



Generation

Nkangala District Municipality
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Attention:

Mr V Mahlangu

AND

Directorate: Air Quality Management Services
The Chief Director:
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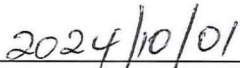
Total number of annexes: 0

DUVHA POWER STATION

Atmospheric Emission License 17/4/AEL/MP312/11/07



GENERAL MANAGER



DATE



AUGUST 2024

DUVHA POWER STATION MONTHLY EMISSIONS REPORT

Atmospheric Emission License 17/4/AEL/MP312/11/07



1 RAW MATERIALS AND PRODUCTS

Raw Materials and Products	Raw Material Type	Units	Maximum Permitted Consumption Rate	Consumption Rate Aug-2024
	Coal	Tons	1 400 000	370 300.980
	Fuel Oil	Tons	5 000	1268.4
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Indicative Production Rate Aug-2024
	Energy	GWh	2 678.400	676.973
	Ash	Tons	not specified	97 278.1
	RE Ash	kg/MWh	not specified	0.176

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	18-24	21.55
Sulphur Content	%	0.6 TO >1.2	0.78
Ash Content	%	27 TO 30	26.27

3 EMISSION LIMITS (mg/Nm³)

Associated Unit/Stack	PM	SO ₂	NO _x
Unit 1	100	3500	1100
Unit 2	100	3500	1100
Unit 3	100	3500	1100
Unit 4	100	3500	1100
Unit 5	100	3500	1100
Unit 6	100	3500	1100

4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Aug-2024	Technology Type	SO ₃ Utilization Aug-2024
Unit 1	FFP	100.0%	SO ₃	n/a
Unit 2	FFP	100.0%	SO ₃	n/a
Unit 3	FFP	Off	SO ₃	n/a
Unit 4	ESP + SO ₃	99.7%	SO ₃	100.0%
Unit 5	ESP + SO ₃	99.9%	SO ₃	98.9%
Unit 6	ESP + SO ₃	Off	SO ₃	Off
Note: ESP plant does not have bypass mode operation, hence plant 100% Utilised.				

5 MONITOR RELIABILITY (%)

Associated Unit/Stack	PM	SO ₂	NO	O ₂
Unit 1	100.0	100.0	100.0	100.0
Unit 2	100.0	98.0	98.0	98.0
Unit 3	Off	Off	Off	Off
Unit 4	100.0	65.1	65.3	77.7
Unit 5	100.0	78.3	78.5	54.2
Unit 6	Off	Off	Off	Off

Note: NO_x emissions is measured as NO in PPM. Final NO_x value is expressed as total NO₂

6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of August 2024

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)
Unit 1	0.0	159	61
Unit 2	6.5	2 064	932
Unit 3	Off	Off	Off
Unit 4	71.2	2 480	1 217
Unit 5	41.3	1 653	703
Unit 6	Off	Off	Off
SUM	119.00	6 355	2 913

Table 6.2: Operating days in compliance to PM AEL Limit - August 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
Unit 1	1	0	0	0	0	12.6
Unit 2	22	0	0	0	0	5.5
Unit 3	Off	Off	Off	Off	Off	Off
Unit 4	31	0	0	0	0	41.9
Unit 5	23	0	0	0	0	36.2
Unit 6	Off	Off	Off	Off	Off	Off
SUM	77	0	0	0	0	

Table 6.3: Operating days in compliance to SO₂ AEL Limit - August 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm³)
Unit 1	2	0	0	0	0	1 595.5
Unit 2	23	0	0	0	0	1 675.9
Unit 3	Off	Off	Off	Off	Off	Off
Unit 4	31	0	0	0	0	1 470.6
Unit 5	24	0	0	0	0	1 445.0
Unit 6	Off	Off	Off	Off	Off	Off
SUM	80	0	0	0	0	

Table 6.4: Operating days in compliance to NO_x AEL Limit - August 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm³)
Unit 1	2	0	0	0	0	663.1
Unit 2	23	0	0	0	0	755.0
Unit 3	Off	Off	Off	Off	Off	Off
Unit 4	31	0	0	0	0	721.9
Unit 5	24	0	0	0	0	611.2
Unit 6	Off	Off	Off	Off	Off	Off
SUM	80	0	0	0	0	

Note: NO_x emissions is measured as NO in PPM. Final NO_x value is expressed as total NO₂

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: Duvha Unit 1 PM Emissions - August 2024

