

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 Jun-2020
	Coal	Tons	1 475 000	850 187
	Fuel Oil	Tons	2 500	319

Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Jun-2020
	Energy	GWh	2 484	1 579
	Ash	Tons	471 000	223 174
	RE PM	kg/MWh	not specified	0,485

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.8-1.1	1,00
Ash Content	%	21-40	26,25

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 Jun-2020
South	<i>Electro Static Precipators (ESP)</i>	<i>99,693%</i>
Unit 4	<i>Electro Static Precipators (ESP)</i>	<i>99,268%</i>
Unit 5	<i>Electro Static Precipators (ESP)</i>	<i>99,685%</i>
Unit 6	<i>Electro Static Precipators (ESP)</i>	<i>99,719%</i>

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

4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	PM	SO ₂	NO	O ₂
South	<i>96,3</i>	<i>99,9</i>	<i>99,9</i>	<i>77,1</i>
Unit 4	<i>96,9</i>	<i>99,7</i>	<i>99,7</i>	<i>66,9</i>
Unit 5	<i>89,0</i>	<i>99,6</i>	<i>99,6</i>	<i>98,8</i>
Unit 6	<i>100,0</i>	<i>99,0</i>	<i>99,0</i>	<i>99,3</i>

6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of June-2020

Associated Unit/Stack	PM	SO _x	NO _x
Unit 1	121,4	3 669,7	1 187,2
Unit 2	12,5	366,2	107,1
Unit 3	129,0	3 904,7	1 271,2
Unit 4	268,7	3 763,5	954,1
Unit 5	123,8	2 870,9	1 080,0
Unit 6	110,1	2 944,4	1 228,6
SUM	765,4	17 519,4	5 828,3

Table 6.2: Operating days in compliance to PM AEL Limit - June 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average PM (mg/Nm ³)
South	26	4	0	0	4	73,3
Unit 4	23	6	1	0	7	148,9
Unit 5	26	4	0	0	4	70,0
Unit 6	25	5	0	0	5	65,1
SUM	100	19	1	0	20	

Table 6.3: Operating days in compliance to SOx AEL Limit - June 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average SOx (mg/Nm ³)
South	29	1	0	0	1	2 226,2
Unit 4	30	0	0	0	0	2 107,3
Unit 5	30	0	0	0	0	1 637,5
Unit 6	30	0	0	0	0	1 773,0
SUM	119	1	0	0	1	

Table 6.4: Operating days in compliance to NOx AEL Limit - June 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average NOx (mg/Nm ³)
South	29	1	0	0	1	722,8
Unit 4	30	0	0	0	0	534,0
Unit 5	30	0	0	0	0	613,8
Unit 6	30	0	0	0	0	738,9
SUM	119	1	0	0	1	

