Eskom

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DUVHA POWER STATION

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

GENERAL MANAGER

2025/11/29
DATE

Eskom

OCTOBER 2025

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	Max Permitted Consumption Rate	Consumption Rate Oct-2025
	Coal	Tons	*2 260 000*	*473 764.04*
	Fuel Oil	Tons	*5 000*	*2873.48*
Production Rates	**Product / By-Product Name**	**Units**	**Max Production Capacity Permitted**	**Indicative Production Rate Oct-2025**
	Energy	GWh	*2 678.400*	*834.76*
	Ash	Tons	*not specified*	*112 471.58*

Note: Max energy rate = AEL capacity [3,600 MW] × 24 hrs × days in month ÷ 1,000 (to convert to GWh).

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	*18-24*	*22.33*
Sulphur Content	%	*0.6 TO >1.2*	*0.72*
Ash Content	%	*27 TO 30*	*23.74*

3 EMISSION LIMITS (mg/Nm³)

	Daily Limit		
Associated Unit/Stack	**PM**	**SO_2**	**NO_x**
Unit 1	*50*	*2600*	*1100*
Unit 2	*50*	*2600*	*1100*
Unit 4	*100*	*2600*	*1100*
Unit 5	*50*	*2600*	*1100*
Unit 6	*100*	*2600*	*1100*

4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	ESP Efficiency	Technology Type	SO_3 Plant Utlization
Unit 1	*FFP*	*99.876%*	*SO_3*	*n/a*
Unit 2	*FFP*	*99.968%*	*SO_3*	*n/a*
Unit 4	*ESP + SO_3*	*Off-line*	*SO_3*	*Off-line*
Unit 5	*ESP + SO_3*	*99.868%*	*SO_3*	*94.5%*
Unit 6	*ESP + SO_3*	*99.886%*	*SO_3*	*100.0%*

Note: The ESP plant does not have a bypass mode; therefore, it operates at 100% utilization.

5 DATA RELIABILITY (%)

Associated Unit/Stack	PM	SO_2	NO	O_2
Unit 1	*100 0*	*94 2*	*100 0*	*100 0*
Unit 2	*100 0*	*94 2*	*94 4*	*94 2*
Unit 4	*Off*	*Off*	*Off*	*Off*
Unit 5	*99 7*	*93 3*	*93 3*	*94 0*
Unit 6	*100 0*	*80 8*	*80 4*	*100 0*

Note NO_x emissions are measured as NO in PPM The final NO_x value is expressed as total NO_2 equivalent

6 EMISSION PERFORMANCE

Table 6 1 Monthly tonnages for October 2025

Associated Unit/Stack	PM (tons)	SO_2 (tons)	NO_x (tons)
Unit 1	35 2	1 934	967
Unit 2	7 6	1 822	1 005
Unit 4	Off	Off	Off
Unit 5	38 6	1 783	698
Unit 6	10 2	974	414
SUM	91 64	6 512	3 084

Table 6 2 PM AEL Daily - October 2025

Associated Unit/Stack	Normal	Grace	Section 30	NC	Total Exceedance	Mnth Avg (mg/Nm³)
Unit 1	27	0	0	0	0	22 9
Unit 2	22	0	0	0	0	6 9
Unit 4	Off	Off	Off	Off	Off	Off
Unit 5	30	1	0	0	1	27 5
Unit 6	10	0	0	0	0	20 3
SUM	**89**	**1**	**0**	**0**	**1**	

Table 6 3 SO_2 AEL Daily - October 2025

Associated Unit/Stack	Normal	Grace	Section 30	NC	Total Exceedance	Mnth Avg (mg/Nm³)
Unit 1	28	0	0	0	0	1 223 6
Unit 2	23	0	0	0	0	1 435 9
Unit 4	Off	Off	Off	Off	Off	Off
Unit 5	31	0	0	0	0	1 299 6
Unit 6	13	0	0	0	0	1 556 5
SUM	**95**	**0**	**0**	**0**	**0**	

