



Generation

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AND

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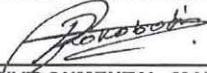
Total number of annexes:

MATLA POWER STATION

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



BOILER ENGINEERING MANAGER



ENVIRONMENTAL MANAGER



ENGINEERING MANAGER

27/07/2021

DATE

29/07/2021

DATE

30.07.2021

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 Jun-2021
	Coal	Tons	1 475 000	968 693
	Fuel Oil	Tons	2 500	695
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Jun-2021
	Energy	GWh	2 484	1 708
	Ash	Tons	471 000	283 827
	RE PM	kg/MWh	not specified	0,686

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.8-1.1	1,00
Ash Content	%	21-40	29,30

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-2021
South	<i>Electro Static Precipators (ESP)</i>	<i>99,549%</i>
Unit 4	<i>Electro Static Precipators (ESP)</i>	<i>99,568%</i>
Unit 5	<i>Electro Static Precipators (ESP)</i>	<i>99,029%</i>
Unit 6	<i>Electro Static Precipators (ESP)</i>	<i>99,801%</i>

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

5 DATA RELIABILITY (%)

Associated Unit/Stack	PM	SO ₂	NO	O ₂
South	<i>90,2</i>	<i>100,0</i>	<i>100,0</i>	<i>100,0</i>
Unit 4	<i>98,9</i>	<i>99,3</i>	<i>99,6</i>	<i>99,6</i>
Unit 5	<i>78,1</i>	<i>99,2</i>	<i>99,5</i>	<i>99,7</i>
Unit 6	<i>91,1</i>	<i>80,2</i>	<i>80,4</i>	<i>80,6</i>

Unit	Dust Monitor>Limit(hours)	Dust Monitor>Limit(%)
SS	71,86	9,98
4	6,00	0,83
5	122,00	16,94
6	0,00	0,00

6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM	SO _x	NO _x
Unit 1	242,7	4 012,1	962,1
Unit 2	240,6	3 989,6	956,7
Unit 3	105,4	1 864,2	447,0
Unit 4	215,6	3 763,3	1 269,4
Unit 5	275,5	2 640,5	1 420,7
Unit 6	92,6	3 054,0	1 375,8
SUM	1 172,3	19 323,7	6 431,6

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
South	20	5	5	0	10	146,1
Unit 4	29	1	0	0	1	117,0
Unit 5	12	4	8	0	12	212,4
Unit 6	29	1	0	0	1	68,8
SUM	90	11	13	0	24	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm ³)
South	30	0	0	0	0	2 471,6
Unit 4	30	0	0	0	0	2 045,1
Unit 5	25	0	0	0	0	2 029,5
Unit 6	30	0	0	0	0	2 249,3
SUM	115	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm ³)
South	30	0	0	0	0	592,7
Unit 4	30	0	0	0	0	687,7
Unit 5	22	0	0	3	3	1 087,6
Unit 6	22	0	0	8	8	1 017,8
SUM	104	0	0	11	11	

