



Generation

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AND

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Total number of pages: 15

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DUVHA POWER STATION

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



GENERAL MANAGER

2026/02/27

DATE

DUVHA POWER STATION MONTHLY EMISSIONS REPORT
Atmospheric Emission License: NDM/AEL/MP312/11/07



1 RAW MATERIALS AND PRODUCTS

Raw Materials and Products	Raw Material Type	Units	Max Permitted Consumption Rate	Consumption Rate Jan-2026
	Coal	Tons	1 400 000	361 884.76
	Fuel Oil	Tons	5 000	5389.24

Production Rates	Product / By-Product Name	Units	Max Production Capacity Permitted	Indicative Production Rate Jan-2026
	Energy	GWh	2 160.00	622 202.14
	Ash	Tons	562 464	91 918.73

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
Sulphur Content	%	0.6 - 1.2	0.70
Ash Content	%	30.2	25.40

3 EMISSION LIMITS (mg/Nm³)

Associated Unit/Stack	Daily Limit		
	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 Utilization
Unit 1	FFP	99.946%	SO ₃	n/a
Unit 2	FFP	99.897%	SO ₃	n/a
Unit 4	ESP + SO ₃	99.761%	SO ₃	97.7%
Unit 5	ESP + SO ₃	99.807%	SO ₃	90.6%
Unit 6	ESP + SO ₃	99.850%	SO ₃	99.7%

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	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>
Unit 2	99.8	92.4	92.7	96.4
Unit 4	100.0	99.5	100.0	100.0
Unit 5	100.0	99.7	99.7	99.3
Unit 6	100.0	99.7	99.7	100.0

Note NO_x emissions are measured as NO in PPM. The final NO_x value is expressed as total NO₂ equivalent.

6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for January 2026

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)
Unit 1	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>
Unit 2	31.5	2,298	1,073
Unit 4	20.9	928	344
Unit 5	44.0	1,825	736
Unit 6	16.1	1,357	607
SUM	112.39	6,467	2,791

Table 6.2: PM AEL Daily - January 2026

Associated Unit/Stack	Normal Days	Number of days in Grace period	Number of Section 30 days	Number of days in contravention	Total Exceedance	Mo Avg (mg/Nm ³)
Unit 1	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>
Unit 2	26	0	0	0	0	18.3
Unit 4	8	1	0	0	1	43.7
Unit 5	22	4	0	0	4	48.8
Unit 6	14	0	0	0	0	20.4
SUM	70	5	0	0	5	

Table 6.3: SO₂ AEL Daily - January 2026

Associated Unit/Stack	Normal Days	Number of days in Grace period	Number of Section 30 days	Number of days In contravention	Total Exceedance	Mo Avg (mg/Nm ³)
Unit 1	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>
Unit 2	28	0	0	0	0	1 232.9
Unit 4	11	0	0	0	0	1 516.3
Unit 5	28	0	0	0	0	1 537.7
Unit 6	15	0	0	0	0	1 578.8
SUM	85	0	0	0	0	

Table 6.4: NO_x AEL Daily - January 2026

Associated Unit/Stack	Normal Days	Number of days in Grace period	Number of Section 30 days	Number of days In contravention	Total Exceedance	Mo Avg (mg/Nm ³)
Unit 1	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>	<i>Unit Offload</i>
Unit 2	28	0	0	0	0	570.9
Unit 4	11	0	0	0	0	554.8
Unit 5	28	0	0	0	0	614.7
Unit 6	15	0	0	0	0	703.5
SUM	85	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 2 PM Emissions - January 2026

