Eskom	Technical and Generic Report	Matimba Power Station

Title: **Matimba Power Station October 2024 emissions report**

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pp

Content

Figures

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 October 2024.The information recorded in the report is obtained from Matimba Emission Reporting tool V10.2024.

During the period under review, Matimba experienced sixty-two (62) exceedances of the daily particulate matter emission limit (50mg/Nm^3), thirty-six (36) 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 twenty-six (26) exceedances occurred within the 48-hour grace period.

There were no exceedances of the monthly SOx limit (3500mg/Nm3). The were no exceedances of the daily NOx emission limit (750mg/Nm3).

Flue gas conditioning plant availability was above 80% for units except unit 3 which operated at availability of 55%. Unit 3 SO3 plant availability was low due to low load, SO_3 plant kept tripping on burner outlet high temperature and converter inlet temperature low (air flow meter transmitter faulty). Defects were addressed and plants returned to service.

The consumption rates for fuel oil for the month of October 2024 exceeded the limit of 1200 tons due to multiple combustion support and units light up trips.

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	952 530
	Fuel Oil	Tons/month	1 200	1565.589
Production Rates	**Product/ By-Product Name**	**Unit**	**Maximum Production Capacity Permitted (Quantity)**	**Production Rate**
	Energy	MW	4000	1229.321

The consumption rates for fuel oil for the month of October 2024 exceeded the permitted maximum limits due to multiple combustion support and units light up trips.

2.2 Abatement technology

Table 2: Abatement Equipment Control Technology Utilised

Associated Unit	Technology Type	Minimum utilisation (%)	Efficiency (%)
Unit 1	Electrostatic Precipitator	100%	99.999%
Unit 2	Electrostatic Precipitator	100%	99.998%
Unit 3	Electrostatic Precipitator	100%	99.998%
Unit 4	Electrostatic Precipitator	100%	99.998%
Unit 5	Electrostatic Precipitator	100%	99.999%
Unit 6	Electrostatic Precipitator	100%	Off
Associated Unit	**Technology Type**	**Minimum utilisation (%)**	**Actual Utilisation (%)**
Unit 1	SO_3 Plant	100%	93%
Unit 2	SO_3 Plant	100%	88%
Unit 3	SO_3 Plant	100%	55%
Unit 4	SO_3 Plant	100%	98%
Unit 5	SO_3 Plant	100%	96%
Unit 6	SO_3 Plant	100%	Off

Flue gas conditioning plant availability was below 90% for unit 2 and unit 3. Unit 2 SO3 plant was constantly on hold due to low load. Unit 3 SO3 plant was on hold for the month of October 2024 due to low load, SO3 plant kept tripping on burner outlet high temperature and converter inlet temperature low (air flow meter transmitter faulty). Unit 1 SO3 plant availability was at 93% due to plant on Hold -raising temp(Burner inlet temperature).Unit 4 SO3 plant availability was 98% due to SO3 plant on hold due to process blower motor fault. Unit 5 SO3 plant was at 96% due to on hold due to low load Defects were addressed and plants returned to service.

Table 3: Energy Source Material Characteristics.

	Characteristic	Stipulated Range (Unit)	Monthly Average Content
Coal burned	**Sulphur Content**	1.6%	1.399%
	Ash Content	40%	35.077%

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 spot test were performed in August 2023 and the results were applied and used for gaseous emissions calculation for October 2024.The spot test results for PM emissions does not meet the minimum requirements outlined in the Eskom emission calculation Methodology and were not applied.

Unit 1 Particulate Emissions

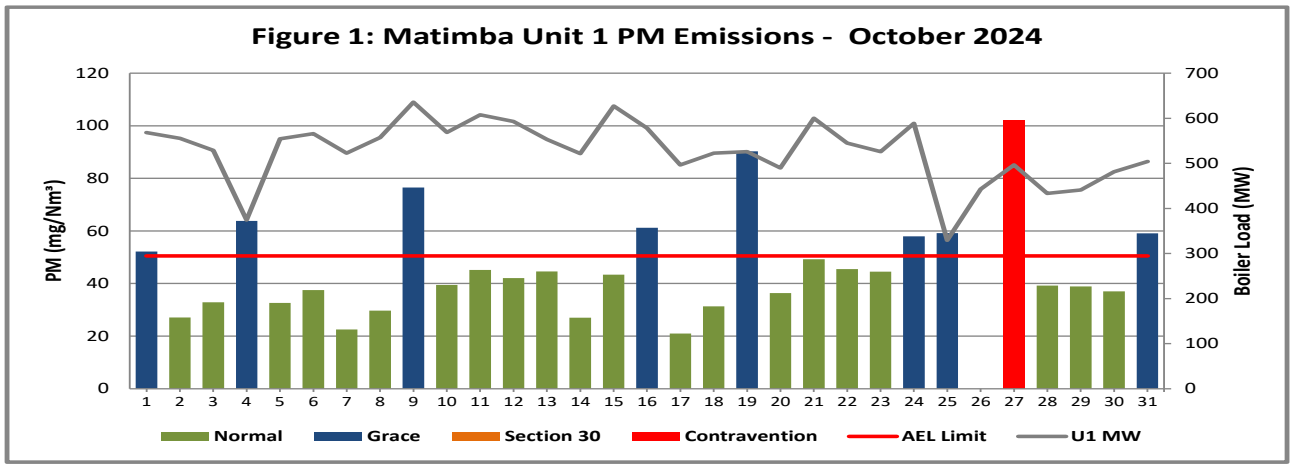

Figure 1: Particulate matter daily average emissions against emission limit for unit 1 for the month of October 2024

Interpretation: Unit 1 exceeded the daily particulate emission limit of 50mg/Nm3 on 1,4,9,16,19,24,25,27 and 31 October 2024. The exceedance on 27 October 2024 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 exceedance was due to high hopper levels causing electrostatic precipitators fields to trip and have low efficiency.

Unit 2 Particulate Emissions

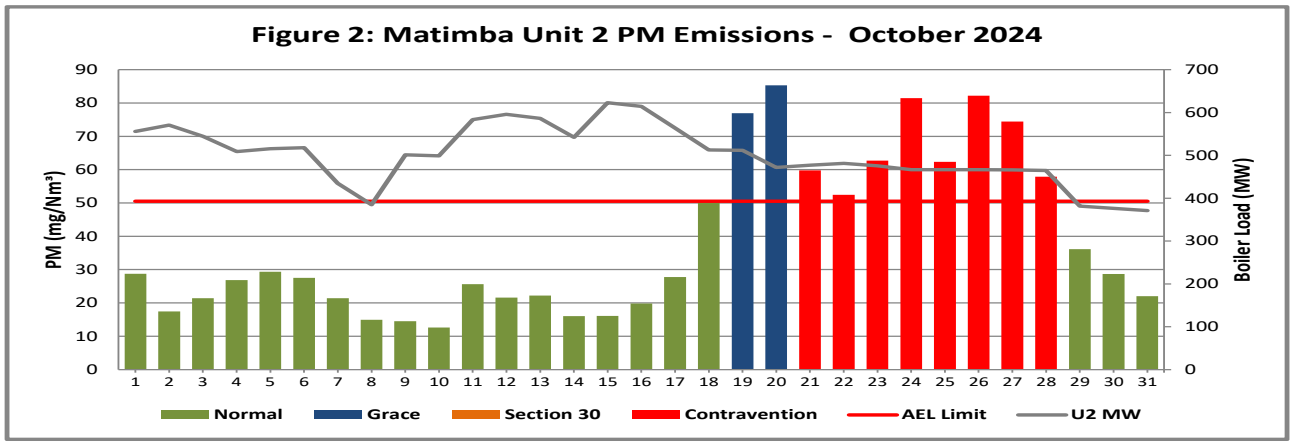

Figure 2: Particulate matter daily average emissions against emission limit for unit 2 for the month of October 2024

Interpretation: Unit 2 exceeded the daily particulate emission limit of 50mg/Nm3 on 19 to 28 October 2024. The exceedances from 21 to 28 October 2024 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 3 Particulate Emissions

