

	<b>Matimba Power Station Emissions report</b>	<b>Matimba Power Station</b>
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## 1. Report Summary

Matimba Power Station was issued with an Atmospheric Emission License (H16/1/13-WDM05) in September 2022. The License requires the license holder to submit monthly reports to the Department. This report contains the required information as specified in the license for March 2023.



During the period under review, Matimba experienced 32 exceedances of the daily particulate matter emission limit (50mg/Nm<sup>3</sup>), 5 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 SO<sub>x</sub> limit (3500mg/Nm<sup>3</sup>) or the daily NO<sub>x</sub> emission limit (750mg/Nm<sup>3</sup>) occurred. 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 station is currently preparing to perform the quality assurance tests and calibrations on the monitors post the changes implemented.

The Sulphur plant for unit 3 and unit 5 did not achieve the required 100% availability due to the defects and breakdown experienced on the plants for the month March 2023. The SO<sub>3</sub> plants were repaired and operating as normal.

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	1 216 009
	Fuel Oil	Tons/month	1 200	663,547
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate
	Energy	MW	4000	2930,611

The consumption rates for the month of March 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%	99,85%
Unit 2	Electrostatic Precipitator	100%	99,89%
Unit 3	Electrostatic Precipitator	100%	99,88%
Unit 4	Electrostatic Precipitator	100%	99,91%
Unit 5	Electrostatic Precipitator	100%	99,92%
Unit 6	Electrostatic Precipitator	100%	99,90%
Associated Unit	Technology Type	Minimum utilisation (%)	Actual Utilisation (%)
Unit 1	SO <sub>3</sub> Plant	100%	99
Unit 2	SO <sub>3</sub> Plant	100%	100
Unit 3	SO <sub>3</sub> Plant	100%	70
Unit 4	SO <sub>3</sub> Plant	100%	100
Unit 5	SO <sub>3</sub> Plant	100%	91
Unit 6	SO <sub>3</sub> Plant	100%	98

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 3 SO<sub>3</sub> was unavailable after Unit synchronised onload on the 02 March 2023 due to the unavailability of the module. The plant module was repaired and put back in service on the 09 March 2023. to services on the 28 March 2023. Unit 5 SO<sub>3</sub> plant was on hold on 09 March 2023 to the 11 March due to the water leak from air conditioning system which wet the electrical panel.

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## 2.3 Energy source characteristics

**Table 3:** Energy Source Material Characteristics.

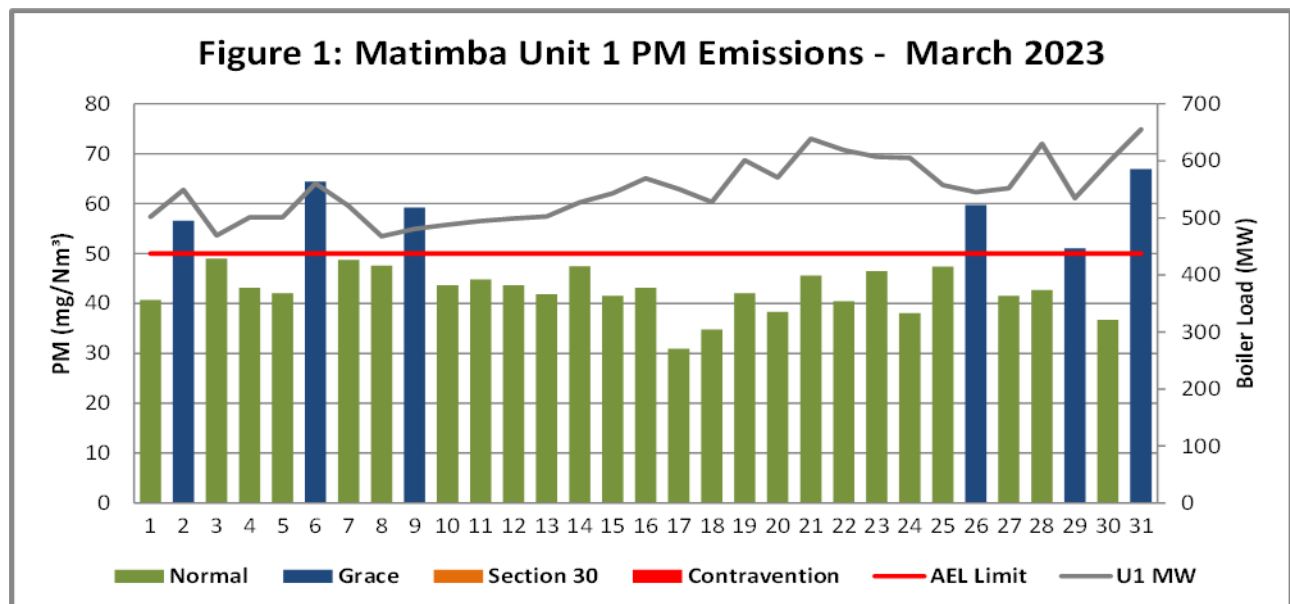
	Characteristic	Stipulated Range (Unit)	Monthly Average Content
Coal burned	Sulphur Content	1.6%	1,43%
	Ash Content	40%	35,30%

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 March 2023**

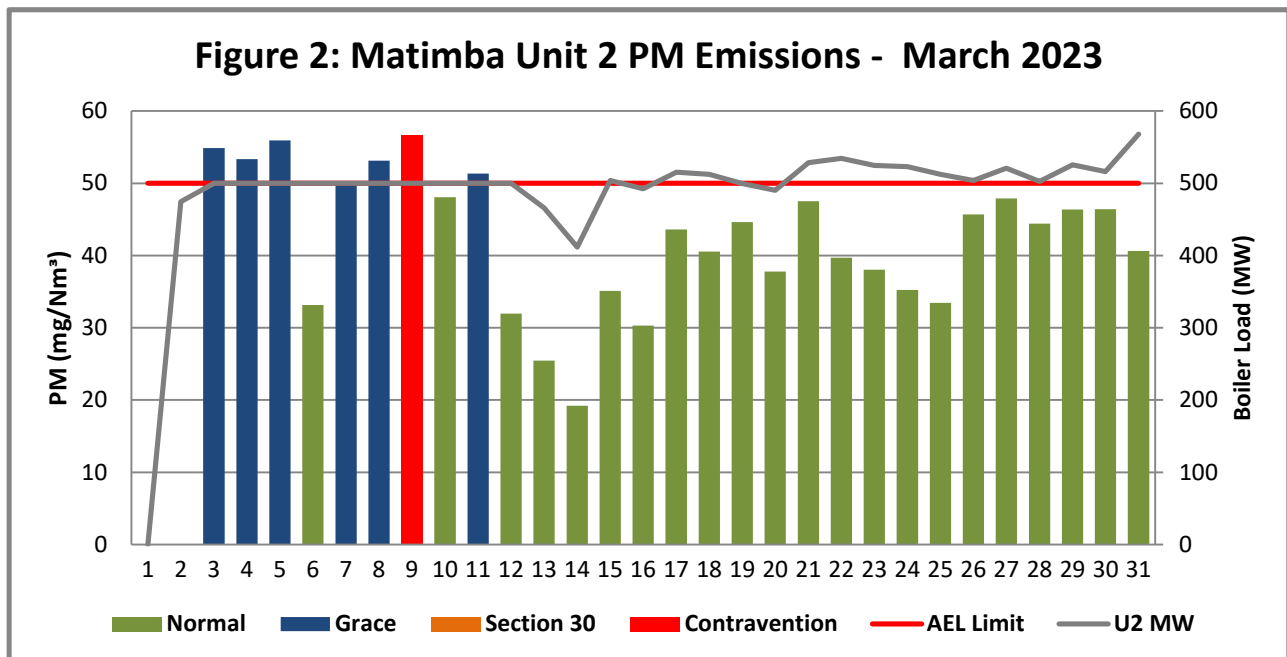
**Interpretation:** Unit 1 exceeded the daily particulate emission limit of 50mg/Nm<sup>3</sup> on 2, 6, 9, 26, 29 and 31 March 2023. The exceedances were due to defects on the dust handling plants leading to high hopper levels within the flue gas cleaning system and reducing the efficiency of the abatement technology (electrostatic precipitator fields). The plant defects were repaired, and emissions returned to below the set limit. The exceedance remained within the 48-hour grace period. Generation load losses were incurred on the units on the days that the PM emission exceeded the daily limit to manage and reduce the emissions.

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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 March 2023**

#### Interpretation:

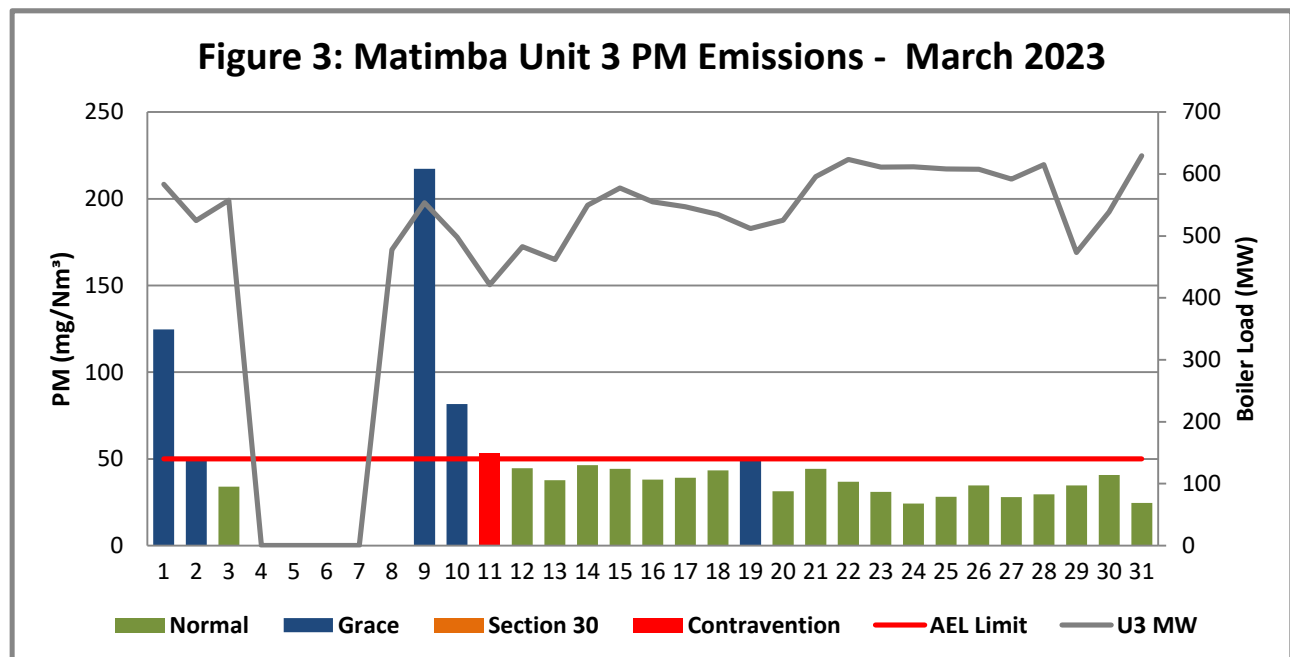
Unit 2 exceeded the daily particulate emission limit of 50mg/Nm<sup>3</sup> on 3, 4, 5, 7, 8, 9 and 11 March 2023. 6 exceedances occurred outside of the 48-hour grace period. The exceedance on 9 March exceeded the 48 hours grace and recorded on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. All 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). Generation load losses were incurred on the units on the days that the PM emission exceeded the daily limit to manage and reduce the emissions.