Table 6.4: NO_x AEL Daily - October 2025

Associated Unit/Stack	Normal	Grace	Section 30	NC	Total Exceedance	Mnth Avg (mg/Nm³)
Unit 1	28	0	0	0	0	610.6
Unit 2	23	0	0	0	0	785.8
Unit 4	Off	Off	Off	Off	Off	Off
Unit 5	31	0	0	0	0	506.2
Unit 6	13	0	0	0	0	655.5
SUM	**95**	**0**	**0**	**0**	**0**	

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 - October 2025

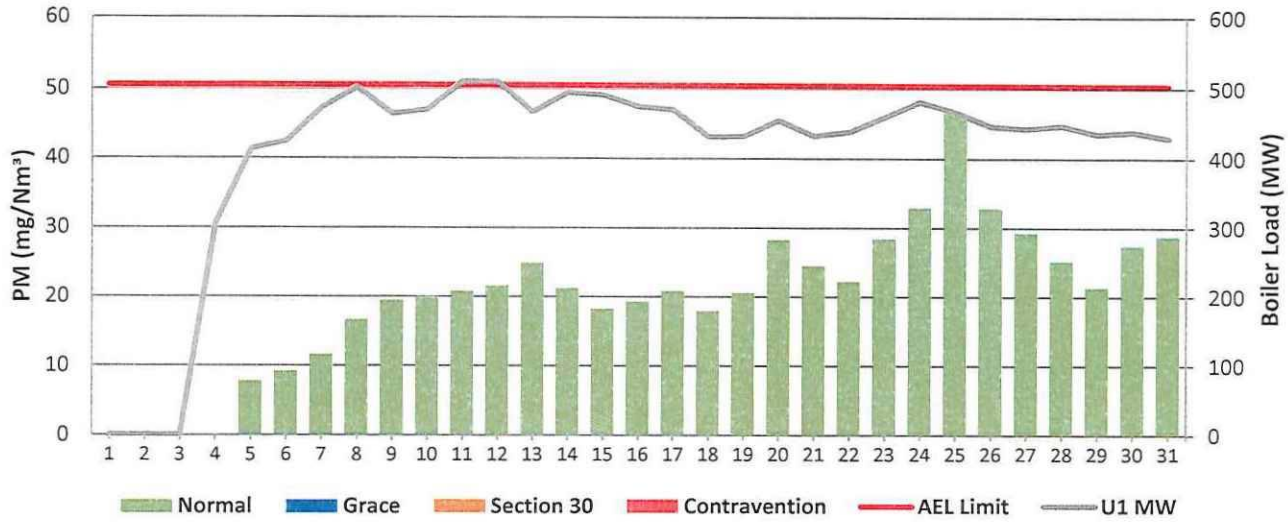


Figure 2: Duvha Unit 2 PM Emissions - October 2025

