Eskom	Technical and Generic Report	Matimba Power Station

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

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Date: 2025-06-03	Date: 2025-06-03	Date: 03.06.2025	Date: 2025/06/03

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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 April 2025.The information recorded in the report is obtained from Matimba Emission Reporting tool V10.2024.

During the period under review, Matimba experienced one hundred and forty-three (143) exceedances of the daily particulate matter emission limit (50mg/Nm^3), one hundred and forty (140) 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 three (3) 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 and 5. Unit 1 SO3 plant was on permit to work(off) to do full repair, SO3 plant's availability was 73%. Unit 2 SO3 plant on hold due to low load, SO3 plant's availability was 84%. Unit 5 SO3 Plant was on Stop mode due to sulphur control valve faulty, SO3 plant's availability was 54%.

The consumption rates for fuel oil for the month of April 2025 exceeded the limit of 1200 tons by 1537.457 tons due to unit 6 light up and combustion support.

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	805 099
	Fuel Oil	Tons/month	1 200	1537.457
Production Rates	**Product/ By-Product Name**	**Unit**	**Maximum Production Capacity Permitted (Quantity)**	**Production Rate**
	Energy	MW	4000	1987.735
	Ash	Tons/month	547500	283 801.712

The consumption rates for fuel oil for the month of April 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%	99.972%
Unit 2	Electrostatic Precipitator	100%	Off
Unit 3	Electrostatic Precipitator	100%	99.675%
Unit 4	Electrostatic Precipitator	100%	99.972%
Unit 5	Electrostatic Precipitator	100%	99.972%
Unit 6	Electrostatic Precipitator	100%	99.962%
Associated Unit	**Technology Type**	**Minimum utilisation (%)**	**Actual Utilisation (%)**
Unit 1	SO_3 Plant	100%	73%
Unit 2	SO_3 Plant	100%	84%
Unit 3	SO_3 Plant	100%	Off
Unit 4	SO_3 Plant	100%	92%
Unit 5	SO_3 Plant	100%	54%
Unit 6	SO_3 Plant	100%	98%

Flue gas conditioning plant availability was below 90% for unit 1,2 and 5. Unit 1 SO3 plant was on permit to work(off) to do full repair. Unit 2 SO3 plant on hold due to low load. Unit 3 SO_3 plant was on hold due to faulty sulphur burner inlet valve that had no actuator spare. Unit 5 SO3 Plant was on Stop mode due to sulphur control valve faulty.

Table 3: Energy Source Material Characteristics.

	Characteristic	Stipulated Range (Unit)	Monthly Average Content
Coal burned	**Sulphur Content**	1.6%	1.152%
	Ash Content	40%	35.251%

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 April 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

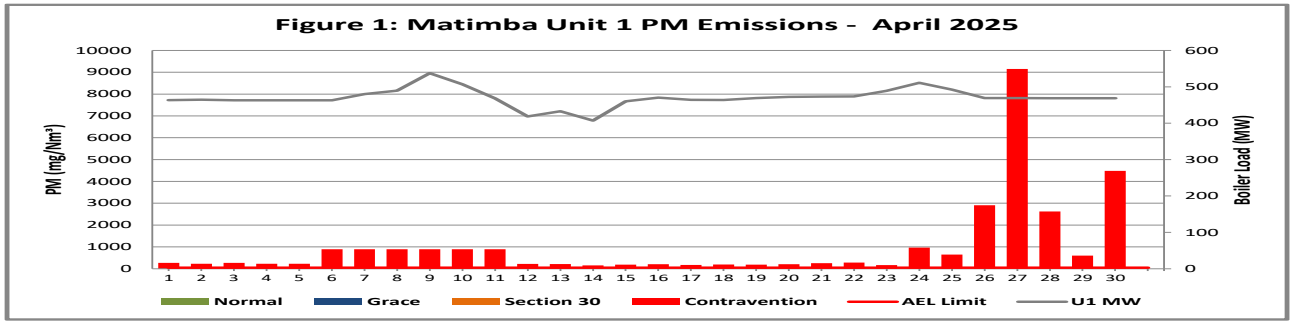

Figure 1: Particulate matter daily average emissions against emission limit for unit 1 for the month of April 2025

Interpretation: Unit 1 exceeded the daily particulate emission limit of 50mg/Nm3 on 1 to 30 of April 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 1 monitor was freezing in most days of April 2025, data was removed and the emissions reporting tool used averages on the 6th to the 11th April 2025.

Unit 2 Particulate Emissions

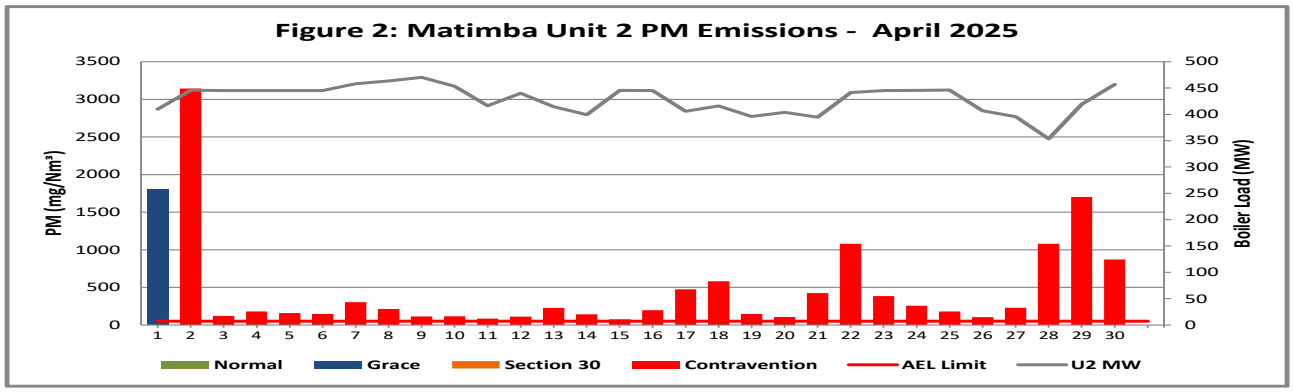

Figure 2: Particulate matter daily average emissions against emission limit for unit 2 for the month of April 2025

Interpretation: Unit 2 exceeded the daily particulate emission limit of 50mg/Nm3 on 1 to 30 April 2025. Exceedances from the 2 to 30 May 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 3 Particulate Emissions

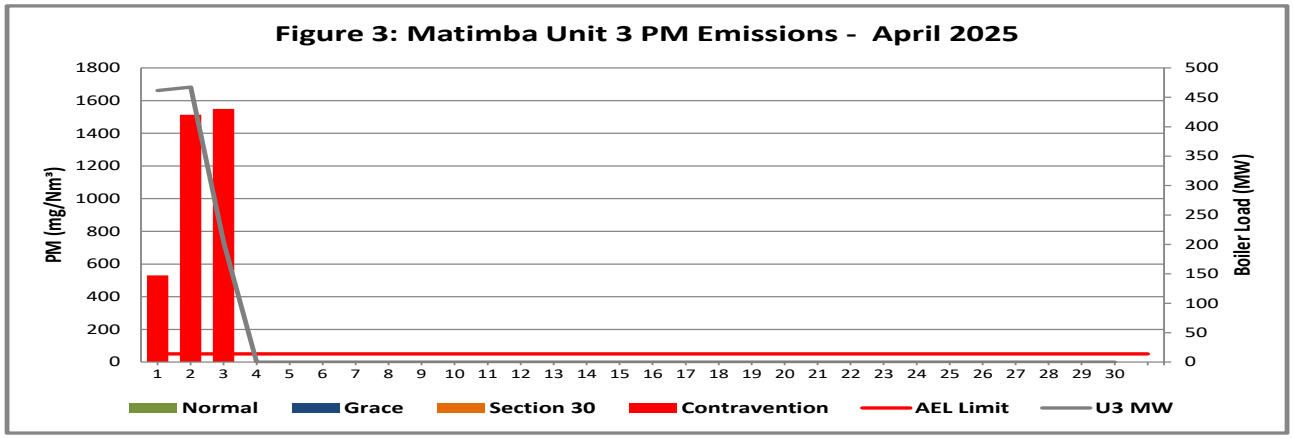

Figure 3: Particulate matter daily average emissions against emission limit for unit 3 for the month of April 2025

