



Generation

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Date: 2021/09/16

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Total number of pages:

14

Total number of annexes:

MATLA POWER STATION


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



BOILER ENGINEERING MANAGER

28/09/2021

DATE



ENVIRONMENTAL MANAGER

29/09/2021

DATE



ENGINEERING MANAGER

28.09.2021

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 Aug-2021
	Coal	Tons	1 475 000	1 024 293
	Fuel Oil	Tons	2 500	963

Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Aug-2021
	Energy	GWh	2 567	1 837
	Ash	Tons	471 000	314 356
	RE PM	kg/MWh	not specified	0,408

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.8-1.1	1,00
Ash Content	%	21-40	30,69

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 Aug-2021
South	<i>Electro Static Precipators (ESP)</i>	<i>99,807%</i>
Unit 4	<i>Electro Static Precipators (ESP)</i>	<i>99,452%</i>
Unit 5	<i>Electro Static Precipators (ESP)</i>	<i>99,728%</i>
Unit 6	<i>Electro Static Precipators (ESP)</i>	<i>99,753%</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>100,0</i>	<i>100,0</i>	<i>100,0</i>	<i>100,0</i>
Unit 4	<i>86,3</i>	<i>99,5</i>	<i>99,5</i>	<i>100,0</i>
Unit 5	<i>100,0</i>	<i>99,6</i>	<i>99,6</i>	<i>100,0</i>
Unit 6	<i>100,0</i>	<i>99,5</i>	<i>99,5</i>	<i>99,9</i>

6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM	SO _x	NO _x
Unit 1	92,8	2 668,1	1 339,1
Unit 2	101,7	2 878,4	1 442,5
Unit 3	99,8	2 829,6	1 418,6
Unit 4	221,3	2 521,1	776,9
Unit 5	127,7	3 341,7	1 989,7
Unit 6	106,7	2 641,5	1 243,5
SUM	749,9	16 880,4	8 210,3

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
South	30	1	0	0	1	57,6
Unit 4	16	6	2	0	8	170,8
Unit 5	25	6	0	0	6	74,3
Unit 6	23	7	0	0	7	86,8
SUM	94	20	2	0	22	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm ³)
South	31	0	0	0	0	1 651,7
Unit 4	27	0	0	0	0	1 926,6
Unit 5	31	0	0	0	0	1 948,0
Unit 6	31	0	0	0	0	2 092,7
SUM	120	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm ³)
South	31	0	0	0	0	828,2
Unit 4	27	0	0	0	0	582,4
Unit 5	24	0	0	7	7	1 159,0
Unit 6	31	0	0	0	0	987,0
SUM	113	0	0	7	7	

