



**Generation**

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**Date: 2020/02/24**

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**MATLA POWER STATION**

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

BOILER ENGINEERING MANAGER

DATE

ENVIRONMENTAL MANAGER

DATE

ENGINEERING MANAGER

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 Nov-2019
	Coal	Tons	1 475 000	1 139 540
	Fuel Oil	Tons	2 500	937
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Nov-2019
	Energy	GWh	2 484	1 889
	Ash	Tons	471 000	290 925
	RE PM	kg/MWh	not specified	0.611

**2 ENERGY SOURCE CHARACTERISTICS**

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	16-24	
Sulphur Content	%	0.8-1.1	1.00
Ash Content	%	21-40	25.53

### 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 Nov-2019
South	<i>Electro Static Precipators (ESP)</i>	<i>99.628%</i>
Unit 4	<i>Electro Static Precipators (ESP)</i>	<i>99.249%</i>
Unit 5	<i>Electro Static Precipators (ESP)</i>	<i>99.572%</i>
Unit 6	<i>Electro Static Precipators (ESP)</i>	<i>99.626%</i>

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

### 4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	PM	SO <sub>2</sub>	NO	CO <sub>2</sub>	O <sub>2</sub>
South	<i>96.4</i>	<i>100.0</i>	<i>100.0</i>		<i>99.7</i>
Unit 4	<i>83.8</i>	<i>100.0</i>	<i>100.0</i>		<i>100.0</i>
Unit 5	<i>35.3</i>	<i>100.0</i>	<i>100.0</i>		<i>100.0</i>
Unit 6	<i>99.9</i>	<i>100.0</i>	<i>100.0</i>		<i>89.3</i>

### 6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of November-2019

Associated Unit/Stack	PM	SO <sub>x</sub>	NO <sub>x</sub>	CO <sub>2</sub>
Unit 1	173.4	3 434.0	1 746.0	
Unit 2	146.2	3 081.7	1 560.6	
Unit 3	182.4	3 544.8	1 804.4	
Unit 4	310.0	2 652.2	1 853.0	
Unit 5	182.2	1 878.1	804.8	
Unit 6	160.7	2 494.1	1 102.9	
SUM	1 154.9	17 084.9	8 871.8	

Table 6.2: Operating days in compliance to PM AEL Limit - November 2019

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
South	28	2	0	0	2	101.1
Unit 4	22	4	4	0	8	173.8
Unit 5	19	3	4	0	7	178.7
Unit 6	20	9	1	0	10	92.2
<b>SUM</b>	<b>89</b>	<b>18</b>	<b>9</b>	<b>0</b>	<b>27</b>	

Table 6.3: Operating days in compliance to SOx AEL Limit - November 2019

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average SOx (mg/Nm <sup>3</sup> )
South	30	0	0	0	0	2 031.5
Unit 4	30	0	0	0	0	1 509.6
Unit 5	28	0	0	0	0	1 554.5
Unit 6	30	0	0	0	0	1 482.7
<b>SUM</b>	<b>118</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Table 6.4: Operating days in compliance to NOx AEL Limit - November 2019