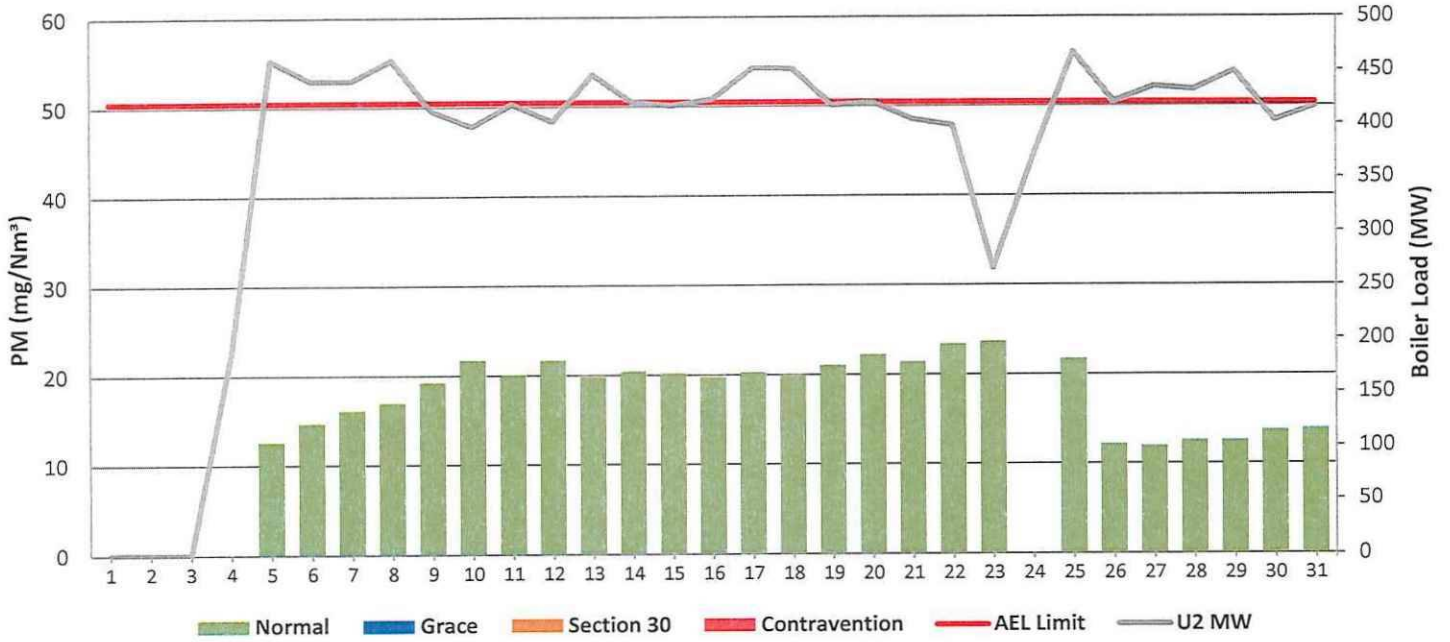


Figure 2: Duvha Unit 4 PM Emissions - January 2026

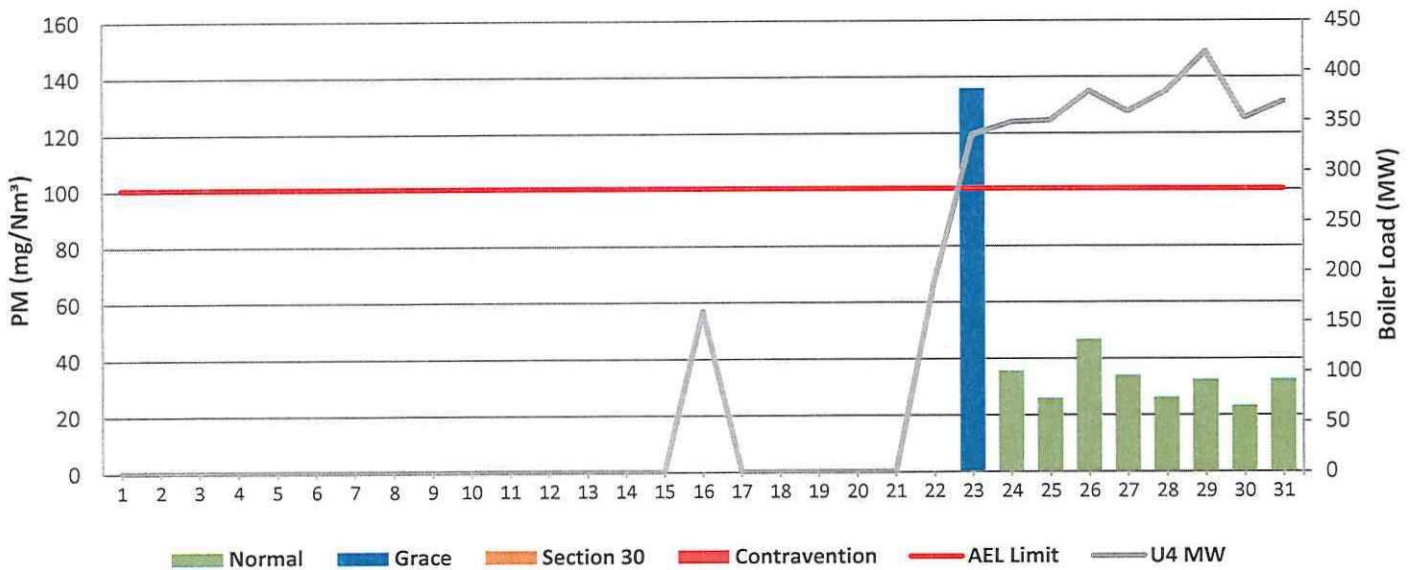


Figure 3: Duvha Unit 5 PM Emissions - January 2026