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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 March 2023**

#### Interpretation:

Unit 3 Particulate matter exceeded the daily limit of 50 mg/Nm<sup>3</sup> on 1,2,9,10,11 and 19 March 2023. 5 exceedances occurred outside of the 48-hour grace period. The exceedance on 11 March exceeded the 48 hours grace and recorded on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. All 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) and the unavailability. Generation load losses were incurred on the units on the days that the PM emission exceeded the daily limit to manage and reduce the emissions .

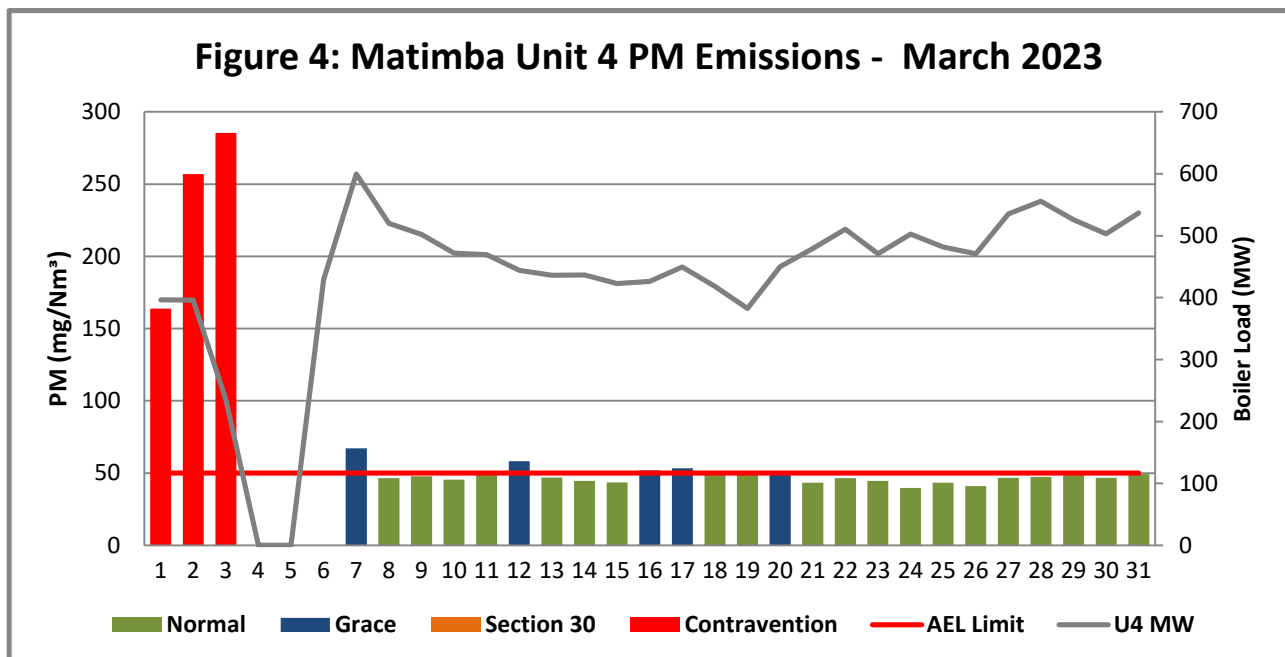
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## Unit 4 Particulate Emissions



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

#### Interpretation:

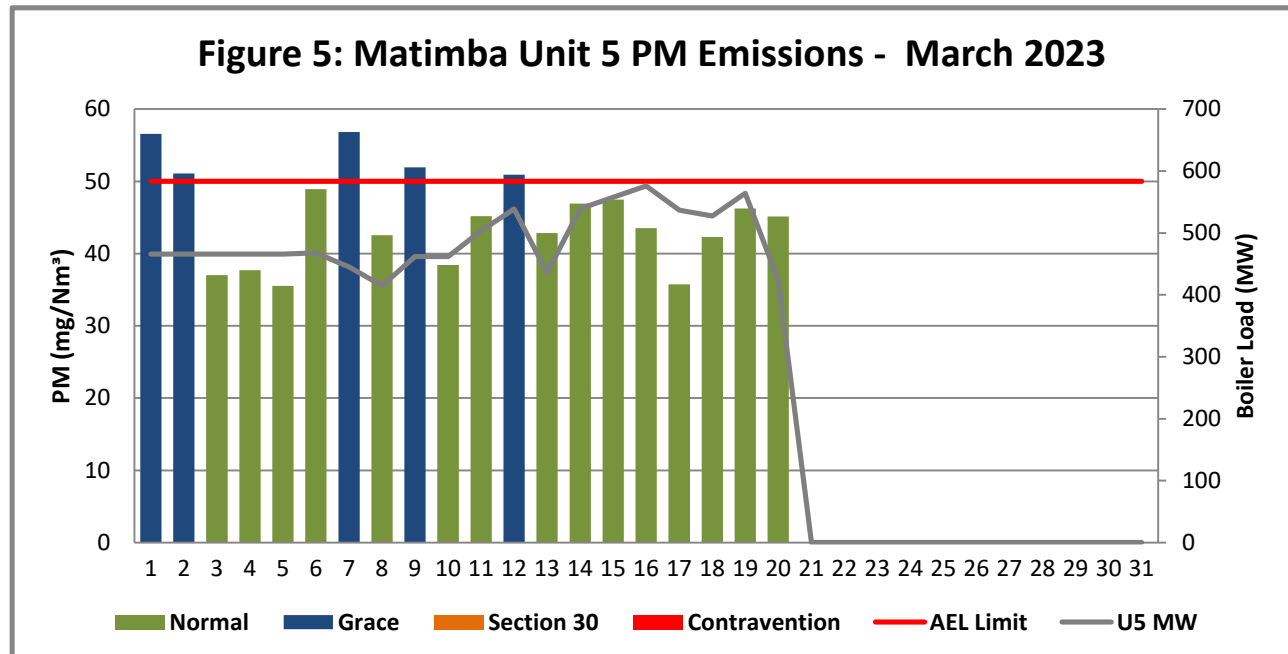
Unit 4 Particulate matter exceeded the daily limit of 50 mg/Nm<sup>3</sup> on 1,2,3,7,12,16,17 and 20 March 2023. 5 exceedances occurred outside of the 48-hour grace period. The exceedance on 1 to 3 March 2023 exceeded the 48 hours grace and recorded on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. All 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) and the unavailability. Unit was shut down on the 03 March 2023 until the 06 March 2023 to manage the emission and clear the ash back lock. Generation load losses were incurred on the units on the days that the PM emission exceeded the daily limit to manage and reduce the emissions

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## Unit 5 Particulate Emissions



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

#### Interpretation:

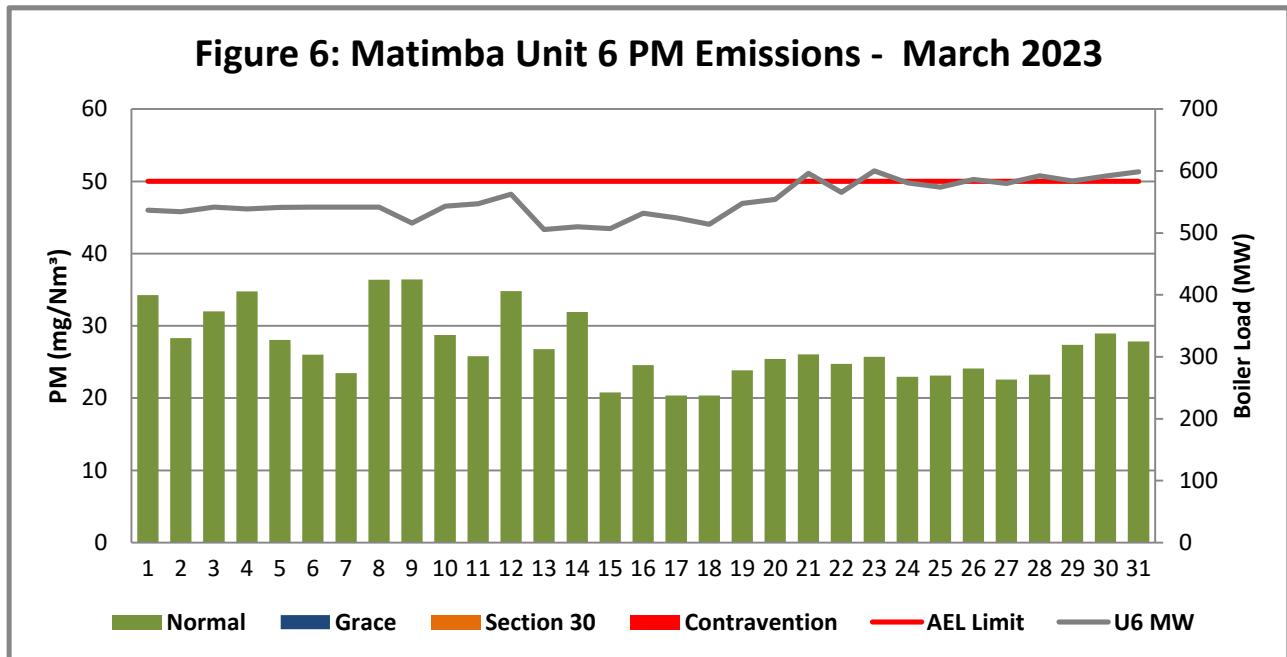
Unit 5 Particulate matter exceeded the daily limit of 50 mg/Nm<sup>3</sup> on 1, 2, 7, 9, and 12 March 2023. All exceedances occurred outside of the 48-hour grace period. All exceedances were due to defects on the dust handling plants leading to high hopper levels within the flue gas cleaning system and reducing the efficiency of the abatement technology (electrostatic precipitator fields). Generation load losses were incurred on the units on the days that the PM emission exceeded the daily limit to manage and reduce the emissions. Unit 5 was taken off on the 20 March 2023 for the general overhaul (GO) outage.

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## Unit 6 Particulate Emissions



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

**Interpretation:**

Unit 6 Particulate matter were within the daily limit of 50 mg/Nm<sup>3</sup> for March 2023.

