Eskom	Technical and Generic Report	Matimba Power Station

Title: **Matimba Power Station June 2023 emissions report Rev 2**

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Compiled by	Functional Responsibility	Authorized by
KH Ramahlare	**MC Mamabolo**	**Obakeng Mabotja**
Senior Advisor Environment	**Environmental Manager**	**General Manager**
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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 2 of the report issued containing the required information as specified in the license for June 2023.Revision 1 of the June 2023 report was issued due to the corrections of the gaseous tonnages calculation due to Unit 3 monitor defects for the month of June 2023.The revision 2 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 June 2023 and revision 1 June 2023 was from Matimba Emission Reporting tool V12.2021 and the information on revision 2 is from Matimba Emission Reporting tool V02.2024FD.

During the period under review, Matimba experienced ninety-six (96) exceedances of the daily particulate matter emission limit (50mg/Nm^3), seventy (70) 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. Four (4) Section 30 exceedances incident were recorded for Unit 1,2,4 and 5 for the month of June 2023 and reported to the licence authorities. The gaseous emissions monitor for unit 3 was providing unvalidated data due to the monitors not being calibrated biweekly as per CEMS requirements. The gaseous monitors were not calibrated since April 2023 due to unavailability of the calibration gas, which is ordered and expected to be delivered from India by 05 July 2023.

The station is planning to perform the calibrations, correlations, and quality assurance tests on the monitors by 18 July 2023.

The flue gas conditioning plant (SO3 Plant) for unit 1,2,3,4,5 and 6 did not achieve the required 100% availability due to the defects and breakdown experienced on the plants throughout the month. The SO3 plants defects were repaired, and plants returned to operation.

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	957 901
	Fuel Oil	Tons/month	1 200	696,724
Production Rates	**Product/ By-Product Name**	**Unit**	**Maximum Production Capacity Permitted (Quantity)**	**Production Rate**
	Energy	MW	4000	2402,31

The consumption rates for the month of June 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%	99,799%
Unit 2	Electrostatic Precipitator	100%	99,690%
Unit 3	Electrostatic Precipitator	100%	99,855%
Unit 4	Electrostatic Precipitator	100%	99,605%
Unit 5	Electrostatic Precipitator	100%	99,693%
Unit 6	Electrostatic Precipitator	100%	99,894%
Associated Unit	**Technology Type**	**Minimum utilisation (%)**	**Actual Utilisation (%)**
Unit 1	SO_3 Plant	100%	94%
Unit 2	SO_3 Plant	100%	90%
Unit 3	SO_3 Plant	100%	99%
Unit 4	SO_3 Plant	100%	97%
Unit 5	SO_3 Plant	100%	84%
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.

2.3 Energy source characteristics

Table 3: Energy Source Material Characteristics.

	Characteristic	Stipulated Range (Unit)	Monthly Average Content
Coal burned	**Sulphur Content**	1.6%	1,36
	Ash Content	40%	35,42

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

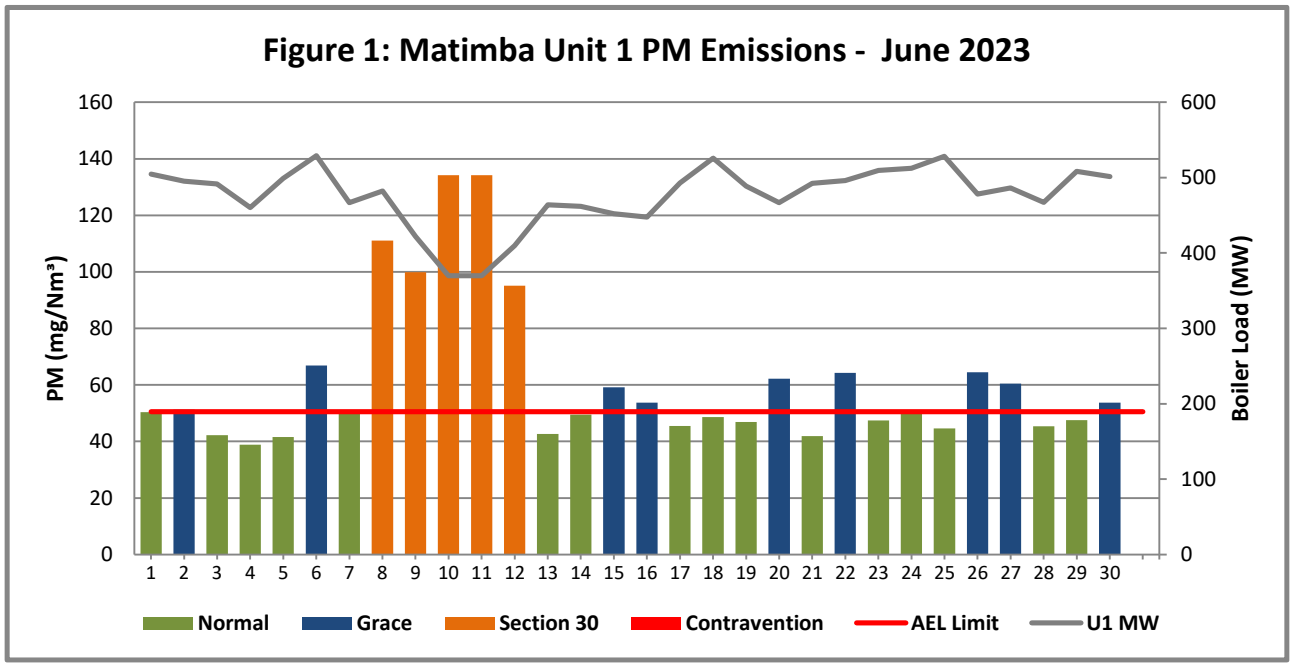

Figure 1: Particulate matter daily average emissions against emission limit for unit 1 for the month of June 2023

Interpretation:

Unit 1 exceeded the daily particulate emission limit of 50mg/Nm3 on 2, 6,8 to 12,15,16,20,22,26,27 and 30 June 2023. The exceedances from the 8 to 12 June 2023 occurred outside of the 48-hour grace period and were recorded as Section 30 and on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. The exceedances were due unavailability of the ash conveyance plant that led to accumulation of ash at the dust handling plant 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.

Unit 2 Particulate Emissions

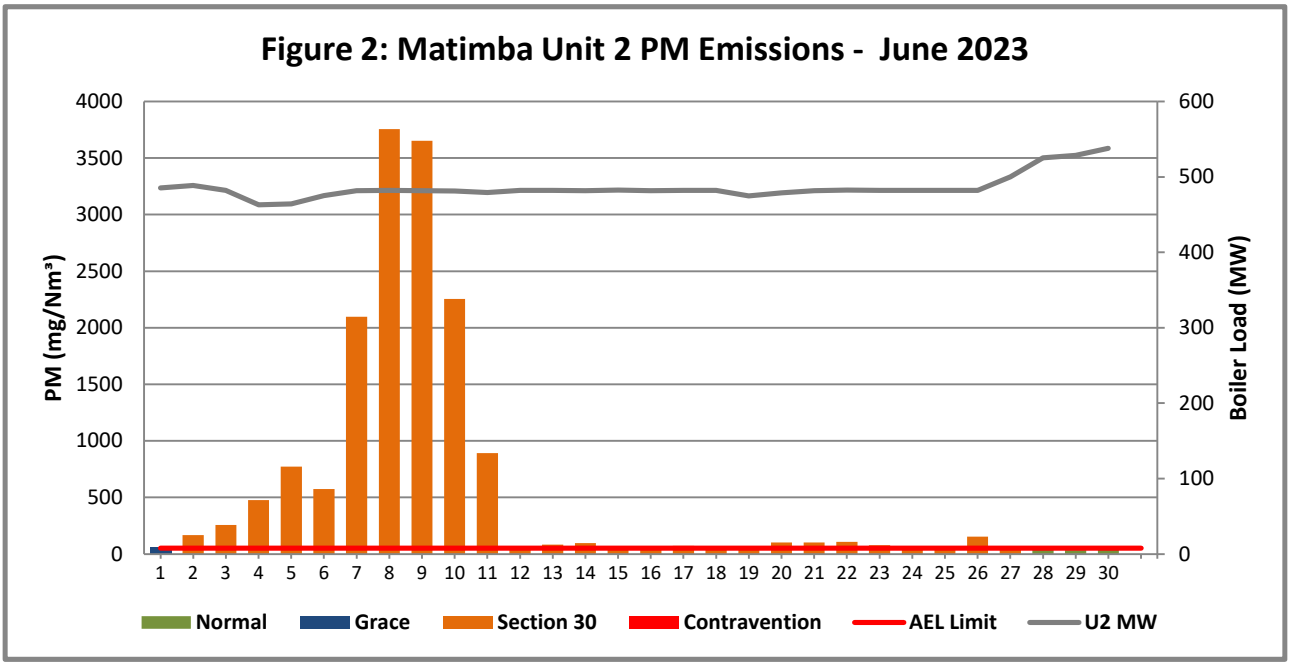

Figure 2: Particulate matter daily average emissions against emission limit for unit 2 for the month of June 2023

Interpretation:

Unit 2 exceeded the daily particulate emission limit of 50mg/Nm3 on 1 to 27 June 2023. The exceedances from the 2 to 27 June 2023 occurred outside of the 48-hour grace period and were recorded as Section 30 and on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. The exceedances were due unavailability of the ash conveyance plant that led to accumulation of ash at the dust handling plant 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.

Unit 3 Particulate Emissions

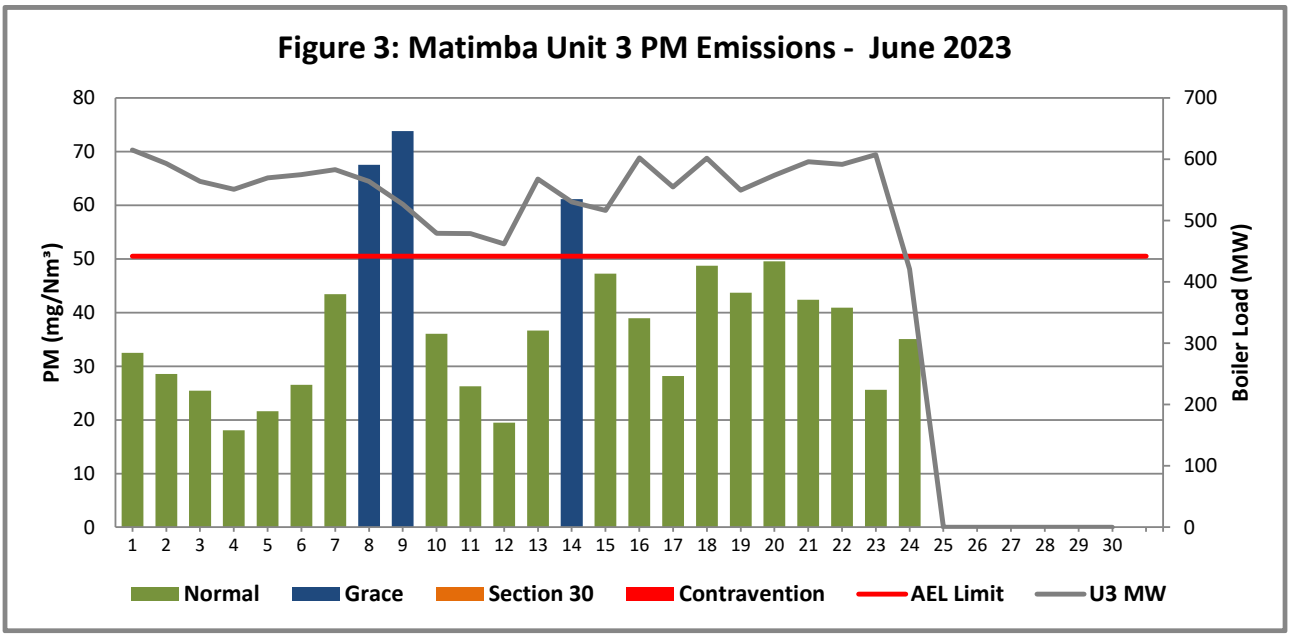

Figure 3: Particulate matter daily average emissions against emission limit for unit 3 for the month of June 2023

Interpretation:

Unit 3 Particulate matter exceeded the daily limit of 50 mg/Nm3 on 8,9 and 14 June 2023. The exceedances were due to unavailability of the ash conveyance system that led to ash accumulation 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.