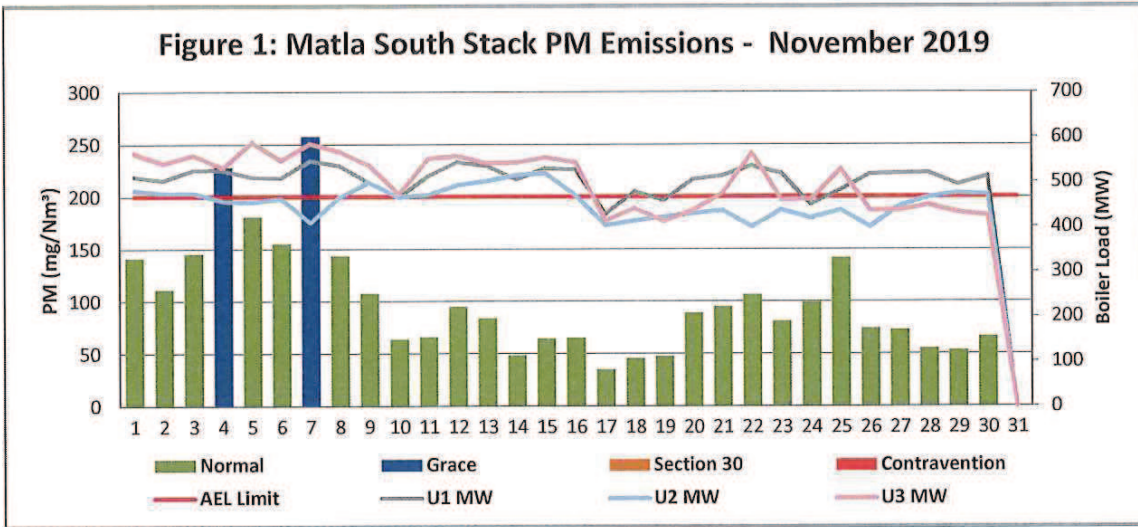
Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average NOx (mg/Nm <sup>3</sup> )
South	29	1	0	0	1	1 030.8
Unit 4	30	0	0	0	0	1 052.1
Unit 5	28	0	0	0	0	636.0
Unit 6	30	0	0	0	0	657.6
<b>SUM</b>	<b>117</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	

Table 6.5: Legend Description

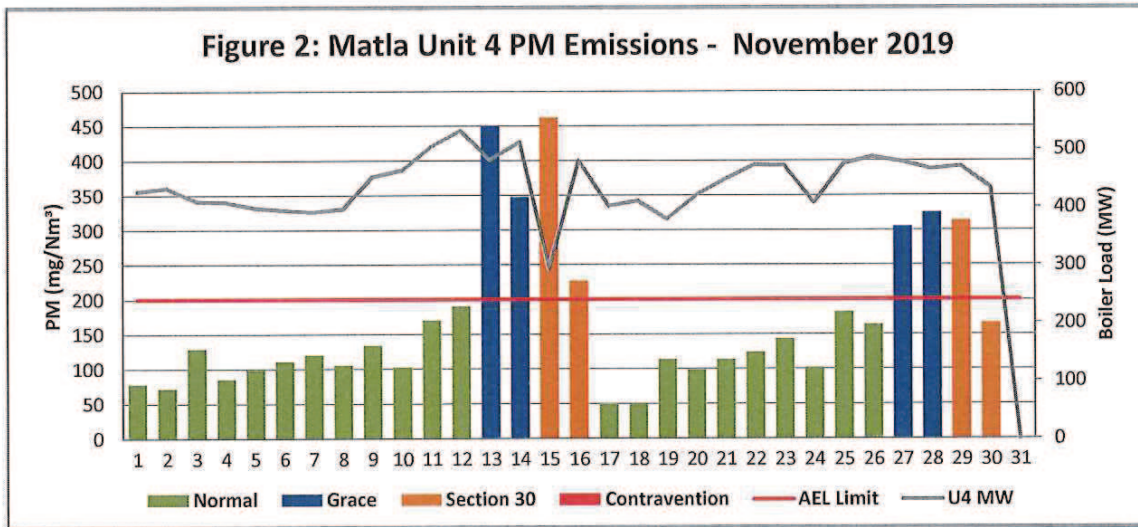
Condition	Colour	Description
Normal		Emissions below Emission Limit Value (ELV)
Grace		Emissions above the ELV during grace period
Section 30		Emissions above ELV during a NEMA S30 incident
Contra-vention		Emissions above ELV but outside grace or S30 incident conditions



