Eskom	Technical and Generic Report	Matimba Power Station

Title: **Matimba Power Station April 2023 emissions report Rev 1**

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Content

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Figures

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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 is the revision 1 of the report issued containing the required information as specified in the license for April 2023.The revision 1 is issued due to the changes applied to the Matimba Emission Reporting tool for the usage of surrogate particulate emissions values when monitors exceed their range due to high actual emissions using the Deutsch calculation. The information recorded in the original report April 2023 was from Matimba Emission Reporting tool V12.2021 and the information on revision 1 April 2023 is from Matimba Emission Reporting tool V02.2024FD.

During the period under review, Matimba experienced ninety-two (92) exceedances of the daily particulate matter emission limit (50mg/Nm3), sixty-one (61) 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. Thirty-one (31) exceedances occurred within the grace period.

The flue gas conditioning (Sulphur trioxide plant (SO3 plant)) for unit 1,3,4 and unit 6 did not achieve the required 100% availability as results of online maintenance that occurred during the month, on average the plant was available for 96% of the time. Matimba Unit 5 has been off load for long-term maintenance outage since the 20th of March 2023.

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

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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	853 241
	Fuel Oil	Tons/month	1 200	2125,566
Production Rates	**Product/ By-Product Name**	**Unit**	**Maximum Production Capacity Permitted (Quantity)**	**Production Rate**
	Energy	MW	4000	1997,273

The consumption rates for the month of April 2023 exceeded the permitted maximum limits of 1200 Tons due to defective pyrometers used to detect the flames in the boiler resulting in requirement to constantly supporting the combustion with fuel oil. The unit ended the month with the fuel oil usage of 2125,566 Tons.

2.2 Abatement technology

Table 2: Abatement Equipment Control Technology Utilised

Associated Unit	Technology Type	Minimum utilisation (%)	Efficiency (%)
Unit 1	Electrostatic Precipitator	100%	99,732%
Unit 2	Electrostatic Precipitator	100%	99,701%
Unit 3	Electrostatic Precipitator	100%	99,817%
Unit 4	Electrostatic Precipitator	100%	99,856%
Unit 5	Electrostatic Precipitator	100%	Unit Off
Unit 6	Electrostatic Precipitator	100%	99,898%
Associated Unit	**Technology Type**	**Minimum utilisation (%)**	**Actual Utilisation (%)**
Unit 1	SO_3 Plant	100%	99,48%
Unit 2	SO_3 Plant	100%	100%
Unit 3	SO_3 Plant	100%	99,23%
Unit 4	SO_3 Plant	100%	93,76%
Unit 5	SO_3 Plant	100%	Unit Off
Unit 6	SO_3 Plant	100%	95,68%

Flue gas conditioning plant availability was below the required 100% for all six (06) units due to maintenance activities and unplanned breakdowns. Defects were addressed and plants returned to services.

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2.3 Energy source characteristics

Table 3: Energy Source Material Characteristics.

	Characteristic	Stipulated Range (Unit)	Monthly Average Content
Coal burned	**Sulphur Content**	1.6%	1,33%
	Ash Content	40%	34,60%

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

2.4 Emissions reporting

2.4.1 Particulate Matter Emissions

Unit 1 Particulate Emissions

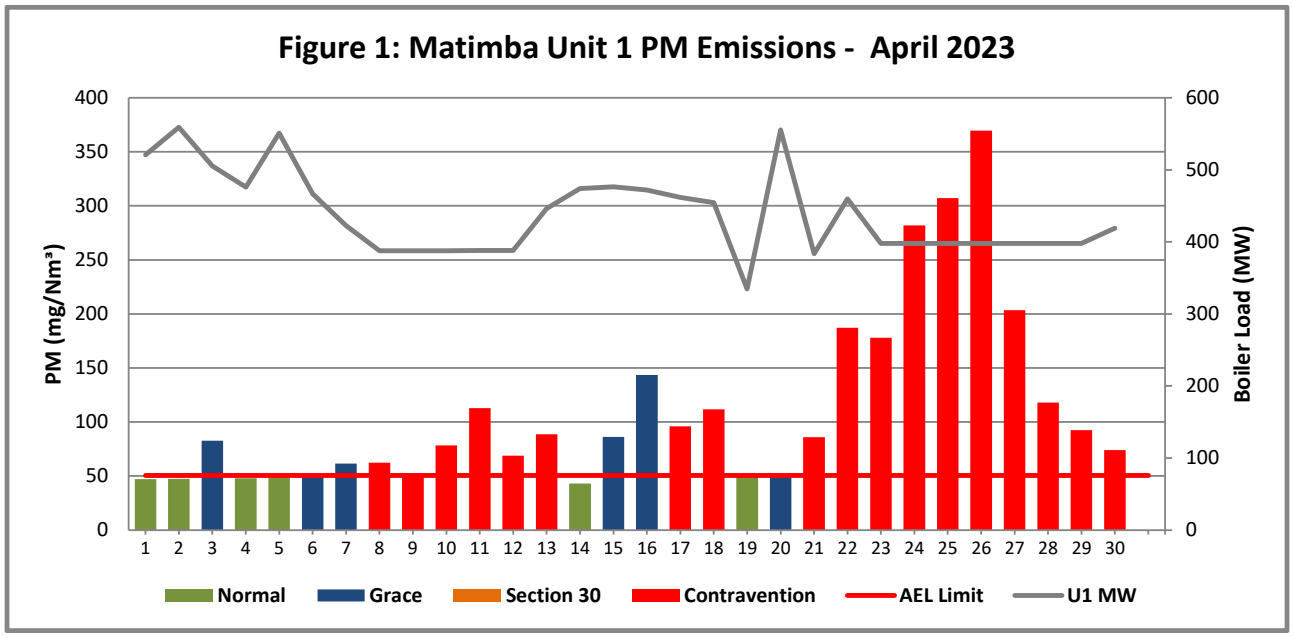

Figure 1: Particulate matter daily average emissions against emission limit for unit 1 for the month of April 2023

Interpretation:

Unit 1 exceeded the daily particulate emission limit of 50mg/Nm3 on 3,6 to 13 and 15 to 18 and 20 to 30 April 2023. Exceedances from 8 to 13, 17,18,21 to 30 April 2023 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 defects on the dust handling plants leading to high hopper levels within the flue gas cleaning system and reducing the efficiency of the abatement technology (electrostatic precipitator fields). The investigation into the causes of the exceedances were done and corrective measure put in place to correct the root causes.

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Unit 2 Particulate Emissions

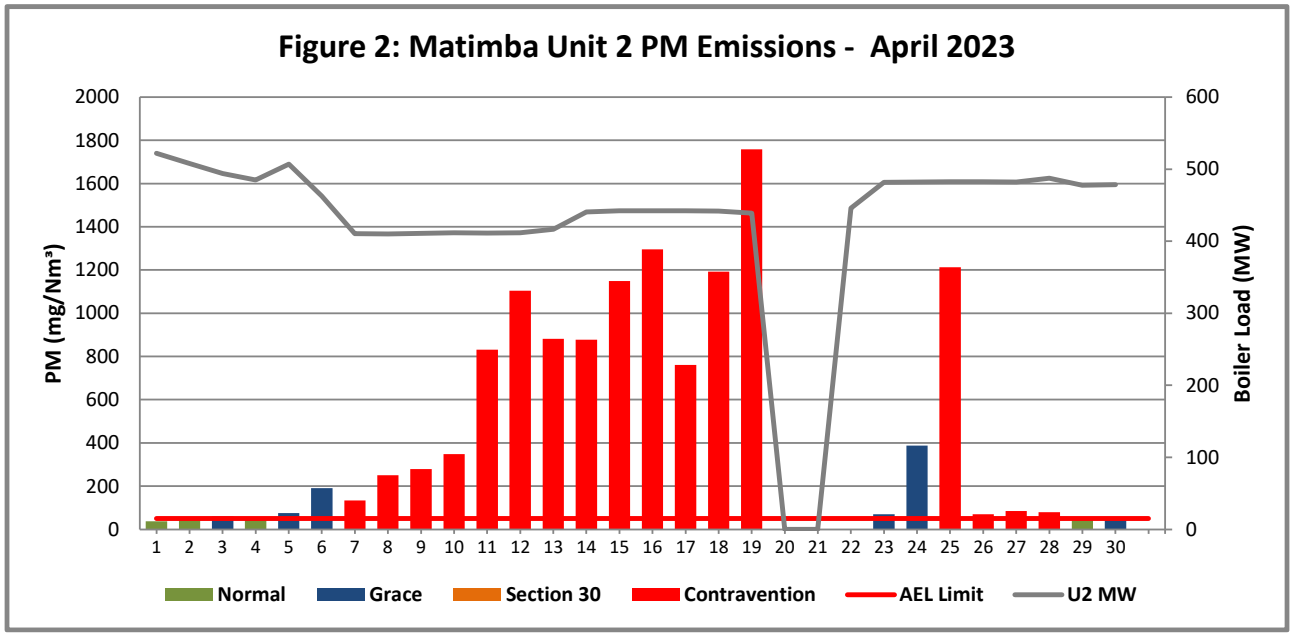

Figure 2: Particulate matter daily average emissions against emission limit for unit 2 for the month of April 2023

Interpretation:

Unit 2 exceeded the daily particulate emission limit of 50mg/Nm3 on 3, 5 to 28 and 30 April 2023. Exceedances from 7 to 19 and 25 to 28 April 2023 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 defects on the dust handling plants leading to high hopper levels within the flue gas cleaning system and reducing the efficiency of the abatement technology (electrostatic precipitator fields). The investigation into the causes of the exceedances were done and corrective measure put in place to correct the root causes.