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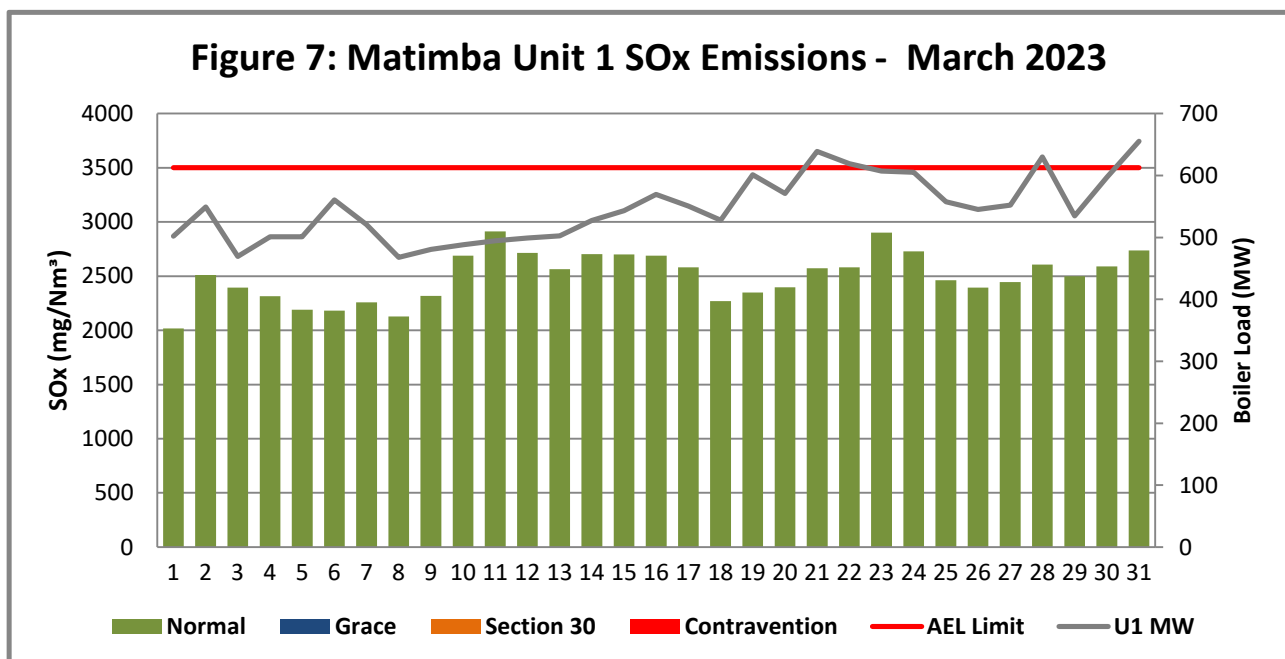
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## 2.4.2 Gaseous Emissions

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 O<sub>2</sub> 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.

### Unit 1 SO<sub>2</sub> Emissions



**Figure 7: SO<sub>2</sub> daily average emissions against emission limit for unit 1 for the month of March 2023**

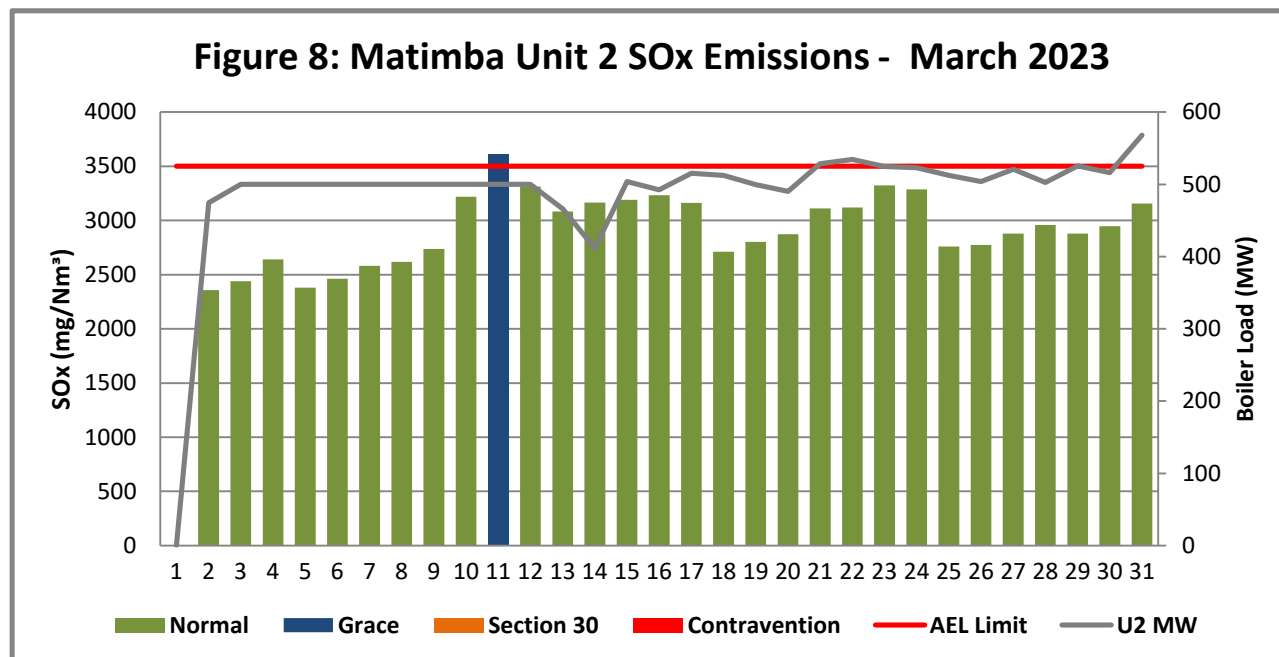
#### Interpretation:

All daily averages below SO<sub>2</sub> emission monthly limit of 3500 mg/Nm<sup>3</sup>.

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Unit 2 SO<sub>2</sub> Emissions

**Figure 8: SO<sub>2</sub> daily average emissions against emission limit for unit 2 for the month of March 2023**

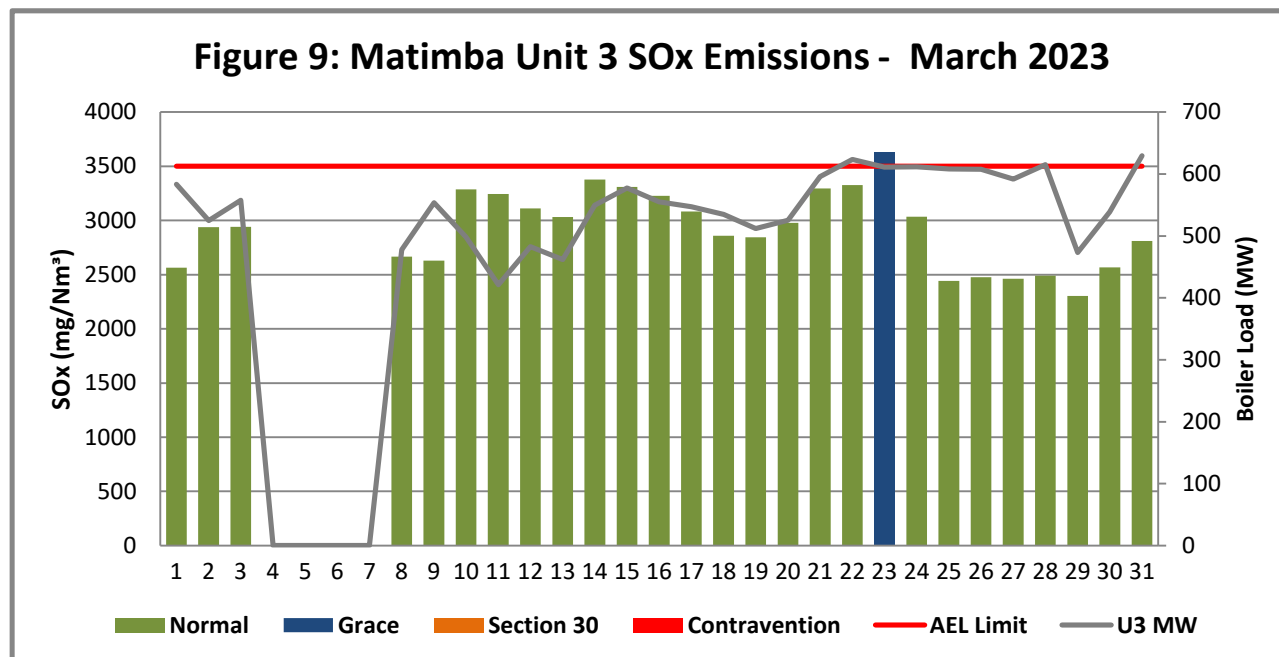
**Interpretation:**

Daily average for SO<sub>2</sub> emission for 11 March 2023 was above 3500 mg/Nm<sup>3</sup> and monthly average was below the limit of 3500 mg/Nm<sup>3</sup>.

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Unit 3 SO<sub>2</sub> Emissions

**Figure 9: SO<sub>2</sub> daily average emissions against emission limit for unit 3 for the month of March 2023**

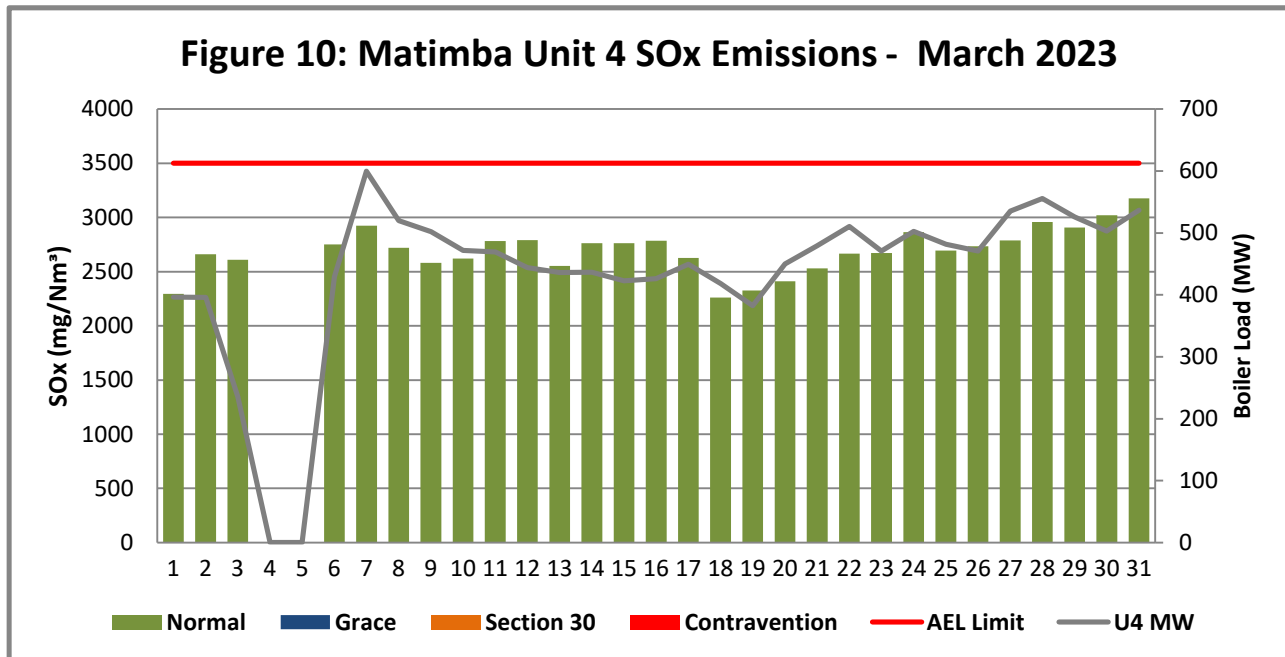
**Interpretation:**

Daily average for SO<sub>2</sub> emission for 23 March 2023 was above 3500 mg/Nm<sup>3</sup> and monthly average was below the limit of 3500 mg/Nm<sup>3</sup>.

