Eskom	Technical and Generic Report	Matimba Power Station

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

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Date: 2023-10-02	Date: 04/10/2023	Date: 2023-10-04

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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 August 2023.

During the period under review, Matimba experienced 49 exceedances of the daily particulate matter emission limit (50mg/Nm^3) ,26 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. 23 of these exceedances occurred within the 48-hour grace period.

No exceedances of the monthly SOx limit (3500mg/Nm3) or the daily NOx emission limit (750mg/Nm3) occurred.

The flue gas conditioning plant (SO3 Plant) for all the units 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.

For the month of August 2023 Matimba Power Station used a total of 1649,556 tons of fuel oil, exceeding the monthly limit of 1200 tons. The increased usage was due to multiple light-ups of units after outages.

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	968 519
	Fuel Oil	Tons/month	1 200	1649,556
Production Rates	**Product/ By-Product Name**	**Unit**	**Maximum Production Capacity Permitted (Quantity)**	**Production Rate**
	Energy	MW	4000	2418,19086

The fuel oil consumption for the month of August 2023 exceeded the maximum permitted limits of 1200 Tons due to the multiple unit light ups that happed for unit 2,3,4 and 5.

2.2 Abatement technology

Table 2: Abatement Equipment Control Technology Utilised

Associated Unit	Technology Type	Minimum utilisation (%)	Efficiency (%)
Unit 1	Electrostatic Precipitator	100%	99,82%
Unit 2	Electrostatic Precipitator	100%	99,83%
Unit 3	Electrostatic Precipitator	100%	99,92%
Unit 4	Electrostatic Precipitator	100%	99,86%
Unit 5	Electrostatic Precipitator	100%	99,83%
Unit 6	Electrostatic Precipitator	100%	99,83%
Associated Unit	**Technology Type**	**Minimum utilisation (%)**	**Actual Utilisation (%)**
Unit 1	SO_3 Plant	100%	94,76%
Unit 2	SO_3 Plant	100%	90,29%
Unit 3	SO_3 Plant	100%	92,57%
Unit 4	SO_3 Plant	100%	94,88%
Unit 5	SO_3 Plant	100%	94,21%
Unit 6	SO_3 Plant	100%	94,62%

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. Energy source characteristics

Table 3: Energy Source Material Characteristics.

	Characteristic	Stipulated Range (Unit)	Monthly Average Content
Coal burned	**Sulphur Content**	1.6%	1,27%
	Ash Content	40%	35,40%

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

2.3 Emissions reporting

2.3.1 Particulate Matter Emissions

Unit 1 Particulate Emissions

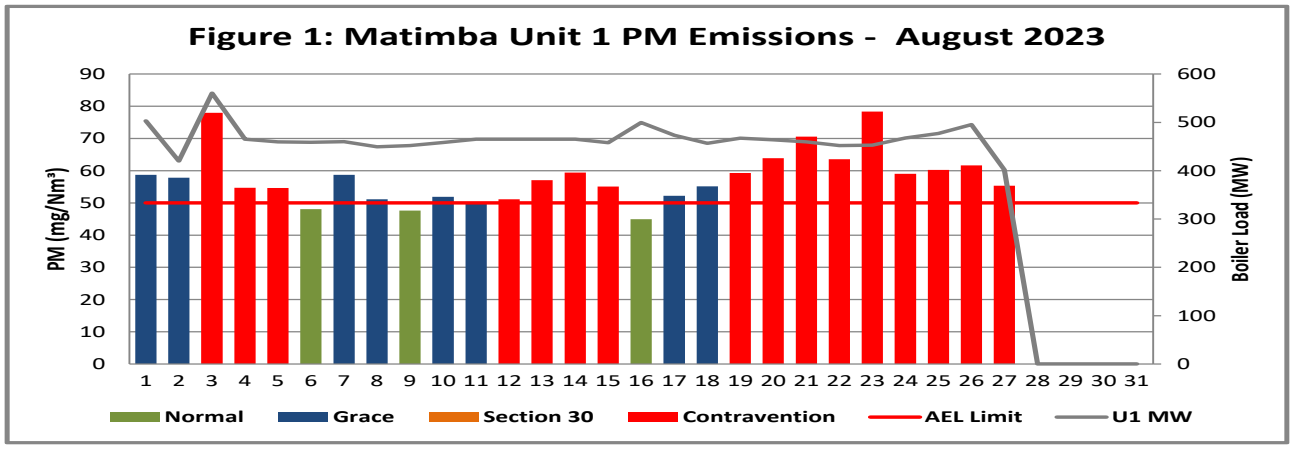

Figure 1: Particulate matter daily average emissions against emission limit for unit 1 for the month of August 2023

Interpretation:

Unit 1 exceeded the daily particulate emission limit of 50mg/Nm3 on 1-5,7-8, 10-15, and 17 -27 August 2023. The exceedances of the 3 to 5,12 to 15 and 19 to 27 August 2023 occurred outside of the 48-hour grace period and were recorded on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. The exceedances were due 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

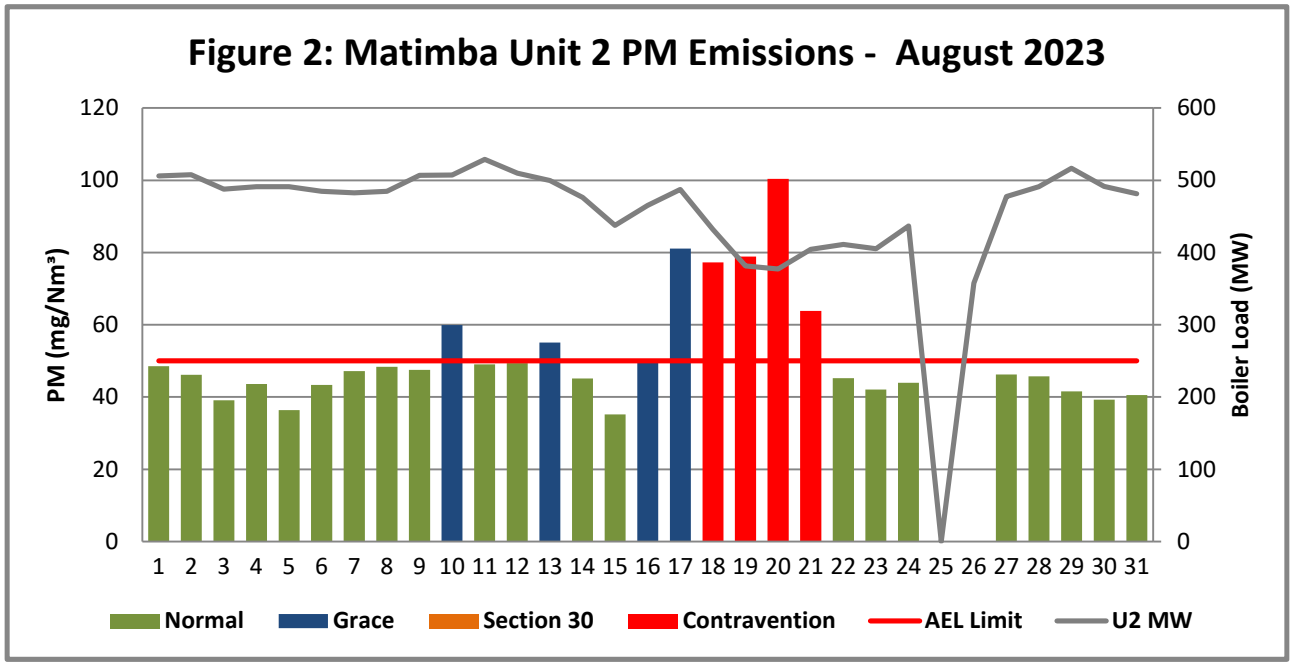

Figure 2: Particulate matter daily average emissions against emission limit for unit 2 for the month of August 2023

Interpretation:

Unit 2 exceeded the daily particulate emission limit of 50mg/Nm3 on 10,13 and 15 to 21 August 2023. The exceedances from the 15 to 21 August 2023 occurred outside of the 48-hour grace period and were recorded on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. The exceedances were due 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

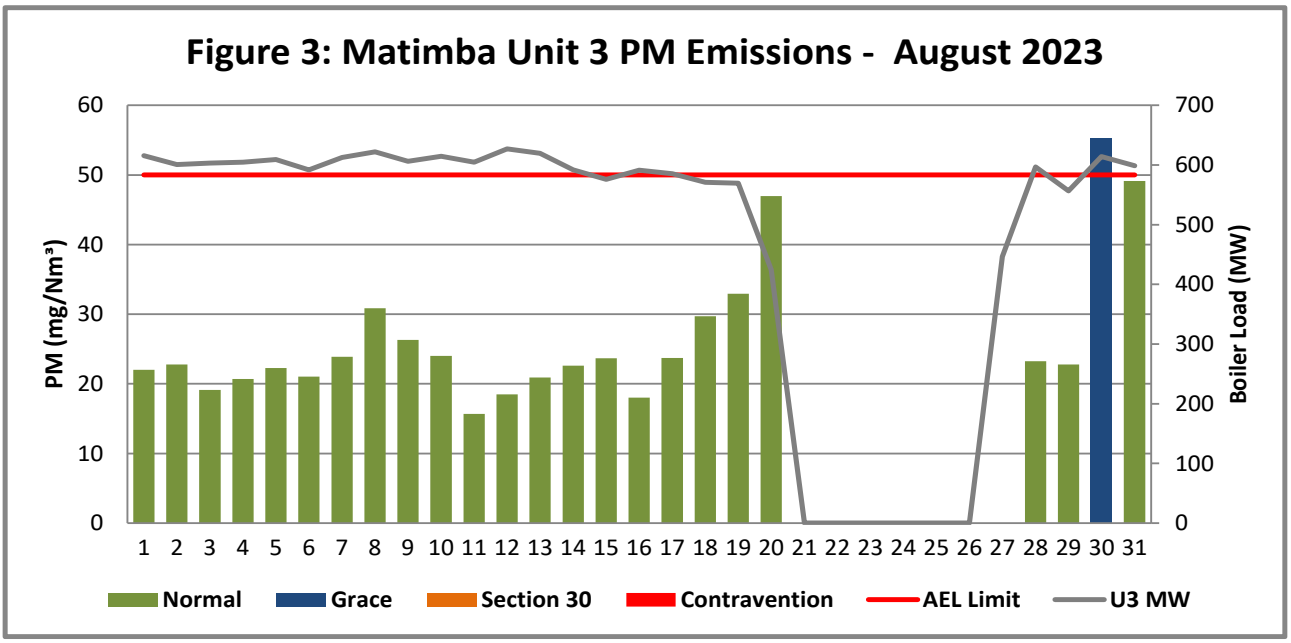

Figure 3: Particulate matter daily average emissions against emission limit for unit 3 for the month of August 2023