Unit 4 Particulate Emissions

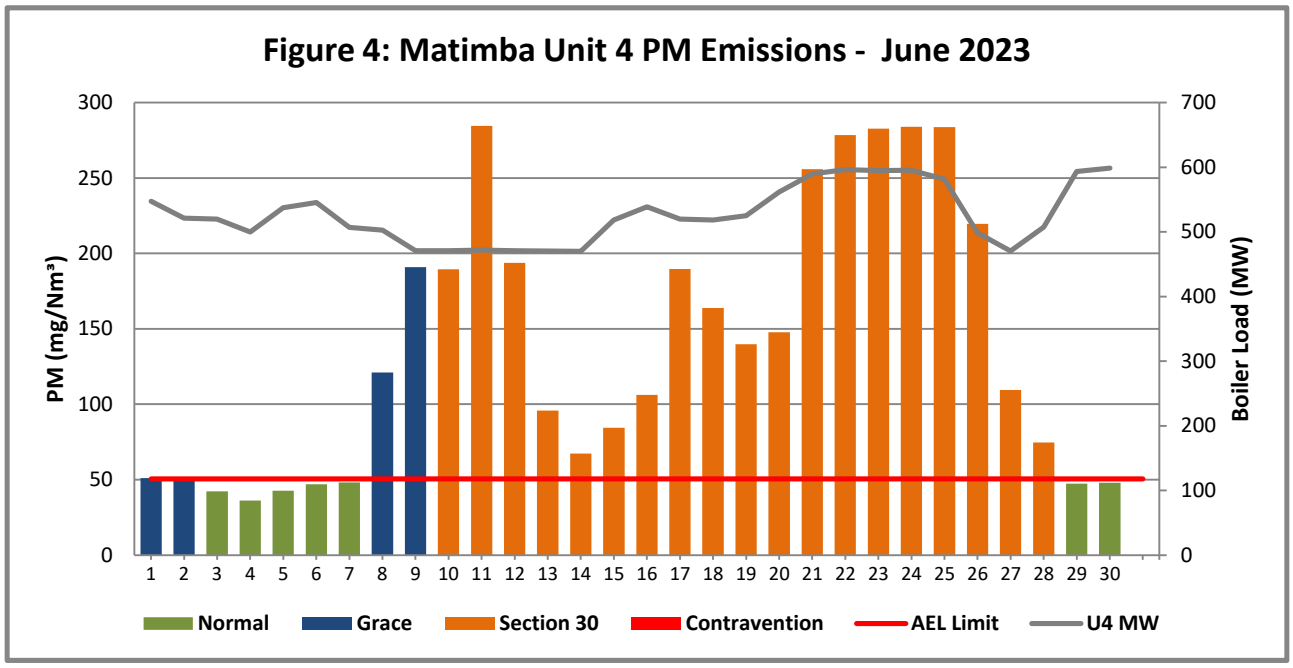

Figure 4: Particulate matter daily average emissions against emission limit for unit 4 for the month of June 2023

Interpretation:

Unit 4 Particulate matter exceeded the daily limit of 50 mg/Nm^3 on 1,2,8 to 28 June 2023. Exceedance from 10 to 28 June 2023 occurred outside of the 48-hour grace period and were recorded as Section 30 incident and 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.

Unit 5 Particulate Emissions

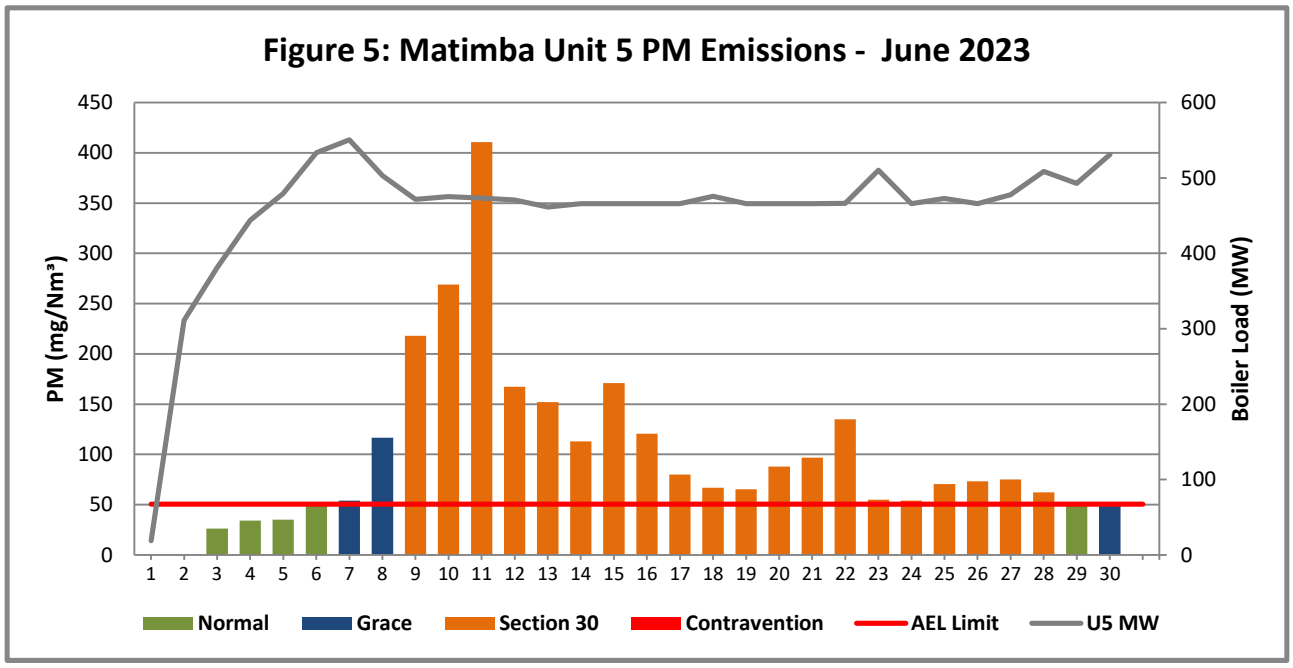

Figure 5: Particulate matter daily average emissions against emission limit for unit 5 for the month of June 2023

Interpretation:

Unit 5 Particulate matter exceeded the daily limit of 50 mg/Nm^3 on 7 to 28 and 30 June 2023. Exceedance from 9 to 28 June 2023 occurred outside of the 48-hour grace period and were recorded as Section 30 incident and 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.

Unit 6 Particulate Emissions

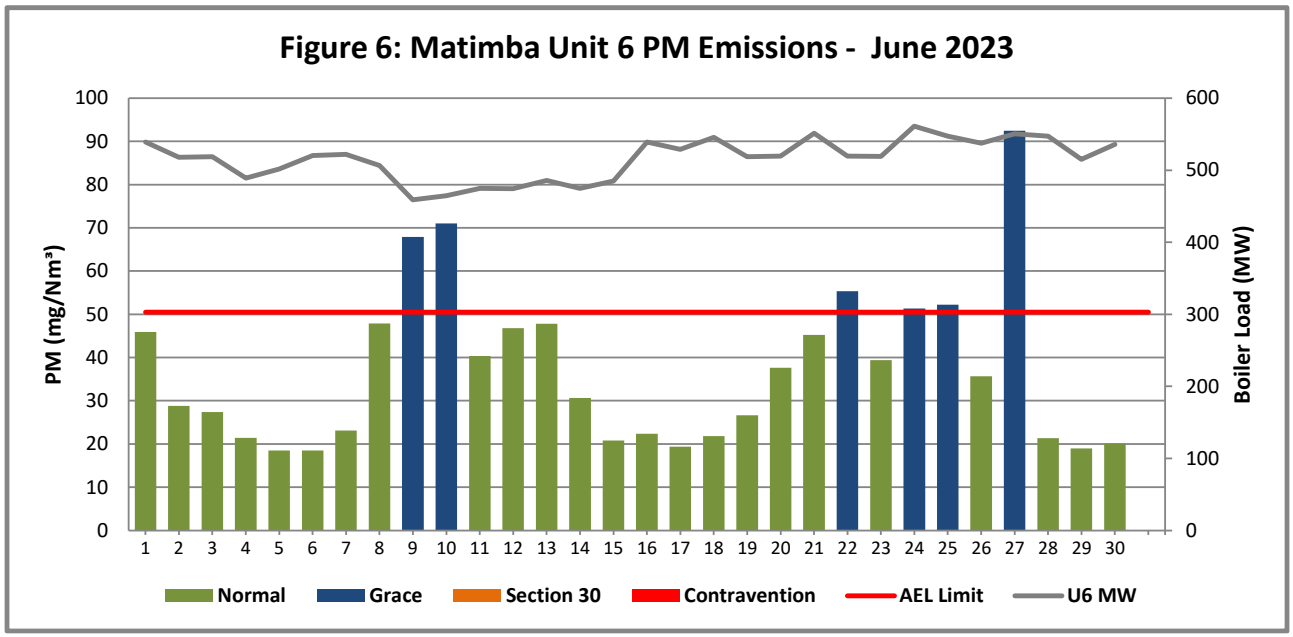

Figure 6: Particulate matter daily average emissions against emission limit for unit 6 for the month of June 2023

Interpretation:

Unit 6 Particulate matter exceeded the daily limit of 50 mg/Nm3 on 9,10,22,24,25 and 27 June 2023. The exceedances were due to unavailability of the ash conveyance system that led to accumulation of ash in 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

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 gaseous monitors were not calibrated since April 2023 due to unavailability of the calibration gas, which is ordered and expected to be delivered from India by 05 July 2023.