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Unit 4 SO<sub>2</sub> Emissions

**Figure 10: SO<sub>2</sub> daily average emissions against emission limit for unit 4 for the month of March 2023**

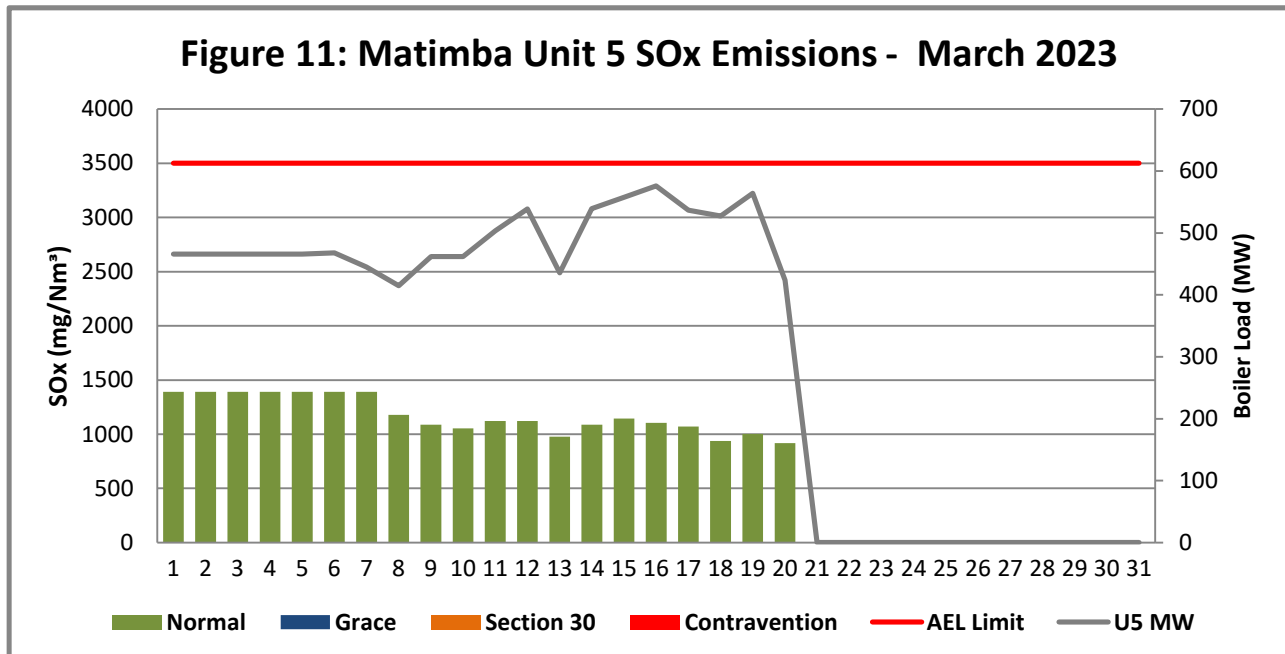
**Interpretation:**

All daily averages below SO<sub>2</sub> emission monthly limit of 3500 mg/Nm<sup>3</sup>.

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**Unit 5 SO<sub>2</sub> Emissions**

**Figure 11: SO<sub>2</sub> daily average emissions against emission limit for unit 5 for the month of March 2023**

**Interpretation:**

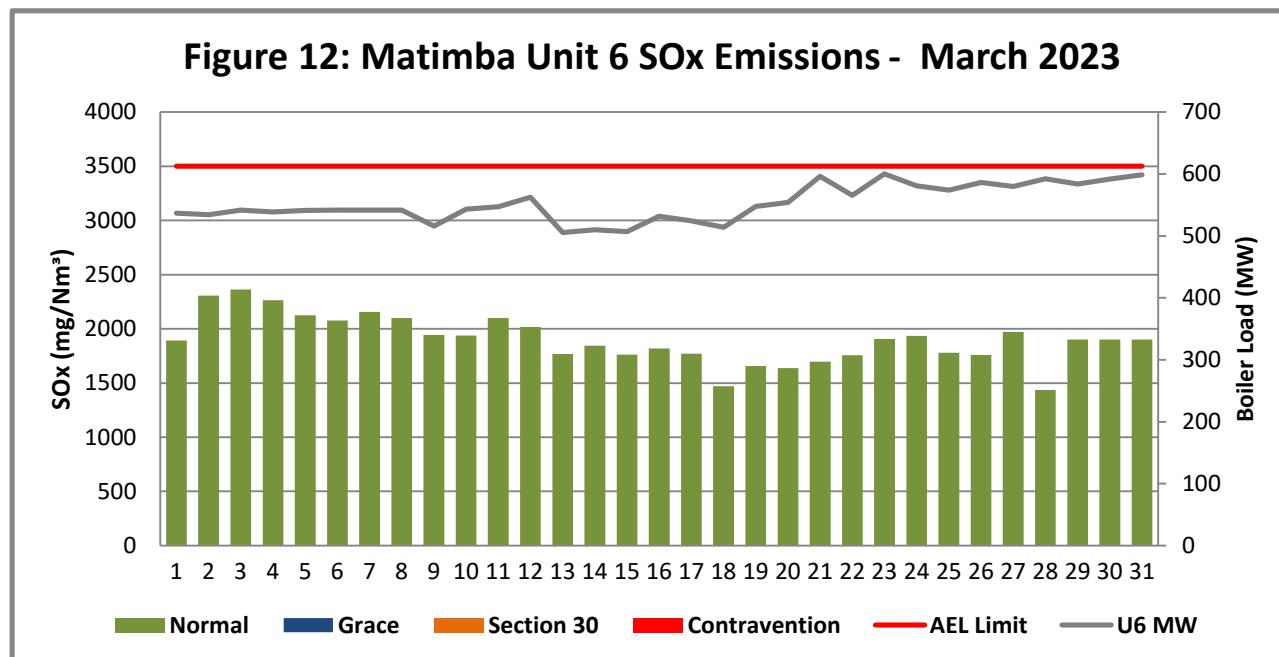
All daily averages below SO<sub>2</sub> emission monthly limit of 3500 mg/Nm<sup>3</sup>.

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**Unit 6 SO<sub>2</sub> Emissions**

**Figure 12: SO<sub>2</sub> daily average emissions against emission limit for unit 6 for the month of March 2023**

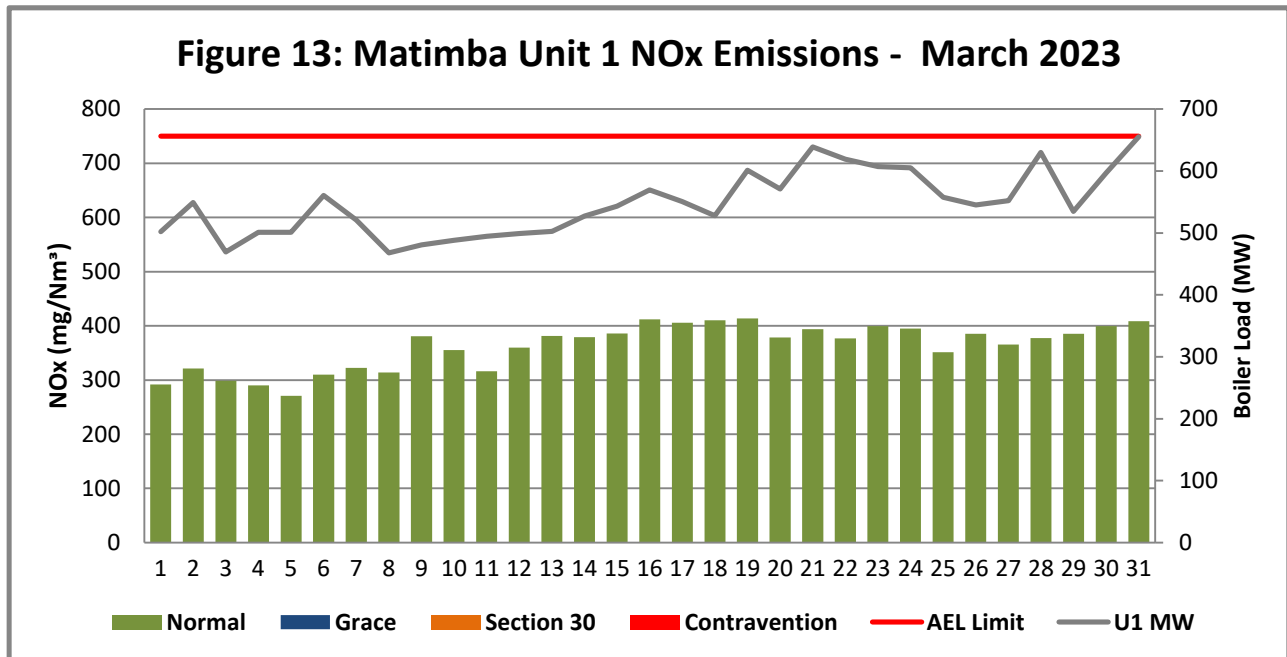
**Interpretation:**

All daily averages remained below SO<sub>2</sub> emission monthly limit of 3500 mg/Nm<sup>3</sup>.

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Unit 1 NO<sub>x</sub> Emissions

**Figure 13: NO<sub>x</sub> daily average emissions against emission limit for unit 1 for the month of March 2023**

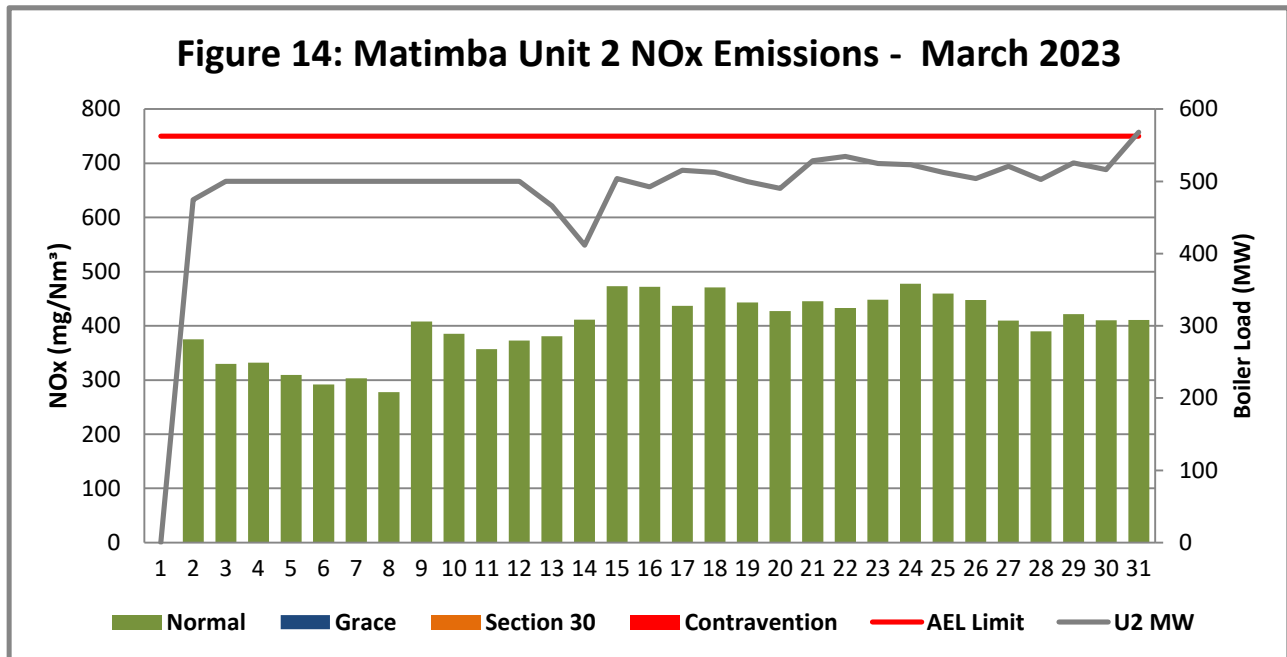
**Interpretation:**

All daily averages below NO<sub>x</sub> emission limit of 750 mg/Nm<sup>3</sup>.

