Eskom	Matimba Power Station Emissions report	Matimba Power Station

Title: **Matimba Power Station February 2023 emissions report**

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Compiled by	Functional Responsibility	Authorized by
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Environmental Officer	**Environmental Manager**	**General Manager**
Date: 2023-04-05	Date: 12/04/2023	Date: 2023/04/12

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 February 2023.

During the period under review, Matimba experienced 30 exceedances of the daily particulate matter emission limit (50mg/Nm3) ,7 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.

No exceedances of the monthly SOx limit (3500mg/Nm3) or the daily NOx emission limit (750mg/Nm3) occurred. The gaseous emissions monitors 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 project to relocate the Oxygen analyzer ports was completed 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 as per the program shared under point 2.4.2 of this report.

The Sulphur conditioning plant for unit 2 and unit 3 did not achieve the required 100% availability due to the defects and breakdown experienced on the plants. The SO3 plants were repaired and operating as normal.

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	979 038
	Fuel Oil	Tons/month	1 200	774,442
Production Rates	**Product/ By-Product Name**	**Unit**	**Maximum Production Capacity Permitted (Quantity)**	**Production Rate**
	Energy	MW	4000	2640,36756

The consumption rates for the month of February 2023 were within the permitted maximum limits.

2.2 Abatement technology

Table 2: Abatement Equipment Control Technology Utilised

Associated Unit	Technology Type	Minimum utilisation (%)	Efficiency (%)
Unit 1	Electrostatic Precipitator	100%	99,86%
Unit 2	Electrostatic Precipitator	100%	99,81%
Unit 3	Electrostatic Precipitator	100%	99,88%
Unit 4	Electrostatic Precipitator	100%	99,88%
Unit 5	Electrostatic Precipitator	100%	99,86%
Unit 6	Electrostatic Precipitator	100%	99,89%
Associated Unit	**Technology Type**	**Minimum utilisation (%)**	**Actual Utilisation (%)**
Unit 1	SO_3 Plant	100%	99%
Unit 2	SO_3 Plant	100%	87%
Unit 3	SO_3 Plant	100%	95%
Unit 4	SO_3 Plant	100%	99%
Unit 5	SO_3 Plant	100%	99%
Unit 6	SO_3 Plant	100%	99%

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. Unit 2 SO3 plant was taken out of service from the 31 January 2023 due to the defect on the air conditioning drainage pipe that was found broken and discharging the water into that panels. The plant was repaired and put back in service on the 04 February 2023.Notification for Unit 2 breakdown was sent to the authorities on the 02 February 2023.Unit 3 SO3 plant was off for 12 hours on 27 February 2023 due to damaged Sulphur Burner inlet, the defects were addressed, and plants returned to services on the 28 February 2023.

2.3 Energy source characteristics

Table 3: Energy Source Material Characteristics.

	Characteristic	Stipulated Range (Unit)	Monthly Average Content
Coal burned	**Sulphur Content**	1.6%	1,34%
	Ash Content	40%	34,06%

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

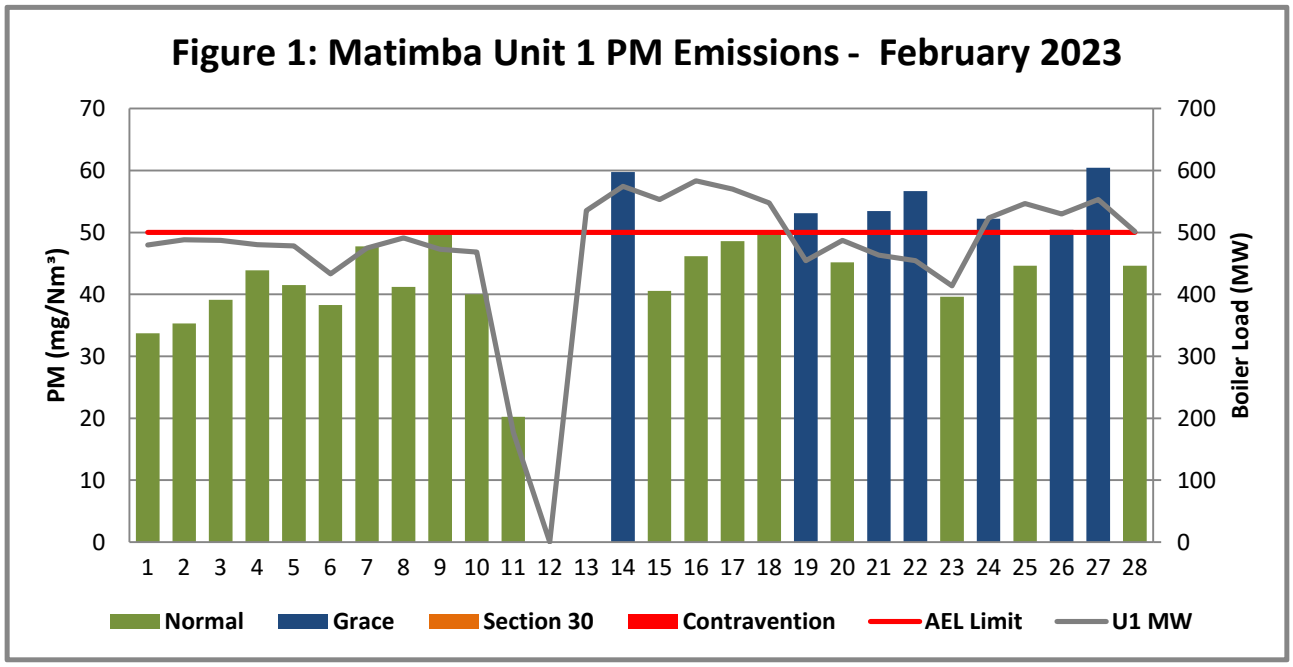

Figure 1: Particulate matter daily average emissions against emission limit for unit 1 for the month of February 2023

Interpretation: Unit 1 exceeded the daily particulate emission limit of 50mg/Nm3 on 14 ,19, 21, 22, 24, 26 and 27 February 2023. 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 plant was repaired, and emissions returned to below the set limit. The exceedance remained within the 48-hour grace period.

Unit 2 Particulate Emissions

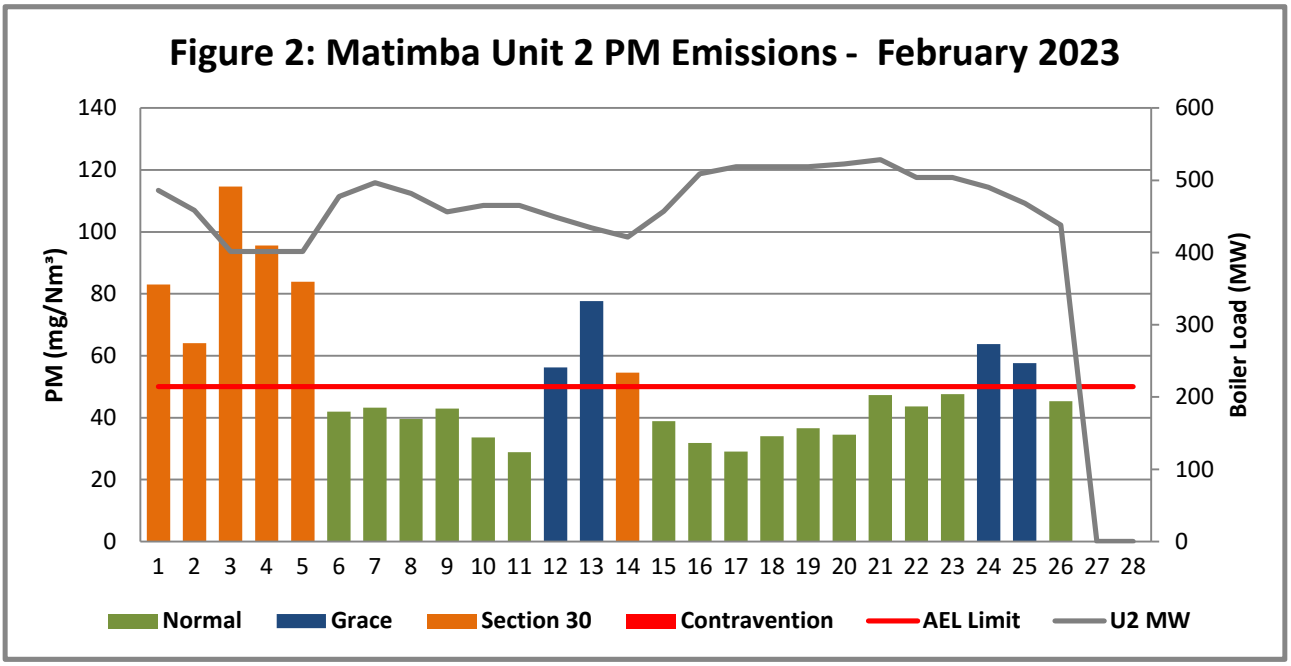

Figure 2: Particulate matter daily average emissions against emission limit for unit 2 for the month of February 2023

Interpretation:

Unit 2 exceeded the daily particulate emission limit of 50mg/Nm3 on 1, 2, 3, 4, 5, 12,13,14, 24, and 25 February 2023.6 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 exceedance on 1 to 5 February 2023 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) and the unavailability of the SO3 plant due to defects and breakdowns.The investigation into the causes of the exceedances were done and corrective measure put in place to correct the root causes. The notification to the authorities for the unavailability of the SO_3 plant was done on the 02 February 2023.

Unit 3 Particulate Emissions

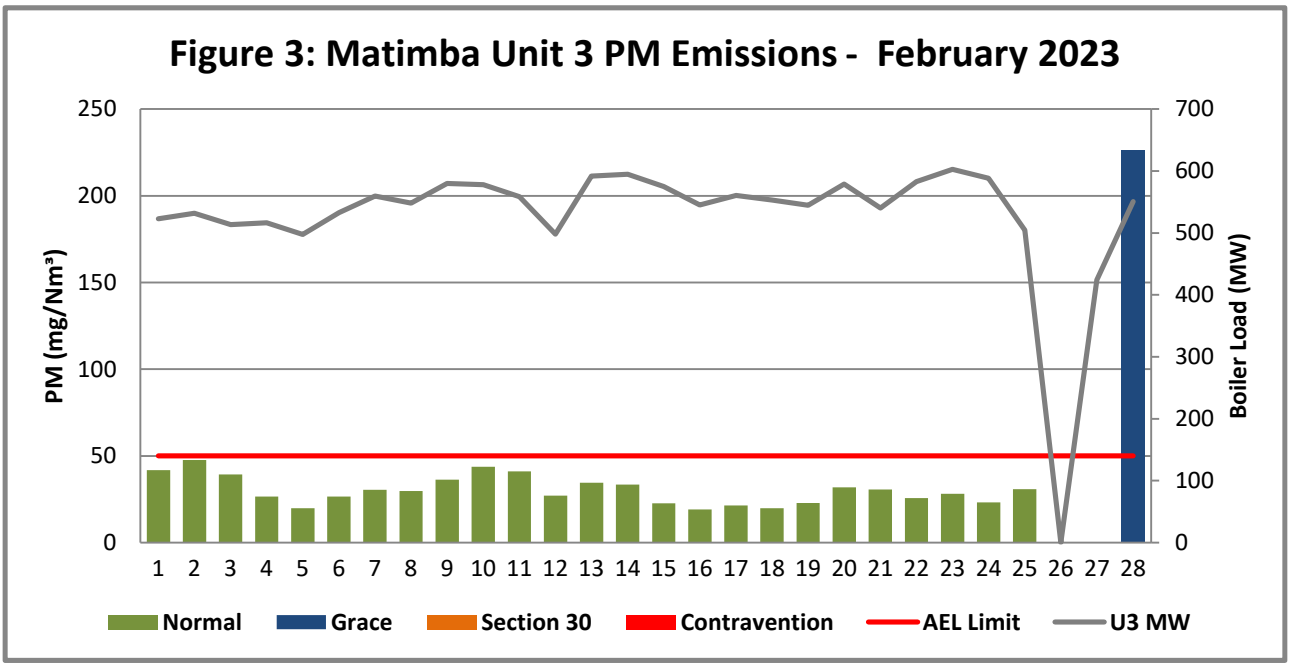

Figure 3: Particulate matter daily average emissions against emission limit for unit 3 for the month of February 2023

Interpretation:

Unit 3 Particulate matter exceeded the daily limit of 50 mg/Nm^3 on 28 February 2023. The exceedance was due to the unavailability of the SO3 that was off for 12 hours on 27 February 2023 due to damaged Sulphur Burner inlet, the defects were addressed, and plants returned to services on the late hours of 28 February 2023.