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

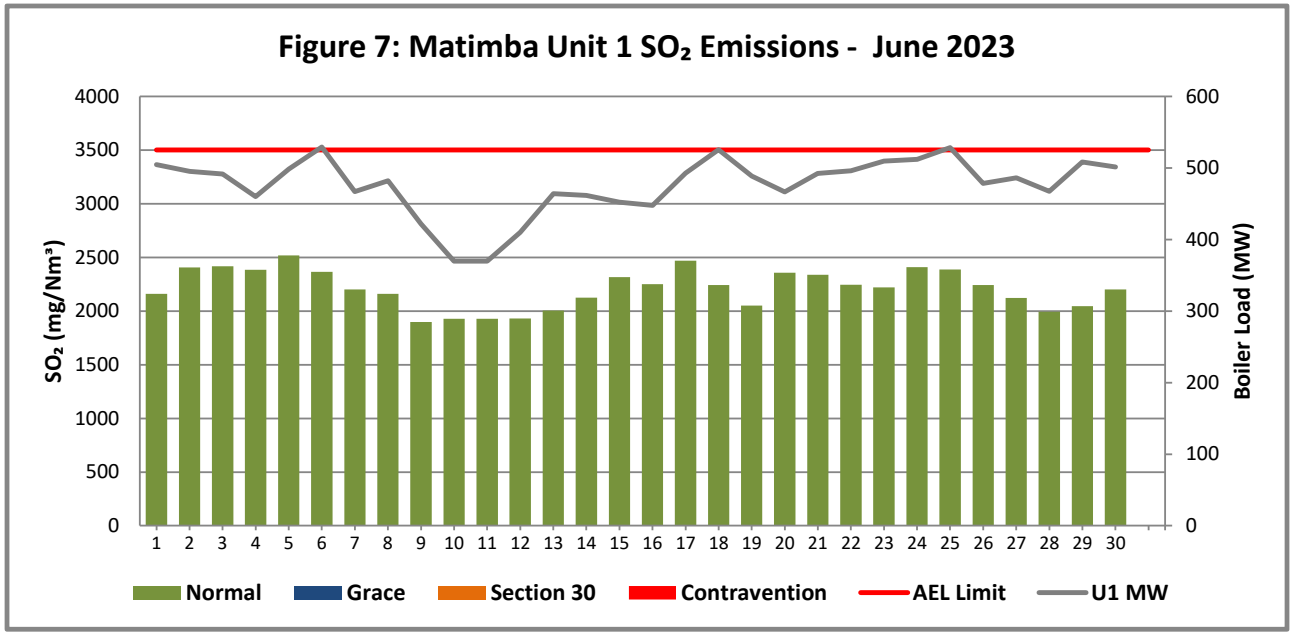

Figure 7: SO2 daily average emissions against emission limit for unit 1 for the month of June 2023

Interpretation:

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

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Unit 2 SO_2 Emissions

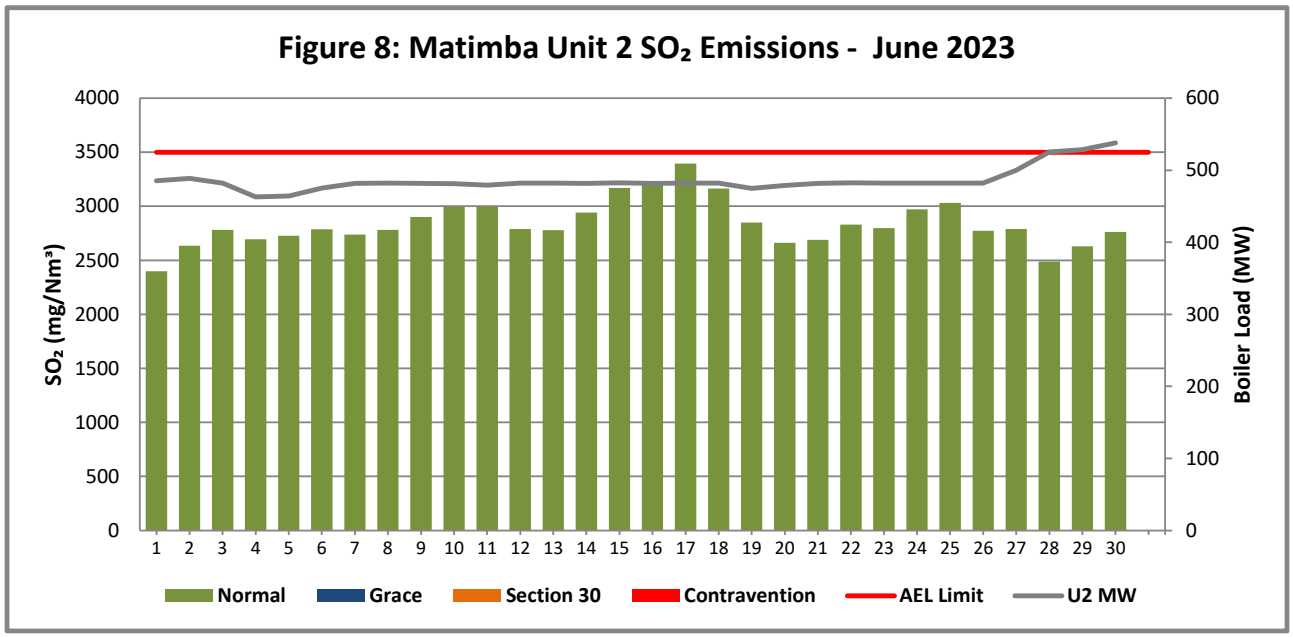

Figure 8: SO2 daily average emissions against emission limit for unit 2 for the month of June 2023

Interpretation:

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

Unit 3 SO_2 Emissions

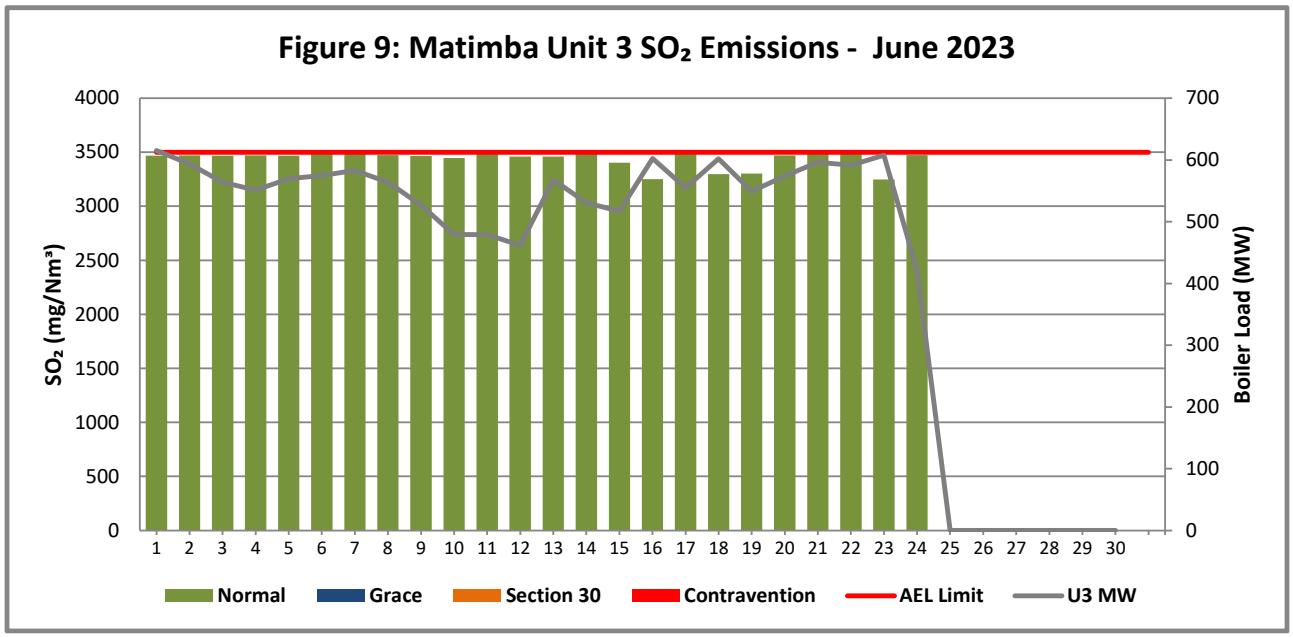

Figure 9: SO2 daily average emissions against emission limit for unit 3 for the month of June 2023

Interpretation:

Unit 3 SO_2 monthly average for May 2023 figure was used due to the monitor faulty. The gaseous monitor is being indicating the drift from calibration. The monitor has not been calibrated from April 2023 due to the unavailability of the calibration gas. The monitor calibration is planned to be performed as soon as the calibration gas are received, with the expected delivery date of 05 July 2023.

Unit 4 SO_2 Emissions

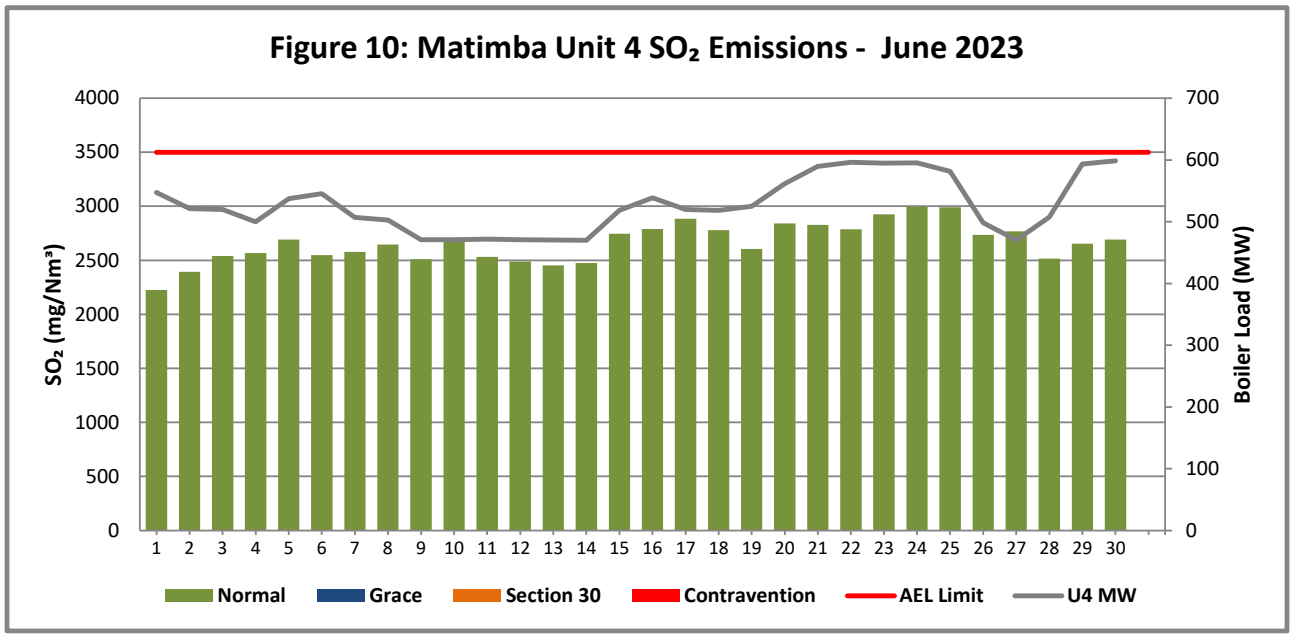

Figure 10: SO2 daily average emissions against emission limit for unit 4 for the month of June 2023