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Unit 3 Particulate Emissions

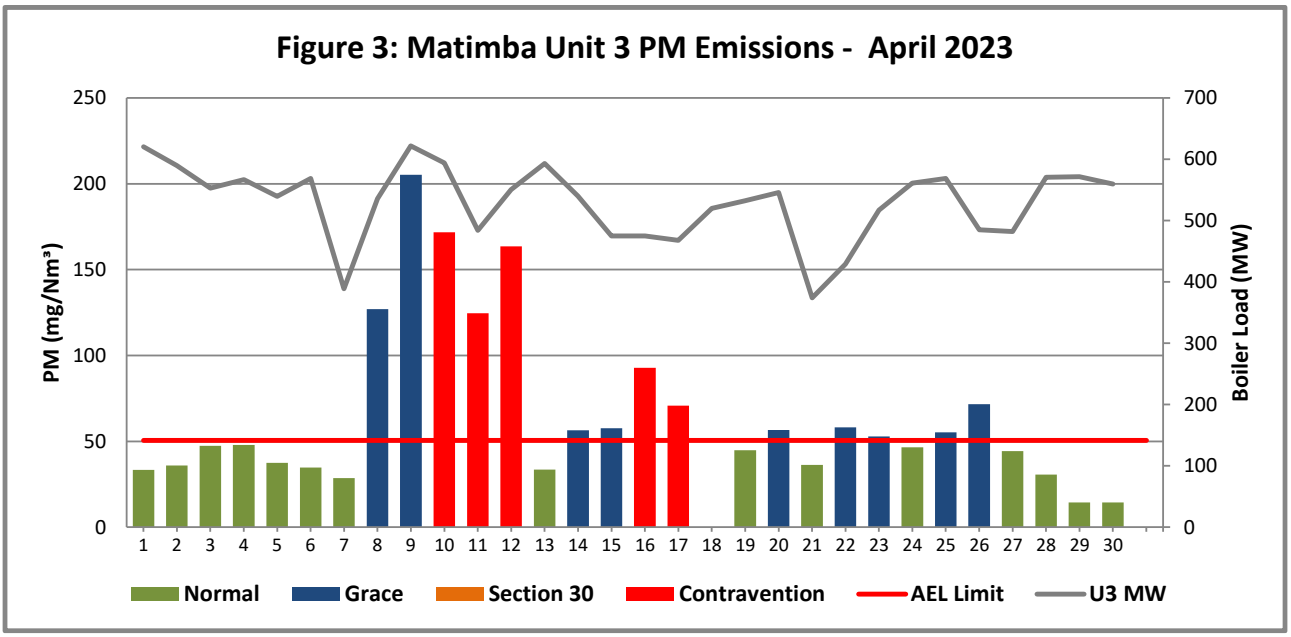

Figure 3: Particulate matter daily average emissions against emission limit for unit 3 for the month of April 2023

Interpretation:

Unit 3 Particulate matter exceeded the daily limit of 50 mg/Nm^3 on 8 to 12, 14 to 17,20,22,23,25 and 26 April 2023. Exceedances from the 10 to 12,16 and 17 April 2023 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 defects on the dust handling plants leading to high hopper levels within the flue gas cleaning system and reducing the efficiency of the abatement technology (electrostatic precipitator fields). The investigation into the causes of the exceedances were done and corrective measure put in place to correct the root causes.

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Unit 4 Particulate Emissions

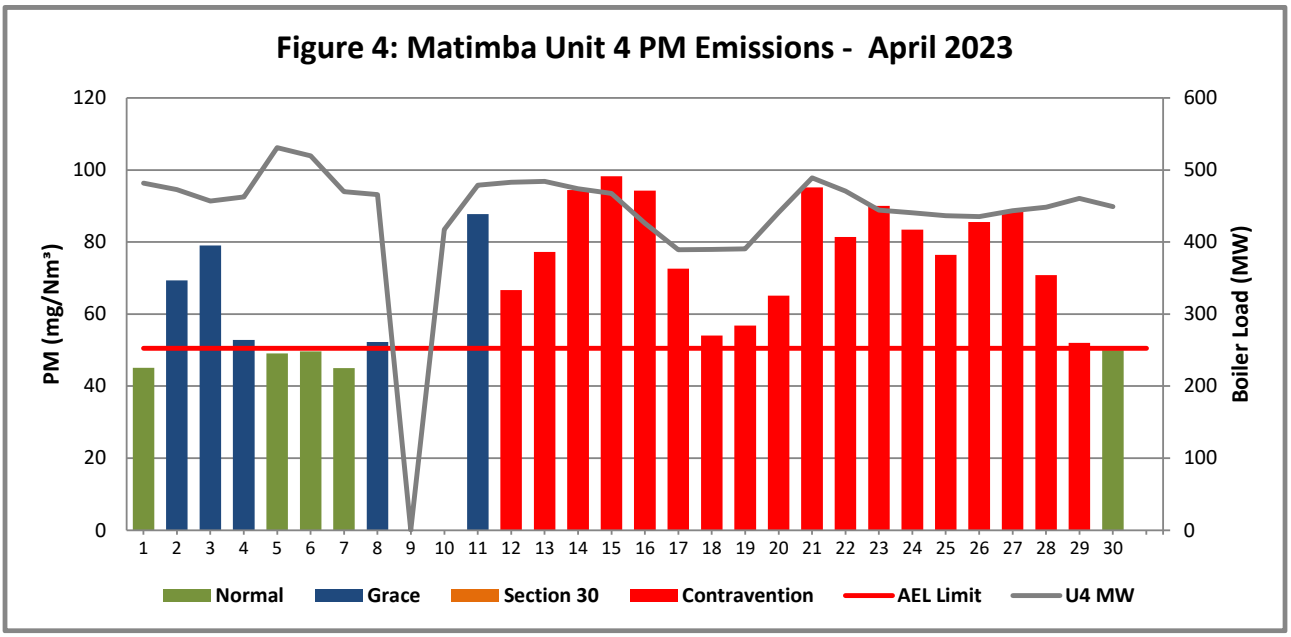

Figure 4: Particulate matter daily average emissions against emission limit for unit 4 for the month of April 2023

Interpretation:

Unit 4 Particulate matter exceeded the daily limit of 50 mg/Nm^3 on 2 to 4,8 to 29 April 2023. Exceedances from 12 to 29 April 2023 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 defects on the dust handling plants leading to high hopper levels within the flue gas cleaning system and reducing the efficiency of the abatement technology (electrostatic precipitator fields). The investigation into the causes of the exceedances were done and corrective measure put in place to correct the root causes.

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Unit 5 Particulate Emissions

Unit 5 on outage.

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Unit 6 Particulate Emissions

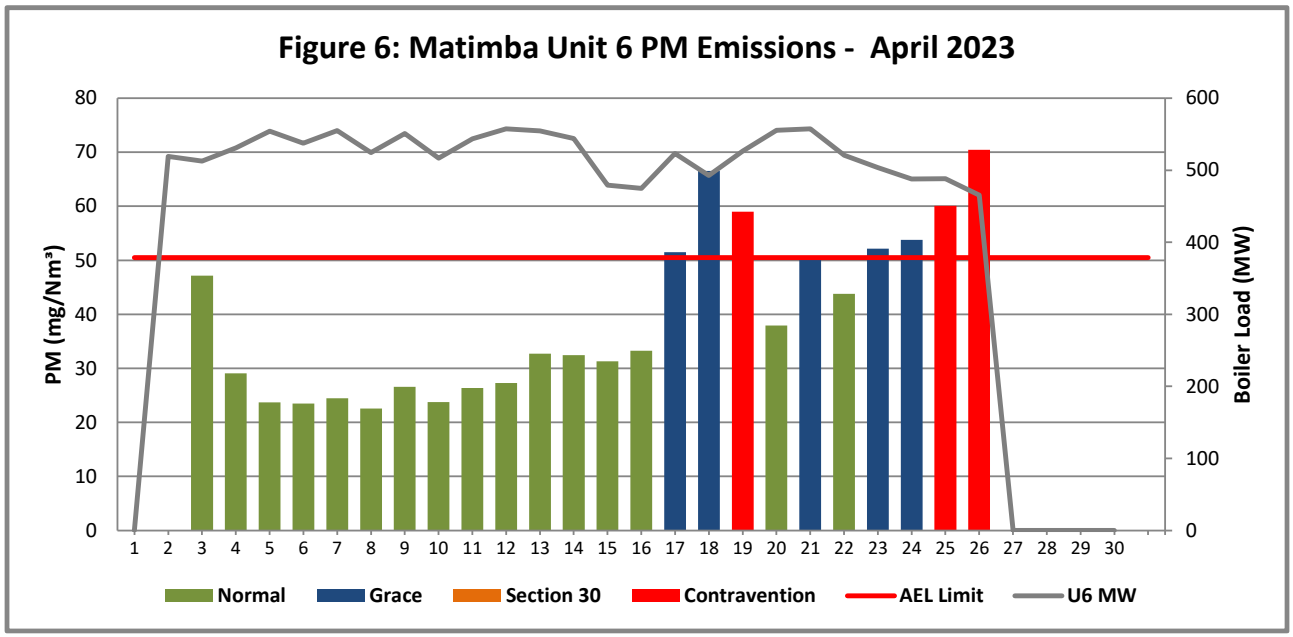

Figure 5: Particulate matter daily average emissions against emission limit for unit 6 for the month of April 2023

Interpretation:

Unit 6 Particulate matter exceeded the daily limit of 50 mg/Nm3 on 17 to 19,21,23 to 26 April 2023. Exceedances of 19,25 and 26 April 2023 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 defects on the dust handling plants leading to high hopper levels within the flue gas cleaning system and reducing the efficiency of the abatement technology (electrostatic precipitator fields). The investigation into the causes of the exceedances were done and corrective measure put in place to correct the root causes

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2.4.2 Gaseous Emissions

Gaseous emissions analyzers for all 6 units are providing unreliable data due to the movement of the Oxygen analyzer ports that were previously installed incorrectly to a new correct position.
The station completed the project to relocate the Oxygen analyzer ports in November 2022 as part of the activities to implement the changes on gaseous emission analyzers to improve the reliability of the data.
The station is currently preparing to perform the quality assurance tests and calibrations on the monitors post the changes implemented.

