Eskom	Technical and Generic Report	Matimba Power Station

Title: **Matimba Power Station March 2025 emissions report**

Document Identifier:	**RP/247/058**
Plant Location:	**Emission management**
Area of Applicability:	**Matimba Power Station**
Functional Area Applicability:	**Environment**
Revision:	**1**
Total Pages:	**30**
Report Date:	**March 2025**
Disclosure Classification:	**Controlled**

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Date: 2025-05-05	Date: 2025-05-05	Date: 06.05.2025	Date: 2025/06/06

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1. Report Summary

Matimba Power Station was issued with an Atmospheric Emission License (H16/1/13-WDM05) in September 2022. The License requires the license holder to submit monthly reports to the Department. This report contains the required information as specified in the license for March 2025.The information recorded in the report is obtained from Matimba Emission Reporting tool V10.2024.

During the period under review, Matimba experienced ninety-two (92) exceedances of the daily particulate matter emission limit (50mg/Nm^3), eighty-one (81) of these exceedances occurred outside of the 48-hour grace period and were recorded on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence and eleven (11) exceedances occurred within the 48-hour grace period.

There were no exceedances of the monthly SOx limit (3500mg/Nm^3). The were no exceedances of the daily NOx emission limit (750mg/Nm^3).

Flue gas conditioning plant availability was below 90% for unit 1,2,3 ,4 and 5. Unit 1 was returned from outage on the 25th March 2025 and had faulty burner issues. Unit 2 was offload for the whole of March 2025. Unit 3 SO_3 plant's availability was 60% due to the faulty sulphur burner inlet valve that had no actuator spare. Unit 4 SO_3 plant's availability was 87% due to the sulphur control valve that had to be repaired. Unit 5 SO_3 plant's availability 80% due to low precipitators inlet temperature. Unit 6 SO_3 plant's availability was 95% due to blower failing to start.

The consumption rates for fuel oil for the month of March 2025 exceeded the limit of 1200 tons by 2871.492 tons due to multiple units light up trips and unit 1 and unit 2 cold start up.

More information regarding above mentioned issues is provided in the relevant sections within the report.

2. Emission information

2.1 Raw materials and products

Table 1: Quantity of Raw Materials and Products used/produced for the month.

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption Rate (Quantity)	Consumption Rate
	Coal	Tons/month	1 500 000	693 494
	Fuel Oil	Tons/month	1 200	2871.492
Production Rates	**Product/ By-Product Name**	**Unit**	**Maximum Production Capacity Permitted (Quantity)**	**Production Rate**
	Energy	MW	4000	1708.344
	Ash	Tons/month	547500	251 573.914

The consumption rates for fuel oil for the month of March 2025 exceeded the permitted maximum limits due to multiple units light up trips and combustion support.

2.2 Abatement technology

Table 2: Abatement Equipment Control Technology Utilised

Associated Unit	Technology Type	Minimum utilisation (%)	Efficiency (%)
Unit 1	Electrostatic Precipitator	100%	99.933%
Unit 2	Electrostatic Precipitator	100%	Off
Unit 3	Electrostatic Precipitator	100%	99.988%
Unit 4	Electrostatic Precipitator	100%	99.988%
Unit 5	Electrostatic Precipitator	100%	99.984%
Unit 6	Electrostatic Precipitator	100%	99.986%
Associated Unit	**Technology Type**	**Minimum utilisation (%)**	**Actual Utilisation (%)**
Unit 1	SO_3 Plant	100%	0%
Unit 2	SO_3 Plant	100%	0%
Unit 3	SO_3 Plant	100%	60%
Unit 4	SO_3 Plant	100%	87%
Unit 5	SO_3 Plant	100%	80%
Unit 6	SO_3 Plant	100%	95%

Flue gas conditioning plant availability was below 90% for unit 1,2,3 ,4 and 5. Unit 1 was returned from outage on the 25th March 2025 and had faulty burner issues. Unit 2 was offload for the whole of March 2025. Unit 3 SO_3 plant was on hold due to faulty sulphur burner inlet valve that had no actuator spare. Unit 4 SO_3 plant was on permit to work(off) for sulphur control valve repair. Unit 5 SO3 on hold mode due to low precipitators inlet temperature. Unit 6 SO_3 plant was off due to blower failing to start.

Table 3: Energy Source Material Characteristics.

	Characteristic	Stipulated Range (Unit)	Monthly Average Content
Coal burned	**Sulphur Content**	1.6%	1.142%
	Ash Content	40%	36.276%

Energy source characteristics remained within the ranges stipulated in the license.

2.3 Emissions reporting

2.3.1 Particulate Matter Emissions

The emission monitors correlation and parallel tests were performed on unit 2,3 and 4 in June 2024 and the curves were applied on emissions calculations for March 2025.Unit 1,5 and 6 emission calculations were done using the correlation/parallel tests curves from the spot test performed in August 2023.Unit 2 PM correlation curve applied is linear curve, Unit 3 and 4 PM correlation curve applied is polynomial curve.

Unit 1 Particulate Emissions

Unit 1 is on outage

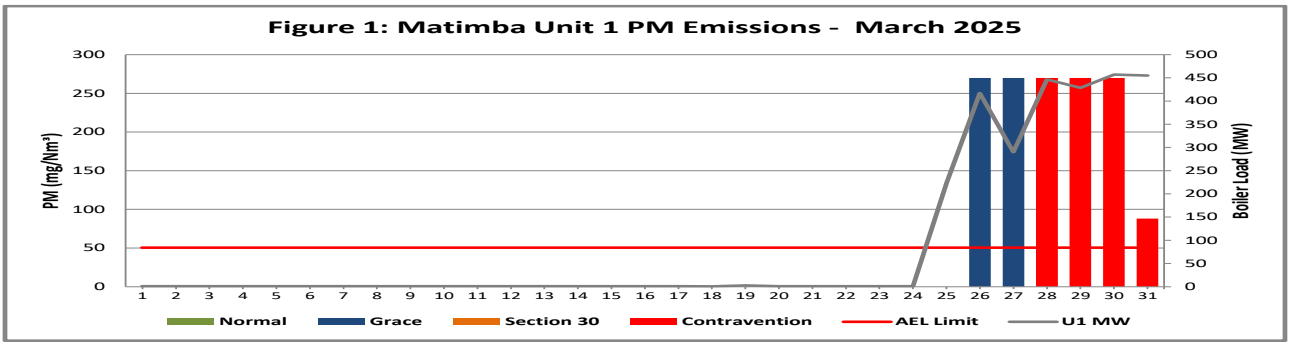

Figure 1: Particulate matter daily average emissions against emission limit for unit 1 for the month of March 2025

Interpretation: Unit 1 exceeded the daily particulate emission limit of 50mg/Nm3 on 26 to 31 of March 2025. The exceedances from 26 to 31 March 2025 occurred outside of the 48-hour grace period and were recorded on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. The exceedances were due to high hopper levels causing electrostatic precipitators fields to trip and have low efficiency. Unit 1 monitor was not calibrated when other PM(dust) unit monitors were calibrated because the unit was on outage. Unit 1 was returned from outage on the 26th of March 2025 not calibrated resulting in the poor monitor reliability, data was removed and the emissions reporting tool used averages from the 26th to the 30th March 2025.

Unit 2 Particulate Emissions

Unit 2 offload.

Unit 3 Particulate Emissions

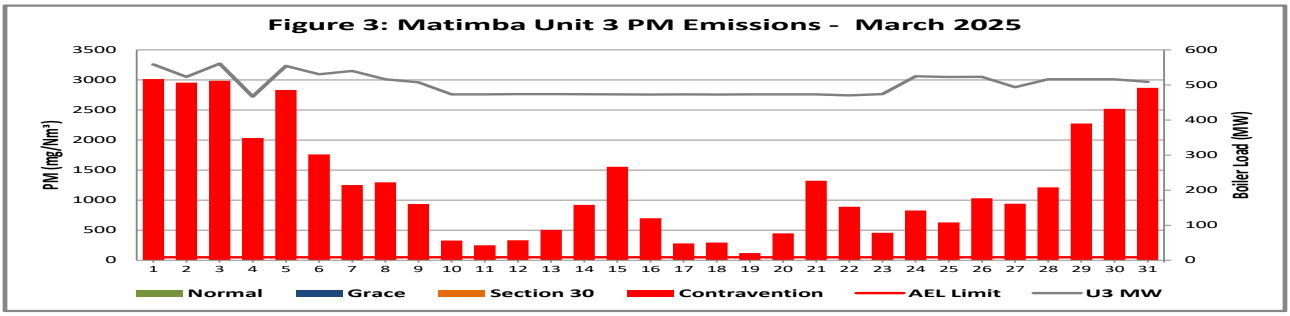

Figure 2: Particulate matter daily average emissions against emission limit for unit 3 for the month of March 2025

Interpretation: Unit 3 exceeded the daily particulate emission limit of 50mg/Nm3 on 1 to 31 March 2025. All exceedances occurred outside of the 48-hour grace period and were recorded on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. The exceedances were due to high hopper levels causing electrostatic precipitators fields to trip and have low efficiency.