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 - August 2021

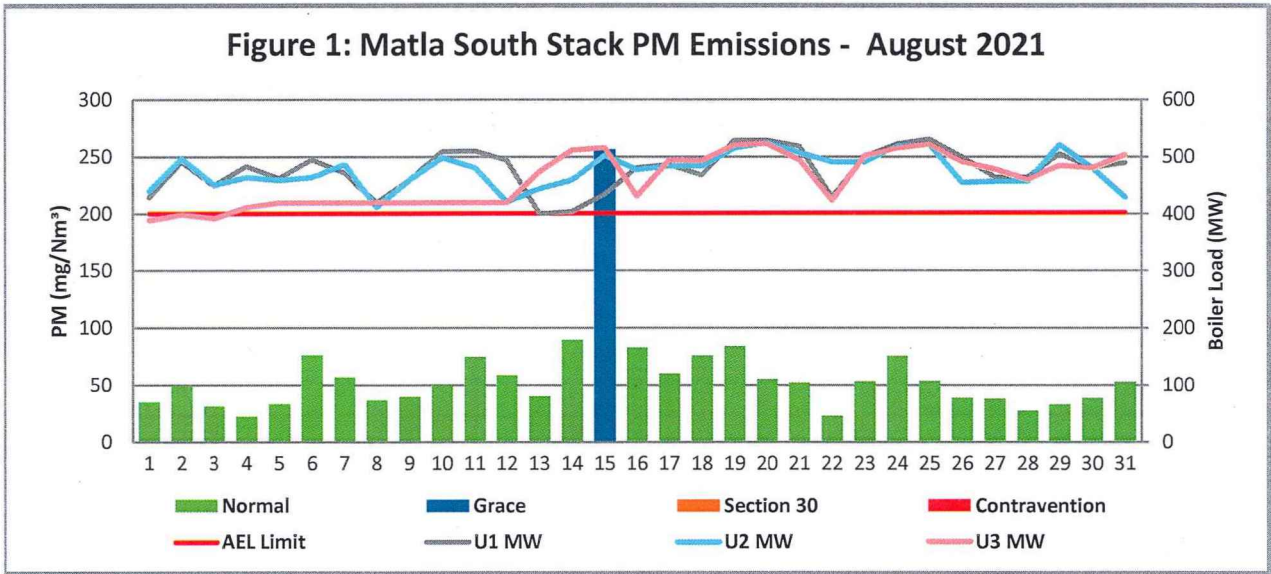


Figure 2: Matla Unit 4 PM Emissions - August 2021

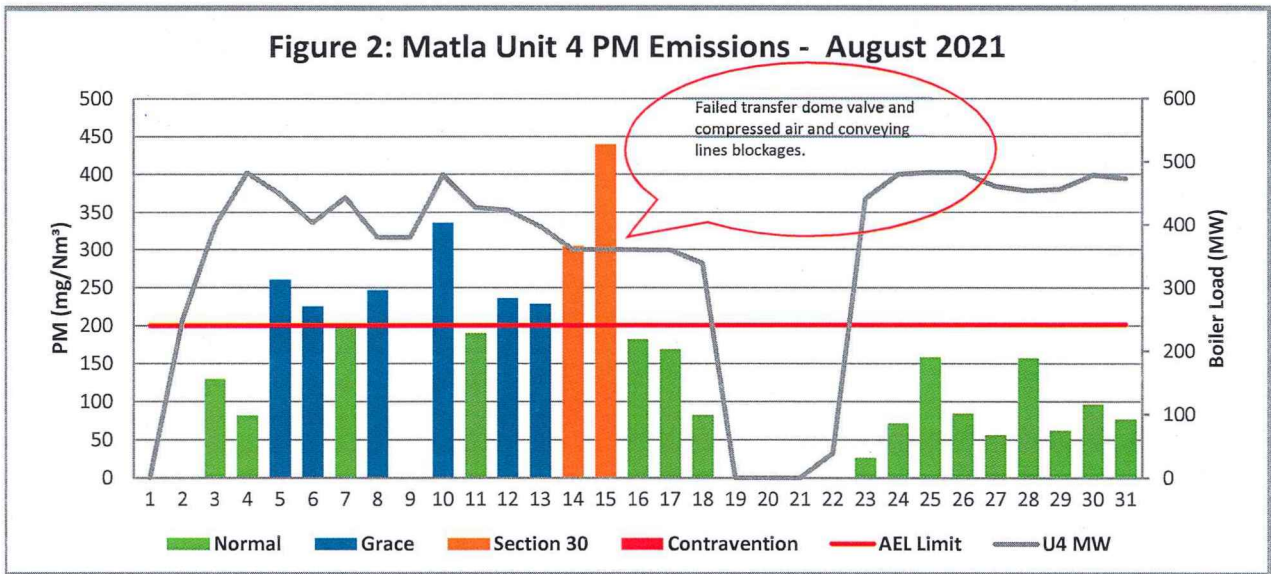