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Unit 1 SO_2 Emissions

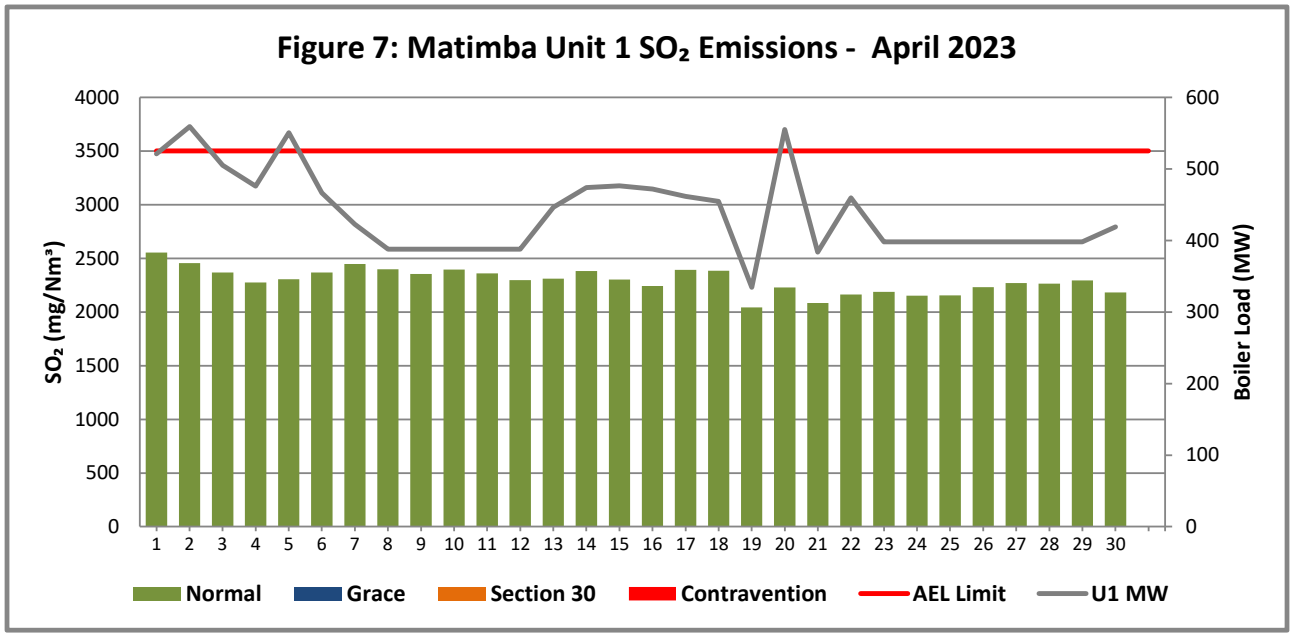

Figure 6: SO2 daily average emissions against emission limit for unit 1 for the month of April2023

Interpretation:

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

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Unit 2 SO_2 Emissions

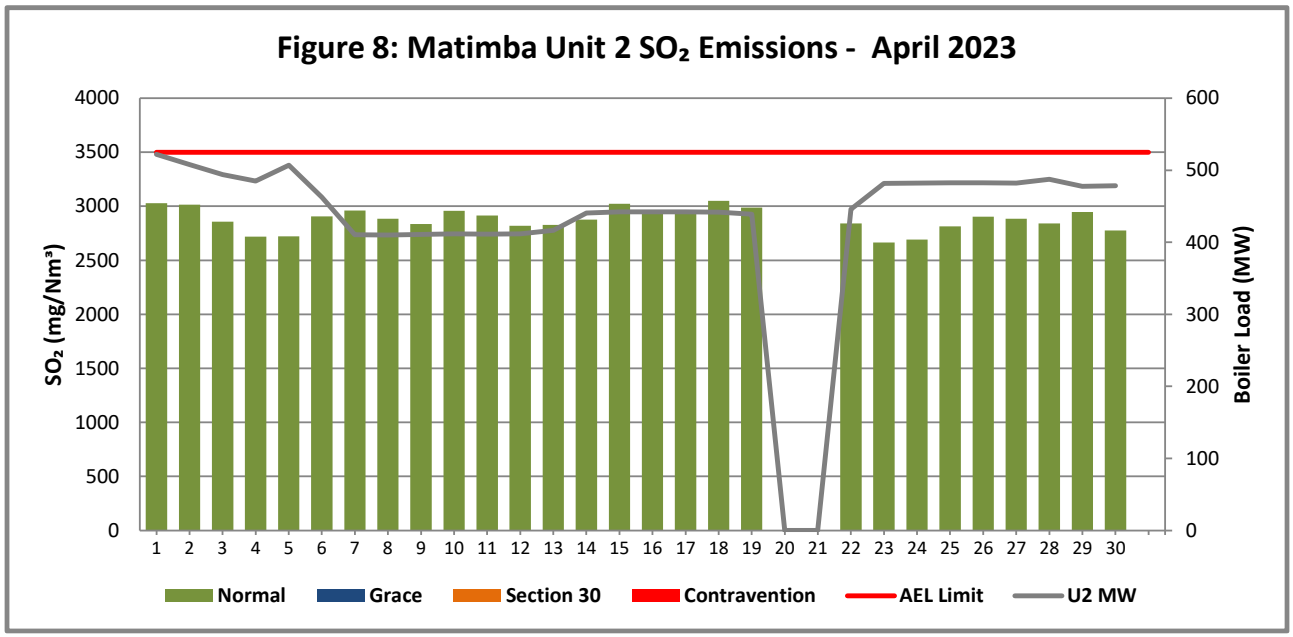

Figure 7: SO2 daily average emissions against emission limit for unit 2 for the month of April 2023

Interpretation:

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

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Unit 3 SO_2 Emissions

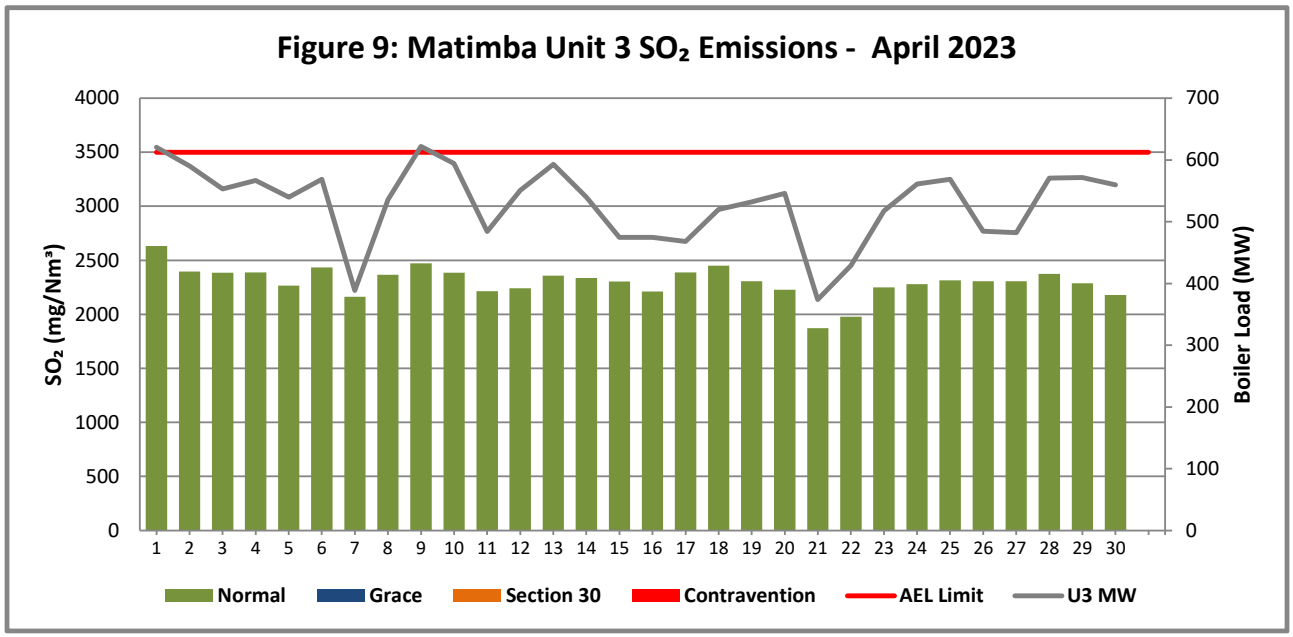

Figure 8: SO2 daily average emissions against emission limit for unit 3 for the month of April 2023

Interpretation:

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

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Unit 4 SO_2 Emissions

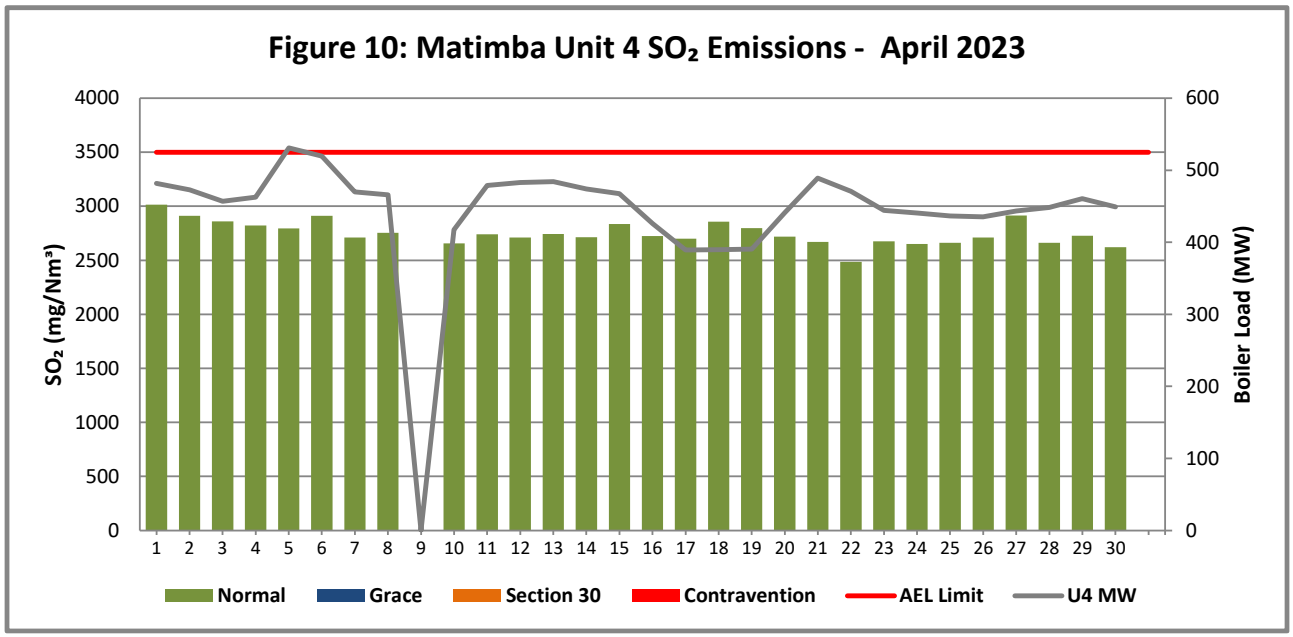

Figure 9: SO2 daily average emissions against emission limit for unit 4 for the month of April 2023

Interpretation:

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

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Unit 5 SO_2 Emissions

Unit 5 off load for outage

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Unit 6 SO_2 Emissions

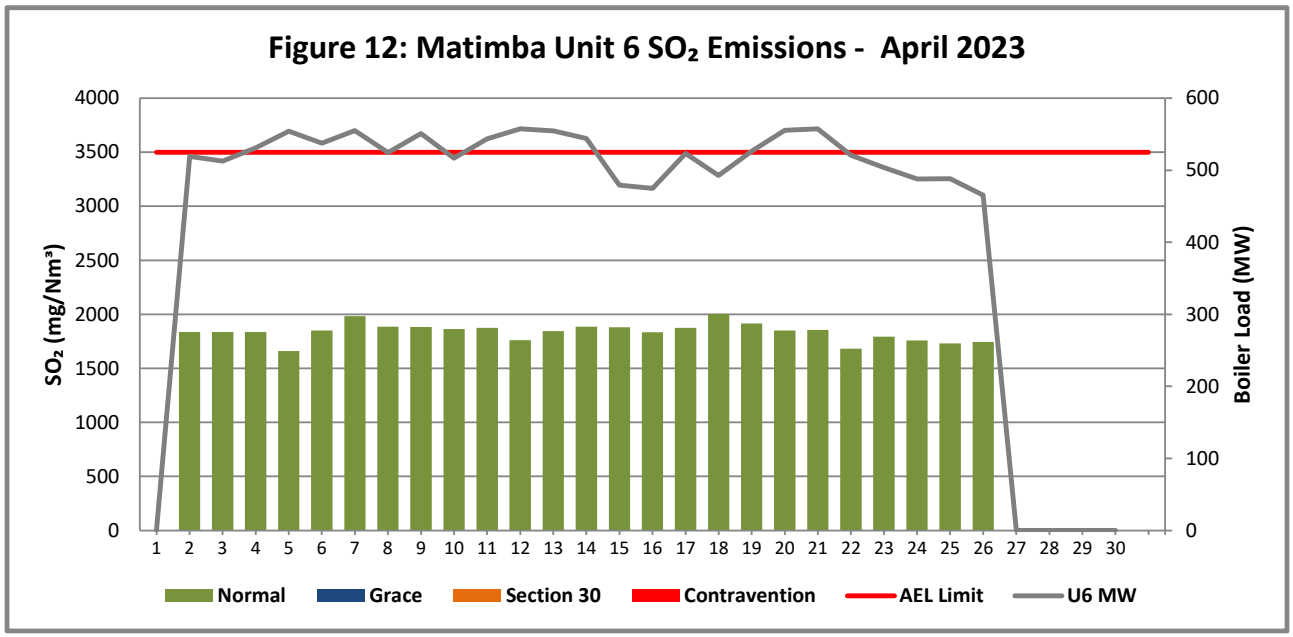

Figure 10: SO2 daily average emissions against emission limit for unit 6 for the month of April 2023

Interpretation:

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

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Unit 1 NO_x Emissions

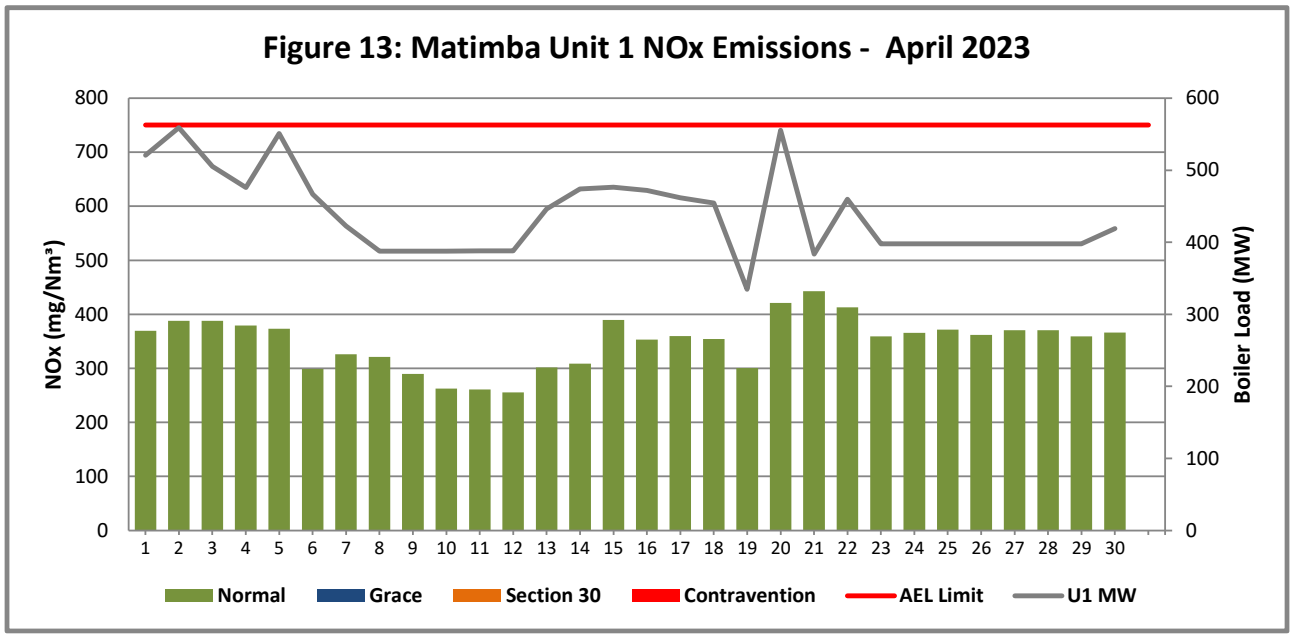

Figure 11: NOx daily average emissions against emission limit for unit 1 for the month of April 2023

Interpretation:

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

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Unit 2 NO_x Emissions

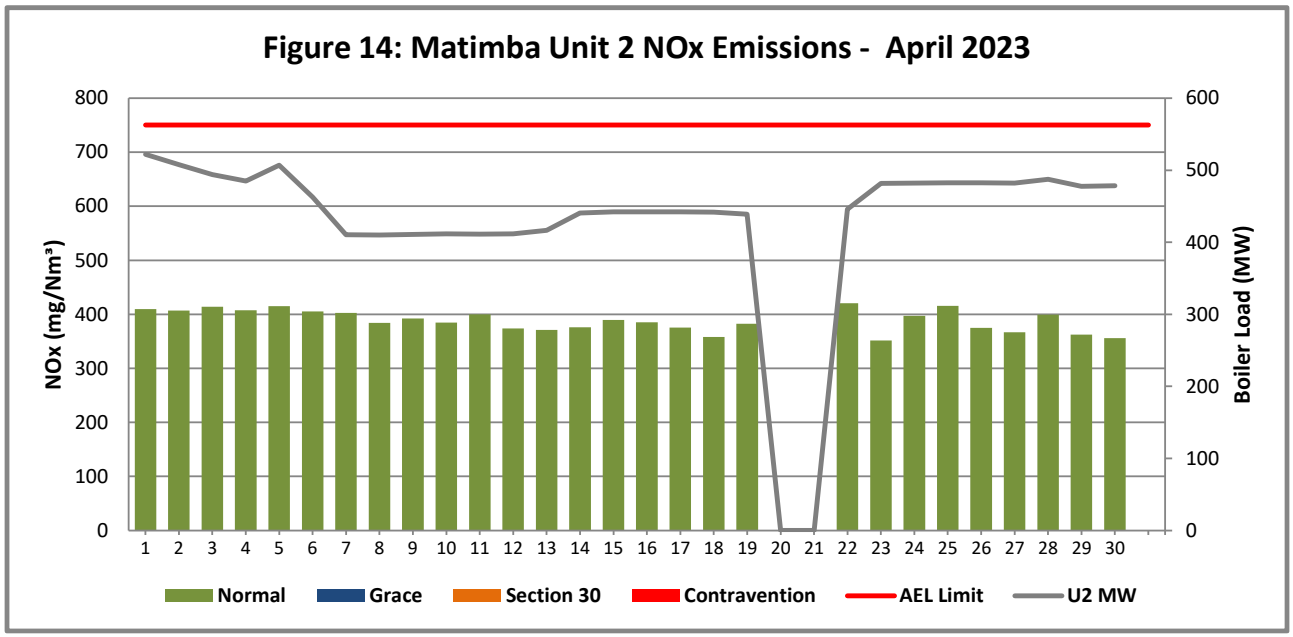

Figure 12: NOx daily average emissions against emission limit for unit 2 for the month of April 2023