Unit 4 Particulate Emissions

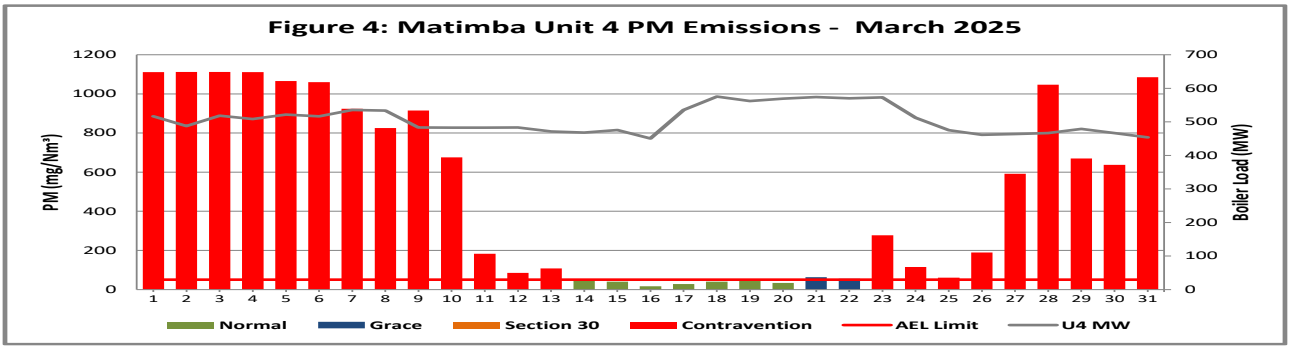

Figure 3: Particulate matter daily average emissions against emission limit for unit 4 for the month of March 2025

Interpretation: Unit 4 exceeded the daily particulate emission limit of 50mg/Nm3 on 1 to 13 and 21 to 31 March 2025. Exceedances from 1 to 13 and 23 to 31 March 2025 occurred outside of the 48-hour grace period and were recorded on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. The exceedances were due to high hopper levels causing electrostatic precipitators fields to trip and have low efficiency. Unit 4 dust monitor was reading almost one value on the 1st to 4th of March 2025 due to the continuous blockages that were caused by the high amount of ash passing through the flue gas stack.

Unit 5 Particulate Emissions

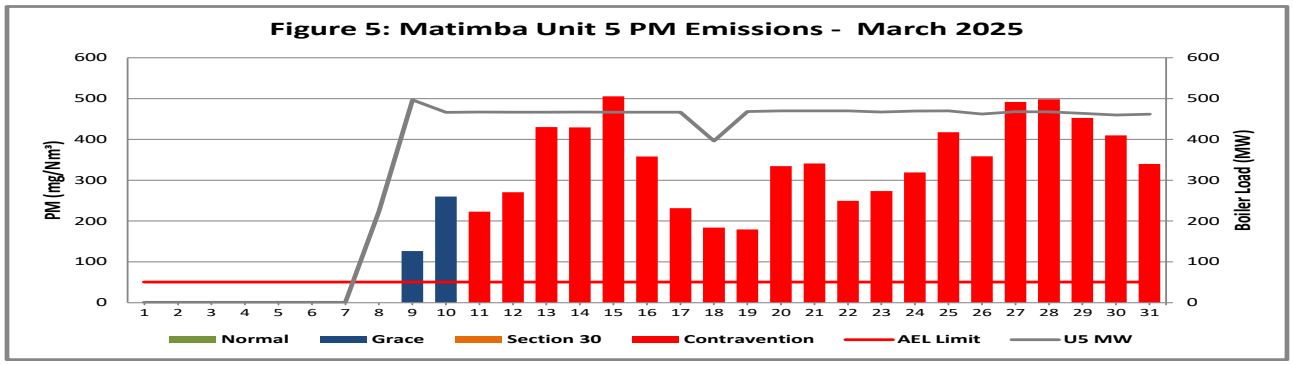

Figure 4: Particulate matter daily average emissions against emission limit for unit 5 for the month of March 2025

Interpretation: Unit 5 Particulate matter exceeded the daily limit of 50 mg/Nm^3 on 1 to 31 March 2025. Exceedances from the 11 to 31 March 205 occurred outside of the 48-hour grace period and was recorded on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. The exceedances were due to high hopper levels causing electrostatic precipitators fields to trip and have low efficiency.

Unit 6 Particulate Emissions

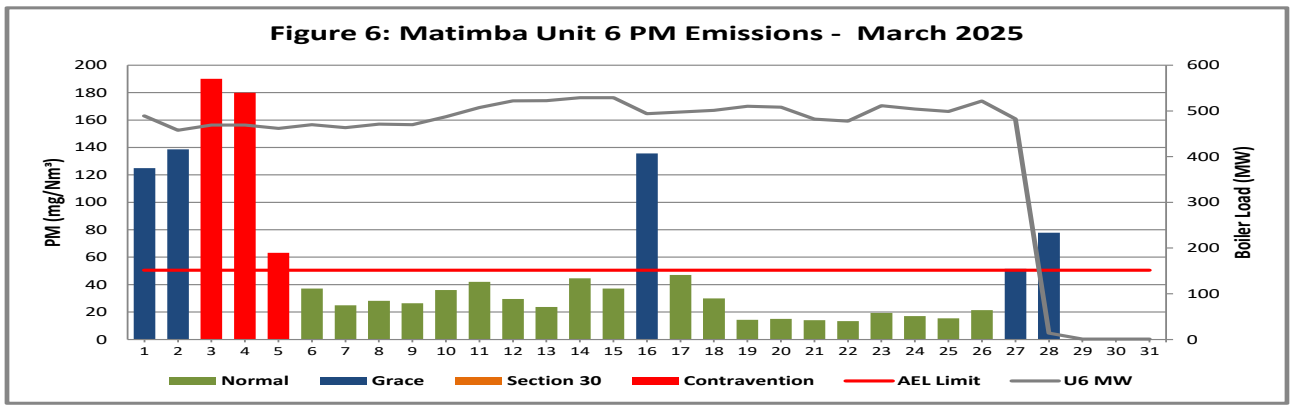

Figure 5: Particulate matter daily average emissions against emission limit for unit 6 for the month of March 2025

Interpretation: Unit 6 Particulate matter exceeded the daily limit of 50 mg/Nm^3 on 1 to 5 March 2025. The exceedances from 3 to 5 March 2025 occurred outside of the 48-hour grace period and was recorded on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. The exceedances were due to high hopper levels causing electrostatic precipitators fields to trip and have low efficiency.

2.3.2 Gaseous Emissions

Gaseous emissions analyzers calibration for all 6 units were performed in March 2025 as per the Eskom emission standard requirement.

The quality assurance tests (QAL2) used for March 2025 emission calculations were performed in June 2024 for Unit 2,3 and 4. Unit 1,5 and 6 quality assurance curves utilized are spot tests performed in August 2023

2.3.2.a SOx Emissions

Unit 1 SO_2 Emissions

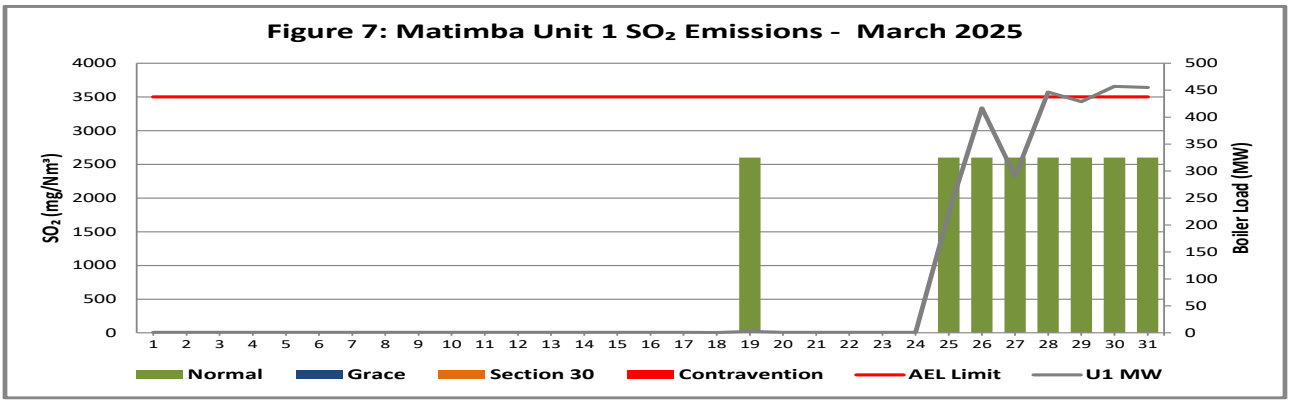

Figure 6: SO2 daily average emissions against emission limit for unit 2 for the month of March 2025

Interpretation: All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3. The monitor was reported to be unavailable from January 2025 due to water ingress issue that passed to north stack from south stack. Moisture in the control air affected the efficiency of the monitor. SRM (Standard Reference Material) values from the parallel test were used to calculate the gaseous emissions for unit 1.