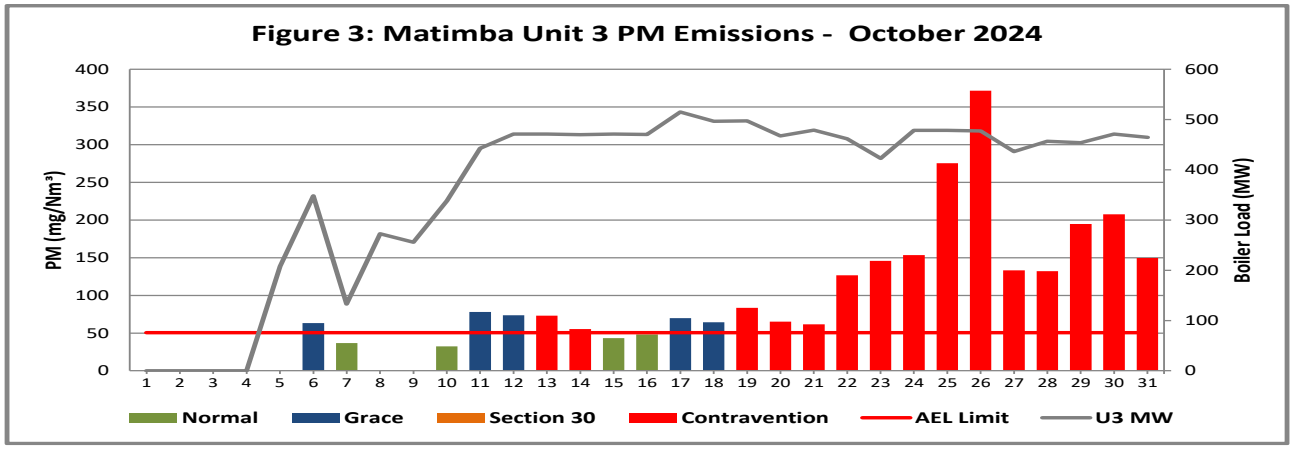

Figure 3: Particulate matter daily average emissions against emission limit for unit 3 for the month of October 2024

Interpretation: Unit 3 exceeded the daily particulate emission limit of 50mg/Nm3 on 1,11 to 14 and 17 to 31 October 2024. The exceedances from 6, 11,12,17 and 18 October 2024 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

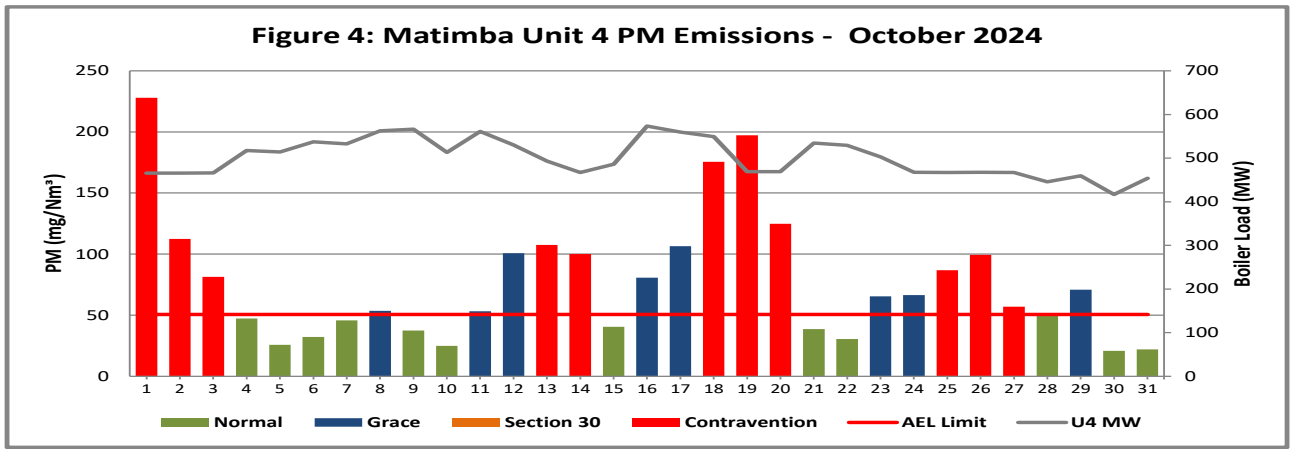

Figure 4: Particulate matter daily average emissions against emission limit for unit 4 for the month of October 2024

Interpretation: Unit 4 exceeded the daily particulate emission limit of 50mg/Nm3 on 1 to 3, 8,11 to 14, 16 to 20, 23 to 27 and 29 October 2024. The exceedances from 8,11,12,16,17,23,24 and 29 October 2024 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 5 Particulate Emissions

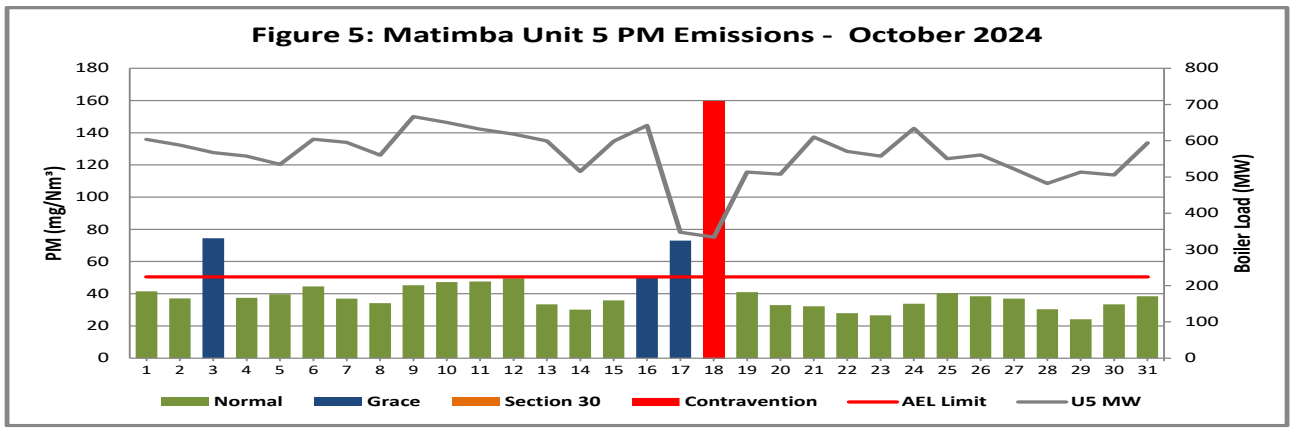

Figure 5: Particulate matter daily average emissions against emission limit for unit 5 for the month of October 2024

Interpretation: Unit 5 Particulate matter exceeded the daily limit of 50 mg/Nm^3 on 3 and 16 to 18 October 2024. Exceedance on 18 October 2024 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 and light up.

Unit 6 Particulate Emissions

Unit 6 is on outage.

2.3.2 Gaseous Emissions

Gaseous emissions analyzers calibration for all 6 units were performed in October 2024 as per the Eskom emission standard requirement.

The quality assurance spot tests were performed on the monitors in August 2023 and the test results are used for the October 2024 emission calculation.