Interpretation:

Unit 3 Particulate matter exceeded the daily limit of 50 mg/Nm3 on 30 August 2023. The exceedance was 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

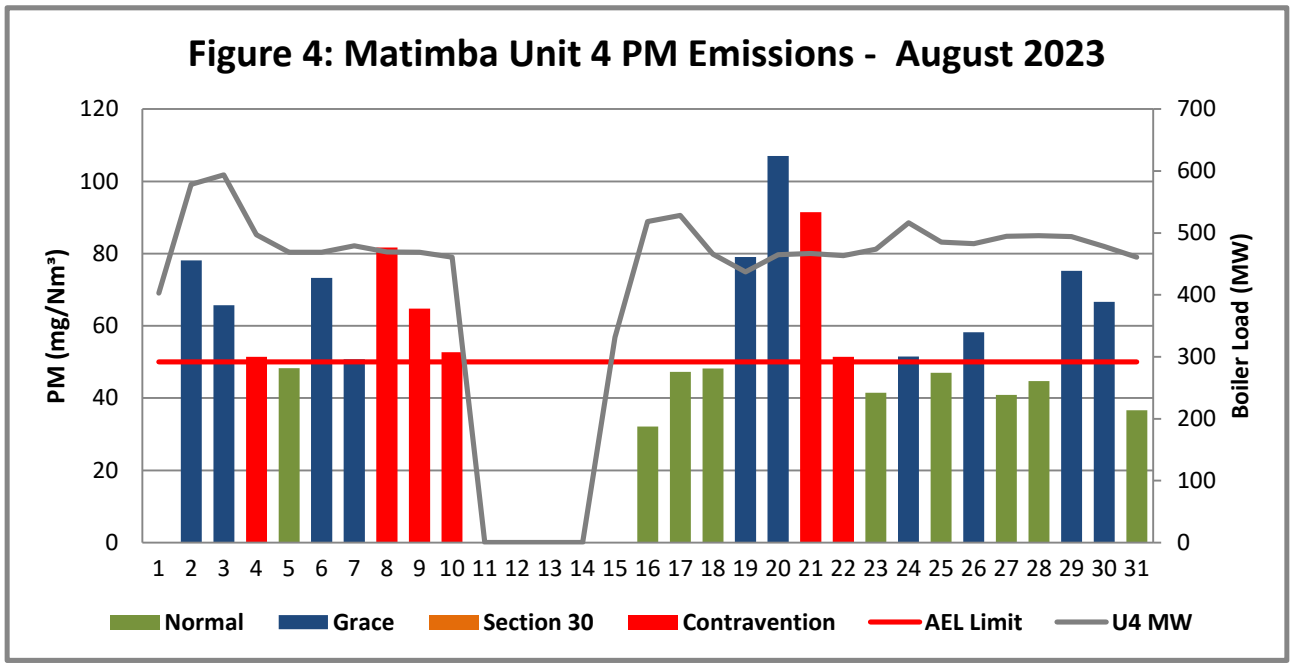

Figure 4: Particulate matter daily average emissions against emission limit for unit 4 for the month of August 2023

Interpretation:

Unit 4 Particulate matter exceeded the daily limit of 50 mg/Nm^3 on 2-4 ,6- 10,19 – 22,24,26,29 and 30 August 2023. Exceedances of 4,8 to 10,21 and 22 August 2023 occurred outside of the 48-hour grace period and were recorded on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. The exceedances were due to defects on the dust handling plants leading to high hopper levels within the flue gas cleaning system and reducing the efficiency of the abatement technology (electrostatic precipitator fields). The investigation into the causes of the exceedances were done and corrective measure put in place to correct the root causes.

Unit 5 Particulate Emissions

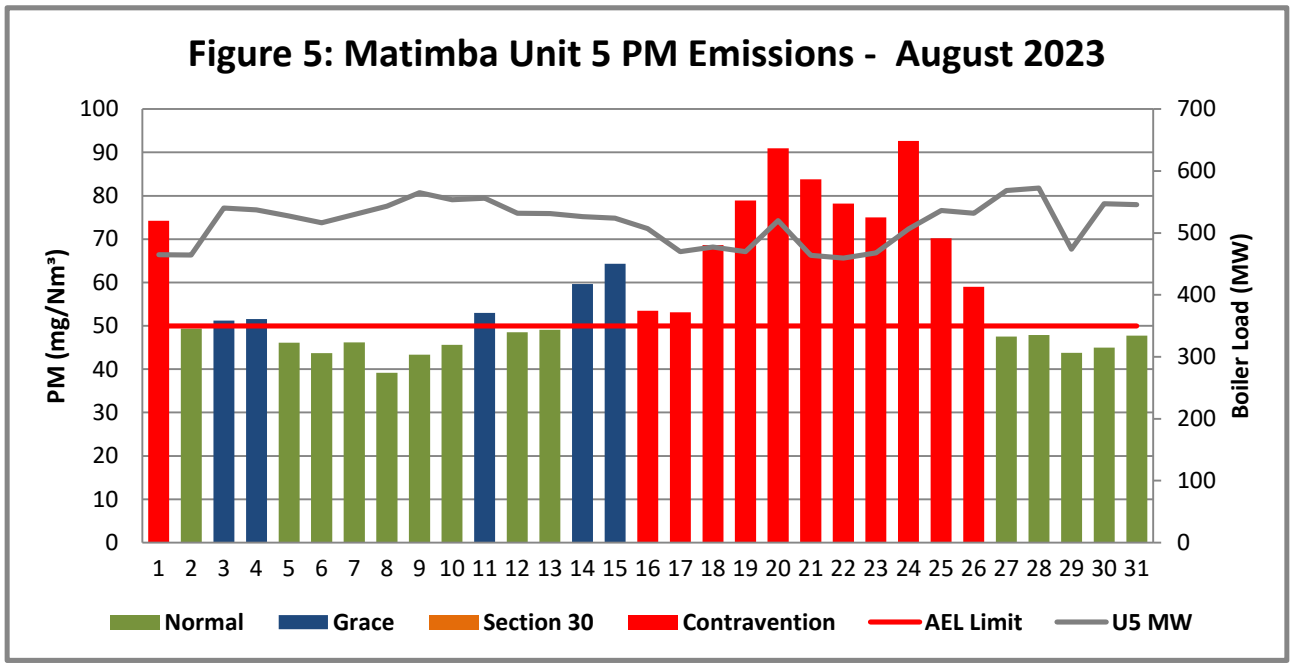

Figure 5: Particulate matter daily average emissions against emission limit for unit 5 for the month of August 2023

Interpretation:

Unit 5 Particulate matter exceeded the daily limit of 50 mg/Nm^3 on 1,3,4,11,14 to 26 August 2023. Exceedances from 1,and 16 to 26 August 2023 occurred outside of the 48-hour grace period and were recorded on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. The exceedances were due to defects on the dust handling plants leading to high hopper levels within the flue gas cleaning system and reducing the efficiency of the abatement technology (electrostatic precipitator fields). The investigation into the causes of the exceedances were done and corrective measure put in place to correct the root causes.

Unit 6 Particulate Emissions

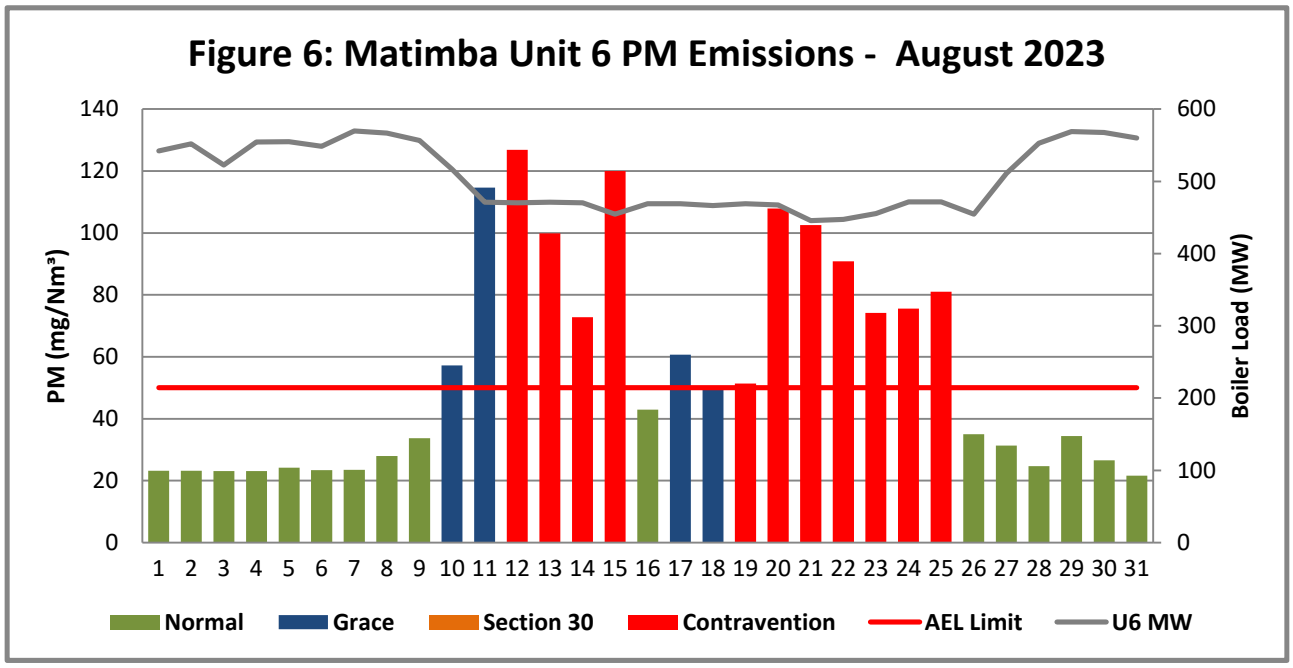

Figure 6: Particulate matter daily average emissions against emission limit for unit 6 for the month of August 2023

Interpretation:

Unit 6 Particulate matter exceeded the daily limit of 50 mg/Nm3 on 10 to 25 August 2023. The exceedances from 12 to 25 August 2023 occurred outside of the 48-hour grace period and were recorded on the Eskom incident management process as non-compliance to the Atmospheric Emissions Licence. The exceedances were due to defects on the dust handling plants leading to high hopper levels within the flue gas cleaning system and reducing the efficiency of the abatement technology (electrostatic precipitator fields). The investigation into the causes of the exceedances were done and corrective measure put in place to correct the root causes.