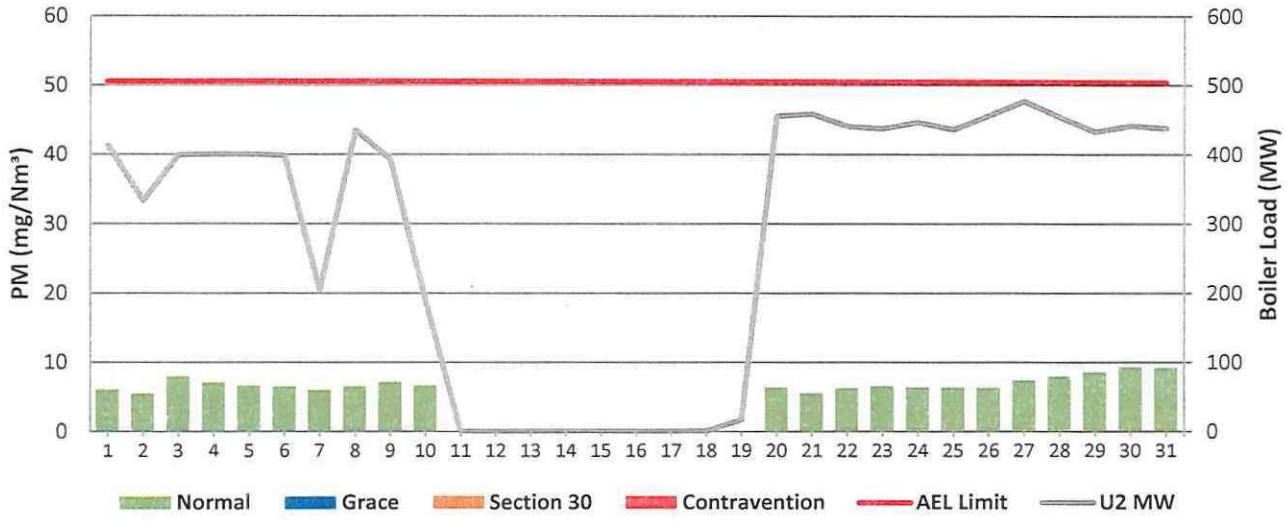


Figure 3: Duvha Unit 5 PM Emissions - October 2025

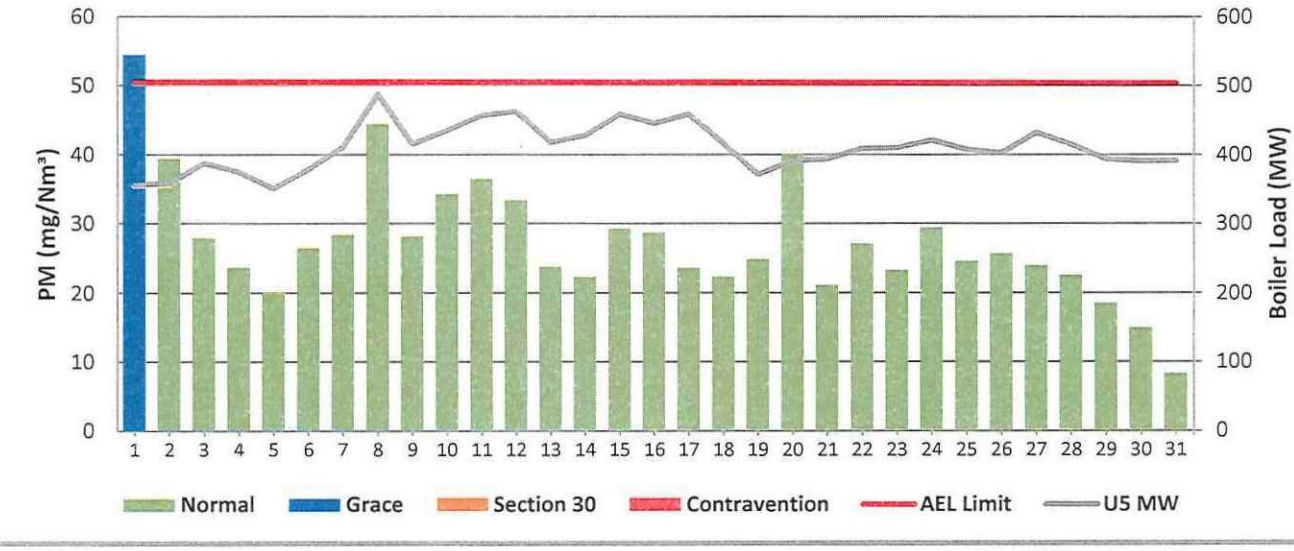


Figure 4: Duvha Unit 6 PM Emissions - October 2025

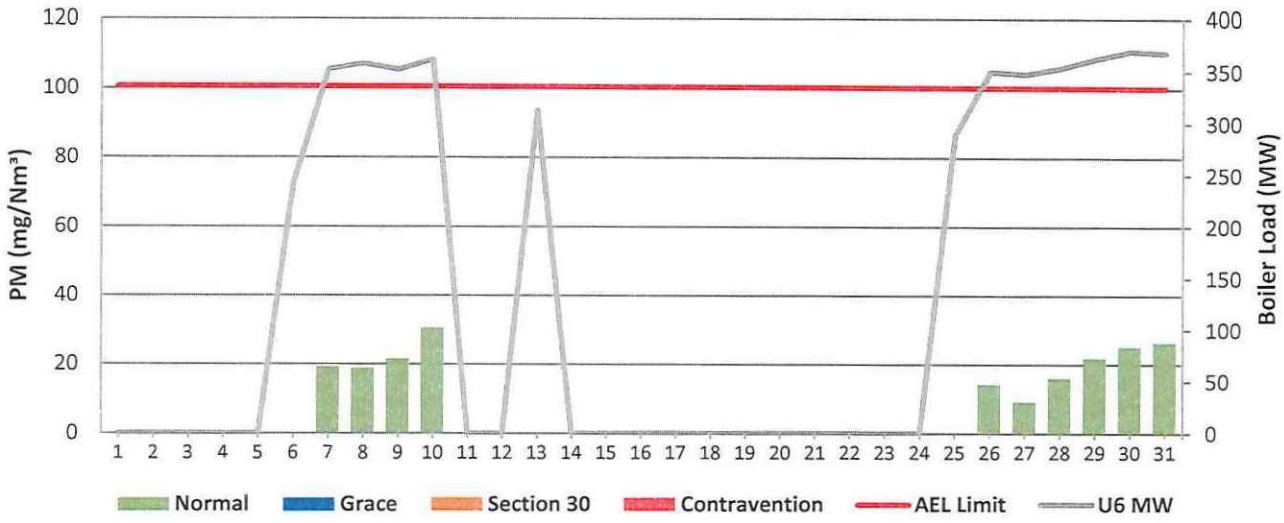