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 - June 2021

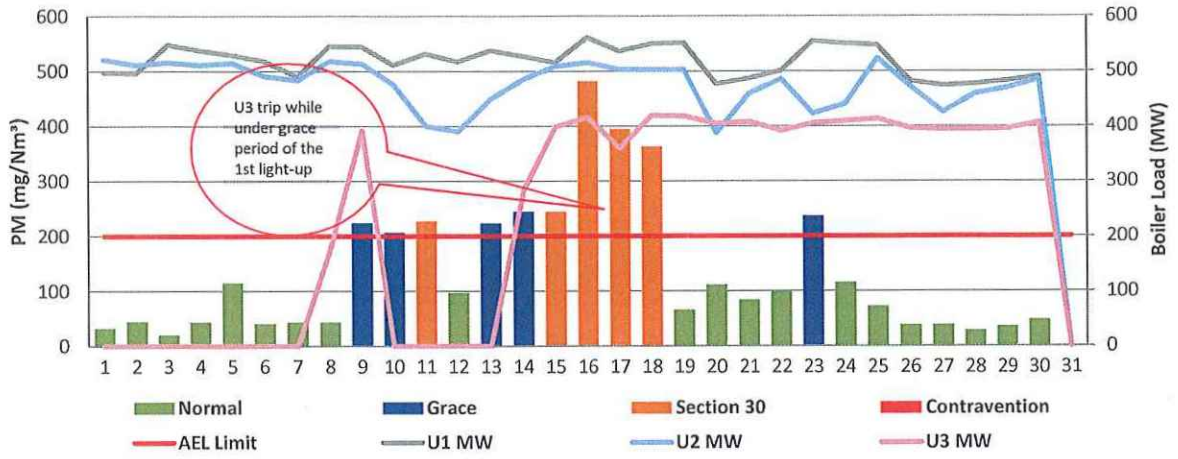


Figure 2: Matla Unit 4 PM Emissions - June 2021

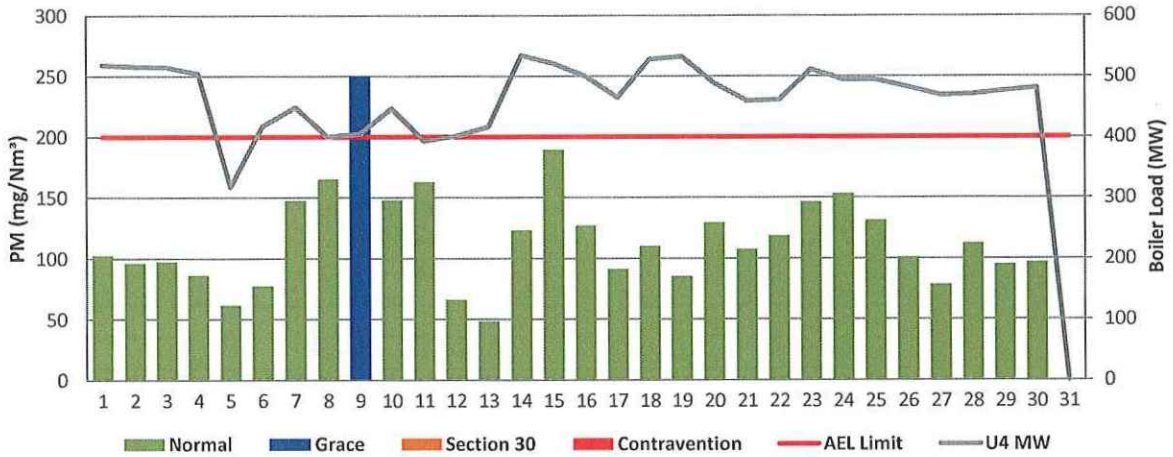