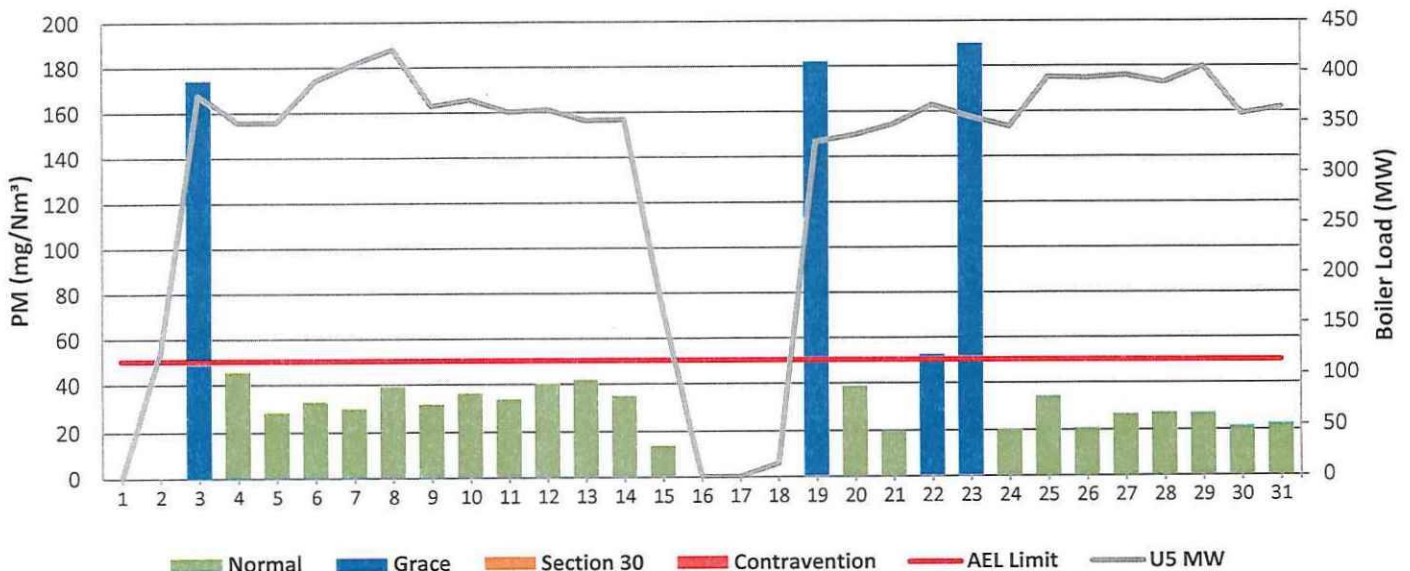


Figure 4: Duvha Unit 6 PM Emissions - January 2026

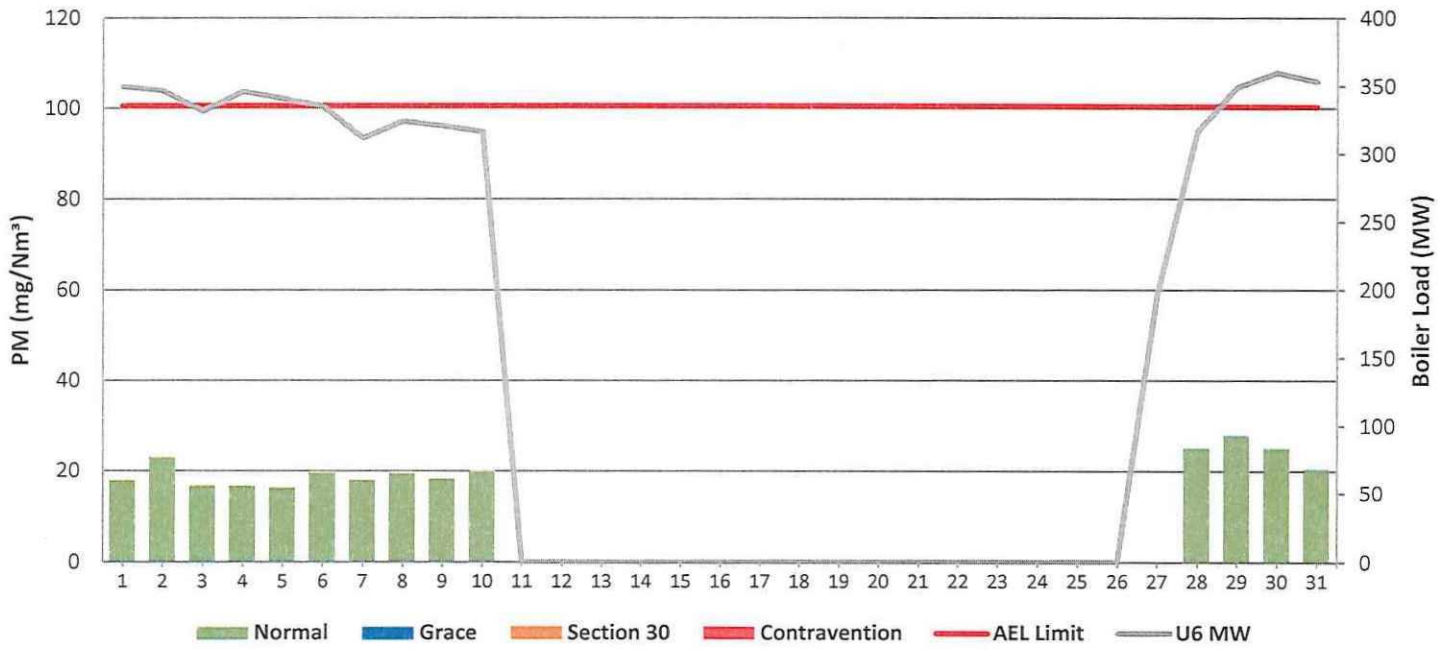


Figure 5: Duvha Unit 1 SO₂ Emissions - January 2026

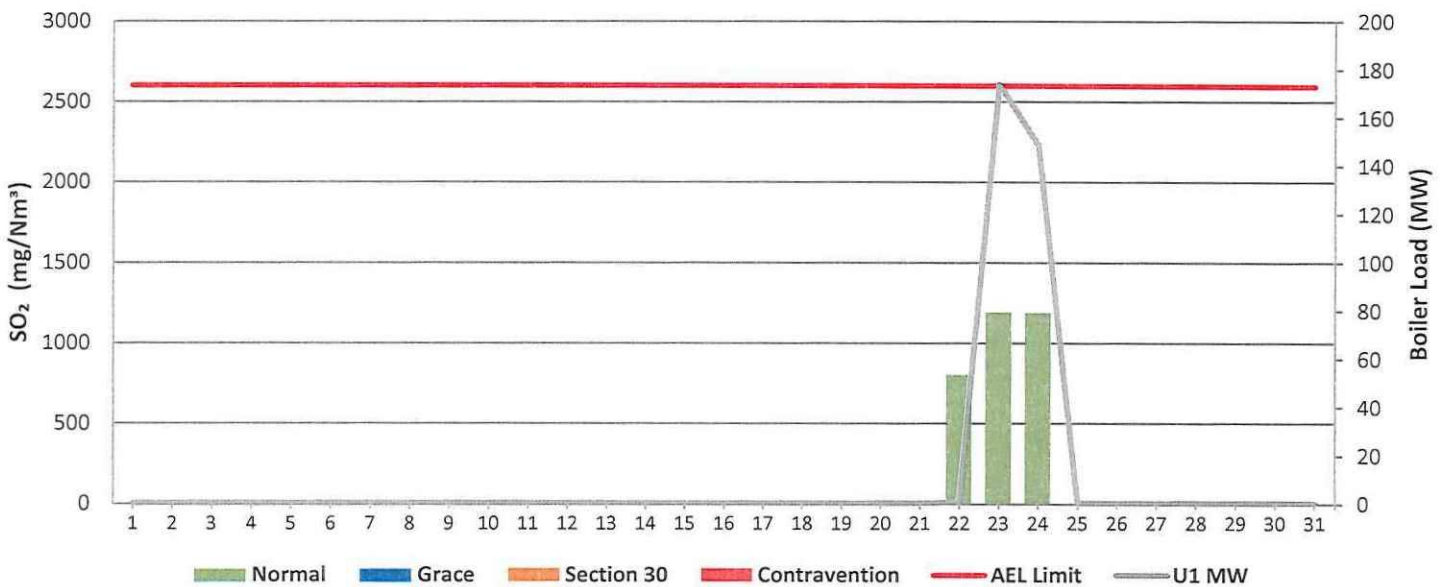