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 - June 2020

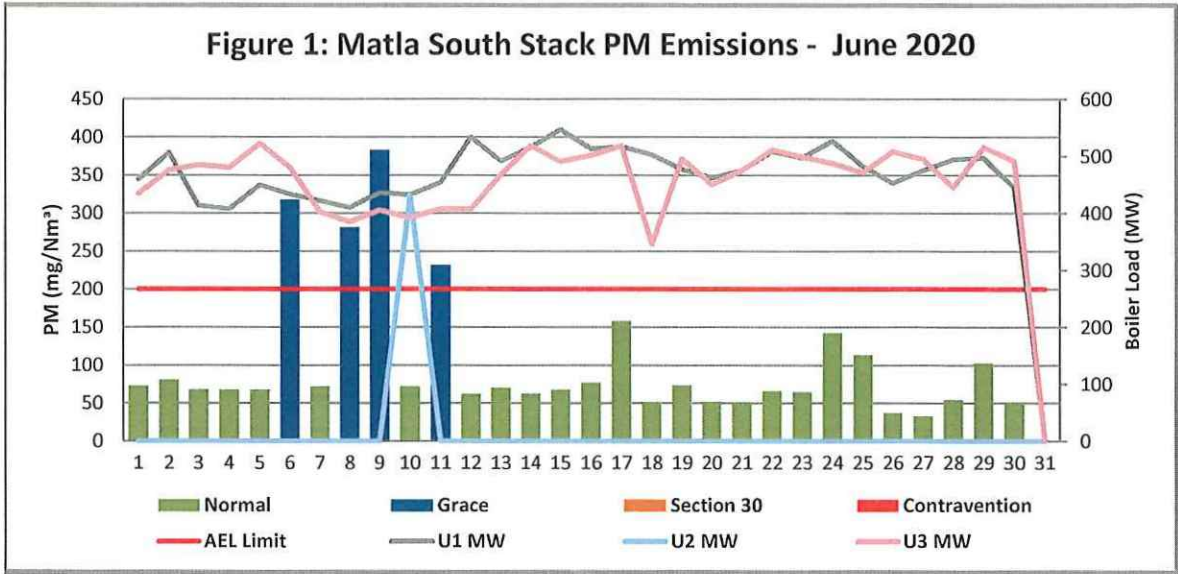


Figure 2: Matla Unit 4 PM Emissions - June 2020

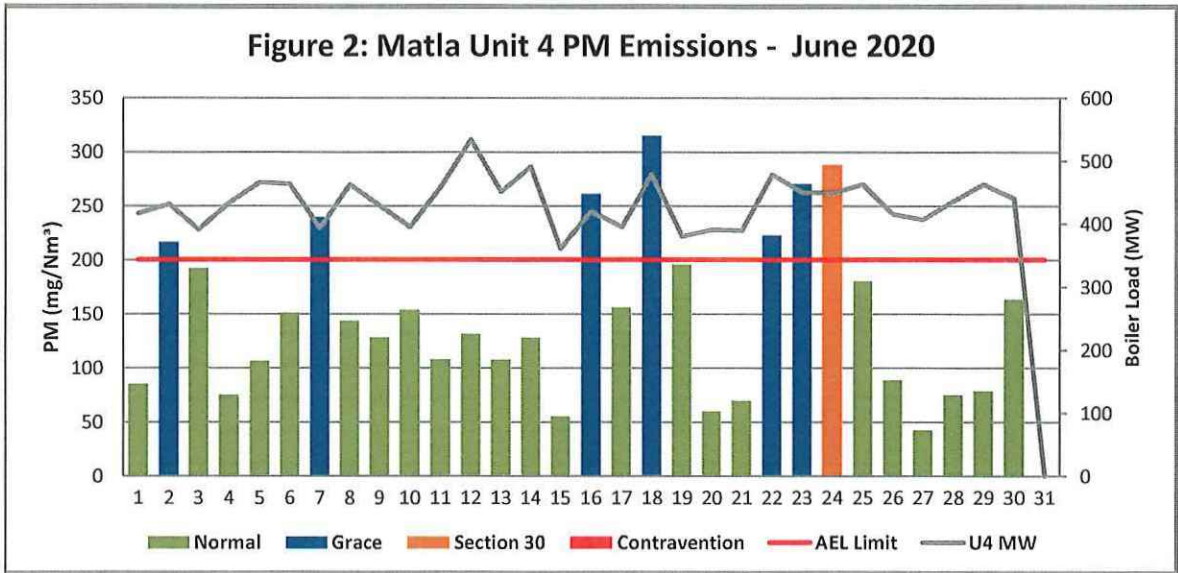


Figure 3: Matla Unit 5 PM Emissions - June 2020

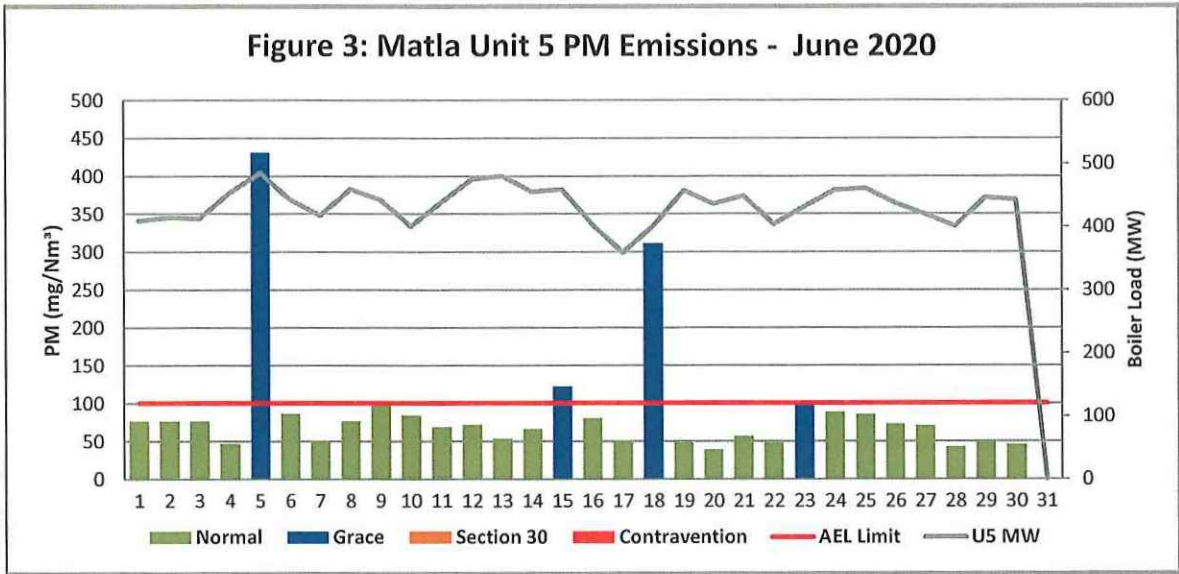


Figure 4: Matla Unit 6 PM Emissions - June 2020

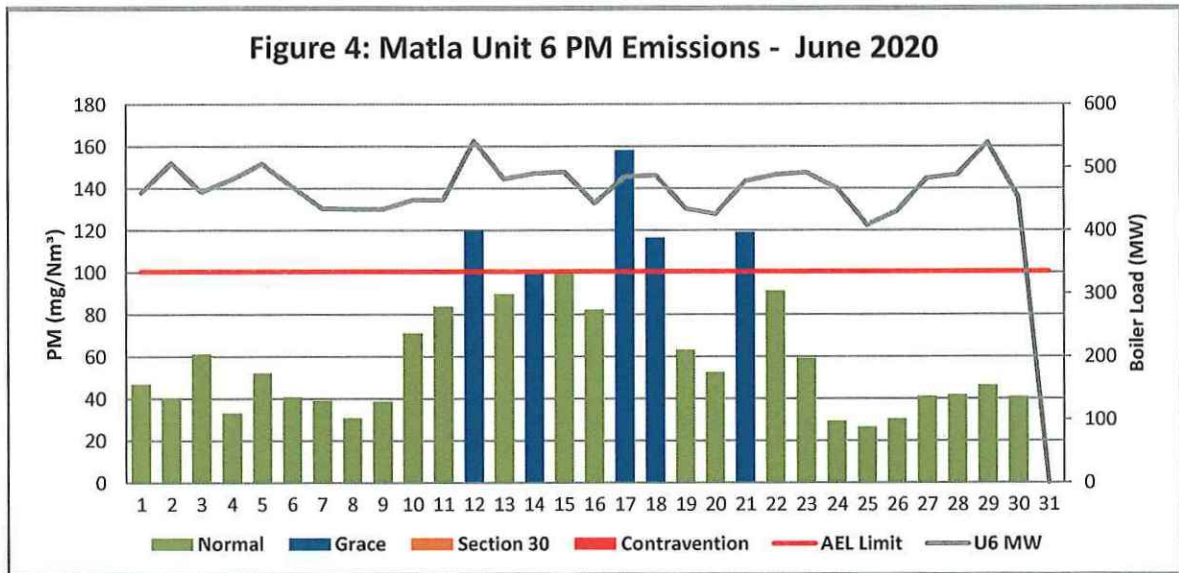