Figure 3: Matla Unit 5 PM Emissions - June 2021

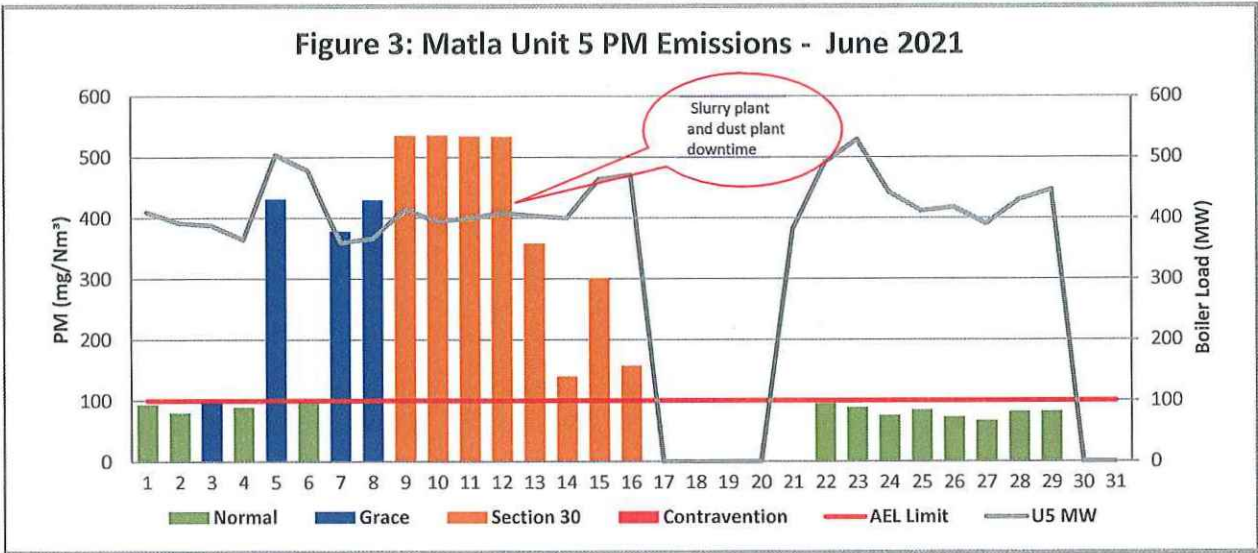


Figure 4: Matla Unit 6 PM Emissions - June 2021

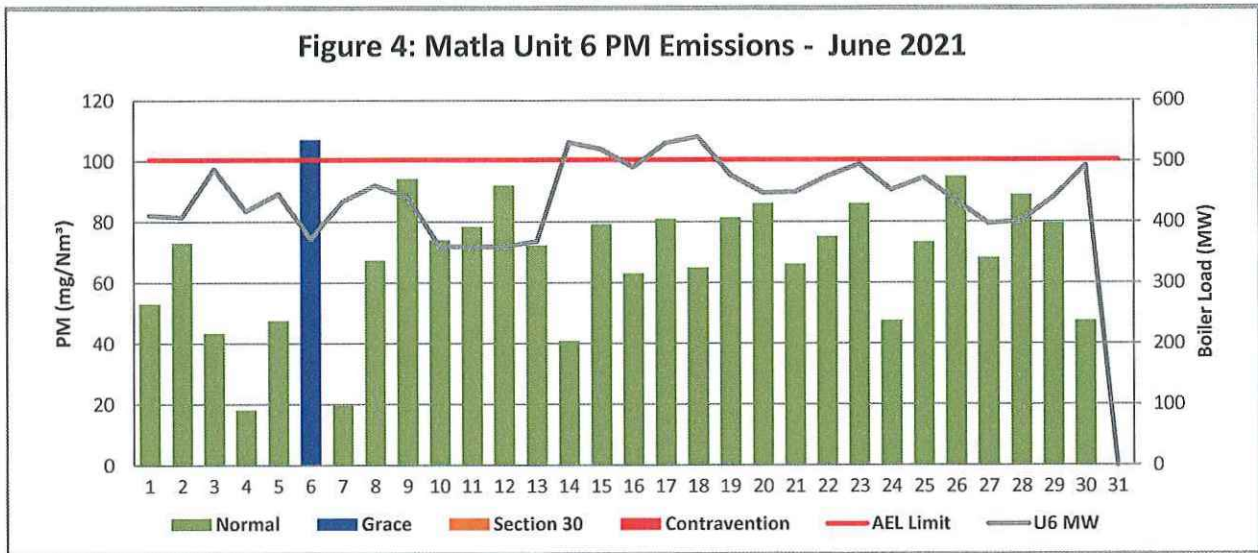


Figure 5: Matla South Stack SOx Emissions - June 2021