Figure 6: Duvha Unit 2 SO₂ Emissions - January 2026

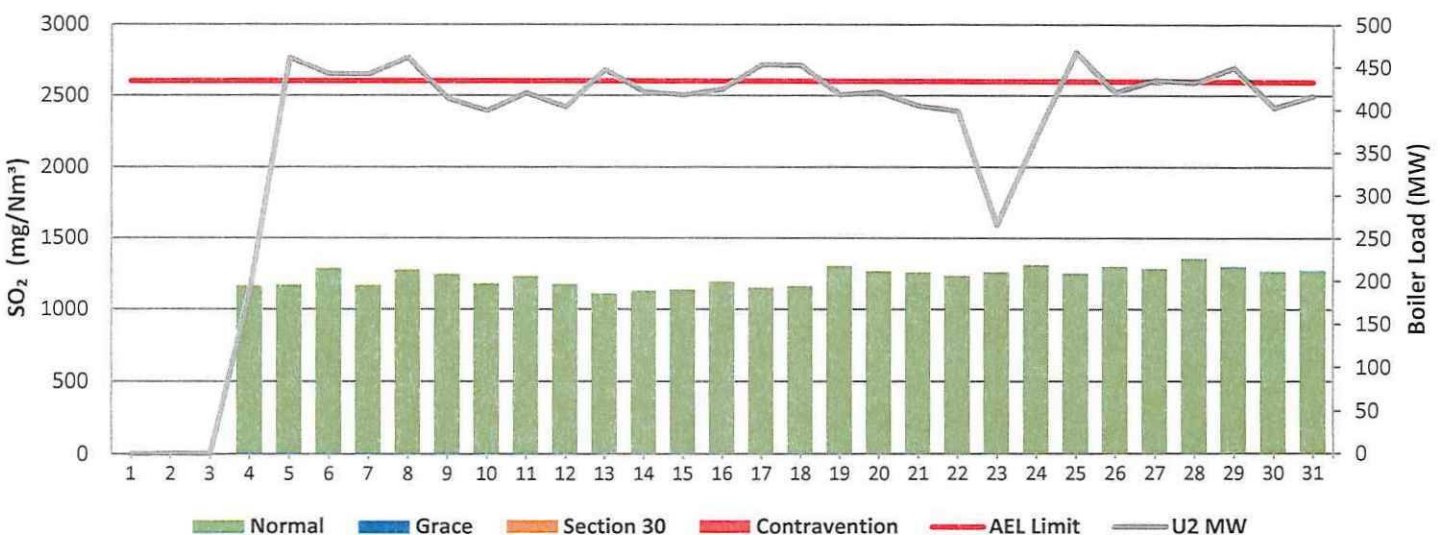


Figure 7: Duvha Unit 3 SO₂ Emissions - January 2026

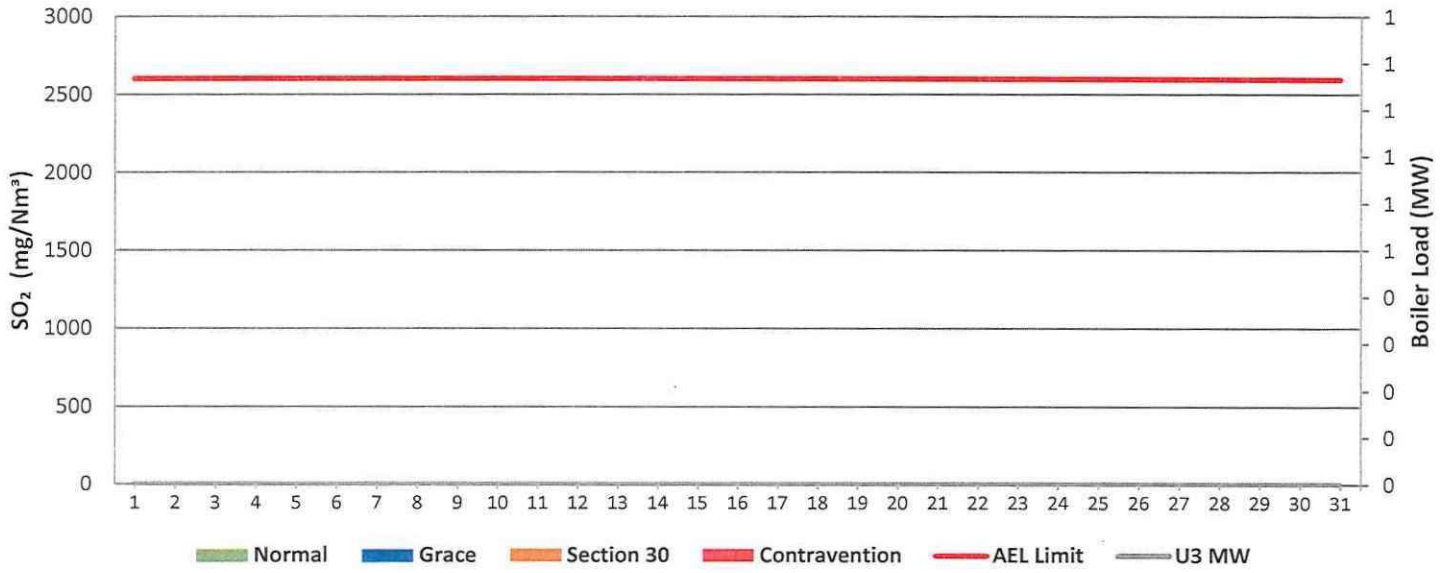