2.3.2 Gaseous Emissions

Gaseous emissions analyzers calibration for all 6 units were performed in August 2023 as per the AEL requirements.

The quality assurance spot tests were performed on the monitors in July 2023.

Unit 1 SO_2 Emissions

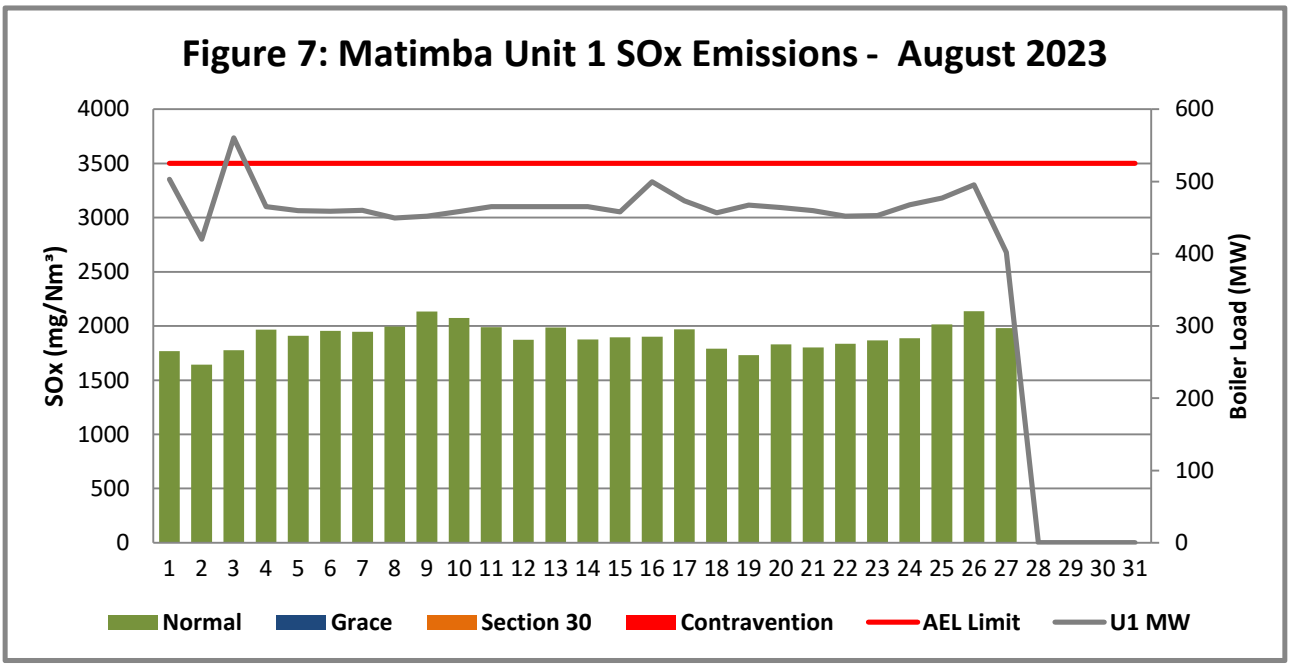

Figure 7: SO2 daily average emissions against emission limit for unit 1 for the month of August 2023

Interpretation:

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

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Unit 2 SO_2 Emissions

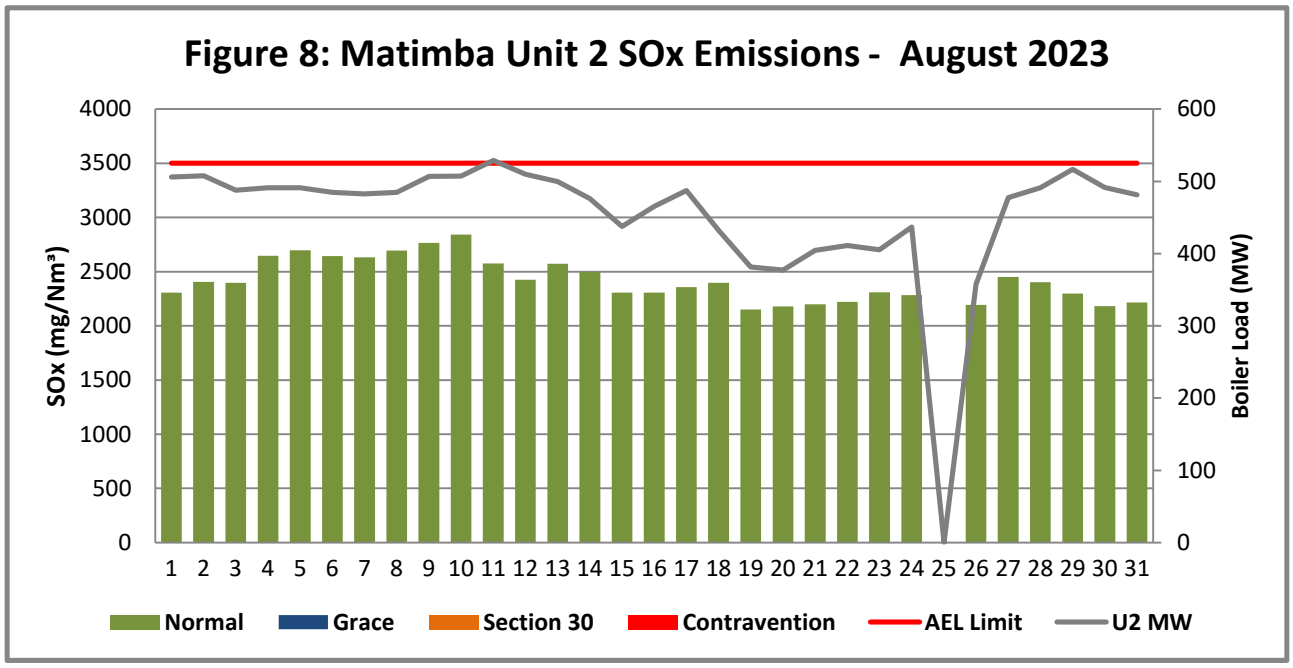

Figure 8: SO2 daily average emissions against emission limit for unit 2 for the month of August 2023

Interpretation:

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

Unit 3 SO_2 Emissions

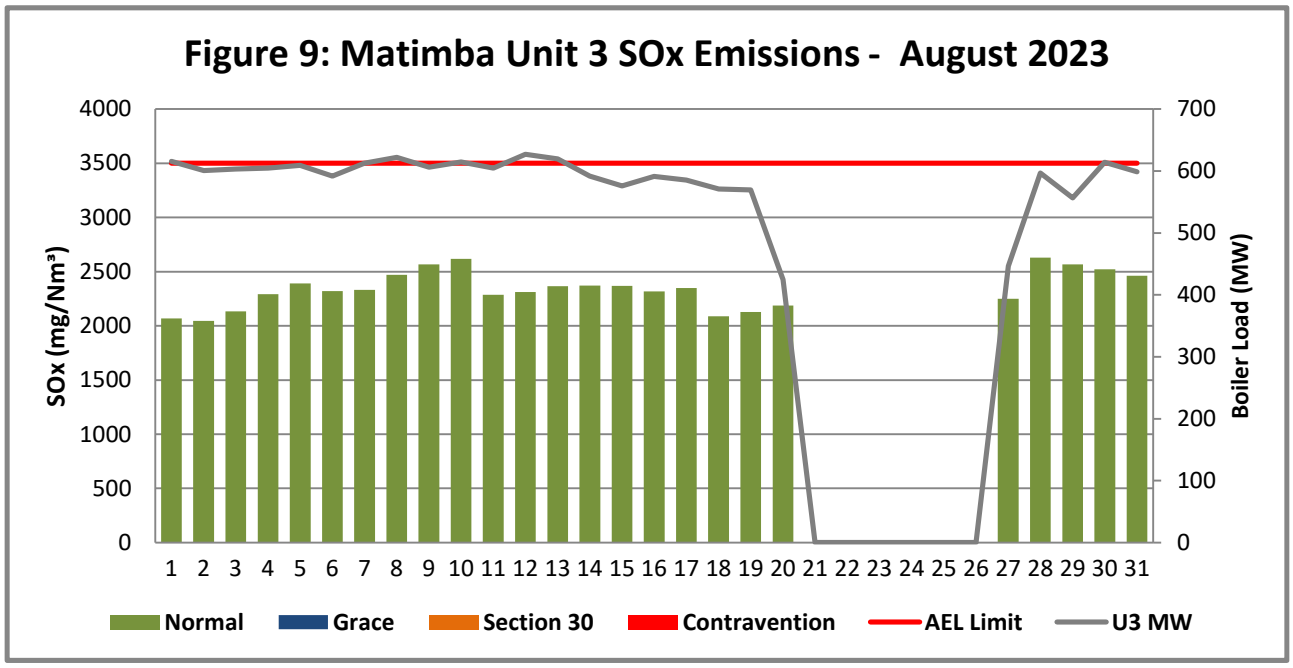

Figure 9: SO2 daily average emissions against emission limit for unit 3 for the month of August 2023