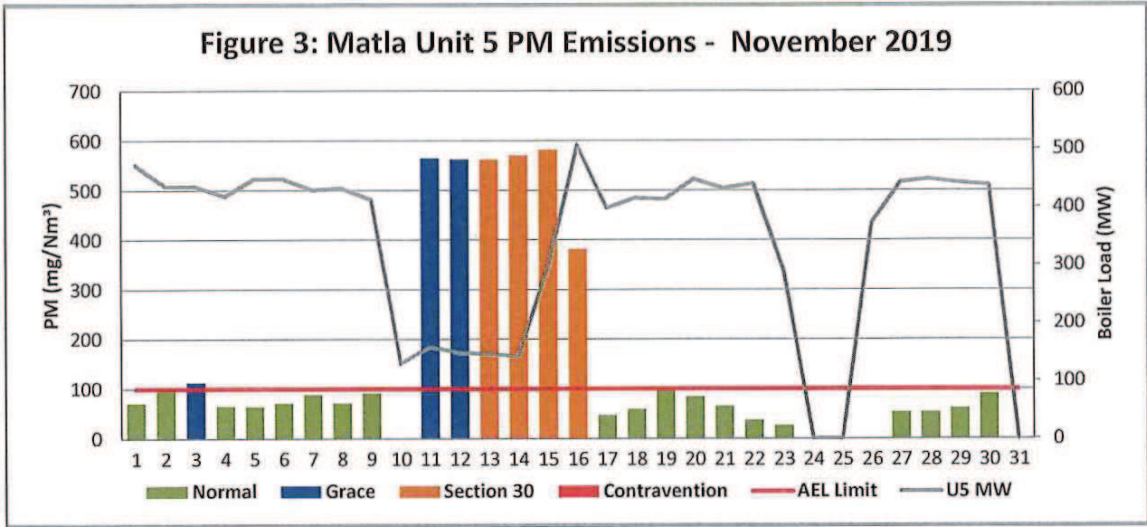
**Figure 1: Matla South Stack PM Emissions - November 2019**



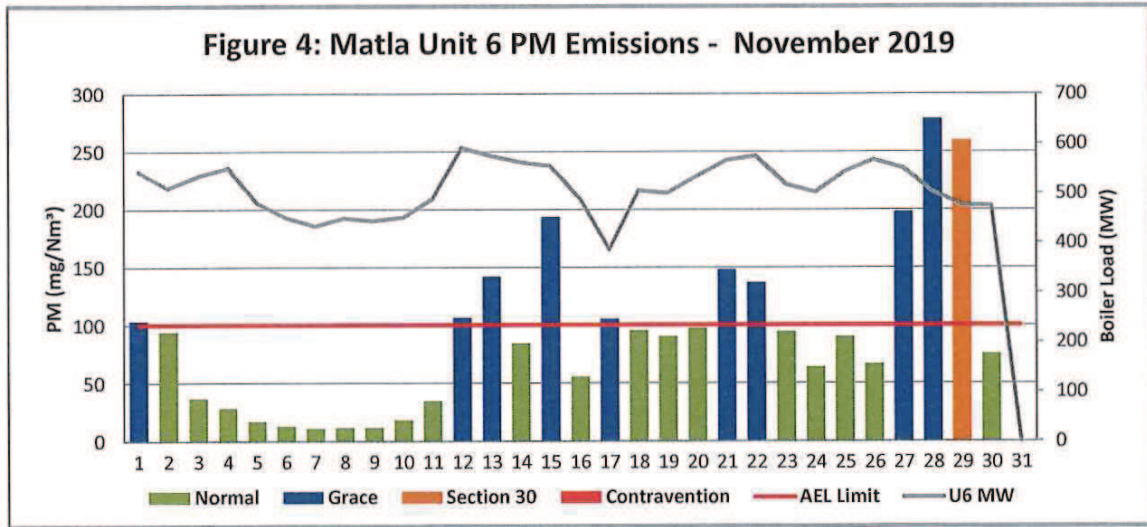
**Figure 2: Matla Unit 4 PM Emissions - November 2019**