Figure 8: Duvha Unit 4 SO₂ Emissions - January 2026

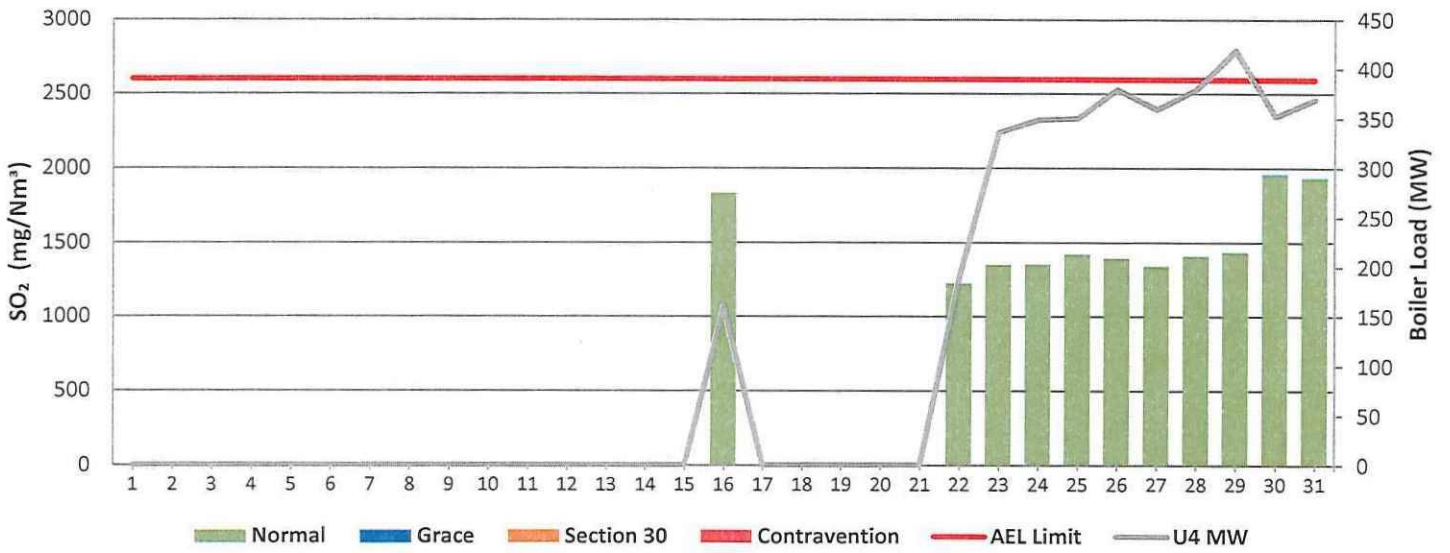


Figure 9: Duvha Unit 5 SO₂ Emissions - January 2026

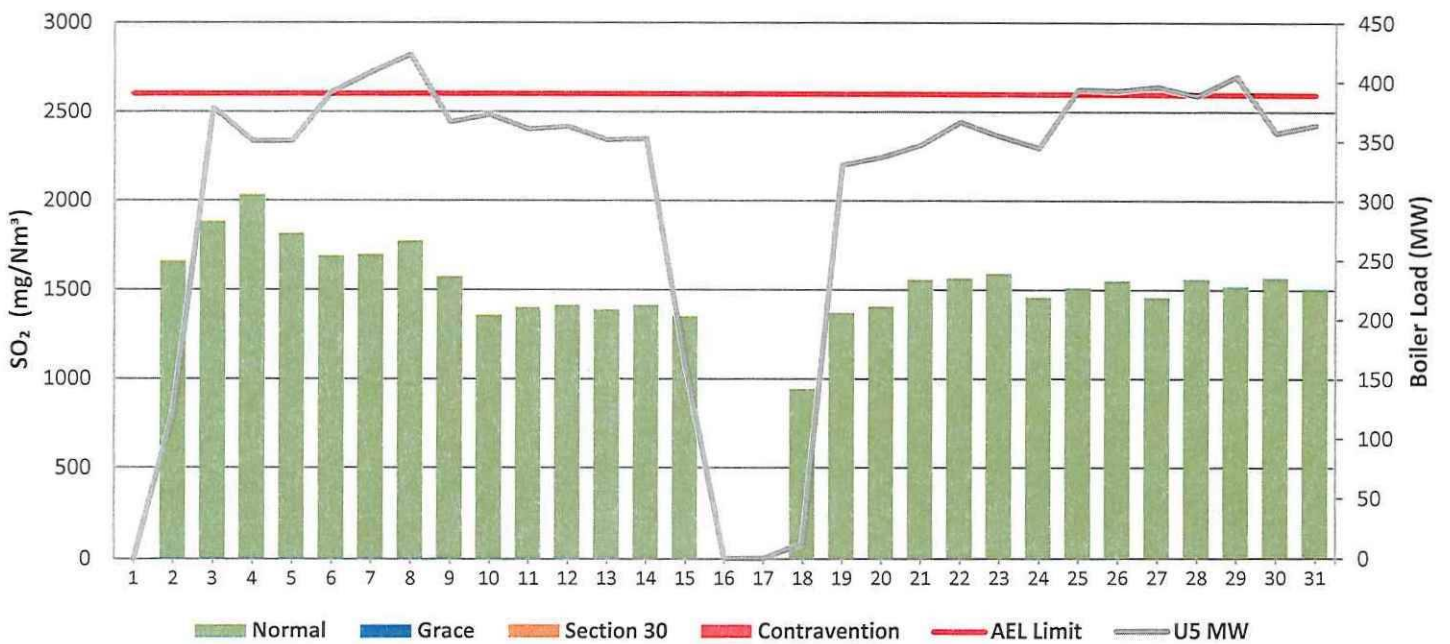