Interpretation:

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

Unit 4 SO_2 Emissions

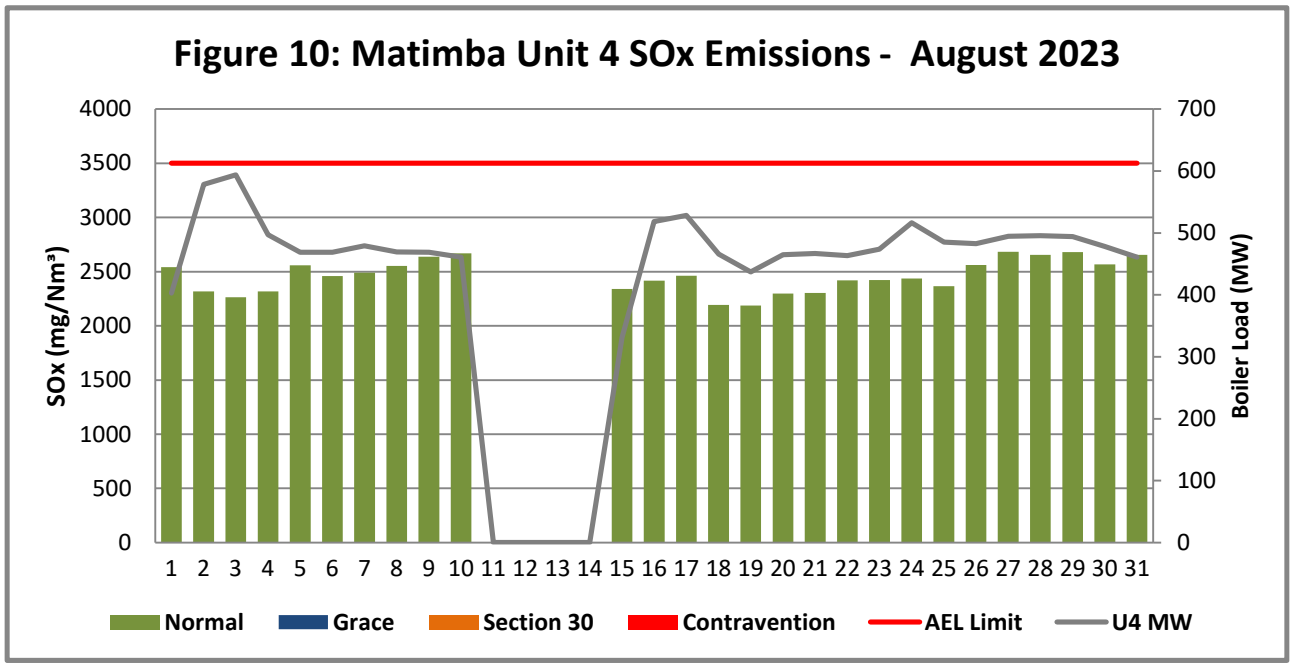

Figure 10: SO2 daily average emissions against emission limit for unit 4 for the month of August 2023

Interpretation:

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

Unit 5 SO_2 Emissions

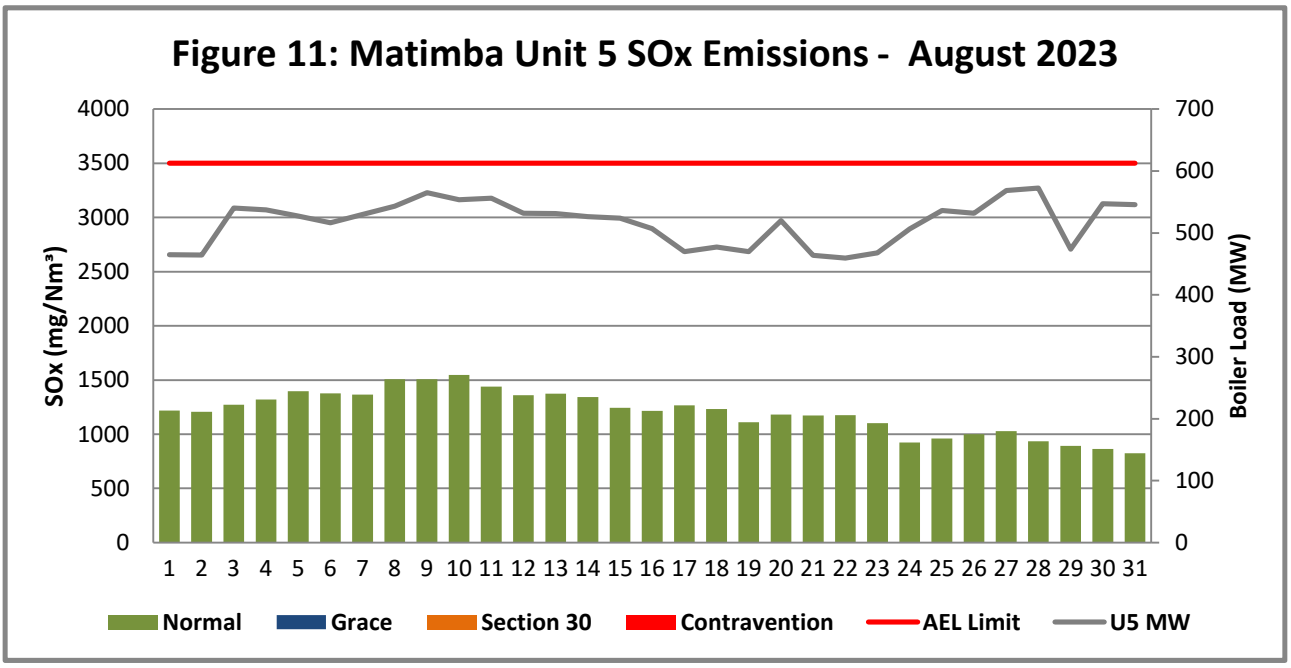

Figure 11: SO2 daily average emissions against emission limit for unit 5 for the month of August 2023

Interpretation:

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

Unit 6 SO_2 Emissions

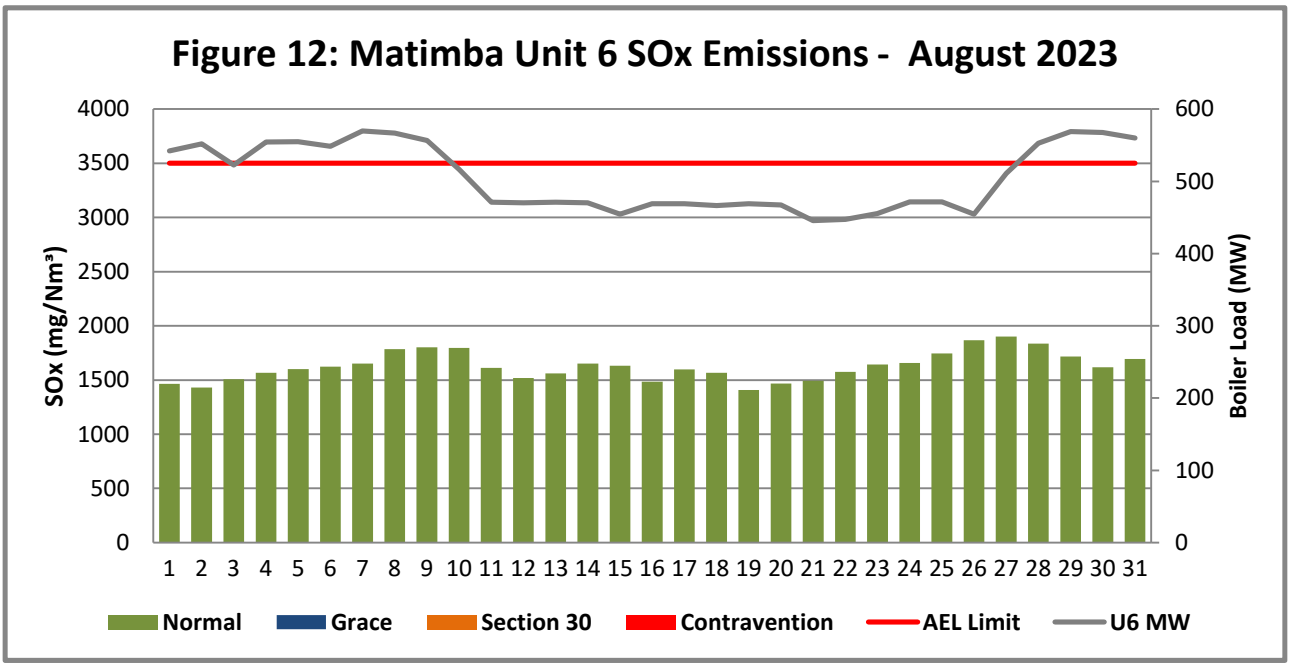

Figure 12: SO2 daily average emissions against emission limit for unit 6 for the month of August 2023