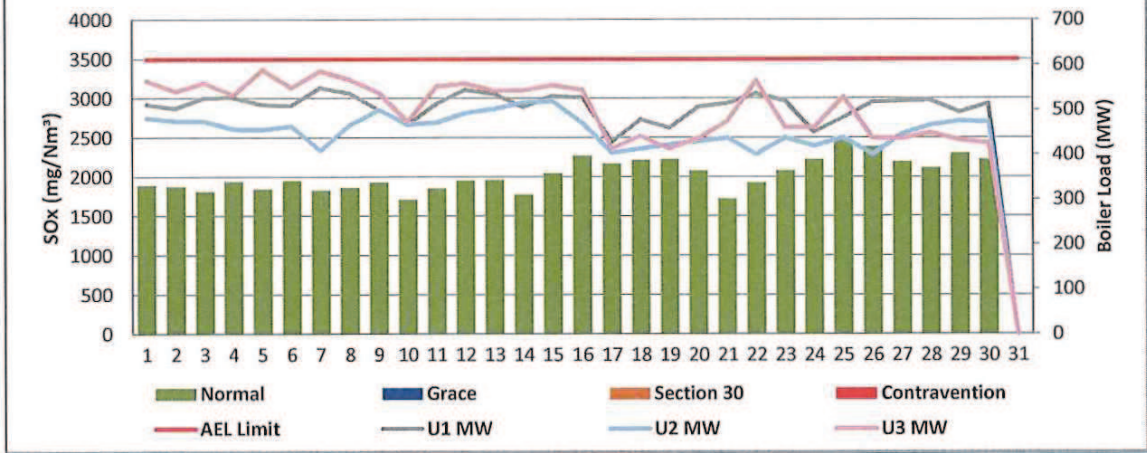
**Figure 3: Matla Unit 5 PM Emissions - November 2019**



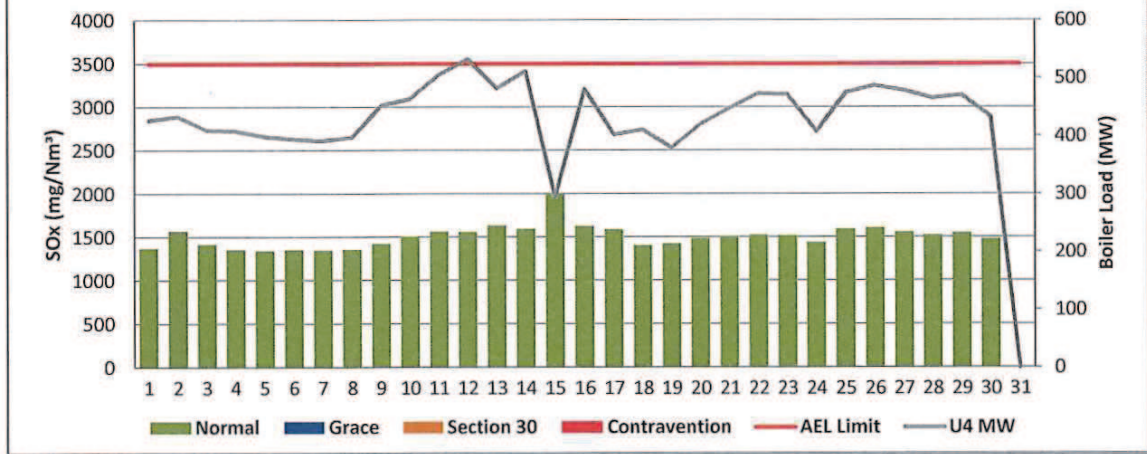
**Figure 4: Matla Unit 6 PM Emissions - November 2019**