2.3.2.a SOx Emissions

Unit 1 SO_2 Emissions

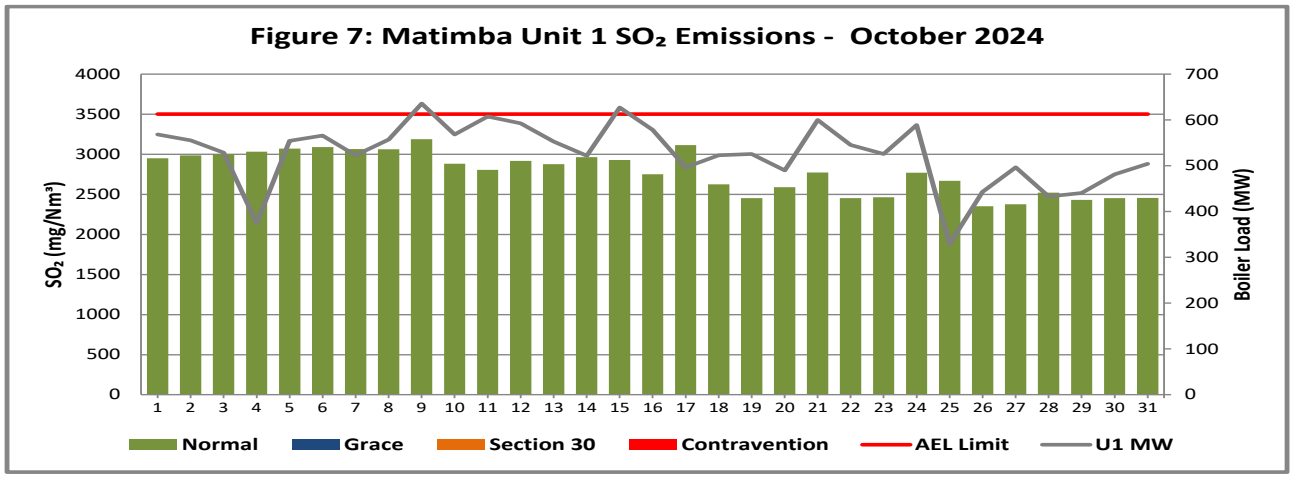

Figure 6: SO2 daily average emissions against emission limit for unit 1 for the month of October 2024

Interpretation: All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3.

Unit 2 SO_2 Emissions

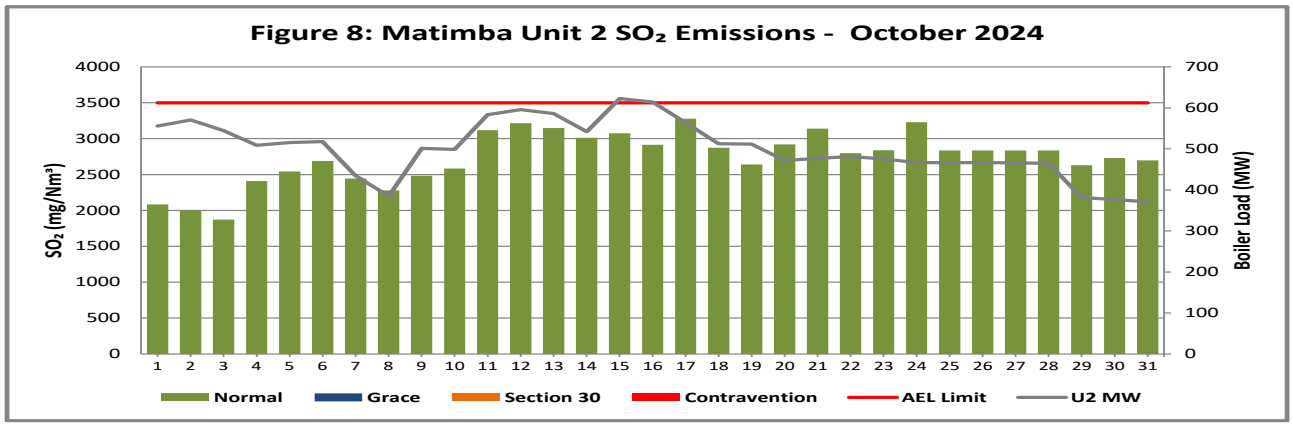

Figure 7: SO2 daily average emissions against emission limit for unit 2 for the month of October 2024

Interpretation: All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3.

Unit 3 SO_2 Emissions

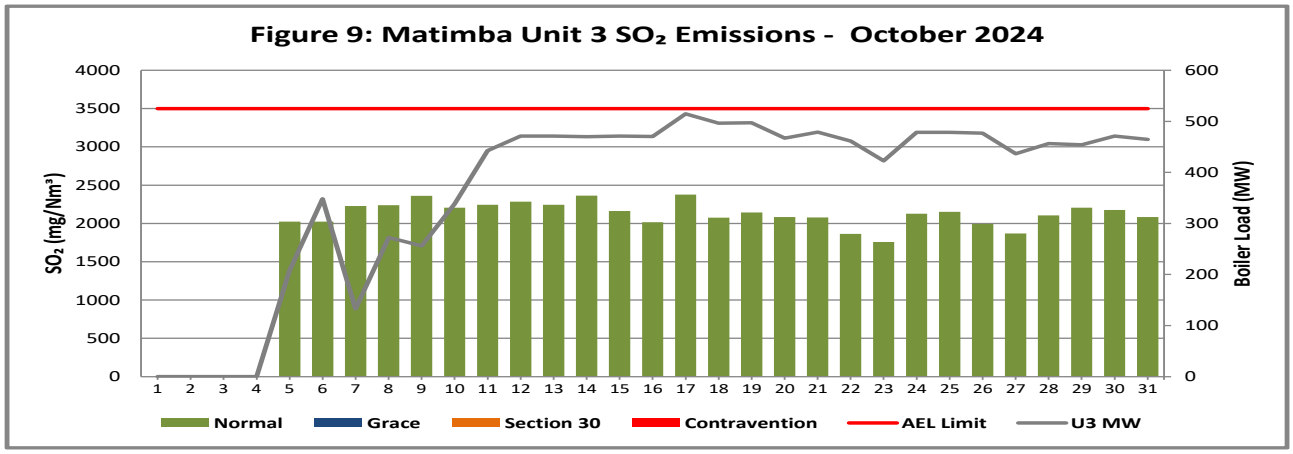

Figure 8: SO2 daily average emissions against emission limit for unit 3 for the month of October 2024

Interpretation: All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3.

Unit 4 SO_2 Emissions

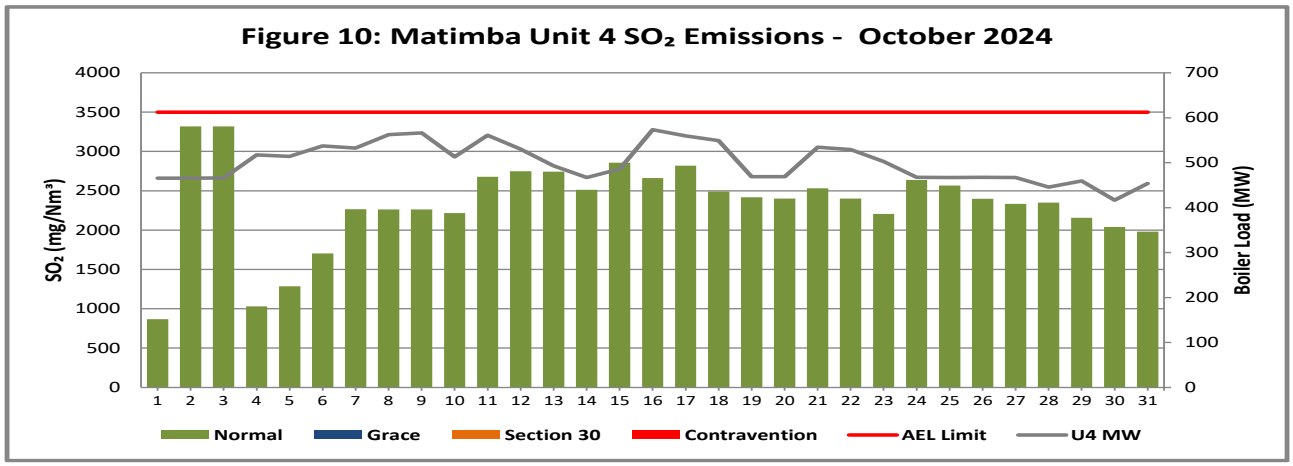

Figure 9: SO2 daily average emissions against emission limit for unit 3 for the month of October 2024

Interpretation: All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3.Unit 4 monitor was faulty on the 2nd and 3rd. The monitor was repaired and calibrated on the 10th October 2024.