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

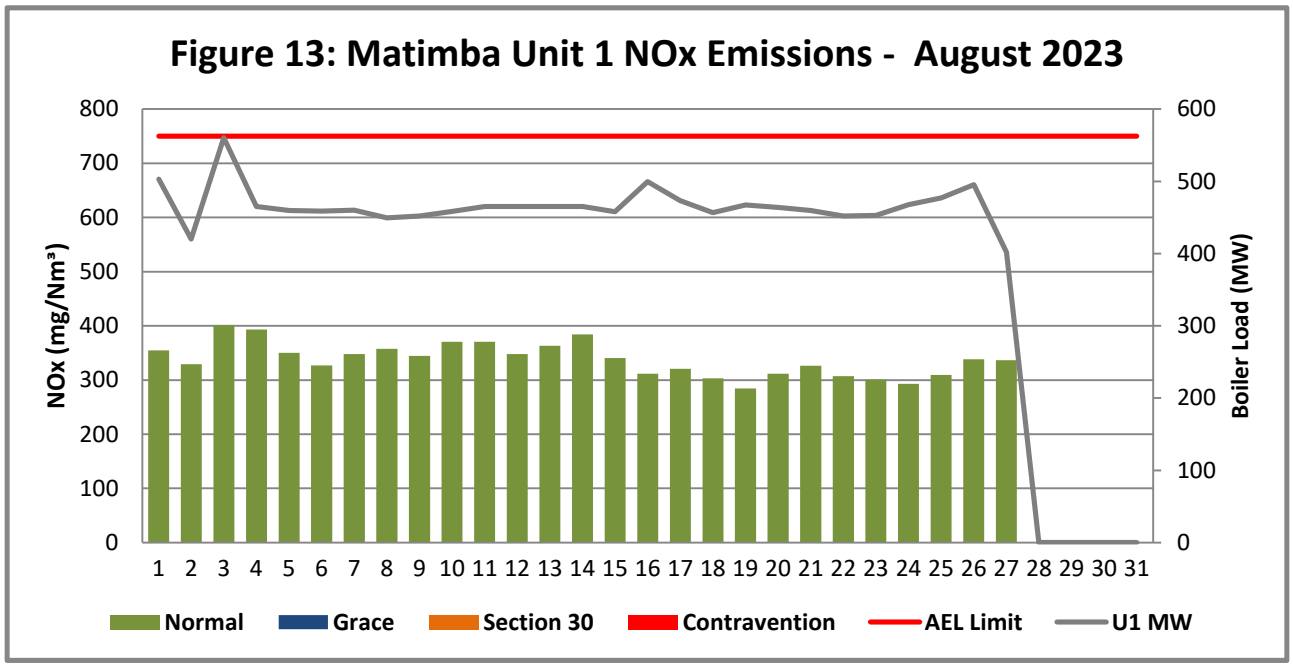

Figure 13: NOx daily average emissions against emission limit for unit 1 for the month of August 2023

Interpretation:

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

Unit 2 NO_x Emissions

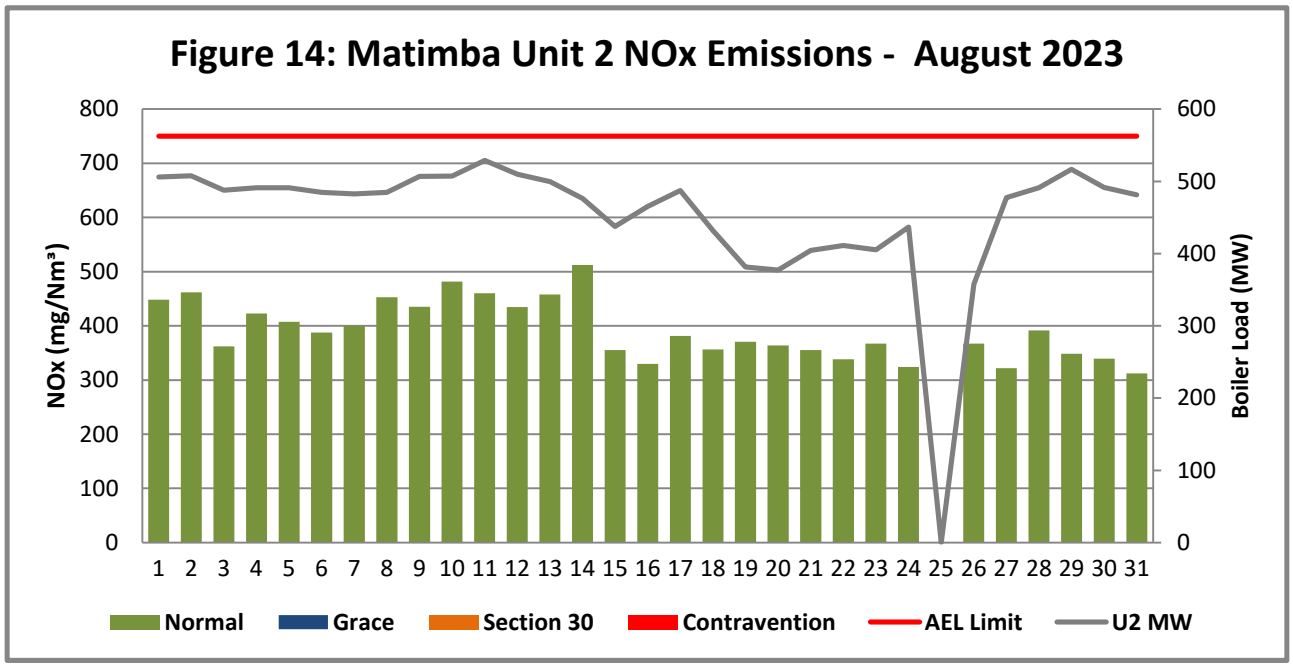

Figure 14: NOx daily average emissions against emission limit for unit 2 for the month of August 2023

Interpretation:

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

Unit 3 NO_x Emissions

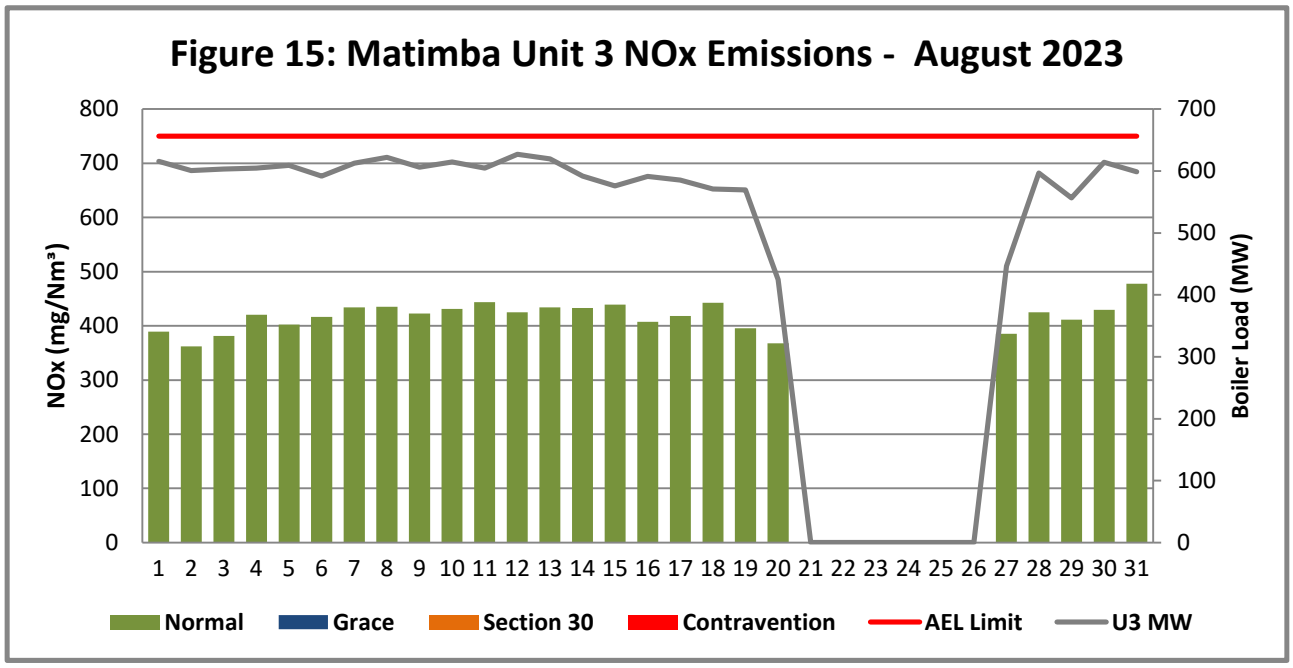

Figure 15: NOx daily average emissions against emission limit for unit 3 for the month of August 2023

Interpretation:

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

Unit 4 NO_x Emissions

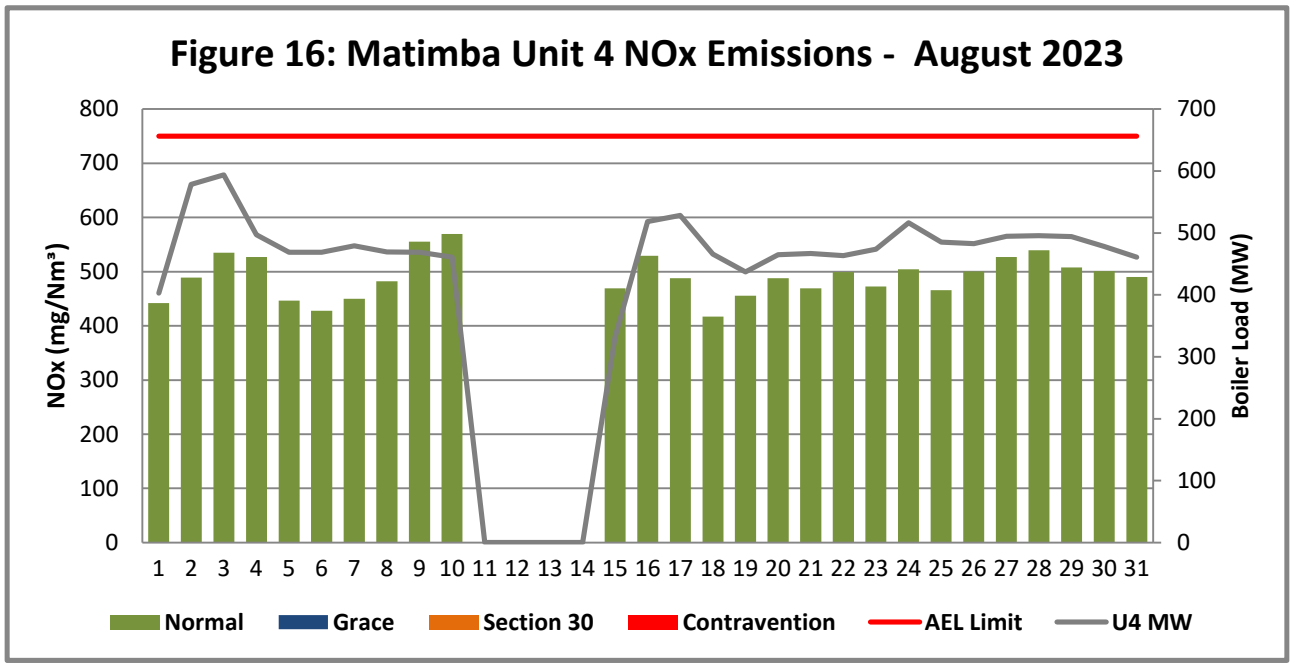

Figure 16: NOx daily average emissions against emission limit for unit 4 for the month of August 2023

