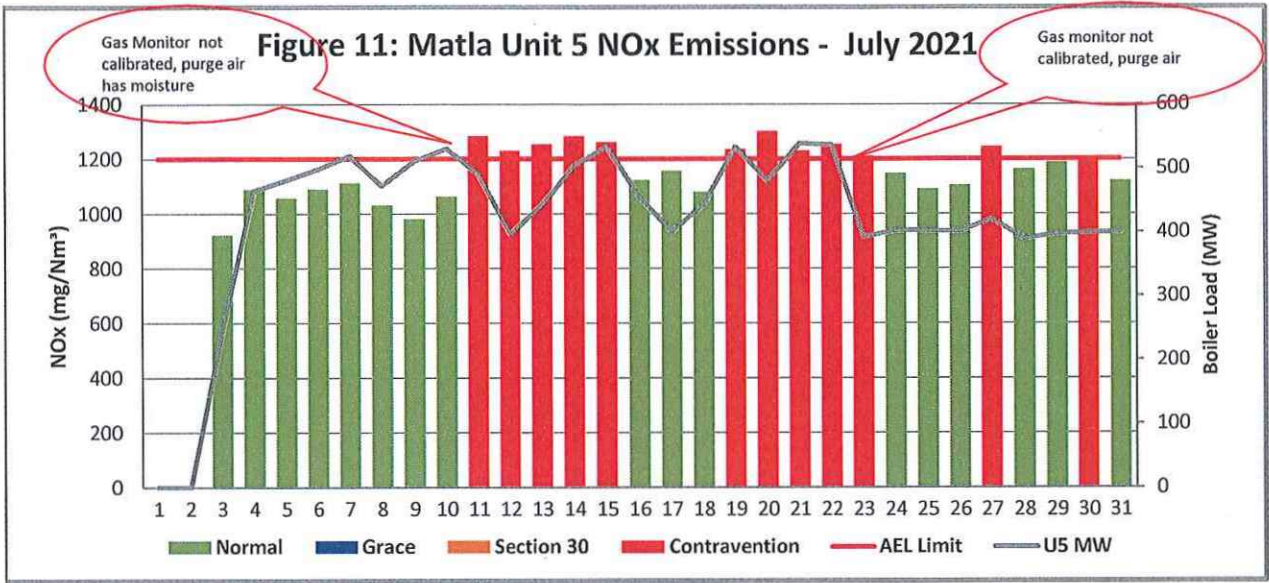


Figure 10: Matla Unit 4 NOx Emissions - July 2021





**7 SHUT DOWN AND LIGHT UP INFORMATION**

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

South Stack	<i>Event 1</i>		<i>Event 2</i>		<i>Event 3</i>		<i>Event 4</i>	
Unit No.	<i>Unit 2</i>		<i>Unit 2</i>		<i>Unit 2</i>		<i>no event</i>	
Breaker Open (BO)	<i>6:05 AM</i>	<i>2021/07/08</i>	<i>8:15 AM</i>	<i>2021/07/24</i>	<i>11:20 AM</i>	<i>2021/07/29</i>		
Draught Group (DG) Shut Down (SD)	<i>DG did not trip or SD</i>	<i>DG did not trip or SD</i>	<i>4:30 PM</i>	<i>2021/07/27</i>	<i>DG did not trip or SD</i>	<i>DG did not trip or SD</i>		
BO to DG SD (duration)	<i>n/a</i>	<i>DD:HH:MM</i>	<i>03:08:15</i>	<i>DD:HH:MM</i>	<i>n/a</i>	<i>DD:HH:MM</i>		<i>DD:HH:MM</i>
Fires in time	<i>6:05 AM</i>	<i>2021/07/08</i>	<i>5:00 AM</i>	<i>2021/07/26</i>	<i>11:20 AM</i>	<i>2021/07/29</i>		
Synch. to Grid (or BC)	<i>9:05 AM</i>	<i>2021/07/08</i>	<i>4:30 PM</i>	<i>2021/07/26</i>	<i>2:15 PM</i>	<i>2021/07/29</i>		
Fires in to BC (duration)	<i>00:03:00</i>	<i>DD:HH:MM</i>	<i>00:11:30</i>	<i>DD:HH:MM</i>	<i>00:02:55</i>	<i>DD:HH:MM</i>		<i>DD:HH:MM</i>
Emissions below limit from BC (end date)	<i>not &gt; limit</i>	<i>not &gt; limit</i>	<i>12:00 AM</i>	<i>2021/07/27</i>	<i>not &gt; limit</i>	<i>not &gt; limit</i>		
Emissions below limit from BC (duration)	<i>n/a</i>	<i>DD:HH:MM</i>	<i>00:07:30</i>	<i>DD:HH:MM</i>	<i>n/a</i>	<i>DD:HH:MM</i>		<i>DD:HH:MM</i>

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)		<i>DD:HH:MM</i>		<i>DD:HH:MM</i>		<i>DD:HH:MM</i>		<i>DD:HH:MM</i>
Fires in time								
Synch. to Grid (or BC)								
Fires in to BC (duration)		<i>DD:HH:MM</i>		<i>DD:HH:MM</i>		<i>DD:HH:MM</i>		<i>DD:HH:MM</i>
Emissions below limit from BC (end date)								
Emissions below limit from BC (duration)		<i>DD:HH:MM</i>		<i>DD:HH:MM</i>		<i>DD:HH:MM</i>		<i>DD:HH:MM</i>

Unit No. 4	Event 1		Event 2		Event 3		Event 4	
Breaker Open (BO)			1:10 AM	2021/07/01	1:45 AM	2021/07/30		
Draught Group (DG) Shut Down (SD)			1:10 AM	2021/07/01	1:45 AM	2021/07/30		
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time			9:25 PM	2021/07/09	11:35 PM	2021/08/01		
Synch. to Grid (or BC)			9:05 AM	2021/07/11	11:05 AM	2021/08/02		
Fires in to BC (duration)		DD:HH:MM	01:11:40	DD:HH:MM	00:11:30	DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)			12:00 AM	2021/07/19	12:00 AM	2021/08/04		
Emissions below limit from BC (duration)		DD:HH:MM	07:14:55	DD:HH:MM	01:12:55	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	6:40 PM	2021/07/02						
Synch. to Grid (or BC)	3:45 PM	2021/07/03						
Fires in to BC (duration)	00:21:05	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	12:00 AM	2021/07/05						
Emissions below limit from BC (duration)	01:08:15	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 July-2021 in mg/Nm<sup>3</sup>

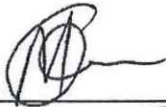
[Include reference to once off test showing typical emissions rates during fires in and SD]

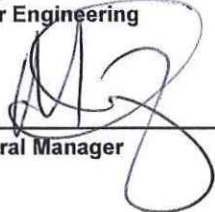
Remember to add attachments here; see ReportAddendum Tab

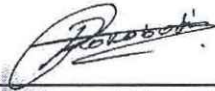
Reserved for Addendum XXXX

11 General

South Stack gases were not working due to defective I/O unit, currently the monitor has values however they are inaccurate, the station will continue with fault finding and calibrations of the monitor . Station is experiencing high moisture on compressed air used for purging gas monitors, this affects calibration of the gas monitors. Station is a process to commission air driers.

  
Boiler Engineering  
23-08-2021  
Date

  
General Manager  
23/08/2021  
Date

  
Environmental Department  
23/08/2021  
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>3</sub> 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