Figure 3: Matla Unit 5 PM Emissions - August 2021

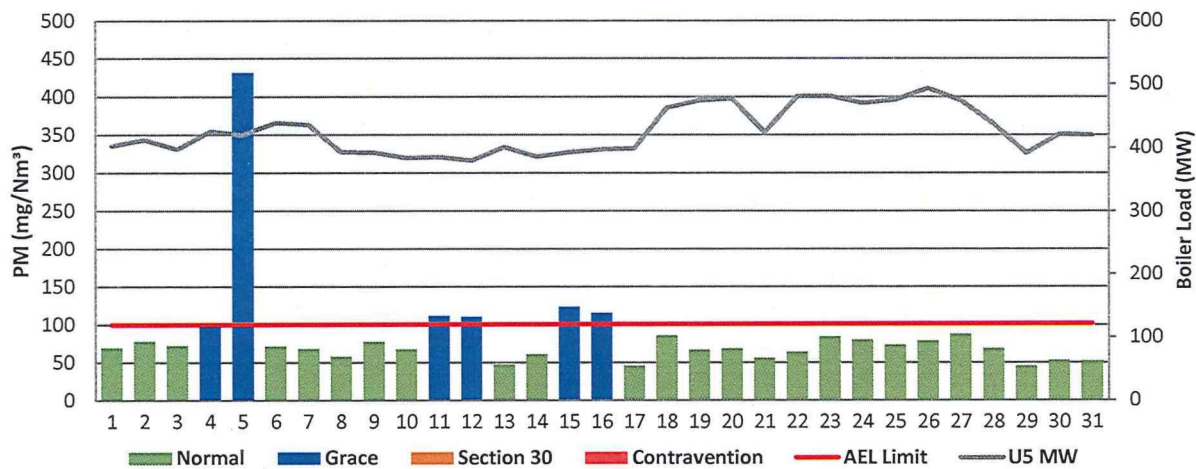


Figure 4: Matla Unit 6 PM Emissions - August 2021