Interpretation: Unit 3 exceeded the daily particulate emission limit of 50mg/Nm3 on 1 to 3 April 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

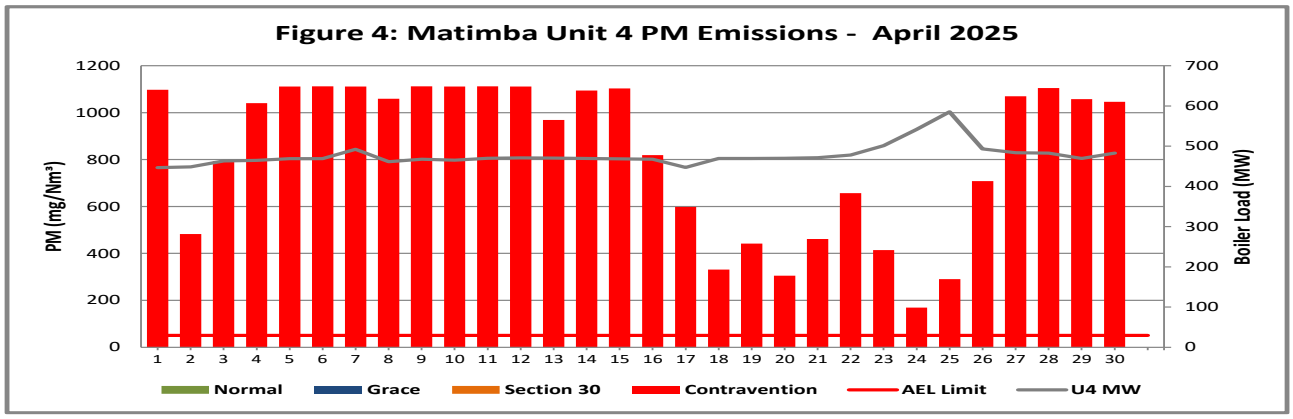

Figure 4: Particulate matter daily average emissions against emission limit for unit 4 for the month of April 2025

Interpretation: Unit 4 exceeded the daily particulate emission limit of 50mg/Nm3 on 1 to 30 April 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 1 monitor was freezing in most days of April 2025, data was removed and the emissions reporting tool used averages on the 5th to 7th and 9th to 12th April 2025.

Unit 5 Particulate Emissions

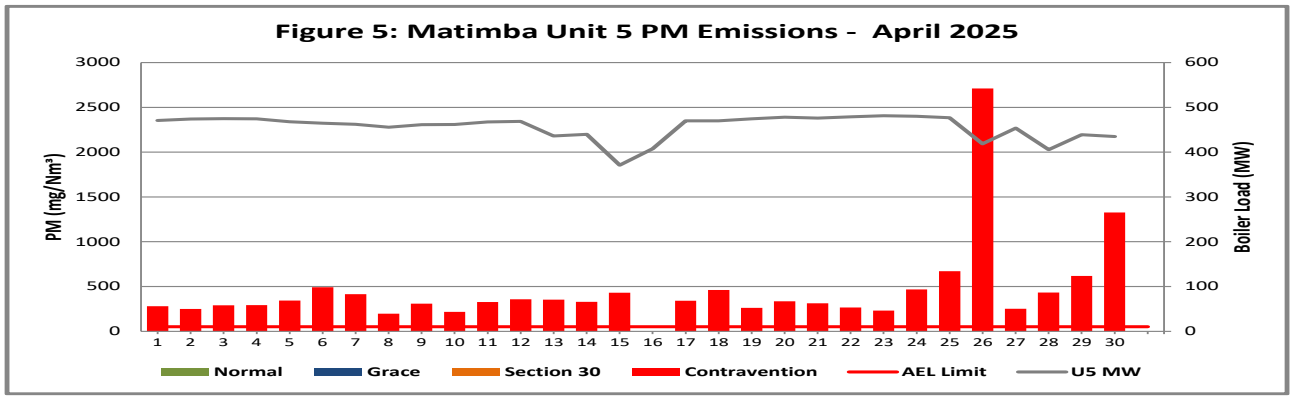

Figure 5: Particulate matter daily average emissions against emission limit for unit 5 for the month of April 2025

Interpretation: Unit 5 Particulate matter exceeded the daily limit of 50 mg/Nm^3 on 1 to 30 April 2025. All exceedances 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

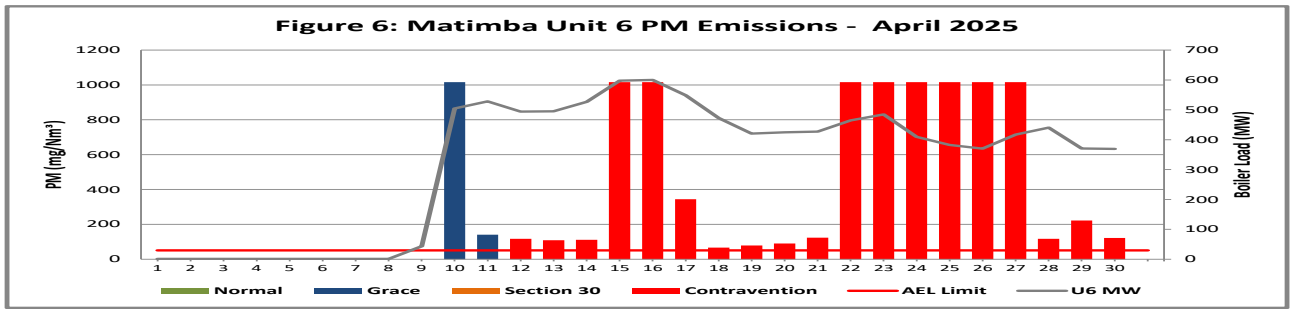

Figure 6: Particulate matter daily average emissions against emission limit for unit 6 for the month of April 2025

Interpretation: Unit 6 Particulate matter exceeded the daily limit of 50 mg/Nm^3 on 10 to 30 April 2025. The exceedances from 12 to 30 April 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 April 2025 as per the Eskom emission standard requirement.

The quality assurance tests (QAL2) used for April 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

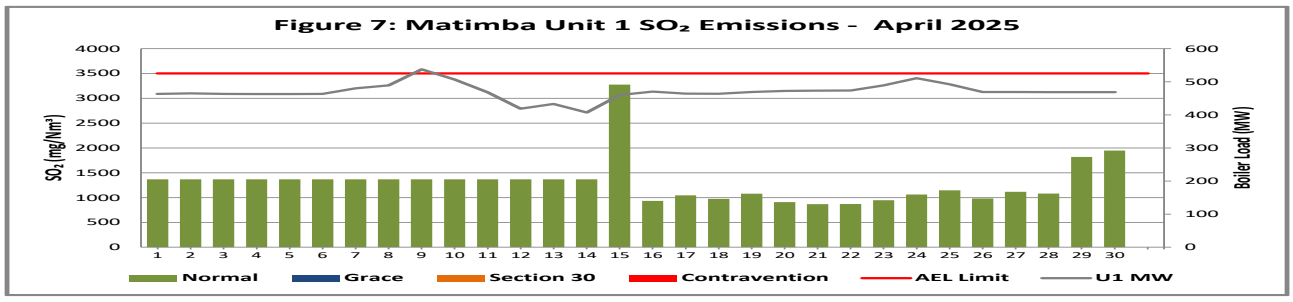

Figure 7: SO2 daily average emissions against emission limit for unit 1 for the month of April 2025

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 till 15th April 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 14th April 2025