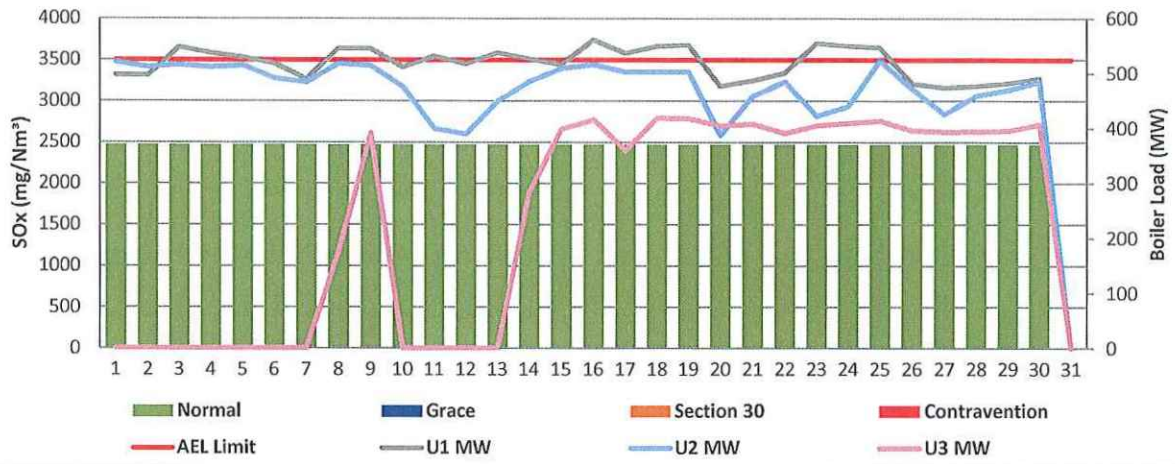


Figure 6: Matla Unit 4 SOx Emissions - June 2021

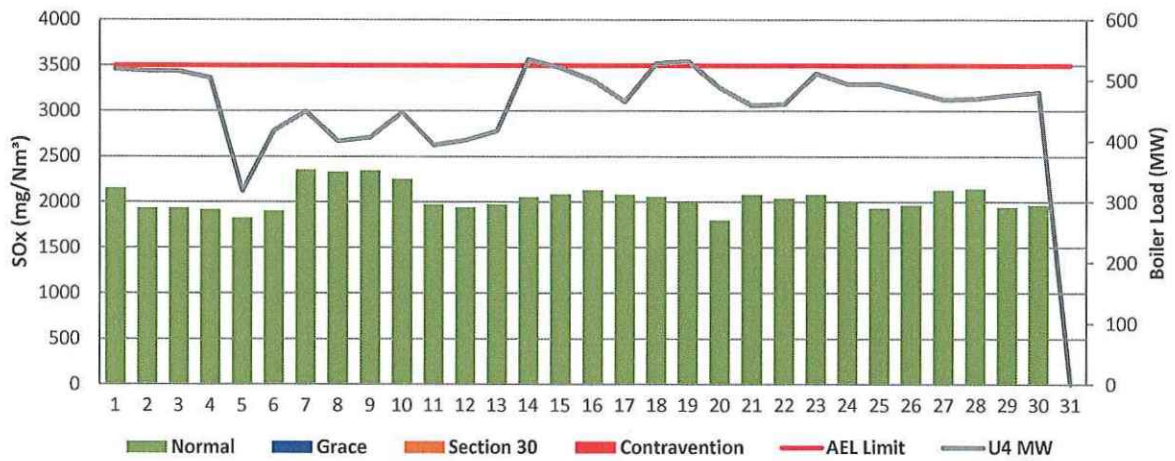


Figure 7: Matla Unit 5 SOx Emissions - June 2021

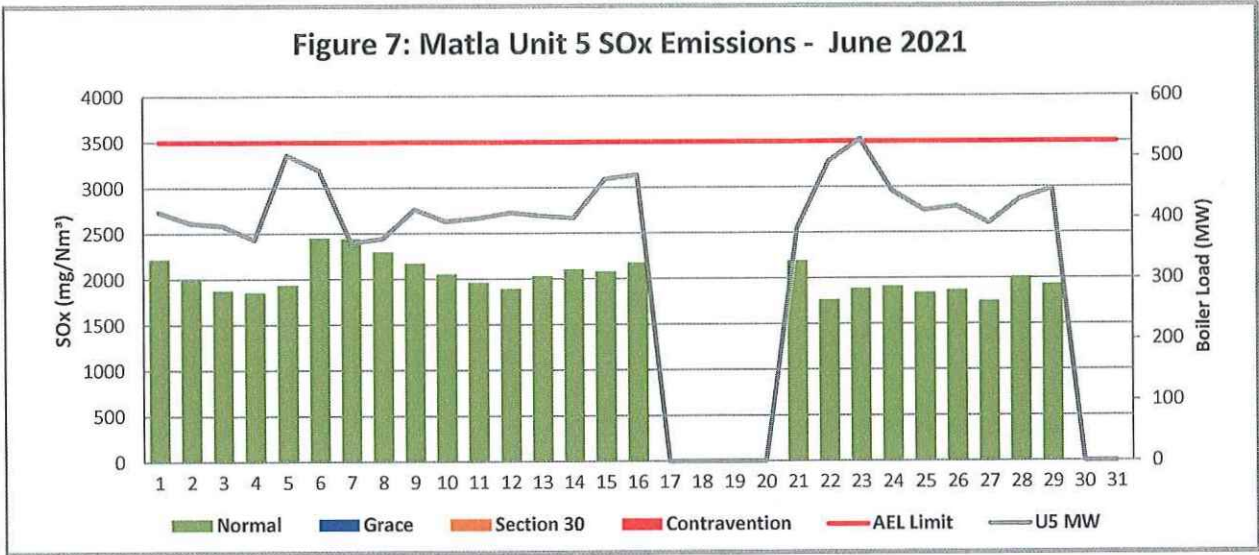