Unit 2 SO_2 Emissions

Unit 2 offload

Unit 3 SO_2 Emissions

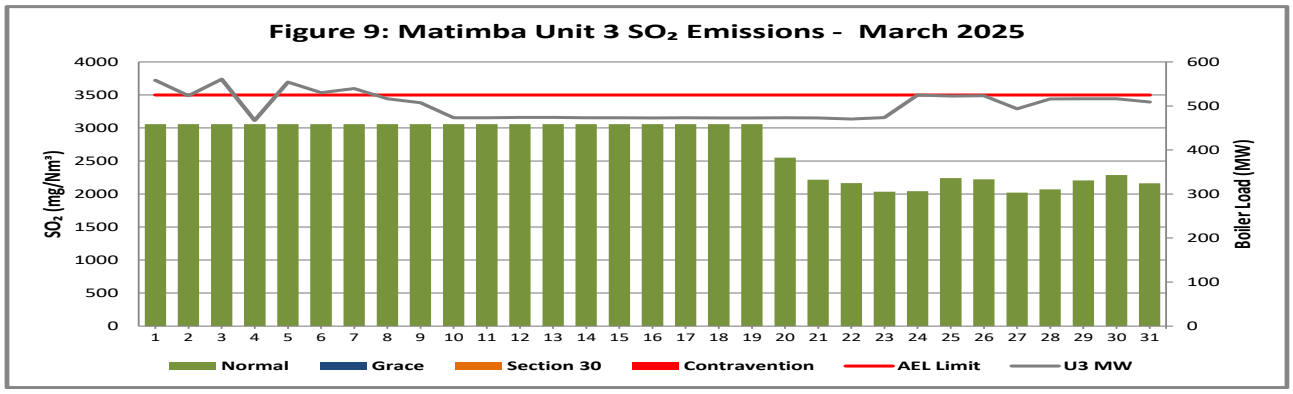

Figure 7: SO2 daily average emissions against emission limit for unit 3 for the month of March 2025

Interpretation: All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3. The monitor was reported to be unavailable in January 2025 till 19th March 2025 due to water ingress issue that passed to north stack from south stack. Moisture in the control air affected the efficiency of the monitor. SRM (Standard Reference Material) values from the parallel test were used to calculate the gaseous emissions for unit 3 from the 1st to 19th March 2025.

Unit 4 SO_2 Emissions

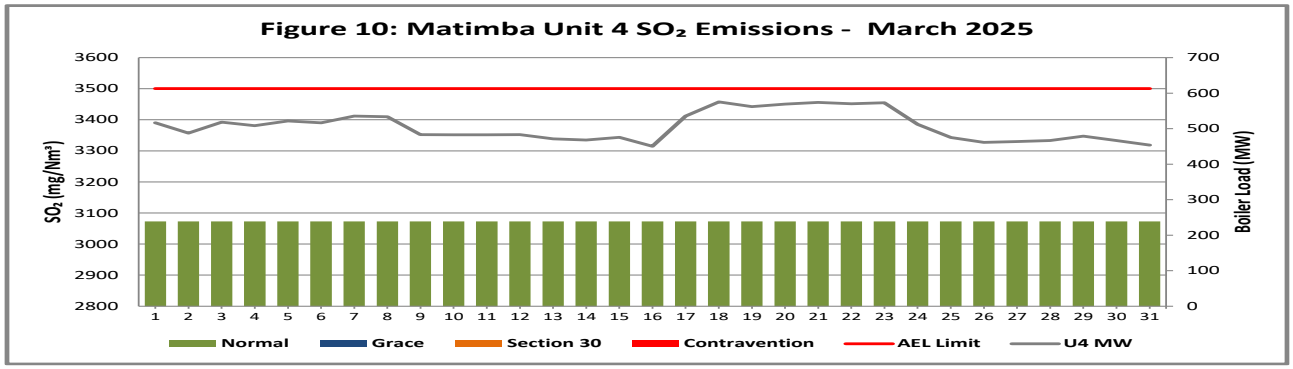

Figure 8: SO2 daily average emissions against emission limit for unit 4 for the month of March 2025

Interpretation: All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3. The monitor was reported to be unavailable on the 18th of December 2025 due to water ingress. Moisture in the control air affected the efficiency of the monitor. SRM (Standard Reference Material) values from the parallel test were used to calculate the gaseous emissions for unit 4.

Unit 5 SO_2 Emissions

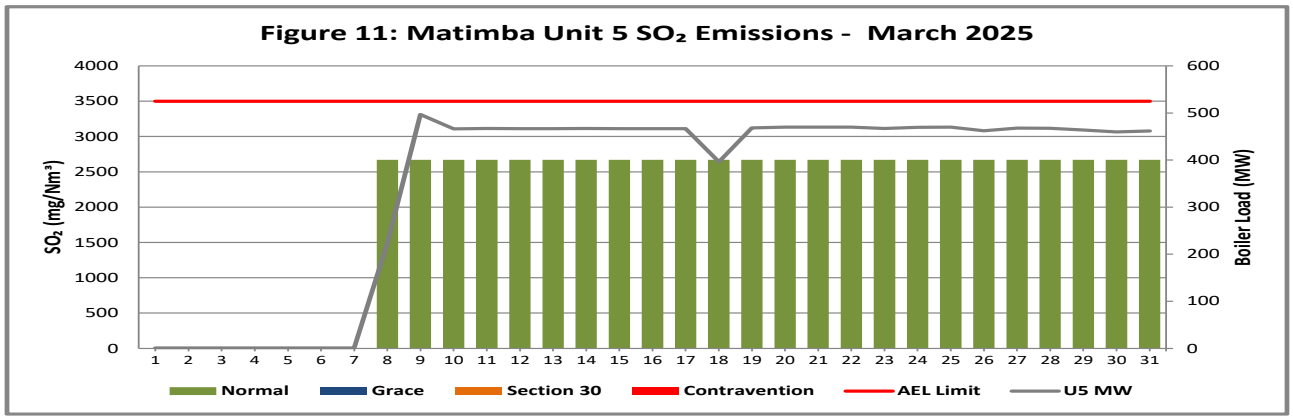

Figure 9: SO2 daily average emissions against emission limit for unit 5 for the month of March 2025

Interpretation: All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3. The monitor was reported to be unavailable on the 18th of December 2025 due to water ingress. Moisture in the control air affected the efficiency of the monitor. SRM (Standard Reference Material) values from the parallel test were used to calculate the gaseous emissions for unit 5.

Unit 6 SO_2 Emissions

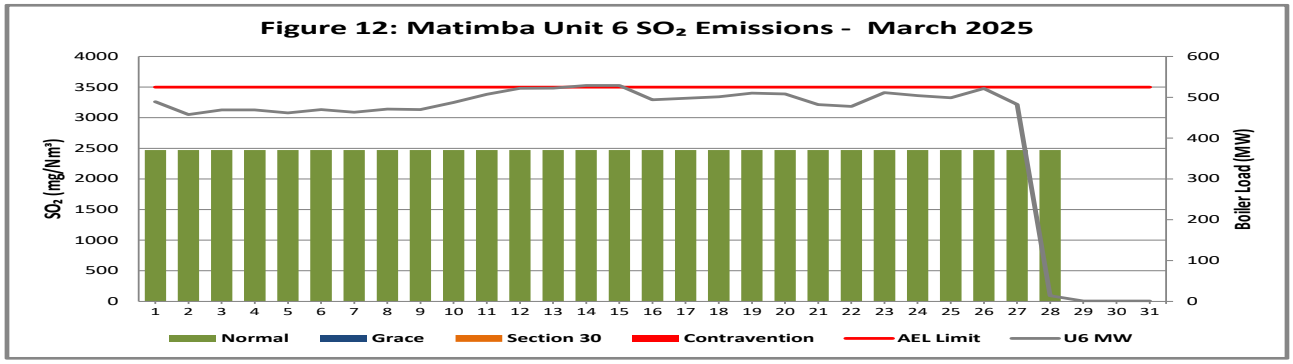

Figure 10: SO2 daily average emissions against emission limit for unit 6 for the month of March 2025

Interpretation: All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3. The monitor was reported to be unavailable on the 18th of December 2025 due to water ingress. Moisture in the control air affected the efficiency of the monitor. SRM (Standard Reference Material) values from the parallel test were used to calculate the gaseous emissions for unit 6.