Interpretation:

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

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Unit 3 NO_x Emissions

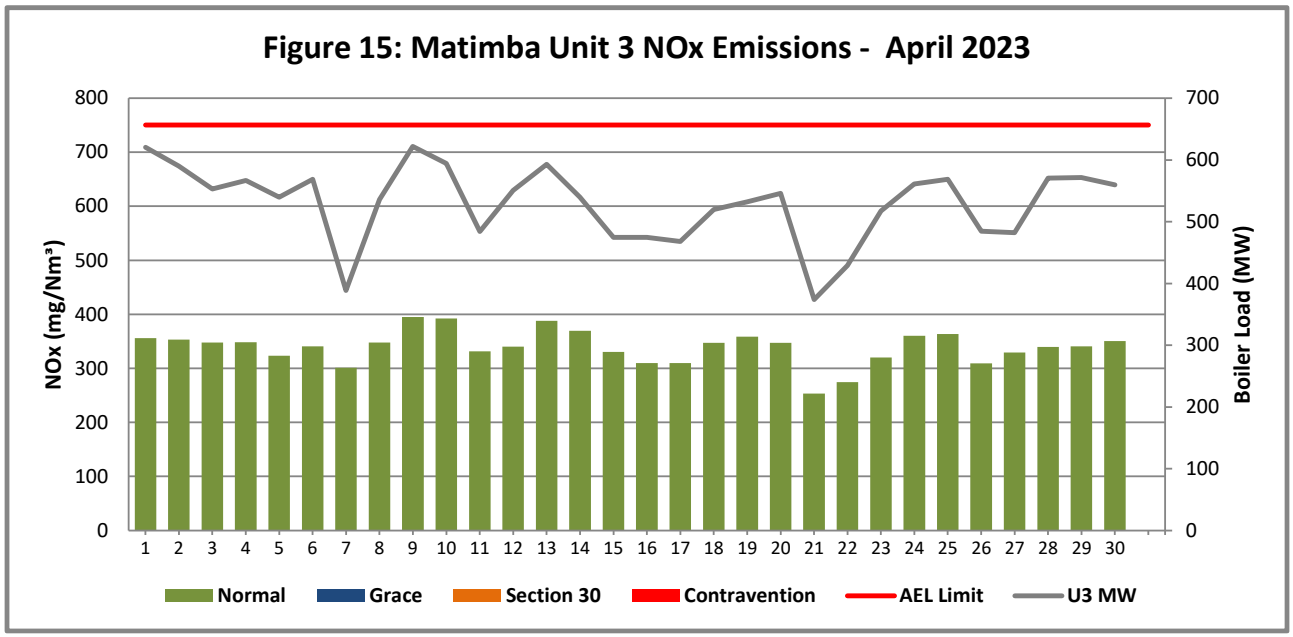

Figure 13: NOx daily average emissions against emission limit for unit 3 for the month of April 2023

Interpretation:

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

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Unit 4 NO_x Emissions

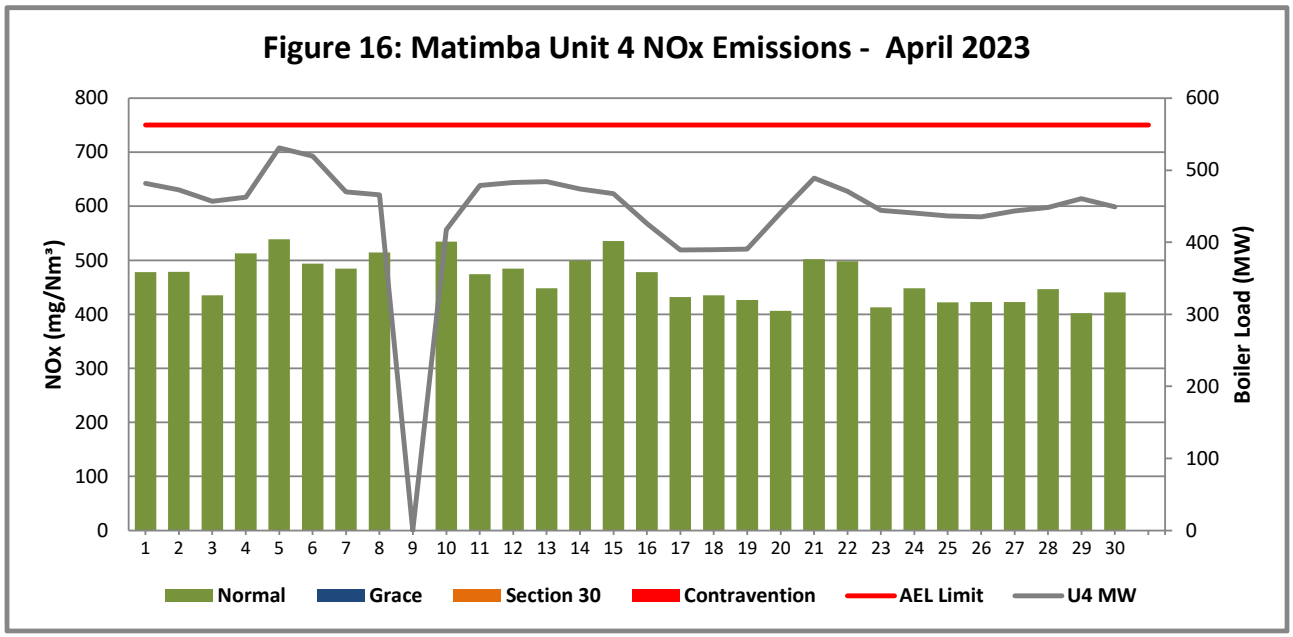

Figure 14: NOx daily average emissions against emission limit for unit 4 for the month of April 2023

Interpretation:

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

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Unit 5 NO_x Emissions

Unit 5 off load for outage

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Unit 6 NO_x Emissions

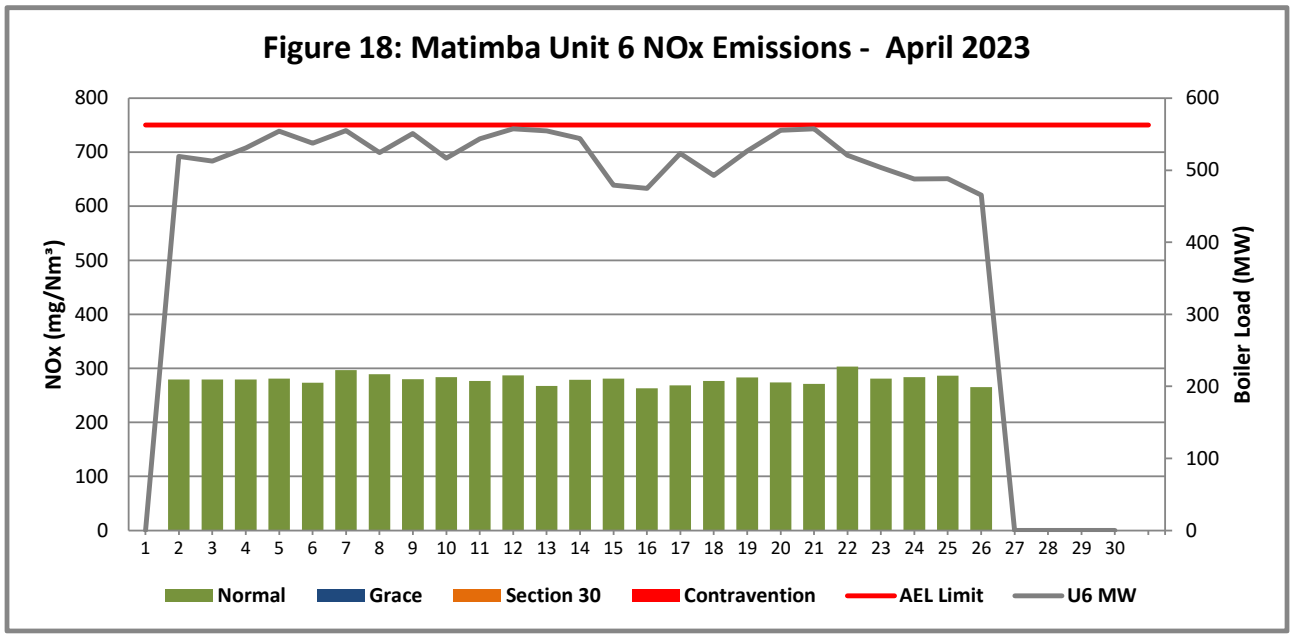

Figure 15: NOx daily average emissions against emission limit for unit 6 for the month of April 2023

Interpretation:

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

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2.4.3 Total Volatile Organic Compounds

Table 4: Total volatile compound estimates

Eskom

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

Date:	Thursday, 01 June 2023
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:	***2125,566***	
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:	0,06	kg/month
TOTAL LOSSES (Total TVOC Emissions for the month):	**0,54**	**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.

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2.4.4 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.