Figure 10: Duvha Unit 6 SO₂ Emissions - January 2026

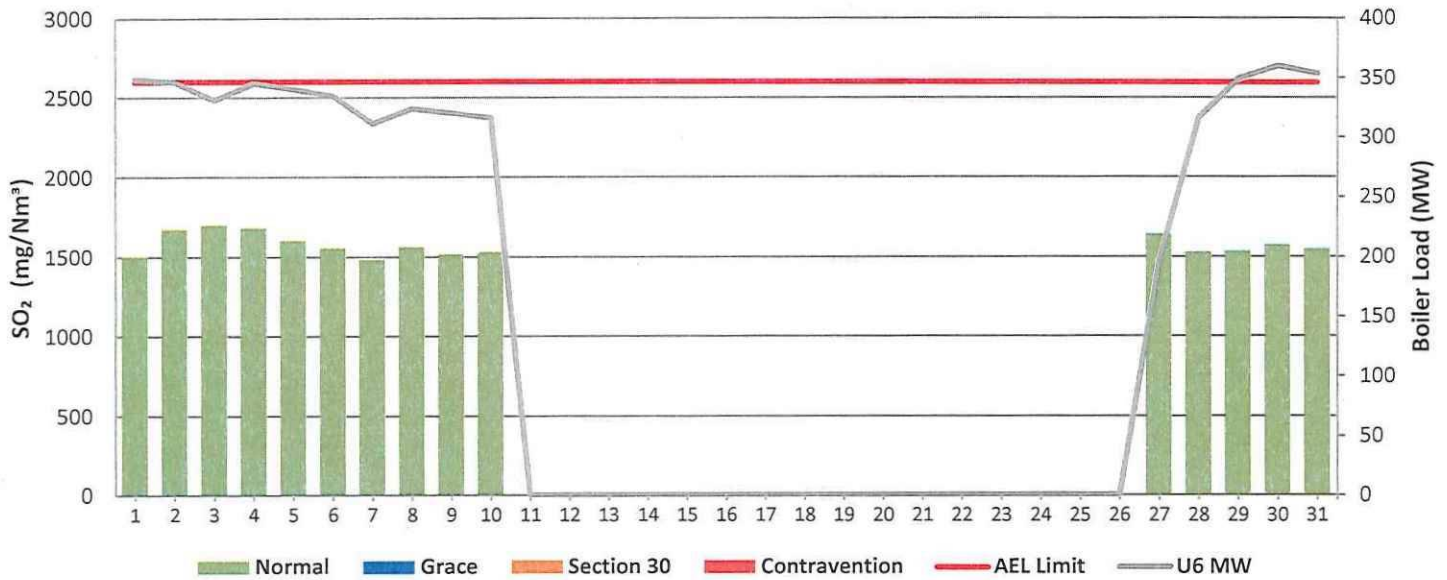


Figure 11: Duvha Unit 2 NO_x Emissions - January 2026

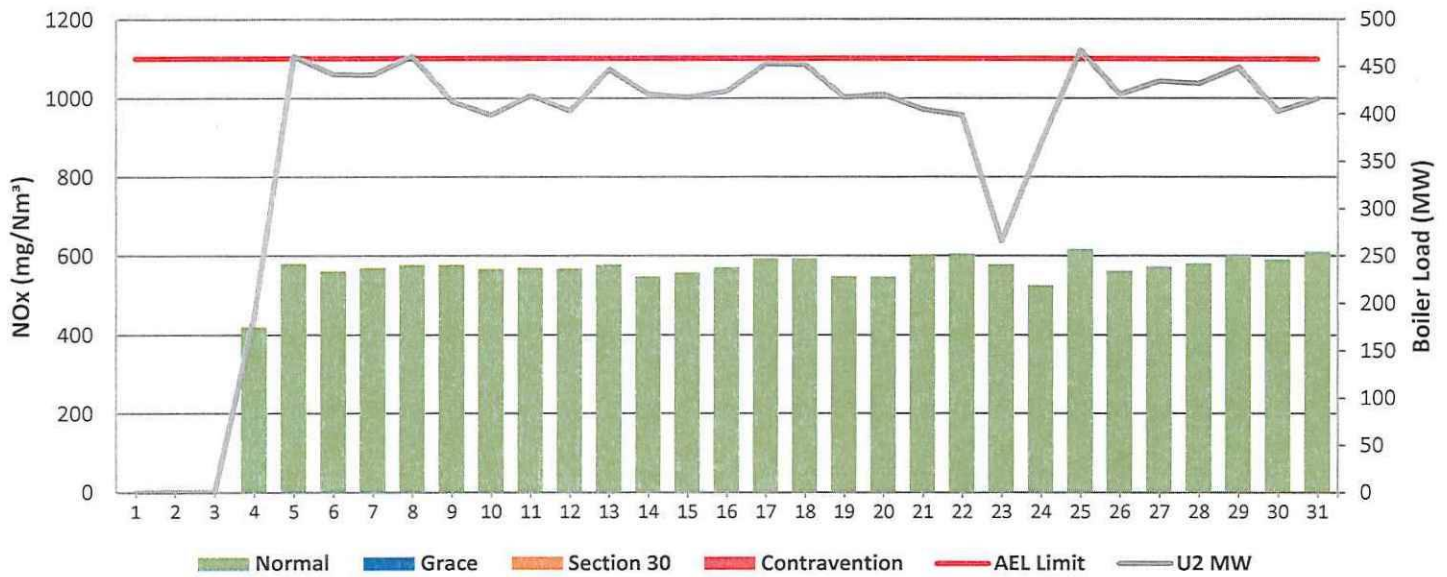


Figure 12: Duvha Unit 4 NO_x Emissions - January 2026