2.3.2.b NOx Emissions

Unit 1 NO_x Emissions

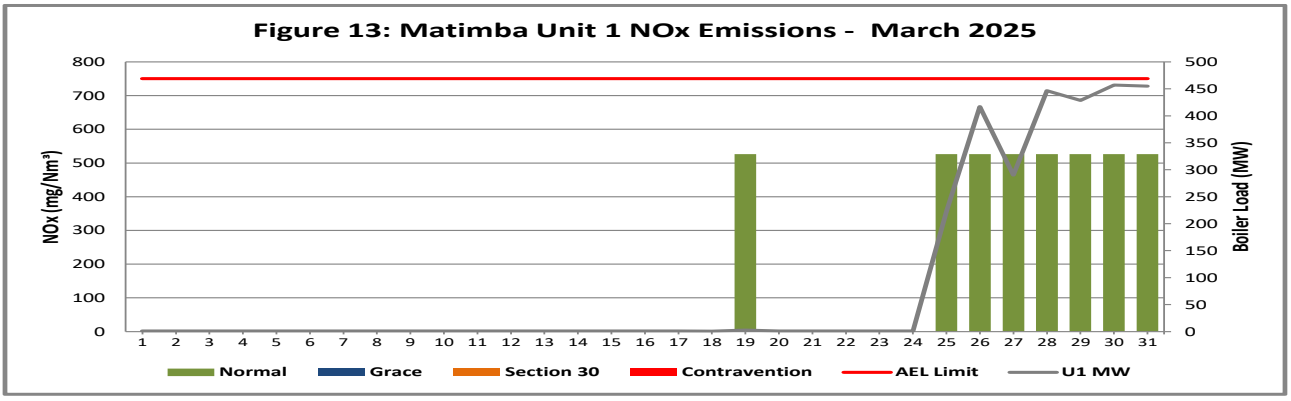

Figure 11: NOx daily average emissions against emission limit for unit 1 for the month of March 2025

Interpretation: All daily averages below NOx emission limit of 750 mg/Nm^3. The monitor was reported to be unavailable from January 2025 due to water ingress issue that passed to north stack from south stack. Moisture in the control air affected the efficiency of the monitor. SRM (Standard Reference Material) values from the parallel test were used to calculate the gaseous emissions for unit 1.

Unit 2 NO_x Emissions

Unit offload.

Unit 3 NO_x Emissions

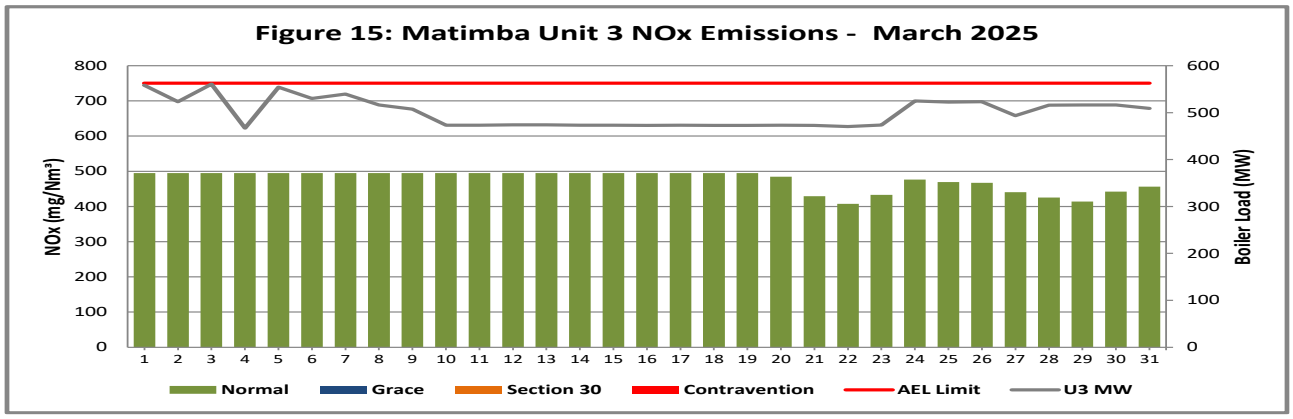

Figure 12: NOx daily average emissions against emission limit for unit 3 for the month of March 2025

Interpretation: All daily averages below NOx emission limit of 750 mg/Nm^3. The monitor was reported to be unavailable in January 2025 till 19th March 2025 due to water ingress issue that passed to north stack from south stack. Moisture in the control air affected the efficiency of the monitor. SRM (Standard Reference Material) values from the parallel test were used to calculate the gaseous emissions for unit 3 from the 1st to 19th March 2025.

Unit 4 NO_x Emissions

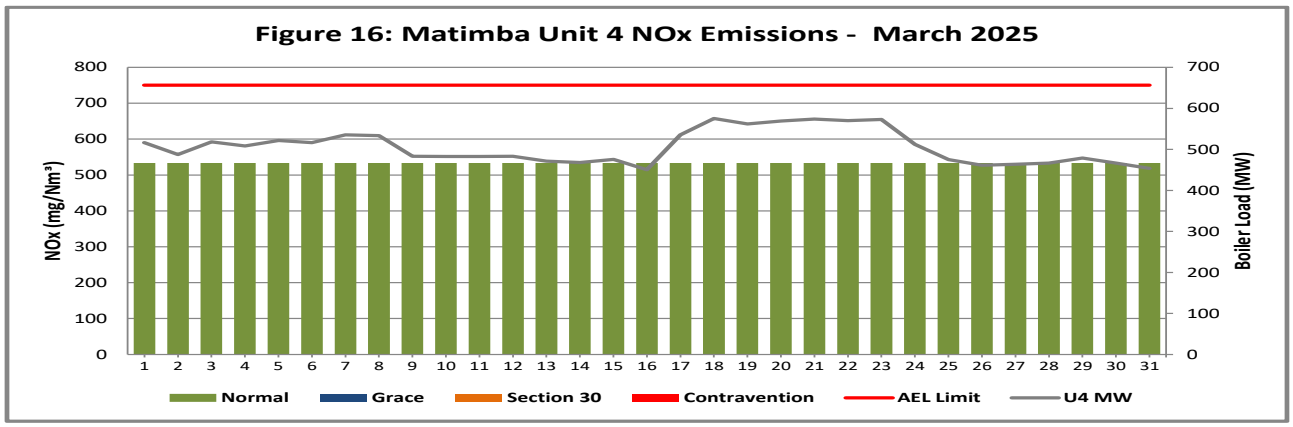

Figure 13: NOx daily average emissions against emission limit for unit 4 for the month of March 2025

Interpretation: All daily averages below NOx emission limit of 750 mg/Nm^3. The monitor was reported to be unavailable on the 18th of December 2025 due to water ingress. Moisture in the control air affected the efficiency of the monitor. SRM (Standard Reference Material) values from the parallel test were used to calculate the gaseous emissions for unit 4.

Unit 5 NO_x Emissions

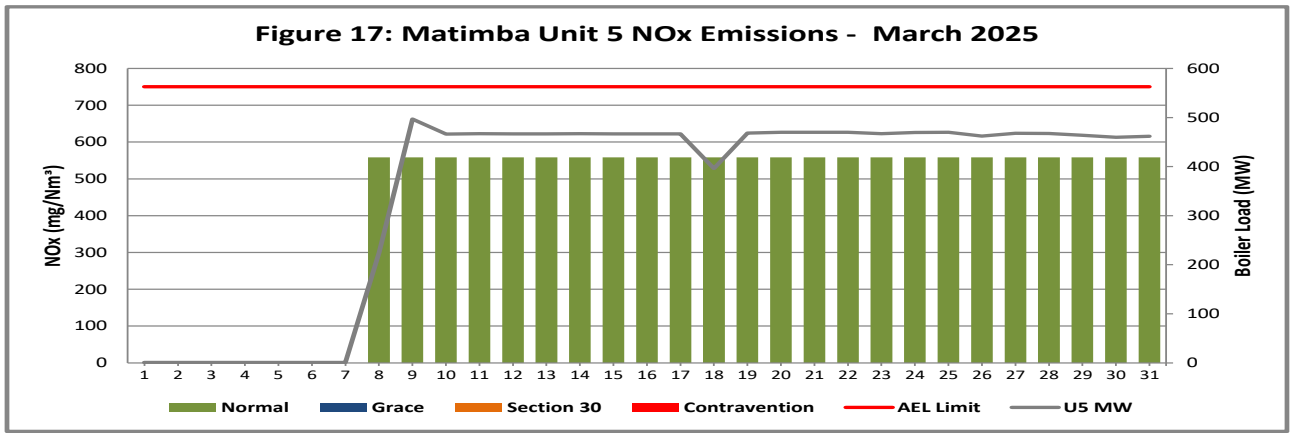

Figure 14: NOx daily average emissions against emission limit for unit 5 for the month of March 2025

Interpretation: All daily averages below NOx emission limit of 750 mg/Nm^3 .The monitor was reported to be unavailable on the 18th of December 2025 due to water ingress. Moisture in the control air affected the efficiency of the monitor. SRM (Standard Reference Material) values from the parallel test were used to calculate the gaseous emissions for unit 5.