Unit 4 Particulate Emissions

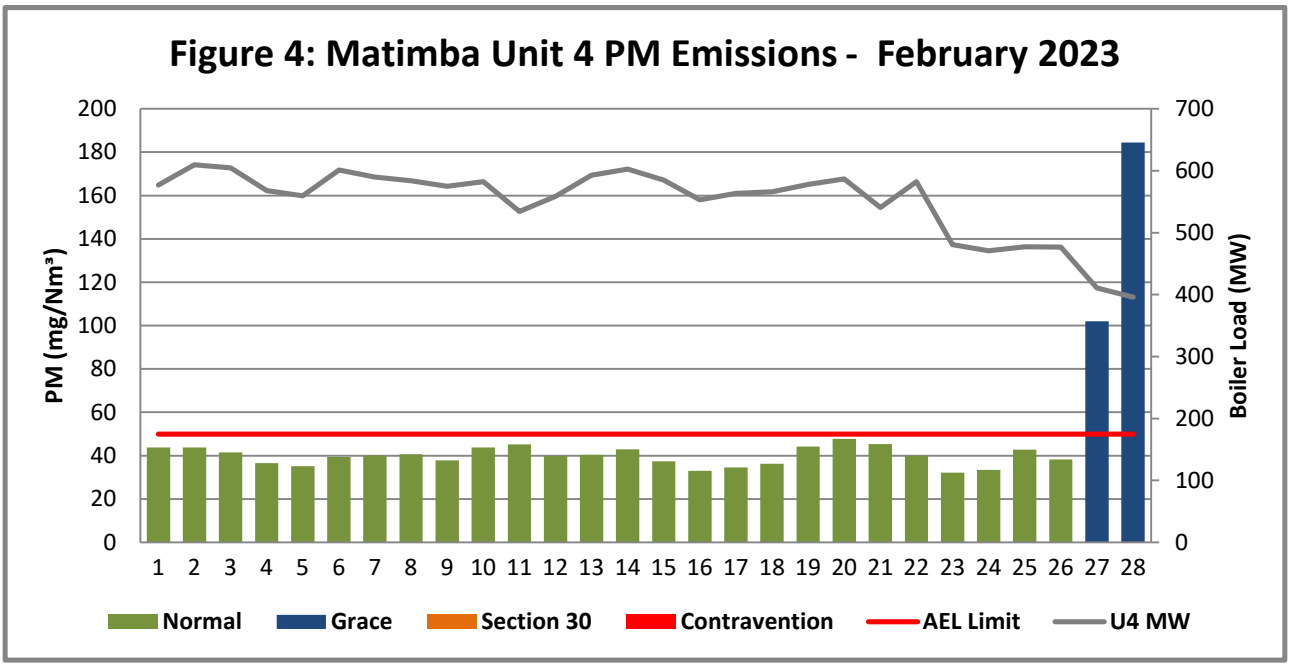

Figure 4: Particulate matter daily average emissions against emission limit for unit 4 for the month of February 2023

Interpretation:

Unit 4 Particulate matter exceeded the daily limit of 50 mg/Nm^3 on 27 and 28 February 2023. 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).

Unit 5 Particulate Emissions

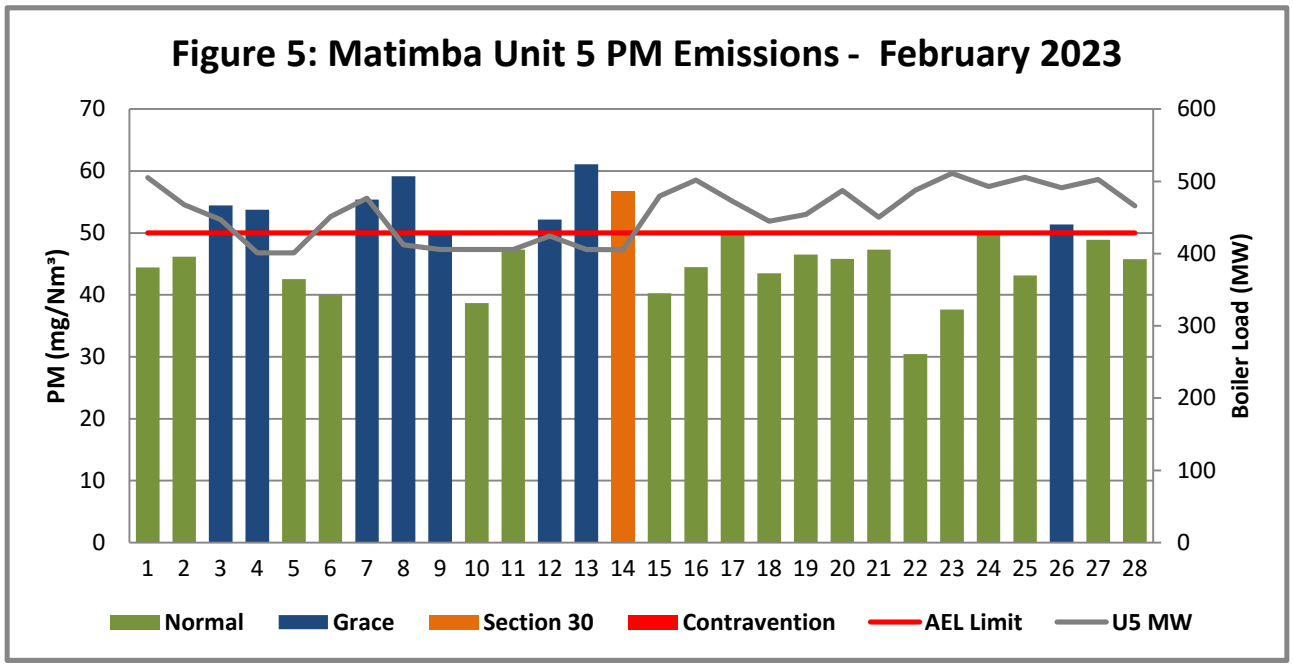

Figure 5: Particulate matter daily average emissions against emission limit for unit 5 for the month of February 2023

Interpretation:

Unit 5 Particulate matter exceeded the daily limit of 50 mg/Nm3 on 3, 4 ,7, 8, 9, 12, 13, 14 and 26 February 2023. The exceedances on 14 February 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 on 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).

Unit 6 Particulate Emissions

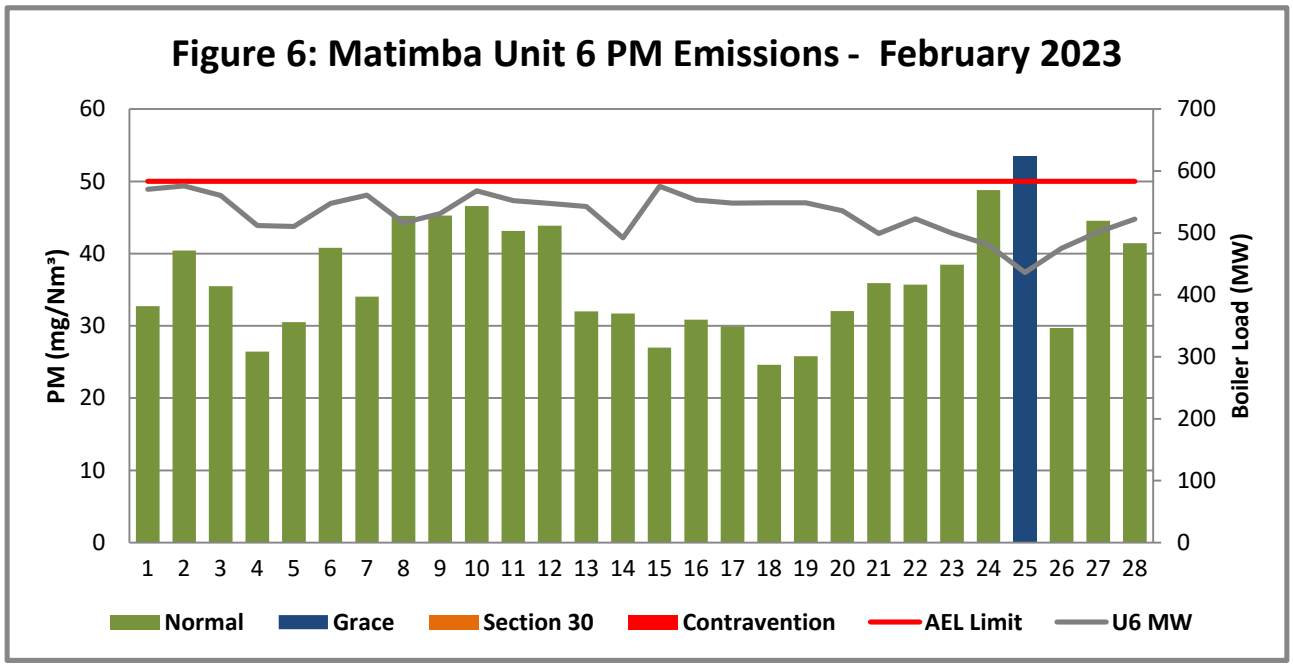

Figure 6: Particulate matter daily average emissions against emission limit for unit 6 for the month of February 2023

Interpretation:

Unit 6 Particulate matter exceeded the daily limit of 50 mg/Nm3 on 25 February 2023. 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 exceedances remained within the 48-hour grace period.

2.4.2 Gaseous Emissions

The gaseous emissions monitors for all 6 units are providing unreliable data due to the movement of the Oxygen analyser ports that were previously installed incorrectly to a new correct position. The project to relocate the Oxygen analyser ports was completed in November 2022 as part of the activities to implement the changes on gaseous emission analysers to improve the reliability of the data. The benefit of the movement of analyser ports will be seen once the O2 monitors are calibrated with the certified gas and valid gas parallel test done on all gas parameters. The station is currently preparing to perform the quality assurance tests and calibrations on the monitors post the changes implemented as per the below program.