Interpretation:

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

Unit 5 SO_2 Emissions

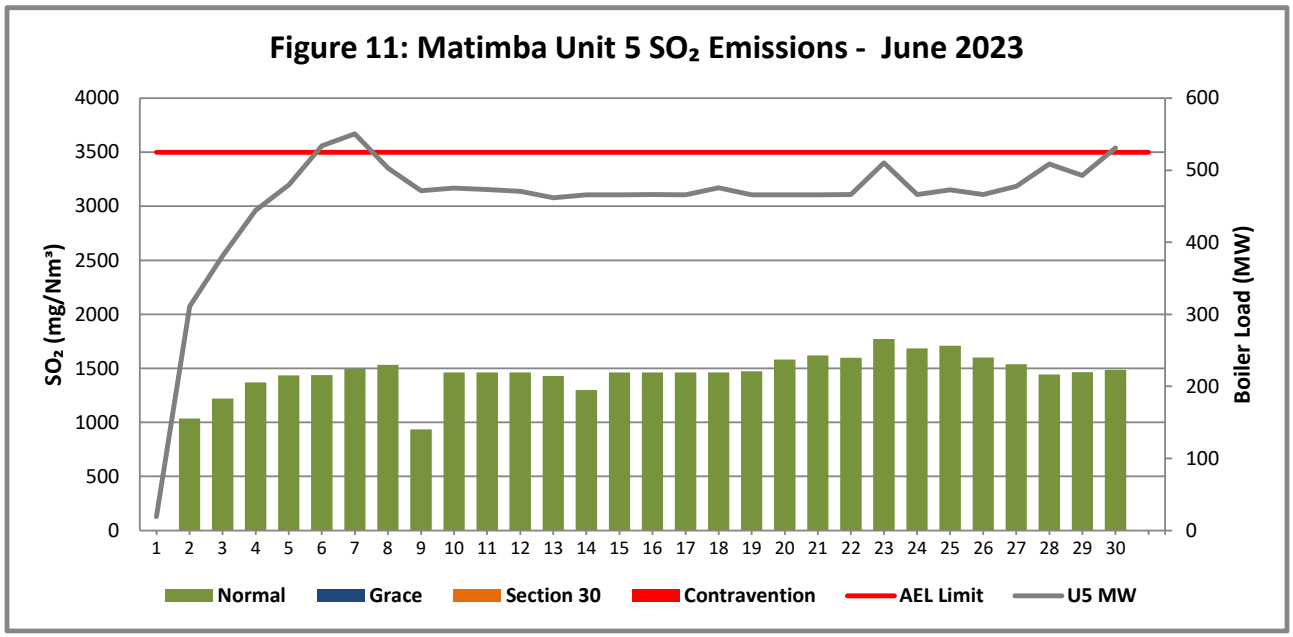

Figure 11: SO2 daily average emissions against emission limit for unit 4 for the month of June 2023

Interpretation:

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

Unit 6 SO_2 Emissions

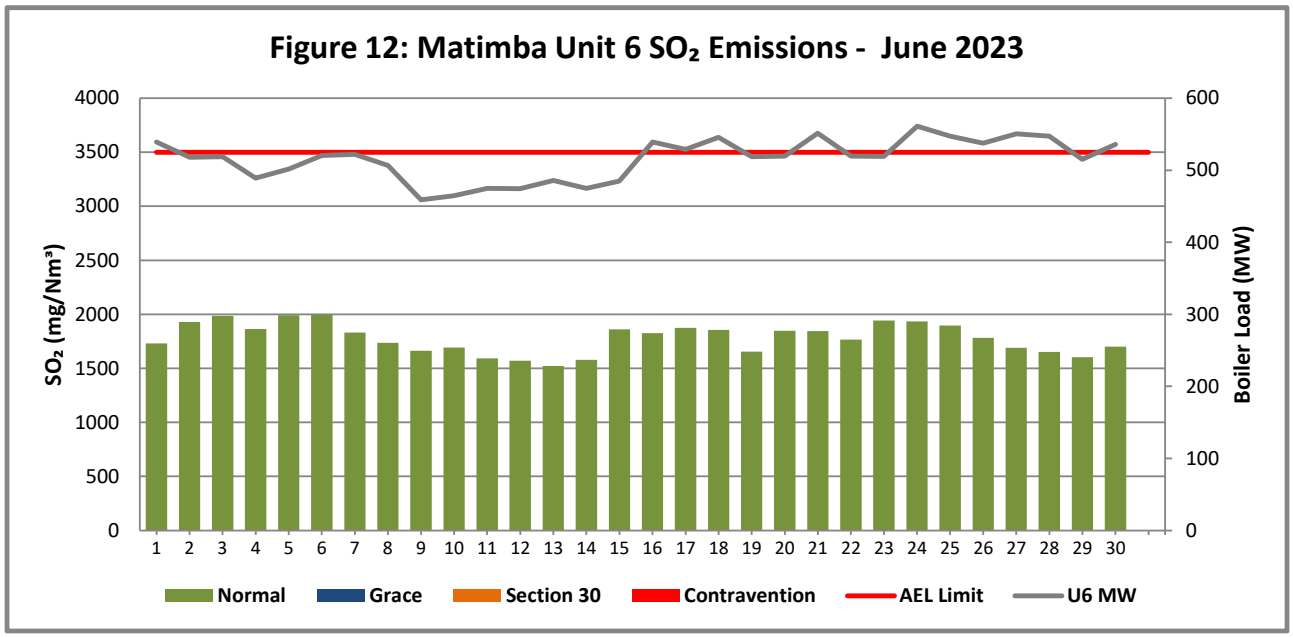

Figure 12: SO2 daily average emissions against emission limit for unit 6 for the month of June 2023

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

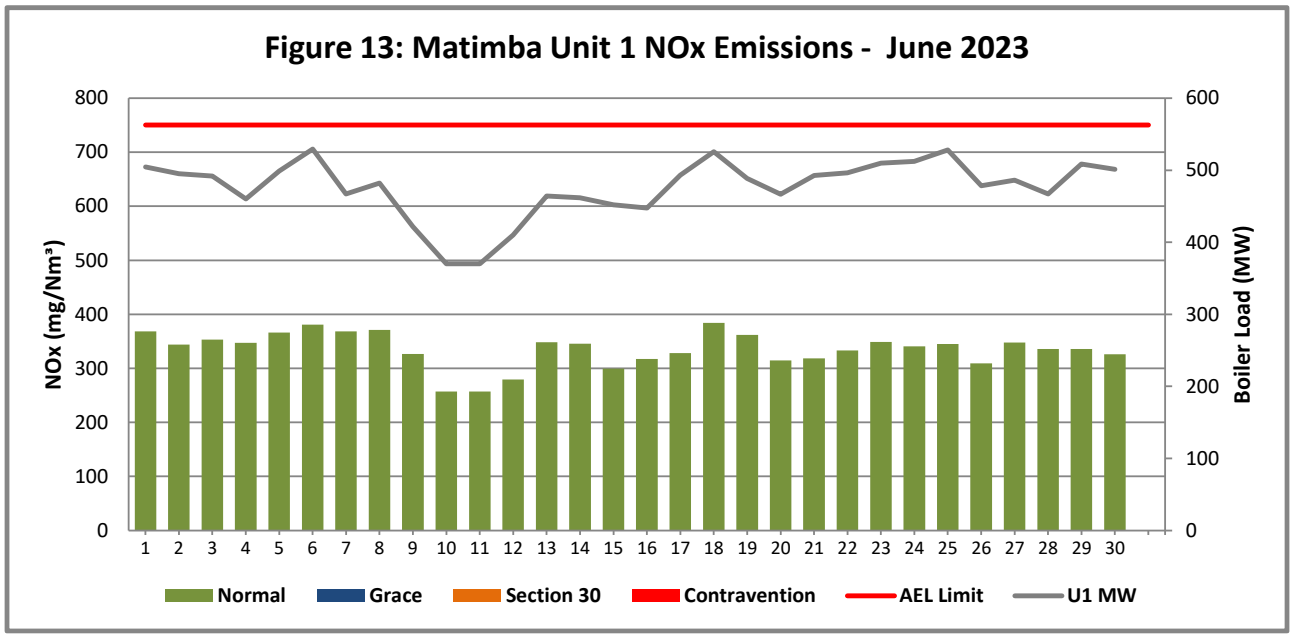

Figure 13: NOx daily average emissions against emission limit for unit 1 for the month of June 2023

Interpretation:

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

Unit 2 NO_x Emissions

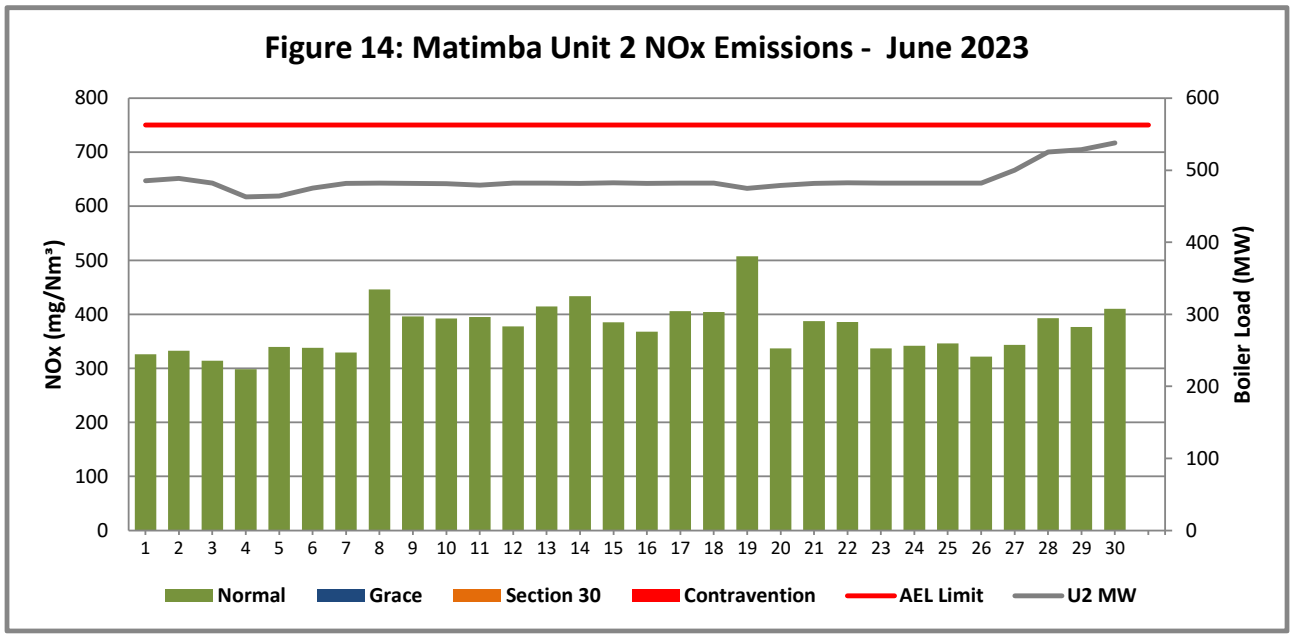

Figure 14: NOx daily average emissions against emission limit for unit 2 for the month of June 2023