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Unit 2 NO<sub>x</sub> Emissions

**Figure 14: NO<sub>x</sub> daily average emissions against emission limit for unit 2 for the month of March 2023**

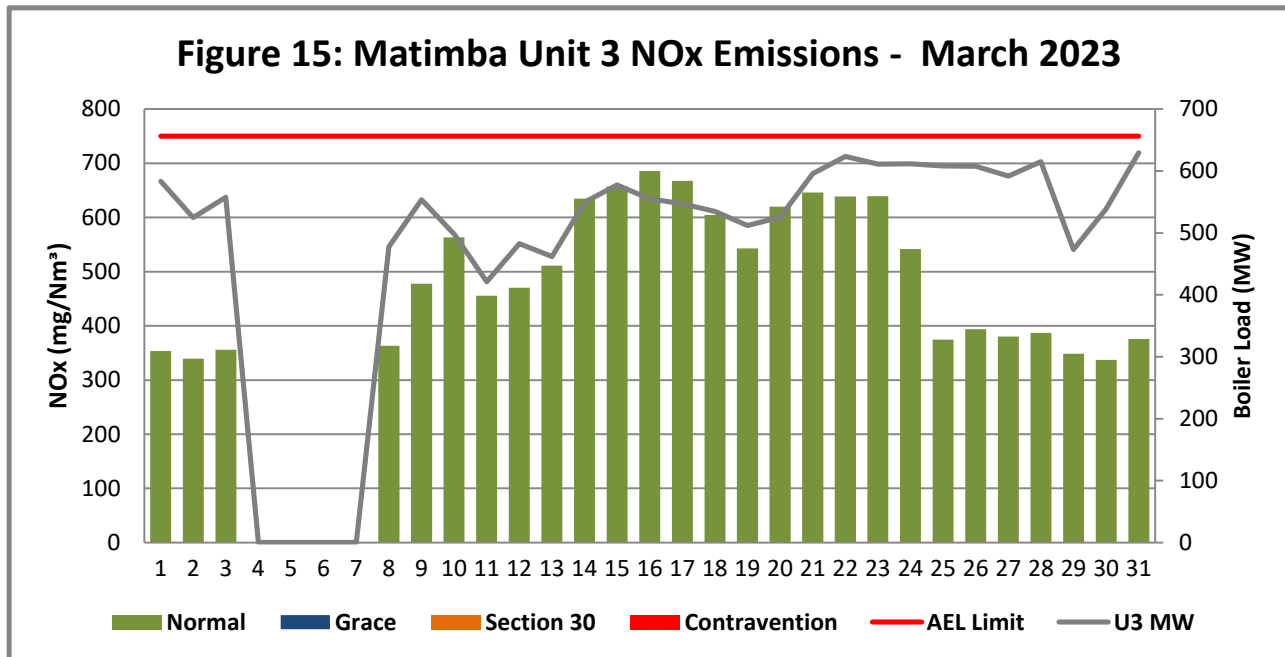
**Interpretation:**

All daily averages below NO<sub>x</sub> emission limit of 750 mg/Nm<sup>3</sup>.

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Unit 3 NO<sub>x</sub> Emissions

**Figure 15: NO<sub>x</sub> daily average emissions against emission limit for unit 3 for the month of March 2023**

**Interpretation:**

All daily averages below NO<sub>x</sub> emission limit of 750 mg/Nm<sup>3</sup>.

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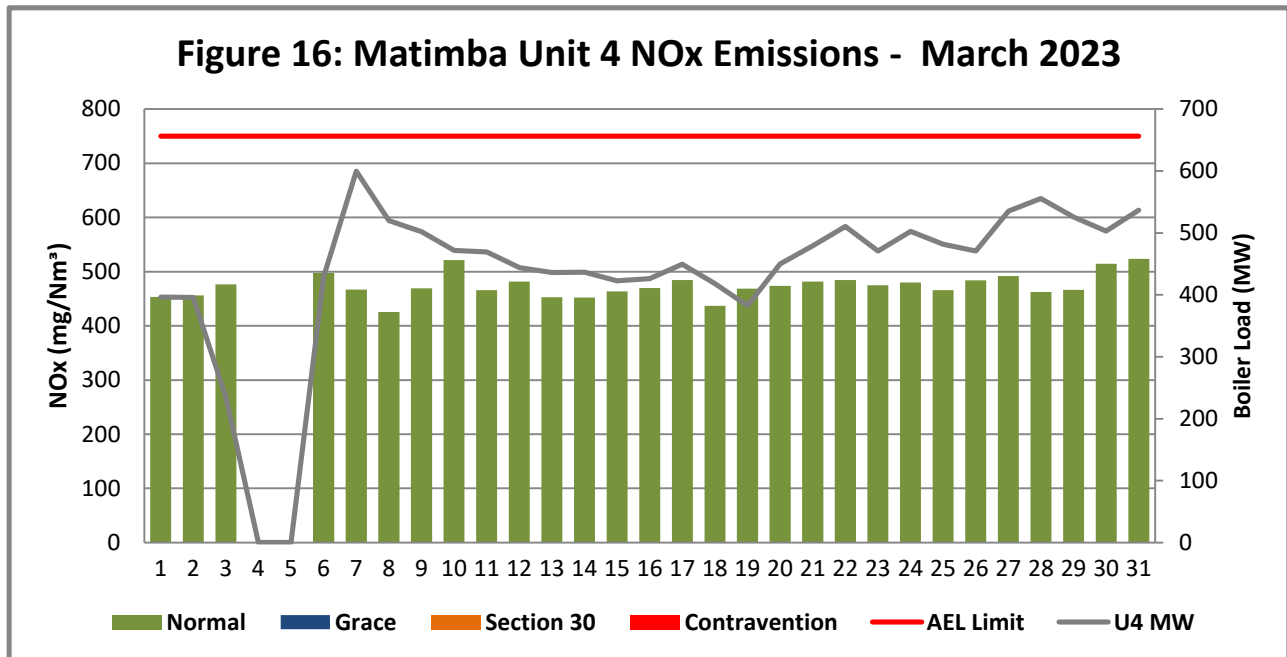
Unit 4 NO<sub>x</sub> Emissions

Figure 16: NO<sub>x</sub> daily average emissions against emission limit for unit 4 for the month of March 2023

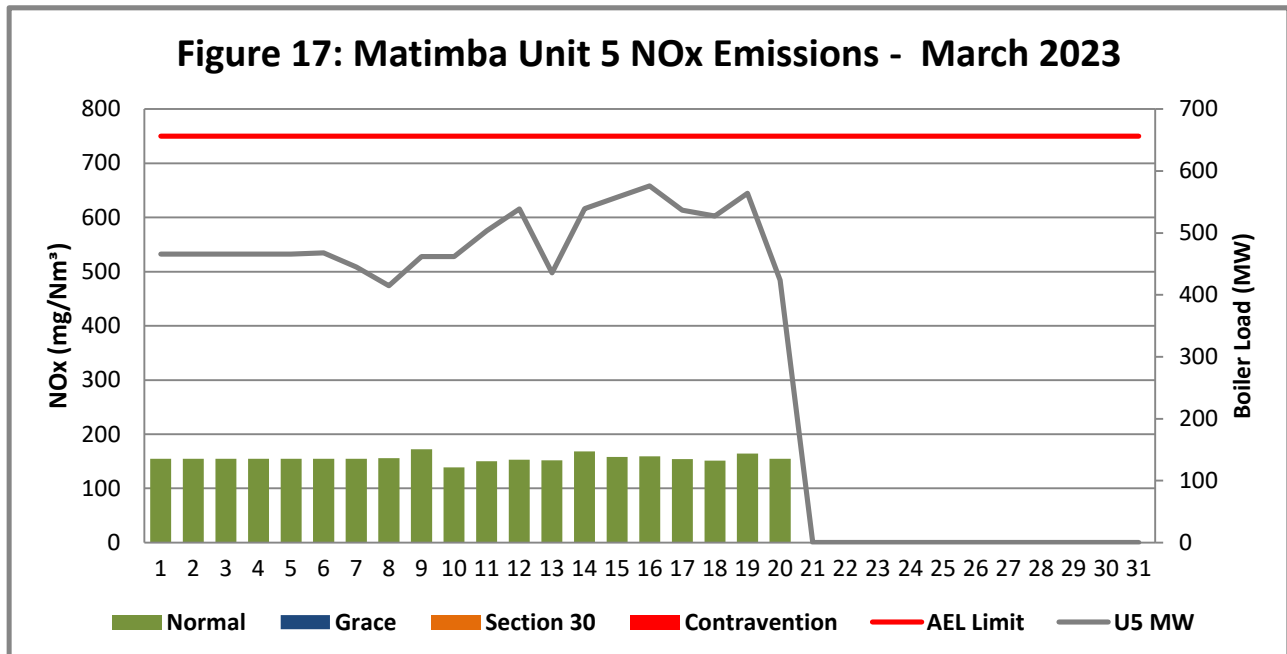
**Interpretation:**

All daily averages below NO<sub>x</sub> emission limit of 750 mg/Nm<sup>3</sup>.