Unit 2 SO_2 Emissions

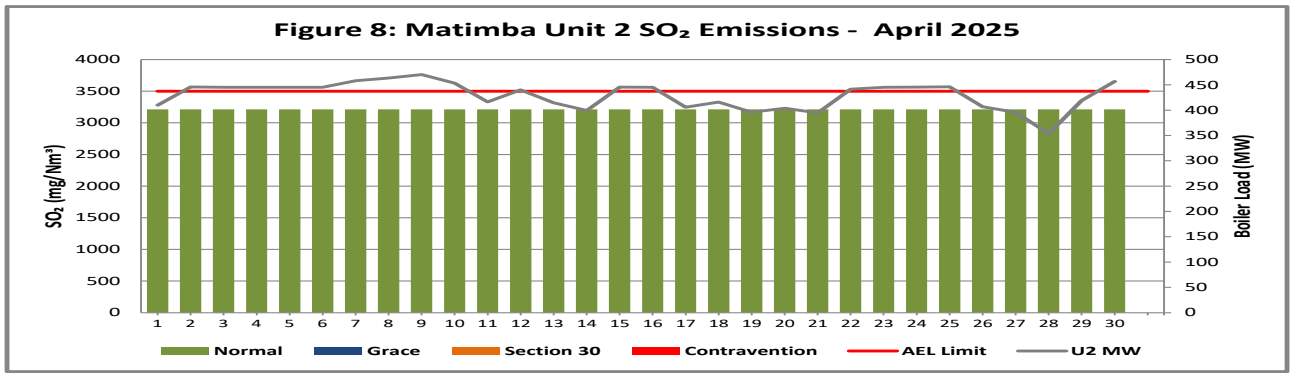

Figure 8: SO2 daily average emissions against emission limit for unit 2 for the month of April 2025

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 2.

Unit 3 SO_2 Emissions

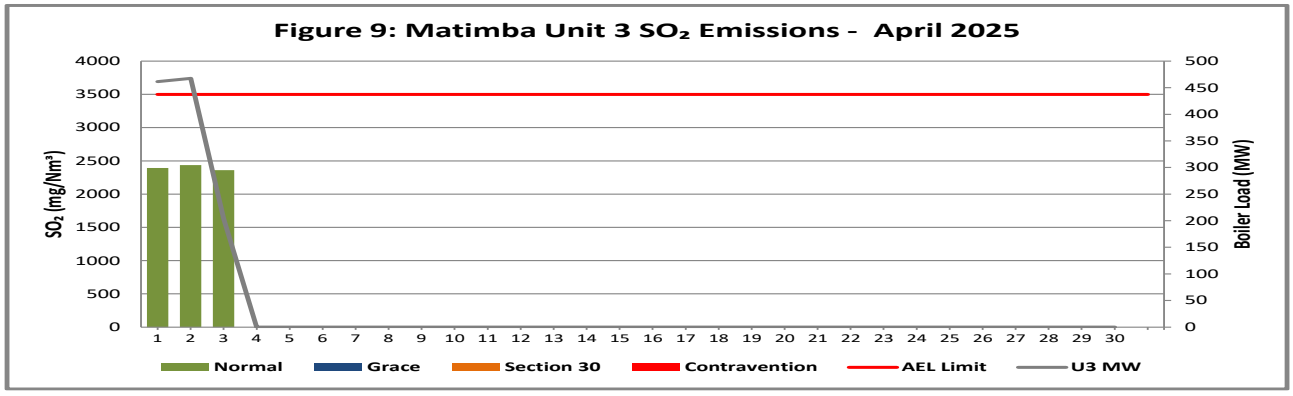

Figure 9: SO2 daily average emissions against emission limit for unit 3 for the month of April 2025

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

Unit 4 SO_2 Emissions

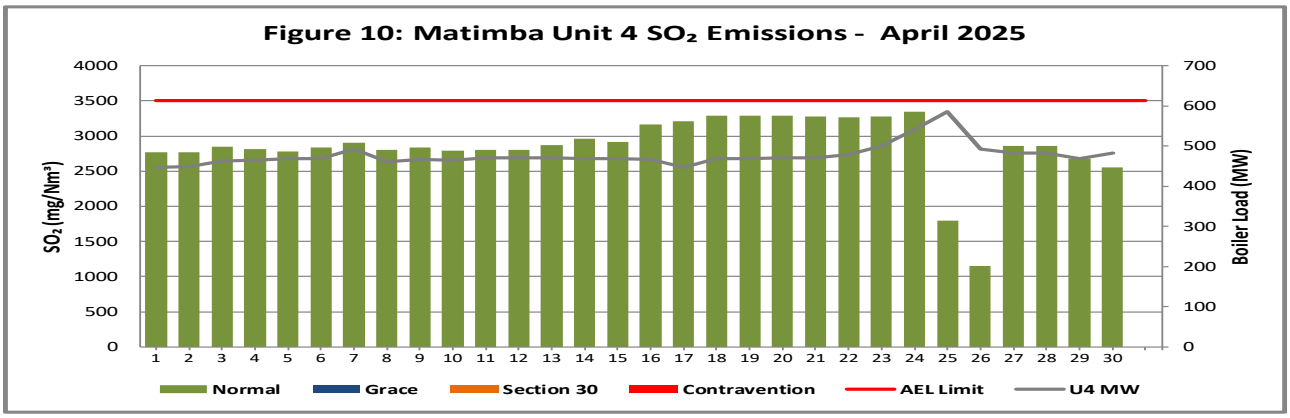

Figure 10: SO2 daily average emissions against emission limit for unit 4 for the month of April 2025

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 and moisture in the control air affected the efficiency of the monitor. The monitor returned to service in April 2025 after the repairs were done. The monitor used average values for the month on the 18th to 20th April 2025 to calculate gaseous emissions during the days the monitor froze.

Unit 5 SO_2 Emissions

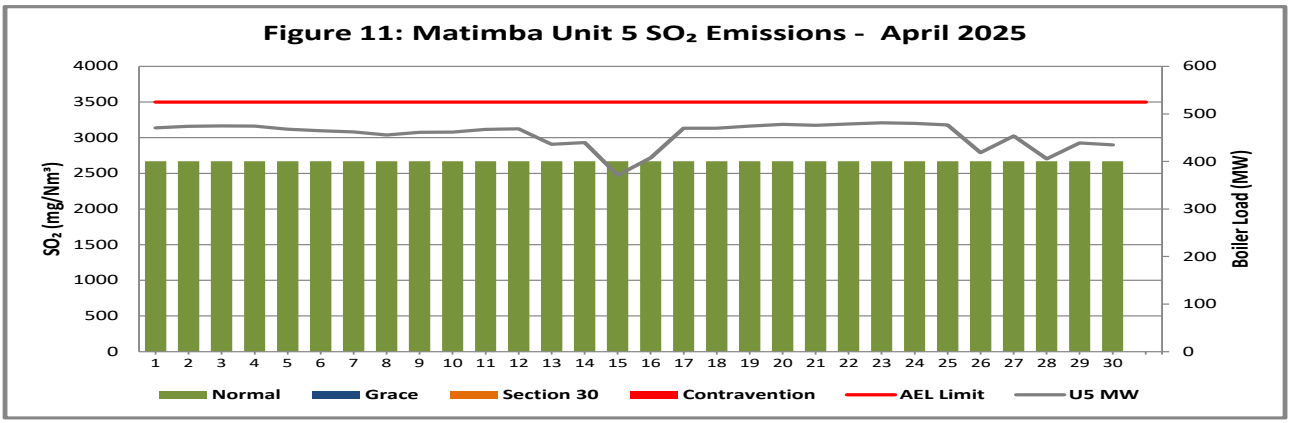

Figure 11: SO2 daily average emissions against emission limit for unit 5 for the month of April 2025

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

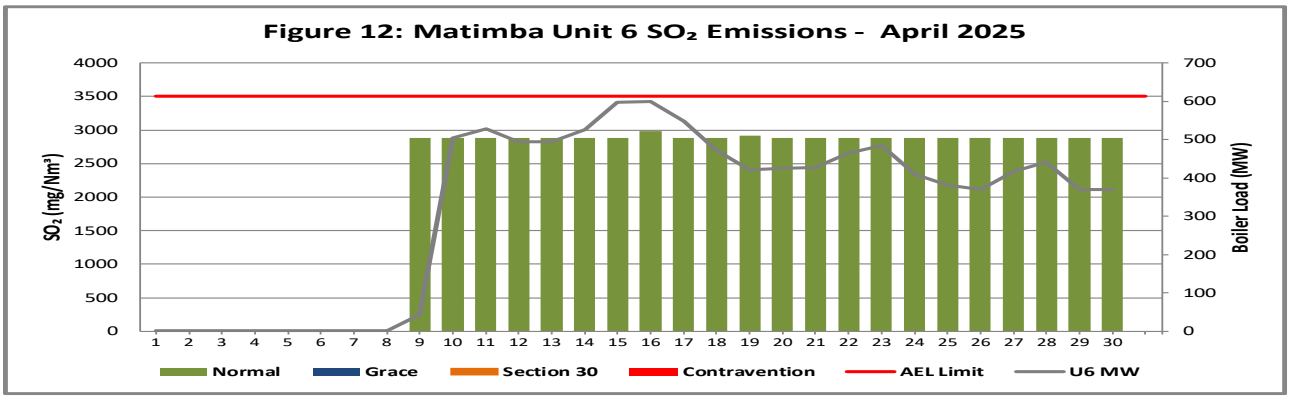

Figure 12: SO2 daily average emissions against emission limit for unit 6 for the month of April 2025

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. The monitors reliability started reading on the 9th to 23rd April 2025 after the repairs were done and drifted again from the 24th April 2025. SRM values were used to calculate the gaseous emissions.