Unit 5 SO_2 Emissions

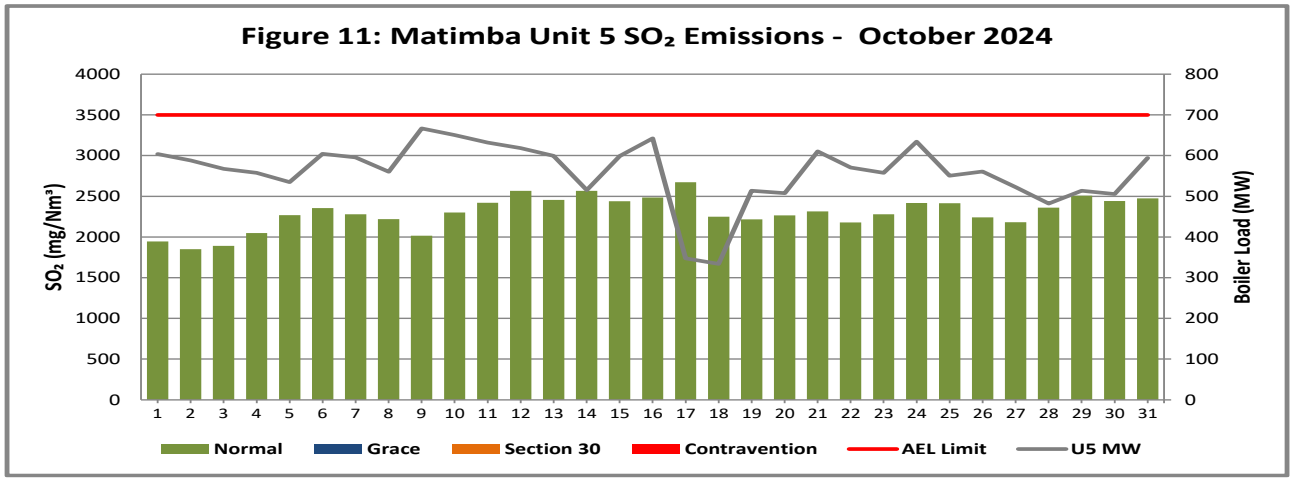

Figure 10: SO2 daily average emissions against emission limit for unit 5 for the month of October 2024

Interpretation: All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3.

Unit 6 SO_2 Emissions

Unit 6 is on outage.

2.3.2.b NOx Emissions

Unit 1 NO_x Emissions

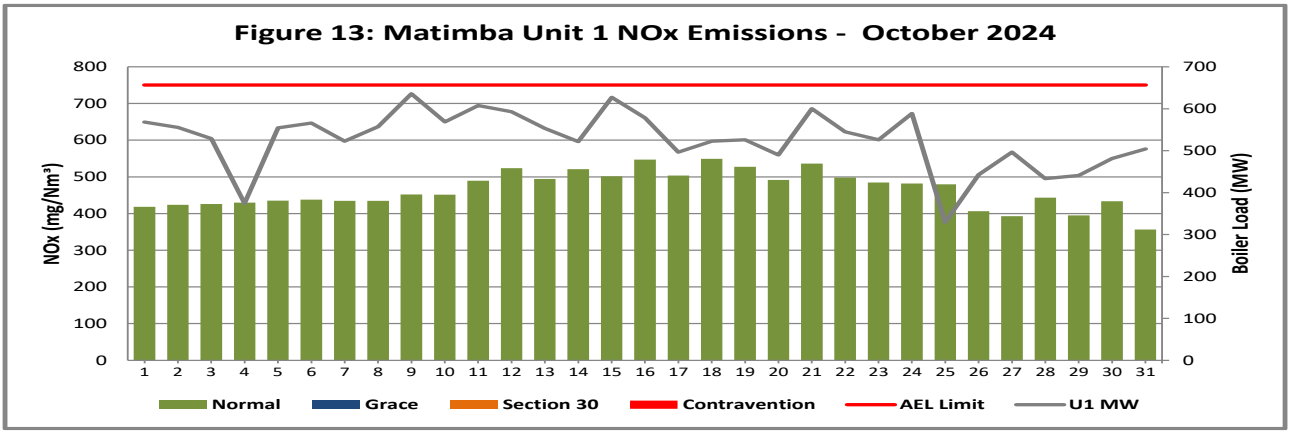

Figure 11: NOx daily average emissions against emission limit for unit 1 for the month of October 2024

Interpretation: All daily averages below NOx emission limit of 750 mg/Nm^3.

Unit 2 NO_x Emissions

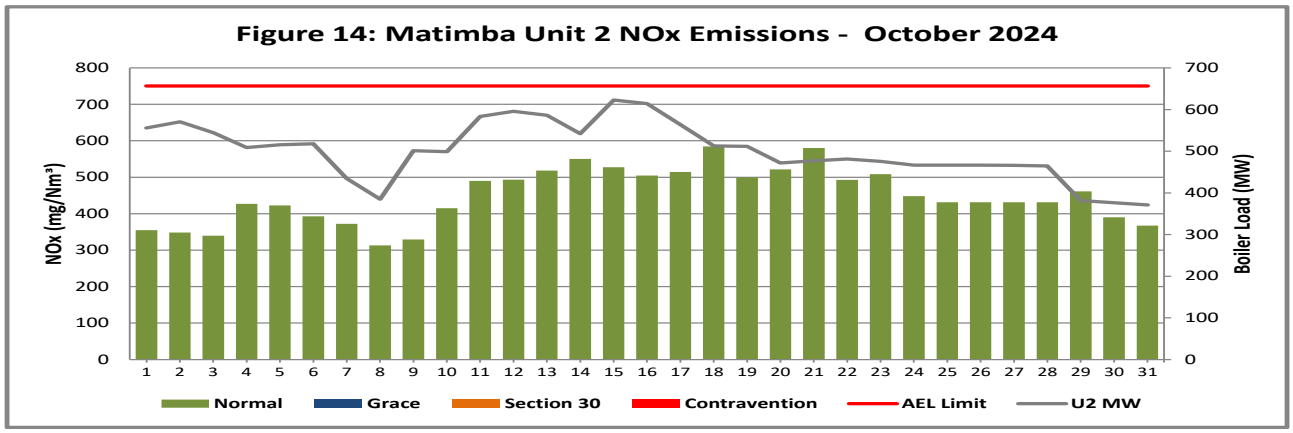

Figure 12: NOx daily average emissions against emission limit for unit 2 for the month of October 2024

Interpretation: All daily averages below NOx emission limit of 750 mg/Nm^3.

Unit 3 NO_x Emissions

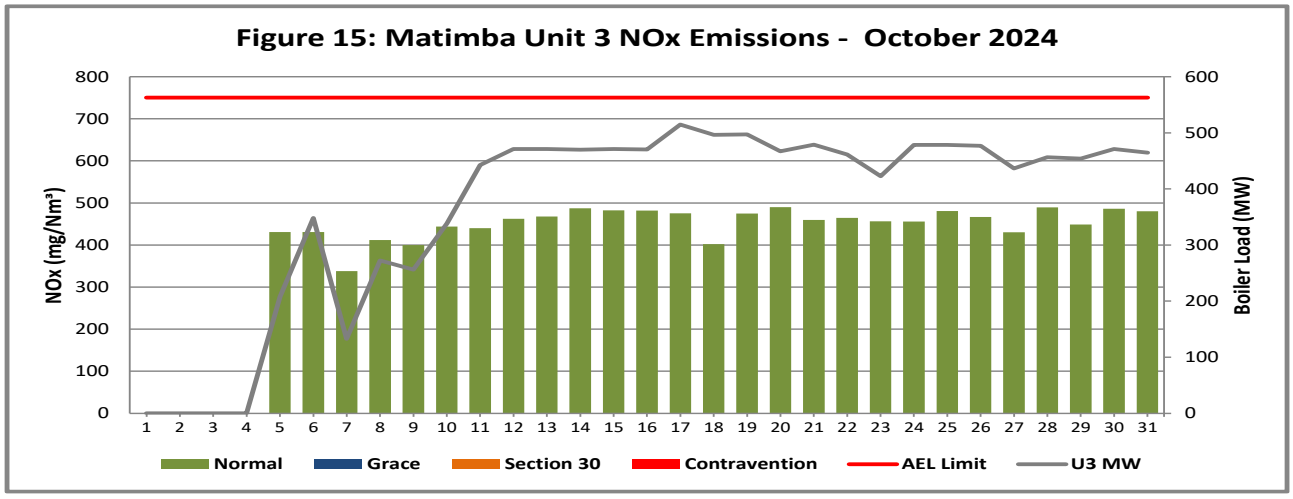

Figure 13: NOx daily average emissions against emission limit for unit 3 for the month of October 2024

Interpretation: All daily averages below NOx emission limit of 750 mg/Nm^3.