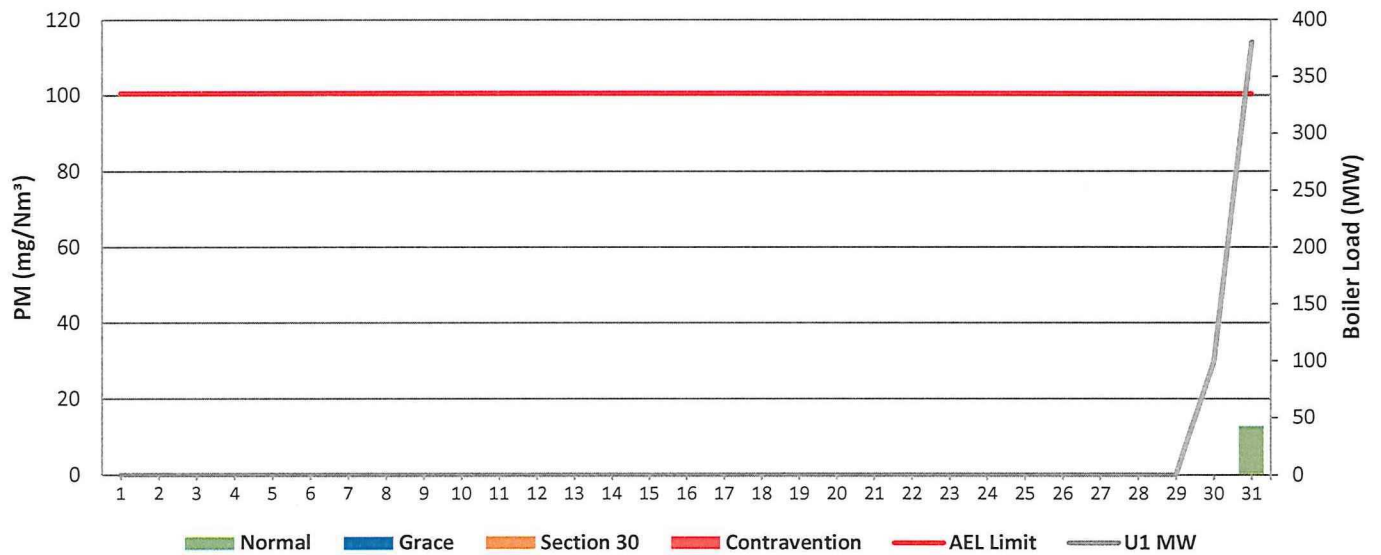


Figure 2: Duvha Unit 2 PM Emissions - August 2024

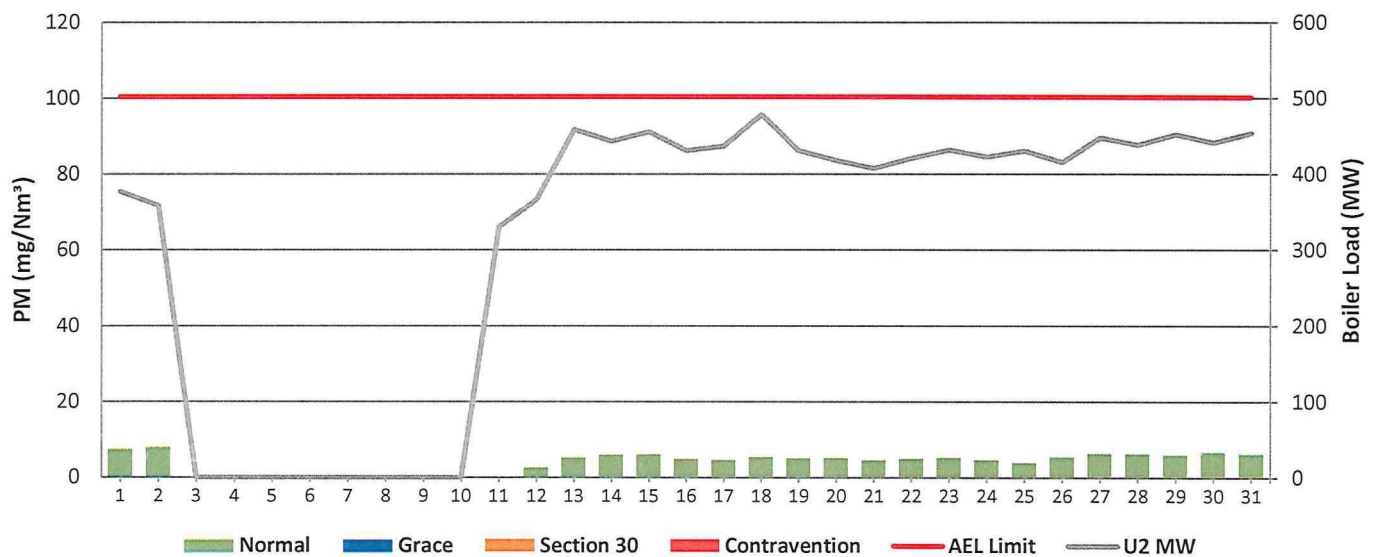


Figure 3: Duvha Unit 4 PM Emissions - August 2024

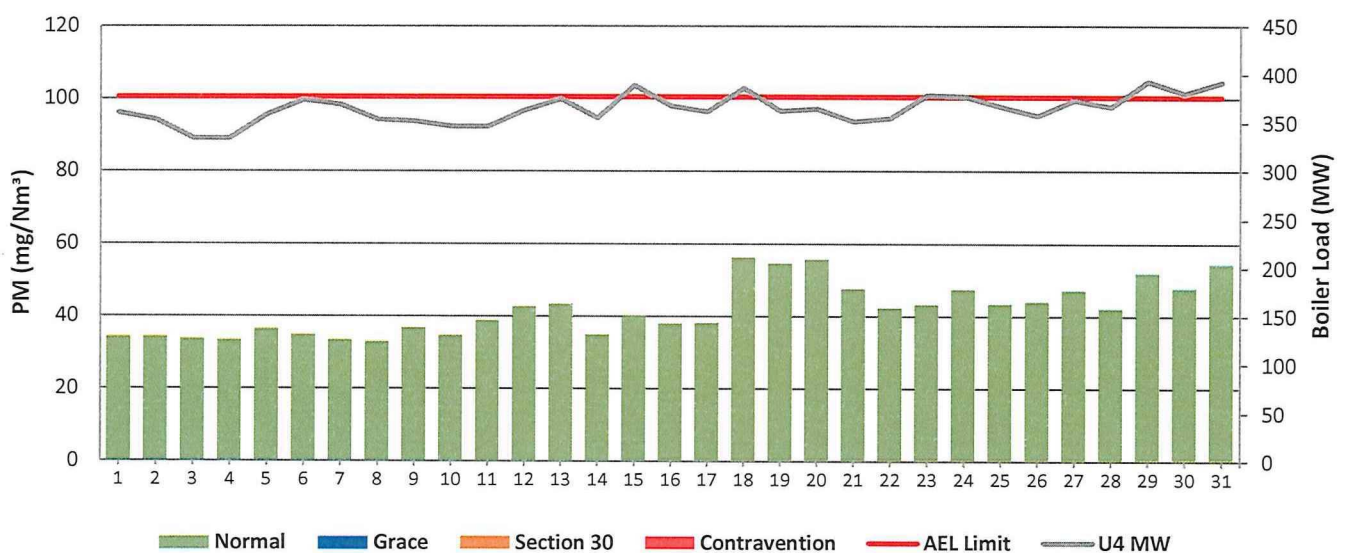


Figure 4: Duvha Unit 5 PM Emissions - August 2024

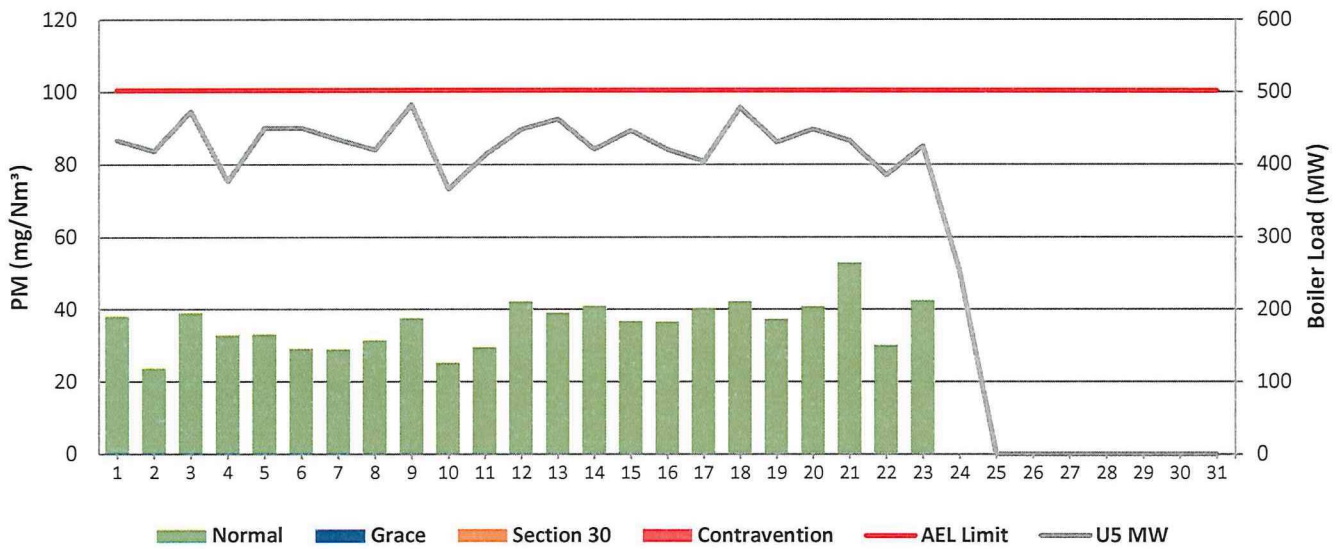


Figure 5: Duvha Unit 1 SO₂ Emissions - August 2024