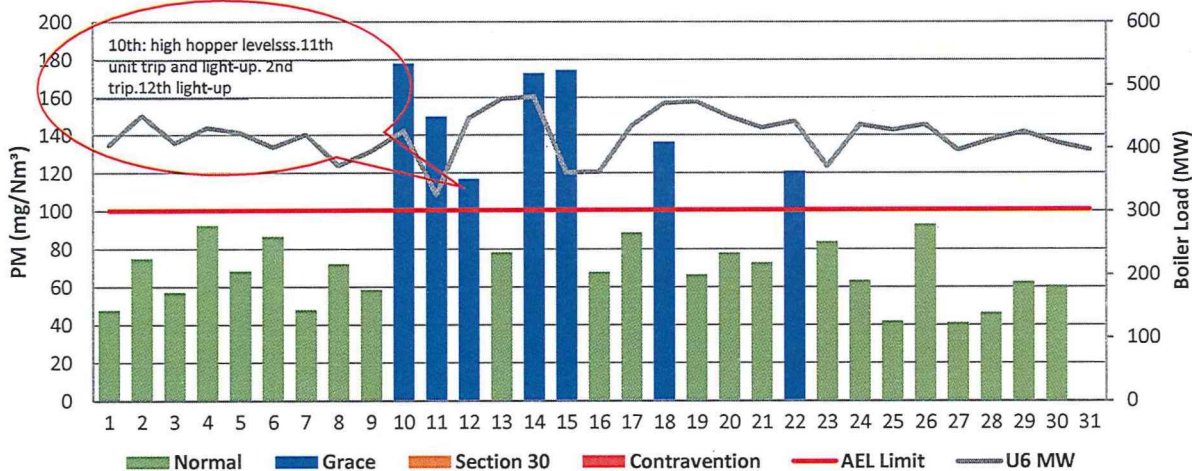


Figure 5: Matla South Stack SOx Emissions - August 2021

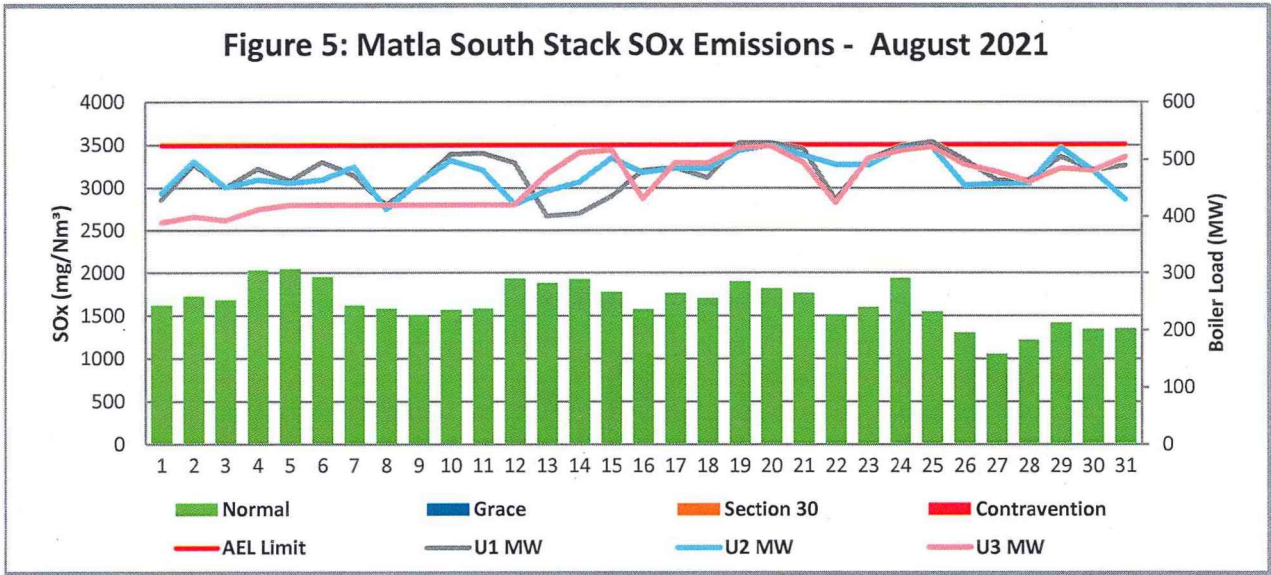


Figure 6: Matla Unit 4 SOx Emissions - August 2021