Interpretation:

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

Unit 3 NO_x Emissions

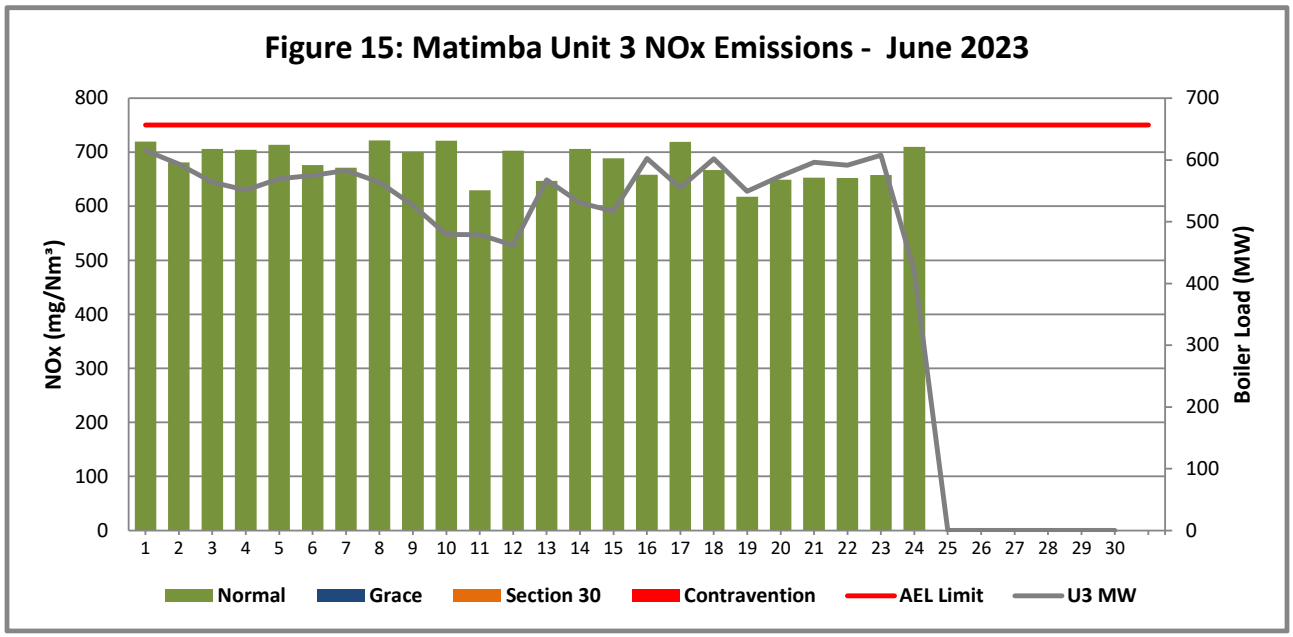

Figure 15: NOx daily average emissions against emission limit for unit 3 for the month of June 2023

Interpretation:

Unit 3 NOx monthly average for May 2023 figure was used due to the monitor faulty. The gaseous monitor is being indicating the drift from calibration. The monitor has not been calibrated from April 2023 due to the unavailability of the calibration gas. The monitor calibration is planned to be performed as soon as the calibration gas are received, with the expected delivery date of 05 July 2023.

Unit 4 NO_x Emissions

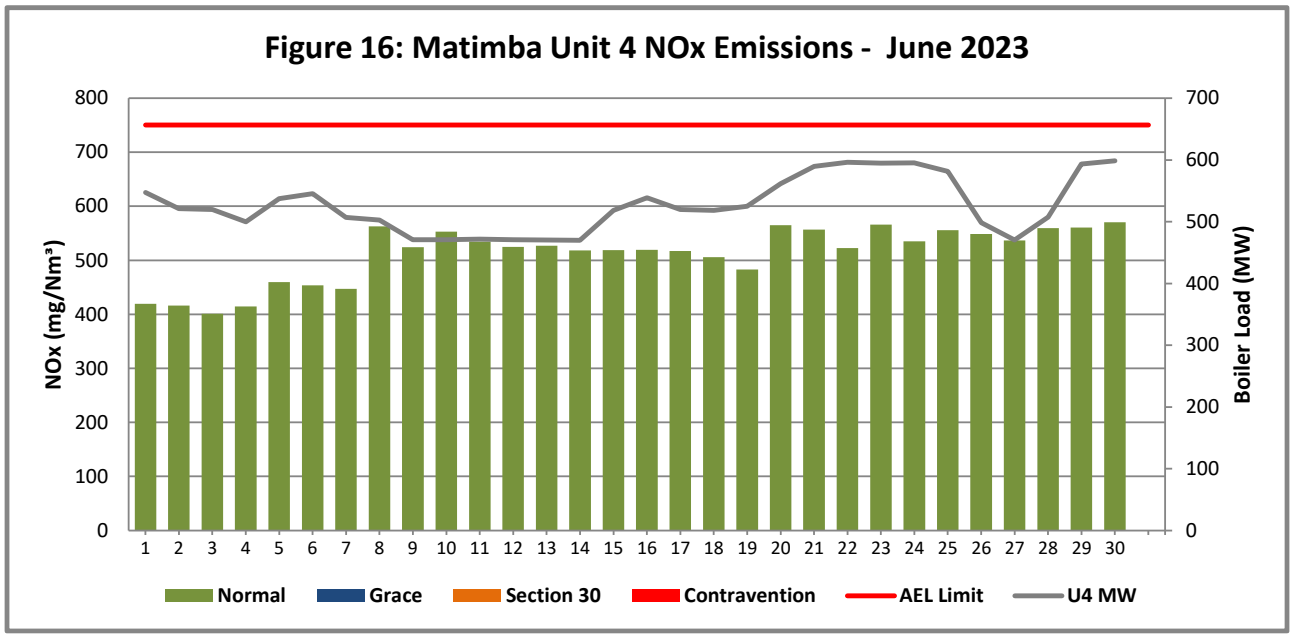

Figure 16: NOx daily average emissions against emission limit for unit 4 for the month of June 2023

Interpretation:

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

Unit 5 NO_x Emissions

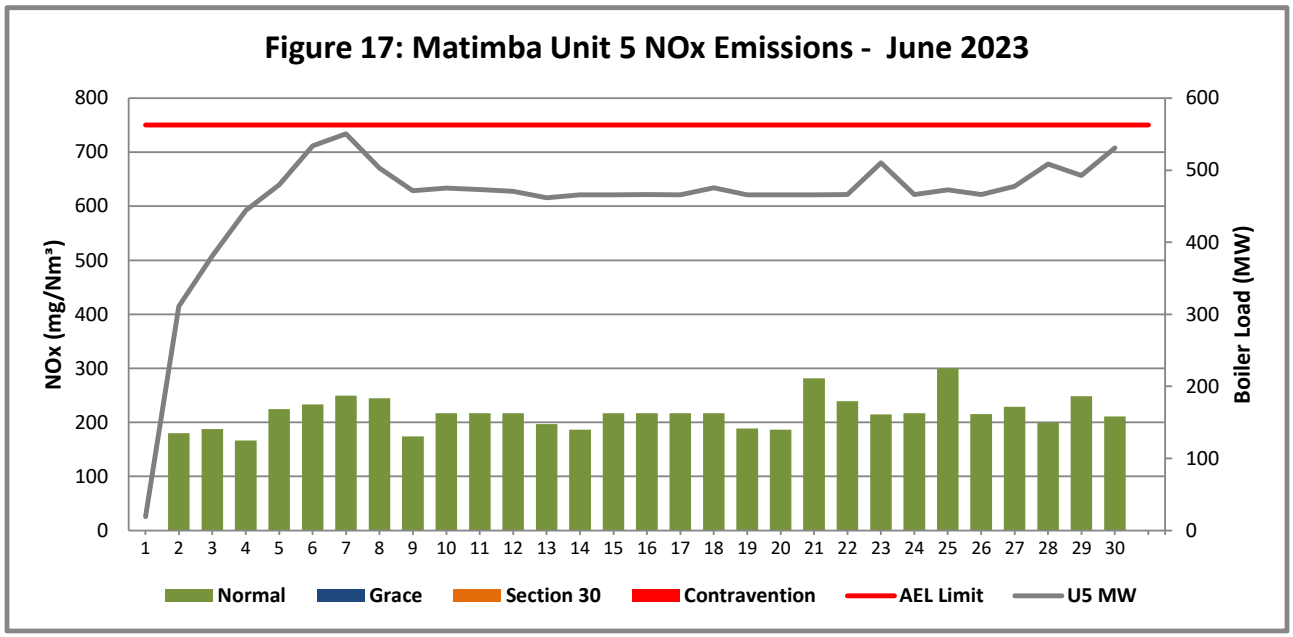

Figure 17: NOx daily average emissions against emission limit for unit 5 for the month of June 2023

Interpretation:

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

Unit 6 NO_x Emissions

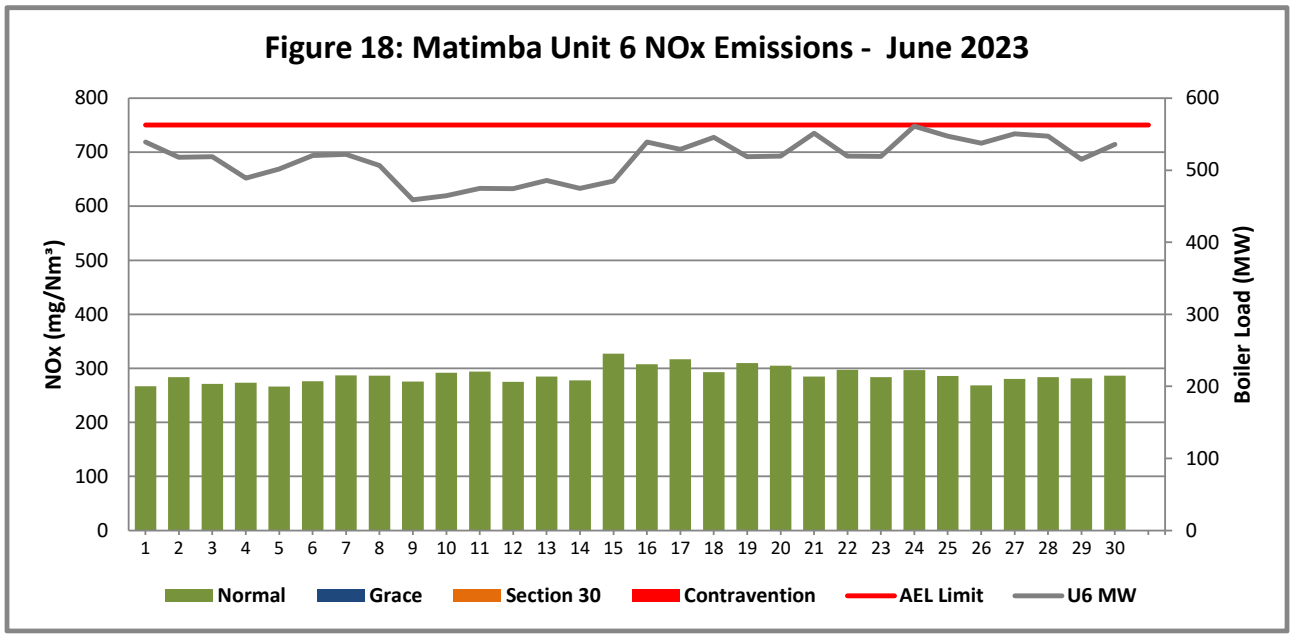

Figure 18 NOx daily average emissions against emission limit for unit 6 for the month of June 2023