**Figure 5: Matla South Stack SOx Emissions - November 2019**

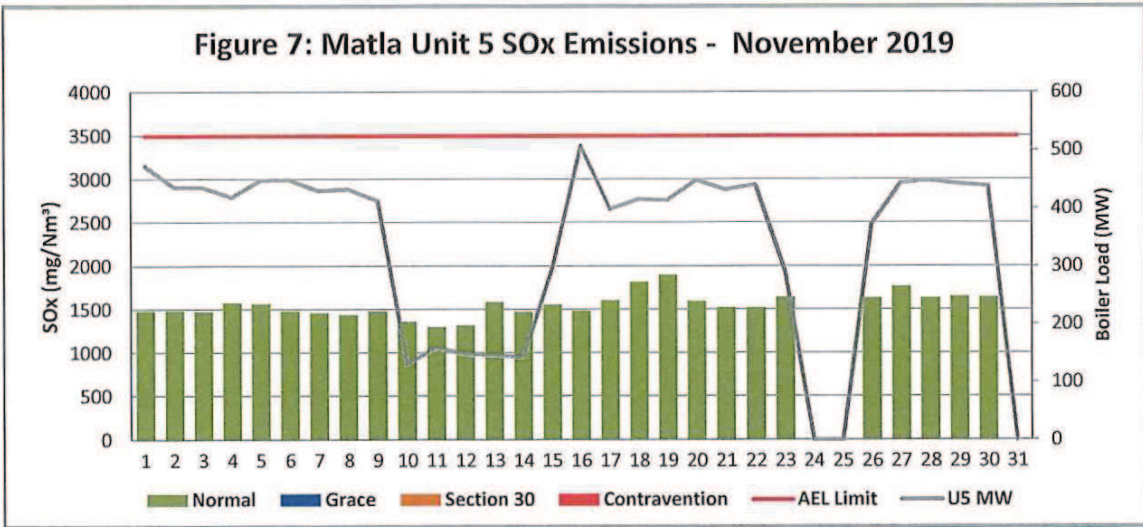


**Figure 6: Matla Unit 4 SOx Emissions - November 2019**

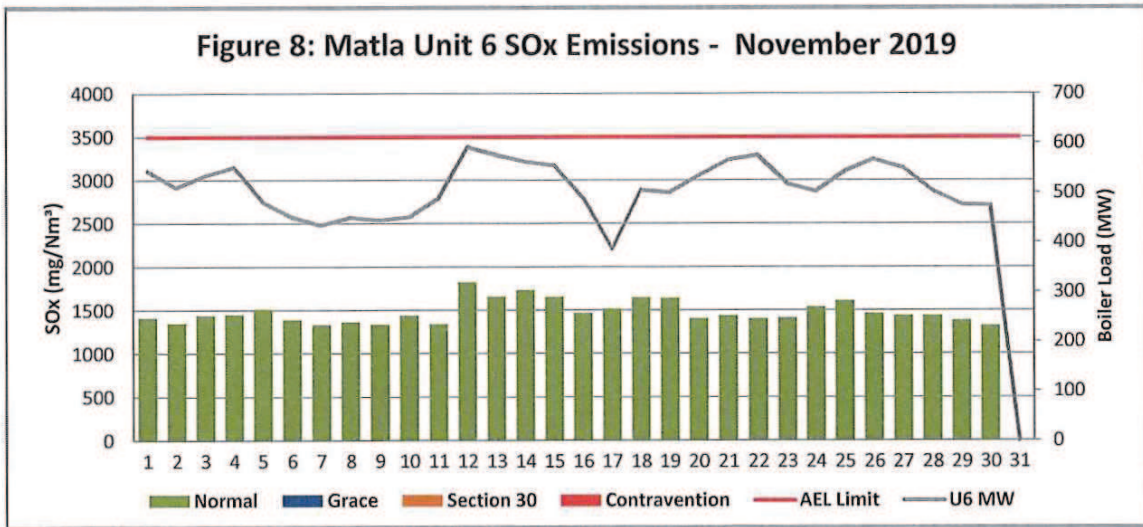




**Figure 7: Matla Unit 5 SOx Emissions - November 2019**

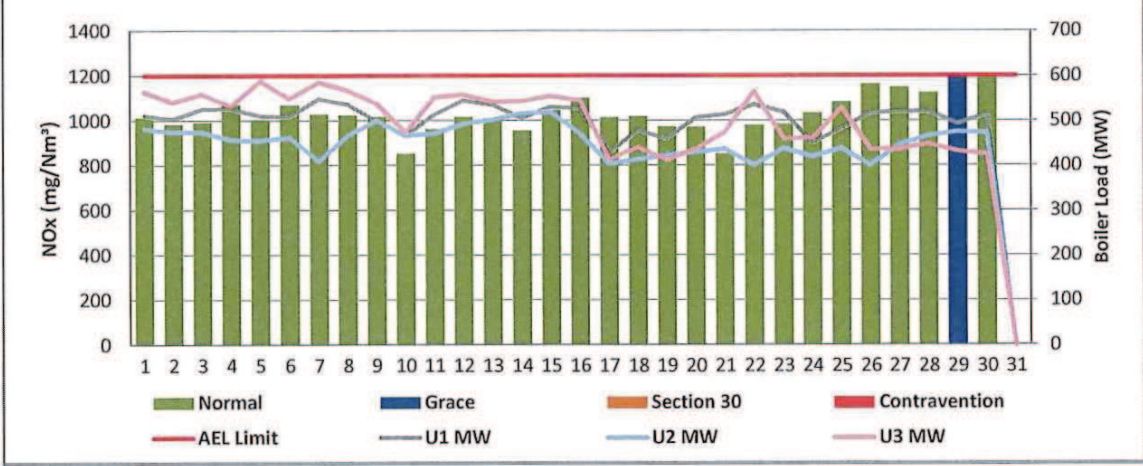


**Figure 8: Matla Unit 6 SOx Emissions - November 2019**





**Figure 9: Matla South Stack NOx Emissions - November 2019**



**Figure 10: Matla Unit 4 NOx Emissions - November 2019**

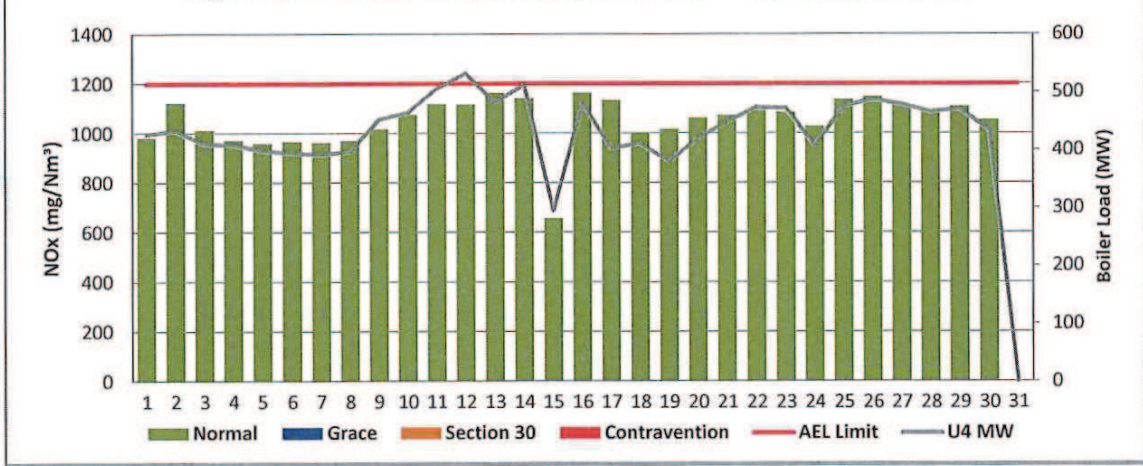