2.5 Daily power generated

Table 5: Daily power generated per unit in MWh for the month of April 2023

Date	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
2023/04/01	11420,5	10330,6	13568,7	10440,6		
2023/04/02	12229,6	10777,9	12911,9	10271,9		10781,1
2023/04/03	11024,8	10467,3	12030,5	9908,34		11057,1
2023/04/04	10372,7	10262,7	12360,9	5753,06		11436,5
2023/04/05	12044,3	10760,6	11789,6	11539,1		12022,1
2023/04/06	10195	9794,36	12419,5	11263,7		11603,9
2023/04/07	9245,08	8646,93	148,62	10185,6		11995,7
2023/04/08	8435,01	8630,32	11172,3	7124,63		11312
2023/04/09	8420,28	8655,54	13577,7			11908,2
2023/04/10	8427,94	8670,44	13082	8025,47		11173,8
2023/04/11	8415,32	8692,01	9774,11	10337		11732,2
2023/04/12	8438,16	8703,89	8463,95	10421,3		12071,6
2023/04/13	9730,65	8789,07	12920	10452,4		12015,3
2023/04/14	10325,6	9324,91	11771,9	10226,8		11756,7
2023/04/15	10409	9354,92	10295,9	10134,9		10338,6
2023/04/16	10316,7	9378,41	10313	9271,05		10261,2
2023/04/17	10111,8	9375,58	10187,6	8448,84		11334,8
2023/04/18	8658,72	9351,81	11301,6	8443,64		10648,9
2023/04/19	2523,04	9247,83	11560,7	8469,96		11390,3
2023/04/20	10663,8		11929,8	9542,9		12008,6
2023/04/21	8289,28		8055,29	10566,8		12055,9
2023/04/22	10026,1	7041,26	9264,49	10212,4		11264
2023/04/23	8642,79	10196,4	11233,1	9619,08		10859,5
2023/04/24	8650,71	10215,2	12211,9	9569,11		10499,9
2023/04/25	8639,58	10217,3	12396,6	9478,83		10532,3
2023/04/26	8625,87	10218,1	10519,9	9432,04		9749,9
2023/04/27	8643,53	10209,6	10481,2	9631,12		
2023/04/28	8644,02	10344,2	12405,8	9736,81		
2023/04/29	8641,37	10099,7	12491,5	9977,1		
2023/04/30	9057,83	10156,4	12162,2	9740,93		

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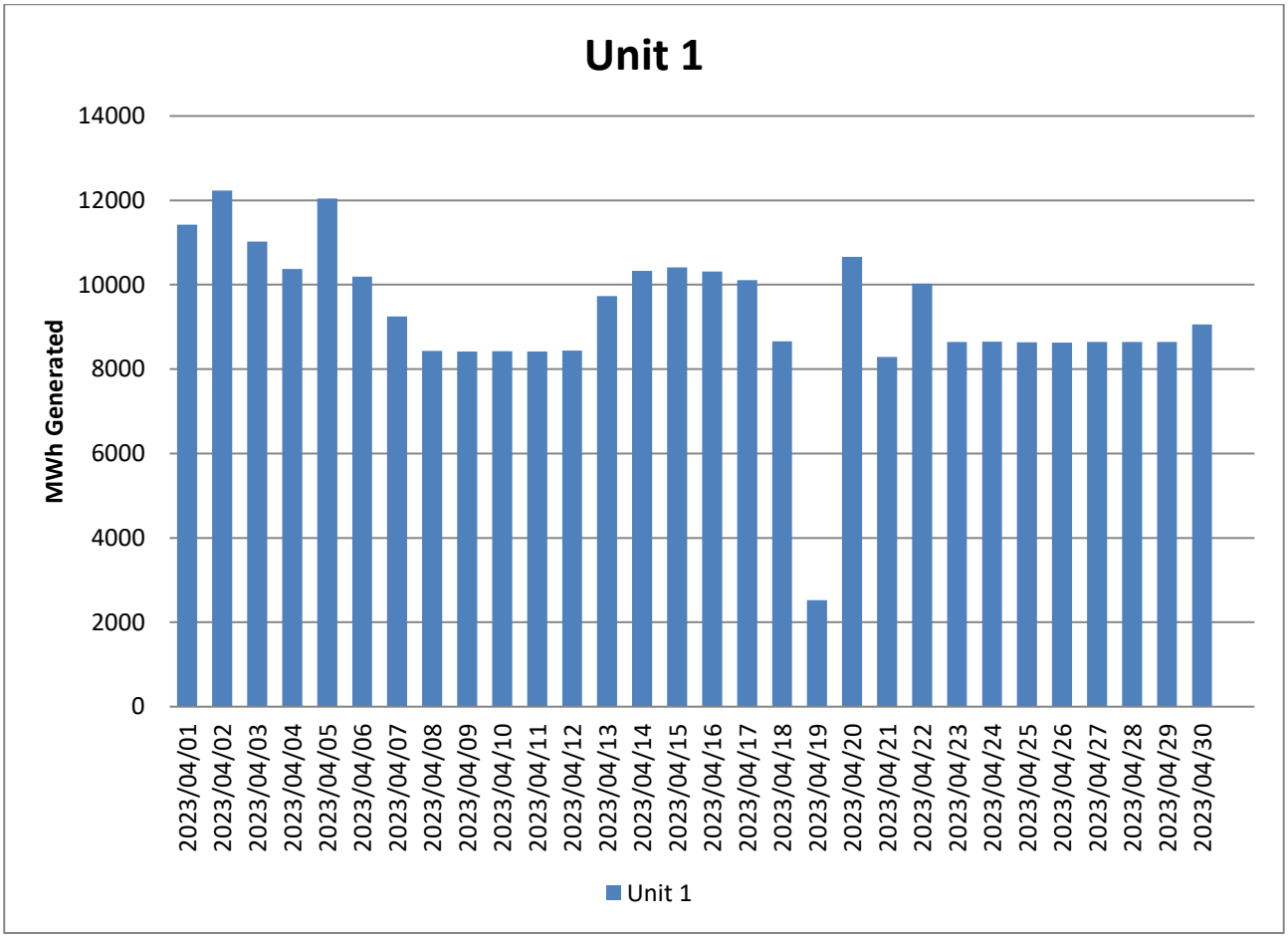

Figure 16: Unit 1 daily generated power in MWh for the month of April 2023

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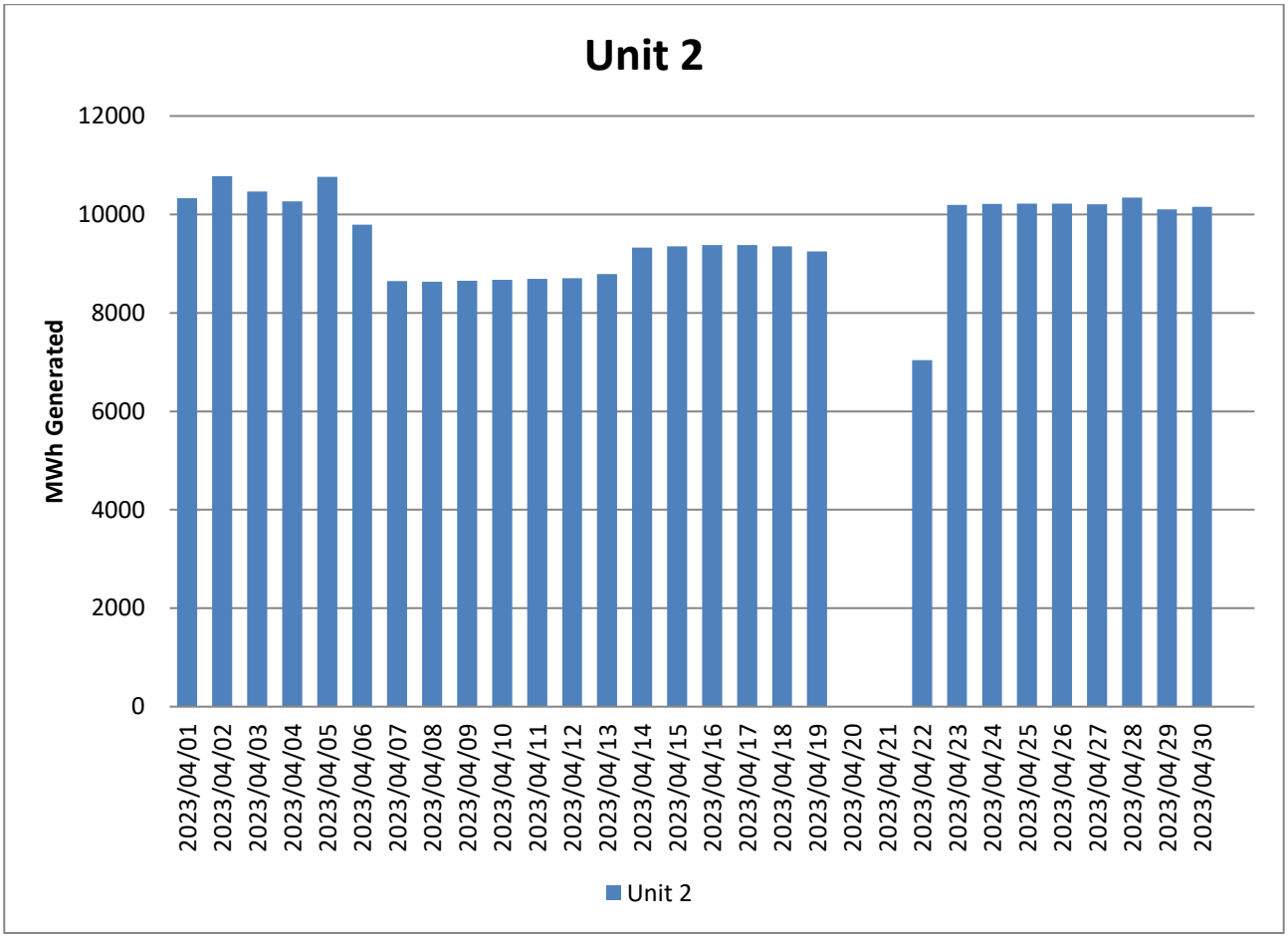