Figure 8: Matla Unit 6 SOx Emissions - June 2021

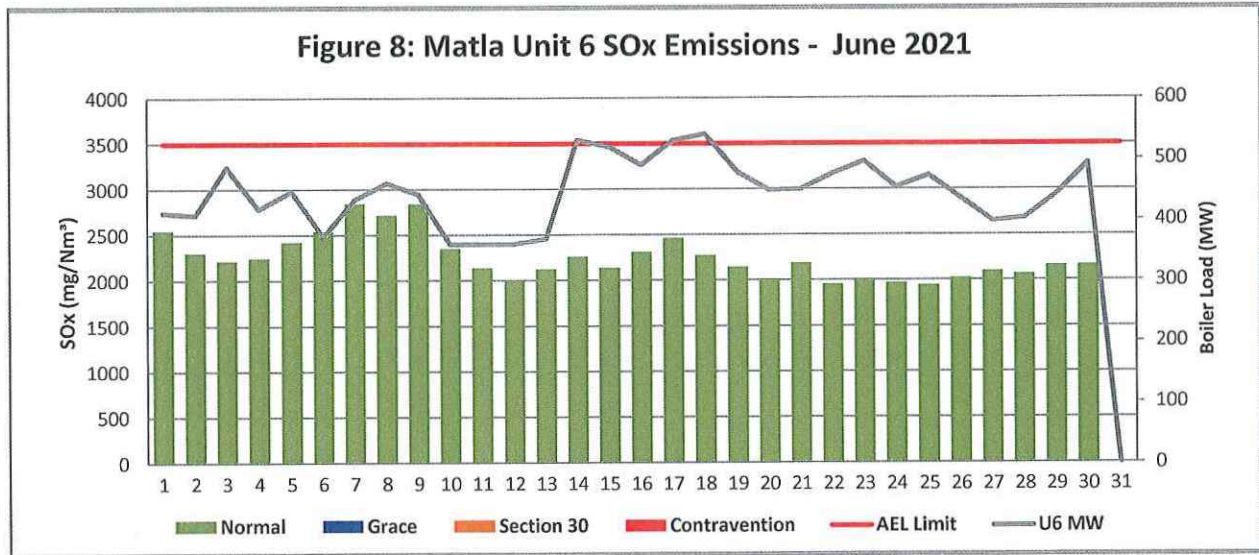


Figure 9: Matla South Stack NOx Emissions - June 2021

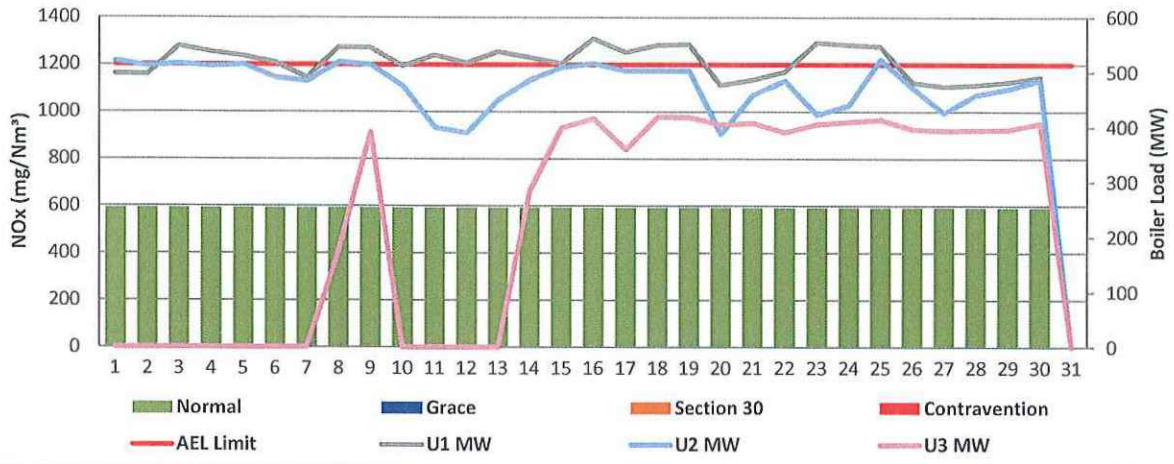