Figure 5: Duvha Unit 1 SO_2 Emissions - October 2025

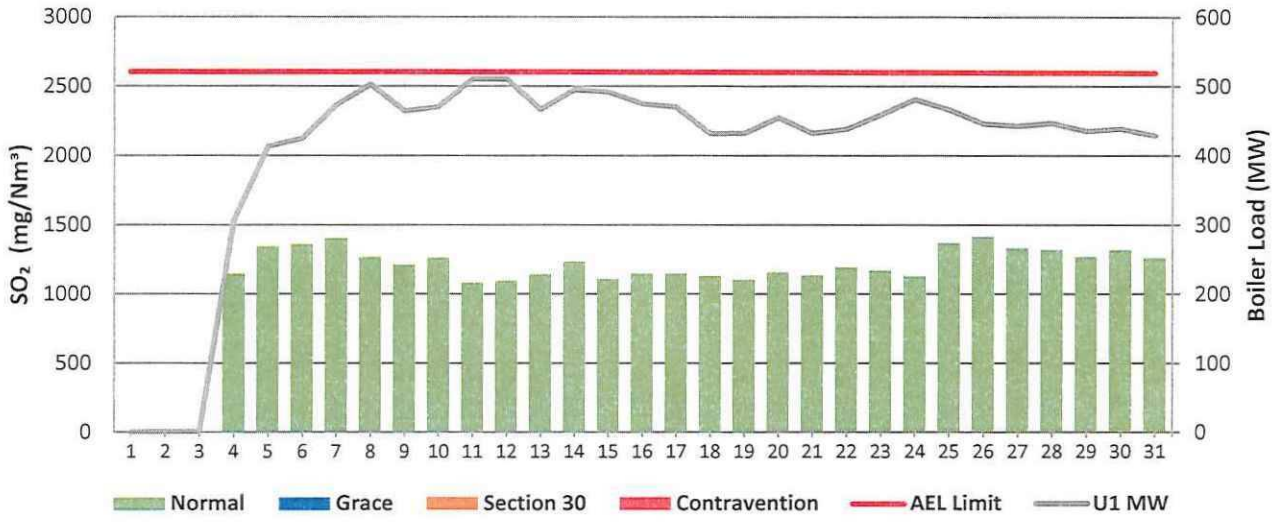


Figure 6: Duvha Unit 2 SO_2 Emissions - October 2025

Figure 7: Duvha Unit 5 SO_2 Emissions - October 2025