Unit 6 NO_x Emissions

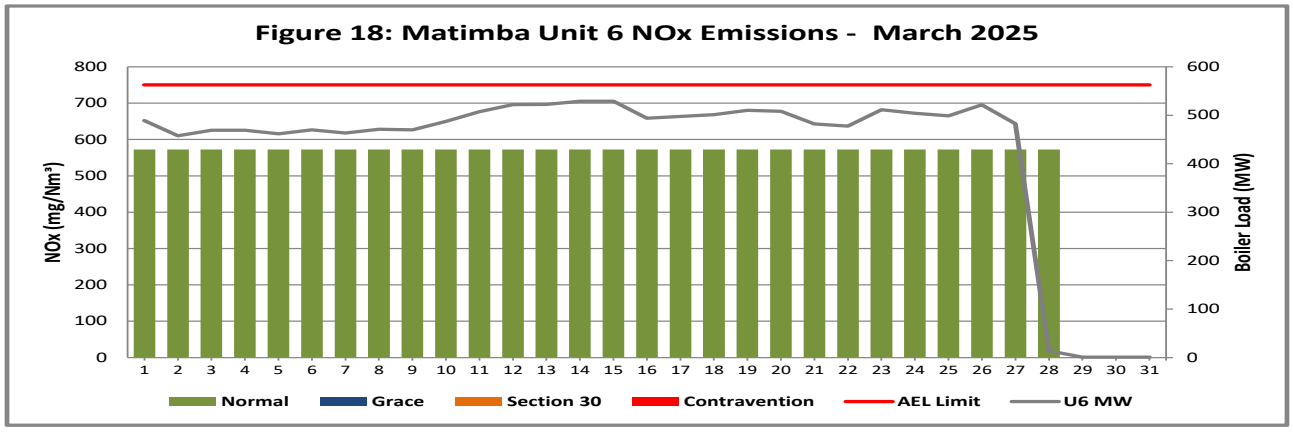

Figure 15: NOx daily average emissions against emission limit for unit 6 for the month of March 2025

Interpretation: All daily averages below NOx emission limit of 750 mg/Nm^3. The monitor was reported to be unavailable on the 18th of December 2025 due to water ingress. Moisture in the control air affected the efficiency of the monitor. SRM (Standard Reference Material) values from the parallel test were used to calculate the gaseous emissions for unit 6.

2.3.3 Total Volatile Organic Compounds

Table 4: Total volatile compound estimates

Eskom

CALCULATION OF EMISSIONS OF TOTAL VOLATILE COMPOUNDS FROM FUEL OIL STORAGE TANKS*

Date:	Tuesday, 29 April 2025
Station:	Matimba Power Station
Province:	Limpopo Province
Tank no.	1-4
Description:	Outdoor fuel oil storage tank
Tank Type:	Vertical fixed roof (vented to atmosphere)
Material stored:	Fuel Oil 150

MONTHLY INPUT DATA FOR THE STATION

Please only insert relevant monthly data inputs into the *blue cells* below
Choose from a dropdown menu in the *green cells*
The total VOC emissions for the month are in the *red cells*

IMPORTANT: Do not change ***any*** other cells without consulting the AQ CoE

MONTH:	**March**	
GENERAL INFORMATION:	**Data**	**Unit**
Total number of fuel oil tanks:	4	NA
Height of tank:	13.34	m
Diameter of tank:	9.53	m
Net fuel oil throughput for the month:	***2871.492***	
Molecular weight of the fuel oil:	166.00	Lb/lb-mole
METEROLOGICAL DATA FOR THE MONTH	**Data**	**Unit**
Daily average ambient temperature	23.67	°C
Daily maximum ambient temperature	30.21	°C
Daily minimum ambient temperature	17.89	°C
Daily ambient temperature range	12.31	°C
Daily total insolation factor	5.08	kWh/m²/day
Tank paint colour	***Grey/medium***	NA
Tank paint solar absorbtance	0.68	NA
FINAL OUTPUT:	**Result**	**Unit**
Breathing losses:	0.55	kg/month
Working losses:	0.08	kg/month
TOTAL LOSSES (Total TVOC Emissions for the month):	**0.63**	**kg/month**

*Calculations performed on this spreadsheet are taken from the USEPA AP-42- Section 7.1 Organic Liquid Storage Tanks - January 1996. This spreadsheet is derived from materials provided by Jimmy Peress, PE, Tritech Consulting Engineers, 85-93 Chevy Chase Street, Jamaica, NY 11432 USA, Tel - 718-454-3920, Fax - 718-454-6330, e-mail - PeressJ@nyc.rr.com.

2.3.4 Greenhouse gas (CO_2) emissions

CO_2 emissions are reported in terms of the Greenhouse gas reporting regulations (GN 43712, GNR. 994/2020) and are not included in the monthly AEL compliance report.

2.4 Daily power generated.

Table 5: Daily power generated per unit in MWh for the month of March 2025

Date	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
2025/03/01	Unit off	Unit off	12129.5	11202.1	Unit off	10605.5
2025/03/02	Unit off	Unit off	11341.8	10607.8	Unit off	9920.24
2025/03/03	Unit off	Unit off	12185	11330.7	Unit off	10163
2025/03/04	Unit off	Unit off	10083.5	11053.2	Unit off	10181.8
2025/03/05	Unit off	Unit off	12044	11390.4	Unit off	9991.81
2025/03/06	Unit off	Unit off	11499.8	11332	Unit off	10166.2
2025/03/07	Unit off	Unit off	11709.2	11657.3	Unit off	10022.2
2025/03/08	Unit off	Unit off	11192.4	11588.9	4366.24	10198.9
2025/03/09	Unit off	Unit off	11026.2	10437.1	10779.9	10160.4
2025/03/10	Unit off	Unit off	10228.6	10417.9	10101.4	10546.6
2025/03/11	Unit off	Unit off	10232.2	10409.9	10106.7	11010.7
2025/03/12	Unit off	Unit off	10245.2	10415.9	10110.2	11336.7
2025/03/13	Unit off	Unit off	10255.9	10205.2	10122.6	11353.5
2025/03/14	Unit off	Unit off	10247.8	10148.9	10121	11498.1
2025/03/15	Unit off	Unit off	10239.6	10320.8	10128.8	11494.8
2025/03/16	Unit off	Unit off	10240.9	9803.79	10121.5	10678.4
2025/03/17	Unit off	Unit off	10249.1	11613.5	10117.4	10738.9
2025/03/18	Unit off	Unit off	10246.1	12550.1	8570.06	10902.3
2025/03/19	Unit off	Unit off	10253	12295.4	10110.7	11075
2025/03/20	Unit off	Unit off	10256.2	12349.1	10191.6	10995.3
2025/03/21	Unit off	Unit off	10246.1	12522.3	10192.7	10415.2
2025/03/22	Unit off	Unit off	10198.1	12426.8	10189.3	10328.7
2025/03/23	Unit off	Unit off	10233.8	12506.3	10113.4	11072.9
2025/03/24	Unit off	Unit off	11396.5	11155.5	10179.8	10905
2025/03/25	4596.56	Unit off	11329.1	10345.6	10169.7	10801.8
2025/03/26	9046.51	Unit off	11381	9986.87	10008.4	11293.1
2025/03/27	6097.29	Unit off	10707	10072.9	10143.6	10504.1
2025/03/28	9792.05	Unit off	11222.6	10109	10121.7	59.3114
2025/03/29	9305.4	Unit off	11221.6	10391.4	10039.2	Unit off
2025/03/30	9977.87	Unit off	11157.7	10106.6	9954.17	Unit off
2025/03/31	10078.5	3874.47	11027.3	9993.46	10149.4	Unit off