Date	Stack/Point	Activity – 3 people	Requests and Comments
Tuesday, 11 April 2023		Travel to Matimba and set up	
Wednesday, 12 April 2023	Unit 1	QAL2 Correlation Tests 1-3 (100% MCR)	
Thursday, 13 April 2023		QAL2 Correlation Tests 4-7 (100% MCR)	
Friday, 14 April 2023		QAL2 Correlation Tests 8-11 (80% MCR)	
Saturday, 15 April 2023		QAL2 Correlation Tests 12-15 (60% MCR)	
Sunday, 16 April 2023		Off	
Monday, 17 April 2023	Unit 2	QAL2 & PM Correlation Tests 1-3 (100% MCR)	Eskom to send Gas data for unit 1
Tuesday, 18 April 2023		QAL2 & PM Correlation Tests 4-7 (100% MCR)	
Wednesday, 19 April 2023		QAL2 & PM Correlation Tests 8-11 (80% MCR)	
Thursday, 20 April 2023		QAL2 & PM Correlation Tests 12-15 (60% MCR)	
Friday, 21 April 2023	Unit 3	QAL2 & PM Correlation Tests 1-3 (100% MCR)	Eskom to send Gas and PM CEM data for unit 2
Saturday, 22 April 2023		Off	
Sunday, 23 April 2023		Off	
Monday, 24 April 2023		QAL2 & PM Correlation Tests 4-7 (100% MCR)	
Tuesday, 25 April 2023		QAL2 & PMCorrelation Tests 8-11 (80% MCR)	
Wednesday, 26 April 2023		QAL2 & PM Correlation Tests 12-15 (60% MCR)	
Thursday, 27 April 2023	Unit 4	Relocate to another Stack	Eskom to send Gas and PM CEM data for unit 3
Friday, 28 April 2023		QAL2 & PM Correlation Tests 1-3 (100% MCR)	
Saturday, 29 April 2023		QAL2 & PM Correlation Tests 4-7 (100% MCR)	
Sunday, 30 April 2023		OFF	
Monday, 01 May 2023		QAL2 & PMCorrelation Tests 8-11 (80% MCR)	Unit 1 report due
Tuesday, 02 May 2023		QAL2 & PM Correlation Tests 12-15 (60% MCR)	Eskom to send Gas and PM CEM data for unit 4
Wednesday, 03 May 2023	Unit 6	QAL2 & PM Correlation Tests 1-3 (100% MCR)	
Thursday, 04 May 2023		QAL2 & PM Correlation Tests 4-7 (100% MCR)	
Friday, 05 May 2023		QAL2 & PMCorrelation Tests 8-11 (80% MCR)	Unit 2 report due
Saturday, 06 May 2023		QAL2 & PM Correlation Tests 12-15 (60% MCR)	
Sunday, 07 May 2023		Site De-establishment and travel back to JHB	
Monday, 08 May 2023		OFF	
Tuesday, 09 May 2023			Eskom to send Gas and PM CEM data for unit 6
Wednesday, 10 May 2023			
Thursday, 11 May 2023			
Friday, 12 May 2023			Unit 3 report due
Saturday, 06 May 2023			
Sunday, 07 May 2023			
Monday, 08 May 2023			
Tuesday, 09 May 2023			Unit 4 report due
Wednesday, 10 May 2023			
Thursday, 11 May 2023			
Friday, 12 May 2023			
Saturday, 13 May 2023			
Sunday, 14 May 2023			
Monday, 15 May 2023			
Tuesday, 16 May 2023			Unit 6 report due
Wednesday, 17 May 2023			
Thursday, 18 May 2023			
Friday, 19 May 2023			

Unit 1 SO_2 Emissions

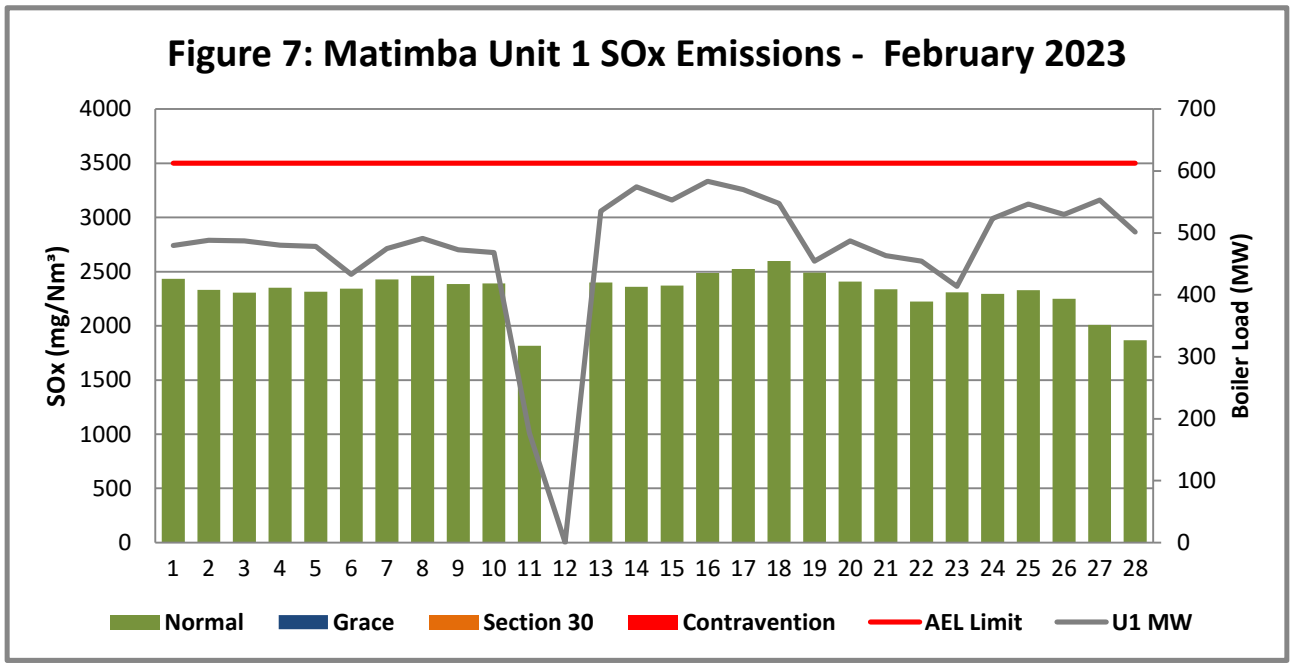

Figure 7: SO2 daily average emissions against emission limit for unit 1 for the month of February 2023

Interpretation:

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

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Unit 2 SO_2 Emissions

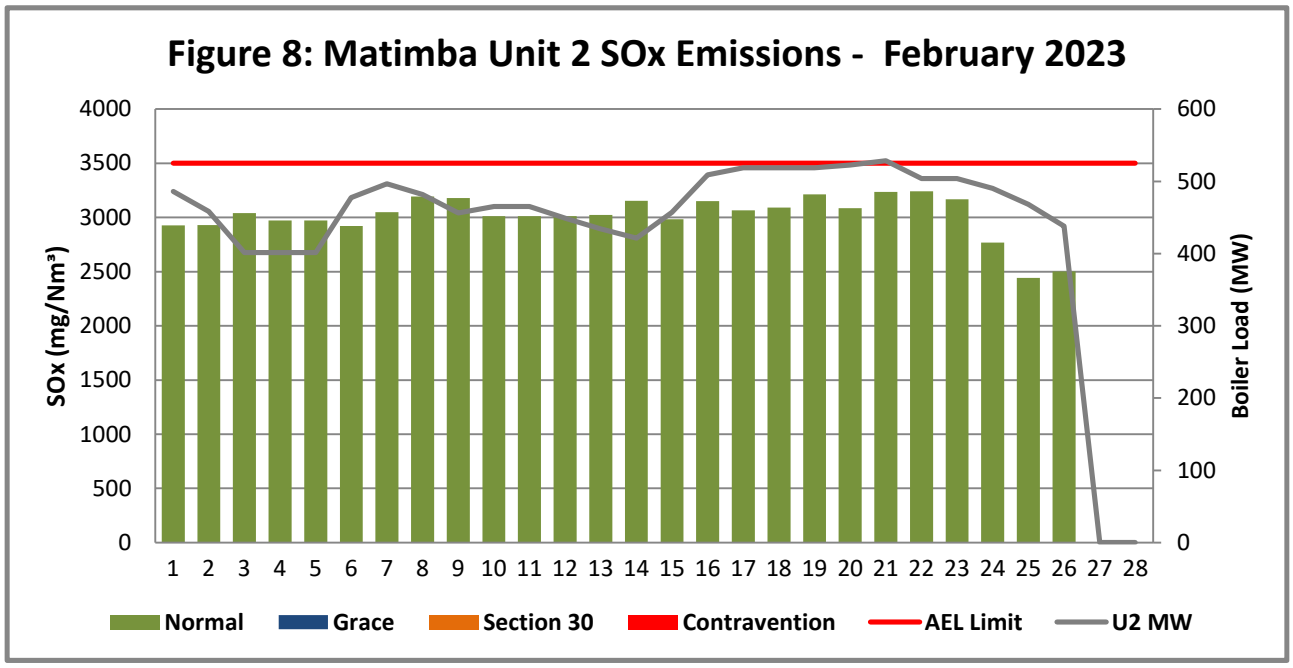

Figure 8: SO2 daily average emissions against emission limit for unit 2 for the month of February 2023

Interpretation:

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

Unit 3 SO_2 Emissions

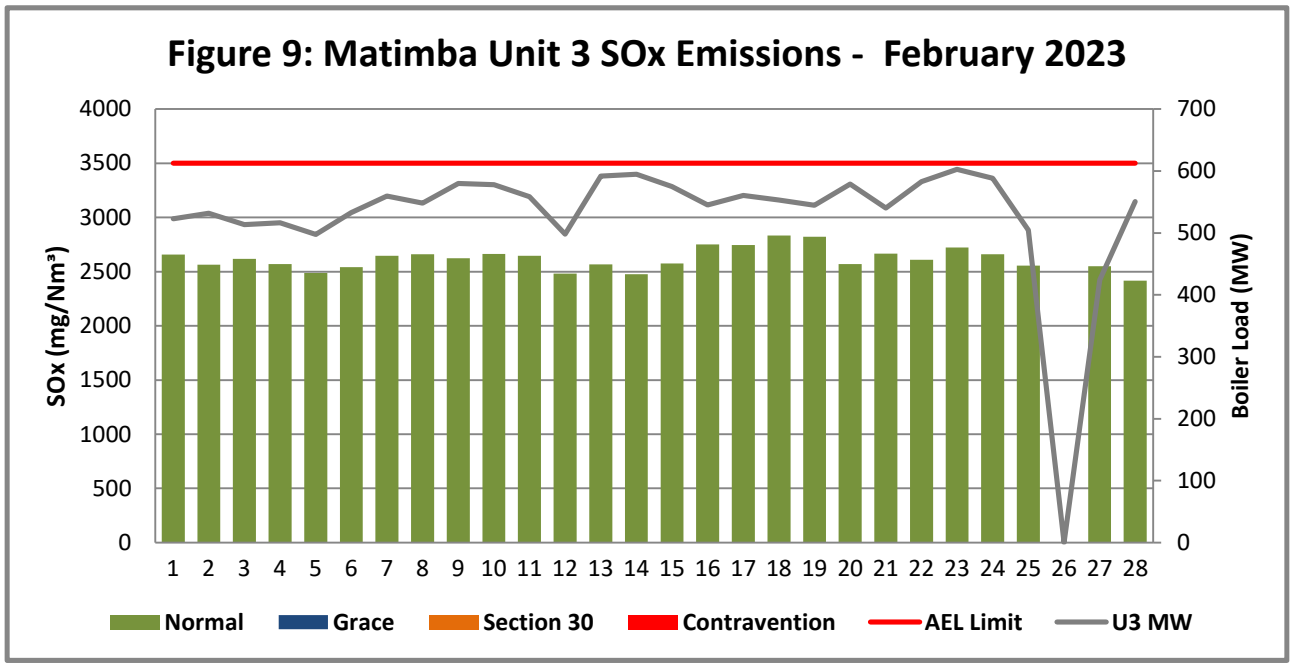

Figure 9: SO2 daily average emissions against emission limit for unit 3 for the month of February 2023