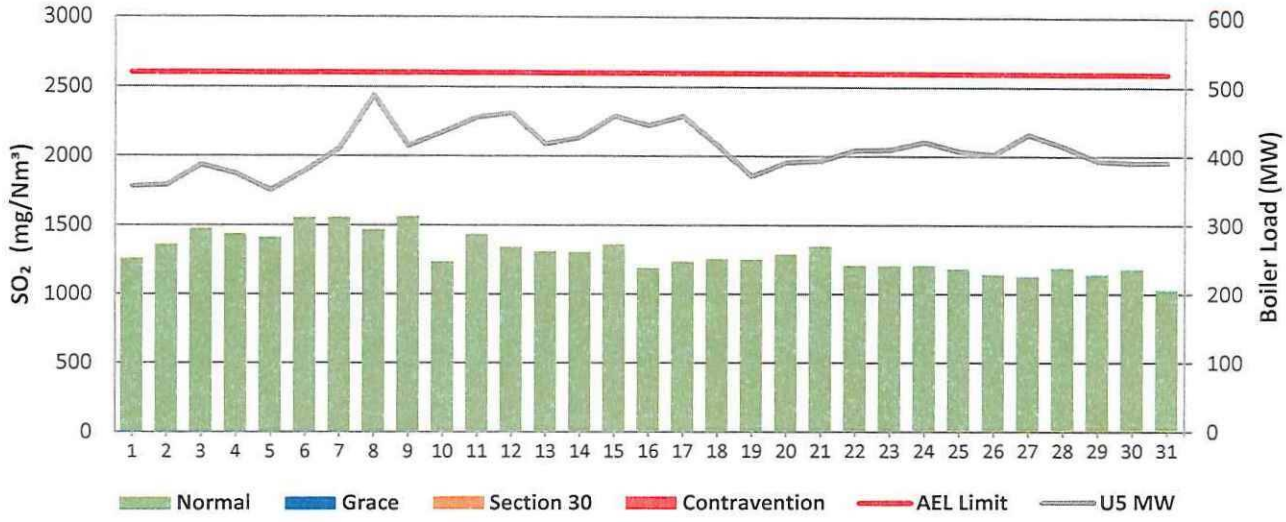


Figure 8: Duvha Unit 6 SO_2 Emissions - October 2025

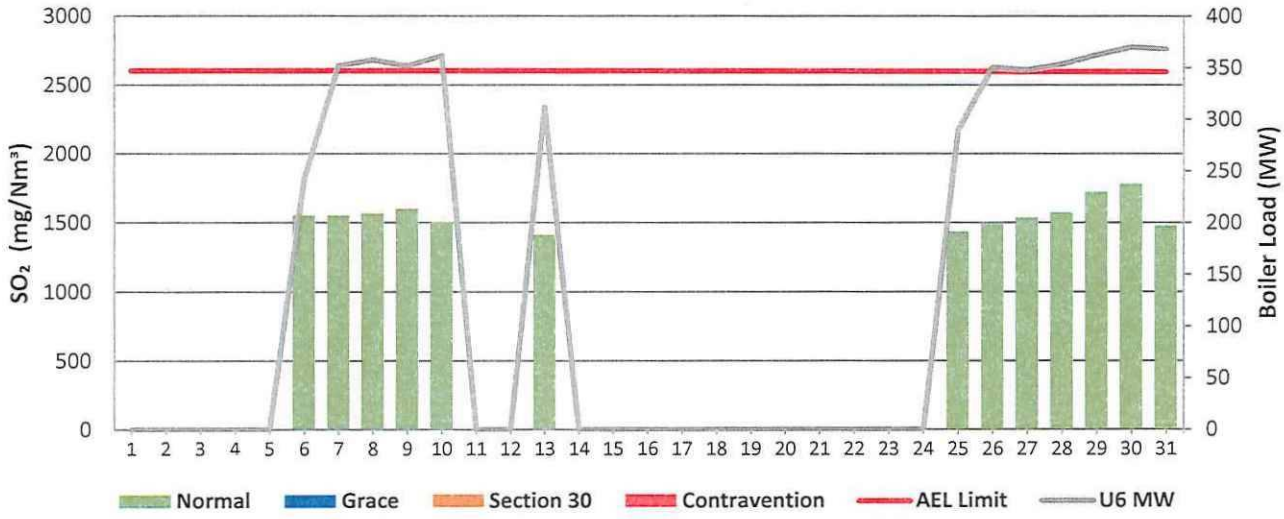


Figure 9: Duvha Unit 1 NO_x Emissions - October 2025

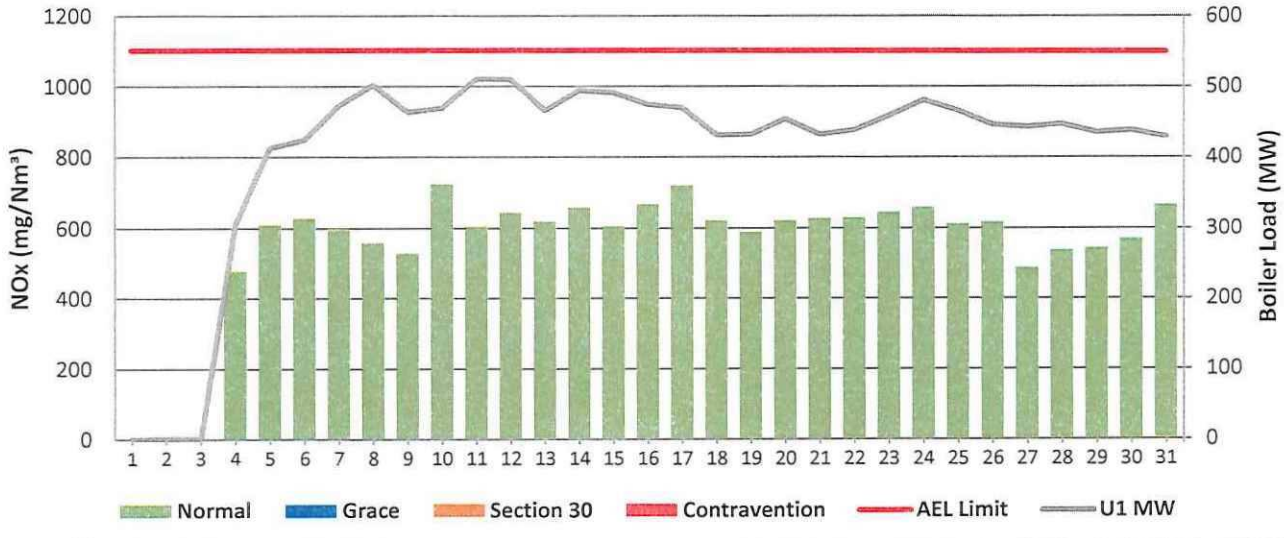