2.3.2.b NOx Emissions

Unit 1 NO_x Emissions

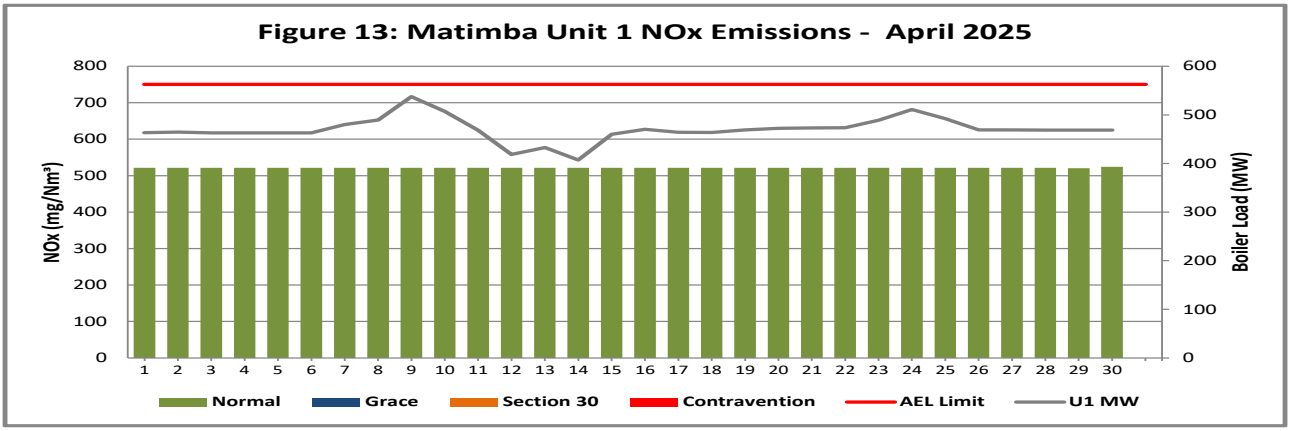

Figure 13: NOx daily average emissions against emission limit for unit 1 for the month of April 2025

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

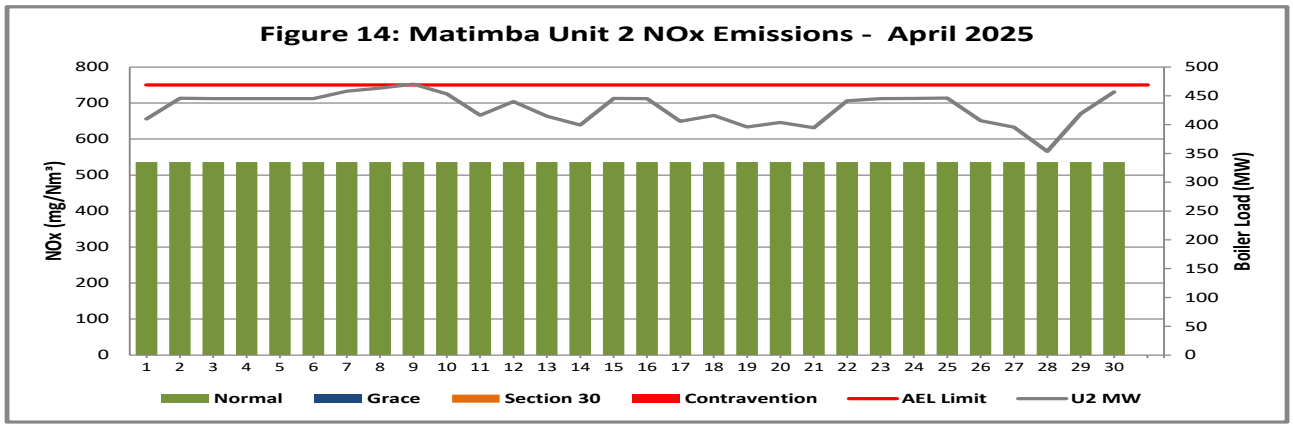

Figure 14: NOx daily average emissions against emission limit for unit 2 for the month of April 2025

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 2.

Unit 3 NO_x Emissions

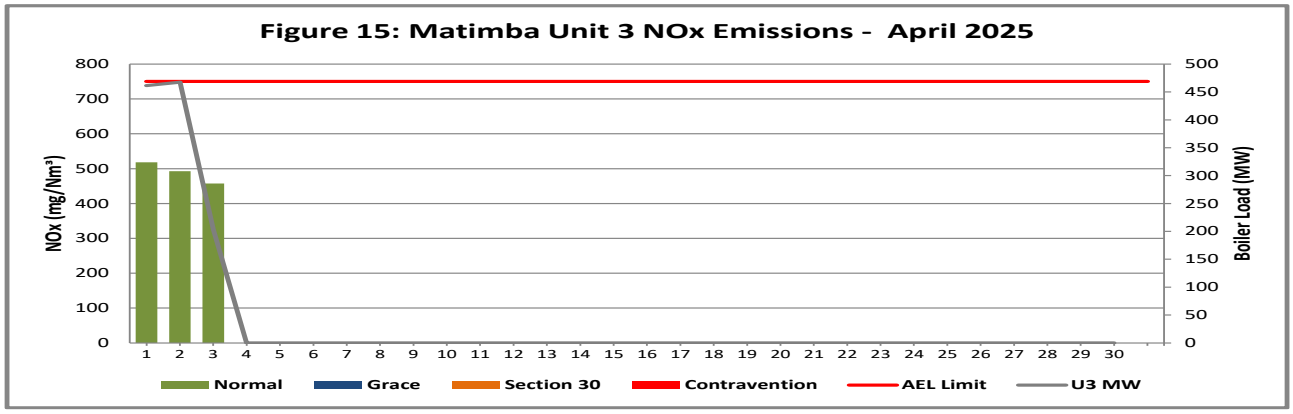

Figure 15: NOx daily average emissions against emission limit for unit 3 for the month of April 2025

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

Unit 4 NO_x Emissions

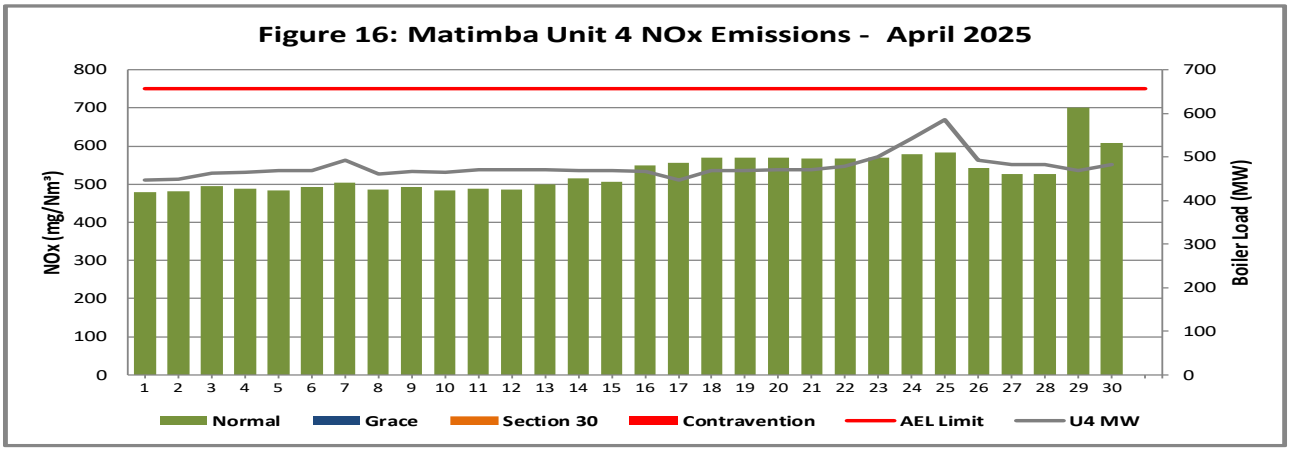

Figure 16: NOx daily average emissions against emission limit for unit 4 for the month of April 2025

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 and moisture in the control air affected the efficiency of the monitor. The monitor returned to service in April 2025 after the repairs were done. The monitor used average values for the month on the 18th to 20th April 2025 to calculate gaseous emissions during the days the monitor froze.