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Unit 5 NO<sub>x</sub> Emissions

**Figure 17: NO<sub>x</sub> daily average emissions against emission limit for unit 5 for the month of March 2023**

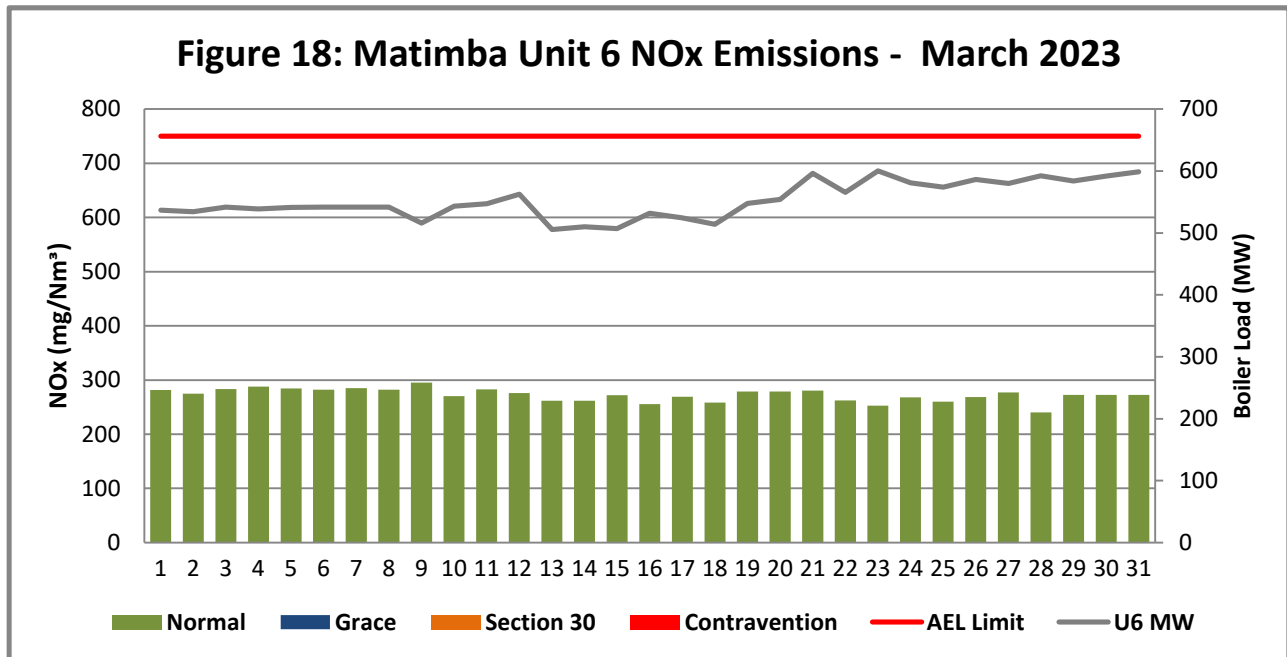
**Interpretation:**

All daily averages below NO<sub>x</sub> emission limit of 750 mg/Nm<sup>3</sup>.

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Unit 6 NO<sub>x</sub> Emissions

**Figure 18: NO<sub>x</sub> daily average emissions against emission limit for unit 6 for the month of March 2023**

**Interpretation:**

All daily averages below NO<sub>x</sub> emission limit of 750 mg/Nm<sup>3</sup>.


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### 2.4.3 Total Volatile Organic Compounds

Table 4: Total volatile compound estimates

		
CALCULATION OF EMISSIONS OF TOTAL VOLATILE COMPOUNDS FROM FUEL OIL STORAGE TANKS*		
Date:	Monday, 17 April 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	
<p align="center"><b>MONTHLY INPUT DATA FOR THE STATION</b></p> <p align="center">Please only insert relevant monthly data inputs into the <b>blue cells</b> below</p> <p align="center">Choose from a dropdown menu in the <b>green cells</b></p> <p align="center">The total VOC emissions for the month are in the <b>red cells</b></p> <p align="center">IMPORTANT: Do not change <b>any</b> other cells without consulting the AQ CoE</p>		
MONTH:	<b>March</b>	
<b>GENERAL INFORMATION:</b>		<b>Data Unit</b>
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:	<b>663,547</b>	
Molecular weight of the fuel oil:	166,00	Lb/lb-mole
<b>METEROLOGICAL DATA FOR THE MONTH</b>		<b>Data Unit</b>
Daily average ambient temperature	23,67	°C
Daily maximum ambient temperature	30,21	°C
Daily minimum ambient temperature	17,89	°C
Daily ambient temperature range	12,31	°C
Daily total insolation factor	5,08	kWh/m <sup>2</sup> /day
Tank paint colour	<b>Grey/medium</b>	NA
Tank paint solar absorbance	0,68	NA
<b>FINAL OUTPUT:</b>		<b>Result Unit</b>
Breathing losses:	<b>0,55 kg/month</b>	
Working losses:	<b>0,02 kg/month</b>	
<b>TOTAL LOSSES (Total TVOC Emissions for the month):</b>	<b>0,57 kg/month</b>	
<p>*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, Trittech 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.</p>		

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## 2.4.4 Greenhouse gas (CO<sub>2</sub>) emissions

CO<sub>2</sub> 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

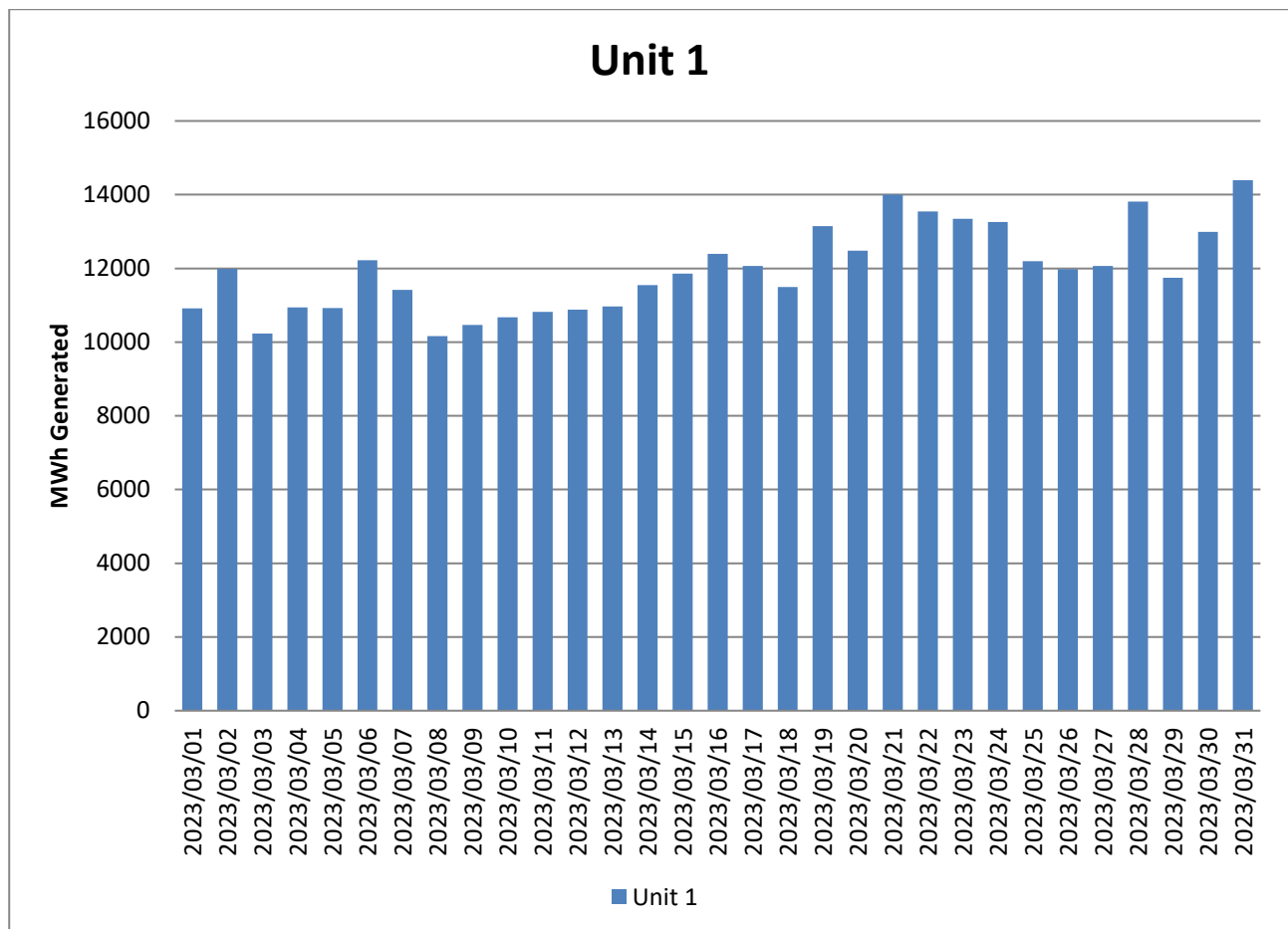
**Table 5:** Daily power generated per unit in MWh for the month of March 2023

Date	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
2023/03/01	10915		12743	8550	10033	11583
2023/03/02	11987	1213	11459	8550	10030	11540
2023/03/03	10229	10147	8571	137	10067	11705
2023/03/04	10938	10401			10064	11644
2023/03/05	10925	9581			10054	11688
2023/03/06	12223	8807		2293	10099	11700
2023/03/07	11416	9377		12950	9611	11700
2023/03/08	10166	8673	5925	11297	8922	11711
2023/03/09	10467	8430	12069	10803	9987	11123
2023/03/10	10669	8586	10843	10172	9946	11754
2023/03/11	10821	8530	9085	10131	10832	11819
2023/03/12	10877	8414	10515	9609	11700	12187
2023/03/13	10963	8410	10059	9387	9345	10899
2023/03/14	11546	8609	11946	9403	11609	7709
2023/03/15	11862	10659	12624	9058	12040	10899
2023/03/16	12395	10381	12054	9188	12456	11456
2023/03/17	12065	10956	11945	9668	11607	11344
2023/03/18	11491	10862	11615	8966	11350	11080
2023/03/19	13145	10593	11175	8178	12189	11767
2023/03/20	12483	10376	11331	9674	1477	11960
2023/03/21	14006	11211	12993	10312		12942
2023/03/22	13546	11364	13622	11067		12187
2023/03/23	13346	11165	13381	10148		13024
2023/03/24	13258	11092	13303	10862		12542
2023/03/25	12199	10929	13269	10413		12443
2023/03/26	11980	10733	13302	10161		12714
2023/03/27	12066	11087	12881	11556		12567
2023/03/28	13812	10709	13476	12052		12767
2023/03/29	11744	11193	10215	11406		12625
2023/03/30	12988	10964	11658	10845		12818
2023/03/31	14390	12081	13751	11683		6172