Figure 10: Duvha Unit 2 NO_x Emissions - October 2025

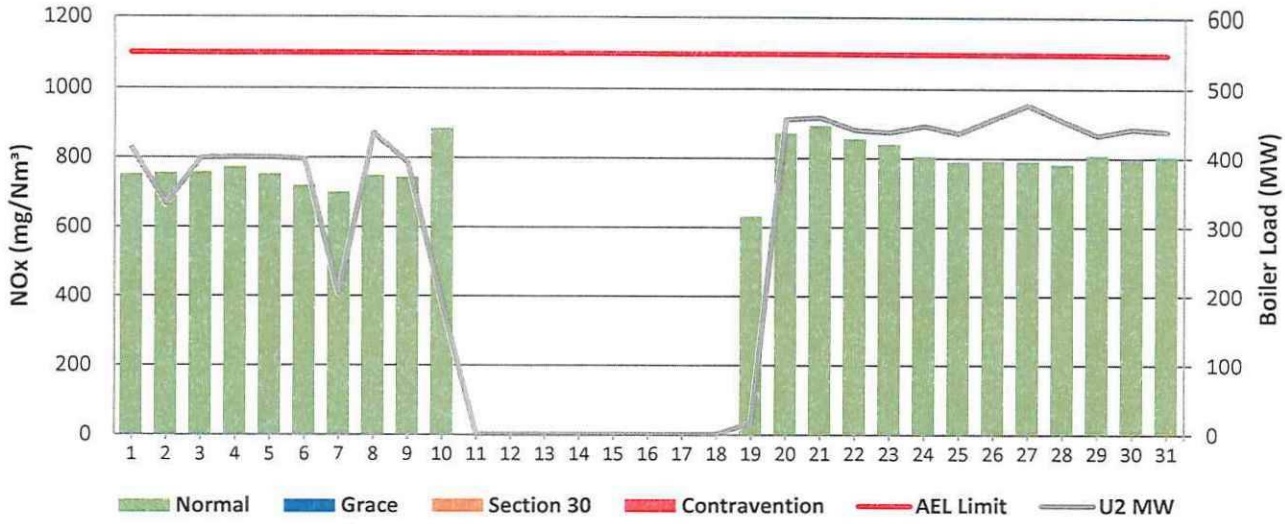


Figure 11: Duvha Unit 5 NO_x Emissions - October 2025

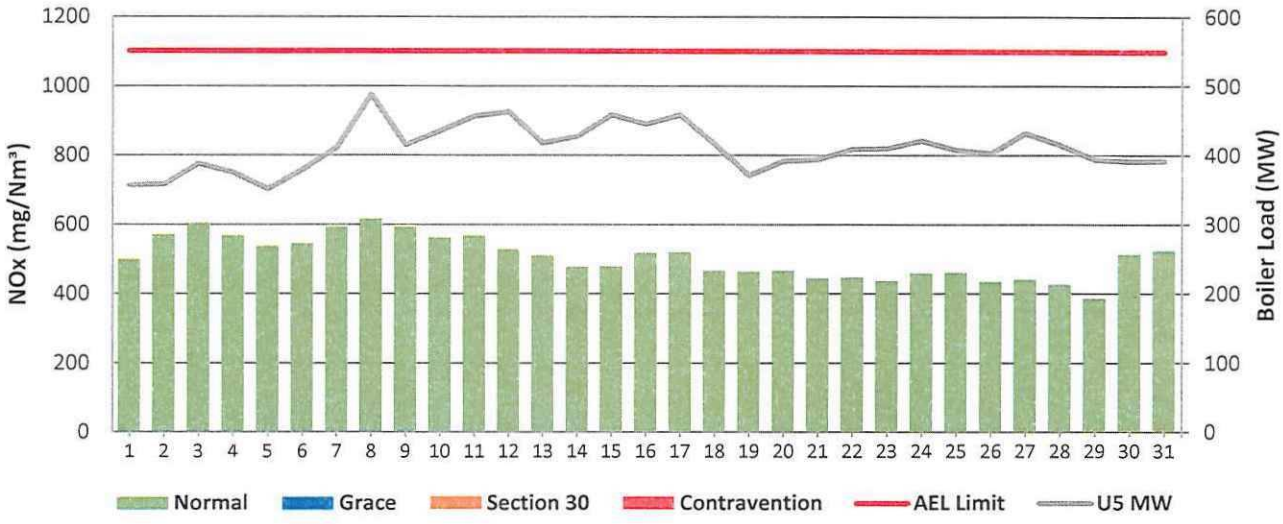
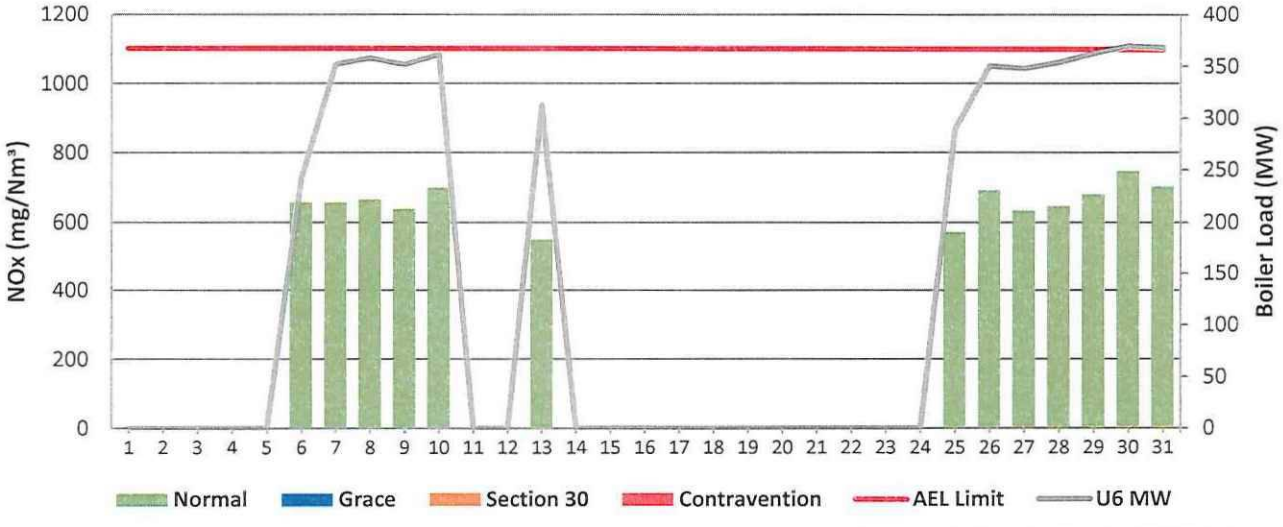