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:	Monday, 17 July 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:	**June**	
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:	***696,724***	
Molecular weight of the fuel oil:	166,00	Lb/lb-mole
METEROLOGICAL DATA FOR THE MONTH	**Data**	**Unit**
Daily average ambient temperature	16,61	°C
Daily maximum ambient temperature	25,19	°C
Daily minimum ambient temperature	9,38	°C
Daily ambient temperature range	15,81	°C
Daily total insolation factor	3,45	kWh/m²/day
Tank paint colour	***Grey/medium***	NA
Tank paint solar absorbtance	0,68	NA
FINAL OUTPUT:	**Result**	**Unit**
Breathing losses:	0,54	kg/month
Working losses:	0,02	kg/month
TOTAL LOSSES (Total TVOC Emissions for the month):	**0,56**	**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 June 2023

Date	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
2023/06/01	11060,8	10172,3	13482,9	11925,3	0	11669,8
2023/06/02	10861,3	10246,3	13018,4	11311,7	6776,5	11213,8
2023/06/03	10751,1	10099,8	12315,1	11258,5	7493,8	11205,5
2023/06/04	10098,7	9715,31	12040,5	10857,9	10558,9	10553,9
2023/06/05	10895,3	9736,61	12449,6	11634,8	11393,6	10834,5
2023/06/06	11616,8	9968,28	12540,5	11827,2	12692,1	11285,3
2023/06/07	10214,5	10104	12760,1	10965,5	13086,2	11309
2023/06/08	10569	10096,9	12341	10868,1	11365,9	10968,2
2023/06/09	9704,67	10081,1	12094,4	10195	10212,3	10168,8
2023/06/10	10096,9	10153,9	10441	10171	10305	10004,3
2023/06/11	10212,5	10135,9	10474,2	10230,1	10266	10265,3
2023/06/12	10176	10192,3	10062,9	10191,1	10236,7	10239,9
2023/06/13	10152,7	10196,4	12441,3	10196,3	9980,69	10482,5
2023/06/14	10102,7	10185,5	11614,3	10195	10119,1	10244,2
2023/06/15	9900,2	10196,5	11295	11233,3	10114,4	10449,6
2023/06/16	9811,63	10169,5	13176,5	11730	10124,2	11645,7
2023/06/17	10829,7	10199,1	12183,5	11308,7	10121,8	11442,8
2023/06/18	11563,7	10183,7	13219,3	11301,2	10339,4	11837
2023/06/19	10697,8	10027,2	12026,8	11403,5	10106,2	11210,8
2023/06/20	10215,9	10084,6	12528,5	12135,6	10106,3	11218,5
2023/06/21	10781,5	10174,8	13066,1	12783,1	10140	11967,9
2023/06/22	10925,1	10181,1	12988,2	12927,4	10144,6	11289
2023/06/23	11206,9	10189,2	13314	12913,9	11124,2	11263,2
2023/06/24	11250,1	10175,7	1177,55	12931,9	10123,8	12183,5
2023/06/25	11609,2	10172,7	0	12670,4	10273,2	11900,8
2023/06/26	10511,3	10177,5	0	10805	10117,9	11639,4
2023/06/27	10663,2	10557,6	0	10204,1	10389,2	11928,2
2023/06/28	10248,4	11114	0	11021,5	11065	11862,7
2023/06/29	11149,6	11188,3	0	12859,6	10690,7	11146,5
2023/06/30	11008,3	11358,2	0	12951,7	11541,7	11565,5