Unit 4 NO_x Emissions

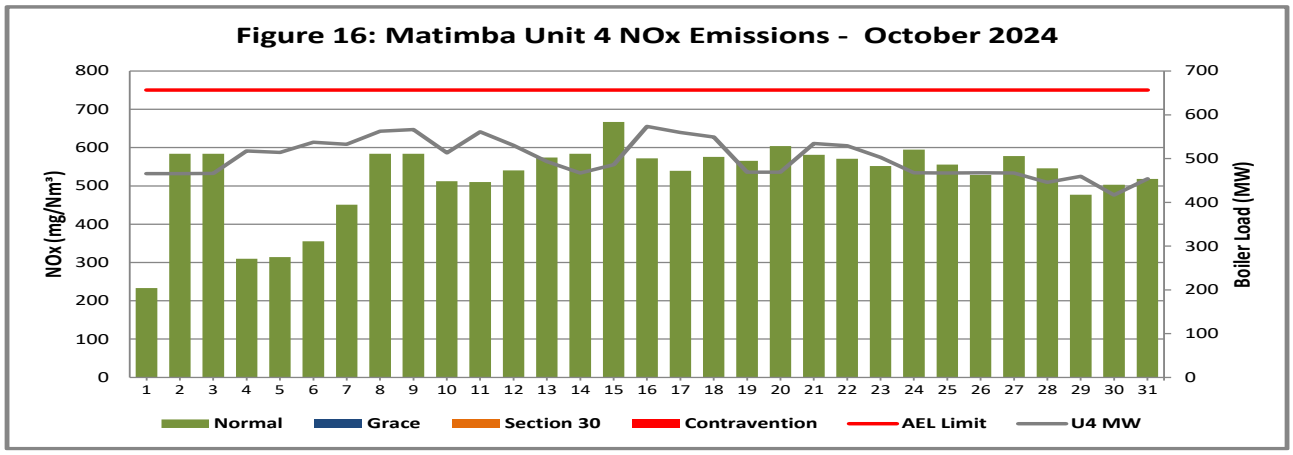

Figure 14: NOx daily average emissions against emission limit for unit 4 for the month of October 2024

Interpretation: All daily averages below NOx emission limit of 750 mg/Nm^3. Unit 4 monitor was faulty on the 2nd and 3rd.The monitor was repaired and calibrated on the 10th October 2024.

Unit 5 NO_x Emissions

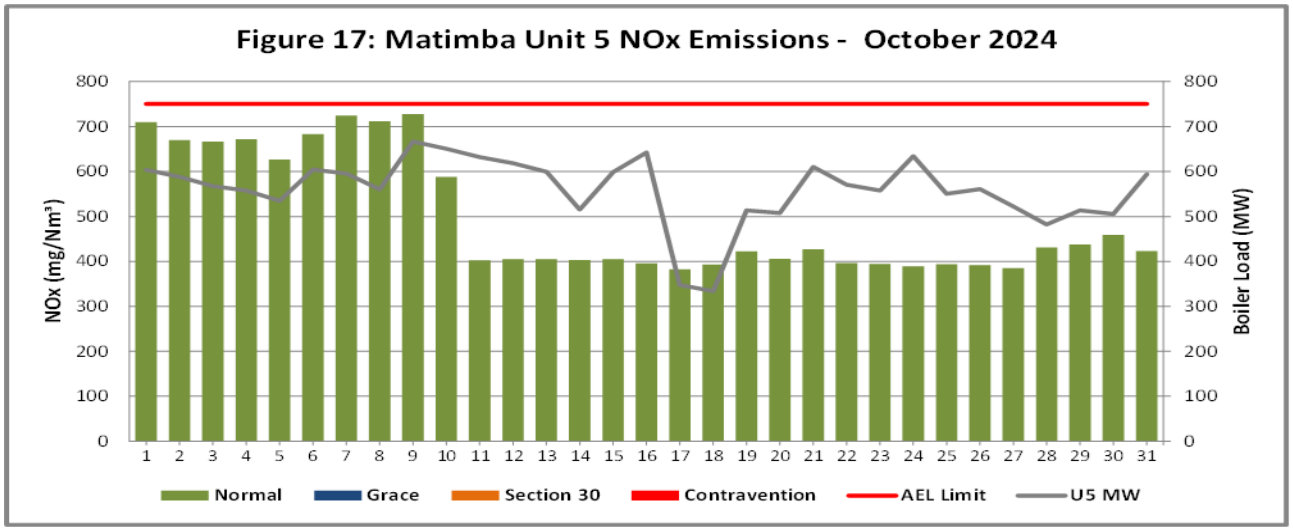

Figure 15: NOx daily average emissions against emission limit for unit 5 for the month of October 2024

Interpretation: All daily averages below NOx emission limit of 750 mg/Nm3. Unit 5 gaseous monitor drifted from the 1st October till the 9th October 2024. The monitor normalized after it was calibrated on the 10th of October 2024.

Unit 6 NO_x Emissions

Unit 6 is on outage.

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, 26 November 2024
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:	**October**	
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:	***1565.589***	
Molecular weight of the fuel oil:	166.00	Lb/lb-mole
METEROLOGICAL DATA FOR THE MONTH	**Data**	**Unit**
Daily average ambient temperature	26.19	°C
Daily maximum ambient temperature	33.65	°C
Daily minimum ambient temperature	19.11	°C
Daily ambient temperature range	14.54	°C
Daily total insolation factor	5.81	kWh/m²/day
Tank paint colour	***Grey/medium***	NA
Tank paint solar absorbtance	0.68	NA
FINAL OUTPUT:	**Result**	**Unit**
Breathing losses:	0.60	kg/month
Working losses:	0.04	kg/month
TOTAL LOSSES (Total TVOC Emissions for the month):	**0.64**	**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 October 2024

Date	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
2024/10/01	12383	12138.3	Unit off	10171.4	13196.2	Unit off
2024/10/02	12155.1	12515.2	Unit off	10145.2	12866.5	Unit off
2024/10/03	11477.5	11893.9	Unit off	10156.8	12365.8	Unit off
2024/10/04	7906.11	11142.8	Unit off	11283.9	12153.2	Unit off
2024/10/05	12041.5	11252.2	4092.94	11173.9	11713.6	Unit off
2024/10/06	12301.9	11320.3	7462.58	11708.6	13161.1	Unit off
2024/10/07	11334.2	9500.88	2662.16	11612.7	12999.2	Unit off
2024/10/08	12080	8338.9	5843.39	12253.5	12205.6	Unit off
2024/10/09	13856.5	10882.7	5264.54	12349.4	14556.6	Unit off
2024/10/10	12357.5	10859.4	7241.73	11188.1	14202.9	Unit off
2024/10/11	13190.6	12678.3	9533.93	12203.9	13792	Unit off
2024/10/12	12887.7	12964.7	10200.9	11538	13489.1	Unit off
2024/10/13	11984.9	12775.6	10209.9	10699.9	13052.9	Unit off
2024/10/14	11282.6	11775	10198	10105.6	11203.4	Unit off
2024/10/15	13633.1	13570.8	10218.2	10497.3	13105	Unit off
2024/10/16	12576.2	13466	10239.8	12491.6	13963.4	Unit off
2024/10/17	10738.1	12380.6	11212.7	12207.1	7559.13	Unit off
2024/10/18	11253.8	11175.5	10825	11975.3	7091.87	Unit off
2024/10/19	11396.4	11070.5	10827.3	10137.9	11201.4	Unit off
2024/10/20	10520.7	10180.4	10133.1	10146.6	11001.7	Unit off
2024/10/21	13042.4	10321.3	10407.7	11594.3	13320.8	Unit off
2024/10/22	11800.3	10443.3	10005.4	11497.8	12395	Unit off
2024/10/23	11371.9	10323.4	9136.46	10942.8	12133.7	Unit off
2024/10/24	12835.6	10095	10392.9	10128.7	13811.9	Unit off
2024/10/25	7429.16	10073.7	10384.8	10103.9	11959.9	Unit off
2024/10/26	9305.55	10075.7	10352.2	10106.4	12183.7	Unit off
2024/10/27	10760.9	10060.5	9469.65	10099.3	11393.4	Unit off
2024/10/28	9301.3	10021.7	9917.44	9636.7	10433.7	Unit off
2024/10/29	9464	8229.1	9826.31	9967.65	11150.6	Unit off
2024/10/30	10379.6	8100.09	10201.9	8988.82	10892.6	Unit off
2024/10/31	11084.19	8123.71	10225.93	10002.51	13144.65	Unit off