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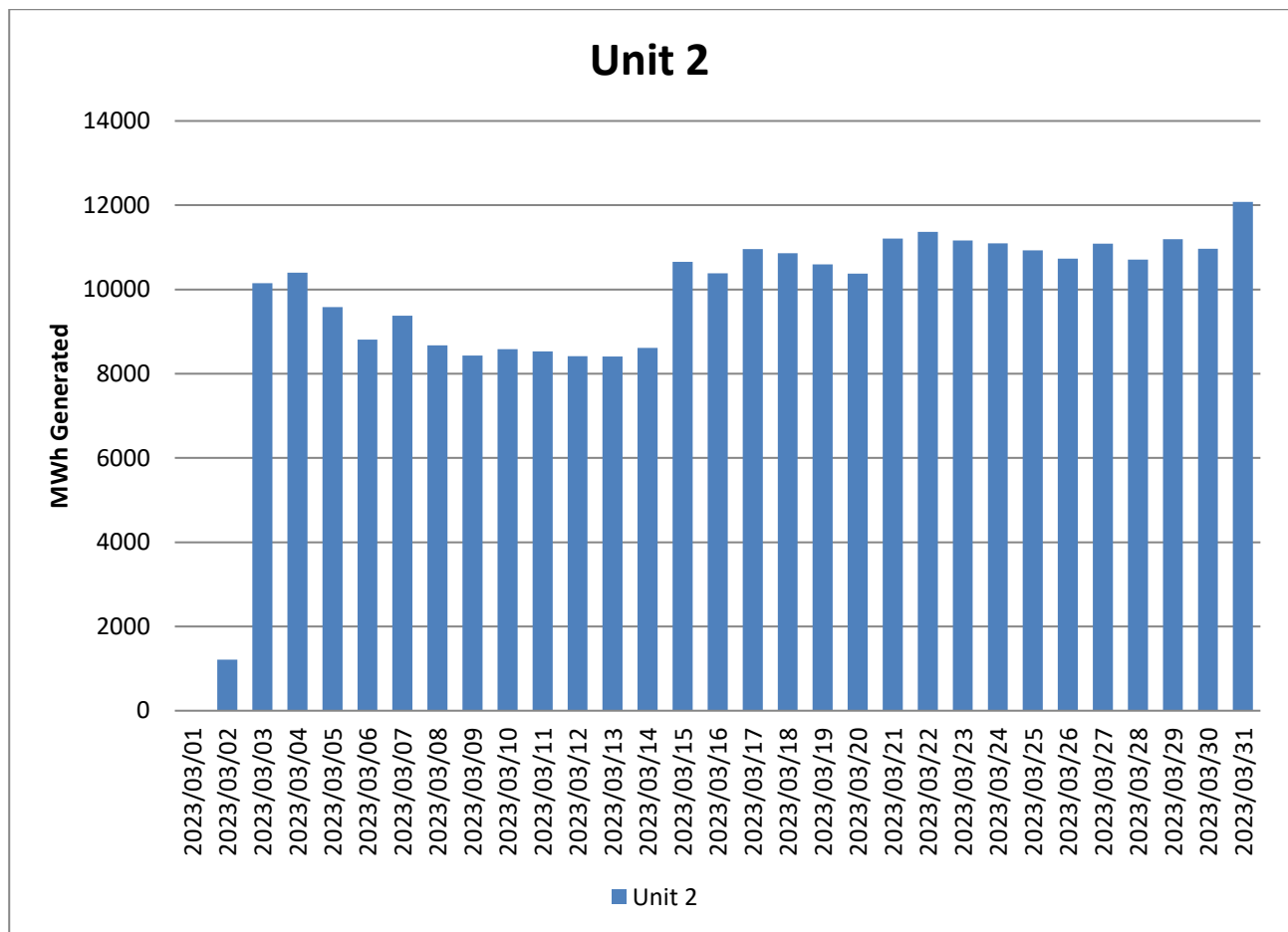


**Figure 19: Unit 1 daily generated power in MWh for the month of March 2023**

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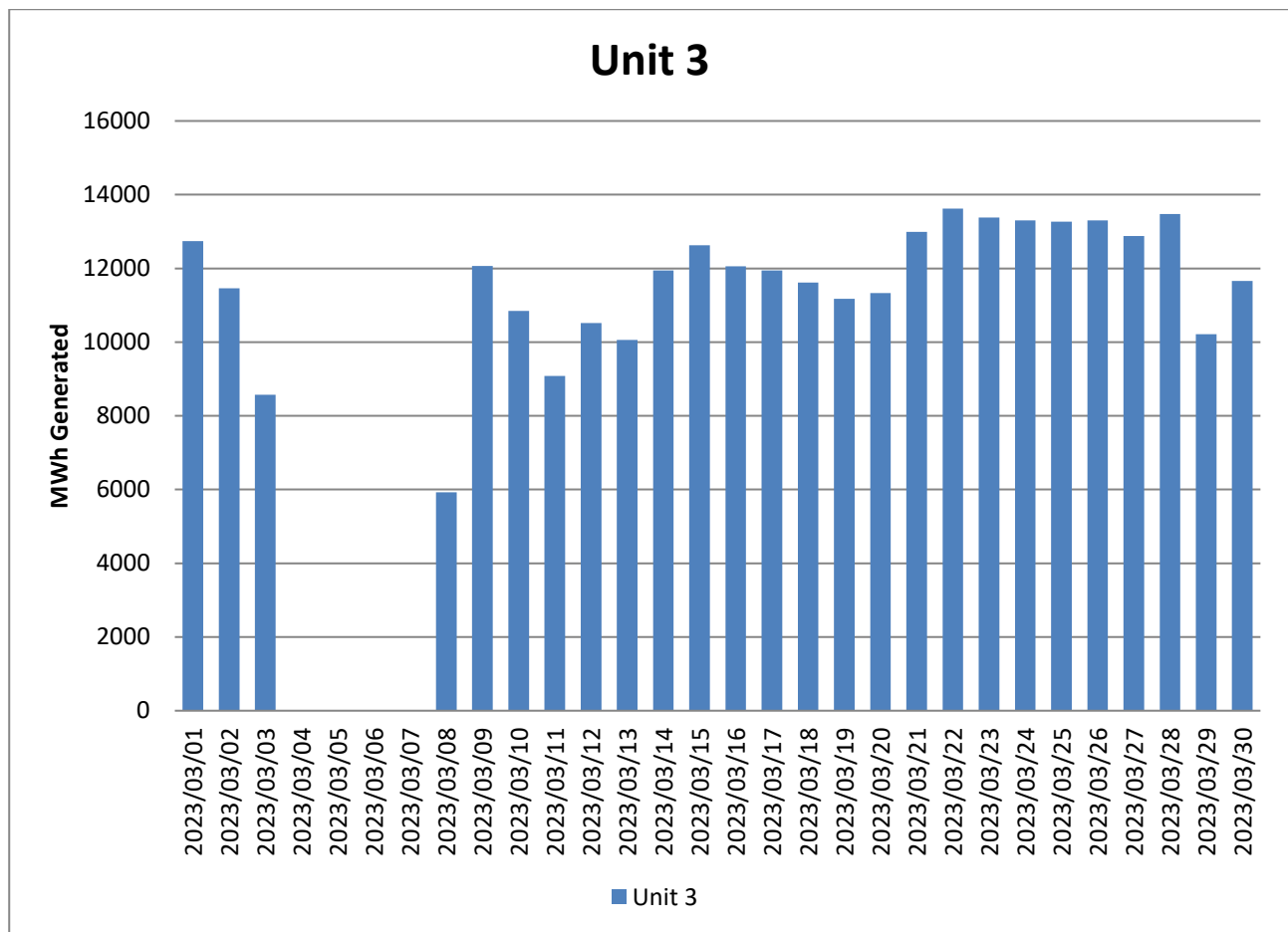


**Figure 20: Unit 2 daily generated power in MWh for the month of March 2023**

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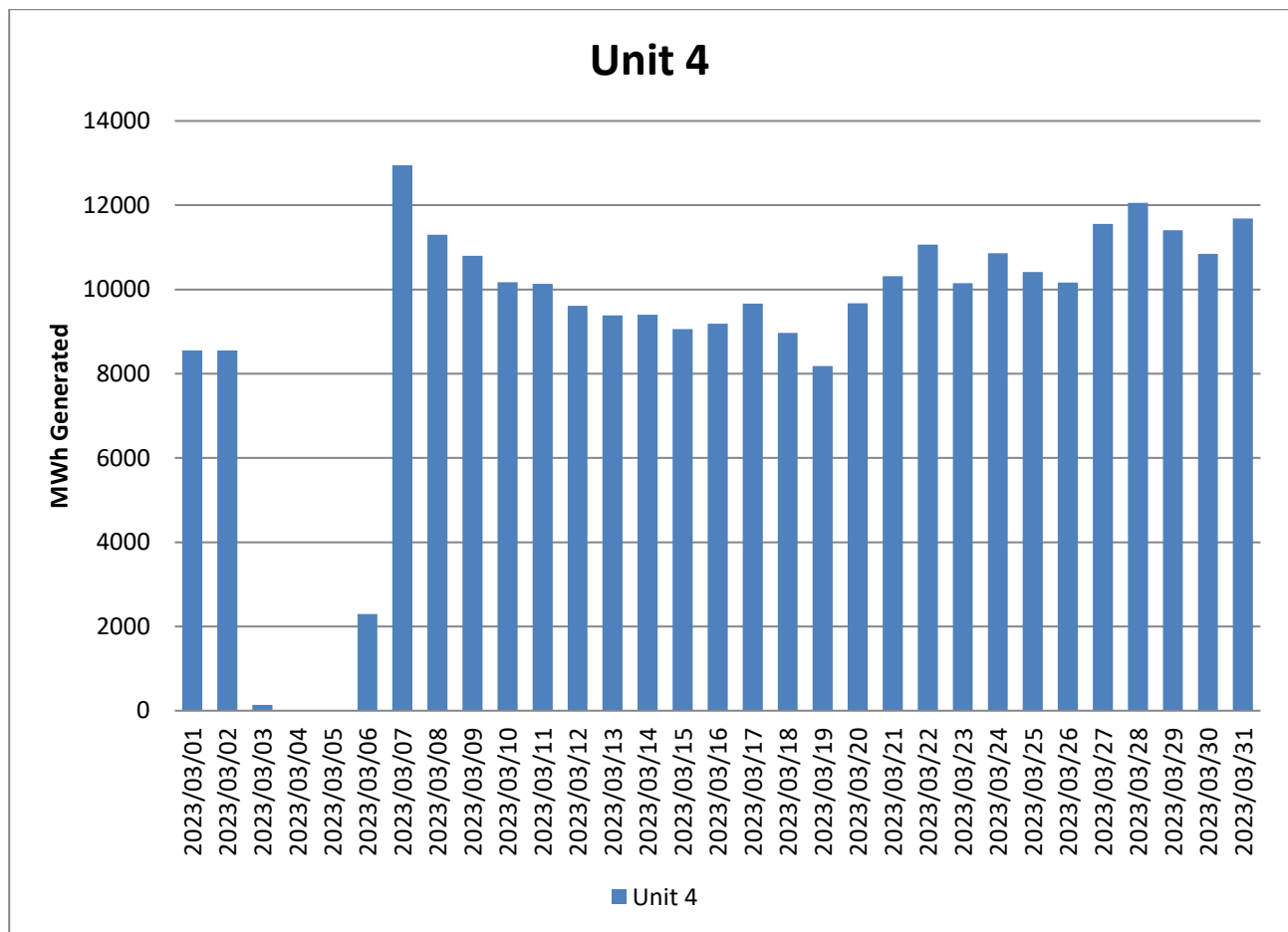