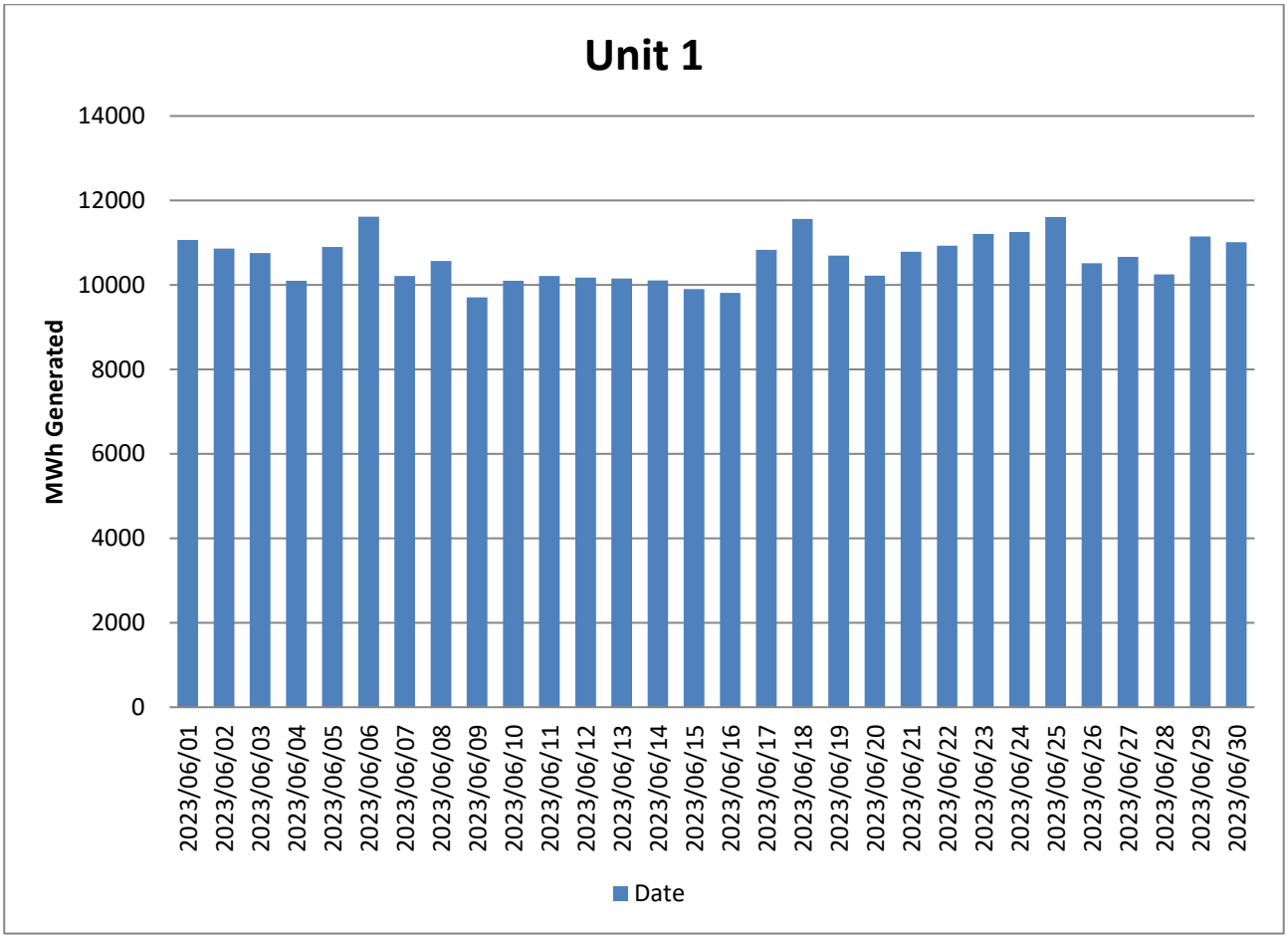

Figure 19: Unit 1 daily generated power in MWh for the month of June 2023

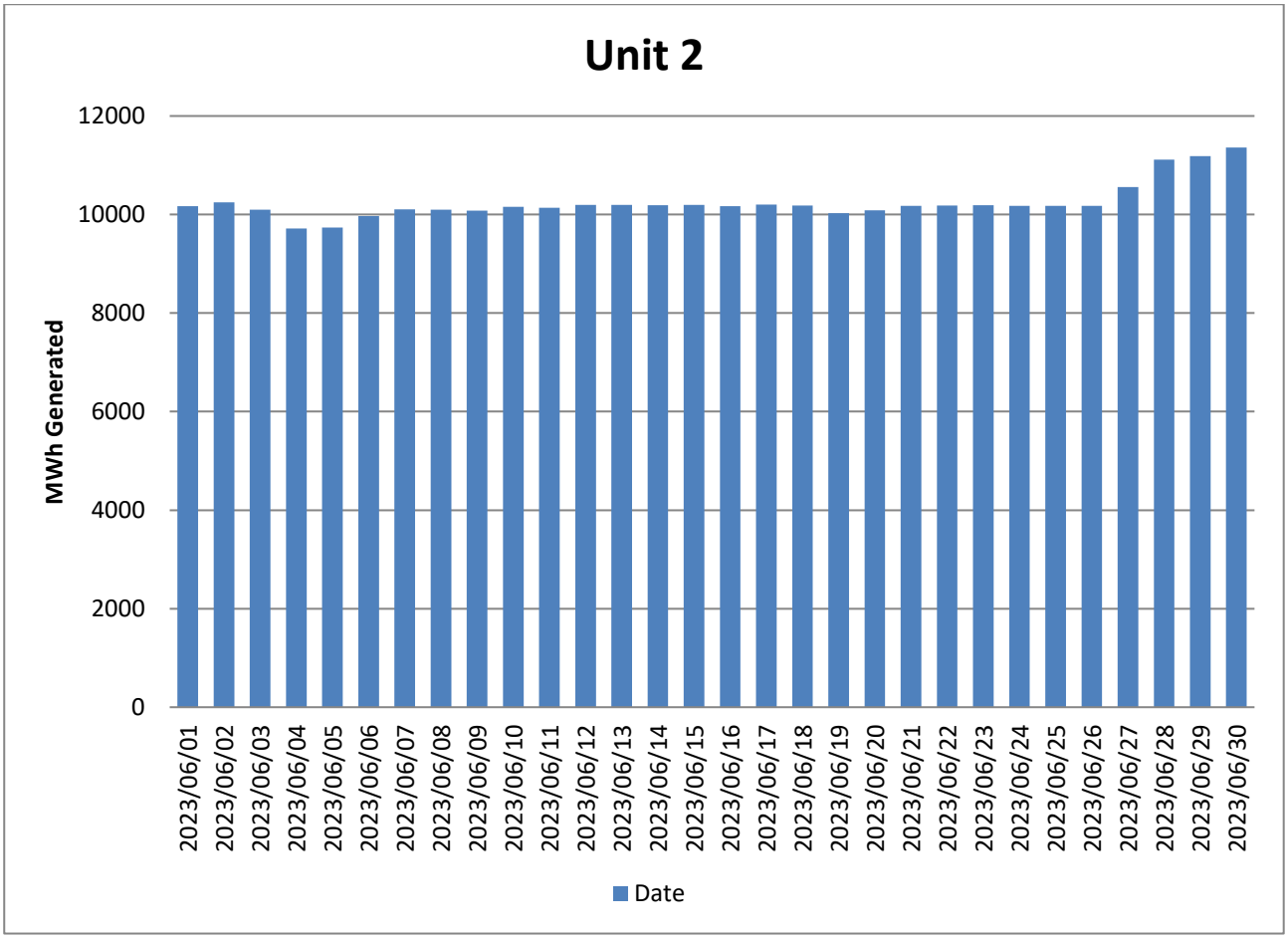

Figure 20: Unit 2 daily generated power in MWh for the month of June 2023

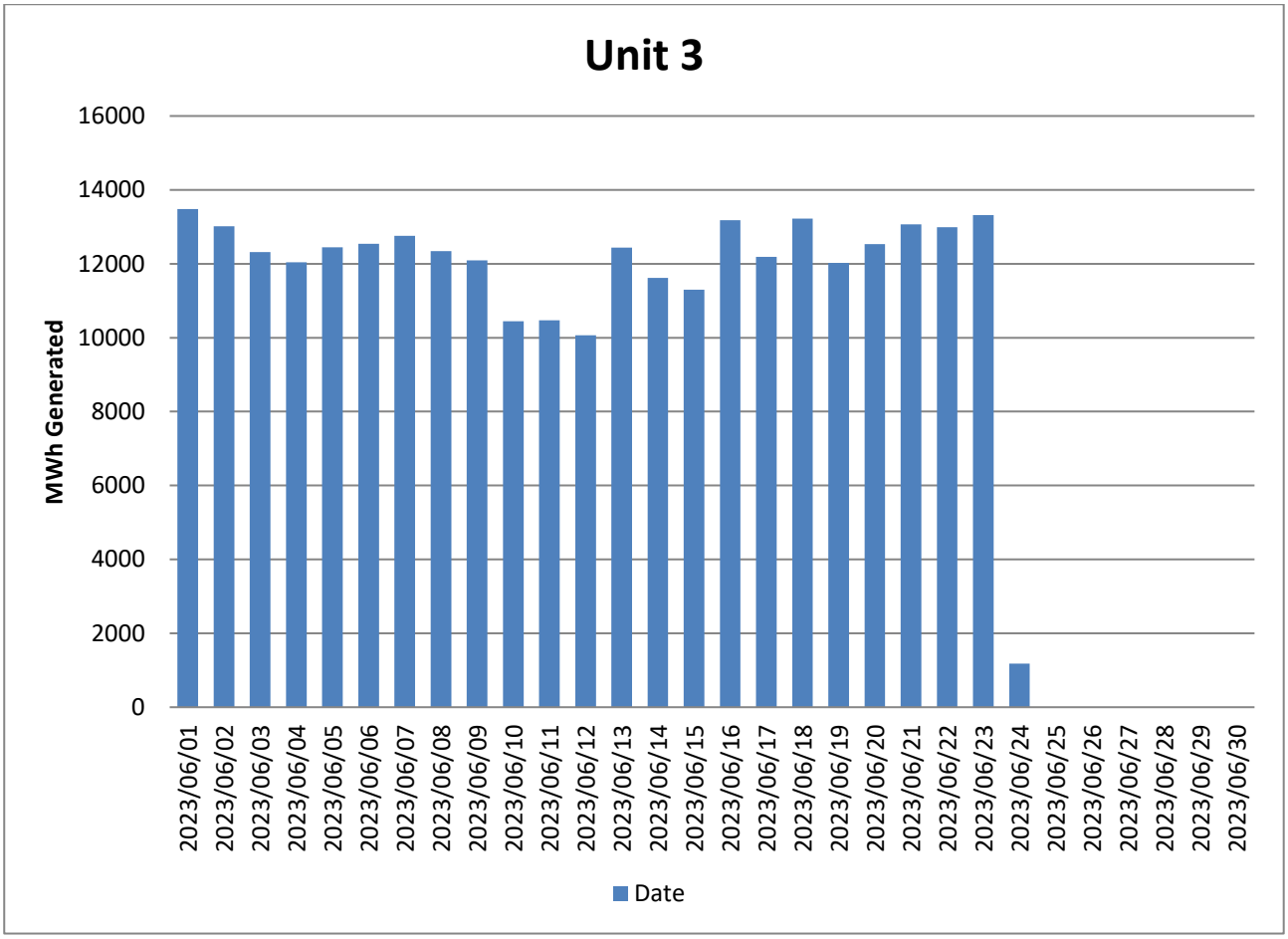

Figure 21: Unit 3 daily generated power in MWh for the month of June 2023

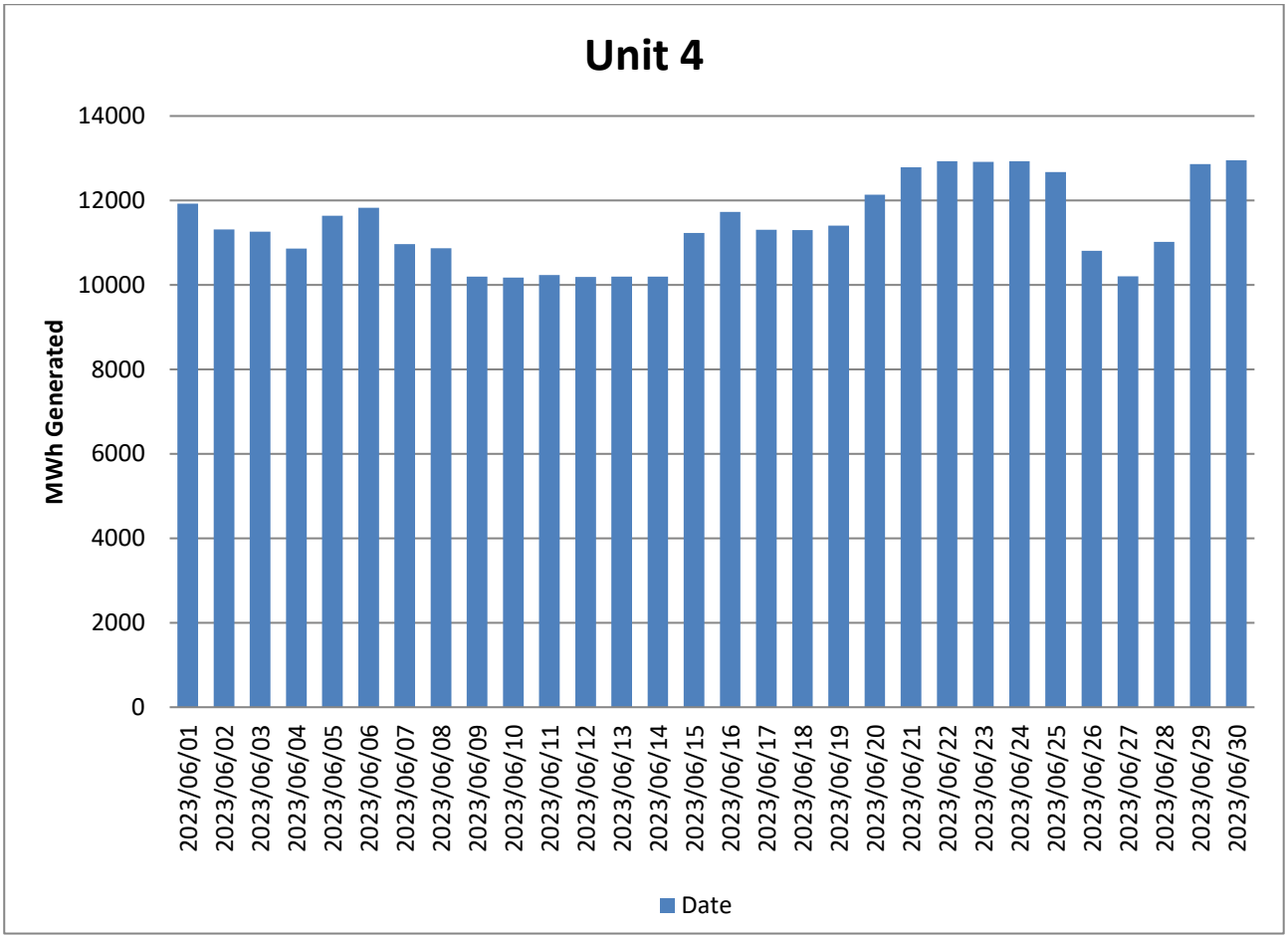

Figure 22: Unit 4 daily generated power in MWh for the month of June 2023

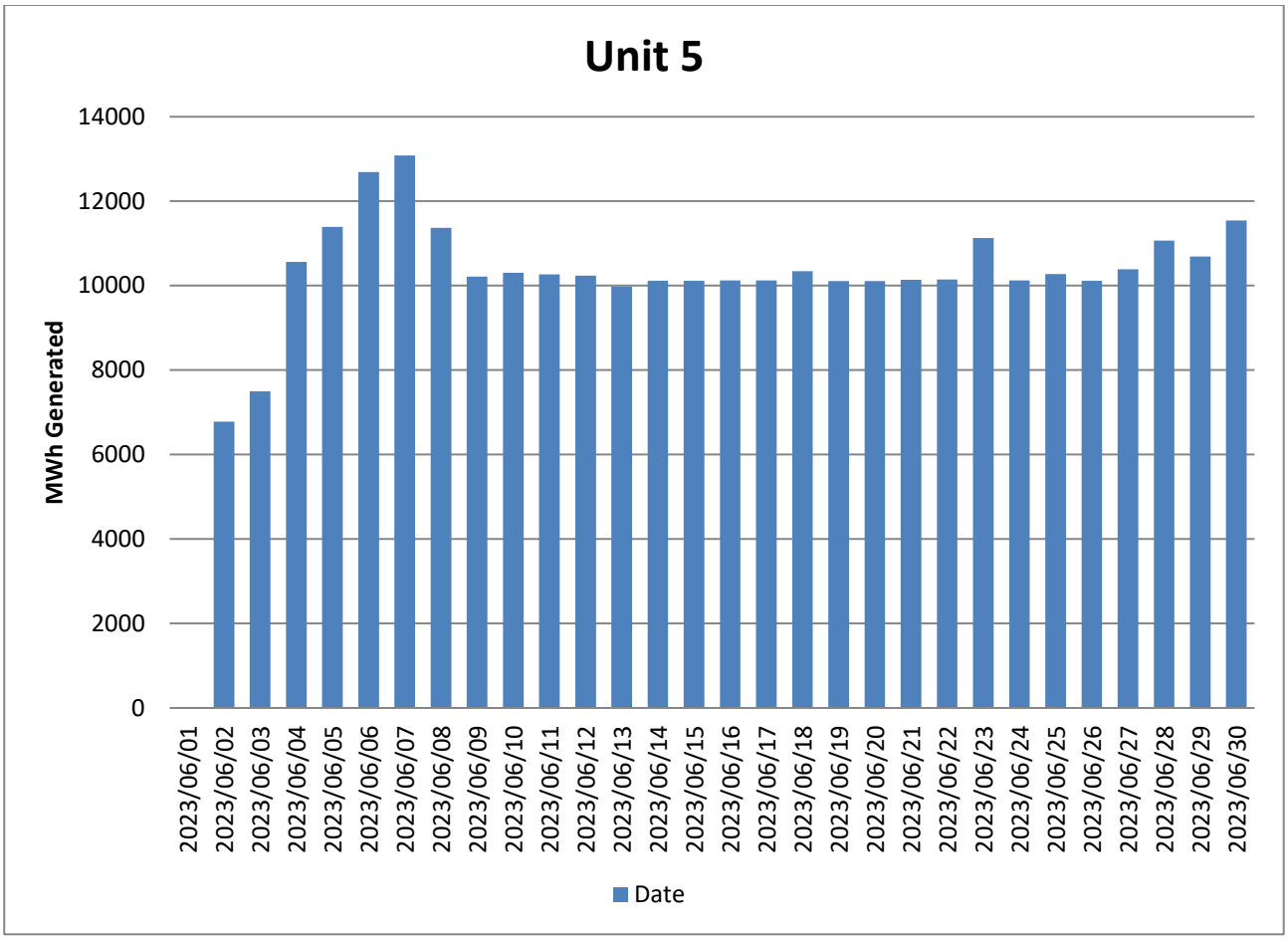

Figure 23: Unit 5 daily generated power in MWh for the month of June 2023

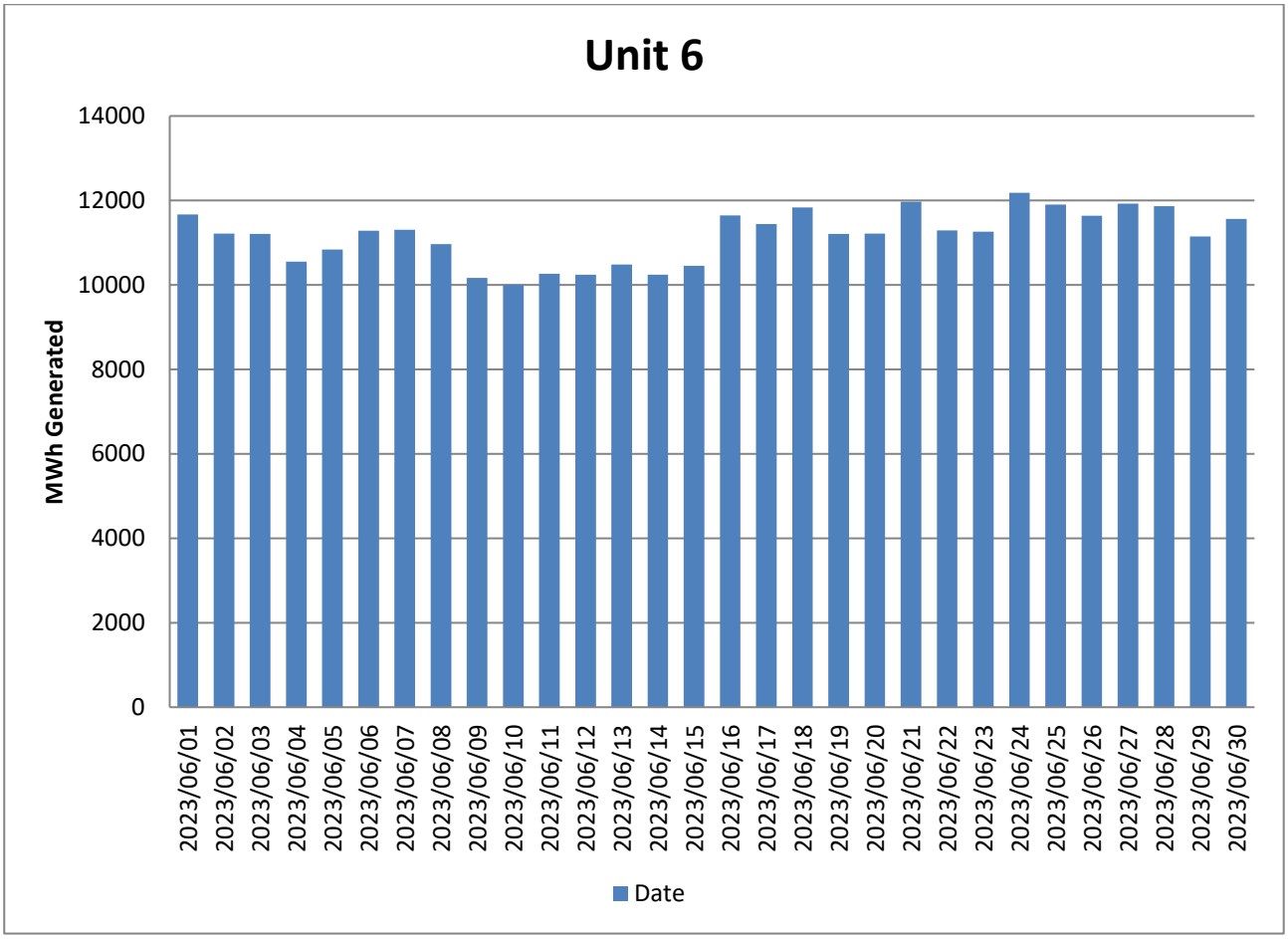

Figure 24: Unit 6 daily generated power in MWh for the month of June 2023

2.6 Pollutant Tonnages

The emitted pollutant tonnages for June 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 June 2023

Associated Unit/Stack	PM (tons)	SO_2 (tons)	NO_x (tons)
Unit 1	106.2	4 402.3	668.1
Unit 2	958.0	7 427.9	975.2
Unit 3	61.6	3 532.5	698.7
Unit 4	209.1	5 446.5	1 042.4
Unit 5	156.5	2 544.0	377.7
Unit 6	61.9	4 109.6	662.0
SUM	1 553.2	27 462.8	4 424.1

2.7 Operating days in compliance to PM AEL Limit

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm^3)
Unit 1	16	9	5	0	14	61.5
Unit 2	3	1	26	0	27	545.2
Unit 3	21	3	0	0	3	38.2
Unit 4	7	4	19	0	23	139.2
Unit 5	5	3	20	0	23	118.1
Unit 6	24	6	0	0	6	37.2
SUM	**76**	**26**	**70**	**0**	**96**	

2.8 Operating days in compliance to SOx AEL Limit

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO_2 (mg/Nm³)
Unit 1	30	0	0	0	0	2 210.9
Unit 2	30	0	0	0	0	2 839.2
Unit 3	24	0	0	0	0	3 442.6
Unit 4	30	0	0	0	0	2 662.7
Unit 5	29	0	0	0	0	1 461.9
Unit 6	30	0	0	0	0	1 780.5
SUM	**173**	**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 June 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
Unit 1	30	0	0	0	0	335.3
Unit 2	30	0	0	0	0	372.7
Unit 3	24	0	0	0	0	682.3
Unit 4	30	0	0	0	0	512.6
Unit 5	29	0	0	0	0	217.0
Unit 6	30	0	0	0	0	287.3
SUM	**173**	**0**	**0**	**0**	**0**	

2.10 Reference values

Table 10: Reference values for data provided, June 2023

Compound / Parameter	Units of Measure	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Oxygen	%	6.05	8.28	12.36	7.21	6.73	6.01
Moisture	%	4.12	3.41	5.36	2.84	4.09	1.91
Velocity	m/s	22.4	33.2	26.3	24.7	20.5	27.7
Temperature	°C	139.0	124.4	130.0	132.7	123.5	164.0
Pressure	mBar	930.3	936.0	917.6	927.7	948.0	916.0

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 June 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 June 2023.

Associated Unit/Stack	PM	SO_2	NO
Unit 1	*99,7*	*99,9*	*99,9*
Unit 2	*79,7*	*99,9*	*98,6*
Unit 3	*100,0*	*99,5*	*99,5*
Unit 4	*77,6*	*99,7*	*99,6*
Unit 5	*82,6*	*63,4*	*58,1*
Unit 6	*99,4*	*100,0*	*100,0*