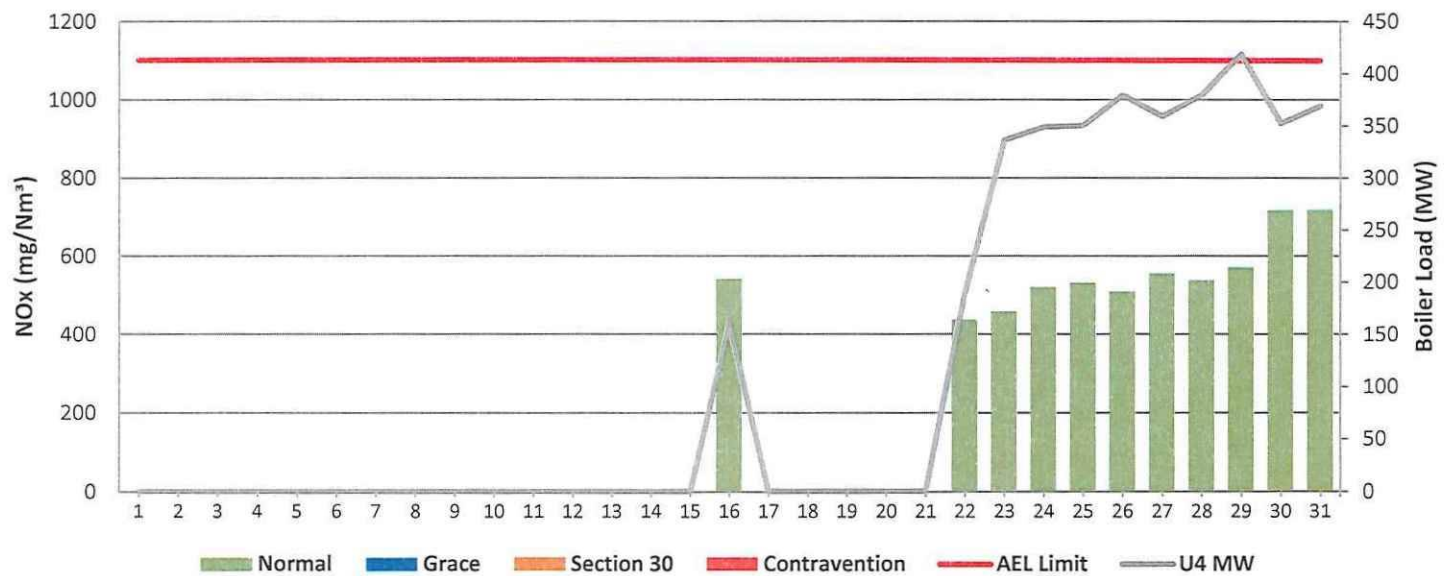


Figure 13: Duvha Unit 5 NO_x Emissions - January 2026

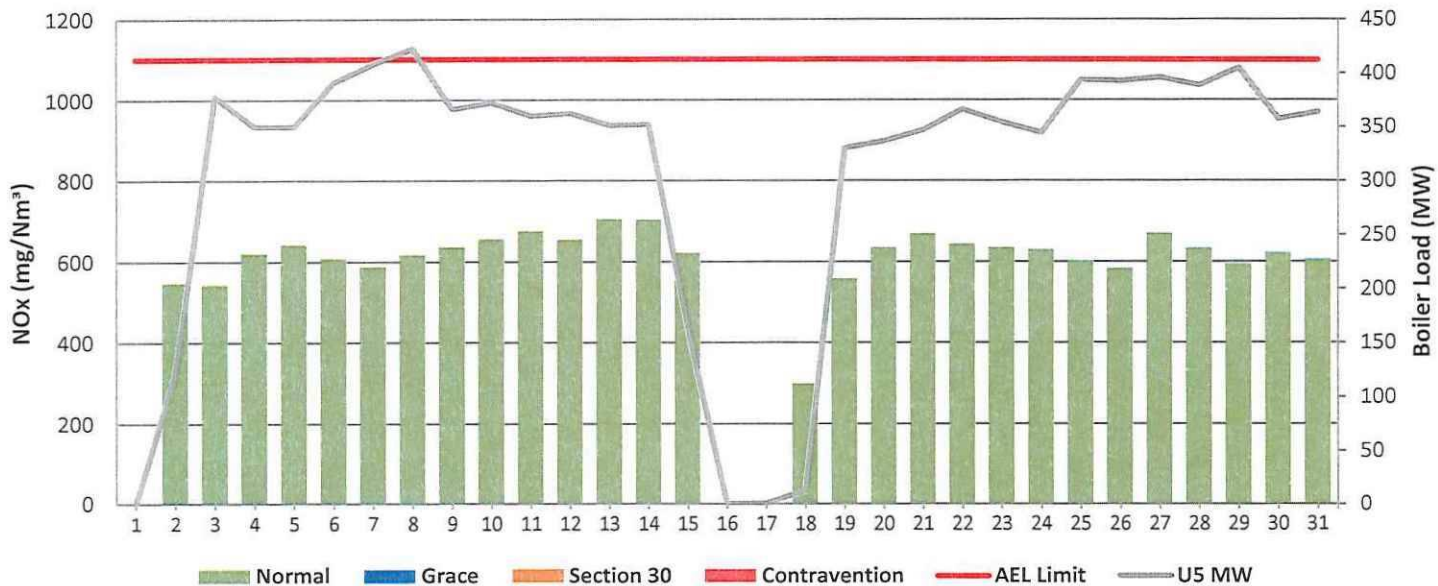
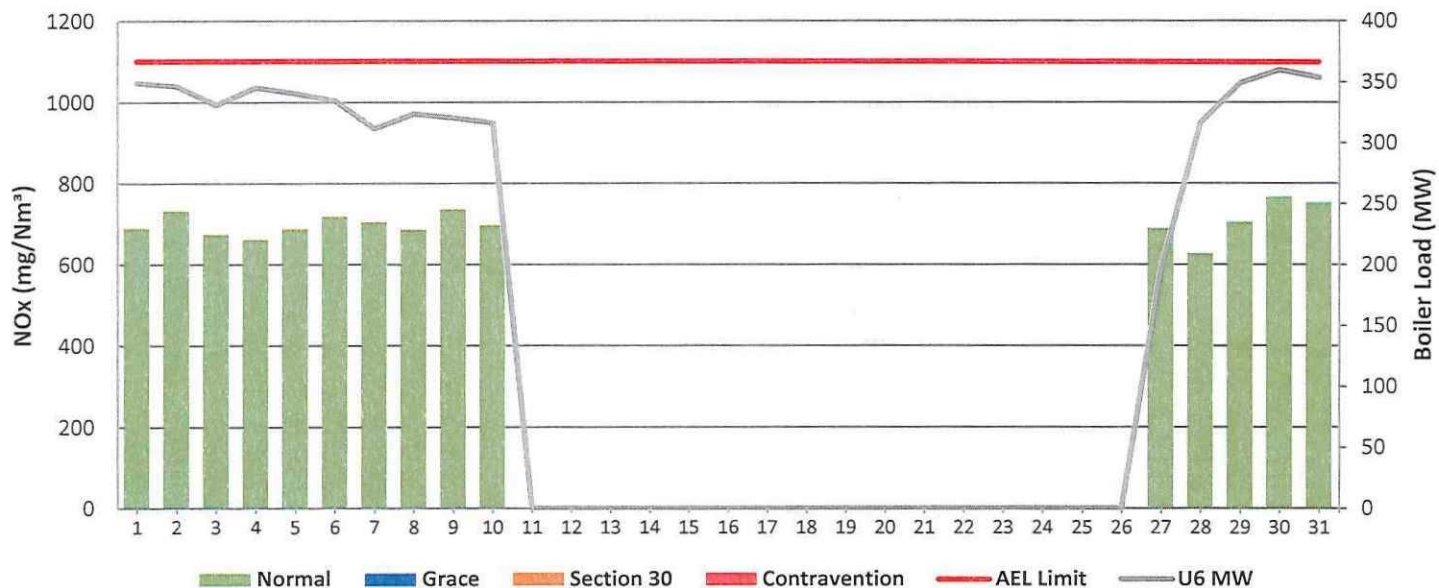