Interpretation:

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

Unit 5 NO_x Emissions

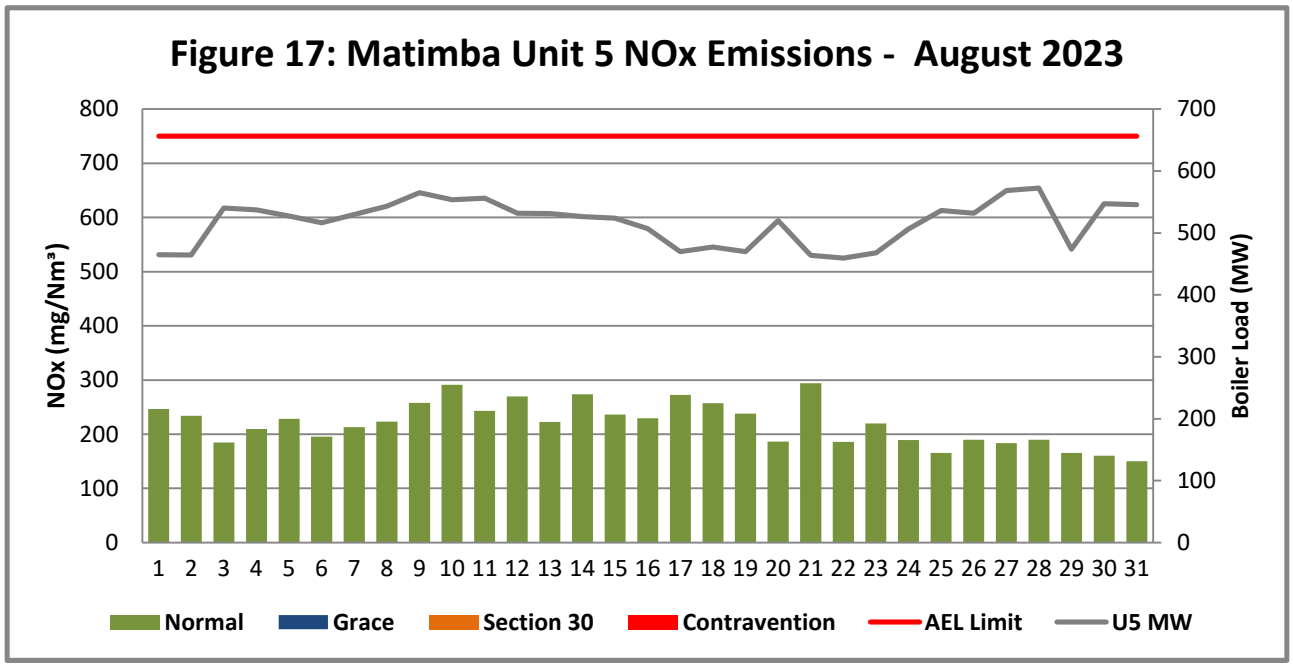

Figure 17: NOx daily average emissions against emission limit for unit 5 for the month of August 2023

Interpretation:

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

Unit 6 NO_x Emissions

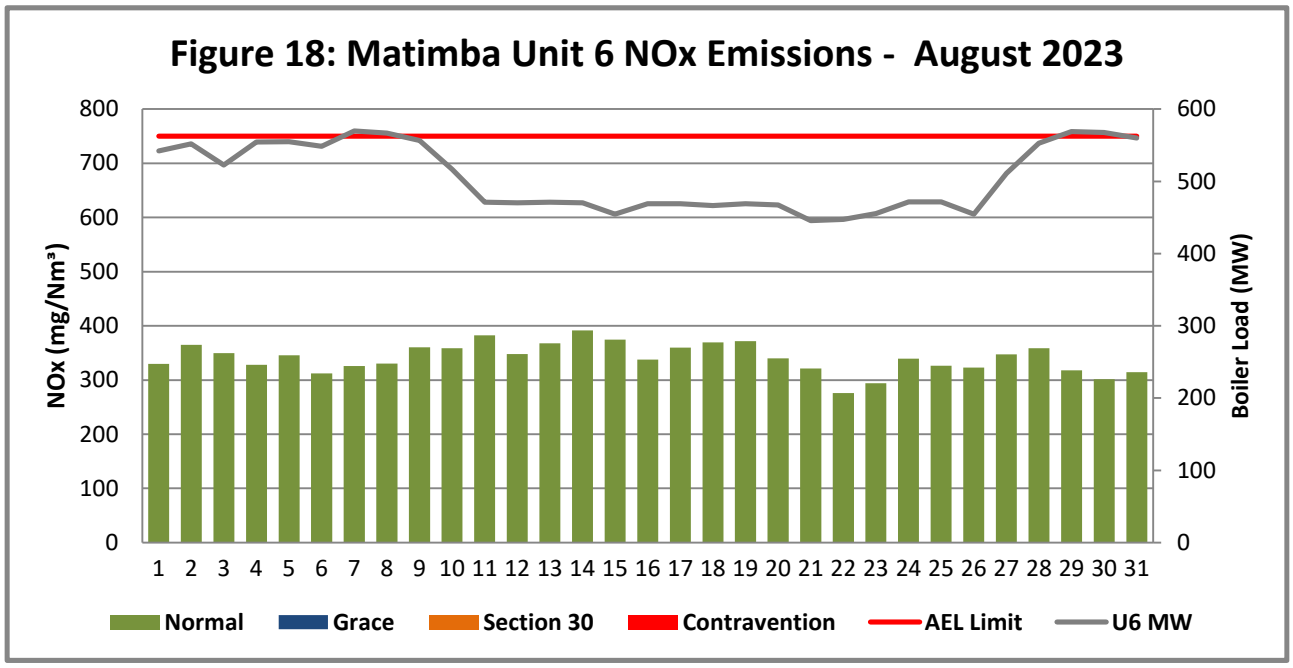

Figure 18 NOx daily average emissions against emission limit for unit 6 for the month of August 2023

Interpretation:

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

2.3.3 Total Volatile Organic Compounds

Table 4: Total volatile compound estimates

Eskom

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

Date:	Tuesday, 19 September 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:	**August**	
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:	***1649,556***	
Molecular weight of the fuel oil:	166,00	Lb/lb-mole
METEROLOGICAL DATA FOR THE MONTH	**Data**	**Unit**
Daily average ambient temperature	20,46	°C
Daily maximum ambient temperature	28,86	°C
Daily minimum ambient temperature	12,76	°C
Daily ambient temperature range	16,09	°C
Daily total insolation factor	4,23	kWh/m²/day
Tank paint colour	***Grey/medium***	NA
Tank paint solar absorbtance	0,68	NA
FINAL OUTPUT:	**Result**	**Unit**
Breathing losses:	0,56	kg/month
Working losses:	0,05	kg/month
TOTAL LOSSES (Total TVOC Emissions for the month):	**0,61**	**kg/month**

*Calculations performed on this spreadsheet are taken from the USEPA AP-42- Section 7.1 Organic Liquid Storage Tanks - January 1996. This spreadsheet is derived from materials provided by Jimmy Peress, PE, Tritech Consulting Engineers, 85-93 Chevy Chase Street, Jamaica, NY 11432 USA, Tel - 718-454-3920, Fax - 718-454-6330, e-mail - PeressJ@nyc.rr.com.

2.3.4 Greenhouse gas (CO_2) emissions

CO_2 emissions are reported in terms of the Greenhouse gas reporting regulations (GN 43712, GNR. 994/2020) and are not included in the monthly AEL compliance report.

2.4 Daily power generated

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

Date	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
2023/08/01	10996,9	10750,5	13514	3115,6	10068,8	11690,1
2023/08/02	7055,15	10809,2	13148,1	12515,5	10077,3	11960,9
2023/08/03	12282,5	10405,3	13241	12924,1	11723	11259,4
2023/08/04	10174,6	10466,7	13204	10830,5	11686	11995,7
2023/08/05	10063,8	10442,2	13391,5	10249,5	11480,3	12057,6
2023/08/06	10044,3	10312,9	12937,6	10243,4	11217,7	11833,1
2023/08/07	10039,6	10280,8	13396,1	10418,3	11486,8	12326,5
2023/08/08	9836,96	10278,7	13598,3	10189,8	11791,7	12263,3
2023/08/09	9902,41	10727,7	13274,2	10190	12291,6	12054,7
2023/08/10	10002,7	10786,2	13480,2	5741,35	12016,3	11207,6
2023/08/11	10190	11232,6	13258,3	0	12096,9	10171,4
2023/08/12	10180,9	10850,2	13741	0	11552,9	10140,3
2023/08/13	10176,5	10612,4	13558,3	0	11542,3	10145,6
2023/08/14	10155,4	10110	12952	0	11437,8	10125,6
2023/08/15	9944,3	9281,32	12576,8	884,261	11355,6	9779,35
2023/08/16	10951	9881,82	12942,8	11228	11002,1	10101,4
2023/08/17	10382,2	10391,1	12772,4	11477,3	10202,8	10099,5
2023/08/18	9976,25	9170,55	12512,5	10091,6	10331,8	10045,3
2023/08/19	10229,4	8017,77	12390,4	9458,71	10162,8	10102,2
2023/08/20	10134,1	7928,1	737,875	10067,5	11268,8	10060,7
2023/08/21	10018,6	8514,38	0	10098,4	10021,7	9584,7
2023/08/22	9854,36	8688,68	0	9978,34	9918,62	9638,45
2023/08/23	9898,46	8565,55	0	10256,8	10099,3	9819,13
2023/08/24	10239	4475,94	0	11144,5	10951,2	10170,8
2023/08/25	10466,1	0	0	10486,7	11641,8	10174,6
2023/08/26	10810,6	2258,48	0	10388,2	11520,8	9779,6
2023/08/27	481,199	10192	4942,74	10693,4	12365,2	11060
2023/08/28	0	10449,4	12998,5	10740,3	12408,1	11993,3
2023/08/29	0	10972,7	7641,03	10732,1	3089,32	12358
2023/08/30	0	10402,3	13391,8	10338	11736,1	12304,7
2023/08/31	0	10188,1	13079,2	9965,18	11836,5	12111,2