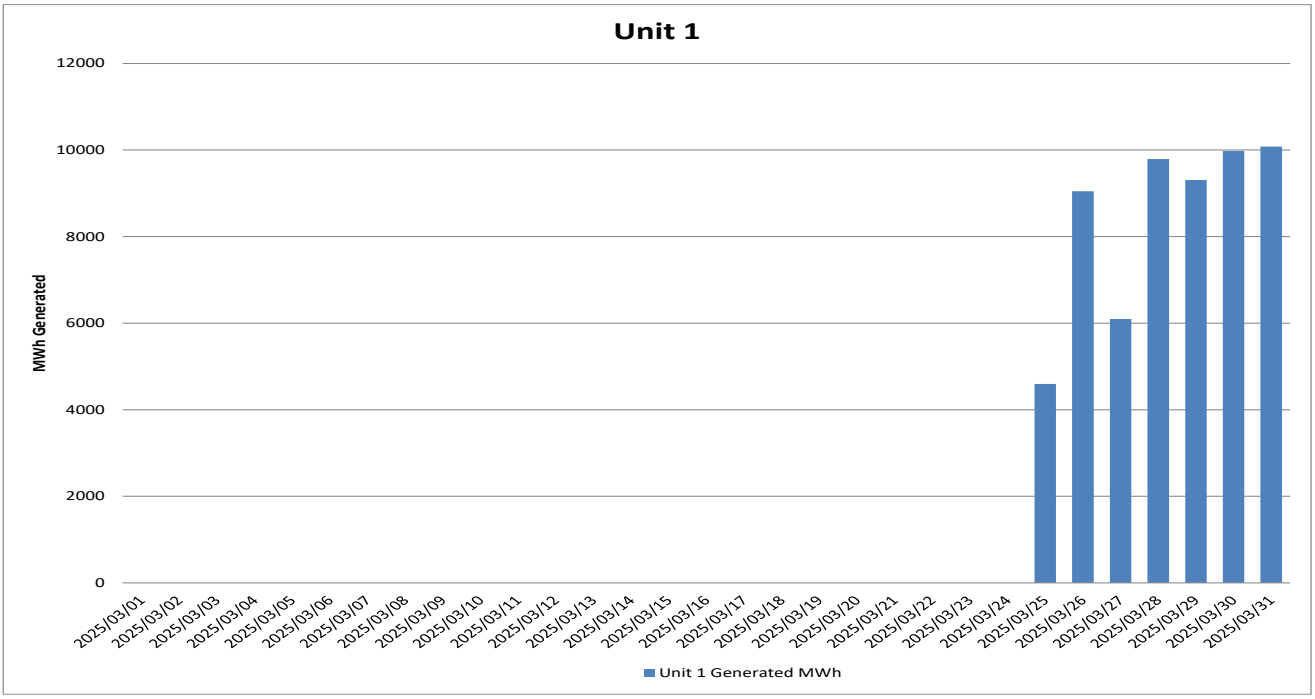

Figure 16: Unit 1 daily generated power in MWh for the month of March 2025

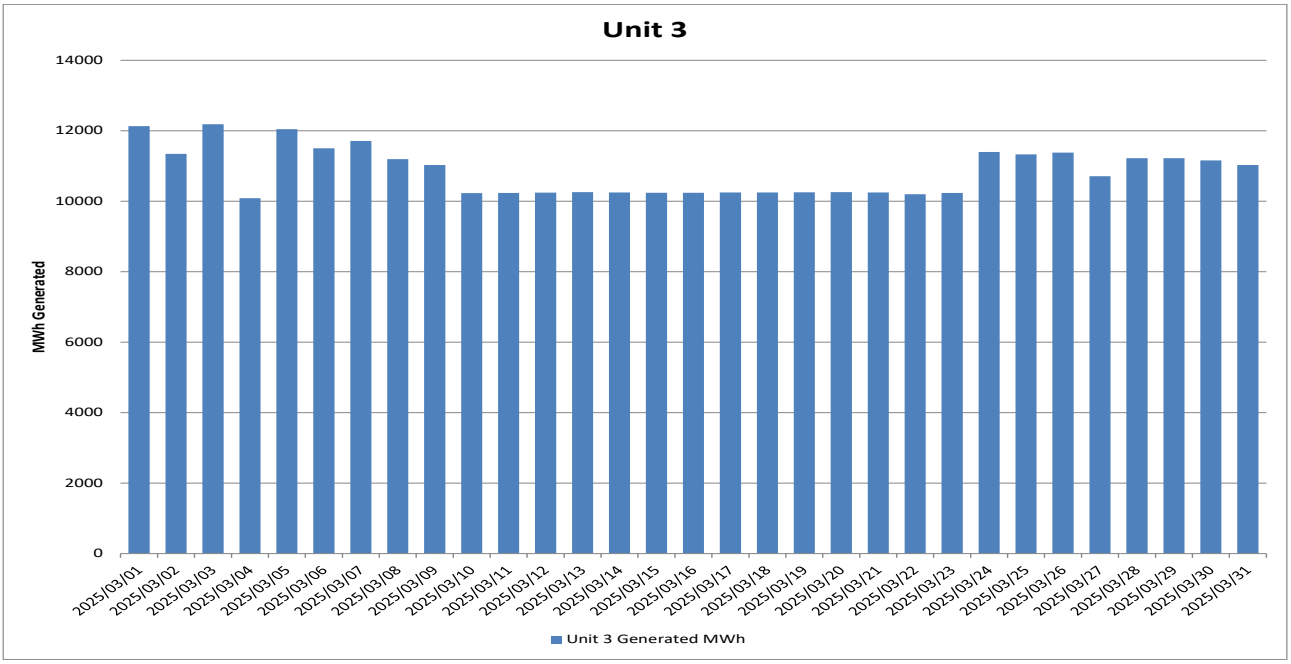

Figure 17: Unit 3 daily generated power in MWh for the month of March 2025

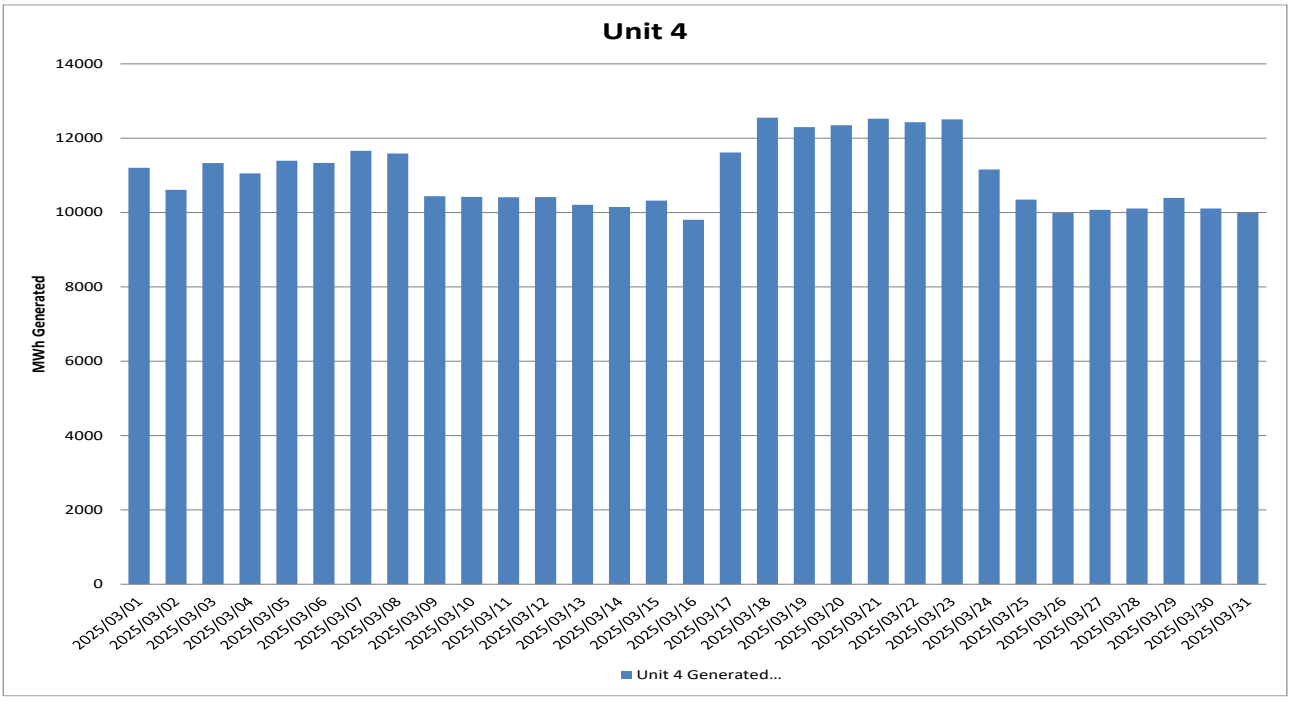

Figure 18: Unit 4 daily generated power in MWh for the month of March 2025

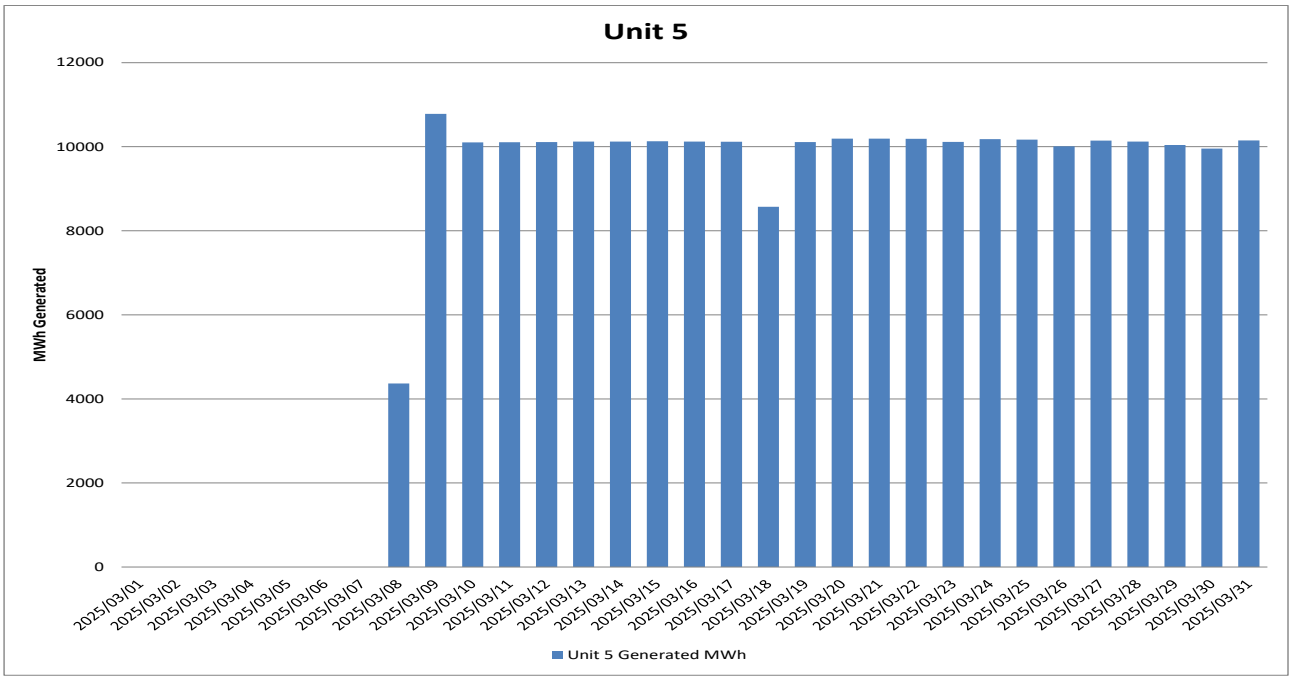

Figure 19: Unit 5 daily generated power in MWh for the month of March 2025

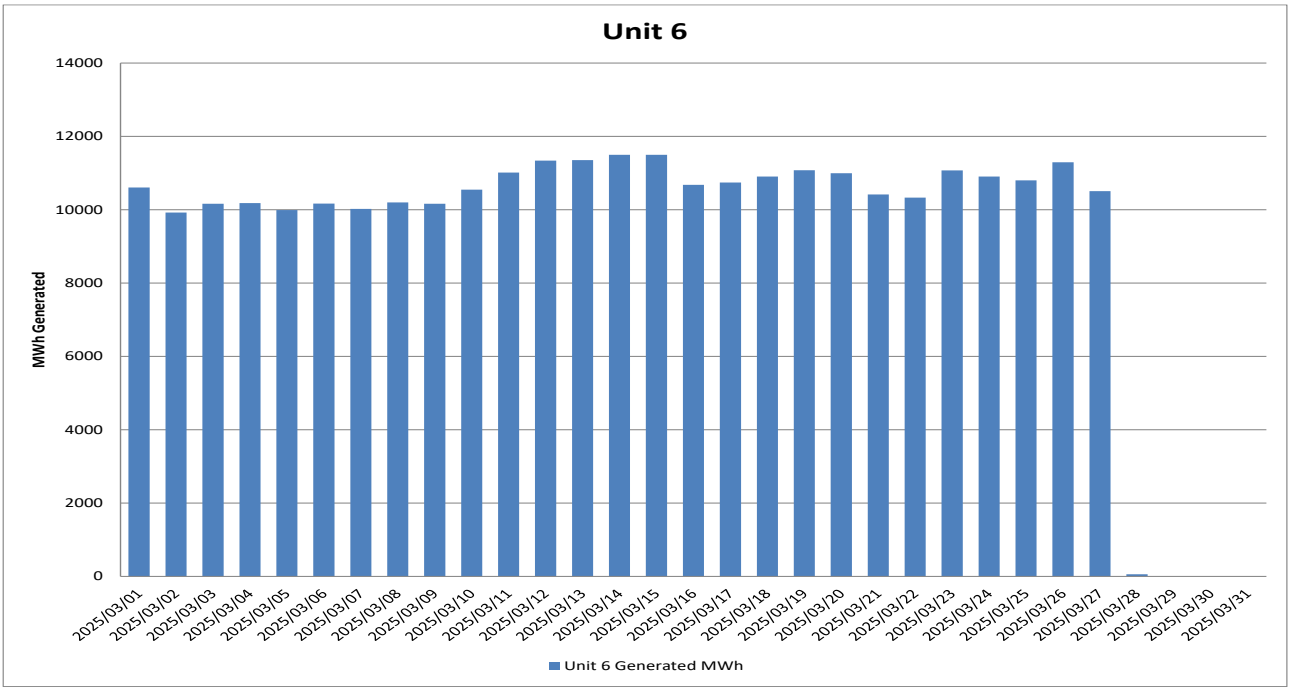

Figure 20: Unit 6 daily generated power in MWh for the month of March 2025

2.5 Pollutant Tonnages

The emitted pollutant tonnages for March 2025 are provided in table 6.

Table 6: Pollutant tonnages for the month of March 2025

Associated Unit/Stack	PM (tons)	SO_2 (tons)	NO_x (tons)
Unit 1	54.9	922.4	186.6
Unit 2	Exempt	0.0	0.0
Unit 3	2 170.9	4 549.9	795.8
Unit 4	80.0	497.1	86.3
Unit 5	480.6	3 961.3	828.3
Unit 6	90.5	4 429.2	1 026.9
SUM	2 876.9	14 359.9	2 923.8

2.6 Operating days in compliance to PM AEL Limit

Table 7: Operating days in compliance with PM AEL limit of March 2025

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
Unit 1	0	2	0	4	6	239.5
Unit 2	Exempt	Exempt	Exempt	Exempt	Exempt	Exempt
Unit 3	0	0	0	31	31	1 283.7
Unit 4	7	2	0	22	24	494.6
Unit 5	0	2	0	21	23	334.1
Unit 6	20	5	0	3	8	53.5
SUM	**27**	**11**	**0**	**81**	**92**	

2.7 Operating days in compliance to SOx AEL Limit

Table 8: Operating days in compliance with SOx AEL limit of March 2025

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO_2 (mg/Nm³)
Unit 1	8	0	0	0	0	2 601.5
Unit 2	0	0	0	0	0	
Unit 3	31	0	0	0	0	2 720.9
Unit 4	31	0	0	0	0	3 072.7
Unit 5	24	0	0	0	0	2 670.7
Unit 6	28	0	0	0	0	2 470.5
SUM	**122**	**0**	**0**	**0**	**0**	

2.8 Operating days in compliance to NOx AEL Limit

Table 9: Operating days in compliance with NOx AEL limit of March 2025