Figure 11: Matla Unit 5 NOx Emissions - November 2019

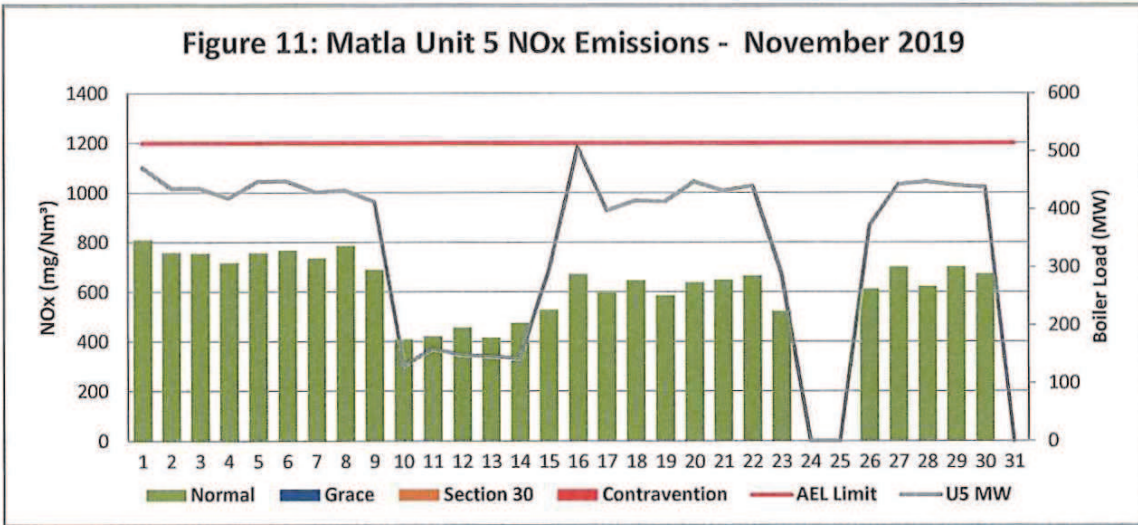
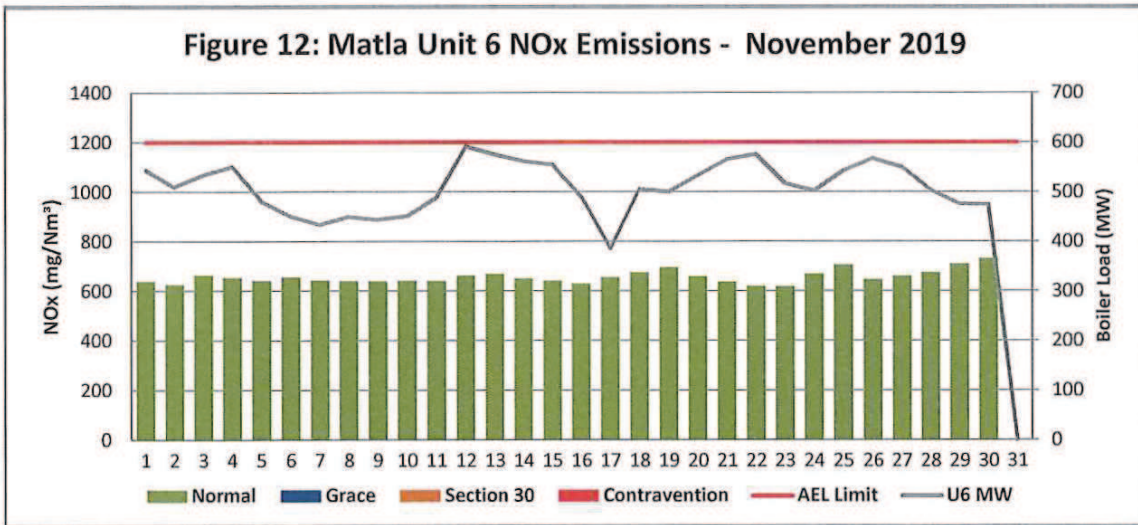


Figure 12: Matla Unit 6 NOx Emissions - November 2019



## 7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1. PM Start-up information for the month of November-2019

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)			09:10 AM	2019/11/07				
Draught Group (DG) Shut Down (SD)			DG did not trip or SD	DG did not trip or SD				
BO to DG SD (duration)		DD:HH:MM	n/a	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)								
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)	07:55 AM	2019/11/09						
Draught Group (DG) Shut Down (SD)	07:55 AM	2019/11/09						
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	01:00 PM	2019/11/10						
Synch. to Grid (or BC)	08:00 PM	2019/11/10						
Fires in to BC (duration)	00:07:00	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. 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								
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 November-2019 in mg/Nm<sup>3</sup>

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