Figure 5: Matla South Stack SOx Emissions - June 2020

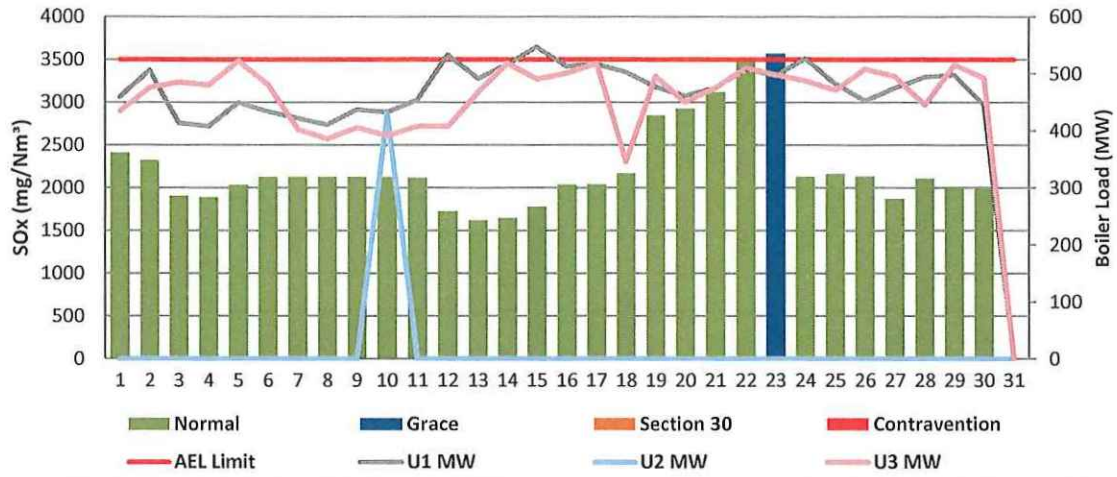


Figure 6: Matla Unit 4 SOx Emissions - June 2020

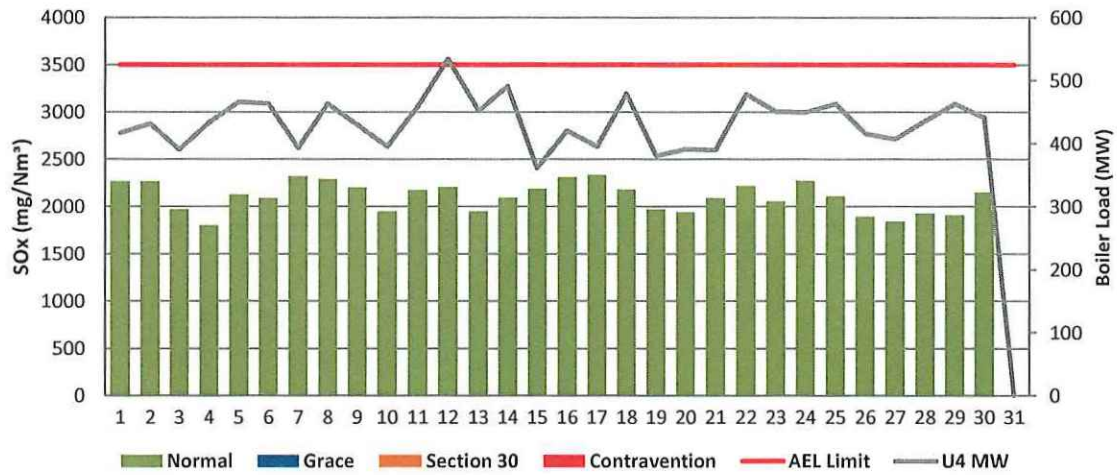


Figure 7: Matla Unit 5 SOx Emissions - June 2020

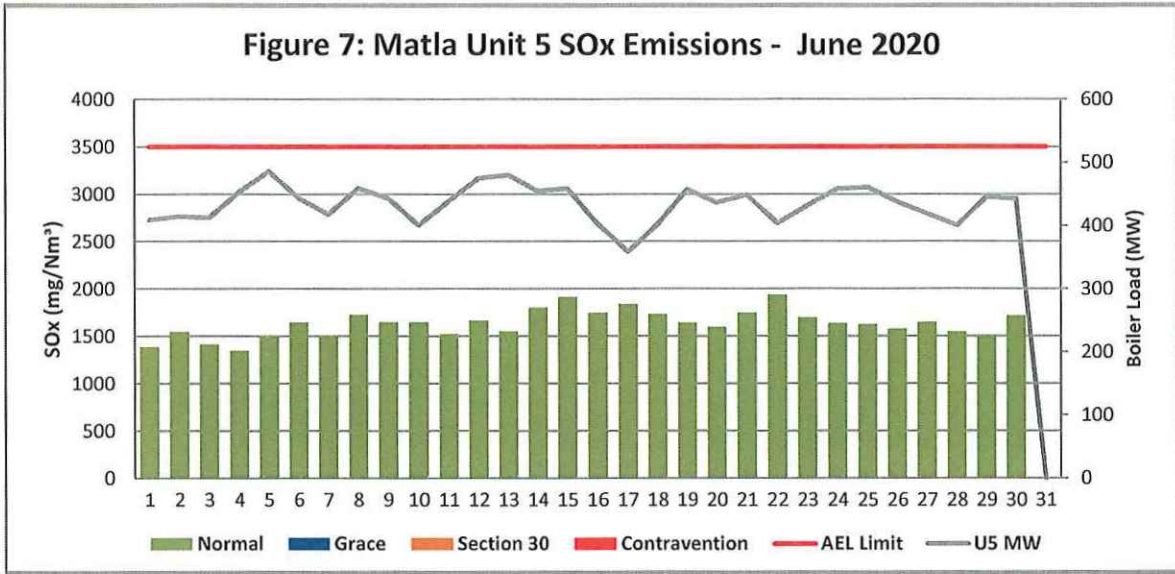


Figure 8: Matla Unit 6 SOx Emissions - June 2020

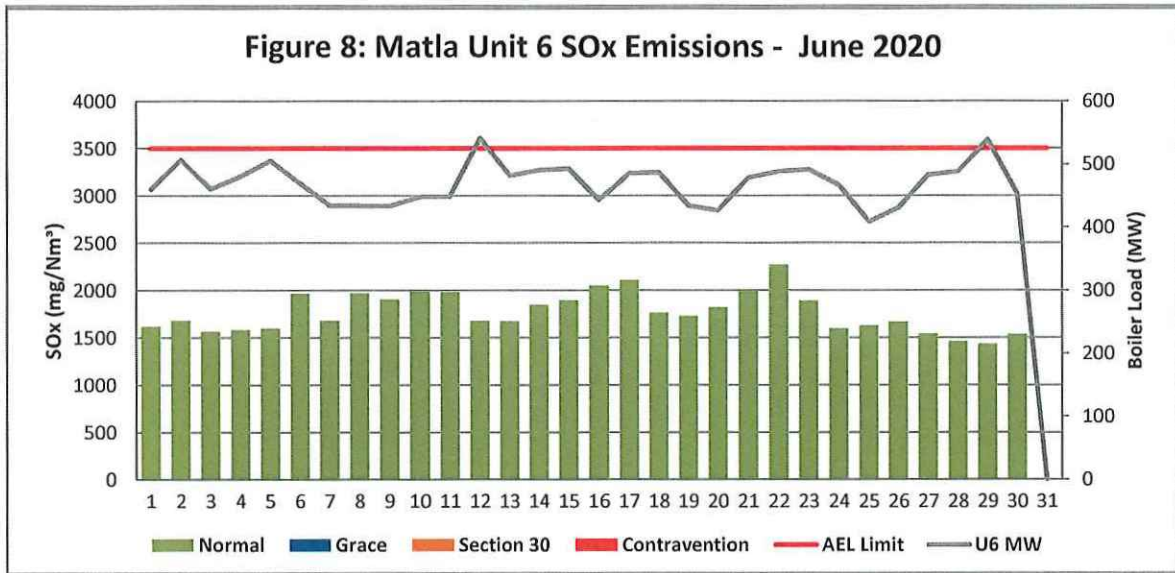