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
Unit 1	8	0	0	0	0	526.2
Unit 2	0	0	0	0	0	
Unit 3	31	0	0	0	0	475.6
Unit 4	31	0	0	0	0	533.4
Unit 5	24	0	0	0	0	558.4
Unit 6	28	0	0	0	0	572.8
SUM	**122**	**0**	**0**	**0**	**0**	

2.9 Reference values

Table 10: Reference values for data provided, March 2025

Compound / Parameter	Units of Measure	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Oxygen	%	9.48		9.22	7.98	7.34	9.84
Moisture	%	4.54		4.83	5.92	5.12	3.66
Velocity	m/s	24.0	10.2	23.5	2.1	23.7	29.1
Temperature	ºC	110.3		133.4	136.4	122.5	110.0
Pressure	mBar	898.9	923.9	917.5	904.4	902.3	902.1

2.10 Continuous Emission Monitors

2.10.1 Reliability

Table 11: Monitor reliability percentage (%)

Associated Unit/Stack	PM	SO_2	NO
Unit 1	*0.0*	*100.0*	*100.0*
Unit 2	*Exempt*	*Exempt*	*Exempt*
Unit 3	*82.8*	*99.9*	*99.9*
Unit 4	*69.2*	*100.0*	*100.0*
Unit 5	*57.1*	*100.0*	*100.0*
Unit 6	*96.6*	*100.0*	*100.0*

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

Continuous emission monitors were reliable for less than 80% of the reporting period for unit 1, 3,4 and 5 PM. Unit 1 PM monitor reliability was low zero because the dust monitor was not calibrated and the monitor kept maxing out of the monitor's range since the unit was synchronized. Unit 3 PM monitor reliability was low due to the number of times the monitor kept maxing out of the monitors' range. Unit 4 PM monitor reliability was low due to the number of times the monitor kept maxing out of the monitors' range. Unit 5 PM monitor reliability was low due to the number of times the monitor kept maxing out of the monitors' range Unit 1,3,4, 5 and 6 gaseous monitor reliability was above 99% due to the SRM (Standard Reference Material) values from the parallel test used to calculate the gaseous emissions for unit 1,3,4,5 and 6.