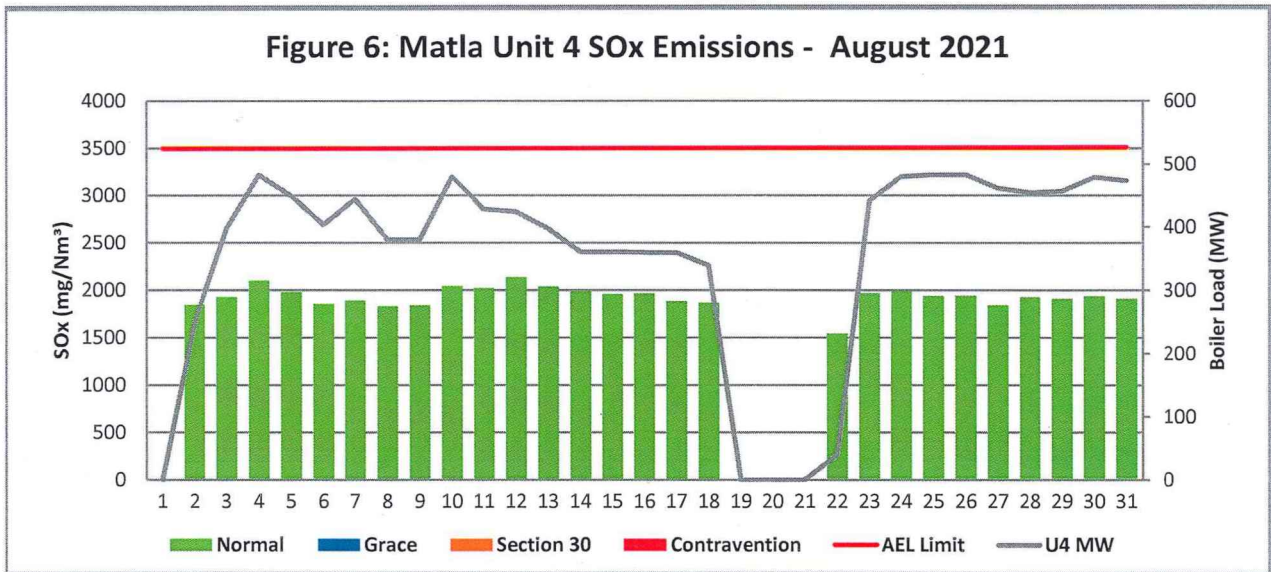


Figure 7: Matla Unit 5 SOx Emissions - August 2021

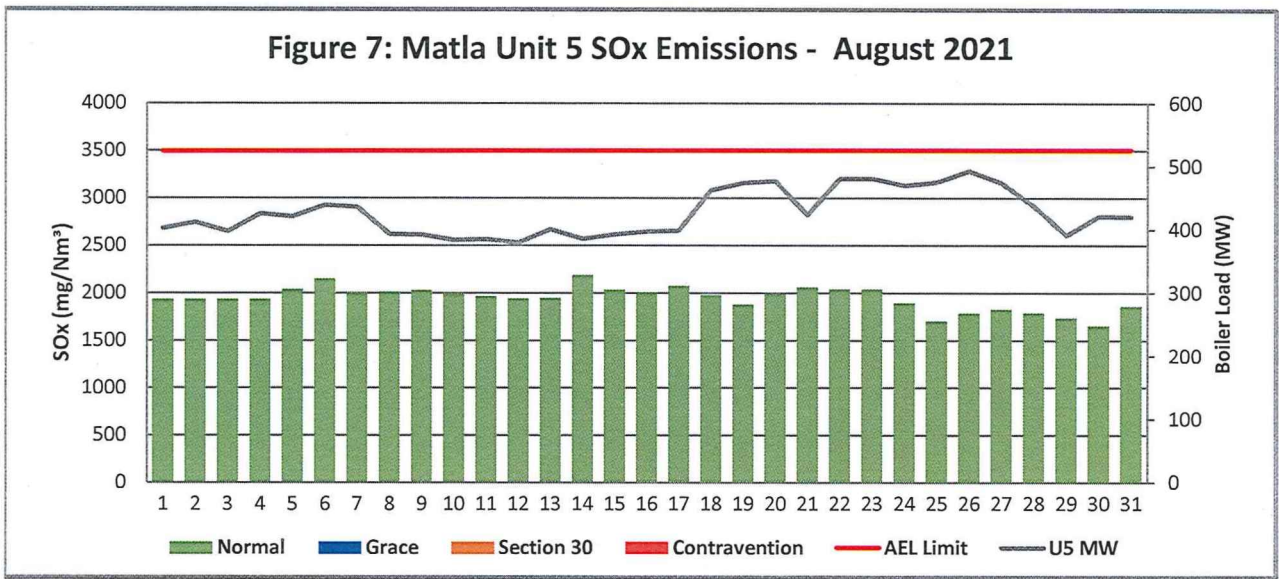


Figure 8: Matla Unit 6 SOx Emissions - August 2021