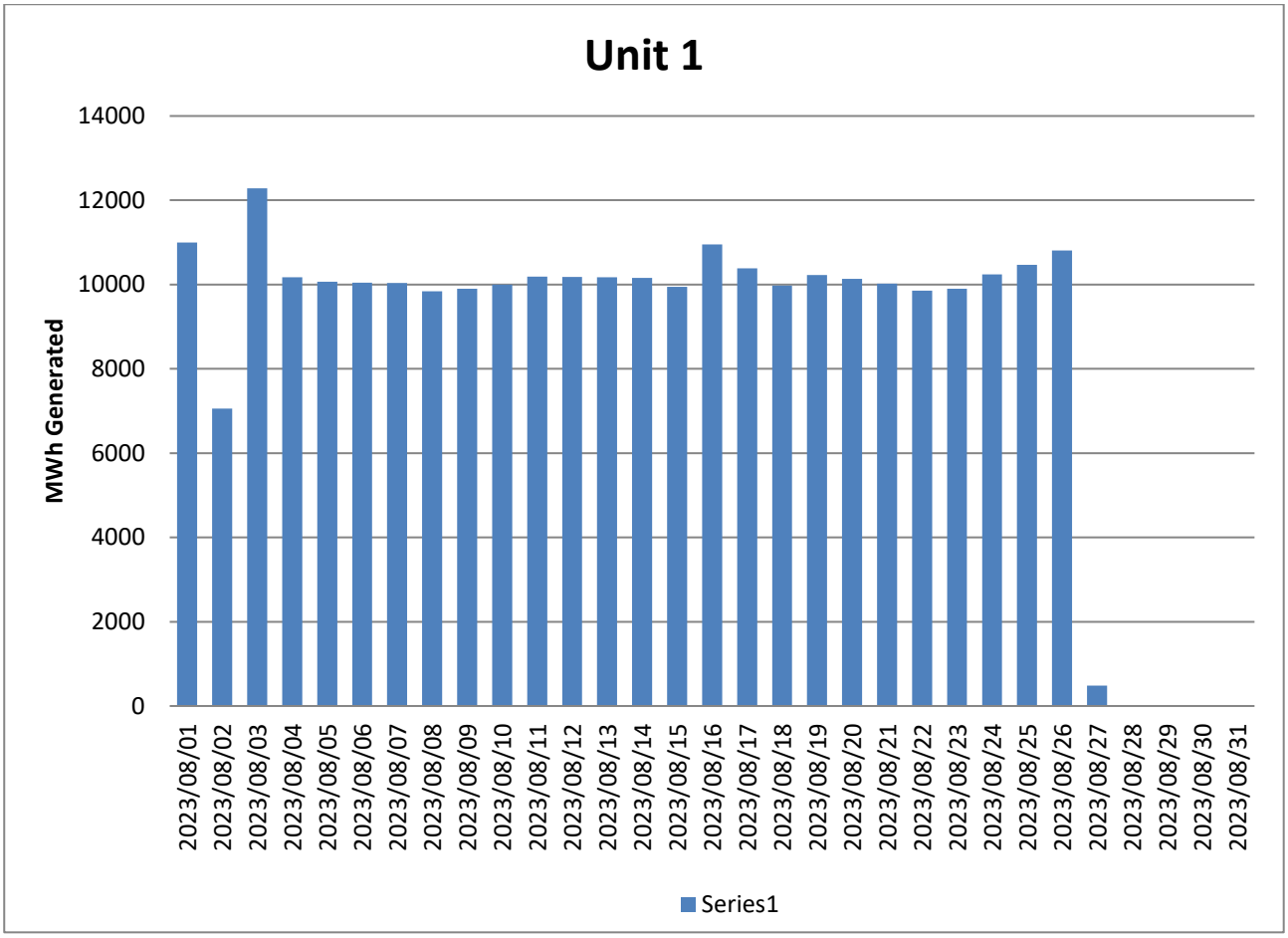

Figure 19: Unit 1 daily generated power in MWh for the month of August 2023

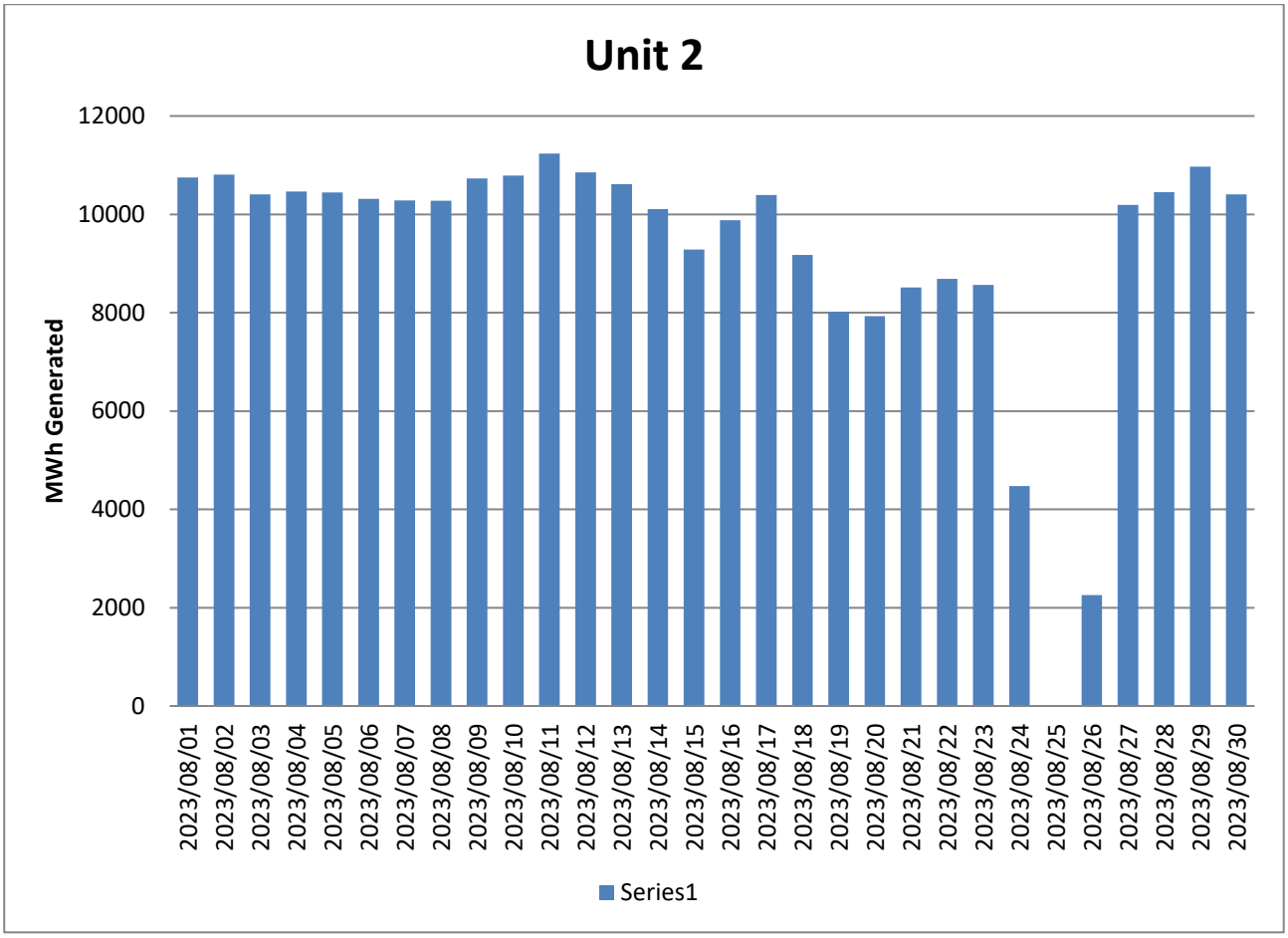

Figure 20: Unit 2 daily generated power in MWh for the month of August 2023

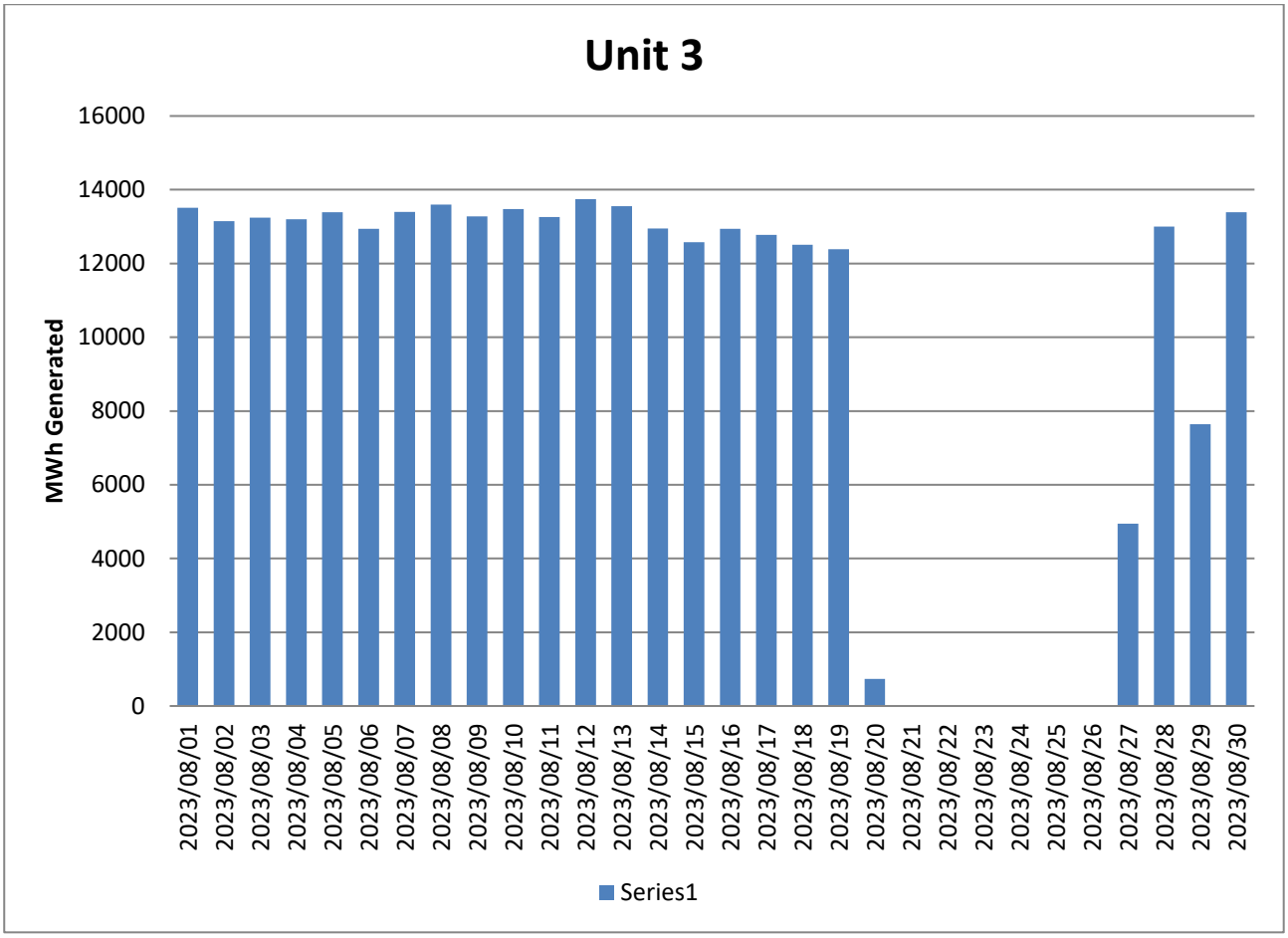