Unit 5 NO_x Emissions

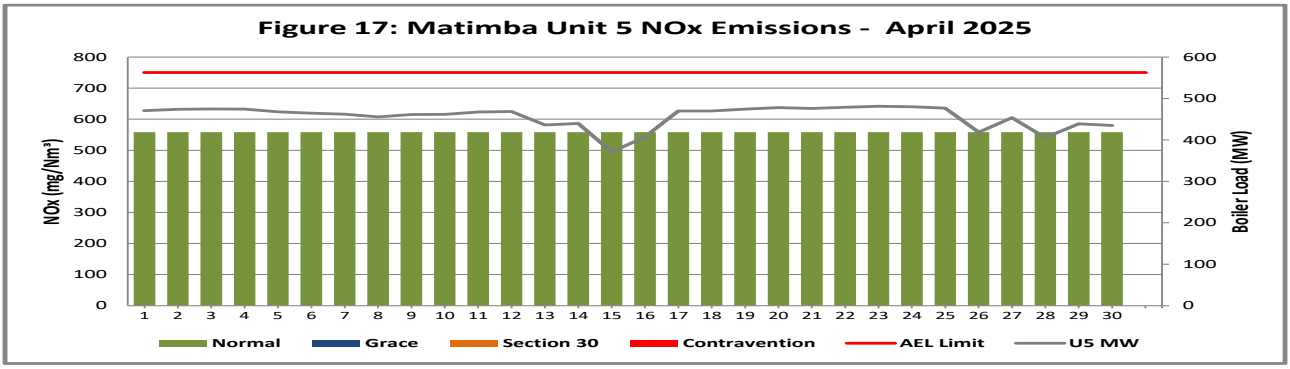

Figure 17: NOx daily average emissions against emission limit for unit 5 for the month of April 2025

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

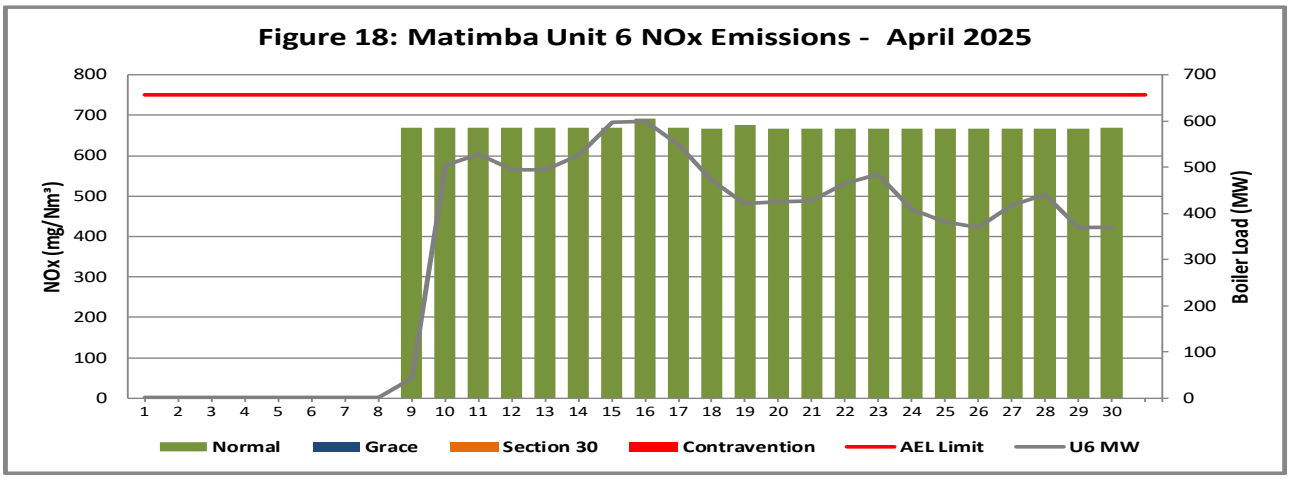

Figure 18: NOx daily average emissions against emission limit for unit 6 for the month of April 2025

Interpretation: All daily averages below NOx emission limit of 750 mg/Nm^3 except for 16th and 29th April 2025. 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. The monitors reliability started reading on the 9th to 23rd April 2025 after the repairs were done and drifted again from the 24th April 2025. SRM values were used to calculate the gaseous emissions.

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:	Wednesday, 28 May 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:	**April**	
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:	***1537.457***	
Molecular weight of the fuel oil:	166.00	Lb/lb-mole
METEROLOGICAL DATA FOR THE MONTH	**Data**	**Unit**
Daily average ambient temperature	20.60	°C
Daily maximum ambient temperature	27.37	°C
Daily minimum ambient temperature	13.11	°C
Daily ambient temperature range	10.46	°C
Daily total insolation factor	3.84	kWh/m²/day
Tank paint colour	***Grey/medium***	NA
Tank paint solar absorbtance	0.68	NA
FINAL OUTPUT:	**Result**	**Unit**
Breathing losses:	0.48	kg/month
Working losses:	0.04	kg/month
TOTAL LOSSES (Total TVOC Emissions for the month):	**0.53**	**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 April 2025

2025/04/01	10128.3	8895.36	9895.65	9701.53	10201.4	Unit off
2025/04/02	10131	9730.76	9936.52	9746.15	10268.6	Unit off
2025/04/03	10079.8	9718.95	4274.31	10073.5	10289.7	Unit off
2025/04/04	10110	9746.27	Unit off	10107.4	10288.9	Unit off
2025/04/05	10119.3	9746.24	Unit off	10180.7	10152.6	Unit off
2025/04/06	10121.4	9745.29	Unit off	10181.5	10076.5	Unit off
2025/04/07	10491.6	9975.83	Unit off	10699.4	10029.4	Unit off
2025/04/08	10657.2	10028.1	Unit off	10042.5	9876.69	Unit off
2025/04/09	11750.1	10203.7	Unit off	10199.6	10001.9	294.174
2025/04/10	11076.2	9834.46	Unit off	10128.3	10006.5	10854.8
2025/04/11	10207.3	8973.69	Unit off	10242.6	10131.4	11369.4
2025/04/12	9088.33	9537.3	Unit off	10234.1	10161.9	10691.1
2025/04/13	9484.65	8974.83	Unit off	10227.2	9421.43	10673.9
2025/04/14	8815.67	8540.09	Unit off	10238.5	9488.34	11374.4
2025/04/15	10051.1	9606.87	Unit off	10196.8	8025.94	12906.7
2025/04/16	10312.9	9619.45	Unit off	10193.8	8546.76	13040.2
2025/04/17	10179.9	8719.92	Unit off	9746.67	10188.4	11959.7
2025/04/18	10180.5	8981.23	Unit off	10268	10203.1	10219.9
2025/04/19	10288.2	8512.67	Unit off	10292.7	10302.1	9112.57
2025/04/20	10375.3	8675.88	Unit off	10260.4	10378.1	9152.54
2025/04/21	10387.5	8450.22	Unit off	10278.6	10340.1	9183.14
2025/04/22	10396.9	9520.95	Unit off	10397.3	10389	10075.5
2025/04/23	10710.8	9632.1	Unit off	10954	10452.1	10539.7
2025/04/24	11182.7	9668.66	Unit off	11841	10452.3	8848.31
2025/04/25	10817	9673.72	Unit off	12838.5	10389.5	8242.11
2025/04/26	10241.3	8739.09	Unit off	10812.5	9052.56	7944.77
2025/04/27	10249.4	8535.56	Unit off	10571.8	9852.27	8983.57
2025/04/28	10223	7449.83	Unit off	10551	8782.96	9539.49
2025/04/29	10222.7	9008.74	Unit off	10249.3	9500.76	7976.26
2025/04/30	10231.8	9860.46	Unit off	10527.9	9428.71	7935.36