Table 12: Average percentage (%) availability of monitors for the month of March 2025.

Unit	SO_2	NO_x	PM	CO_2
1	100.0	100.0	0.0	100.0
2	Exempt	Exempt	Exempt	Exempt
3	99.9	99.9	82.8	100.0
4	100.0	100.0	69.2	100.0
5	100.0	100.0	57.1	100.0
6	100.0	100.0	96.6	100.0

Continuous emission monitors were available for less than 80% of the reporting period for unit 1,3, 4 and 5 PM. Unit 1 PM monitor availability was low zero because the dust monitor was not calibrated and the monitor kept maxing out of the monitor's range since the unit was synchronized. Unit 3 PM monitor availability was low due to the number of times the monitor kept maxing out of the monitors' range. Unit 4 PM monitor availability was low due to the number of times the monitor kept maxing out of the monitors' range. Unit 5 PM monitor availability was low due to the number of times the monitor kept maxing out of the monitors' range. Unit 1,3,4, 5 and 6 gaseous monitor availability was above 99% due to the SRM (Standard Reference Material) values from the parallel test used to calculate the gaseous emissions for unit 1,3,4,5 and 6.

2.10.2 Changes, downtime, and repairs

Unit 1

- No adjustments done on the CEMs.
- Correlation test to be done.

Unit 2

- No adjustments done on the CEMs.
- No downtime or repairs done on the particulate monitors.

Unit 3

- No adjustments done on the CEMs.
- Correlation test to be done.

Unit 4

- No adjustments done on the CEMs.
- Correlation test to be done.

Unit 5

- No adjustments done on the CEMs.
- Correlation test to be done.

Unit 6

- No adjustments done on the CEMs.
- Correlation test to be done.

2.10.3 Sampling dates and times

Table 13: Dates of last full conducted CEMS verification tests for PM for unit 6.

Name of service provider:		Stacklabs Environmental Services CC		
Address of service provider:		10 Chisel Street Boltonia Krugersdorp 1739		
Stack/ Unit	**PM**	**SO_2**	**NOx**	**CO_2**
6	2020/09/09 06h41	New sampling tests in table 14	New sampling tests in table 14	New sampling tests in table 14

Table 14: Dates of last conducted CEMS Spot verification tests for PM, SO_2 and NOx for unit 1, 5 and 6)

Name of service provider:		Levego Environmental services		
Address of service provider:		Building R6 Pineland site Ardeer Road Modderfontein 1645		
Stack/ Unit	**PM**	**SO_2**	**NOx**	**CO_2**
1	2023/08/01 19h33	2023/08/01 19:33	2023/08/01 19:33	2023/08/01 19:33
5	2023/08/05 07:30	2023/08/05 07:30	2023/08/05 07:30	2023/08/05 07:30
6	Dates in table 13 above	2023/08/05 15:52	2023/08/05 15:52	2023/08/05 15:52

Note: The CEMS Spot verification tests for PM, SO_2 and NOx were performed in August 2023. PM spot verification test results for unit 6 failed and old curves are still in use.

Table 15: Dates of last full conducted CEMS verification tests for PM for unit 2, unit 3 and 4 only

Name of service provider:		Levego Environmental services		
Address of service provider:		Building R6 Pineland site Ardeer Road Modderfontein 1645		
Stack/ Unit	**PM**	**SO_2**	**NOx**	**CO_2**
2	2024/07/02 08h50	2024/07/02 12h35	2024/07/02 12h35	2024/07/02 12h35
3	2024/06/23 16h34	2024/06/23 14h00	2024/06/23 14h00	2024/06/23 14h00
4	2024/06/29 16h05	2024/06/29 11h00	2024/06/29 11h00	2024/06/29 11h00

2.11 Units Start-up information

Table 16: Start-up information

Unit	1	
Fires in	2025/03/23	09h45
Synchronization with Grid	2025/03/25	09h35
Emissions below limit	N/A	The unit did not go below the limit after it was returned from outage March 2025.
Fires in, to synchronization	47.50	HOURS
Synchronization to < Emission limit	N/A	HOURS

Unit	2	
Fires in	2025/03/30	22h09
Synchronization with Grid	2025/03/31	09h56
Emissions below limit	N/A	The unit did not go below the limit after it was returned from outage March 2025.
Fires in, to synchronization	11.47	HOURS
Synchronization to < Emission limit	N/A	HOURS

Unit	5	
Fires in	2025/03/07	19h49
Synchronization with Grid	2025/03/08	11h10
Emissions below limit	N/A	The unit did not go below the limit after it was returned from outage March 2025.
Fires in, to synchronization	15.21	HOURS
Synchronization to < Emission limit	N/A	HOURS

2.12 Emergency generation

Table 17: Emergency generation

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Emergency Generation hours declared by national Control	744	744	744	744	744	744
Emergency Hours declared including hours after standing down	160.340	24.000	744.000	744.000	570.750	650.050
Days over the Limit during Emergency Generation	6	Off	31	24	23	8

During the period under review all Units were on emergency generation in force from 01 March 2025 until 31 March 2025.

2.13 Complaints register.

Table 18: Complaints

Source Code/ Name	Root Cause Analysis	Calculation of Impacts/ emissions associated with the incident	Dispersion modelling of pollutants where applicable	Measures implemented to prevent reoccurrence	Date by which measure will be implemented
None					

2.14 Air quality improvements and social responsibility conducted.

Air quality improvements

None

Social responsibility conducted.

None

2.15 Ambient air quality monitoring

Marapong ambient air quality monitoring station was relocated from the previous location to Ditheku primary school and commissioned to service on 20 March 2024. The March 2025 ambient air quality monitoring report is attached to this report as an addendum.

2.16 Electrostatic precipitator and Sulphur plant status

Unit 1

- Unit on outage.
- RTS on 25 March 2025.

Unit 2

- Unit on outage.

Unit 3

- 4 fields defective.
- Unit 3 SO3 plant running at low SO3 injection rate due to defective process air flow transmitters.

Unit 4

- 5 fields defective.
- No abnormalities on the SO3 plant.

Unit 5

- 4 fields defective.
- No abnormalities on the SO3 plant.

Unit 6

- 4 fields defective.
- No abnormalities on the SO3 plant.

SO3 common plant

- Sulphur supply pump number 2 not available.

2.17 General

Name and reference number of the monitoring methods used:

1. Particulate and gas monitoring according to standards
    a. BS EN 14181:2004 - Quality Assurance of Automated Measuring Systems
    b. ESKOM internal standard 240-56242363 Emissions Monitoring and Reporting Standard

Sampling locations:

1. Stack one
    a. Particulates:
        i. S23º 40' 2.8" E027º 36' 34.8" 175m from ground level and 75m from the top.
    b. Gas:
        i. S23º 40' 2.8" E027º 36' 34.8" 100m from ground level and 150m from the top.
    c. Stack height
        i. 250 meter consist of 3 flues
2. Stack two
    a. Particulates:
        i. S23º 40' 14.8" E027º 36' 47.5" 175m from ground level and 75m from the top.
    b. Gas:
        i. S23º 40' 14.8" E027º 36' 47.5" 100m from ground level and 150m from the top.
    c. Stack height
        i. 250 meter consist of 3 flues

3. Attachments

- Fugitive dustfall out monitoring report and Ambient air quality report.
- Marapong ambient air quality report

4. Report Conclusion

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

Hoping the above will meet your satisfaction.

I hereby declare that the information in this report is correct.

Yours sincerely

GENERAL MANAGER: MATIMBA POWER STATION