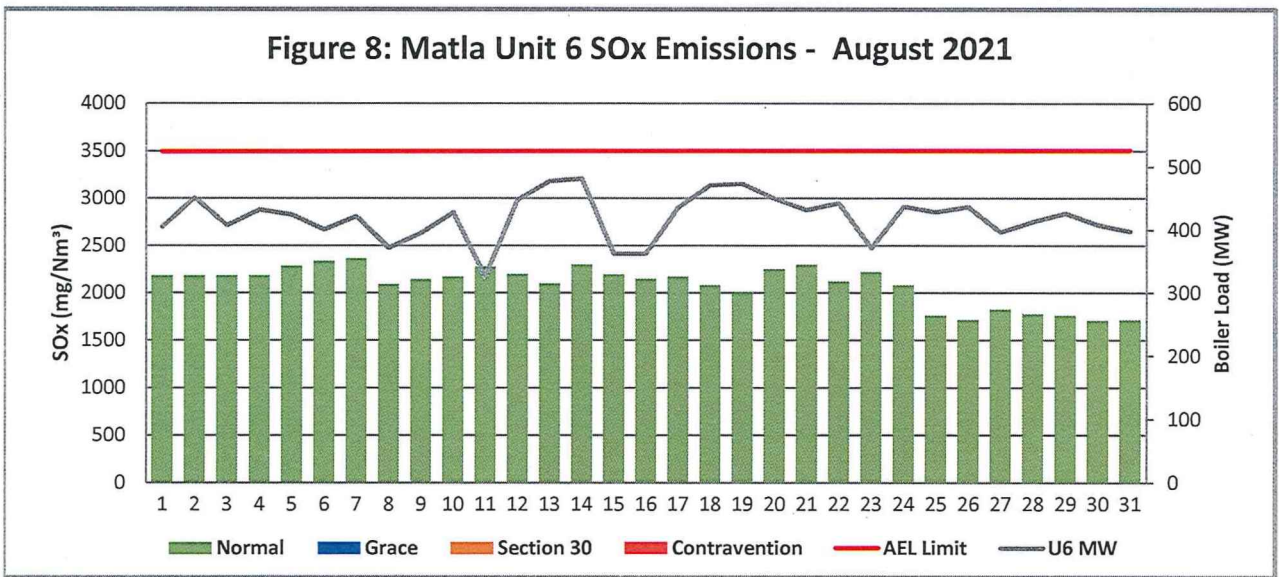


Figure 9: Matla South Stack NOx Emissions - August 2021

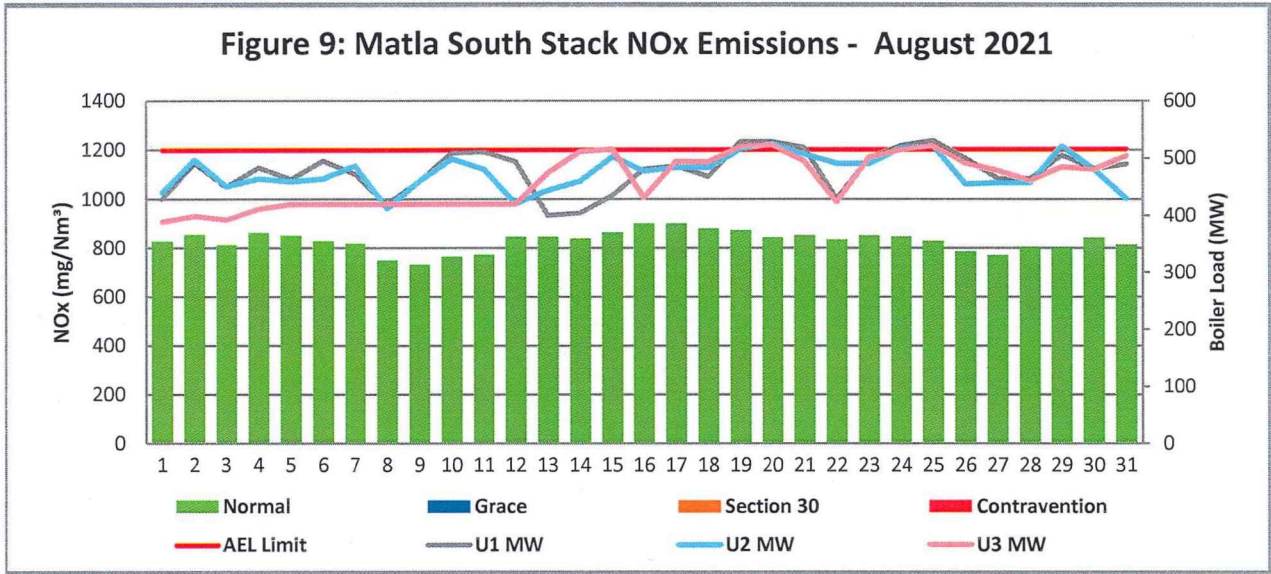


Figure 10: Matla Unit 4 NOx Emissions - August 2021