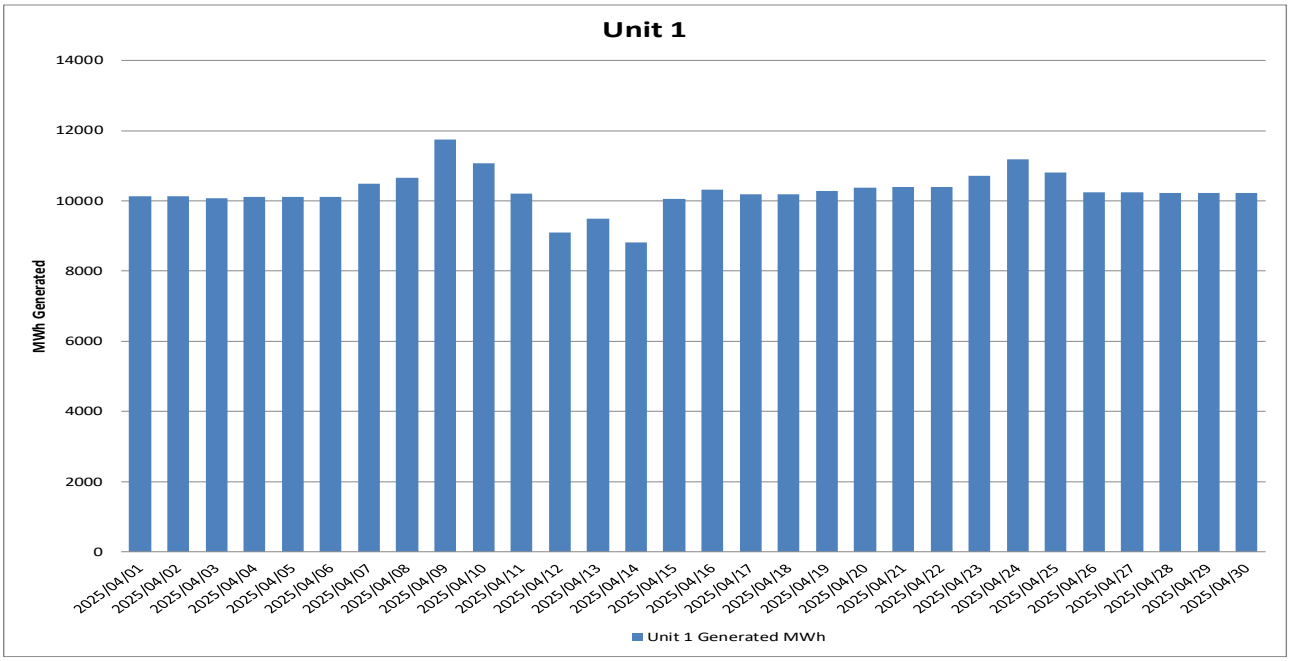

Figure 19: Unit 1 daily generated power in MWh for the month of April 2025

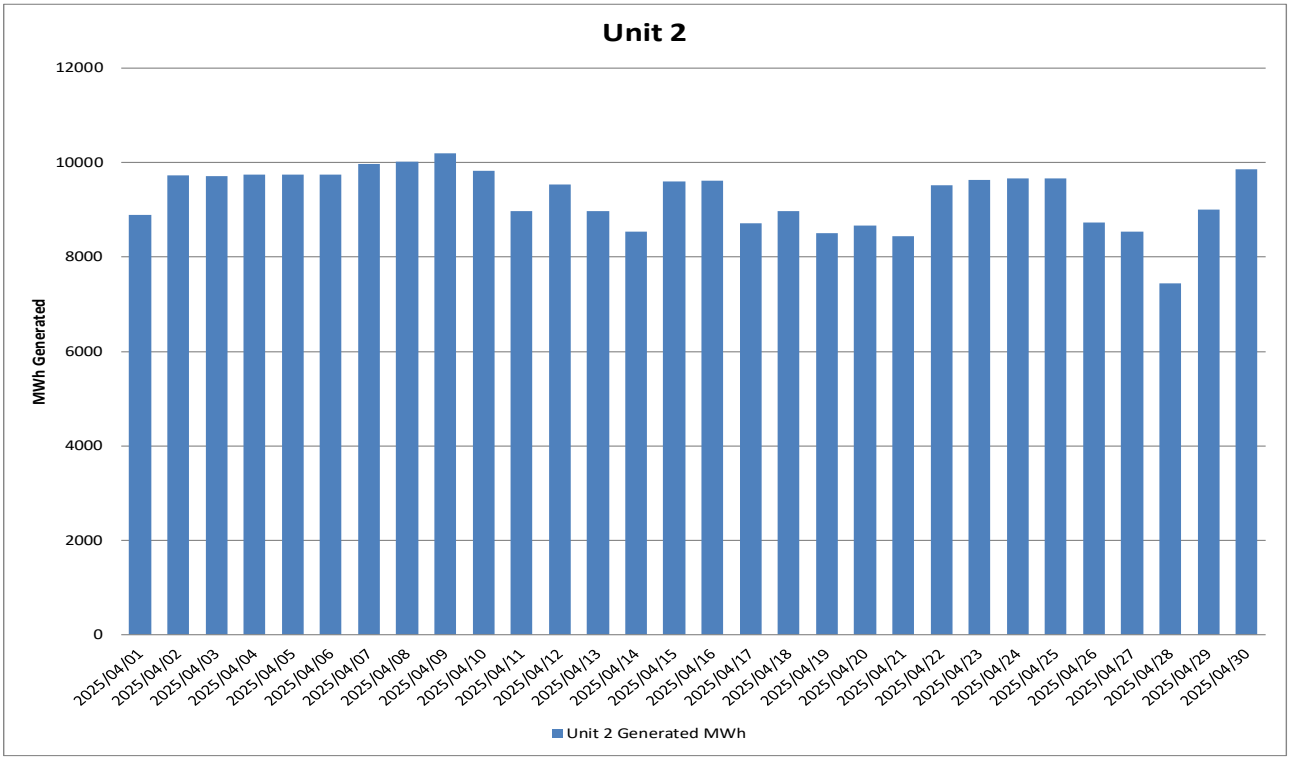

Figure 20: Unit 2 daily generated power in MWh for the month of April 2025

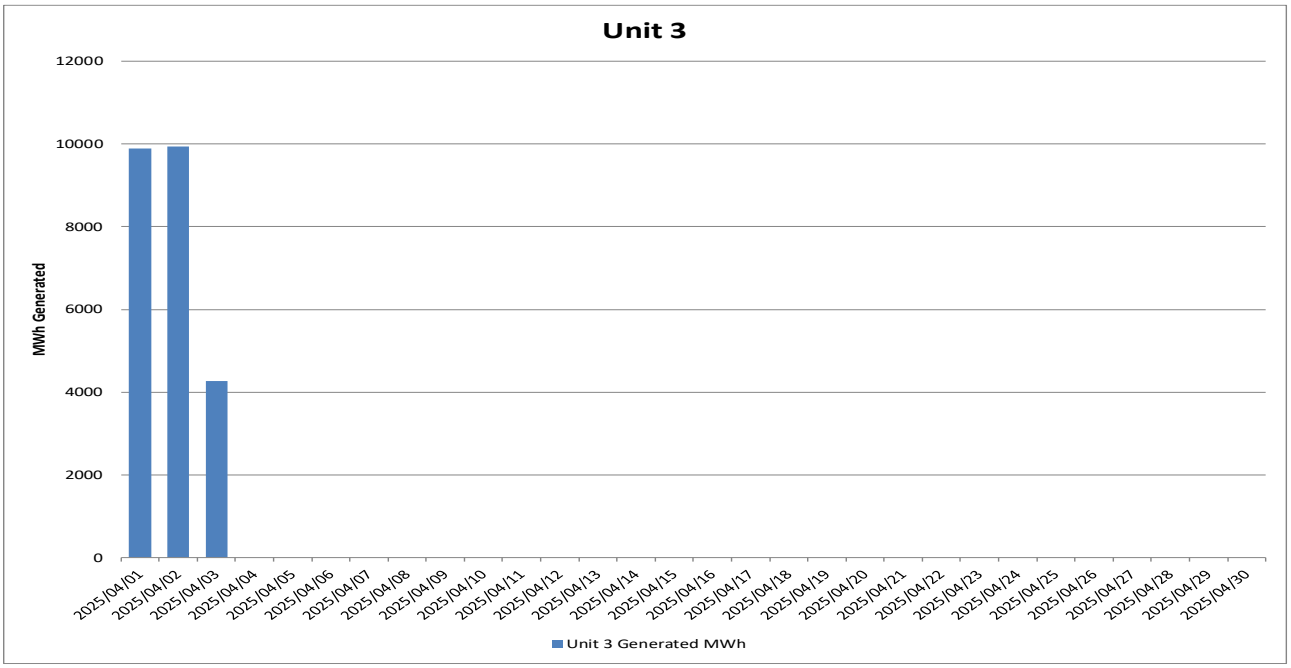

Figure 21: Unit 3 daily generated power in MWh for the month of April 2025

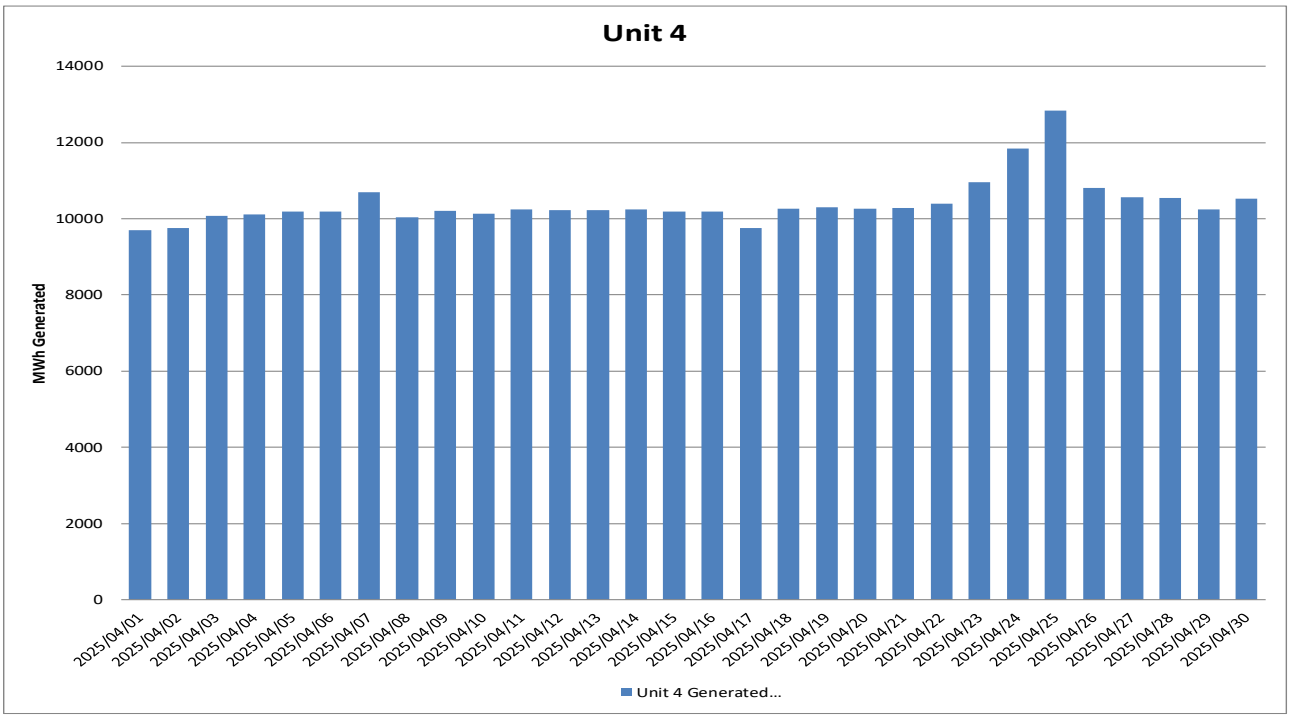

Figure 22: Unit 4 daily generated power in MWh for the month of April 2025

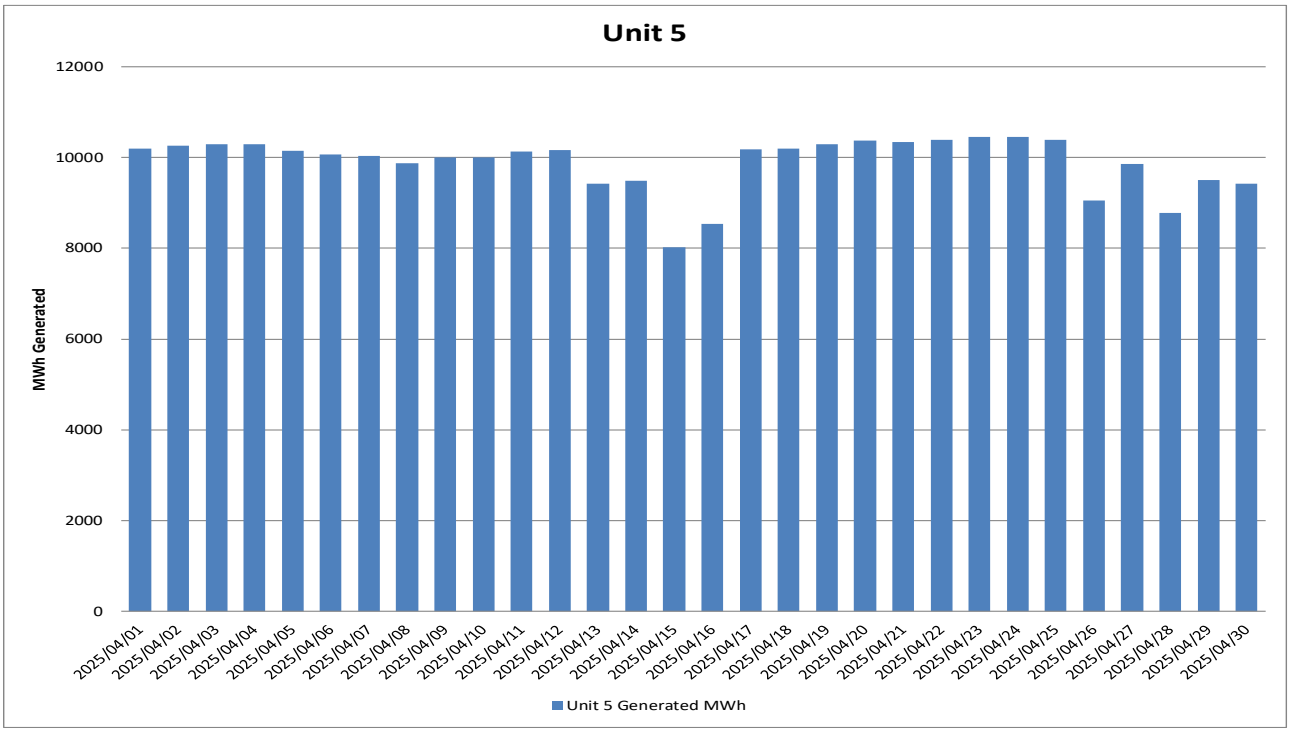

Figure 23: Unit 5 daily generated power in MWh for the month of April 2025

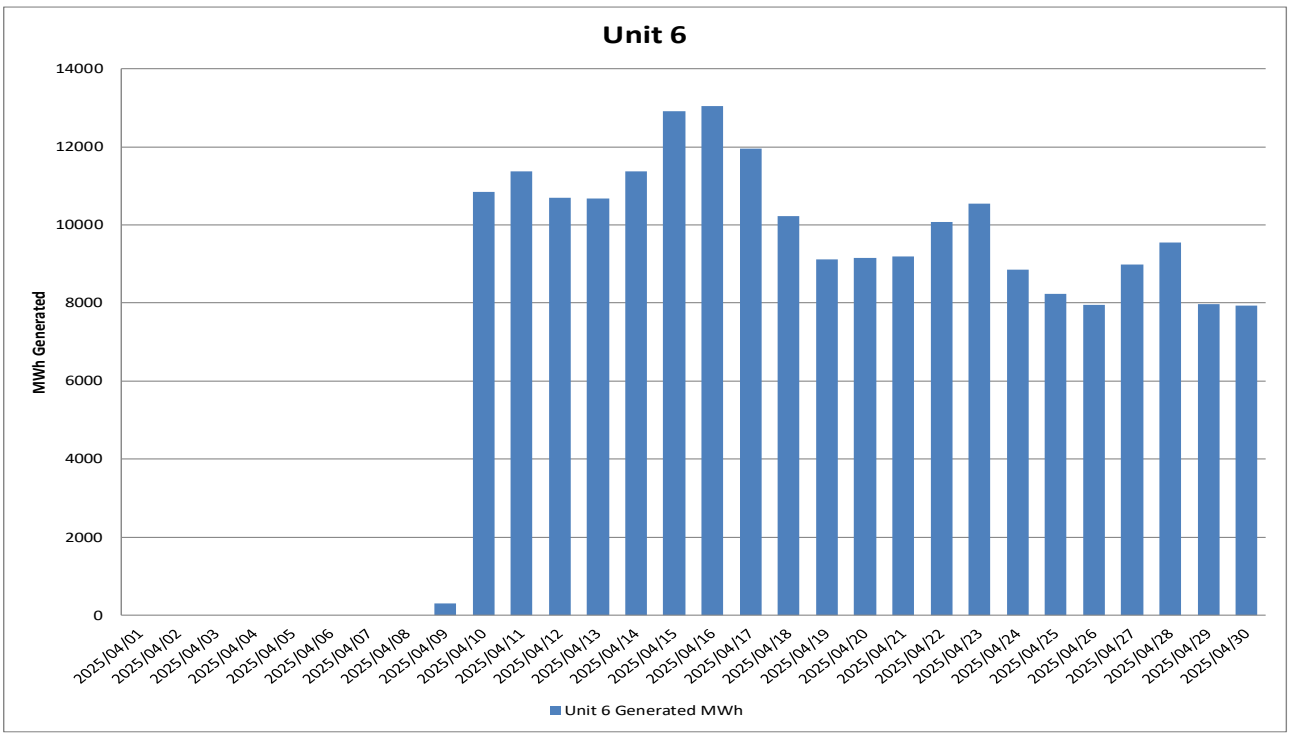

Figure 24: Unit 6 daily generated power in MWh for the month of April 2025

2.5 Pollutant Tonnages

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

Table 6: Pollutant tonnages for the month of April 2025

Associated Unit/Stack	PM (tons)	SO_2 (tons)	NO_x (tons)
Unit 1	1 515.9	1 542.9	662.5
Unit 2	0.0	0.0	0.0
Unit 3	135.5	294.1	60.8
Unit 4	1 755.1	5 958.7	1 105.8
Unit 5	846.8	4 996.9	1 044.8
Unit 6	150.9	3 346.8	776.0
SUM	4 404.1	16 139.5	3 649.9

2.6 Operating days in compliance to PM AEL Limit

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
Unit 1	0	0	0	30	30	1 043.5
Unit 2	0	1	0	29	30	491.5
Unit 3	0	0	0	3	3	1 197.9
Unit 4	0	0	0	30	30	829.8
Unit 5	0	0	0	29	29	467.6
Unit 6	0	2	0	19	21	136.7
SUM	**0**	**3**	**0**	**140**	**143**	

2.7 Operating days in compliance to SOx AEL Limit

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO_2 (mg/Nm³)
Unit 1	30	0	0	0	0	1 253.5
Unit 2	30	0	0	0	0	3 214.1
Unit 3	3	0	0	0	0	2 396.3
Unit 4	30	0	0	0	0	2 860.6
Unit 5	30	0	0	0	0	2 670.7
Unit 6	22	0	0	0	0	2 889.2
SUM	**145**	**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 April 2025