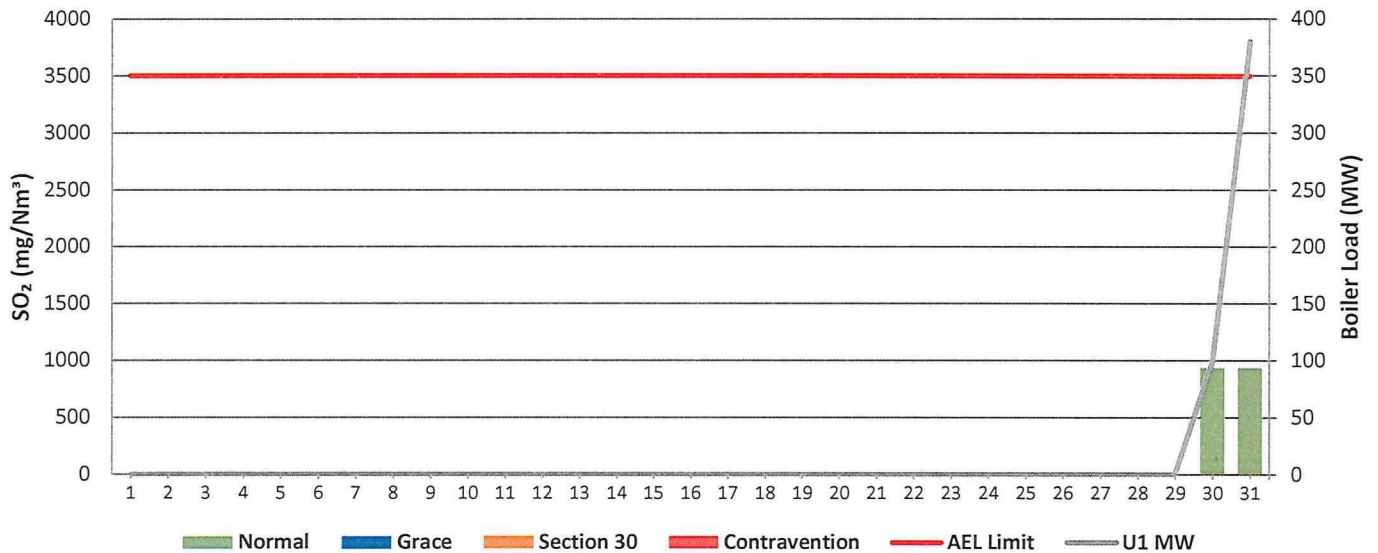


Figure 6: Duvha Unit 2 SO₂ Emissions - August 2024

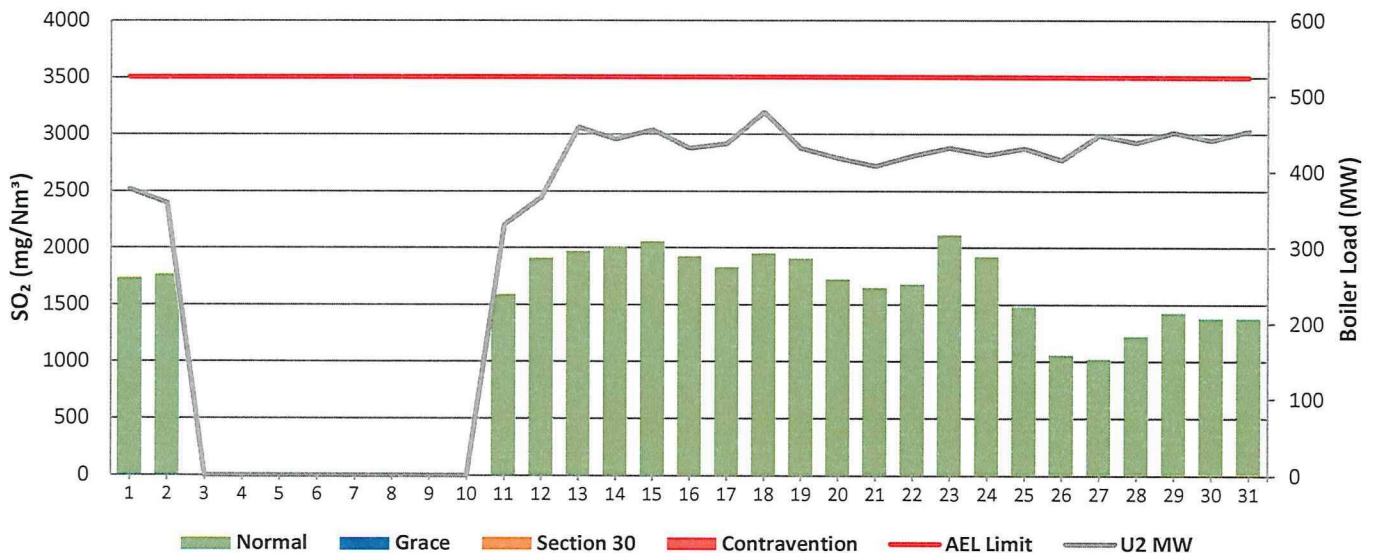


Figure 7: Duvha Unit 4 SO₂ Emissions - August 2024

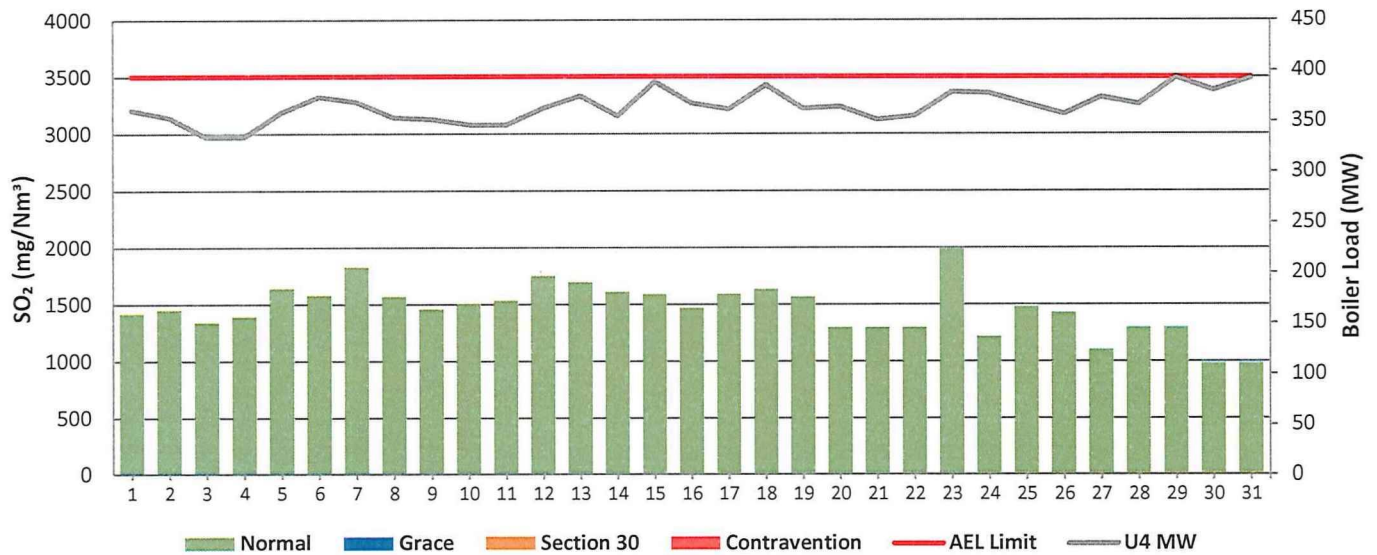


Figure 8: Duvha Unit 5 SO₂ Emissions - August 2024

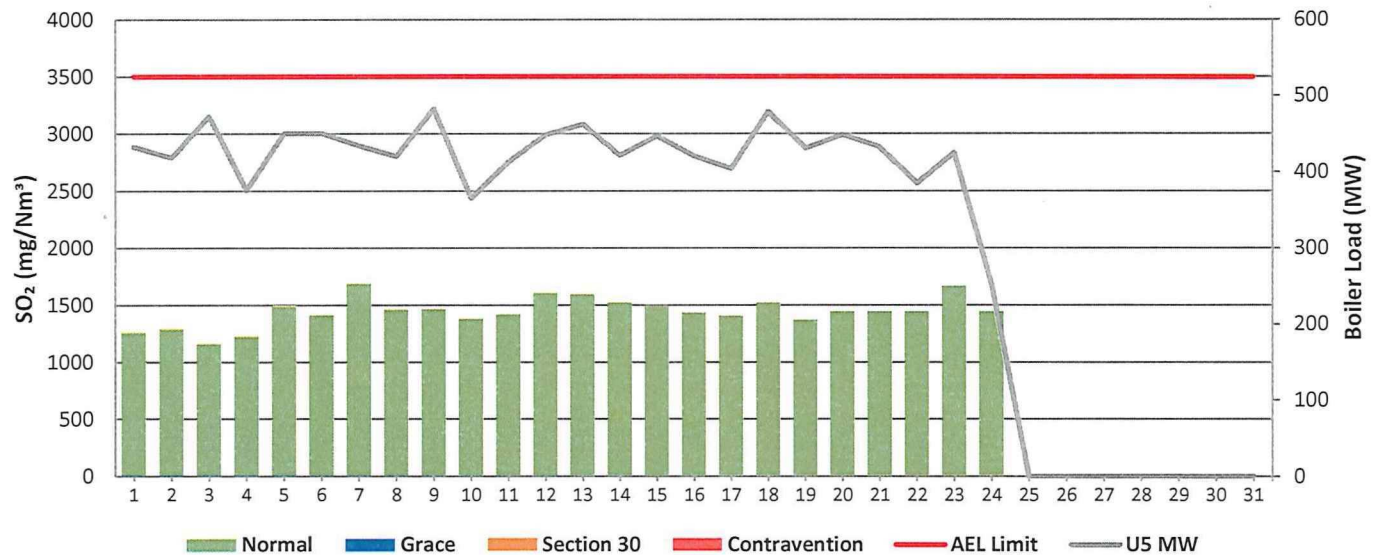


Figure 9: Duvha Unit 1 NO_x Emissions - August 2024