Figure 12: Duvha Unit 6 NO_x Emissions - October 2025



7 Shut-down and light-up information for OCTOBER 2025

	Event Description	Event 1	
Unit 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	9:35 pm	2025/10/03
	Synch. to Grid (or BC)	5:35 am	2025/10/04
	Fires in to BC (duration)	00:08:00	DD:HH:MM
	Emissions below limit from BC (end date)	12:00 am	2025/10/06
	Emissions below limit from BC (duration)	01:18:25	DD:HH:MM

	Event Description	Event 1	
Unit 2	Breaker Open (BO)	11:30 am	2025/10/10
	Draught Group (DG) Shut Down (SD)	12:35 pm	2025/10/19
	BO to DG SD (duration)	09:01:05	DD:HH:MM
	Fires in time	2:10 pm	2025/10/19
	Synch. to Grid (or BC)	10:00 pm	2025/10/19
	Fires in to BC (duration)	00:07:50	DD:HH:MM
	Emissions below limit from BC (end date)	12:00 am	2025/10/21
	Emissions below limit from BC (duration)	01:02:00	DD:HH:MM

	Event Description	Event 1		Event 2	
Unit 6	Breaker Open (BO)	BO previously	BO previously	11:25 pm	2025/10/10
	Draught Group (DG) Shut Down (SD)	n/a	n/a	5:30 am	2025/10/14
	BO to DG SD (duration)	n/a	DD:HH:MM	03:06:05	DD:HH:MM
	Fires in time	4:05 pm	2025/10/05	5:25 am	2025/10/25
	Synch. to Grid (or BC)	10:35 am	2025/10/06	10:55 am	2025/10/25
	Fires in to BC (duration)	00:18:30	DD:HH:MM	00:05:30	DD:HH:MM
	Emissions below limit from BC (end date)	12:00 am	2025/10/07	12:00 am	2025/10/27
	Emissions below limit from BC (duration)	00:13:25	DD:HH:MM	01:13:05	DD:HH:MM

8 COMPLAINTS

There were no complaints for this month.

Source Code / Name	Root Cause Analysis	Calculation of Impacts / emissions associated with the incident	Dispersion modeling of pollutants where applicable	Measures implemented to prevent reoccurrence

9 GENERAL

Exceedances:

Particulate Matter:

Unit 5

01/10/2025

The SO3 plant scrubs were faulty due to blockages in the channels that caused pressure buildup that led to SO3 leaks. The SO3 plant had to be serviced for these leaks.

Additionally, the SO3 utilization was 94.5% for October due to the following reasons:

01/10/2025 - 02/10/2025:

On the 1st of October an electrical issue caused a loss of power to multiple plant areas on site including the SO3 skid and common plant. Upon the restoration of power, Unit 5 SO3 failed to run. Fault finding continued through the evening and on to the 2nd of October and there were defects identified on the VSD of the process air blower. The defects were attended, and the plant had to then be put onto preheat before starting to inject.

19/10/2025 - 20/10/2025

The return to service of Unit 2 had an impact on the pressure of the auxiliary steam range The low steam pressure on the aux steam range caused the sulphur temperature to drop below the required values for SO3 plant to run This led to the SO3 being out of service for part of the 19th and part of the 20th Once pressure to aux steam range was restored, there was period required to warm sulphur to the correct temperature and then preheat programme before SO3 could resume injecting

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

10. S30 Incidents Register

There were no section 30 incidents

Ben Highway	24/11/2025		2025/11/27
Boiler Plant Engineering Manager	Date	Environmental Manager	Date
	2025/11/27		
Engineering Manager	Date		

Compiled by	Environmental Officer	
For	Nkangala District Municipality	Air Quality Officer
Copies	Generation Environmental Management	D Herbst B Mccourt
	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