Figure 14: Duvha Unit 6 NO_x Emissions - January 2026



7 Shut-down and light-up information for JANUARY 2026

	Event Description	Event 1		Event 2	
Unit 2	Breaker Open (BO)	BO previously	BO previously	3:35 pm	2026/01/23
	Draught Group (DG) Shut Down (SD)	DG Shut down previously	DG Shut down previously	DG did not trip or SD	DG did not trip or SD
	BO to DG SD (duration)	n/a	DD:HH:MM	n/a	DD:HH:MM
	Fires in time	7:10 am	2026/01/04		
	Synch. to Grid (or BC)	11:20 am	2026/01/04		
	Fires in to BC (duration)	00:04:10	DD:HH:MM		DD:HH:MM
	Emissions below limit from BC (end date)	12:00 am	2026/01/06		
	Emissions below limit from BC (duration)	01:12:40	DD:HH:MM		DD:HH:MM

	Event Description	Event 1	
Unit 4	Breaker Open (BO)	BO previously	BO previously
	Draught Group (DG) Shut Down (SD)	DG Shut down previously	DG Shut down previously
	BO to DG SD (duration)	DG Shut down previously	DG Shut down previously
	Fires in time	3:20 am	2026/01/22
	Synch. to Grid (or BC)	8:10 am	2026/01/22
	Fires in to BC (duration)	00:04:50	DD:HH:MM
	Emissions below limit from BC (end date)	12:00 am	2026/01/24
	Emissions below limit from BC (duration)	01:15:50	DD:HH:MM

	Event Description	Event 1		Event 2	
Unit 5	Breaker Open (BO)	BO previously	BO previously	10:55 am	2026/01/15
	Draught Group (DG) Shut Down (SD)	DG Shut down previously	DG Shut down previously	12:45 pm	2026/01/15
	BO to DG SD (duration)	n/a	DD:HH:MM	00:01:50	DD:HH:MM
	Fires in time	12:25 pm	2026/01/02	5:12 pm	2026/01/18
	Synch. to Grid (or BC)	3:25 pm	2026/01/02	10:10 pm	2026/01/18
	Fires in to BC (duration)	00:03:00	DD:HH:MM	00:04:58	DD:HH:MM
	Emissions below limit from BC (end date)	6:00 pm	2026/01/04	3:00 pm	2026/01/20
	Emissions below limit from BC (duration)	02:02:35	DD:HH:MM	01:16:50	DD:HH:MM

	Event Description	Event 1	
Unit 6	Breaker Open (BO)	5:10 am	2026/01/10
	Draught Group (DG) Shut Down (SD)	9:50 am	2026/01/10
	BO to DG SD (duration)	00:04:40	DD:HH:MM
	Fires in time	7:55 pm	2026/01/26
	Synch. to Grid (or BC)	1:10 pm	2026/01/27
	Fires in to BC (duration)	00:17:15	DD:HH:MM
	Emissions below limit from BC (end date)	12:00 am	2026/01/28
	Emissions below limit from BC (duration)	00:10:50	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 4

23/01/2026

The unit was returning on load. The emissions abatement technology was still on pre heat mode on the first hours of the unit return to service, the abatement technology started to operate optimally after 8 hours of the unit return to service.

Unit 5

03/01/2026

The unit was returning on load. The emissions abatement technology was still on pre heat mode on the first hours of the unit return to service, the abatement technology started to operate optimally after 8 hours of the unit return to service.

19/01/2026

The unit was returning on load. The emissions abatement technology was still on pre heat mode on the first hours of the unit return to service, the abatement technology started to operate optimally after 8 hours of the unit return to service.

22/01/2026 – 23/01/2026

The SO3 Plant had a gas leak on the converter vessel due to the air dilution valve being worn out. The SO3 plant air dilution valve was replaced.

The fuel Oil usage for the month of January 2026 exceeded the permitted consumption rate. This was due to all the units returning to service (RTS) on several days. Oil burner combustion support was required on all the units where there was prolonged sootblowing, the bottom pryors were unstable to keep the furnace flame stable and prevent flame failure, the coal mills were unstable and, in some cases, not available due to mill changes happening during the unit's return to service, in cases where prolonged ashing of the boiler took place and when the bunkers had low levels.

The SO3 utilization was 90.6% on Unit 5 for January 2026 due to the following reasons:

19/01/2026

Unit 4 and 6 were off. Unit 5 was the only unit supplying steam to the SO3 system until aux steam supply on Unit 5 was also isolated on 17 Jan 2026 for maintenance in the SO3 common plant system. This led to the entire sulphur system becoming cold and hence sulphur solidified and could not be pumped through the system. On the 19th the steam supply was de-isolated and U4 and U6 were able to supply steam to assist to increase the temperature. The entire SO3 system was not in service until the sulphur was heated sufficiently to allow the sulphur pumps to run and circulate sulphur.

22/01/2026 – 23/01/2026


A gas leak was observed in the area of the SO3 converter vessel. The SO3 plant was immediately switched off and allowed to cool so the area can be stripped and inspected. The leak was identified to be on the pipework from the dilution valve to the converter vessel. Upon inspection it was determined that the section of pipe needs to be replaced. The work commenced and the SO3 plant remained off until the work was completed and then the plant had to be pre-heated before SO3 injection could commence.

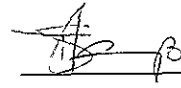
The rest of the information demonstrating compliance with the emission license conditions is supplied in the annual emission report which will be sent to your office


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

There were no section 30 incidents

 26/02/2026
Boiler Plant Engineering
Manager Date

 2026/02/27
Environmental Manager Date

 2026/02/26
Engineering Manager Date

Compiled by Environmental Officer

For Nkangala District
Municipality

Air Quality Officer

Copies Generation Environmental
Management

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B Mccourt

Generation Compliance
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Generation Asset
Management

R Rampiar
E Patel

Duvha Power Station

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