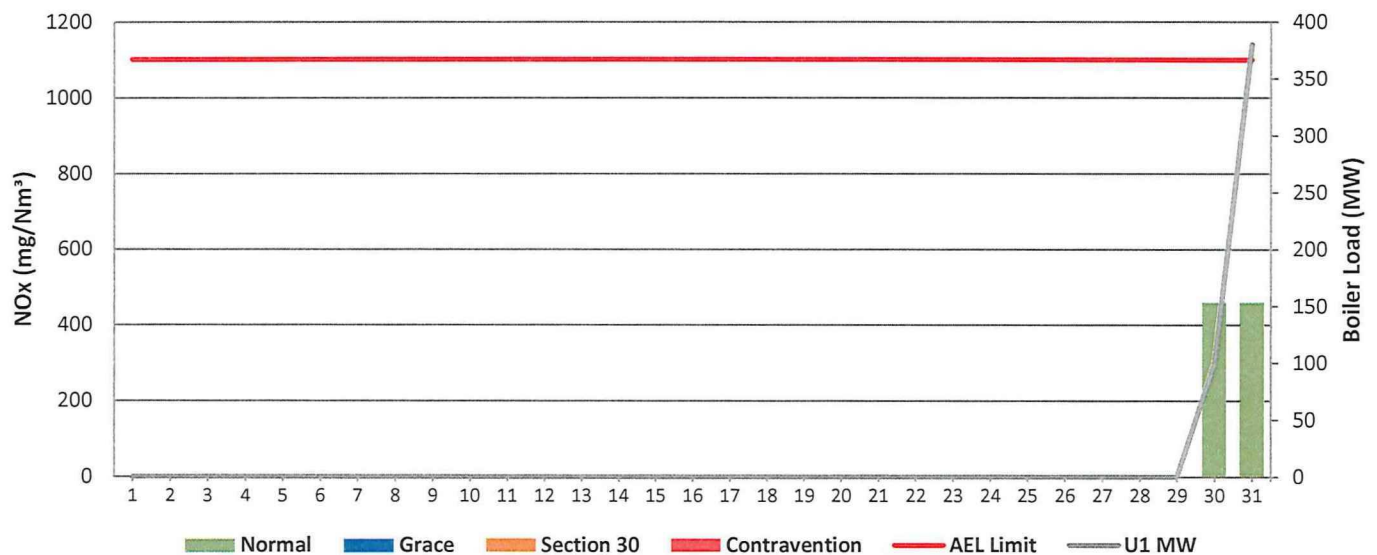


Figure 10: Duvha Unit 2 NOx Emissions - August 2024

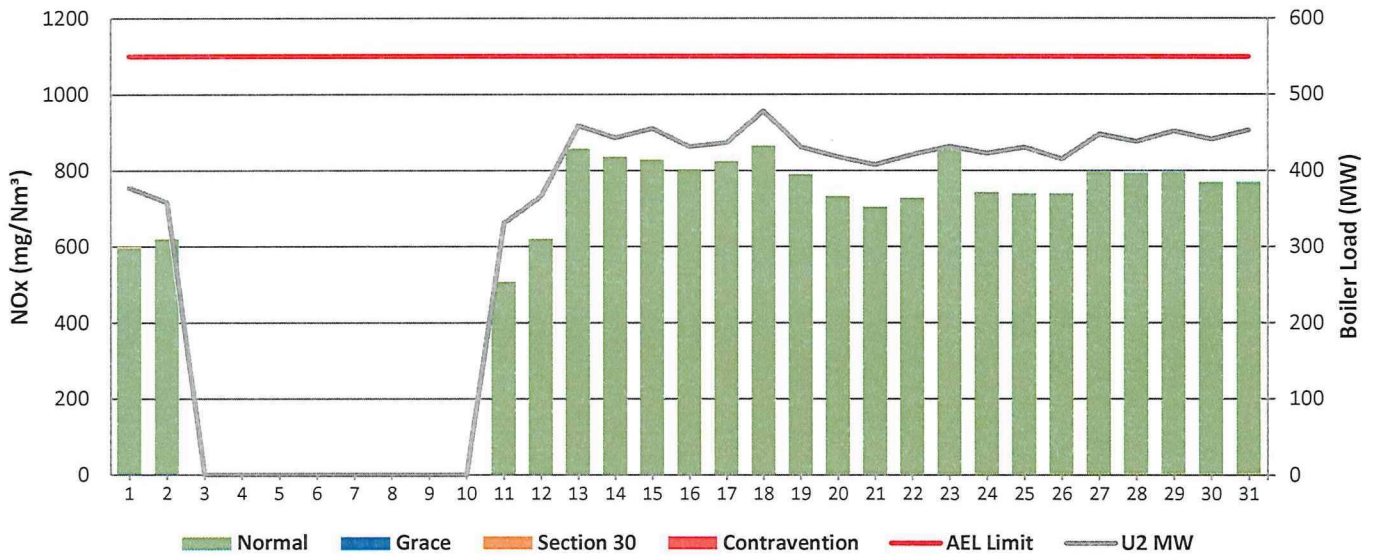


Figure 11: Duvha Unit 4 NOx Emissions - August 2024

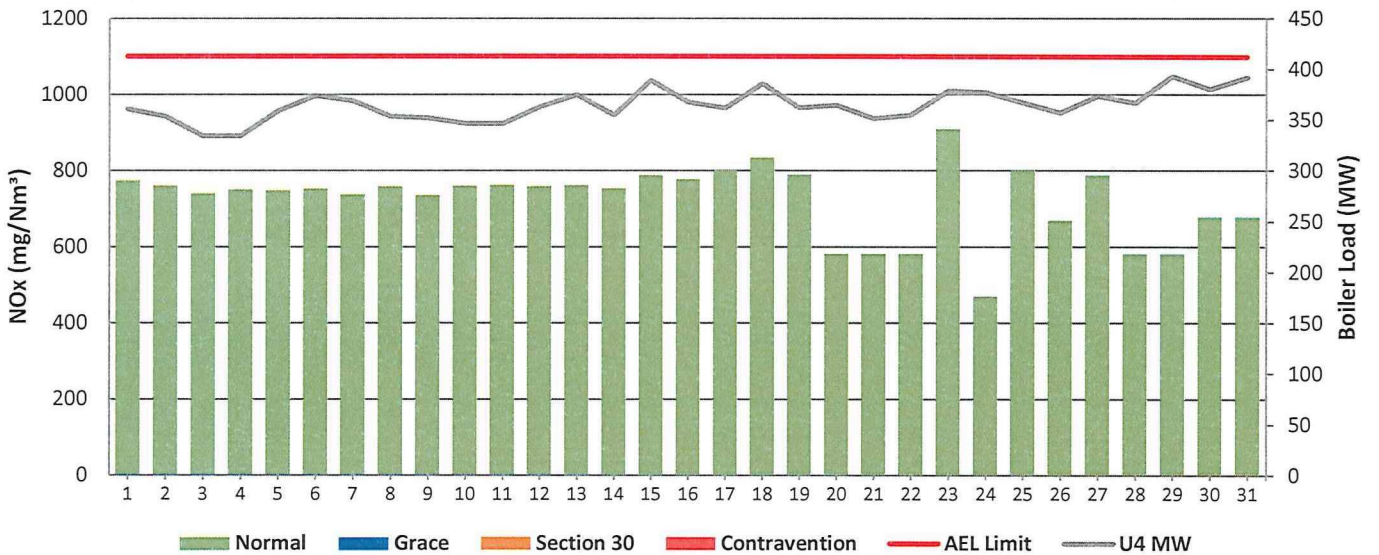
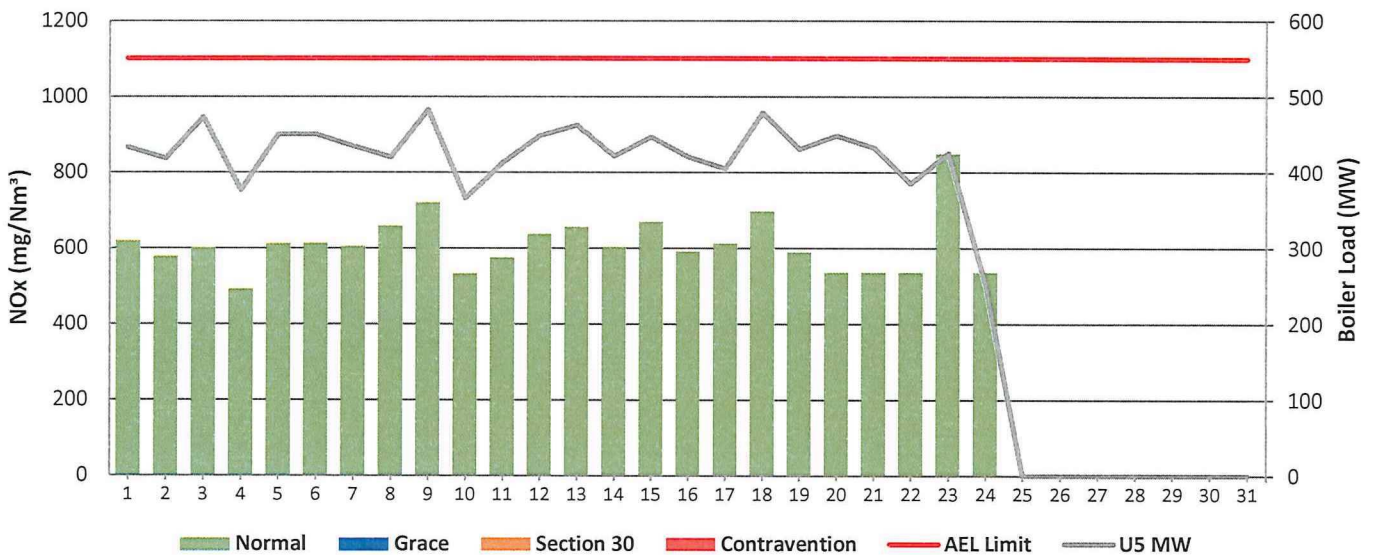


Figure 12: Duvha Unit 5 NOx Emissions - August 2024



7 SHUT DOWN AND LIGHT UP INFORMATION