Interpretation:

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

Unit 4 SO_2 Emissions

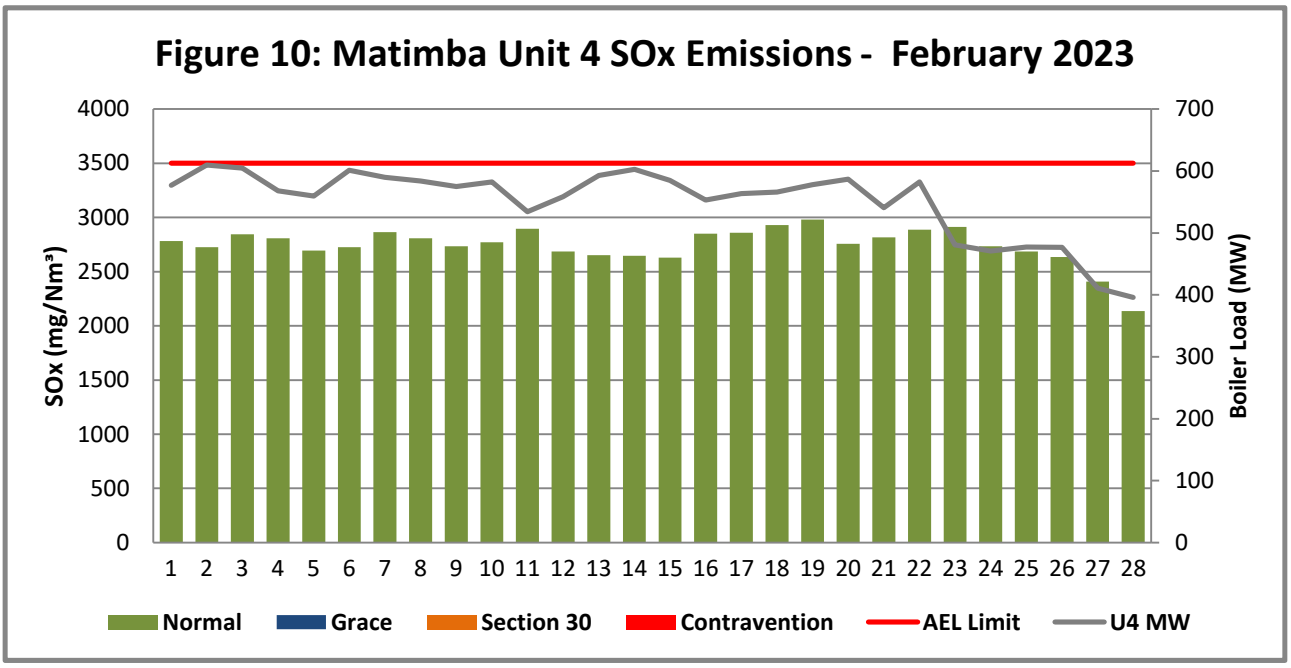

Figure 10: SO2 daily average emissions against emission limit for unit 4 for the month of February 2023

Interpretation:

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

Unit 5 SO_2 Emissions

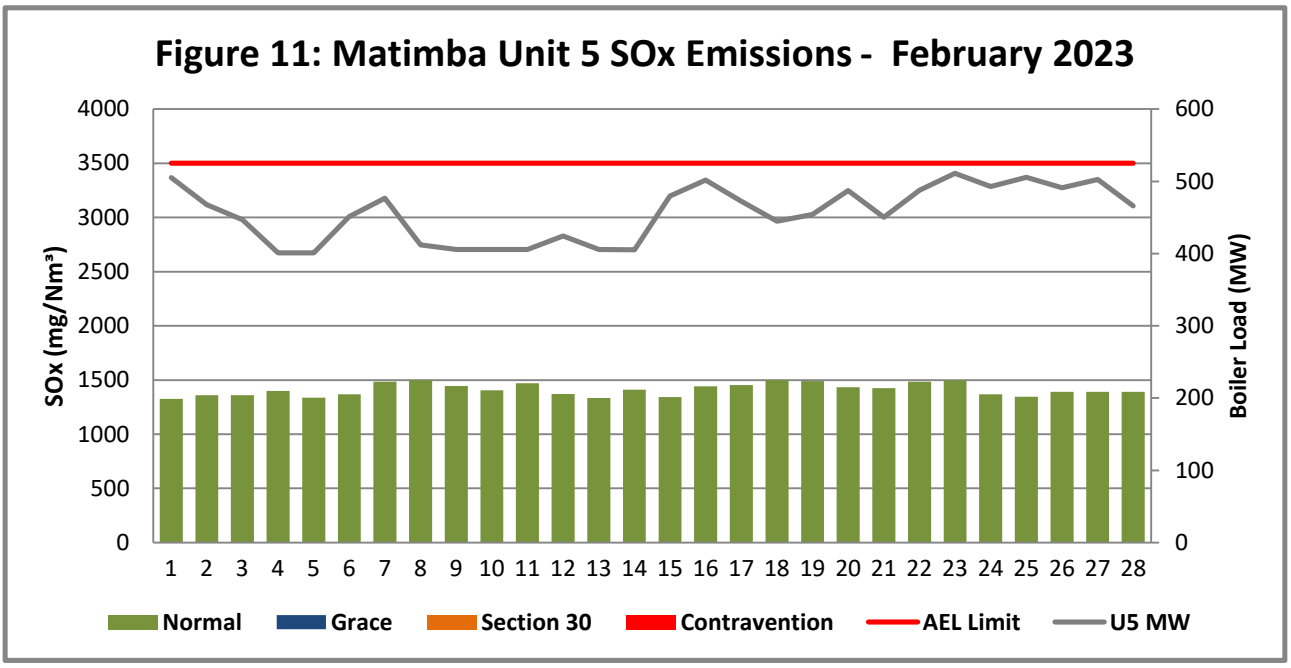

Figure 11: SO2 daily average emissions against emission limit for unit 5 for the month of February 2023

Interpretation:

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

Unit 6 SO_2 Emissions

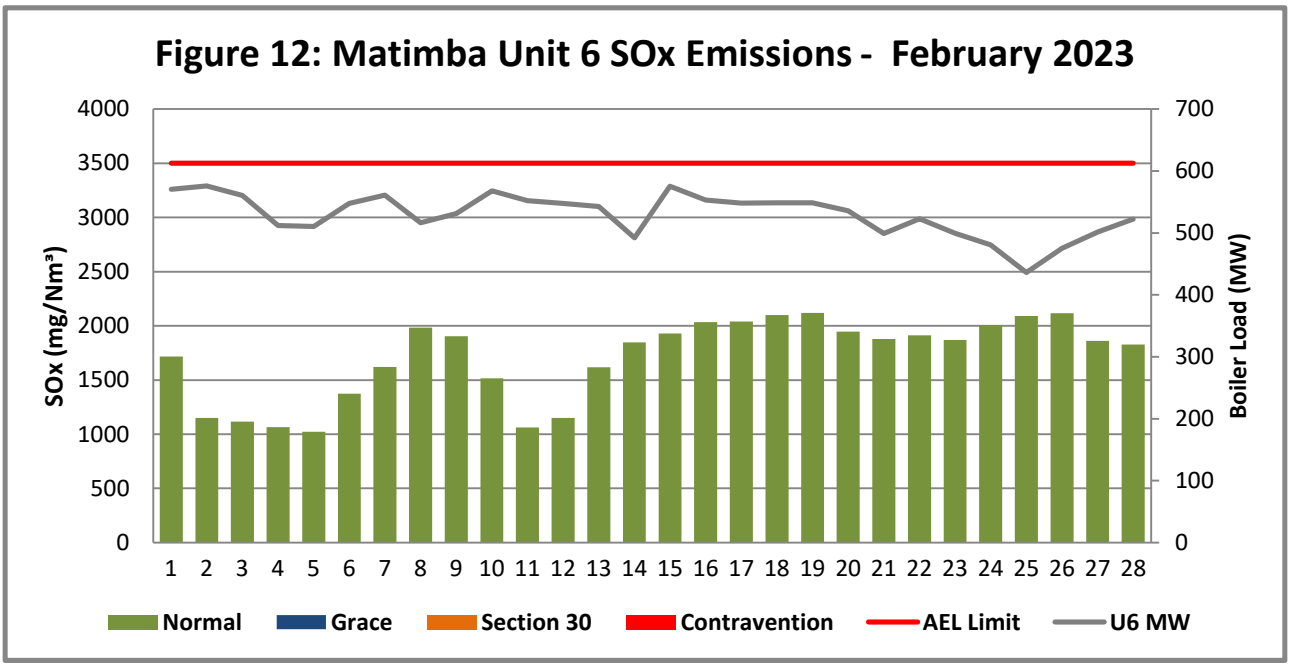

Figure 12: SO2 daily average emissions against emission limit for unit 6 for the month of February 2023