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
Unit 1	30	0	0	0	0	521.8
Unit 2	30	0	0	0	0	536.4
Unit 3	3	0	0	0	0	489.4
Unit 4	30	0	0	0	0	532.4
Unit 5	30	0	0	0	0	558.4
Unit 6	22	0	0	0	0	669.9
SUM	**145**	**0**	**0**	**0**	**0**	

2.9 Reference values

Table 10: Reference values for data provided, April 2025

Compound / Parameter	Units of Measure	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Oxygen	%	9.44	7.45	9.73	7.97	7.34	11.44
Moisture	%	4.10	5.76	4.77	4.87	5.12	3.66
Velocity	m/s	17.9	30.0	22.7	26.9	23.7	29.1
Temperature	^{o}C	140.3	132.1	131.2	122.1	122.5	124.9
Pressure	mBar	961.2		917.3	918.5	902.3	906.1

2.10 Continuous Emission Monitors

2.10.1 Reliability

Table 11: Monitor reliability percentage (%)

Associated Unit/Stack	PM	SO_2	NO
Unit 1	*37.8*	*35.8*	*100.0*
Unit 2	*67.3*	*100.0*	*100.0*
Unit 3	*87.3*	*100.0*	*100.0*
Unit 4	*46.0*	*84.3*	*95.1*
Unit 5	*56.8*	*100.0*	*100.0*
Unit 6	*27.6*	*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 1,2,4 ,5 and 6 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 2 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 6 PM monitor reliability was low due to the number of times the monitor kept maxing out of the monitors' range. Unit 1,2,3,4, 5 and 6 gaseous monitor reliability was above 80% 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 except for unit 1 SOX gaseous monitor that used monthly averages after the monitor was repaired.

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

Unit	SO_2	NO_x	PM	CO_2
1	35.8	100.0	37.8	100.0
2	100.0	100.0	67.3	100.0
3	100.0	100.0	87.3	0.0
4	84.3	95.1	46.0	9.7
5	100.0	100.0	56.8	100.0
6	100.0	100.0	27.6	6.8