Tables 7.1: Shut-down and light-up information for the month of August 2024

Unit No.1	Event 1	
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
Fires in time	6:15 pm	2024/08/30
Synch. to Grid (or BC)	11:35 pm	2024/08/30
Fires in to BC (duration)	00:05:20	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

Unit No.2	Event 1	
Breaker Open (BO)	11:45 pm	2024/08/02
Draught Group (DG) Shut Down (SD)	5:20 pm	2024/08/03
BO to DG SD (duration)	00:17:35	DD:HH:MM
Fires in time	1:25 pm	2024/08/10
Synch. to Grid (or BC)	1:30 am	2024/08/11
Fires in to BC (duration)	00:12:05	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

Unit No.5	Event 1	
Breaker Open (BO)	8:30 pm	2024/08/23
Draught Group (DG) Shut Down (SD)	10:20 pm	2024/08/23
BO to DG SD (duration)	00:01:50	DD:HH:MM
Fires in time		
Synch. to Grid (or BC)		
Fires in to BC (duration)		DD:HH:MM
Emissions below limit from BC (end date)		
Emissions below limit from BC (duration)		DD:HH:MM

There were no complaints for the month of August

9 GENERAL

There were no exceedances for the month of August

The rest of the information demonstrating compliance with the emission license conditions is supplied in the annual emission report which will be sent to your office

There were no section 30 incidents for this month

Date _____

Generation Compliance
Management R Rampiar

Generation Asset
Management

E Patel

Duvha Power Station

Engineering Manager
Operating Manager
Maintenance Manager
Production Manager
Boiler Engineering Manager
System Engineer
Environmental Manager