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

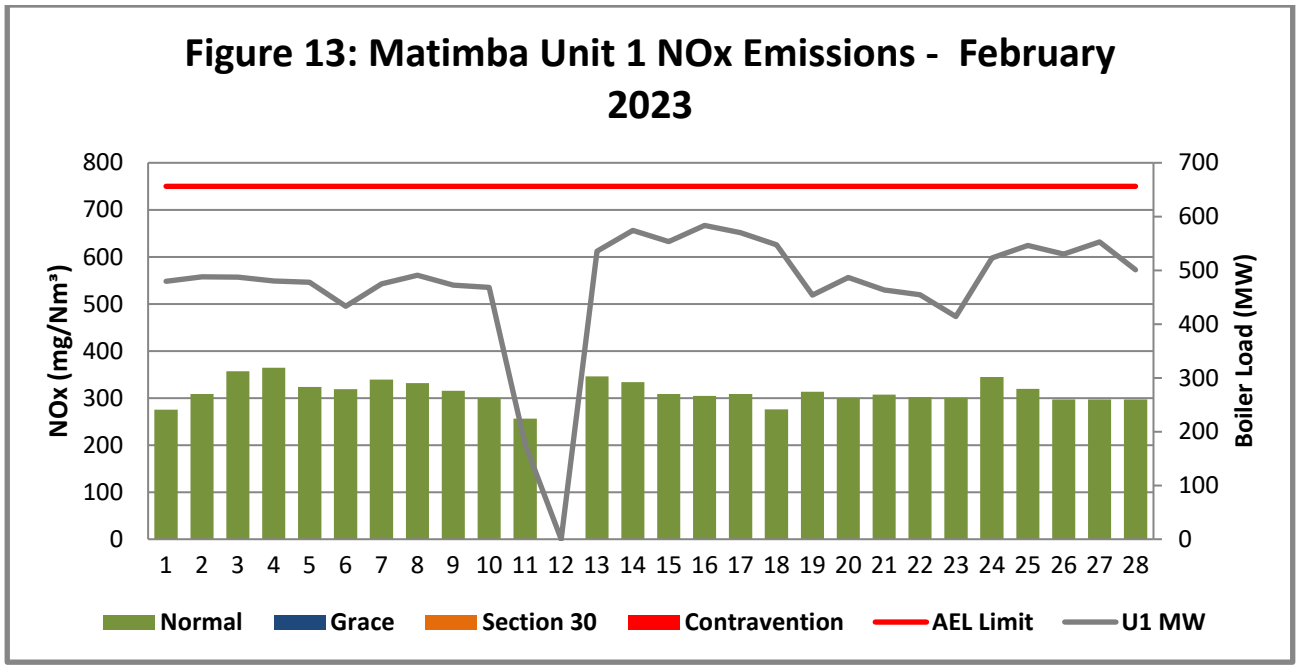

Figure 13: Figure 14: NOx daily average emissions against emission limit for unit 1 for the month of February 2023

Interpretation:

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

Unit 2 NO_x Emissions

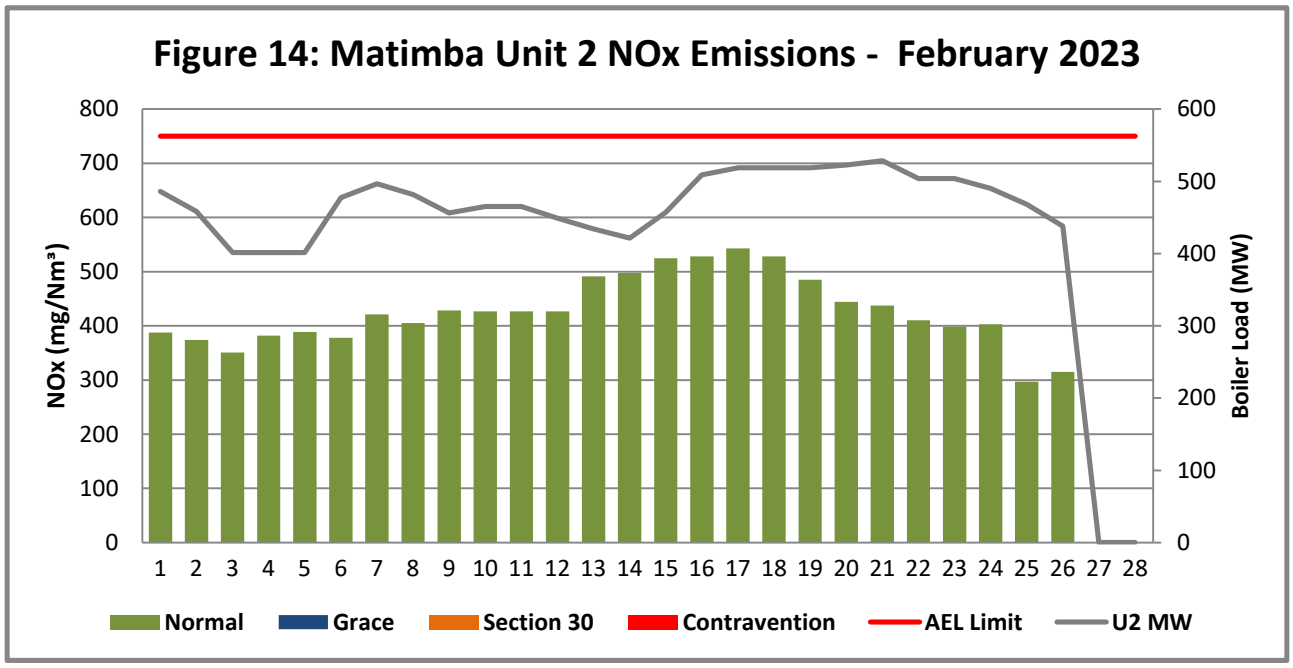

Figure 15: NOx daily average emissions against emission limit for unit 2 for the month of February 2023

Interpretation:

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

Unit 3 NO_x Emissions

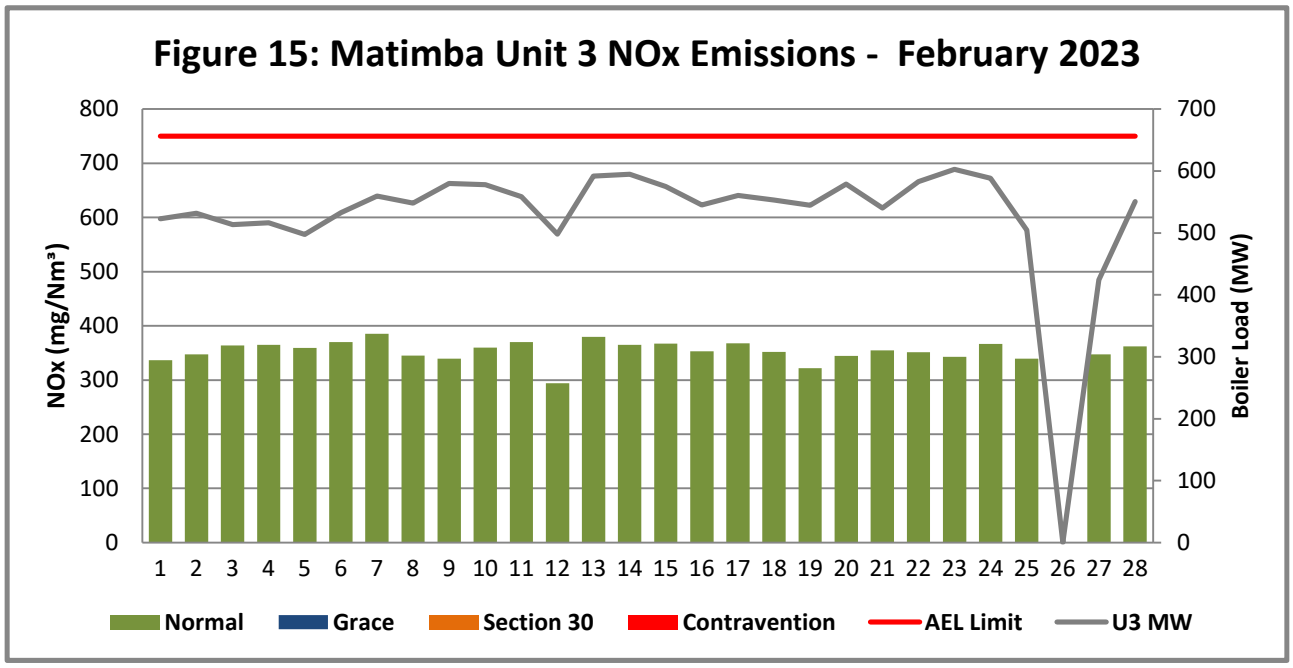

Figure 16: NOx daily average emissions against emission limit for unit 3 for the month of February 2023

Interpretation:

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

Unit 4 NO_x Emissions

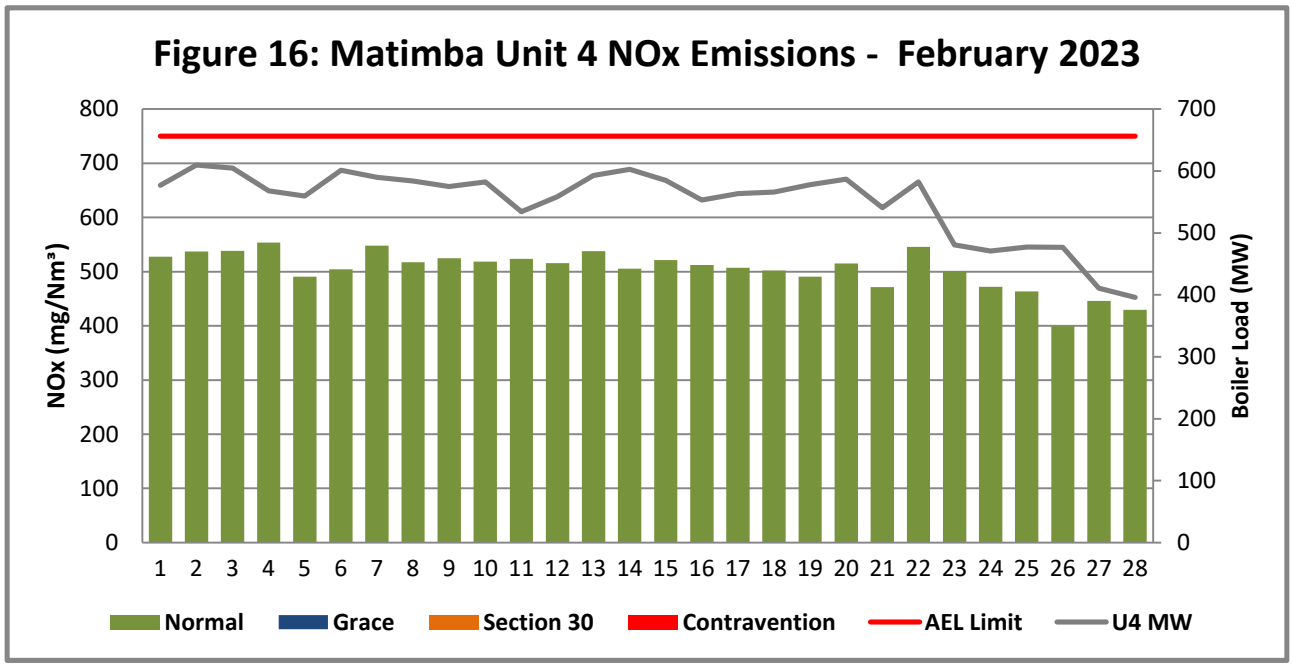

Figure 17: NOx daily average emissions against emission limit for unit 4 for the month of February 2023

Interpretation:

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

Unit 5 NO_x Emissions

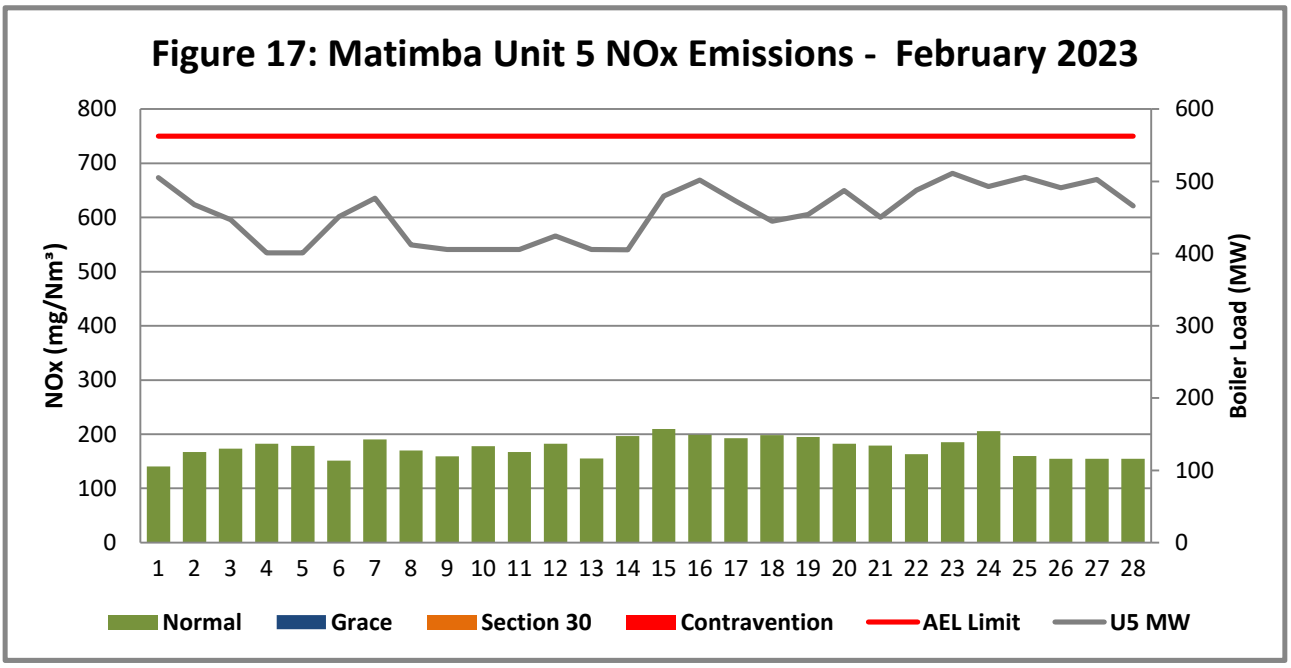

Figure 18: NOx daily average emissions against emission limit for unit 5 for the month of February 2023

Interpretation:

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

Unit 6 NO_x Emissions

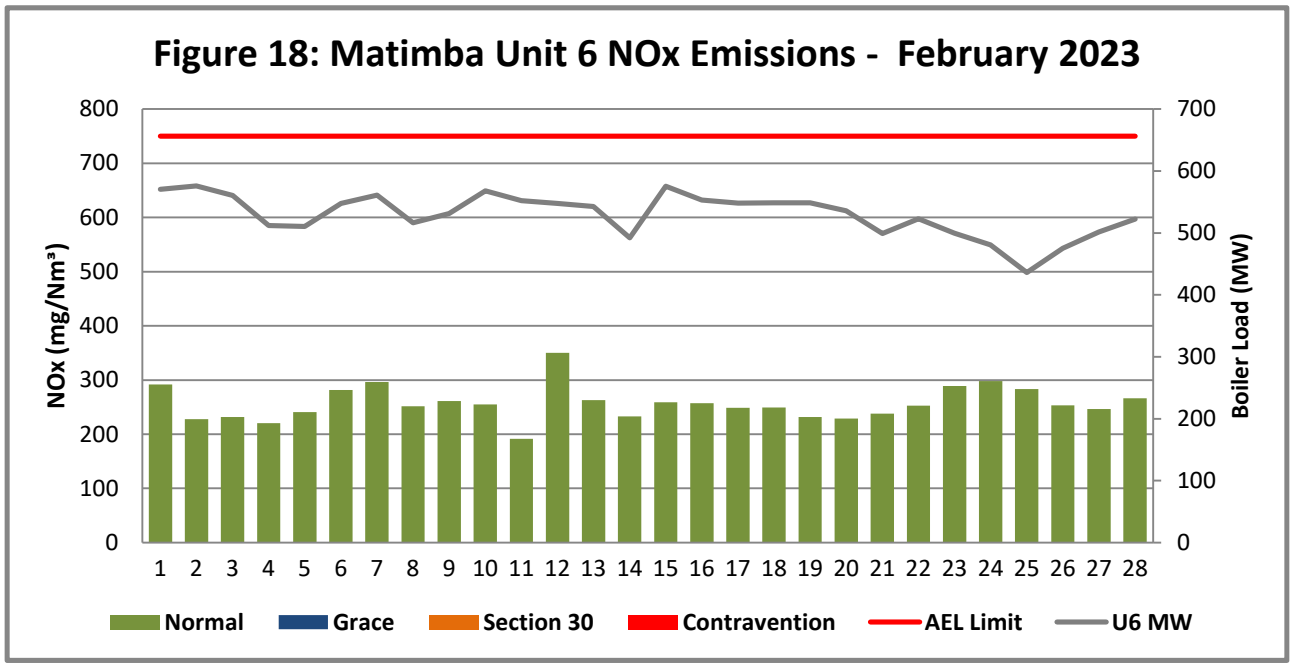

Figure 19: NOx daily average emissions against emission limit for unit 6 for the month of February 2023

Interpretation:

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

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, 16 March 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:	**February**	
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:	***744,442***	
Molecular weight of the fuel oil:	166,00	Lb/lb-mole
METEROLOGICAL DATA FOR THE MONTH	**Data**	**Unit**
Daily average ambient temperature	26,20	°C
Daily maximum ambient temperature	32,94	°C
Daily minimum ambient temperature	20,71	°C
Daily ambient temperature range	12,24	°C
Daily total insolation factor	5,72	kWh/m²/day
Tank paint colour	***Grey/medium***	NA
Tank paint solar absorbtance	0,68	NA
FINAL OUTPUT:	**Result**	**Unit**
Breathing losses:	0,57	kg/month
Working losses:	0,02	kg/month
TOTAL LOSSES (Total TVOC Emissions for the month):	**0,59**	**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.

2.4.4 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 February 2023

Date	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
2023/02/01	10444	10328	11308	12485	10957	12343
2023/02/02	10653	9747	11603	13204	10144	12459
2023/02/03	10625	8463	11137	13091	9679	12147
2023/02/04	10475	8494	11244	12329	8616	11054
2023/02/05	10408	8483	10796	12045	8618	10968
2023/02/06	9405	10098	11576	12975	9725	11832
2023/02/07	10342	10536	12153	12739	10334	12152
2023/02/08	10692	10239	11950	12644	8876	11117
2023/02/09	10294	9712	12589	12445	8735	11437
2023/02/10	10226	9850	12631	12643	8736	12287
2023/02/11	0	9887	12174	11548	8742	11950
2023/02/12	0	9529	10773	12066	9163	11810
2023/02/13	10311	9190	12890	12832	8741	11768
2023/02/14	12583	8904	12991	13063	8777	10580
2023/02/15	12098	9653	12531	12645	10334	12457
2023/02/16	12765	10813	11840	11963	10838	11965
2023/02/17	12476	11056	12194	12183	10210	11836
2023/02/18	12015	11054	12031	12230	9584	11864
2023/02/19	9900	11069	11851	12487	9789	11861
2023/02/20	10622	11125	12601	12723	10517	11602
2023/02/21	10142	11236	11764	11661	9753	10754
2023/02/22	9886	10683	12656	12595	10538	11298
2023/02/23	8969	10682	13125	10416	11075	10784
2023/02/24	11370	10390	12827	10166	10625	10395
2023/02/25	11927	9920	2039	10316	10873	9385
2023/02/26	11567	464	0	10339	10612	10231
2023/02/27	12069	0	5648	8907	10864	10827
2023/02/28	10928	0	12006	8554	10037	11265