Figure 17: Unit 2 daily generated power in MWh for the month of April 2023

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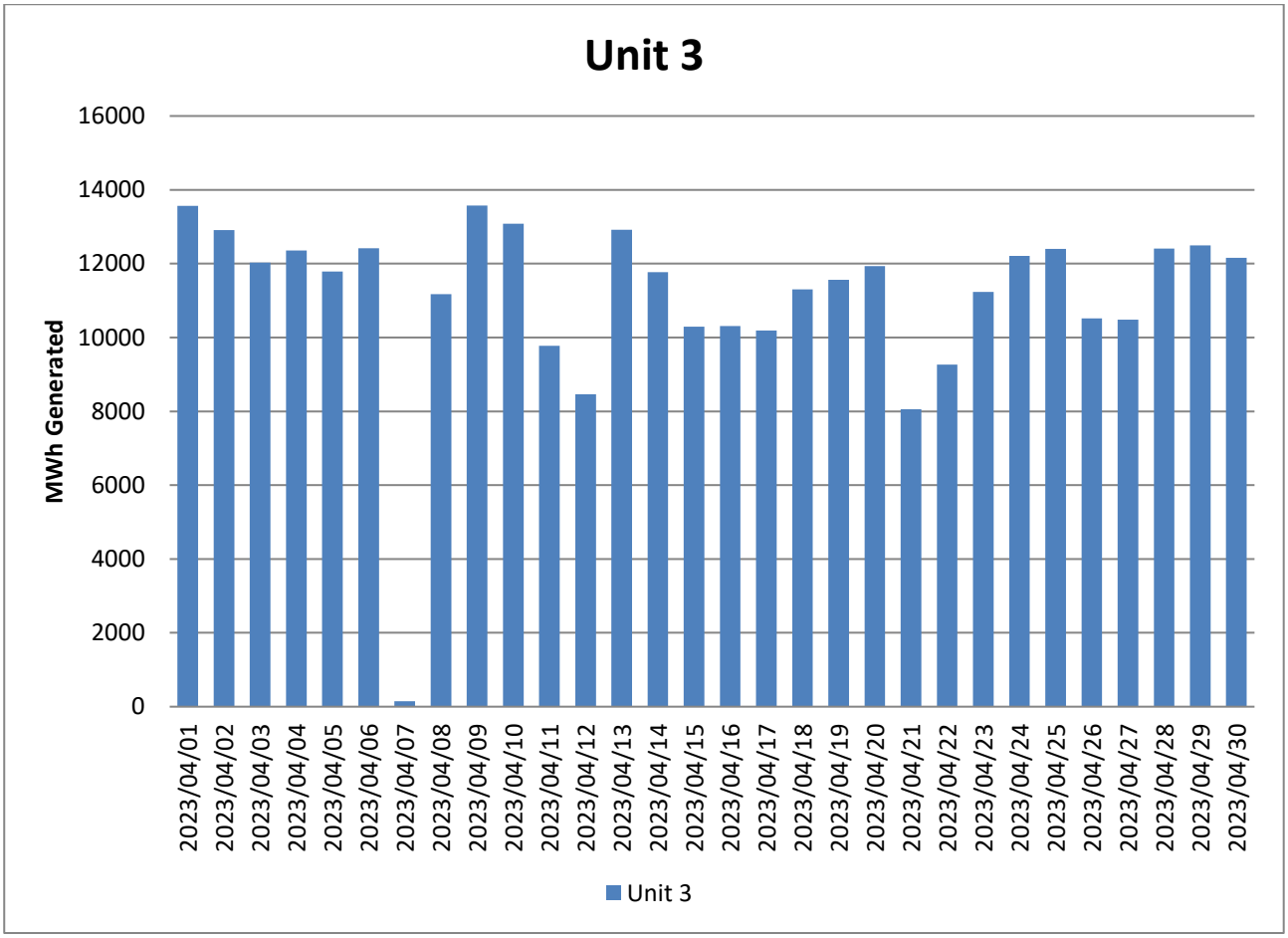

Figure 18: Unit 3 daily generated power in MWh for the month of April 2023

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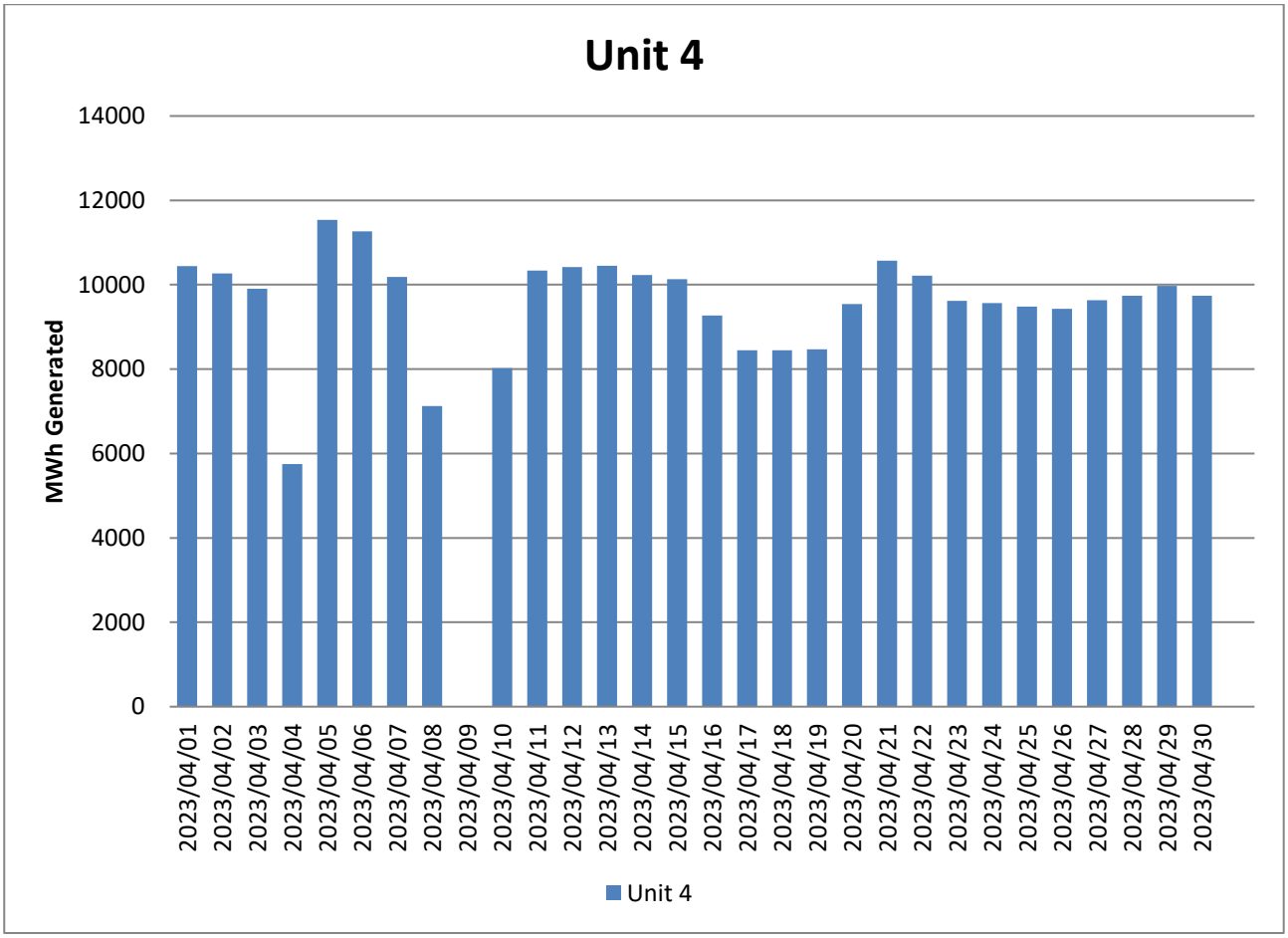

Figure 19: Unit 4 daily generated power in MWh for the month of April 2023

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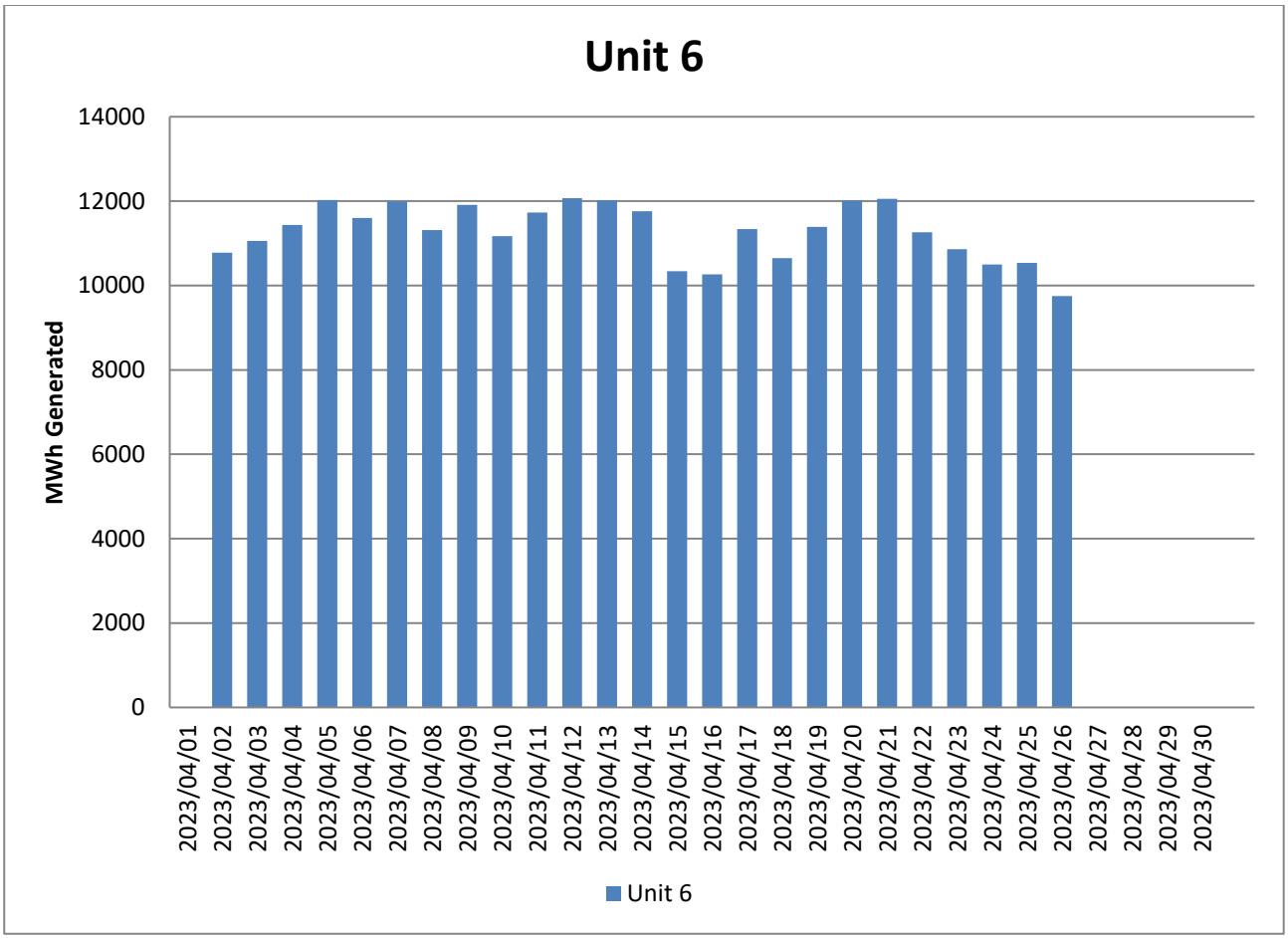