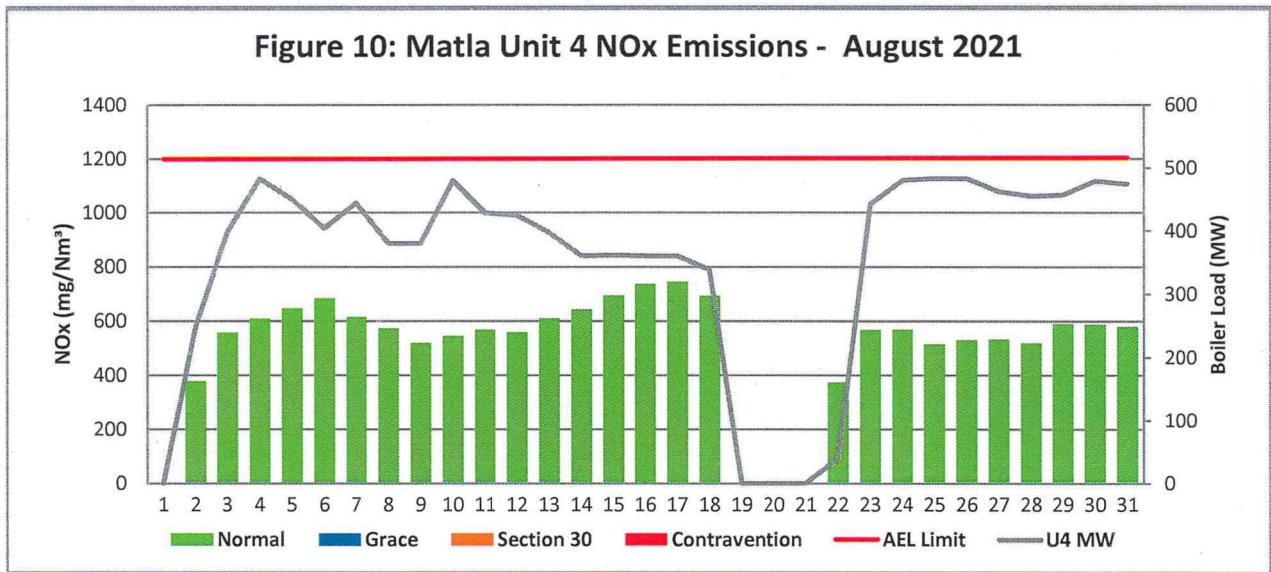


Figure 11: Matla Unit 5 NOx Emissions - August 2021

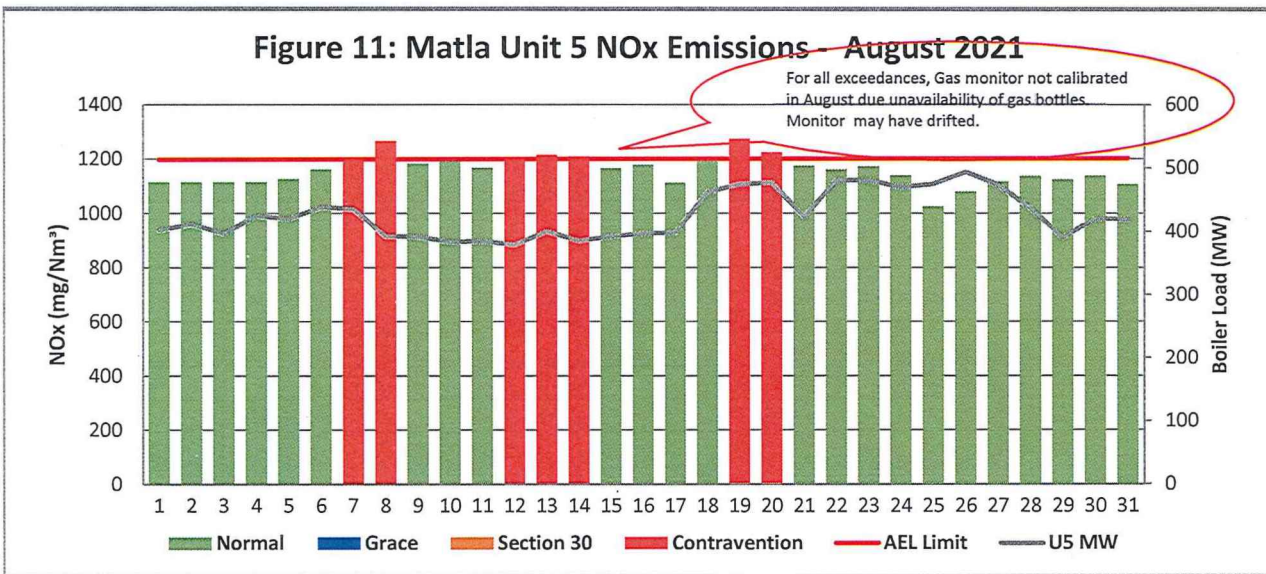
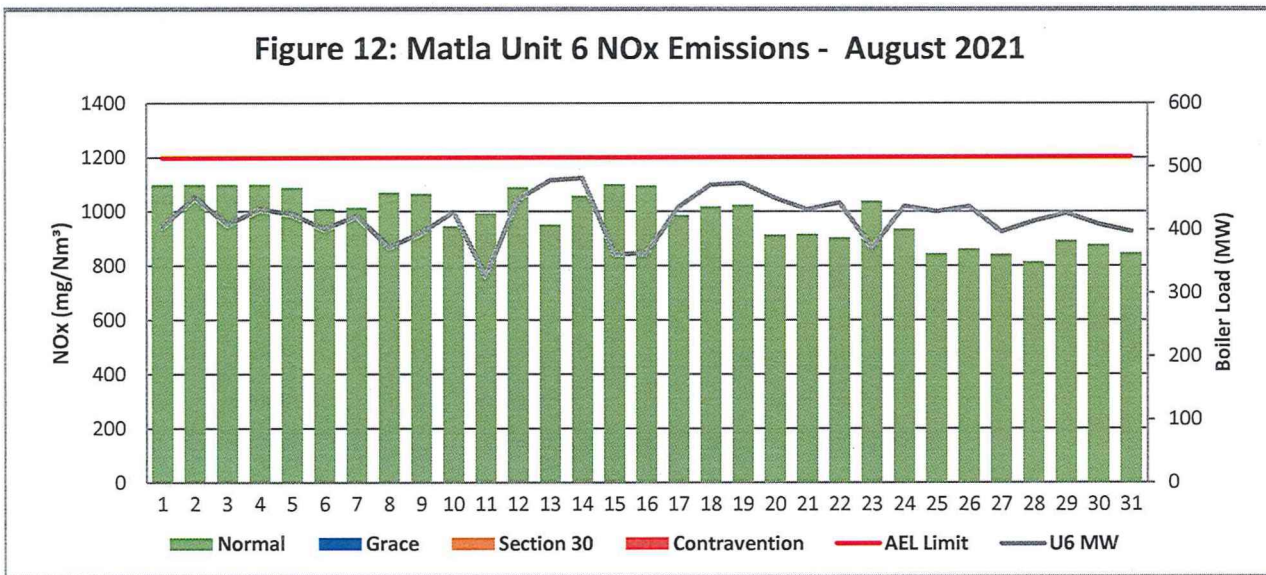