Figure 10: Matla Unit 4 NOx Emissions - June 2021

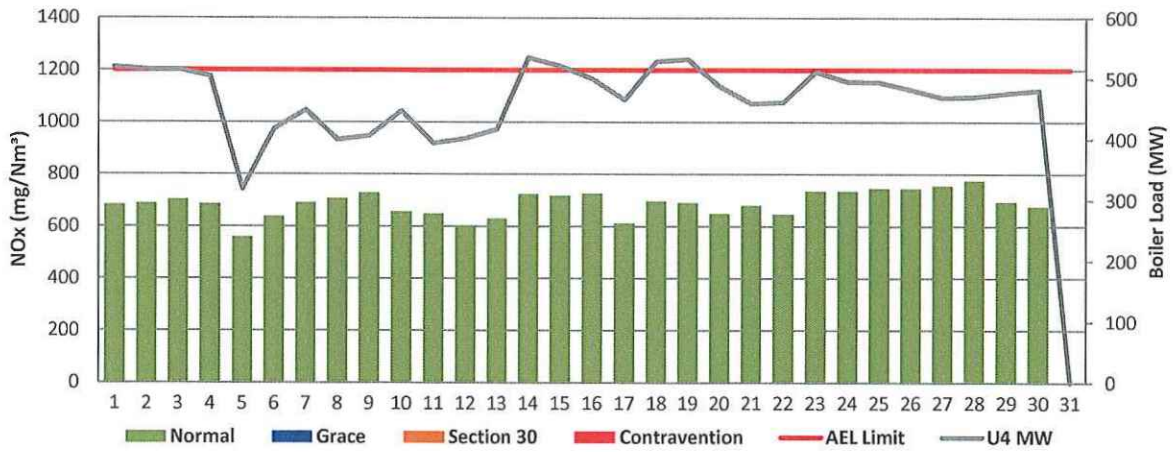


Figure 11: Matla Unit 5 NOx Emissions - June 2021

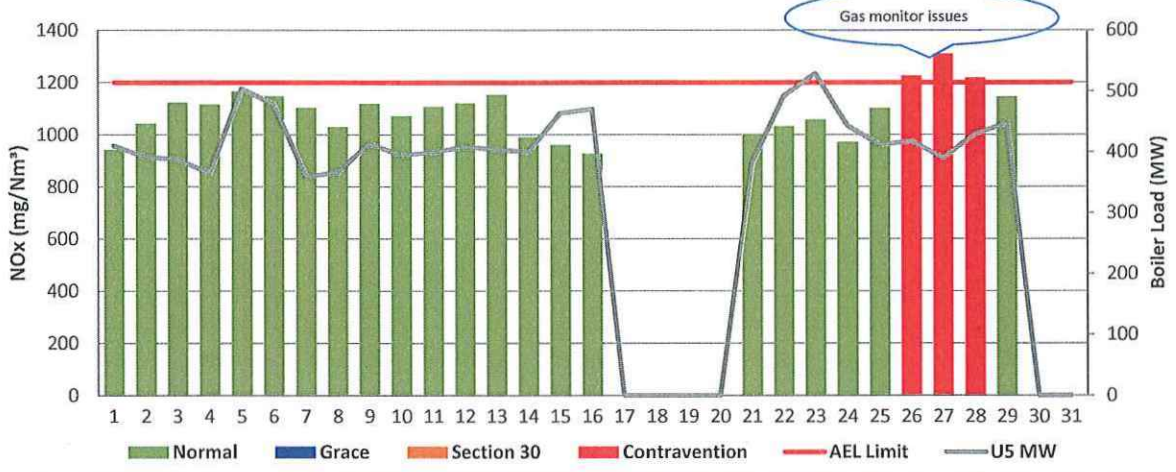
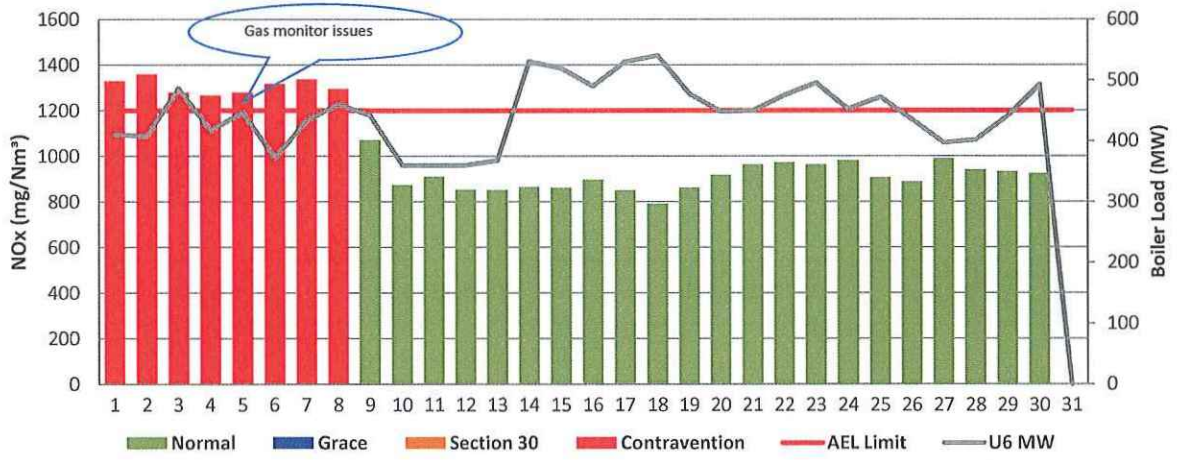