2.11.2 Changes, downtime, and repairs

Unit 1

- No adjustments done on the CEMs. Calibration of gaseous analysers is not done from April 2023 due to unavailability of the calibration gas.
- No downtime or repairs done on the particulate monitors

Unit 2

- No adjustments done on the CEMs. Calibration of gaseous analysers is not done from April 2023 due to unavailability of the calibration gas.
- No downtime or repairs done on the particulate monitors

Unit 3

- No adjustments done on the CEMs. Calibration of gaseous analysers is not done from April 2023 due to unavailability of the calibration gas.
- No downtime or repairs done on the particulate monitors

Unit 4

- No adjustments done on the CEMs. Calibration of gaseous analysers is not done from April 2023 due to unavailability of the calibration gas.
- No downtime or repairs done on the particulate monitors

Unit 5

- No adjustments done on the CEMs.
- Calibration of gaseous analysers is not done from April 2023 due to unavailability of the calibration gas.

  No downtime or repairs done on the particulate monitors

Unit 6

- No adjustments done on the CEMs. Calibration of gaseous analysers is not done from April 2023 due to unavailability of the calibration gas.
- 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

Note: The CEMS verification tests for PM, SO_2 and NOx were performed in October 2022 and failed. The tests are planned to be repeated on 18 July 2023.

2.12 Units Start-up information

Table 13: Start-up information

Unit	5	
Fires in	2023/06/01	21h40
Synchronization with Grid	2023/06/02	02h00
Emissions below limit	2023/06/02	09h01
Fires in, to synchronization	4,20	HOURS
Synchronization to < Emission limit	7,1	HOURS

Unit	5	
Fires in	2023/06/03	07h33
Synchronization with Grid	2023/06/03	11h44
Emissions below limit	2023/06/02	09h01
Fires in, to synchronization	4,11	HOURS
Synchronization to < Emission limit	0	HOURS

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	720	720
Emergency Hours declared including hours after stand down						
Days over the Limit during Emergency Generation	17	27	3	23	23	6

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

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

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

Unit 2

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

Unit 3

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

Unit 4

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

Unit 5

- 7 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.

Unit 6

- 7 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.

2.18 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