Figure 12: Matla Unit 6 NOx Emissions - August 2021



7 SHUT DOWN AND LIGHT UP INFORMATION

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

South Stack	<i>Event 1</i>		<i>Event 2</i>		<i>Event 3</i>		<i>Event 4</i>	
Unit No.	<i>Unit 3</i>		<i>no event</i>		<i>no event</i>		<i>no event</i>	
Breaker Open (BO)	<i>1:28 AM</i>	<i>2021/08/06</i>						
Draught Group (DG) Shut Down (SD)	<i>9:28 PM</i>	<i>2021/08/06</i>						
BO to DG SD (duration)	<i>00:20:00</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	<i>9:36 AM</i>	<i>2021/08/09</i>						
Synch. to Grid (or BC)	<i>9:28 PM</i>	<i>2021/08/10</i>						
Fires in to BC (duration)	<i>01:11:52</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)			10:30 AM	2021/08/08	9:05 AM	2021/08/18		
Draught Group (DG) Shut Down (SD)			10:30 AM	2021/08/08	9:05 AM	2021/08/18		
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	11:35 PM	2021/08/01	10:30 AM	2021/08/08	10:25 AM	2021/08/22		
Synch. to Grid (or BC)	11:05 AM	2021/08/02	1:30 PM	2021/08/09	11:45 PM	2021/08/22		
Fires in to BC (duration)	00:11:30	DD:HH:MM	01:03:00	DD:HH:MM	00:13:20	DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	12:00 AM	2021/08/04	7:00 AM	2021/08/11	10:00 PM	2021/08/23		
Emissions below limit from BC (duration)	01:12:55	DD:HH:MM	01:17:30	DD:HH:MM	00:22:15	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								
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)	7:50 AM	2021/08/11	6:20 PM	2021/08/30				
Draught Group (DG) Shut Down (SD)	7:50 AM	2021/08/11	6:20 PM	2021/08/30				
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	7:50 AM	2021/08/11	6:20 PM	2021/08/30				
Synch. to Grid (or BC)	6:25 PM	2021/08/11	2:40 AM	2021/08/31				
Fires in to BC (duration)	00:10:35	DD:HH:MM	00:08:20	DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	12:00 AM	2021/08/12	not > limit	not > limit				
Emissions below limit from BC (duration)	00:05:35	DD:HH:MM	n/a	DD:HH:MM		DD:HH:MM		DD:HH:MM

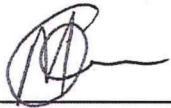
7.2: Point Source emissions released during start-up (fires-in) and Shut-down (SD) for the month of August-2021 in mg/Nm³

[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



27-09-2021

Boiler Engineering

Date



01/10/2021

General Manager

Date



Environmental Department

Date 21/09/21

Compiled by: Boiler Engineering Department

For: Department of Environmental Affairs and Tourism

Copies: Eskom Environmental Management

Group Technology Engineering

Matla Power Station:

ESP & SO₂ 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