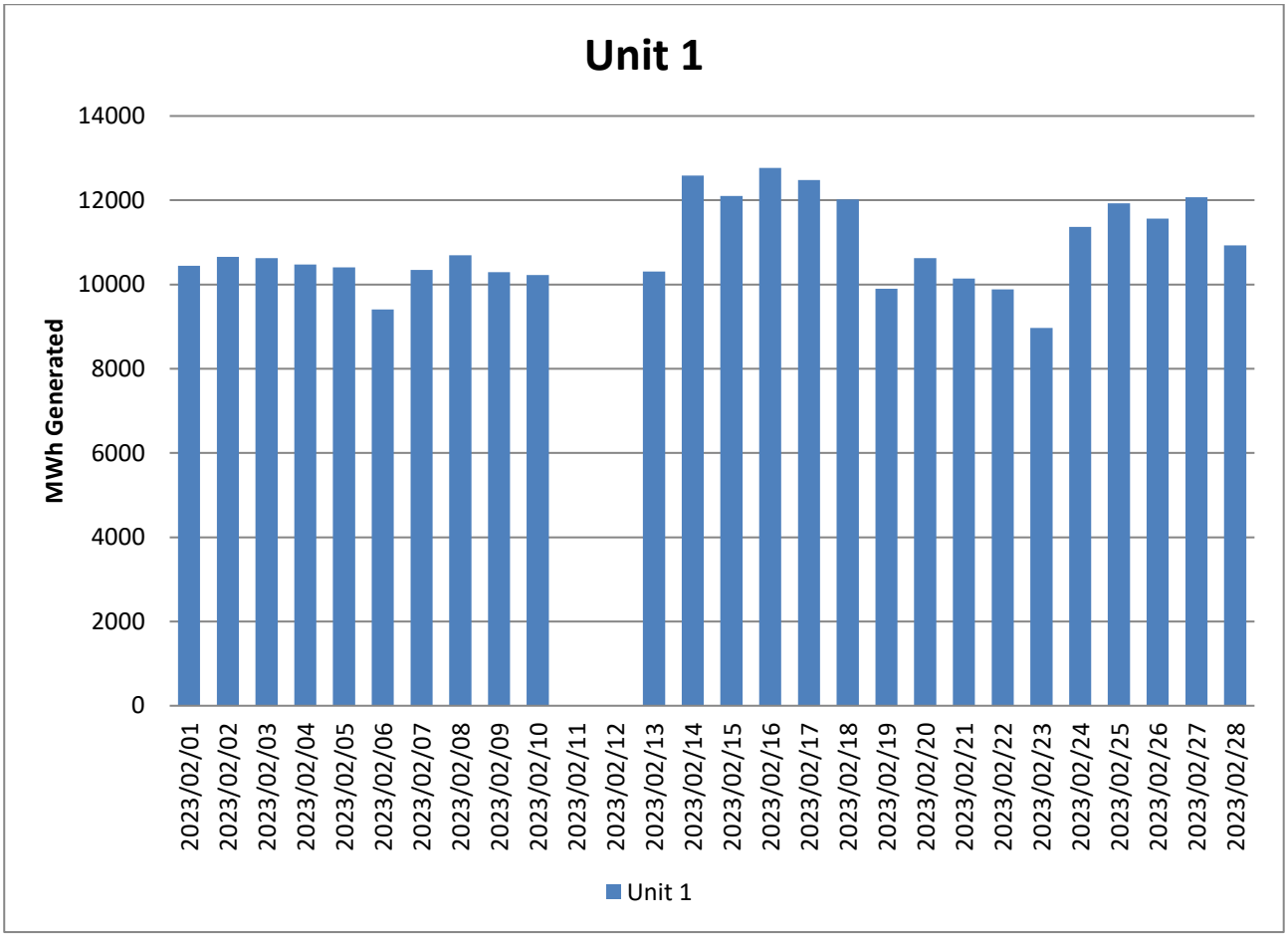

Figure 20: Unit 1 daily generated power in MWh for the month of February 2023

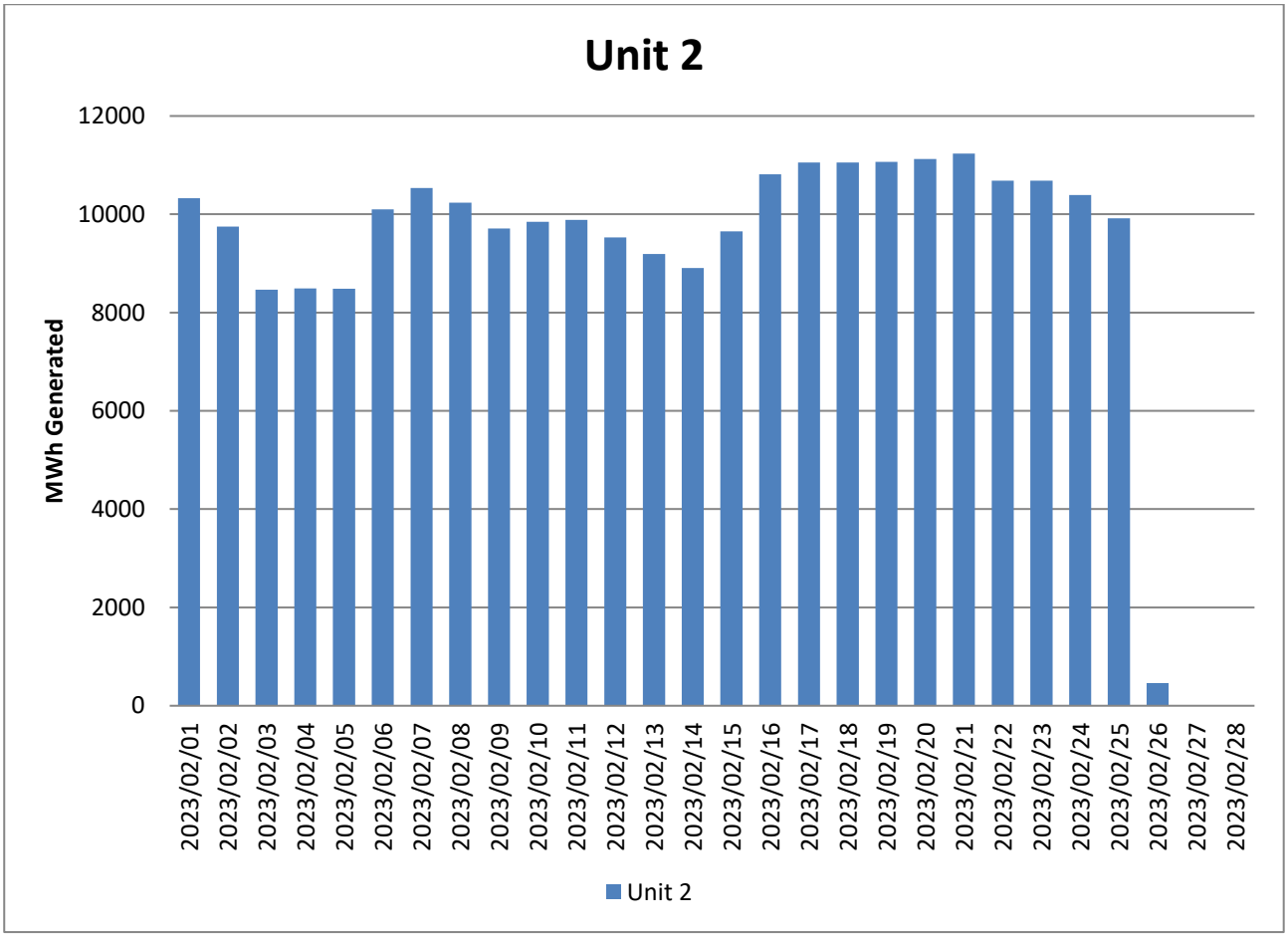

Figure 21: Unit 2 daily generated power in MWh for the month of February 2023

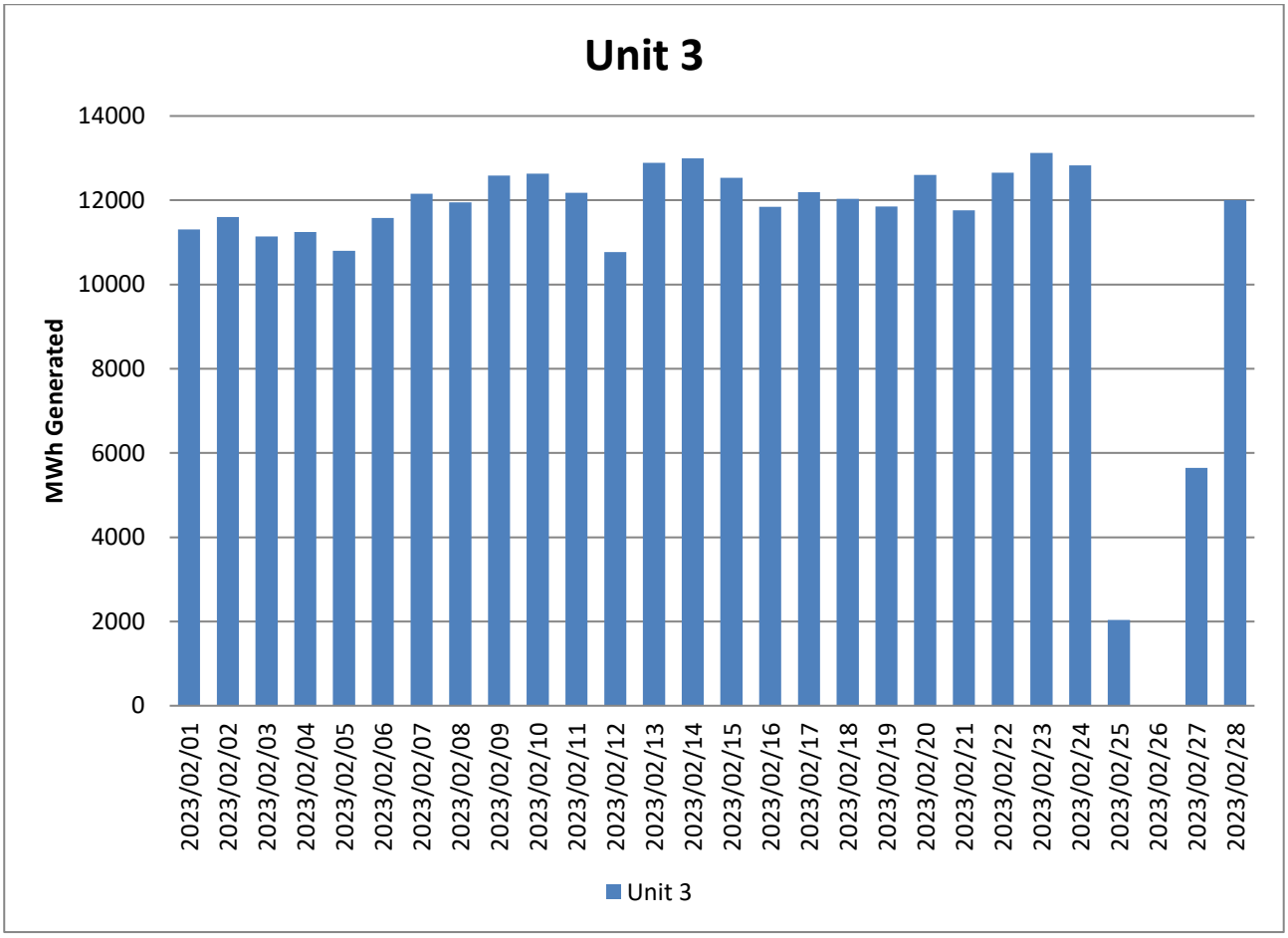

Figure 22: Unit 3 daily generated power in MWh for the month of February 2023

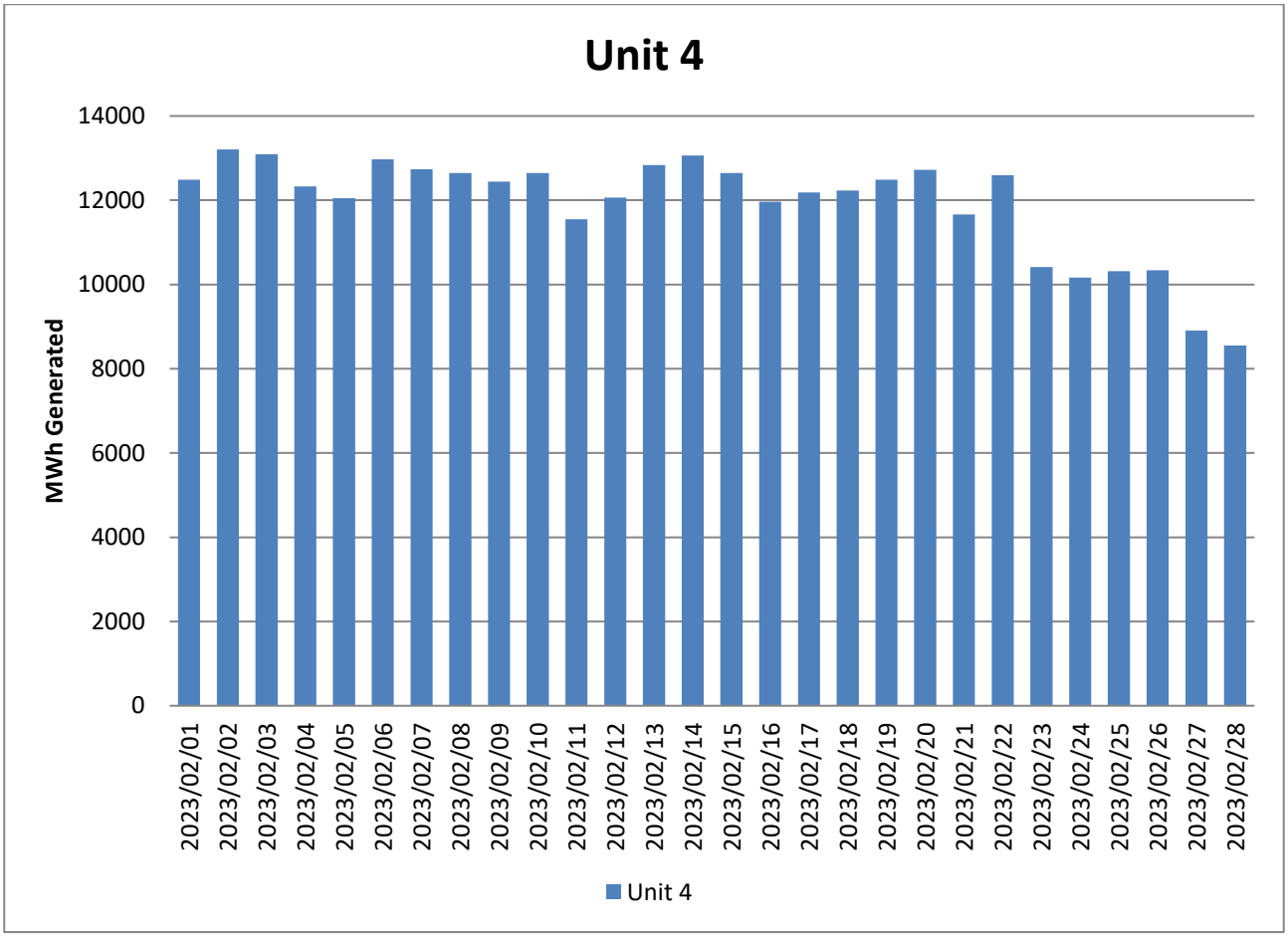

Figure 23: Unit 4 daily generated power in MWh for the month of February 2023

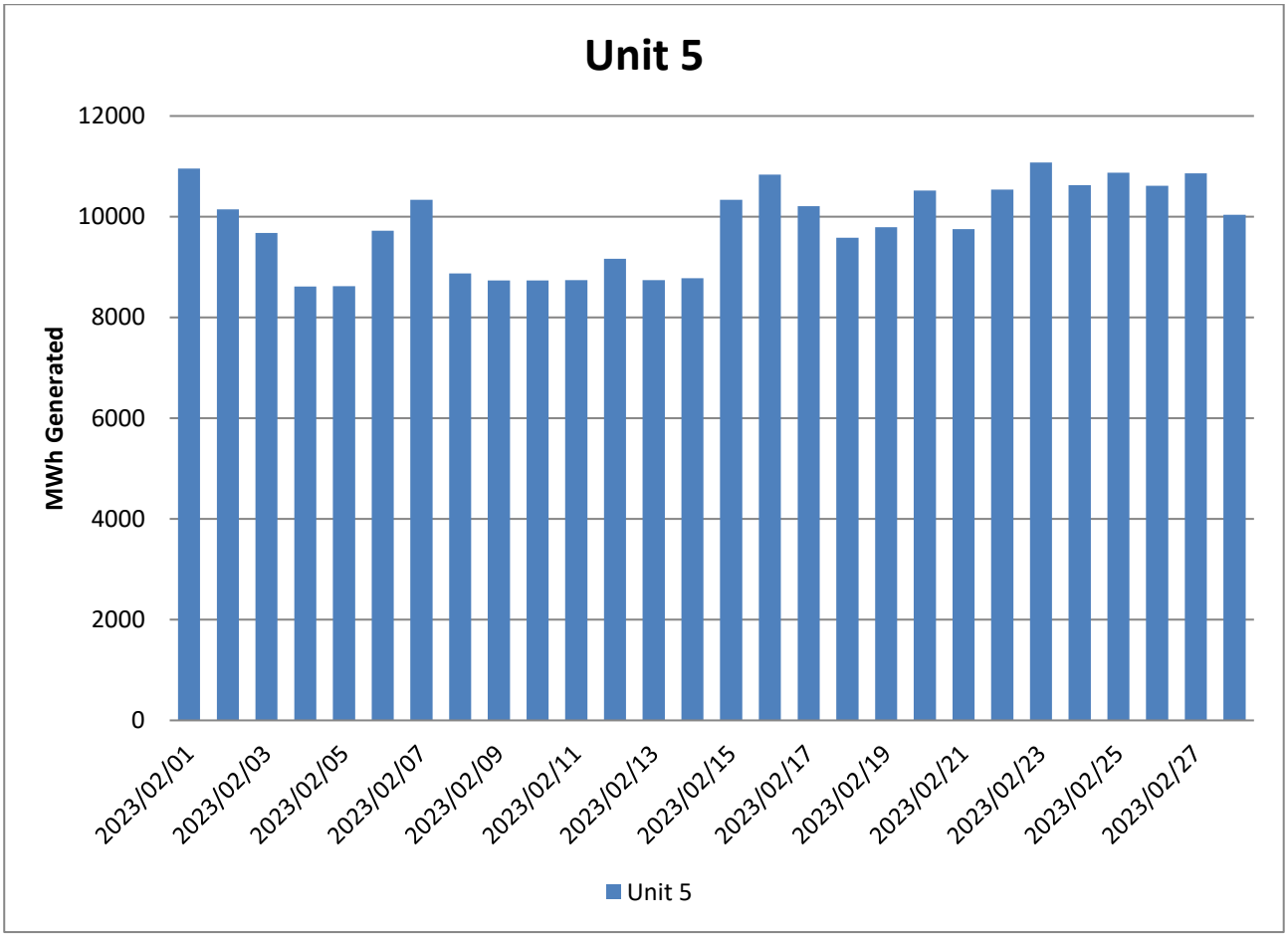

Figure 24: Unit 5 daily generated power in MWh for the month of February 2023

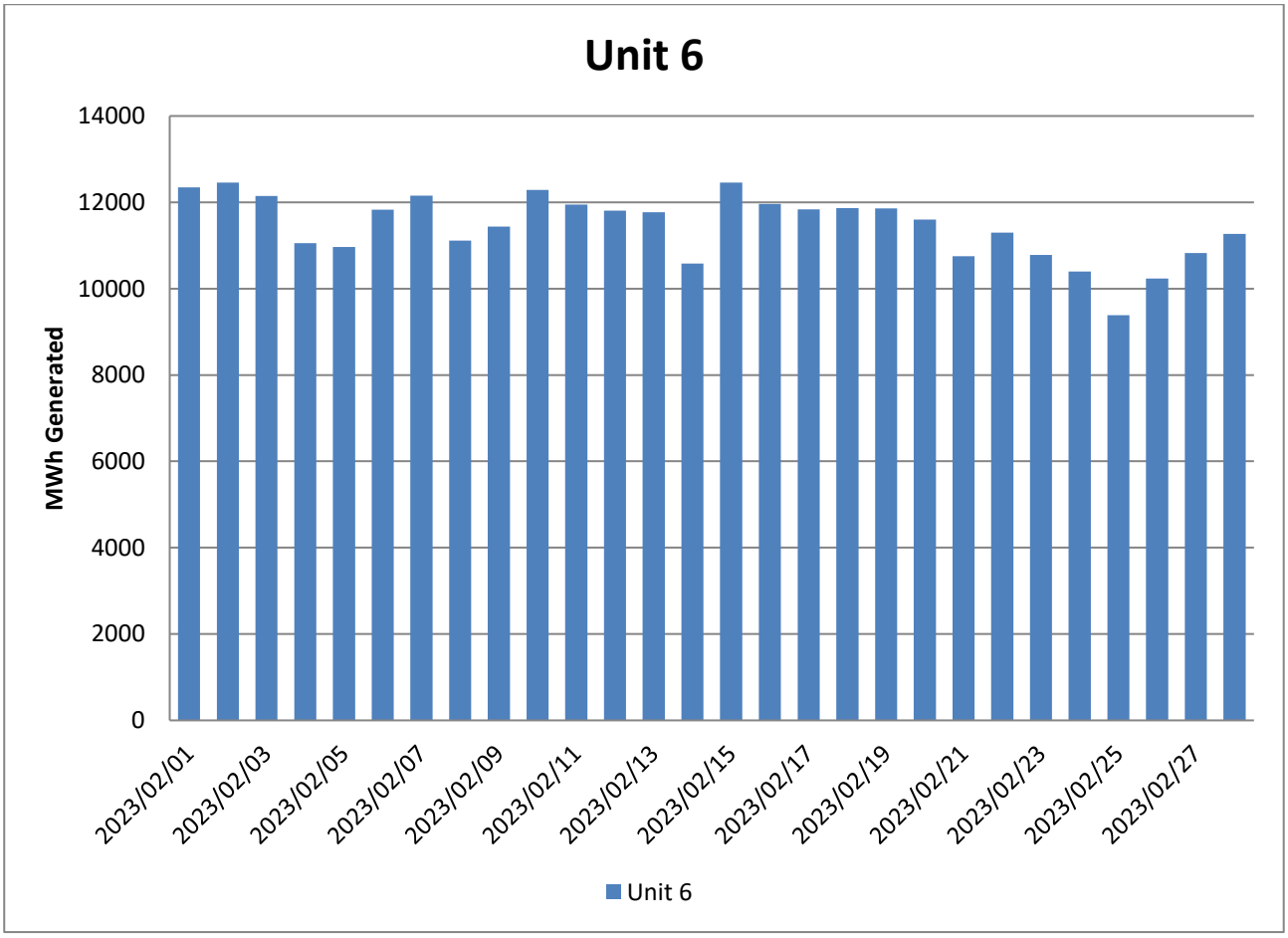

Figure 25: Unit 6 daily generated power in MWh for the month of February 2023

2.6 Pollutant Tonnages

The emitted pollutant tonnages for February 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 February 2023

Associated Unit/Stack	PM (tons)	SO_2 (tons)	NO_x (tons)	CO_2 (tons)
Unit 1	69,8	4 412,2	593,5	336 507
Unit 2	79,8	6 317,8	899,3	365 657
Unit 3	59,3	5 735,0	775,1	374 071
Unit 4	66,7	5 298,8	975,2	321 509
Unit 5	63,9	2 902,9	361,1	197 990
Unit 6	62,0	3 575,5	518,5	274 600
SUM	401,5	28 242,2	4 122,6	1 870 334

2.7 Reference values

Table 7: Reference values for data provided, February 2023

Compound / Parameter	Units of Measure	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Oxygen	%	5,31	8,88	4,48	6,92	6,04	4,58
Moisture	%	5,35	4,25	6,38	3,93	4,70	1,77
Velocity	m/s	23,7	33,5	26,2	25,3	23,8	23,9
Temperature	^{o}C	144,4	123,4	127,1	133,9	114,7	157,8
Pressure	mBar	931,4	935,9	915,4	905,9	934,2	899,5

2.8 Continuous Emission Monitors

2.8.1 Reliability

Continuous emission monitors were available for more than 80% of the reporting period. The emitted pollutant tonnages for February 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 8: Average percentage (%) availability of monitors for the month of February 2023.