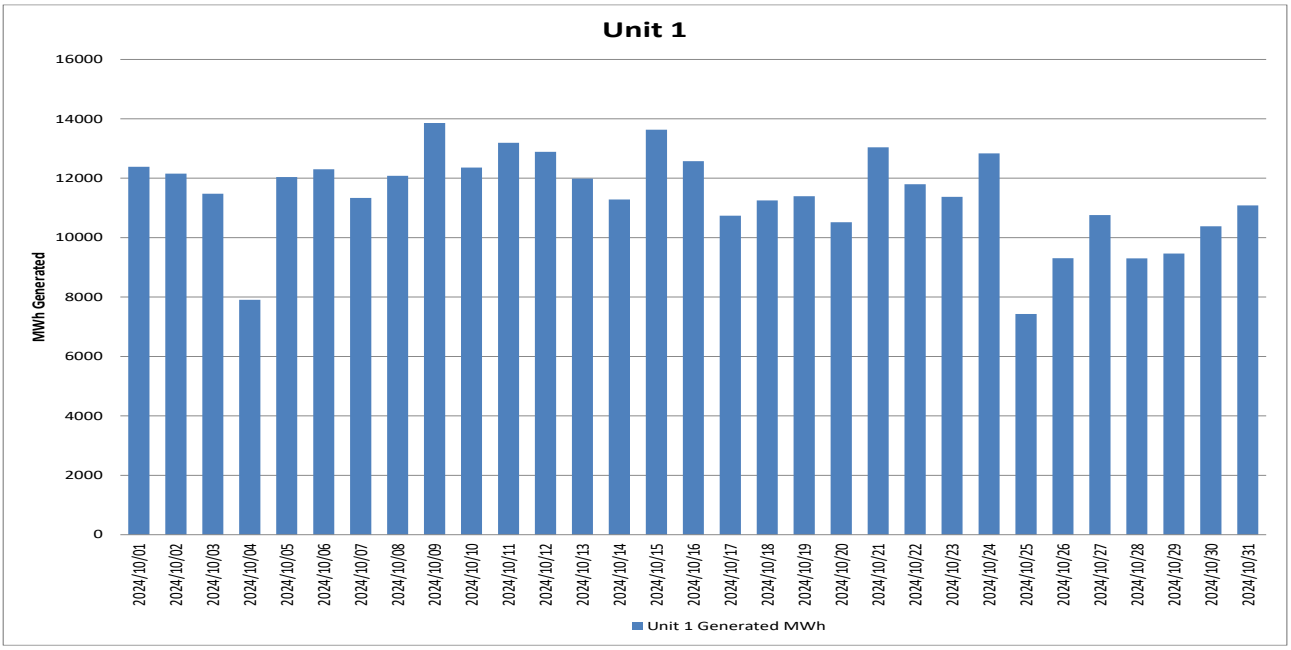

Figure 16: Unit 1 daily generated power in MWh for the month of October 2024

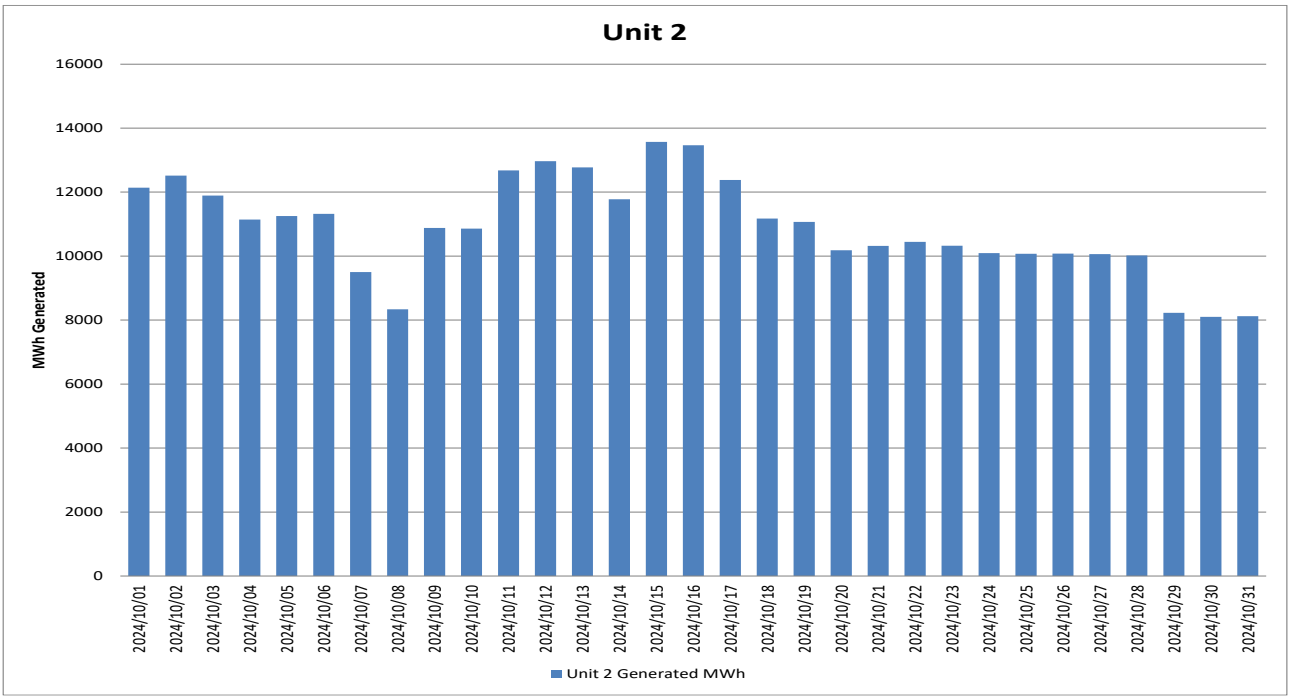

Figure 17: Unit 2 daily generated power in MWh for the month of October 2024

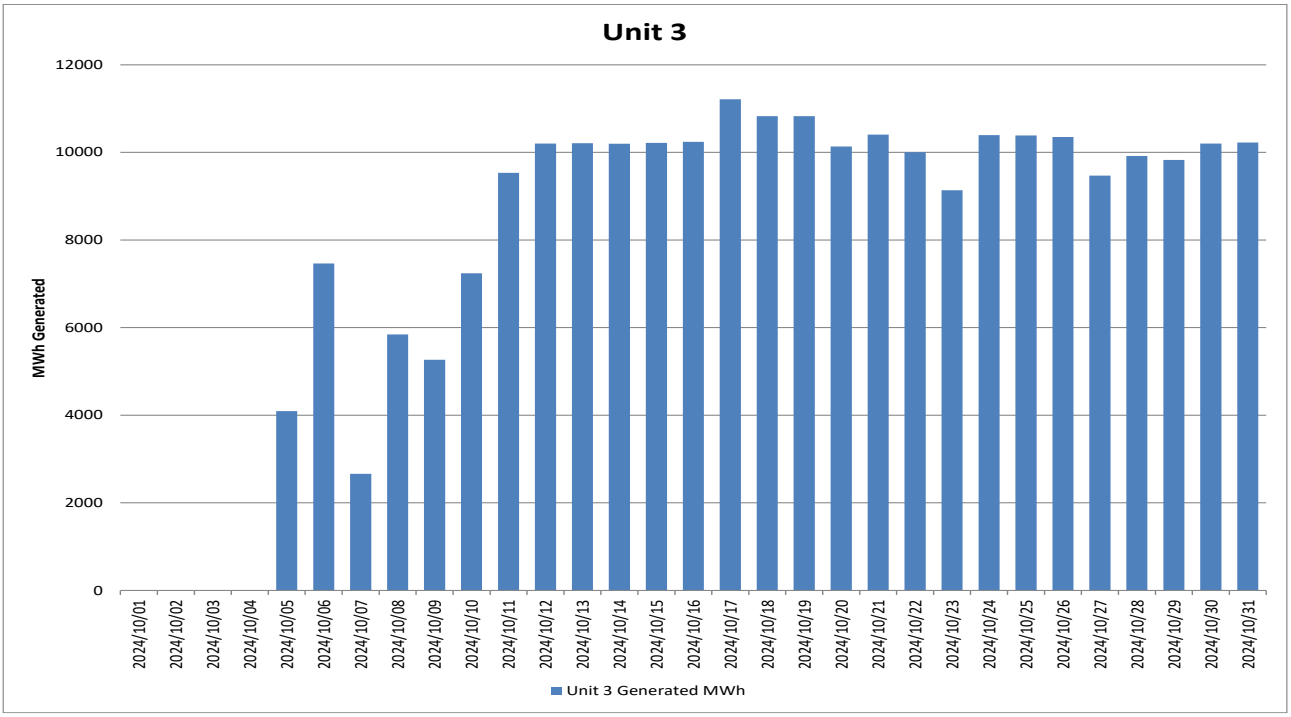

Figure 18: Unit 3 daily generated power in MWh for the month of October 2024