Figure 12: Matla Unit 6 NOx Emissions - June 2021



7 SHUT DOWN AND LIGHT UP INFORMATION

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

South Stack	Event 1		Event 2		Event 3		Event 4	
Unit No.	Unit 3		Unit 3		Unit 3		Unit 2	
Breaker Open (BO)	<i>BO previously</i>	<i>BO previously</i>	<i>1:30 PM</i>	<i>2021/06/09</i>	<i>1:30 PM</i>	<i>2021/06/17</i>	<i>1:00 AM</i>	<i>2021/06/20</i>
Draught Group (DG) Shut Down (SD)	<i>n/a</i>	<i>n/a</i>	<i>5:10 PM</i>	<i>2021/06/09</i>	<i>DG did not trip or SD</i>	<i>DG did not trip or SD</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>00:03:40</i>	<i>DD:HH:MM</i>	<i>n/a</i>	<i>DD:HH:MM</i>	<i>n/a</i>	<i>DD:HH:MM</i>
Fires in time	<i>5:55 AM</i>	<i>2021/06/06</i>	<i>3:10 AM</i>	<i>2021/06/13</i>	<i>1:30 PM</i>	<i>2021/06/17</i>	<i>1:01 AM</i>	<i>2021/06/20</i>
Synch. to Grid (or BC)	<i>10:45 AM</i>	<i>2021/06/08</i>	<i>12:50 AM</i>	<i>2021/06/14</i>	<i>6:55 PM</i>	<i>2021/06/17</i>	<i>11:25 AM</i>	<i>2021/06/20</i>
Fires in to BC (duration)	<i>02:04:50</i>	<i>DD:HH:MM</i>	<i>00:21:40</i>	<i>DD:HH:MM</i>	<i>00:05:25</i>	<i>DD:HH:MM</i>	<i>00:10:24</i>	<i>DD:HH:MM</i>
Emissions below limit from BC (end date)	<i>12:00 AM</i>	<i>2021/06/12</i>	<i>3:00 AM</i>	<i>2021/06/18</i>	<i>3:00 AM</i>	<i>2021/06/18</i>	<i>12:00 AM</i>	<i>2021/06/21</i>
Emissions below limit from BC (duration)	<i>03:13:15</i>	<i>DD:HH:MM</i>	<i>04:02:10</i>	<i>DD:HH:MM</i>	<i>00:08:05</i>	<i>DD:HH:MM</i>	<i>00:12:35</i>	<i>DD:HH:MM</i>

South Stack ...cont.	Event 5		Event 6		Event 7		Event 8	
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)								
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)	11:50 PM	2021/06/16	9:55 PM	2021/06/29				
Draught Group (DG) Shut Down (SD)	11:50 PM	2021/06/16	9:55 PM	2021/06/29				
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	12:00 AM	2021/06/21						
Synch. to Grid (or BC)	2:55 PM	2021/06/21						
Fires in to BC (duration)	00:14:55	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	12:00 AM	2021/06/23						
Emissions below limit from BC (duration)	01:09:05	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-2021 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

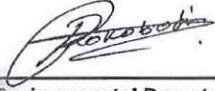
Reserved for Addendum XXXX

11 General


South Stack gases are were not working, QAL2 averages are used for reporting.
U5 Dust monitor reliability < 80%.
Dust monitors maxed out as per table on 5.



Boiler Engineering
27-07-2021
Date



Environmental Department
29/07/2021
Date



General Manager
03/08/2021
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

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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