Figure 20: Unit 6 daily generated power in MWh for the month of April 2023

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2.6 Pollutant Tonnages

The emitted pollutant tonnages for April 2023 are provided in table 6. Gaseous emissions analysers for all 6 units are providing unreliable data due to the movement of the Oxygen analyser port to a new position. Matimba is currently in the process of implementing recommended changes on gaseous emission analysers to improve the reliability of the data.

Table 6: Pollutant tonnages for the month of April 2023

Associated Unit/Stack	PM (tons)	SO_2 (tons)	NO_x (tons)
Unit 1	165.6	4 151.4	636.1
Unit 2	771.6	5 631.8	759.5
Unit 3	105.3	5 623.6	832.3
Unit 4	72.8	4 562.6	773.0
Unit 5	Off	Off	Off
Unit 6	53.8	3 426.2	521.5
SUM	1 169.1	23 395.6	3 522.4

2.7 Operating days in compliance to PM AEL Limit

Table 7: Operating days in compliance with PM AEL limit of April 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm^3)
Unit 1	6	6	0	18	24	115.3
Unit 2	4	6	0	17	23	488.6
Unit 3	15	9	0	5	14	58.9
Unit 4	5	5	0	18	23	70.8
Unit 5	Off	Off	Off	Off	Off	Off
Unit 6	16	5	0	3	8	39.6
SUM	**46**	**31**	**0**	**61**	**92**	

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2.8 Operating days in compliance to SOx AEL Limit

Table 8: Operating days in compliance with SOx AEL limit of April 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO_2 (mg/Nm³)
Unit 1	30	0	0	0	0	2 295.1
Unit 2	28	0	0	0	0	2 880.2
Unit 3	30	0	0	0	0	2 302.1
Unit 4	29	0	0	0	0	2 750.2
Unit 5	Off	Off	Off	Off	Off	Off
Unit 6	25	0	0	0	0	1 836.9
SUM	**142**	**0**	**0**	**0**	**0**	

2.9 Operating days in compliance to NOx AEL Limit

Table 9: Operating days in compliance with NOx AEL limit of April 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
Unit 1	30	0	0	0	0	349.4
Unit 2	28	0	0	0	0	388.5
Unit 3	30	0	0	0	0	339.3
Unit 4	29	0	0	0	0	465.8
Unit 5	Off	Off	Off	Off	Off	Off
Unit 6	25	0	0	0	0	279.6
SUM	**142**	**0**	**0**	**0**	**0**	

2.10 Reference values

Table 10: Reference values for data provided, April 2023

Compound / Parameter	Units of Measure	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Oxygen	%	6.98	9.65	4.18	7.91	Off	5.91
Moisture	%	4.34	3.83	5.65	2.95	Off	1.94
Velocity	m/s	22.2	30.2	25.6	22.3	Off	27.0
Temperature	°C	139.8	123.3	128.6	127.6	Off	166.8
Pressure	mBar	932.5	936.0	919.3	925.8	Off	914.6

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2.11 Continuous Emission Monitors

2.11.1 Reliability

Continuous emission monitors were available for more than 80% of the reporting period. The emitted pollutant tonnages for April 2023 are provided in table 6. Gaseous emissions analysers for all 6 units are providing unreliable data due to the movement of the Oxygen analyser port to a new position. Matimba is currently in the process of implementing recommended changes on gaseous emission analysers to improve the reliability of the data.

Table 11: Average percentage (%) availability of monitors for the month of April 2023.

Associated Unit/Stack	PM	SO_2	NO
Unit 1	81,7	100,0	100,0
Unit 2	63,6	100,0	98,9
Unit 3	100,0	100,0	100,0
Unit 4	100,0	100,0	100,0
Unit 5	Off	Off	Off
Unit 6	100,0	86,0	86,0

2.11.2 Changes, downtime, and repairs

Unit 1

- No adjustments done on the CEMs. Calibration of gaseous analysers is done every second week.
- No downtime or repairs done on the particulate monitors

Unit 2

- No adjustments done on the CEMs. Calibration of gaseous analysers is done every second week.
- No downtime or repairs done on the particulate monitors

Unit 3

- No adjustments done on the CEMs. Calibration of gaseous analysers is done every second week.
- No downtime or repairs done on the particulate monitors

Unit 4

- No adjustments done on the CEMs. Calibration of gaseous analysers is done every second week.
- No downtime or repairs done on the particulate monitors

Unit 5

- No adjustments done on the CEMs. Calibration of gaseous analysers is done every second week.
- No downtime or repairs done on the particulate monitors

Unit 6

- No adjustments done on the CEMs. Calibration of gaseous analysers is done every second week.

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- No downtime or repairs done on the particulate monitors

2.11.3 Sampling dates and times

Table 12: Dates of last conducted CEMS verification tests for PM, SO_2 and NOx

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	2020/09/30 06h04	2020/09/09 13h00	2020/09/09 13h00	2020/09/09 13h00
2	2021/01/26 04h52	2021/01/27 13h00	2021/01/27 13h00	2021/01/27 13h00
3	2021/08/10 12h05	2020/09/24 07h00	2020/09/24 07h00	2020/09/24 07h00
4	2021/07/13 14h31	2020/09/16 02h00	2020/09/16 02h00	2020/09/16 02h00
5	2020/10/06 05h39	2020/10/08 02h30	2020/10/08 02h30	2020/10/08 02h30
6	2020/09/09 06h41	2020/09/09 13h00	2020/09/09 13h00	2020/09/09 13h00

2.12 Units Start-up information

Table 13: Start-up information

Unit	1	
Fires in	2023/04/19	11h36
Synchronization with Grid	2023/04/19	14h40
Emissions below limit	2023/04/19	15h01
Fires in to synchronization	3,4	HOURS
Synchronization to < Emission limit	0,21	HOURS

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Unit	1	
Fires in	2023/04/20	14h49
Synchronization with Grid	2023/04/20	16h12
Emissions below limit	2023/04/20	21h12
Fires in to synchronization	1,23	HOURS
Synchronization to < Emission limit	5,0	HOURS

Unit	2	
Fires in	2023/04/07	14h14
Synchronization with Grid	2023/04/08	00h49
Emissions below limit	2023/04/22	14h02
Fires in to synchronization	10,35	HOURS
Synchronization to < Emission limit	349,13	HOURS

Unit	3	
Fires in	2023/04/07	04h50
Synchronization with Grid	2023/04/08	08h43
Emissions below limit	2023/04/11	20h02
Fires in to synchronization	27,53	HOURS
Synchronization to < Emission limit	83,19	HOURS

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Unit	3	
Fires in	2023/04/12	03h16
Synchronization with Grid	2023/4/12	06h50
Emissions below limit	2023/04/12	18h02
Fires in to synchronization	3,47	HOURS
Synchronization to < Emission limit	11,12	HOURS

Unit	4	
Fires in	2023/04/04	10h54
Synchronization with Grid	2023/04/04	13h37
Emissions below limit	2023/04/04	16h04
Fires in to synchronization	2,43	HOURS
Synchronization to < Emission limit	2,27	HOURS

Unit	4	
Fires in	2023/04/09	22h09
Synchronization with Grid	2023/04/10	01h38
Emissions below limit	2023/04/11	04h04
Fires in to synchronization	3,29	HOURS
Synchronization to < Emission limit	26,26	HOURS

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2.13 Emergency generation

Table 14: Emergency generation

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Emergency Generation hours declared by national Control	720	720	720	720	Off	720
Emergency Hours declared including hours after stand down						
Days over the Limit during Emergency Generation	24	23	14	23	Off	8

During the period under review all Units were on emergency generation in force from 01 April 2023 until 30 April 2023.

2.14 Complaints register.

Table 15: 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
N/A					

2.15 Air quality improvements and social responsibility conducted.

2.15.1 Air quality improvements

None

2.15.2 Social responsibility conducted.

None

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2.16 Ambient air quality monitoring

Ambient air quality monitoring report was not available at the time of publishing this report.

2.17 Electrostatic precipitator and Sulphur plant status

Unit 1

- 3 fields out of service, will be inspected next opportunity.
- No abnormalities on the SO3 plant. Preventative maintenance done during the month.

Unit 2

- 2 fields out of service, will be inspected next opportunity.
- No abnormalities on the SO3 plant. Preventative maintenance done during the month.

Unit 3

- All precipitator fields in service. Unit shut down for outage
- No abnormalities on the SO3 plant. Preventative maintenance done during the month.

Unit 4

- 3 field out of service, will be inspected next opportunity.
- No abnormalities on the SO3 plant. Preventative maintenance done during the month.

Unit 5

- On outage.

Unit 6

- 2 fields out of service, will be inspected next opportunity.
- Hole in burner casing and sulphur leak causing low availability. Preventative maintenance done during the month.

SO3 common plant

- No abnormalities on the sulphur storage plant.

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2.18 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

None

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

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