**Figure 21: Unit 3 daily generated power in MWh for the month of March 2023**

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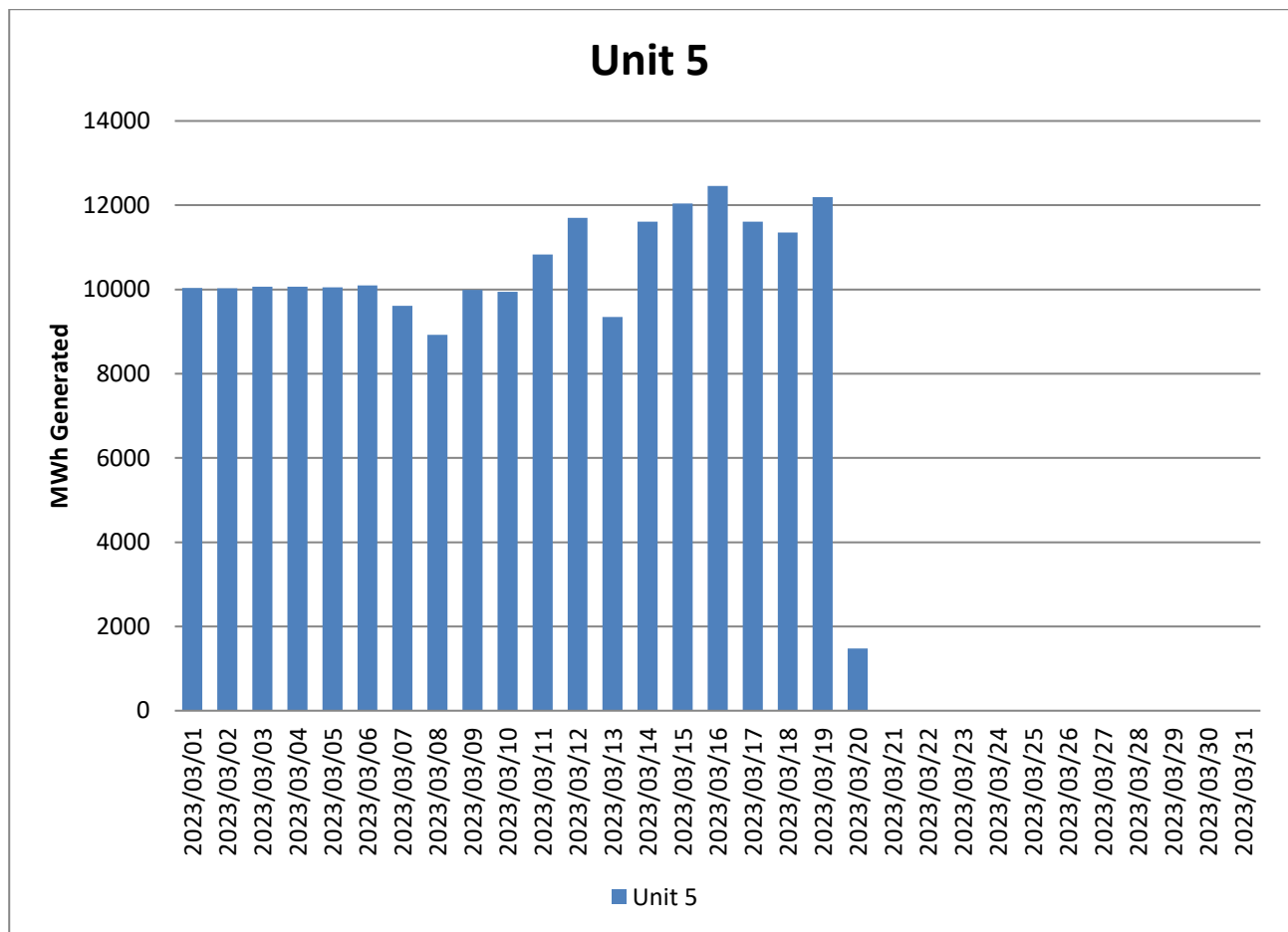


**Figure 22: Unit 4 daily generated power in MWh for the month of March 2023**

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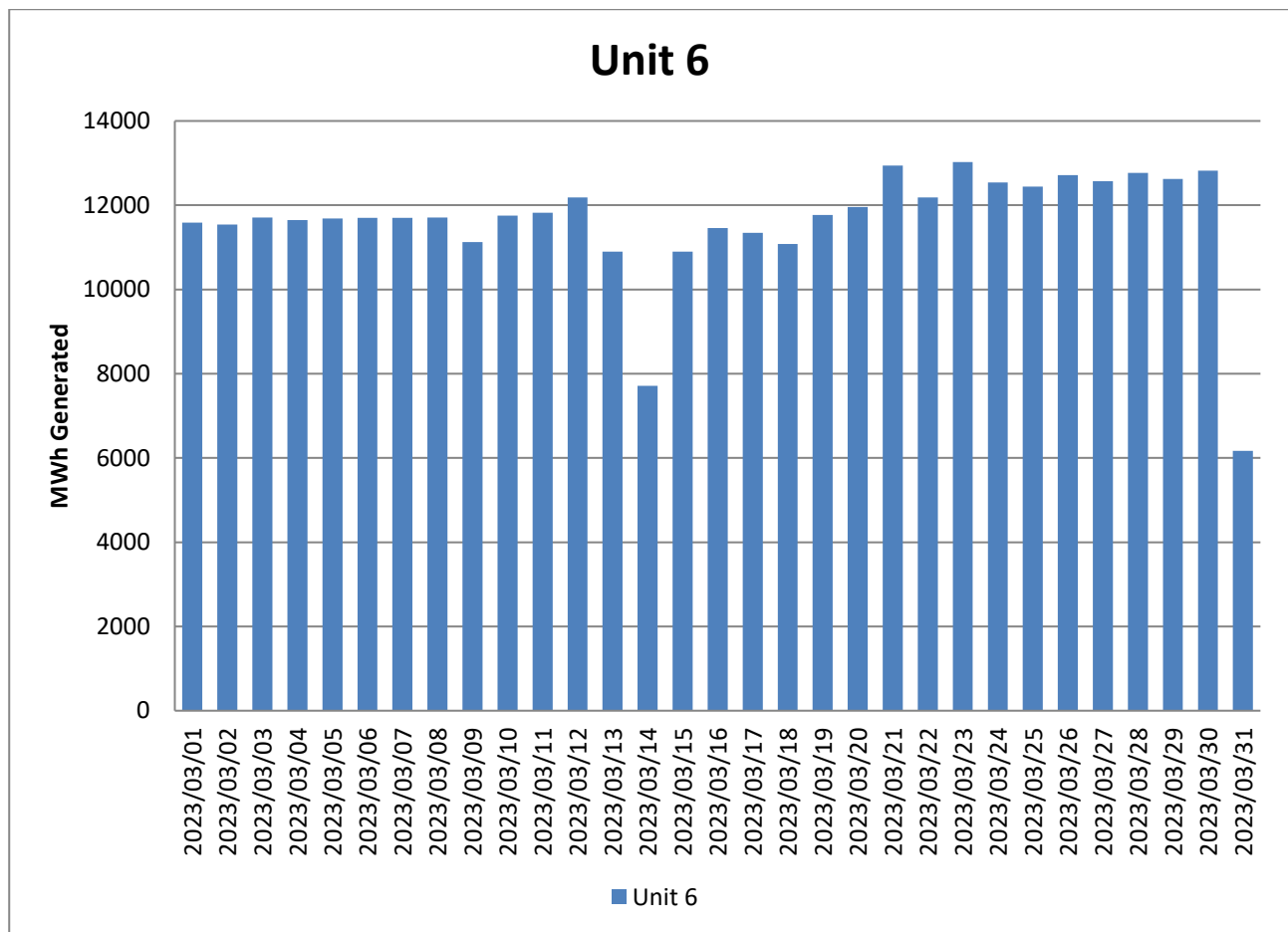


**Figure 23: Unit 5 daily generated power in MWh for the month of March 2023**

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**Figure 24: Unit 6 daily generated power in MWh for the month of March 2023**

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## 2.6 Pollutant Tonnages

The emitted pollutant tonnages for March 2023 are provided in table 6. Gaseous emissions analysers for all 6 units are providing unvalidated 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 March 2023

Associated Unit/Stack	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>x</sub> (tons)
Unit 1	96,2	5 840,2	848,8
Unit 2	73,7	6 276,4	853,7
Unit 3	80,6	6 440,7	1 098,6
Unit 4	60,4	4 452,9	778,2
Unit 5	47,8	1 948,0	254,2
Unit 6	50,1	4 489,0	642,8
<b>SUM</b>	408,7	29 447,3	4 476,4

## 2.7 Reference values

**Table 7:** Reference values for data provided, March 2023

Compound / Parameter	Units of Measure	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Oxygen	%	5,61	8,60	4,66	7,75	4,81	5,71
Moisture	%	5,02	3,93	5,82	3,13	4,68	1,86
Velocity	m/s	25,4	28,9	26,3	22,4	25,5	28,0
Temperature	°C	146,1	124,3	130,2	129,4	118,4	167,7
Pressure	mBar	933,5	936,0	918,8	924,0	937,9	908,1

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## 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 March 2023 are provided in table 6. Gaseous emissions analysers for all 6 units are providing unvalidated 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 March 2023.

Associated Unit/Stack	PM	SO <sub>2</sub>	NO
Unit 1	99,9	99,5	99,5
Unit 2	100,0	99,6	99,6
Unit 3	100,0	99,5	99,4
Unit 4	94,8	100,0	100,0
Unit 5	100,0	89,4	79,3
Unit 6	100,0	88,0	87,6

### 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.

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- 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<sub>2</sub> and NO<sub>x</sub>

<b>Name of service provider:</b>		Stacklabs Environmental Services CC		
<b>Address of service provider:</b>		10 Chisel Street Boltonia Krugersdorp 1739		
<b>Stack/ Unit</b>	<b>PM</b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO<sub>2</sub></b>
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

<b>Unit</b>	2	
<b>Fires in</b>	2023/03/02	11h50
<b>Synchronization with Grid</b>	2023/03/02	18h06
<b>Emissions below limit</b>	2023/03/03	10h01
<b>Fires in to synchronization</b>	6,16	HOURS
<b>Synchronization to &lt; Emission limit</b>	15,55	HOURS

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<b>Unit</b>	3	
<b>Fires in</b>	2023/03/08	04h50
<b>Synchronization with Grid</b>	2023/03/08	09h47
<b>Emissions below limit</b>	2023/03/10	01h02
<b>Fires in to synchronization</b>	4,45	HOURS
<b>Synchronization to &lt; Emission limit</b>	39,15	HOURS

<b>Unit</b>	4	
<b>Fires in</b>	2023/03/06	12h19
<b>Synchronization with Grid</b>	2023/03/06	17h14
<b>Emissions below limit</b>	2023/03/07	09h03
<b>Fires in to synchronization</b>	4,55	HOURS
<b>Synchronization to &lt; Emission limit</b>	15,49	HOURS

<b>Unit</b>	6	
<b>Fires in</b>	2023/03/14	18h34
<b>Synchronization with Grid</b>	2023/03/14	23h28
<b>Emissions below limit</b>	2023/03/15	00h06
<b>Fires in to synchronization</b>	4,54	HOURS
<b>Synchronization to &lt; Emission limit</b>	0,38	HOURS

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## 2.10 Emergency generation

**Table 11:** Emergency generation

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

During the period under review all Units were on emergency generation in force from 01 March 2023 until 31 March 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

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## 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.

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## 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. S23° 40' 2.8" E027° 36' 34.8" 175m from ground level and 75m from the top.
  - b. Gas:
    - i. S23° 40' 2.8" E027° 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. S23° 40' 14.8" E027° 36' 47.5" 175m from ground level and 75m from the top.
  - b. Gas:
    - i. S23° 40' 14.8" E027° 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

*Wikus van Rensburg*

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