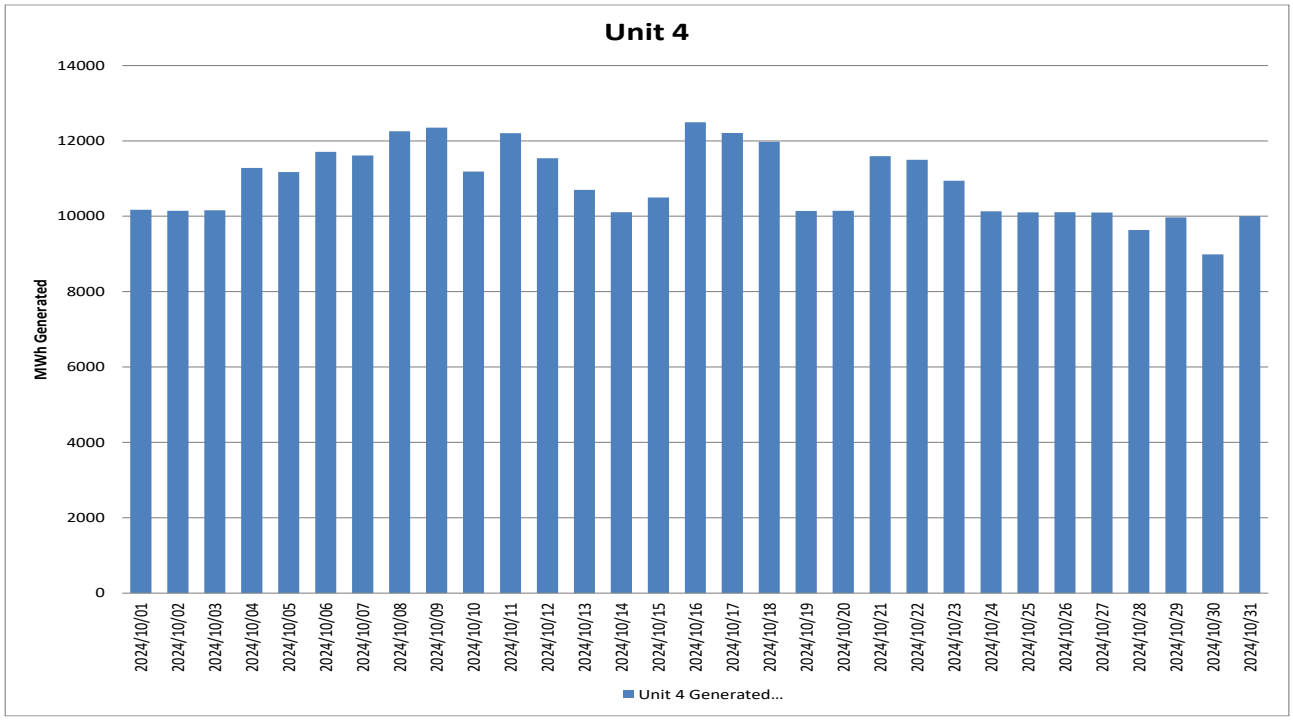

Figure 19: Unit 4 daily generated power in MWh for the month of October 2024

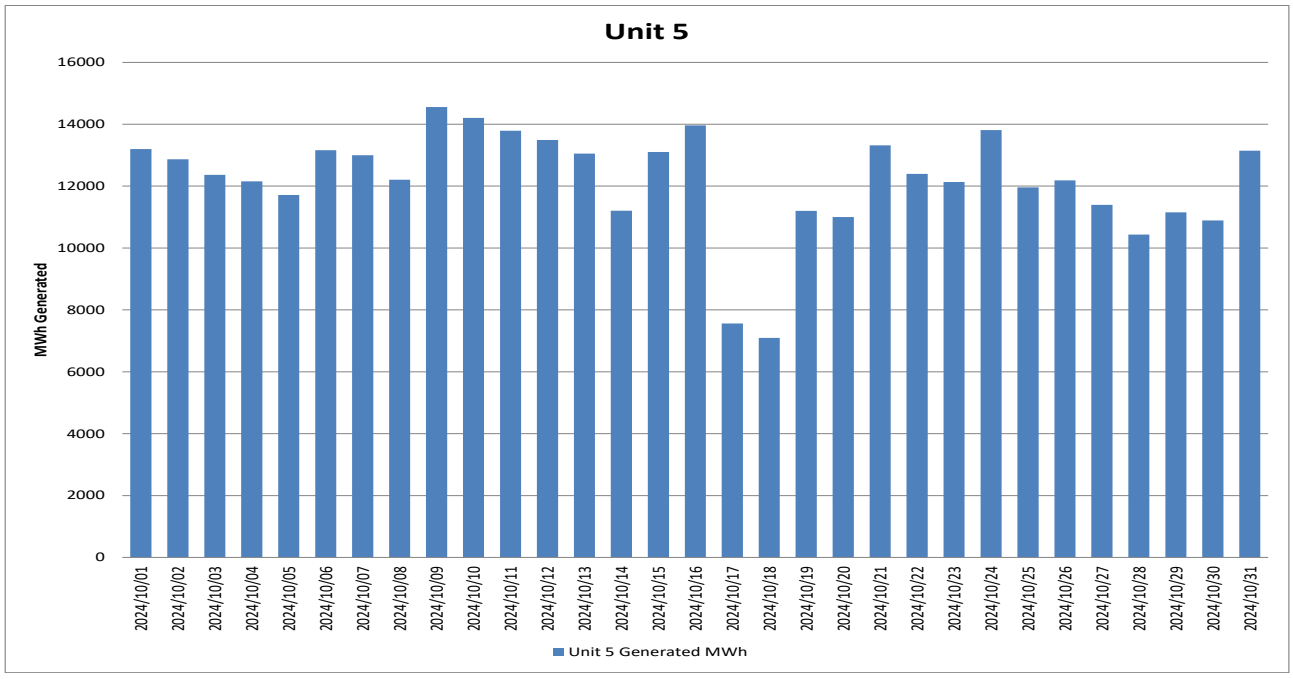

Figure 20: Unit 5 daily generated power in MWh for the month of October 2024

2.5 Pollutant Tonnages

The emitted pollutant tonnages for October 2024 are provided in table 6.