Continuous emission monitors were available for less than 80% of the reporting period for unit 1,2,4 ,5 and 6 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 2 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 6 PM monitor availability was low due to the number of times the monitor kept maxing out of the monitors' range. Unit 1,2,3,4, 5 and 6 gaseous monitor availability was above 80% 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 except for unit 1 SOX gaseous monitor that used monthly averages after the monitor was repaired.

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	6	
Fires in	2025/04/09	05h41
Synchronization with Grid	2025/04/09	20h55
Emissions below limit	N/A	The unit did not go below the limit.
Fires in, to synchronization	15.14	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	720.000	720.000	61.240	720.000	720.000	518.450
Days over the Limit during Emergency Generation	30	30	3	30	29	21

During the period under review all Units were on emergency generation in force from 01 April 2025 until 30 April 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 April 2024. The April 2025 ambient air quality monitoring report is attached to this report as an addendum.

2.16 Electrostatic precipitator and Sulphur plant status

Unit 1

- Hopper levels causing precipitator fields to trip.
- SO3 plant off due to no process airflow transmitter available.

Unit 2

- Hopper levels causing precipitator fields to trip.
- No abnormalities on the SO3 plant.

Unit 3

- Unit on outage.

Unit 4

- Hopper levels causing precipitator fields to trip.
- No abnormalities on the SO3 plant.

Unit 5

- Hopper levels causing precipitator fields to trip.
- No abnormalities on the SO3 plant.

Unit 6

- Hopper levels causing precipitator fields to trip.
- 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