Figure 9: Matla South Stack NOx Emissions - June 2020

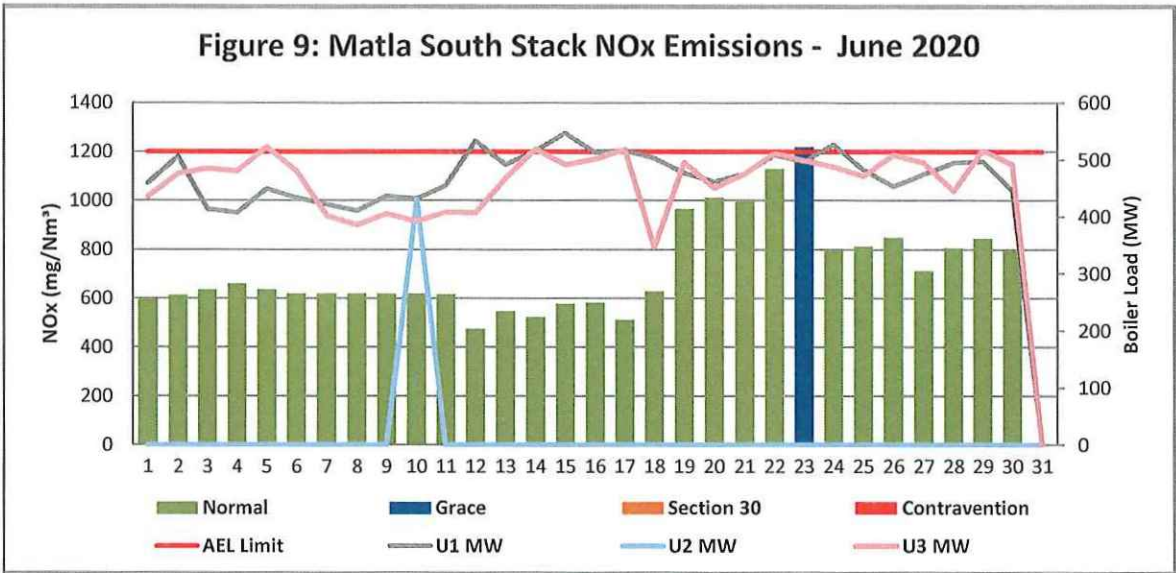


Figure 10: Matla Unit 4 NOx Emissions - June 2020

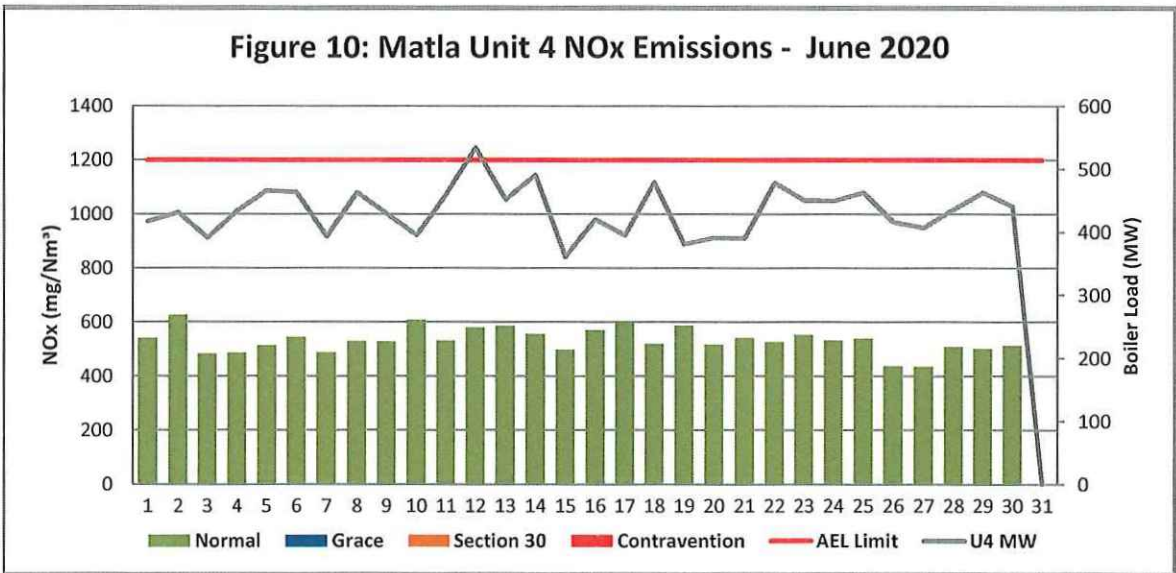


Figure 11: Matla Unit 5 NOx Emissions - June 2020

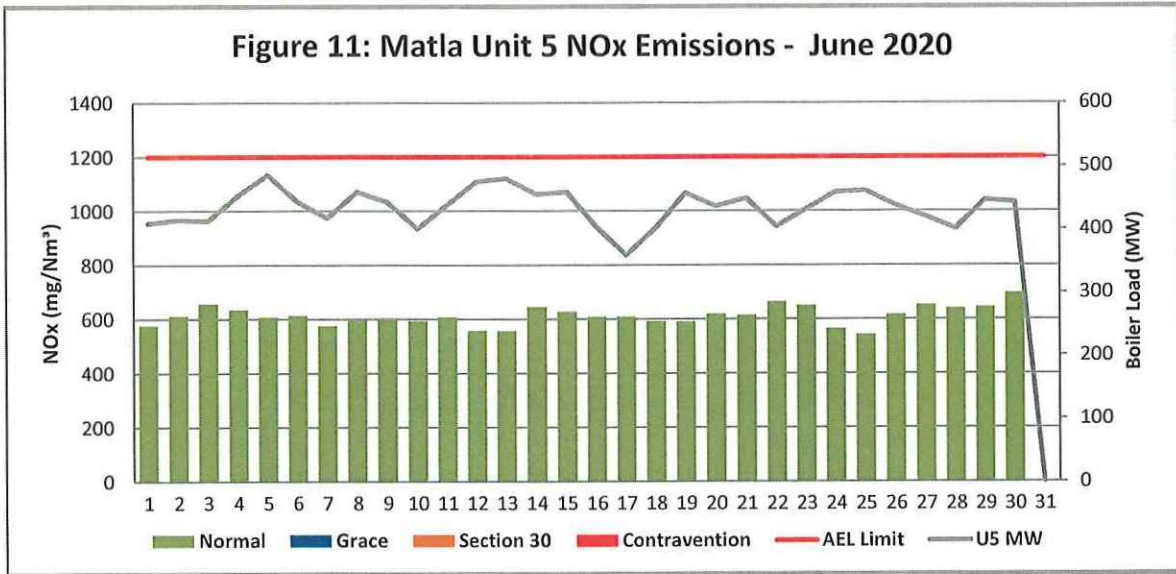
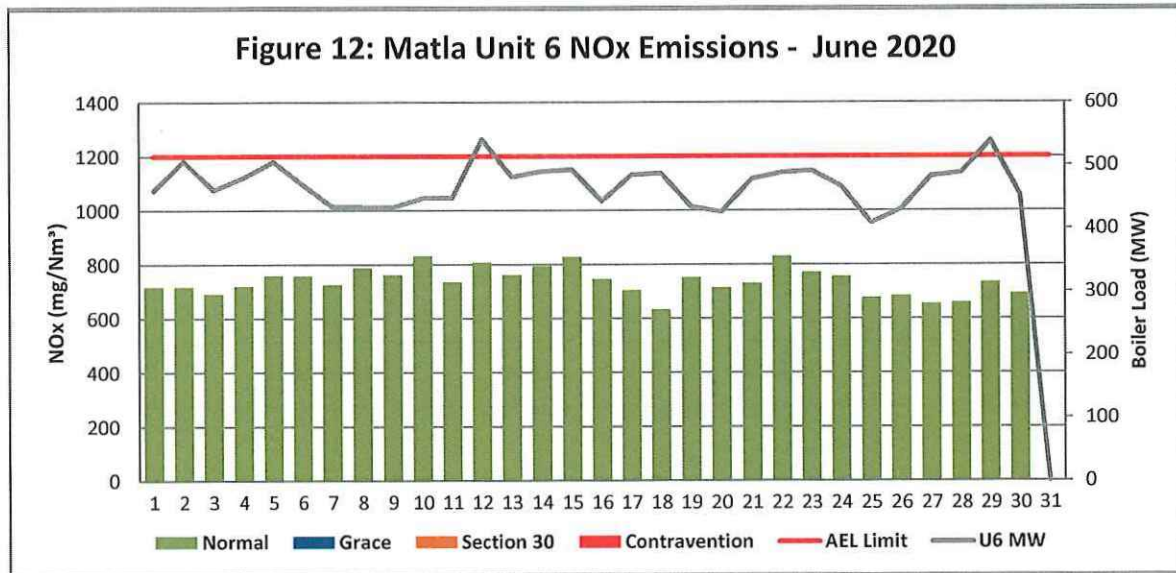


Figure 12: Matla Unit 6 NOx Emissions - June 2020



7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1. PM Start-up information for the month of June-2020

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>no event</i>		<i>no event</i>		<i>no event</i>	
Breaker Open (BO)	<i>10:45 PM</i>	<i>2020/06/10</i>						
Draught Group (DG) Shut Down (SD)	<i>11:30 PM</i>	<i>2020/06/11</i>						
BO to DG SD (duration)	<i>01:00:45</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	<i>6:25 PM</i>	<i>2020/06/05</i>						
Synch. to Grid (or BC)	<i>12:00 AM</i>	<i>2020/06/10</i>						
Fires in to BC (duration)	<i>04:05:35</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	<i>not > limit</i>	<i>not > 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)	6:35 PM	2020/06/17						
Draught Group (DG) Shut Down (SD)	6:35 PM	2020/06/17						
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 June-2020 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


14-07-2020
Boiler Engineering Date


2020-07-13
Environmental Department Date


General Manager Date

Compiled by: Boiler Engineering Department

ESP & SO₃ 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