Associated Unit/Stack	PM	SO_2	NO
Unit 1	100,0	99,8	99,8
Unit 2	100,0	79,3	79,3
Unit 3	100,0	99,8	99,7
Unit 4	99,7	99,9	100,0
Unit 5	100,0	100,0	87,4
Unit 6	100,0	90,2	84,4

2.8.2 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.

- No downtime or repairs done on the particulate monitors

2.8.3 Sampling dates and times

Table 9: 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

2.9 Units Start-up information

Table 10: Start-up information

Unit	1	
Fires in	2023/02/12	21h10
Synchronization with Grid	2023/03/13	02h40
Emissions below limit	2023/03/13	12h01
Fires in to synchronization	5,30	HOURS
Synchronization to < Emission limit	9,21	HOURS

Unit	3	
Fires in	2023/02/27	04h50
Synchronization with Grid	2023/02/27	08h43
Emissions below limit	2023/02/27	11h02
Fires in to synchronization	3,53	HOURS
Synchronization to < Emission limit	2,19	HOURS

2.10 Emergency generation

Table 11: Emergency generation

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

During the period under review all Units were on emergency generation in force from 01 February 2023 until 28 February 2023.

2.11 Complaints register

Table 12: 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					

2.12 Air quality improvements and social responsibility conducted

2.12.1 Air quality improvements

None

2.12.2 Social responsibility conducted

None

2.13 Ambient air quality monitoring

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

2.14 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.
- 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

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

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.

2.15 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