Table 6: Pollutant tonnages for the month of October 2024

Associated Unit/Stack	PM (tons)	SO_2 (tons)	NO_x (tons)
Unit 1	95.6	6 160.8	1 032.7
Unit 2	84.1	6 004.3	984.0
Unit 3	203.0	4 095.4	882.0
Unit 4	138.4	4 237.5	950.3
Unit 5	102.3	6 051.1	1 184.5
Unit 6	Off	Off	Off
SUM	623.4	26 549.2	5 033.5

2.6 Operating days in compliance to PM AEL Limit

Table 7: Operating days in compliance with PM AEL limit of October 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm^3)
Unit 1	21	8	0	1	9	46.3
Unit 2	21	2	0	8	10	38.6
Unit 3	4	5	0	15	20	114.1
Unit 4	12	8	0	11	19	76.9
Unit 5	27	3	0	1	4	43.7
Unit 6	Off	Off	Off	Off	Off	Off
SUM	**85**	**26**	**0**	**36**	**62**	

2.7 Operating days in compliance to SOx AEL Limit

Table 8: Operating days in compliance with SOx AEL limit of October 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO_2 (mg/Nm^3)
Unit 1	31	0	0	0	0	2 776.7
Unit 2	31	0	0	0	0	2 741.4
Unit 3	27	0	0	0	0	2 129.0
Unit 4	31	0	0	0	0	2 337.5
Unit 5	31	0	0	0	0	2 300.6
Unit 6	Off	Off	Off	Off	Off	Off
SUM	**151**	**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 October 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
Unit 1	31	0	0	0	0	464.5
Unit 2	31	0	0	0	0	448.1
Unit 3	27	0	0	0	0	453.2
Unit 4	31	0	0	0	0	524.2
Unit 5	31	0	0	0	0	449.3
Unit 6	Off	Off	Off	Off	Off	Off
SUM	**151**	**0**	**0**	**0**	**0**	

2.9 Reference values

Table 10: Reference values for data provided, October 2024

Compound / Parameter	Units of Measure	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Oxygen	%	7.23	8.44	7.28	8.88	7.07	Off
Moisture	%	3.61	3.38	3.03	2.31	3.78	Off
Velocity	m/s	26.0	26.3	25.8	23.7	30.3	Off
Temperature	°C	131.6	126.8	131.0	123.6	119.5	Off
Pressure	mBar	936.8	971.6	969.0	921.8	919.6	Off

2.10 Continuous Emission Monitors

2.10.1 Reliability

Table 11: Monitor reliability percentage (%)

Associated Unit/Stack	PM	SO_2	NO
Unit 1	*100.0*	*99.7*	*99.7*
Unit 2	*100.0*	*82.4*	*81.5*
Unit 3	*96.7*	*89.3*	*89.6*
Unit 4	*99.9*	*85.8*	*75.8*
Unit 5	*100.0*	*99.7*	*70.7*
Unit 6	*Off*	*Off*	*Off*

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

Continuous emission monitors were reliable for more than 80% of the reporting period except for unit 4 and unit 5 NO. Unit 4 and unit 5 NO was out of calibration. The supplier was on site for gaseous monitor calibration on the 10th October 2024.

Table 12: Average percentage (%) availability of monitors for the month of October 2024.

Unit	SO_2	NO_x	PM	CO_2
1	99.7	99.7	100.0	99.7
2	82.4	81.5	100.0	81.9
3	89.3	89.6	96.7	100.0
4	85.8	75.8	99.9	100.0
5	99.7	70.7	100.0	99.7
6	Off	Off	Off	Off

Continuous emission monitors were available for more than 80% of the reporting period except for unit 4 and unit 5 NO.

2.10.2 Changes, downtime, and repairs

Unit 1

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

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

Unit 4

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

Unit 5

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

Unit 6

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

2.10.3 Sampling dates and times

Table 13: Dates of last full conducted CEMS verification tests for PM for unit 2, unit 4 and 6 only

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**
1	New sampling tests in table 13	New sampling tests in table 13	New sampling tests in table 13	New sampling tests in table 13
2	2024/07/02 08h50	New sampling tests in table 13	New sampling tests in table 13	New sampling tests in table 13
3	New sampling tests in table 13	New sampling tests in table 13	New sampling tests in table 13	New sampling tests in table 13
4	2021/07/13 14h31	New sampling tests in table 13	New sampling tests in table 13	New sampling tests in table 13
5	New sampling tests in table 13	New sampling tests in table 13	New sampling tests in table 13	New sampling tests in table 13
6	2020/09/09 06h41	New sampling tests in table 13	New sampling tests in table 13	New sampling tests in table 13

Note: The CEMS verification tests for PM, SO_2 and NOx were performed in October 2022 and failed. The spot tests were done in August 2023.

Table 14: Dates of last conducted CEMS Spot verification tests for PM, SO_2 and NOx (without unit 4 and 6 PMs)

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
2	Dates in table 12 above	2023/07/29 21:17	2023/07/29 21:17	2023/07/29 21:17
3	2023/08/06 03:00	2023/08/06 03:00	2023/08/06 03:00	2023/08/06 03:00
4	Dates in table 12 above	2023/08/04 19:39	2023/08/04 19:39	2023/08/04 19:39
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 12 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 units 4 and 6 failed and old curves are still in use.

2.11 Units Start-up information

Table 15: Start-up information

Unit	1	
Fires in	2024/10/04	06h26
Synchronization with Grid	2024/10/04	12h26
Emissions below limit	2024/10/04	19h01
Fires in, to synchronization	6.0	HOURS
Synchronization to < Emission limit	6.35	HOURS

Unit	1	
Fires in	2024/10/25	21h40
Synchronization with Grid	2024/10/26	01h17
Emissions below limit	2024/10/26	04h00
Fires in, to synchronization	3.37	HOURS
Synchronization to < Emission limit	2.43	HOURS

Unit	3	
Fires in	2024/10/05	01h21
Synchronization with Grid	2024/10/05	07h00
Emissions below limit	2024/10/05	10h00
Fires in, to synchronization	5.39	HOURS
Synchronization to < Emission limit	3.0	HOURS

Unit	3	
Fires in	2024/10/07	19h39
Synchronization with Grid	2024/10/07	23h48
Emissions below limit	2024/10/08	02h00
Fires in, to synchronization	4.9	HOURS
Synchronization to < Emission limit	2.12	HOURS

Unit	3	
Fires in	2024/10/09	02h16
Synchronization with Grid	2024/10/09	05h50
Emissions below limit	2024/10/09	07h00
Fires in, to synchronization	3.34	HOURS
Synchronization to < Emission limit	1.10	HOURS

Unit	5	
Fires in	2024/10/17	16h07
Synchronization with Grid	2024/10/17	19h00
Emissions below limit	2024/10/17	23h50
Fires in, to synchronization	2.53	HOURS
Synchronization to < Emission limit	4.50	HOURS

2.12 Emergency generation

Table 16: 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	738.250	744.000	625.470	744.000	737.850	Off
Days over the Limit during Emergency Generation	9	10	20	19	4	Off

During the period under review all Units were on emergency generation in force from 01 October 2024 until 31 October 2024.

2.13 Complaints register.

Table 17: 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 October 2024 ambient air quality monitoring report is sent with the report as addendum.

2.16 Electrostatic precipitator and Sulphur plant status

Unit 1

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

Unit 2

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

Unit 3

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

Unit 4

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

Unit 5

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

Unit 6

- On outage

SO3 common plant

- No abnormalities on the sulphur storage plant.

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

Dust fall out monitoring report and 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

Wikus van Rensburg

GENERAL MANAGER: MATIMBA POWER STATION