Figure 21: Unit 3 daily generated power in MWh for the month of August 2023

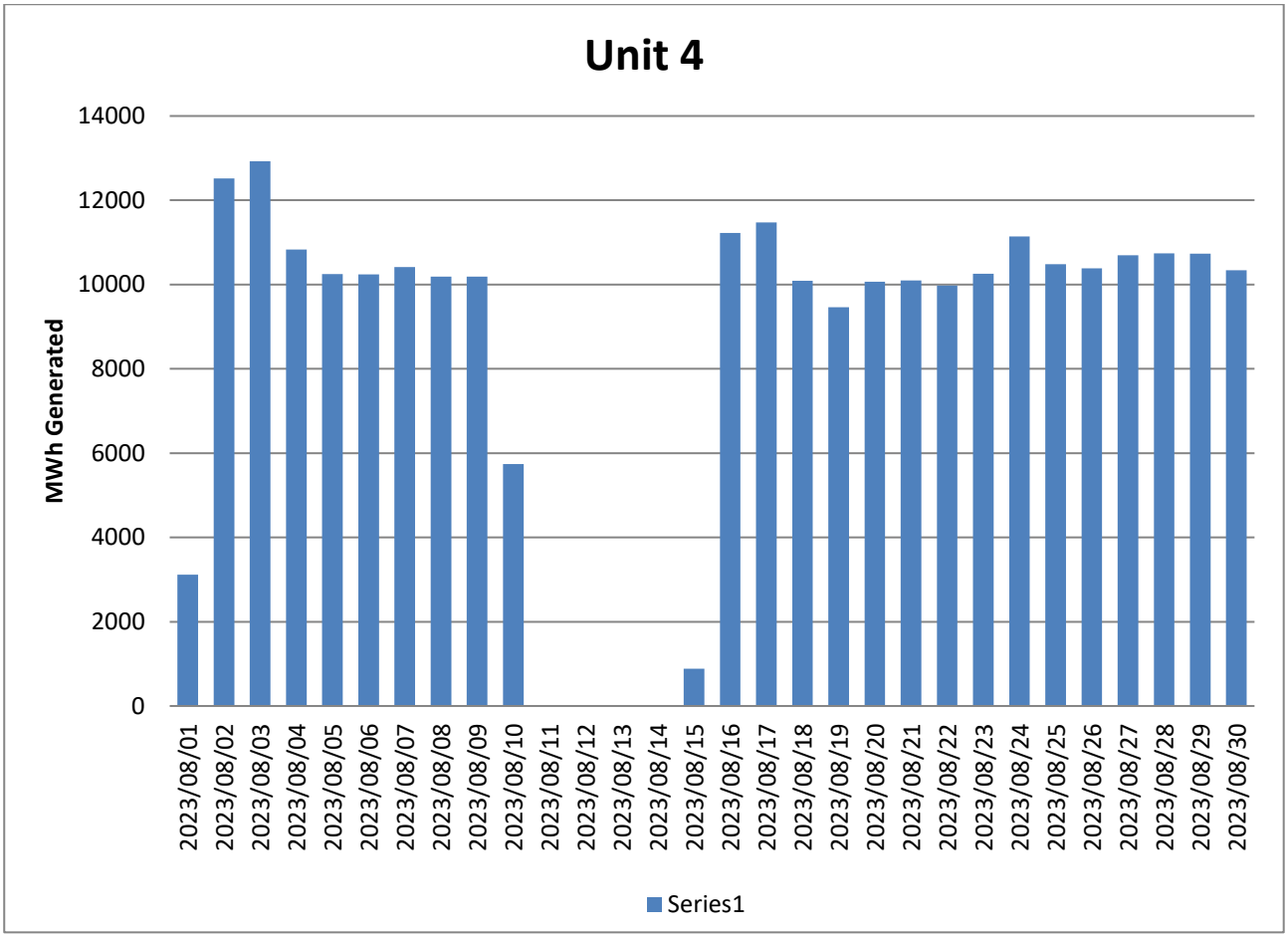

Figure 22: Unit 4 daily generated power in MWh for the month of August 2023

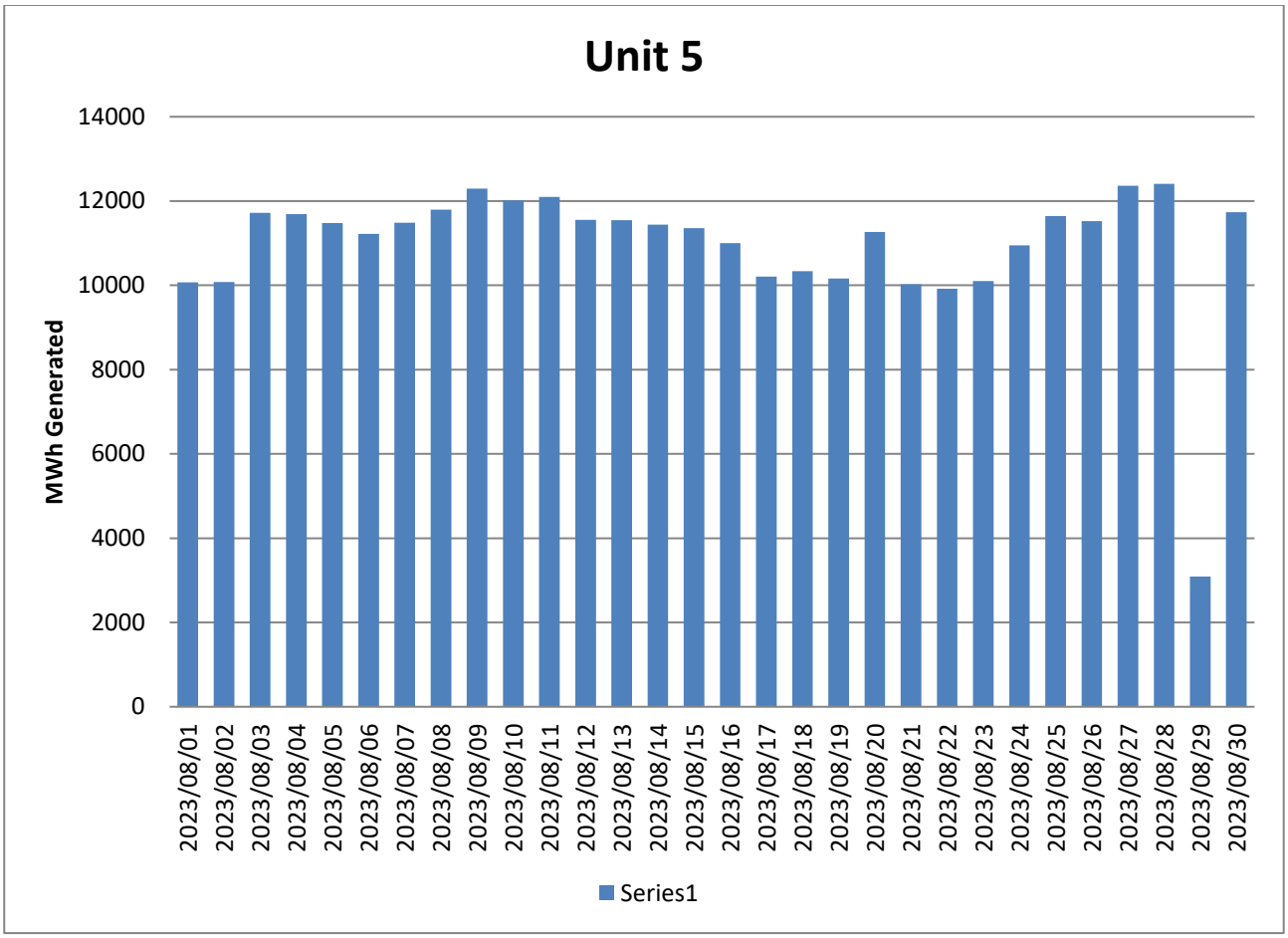

Figure 23: Unit 5 daily generated power in MWh for the month of August 2023

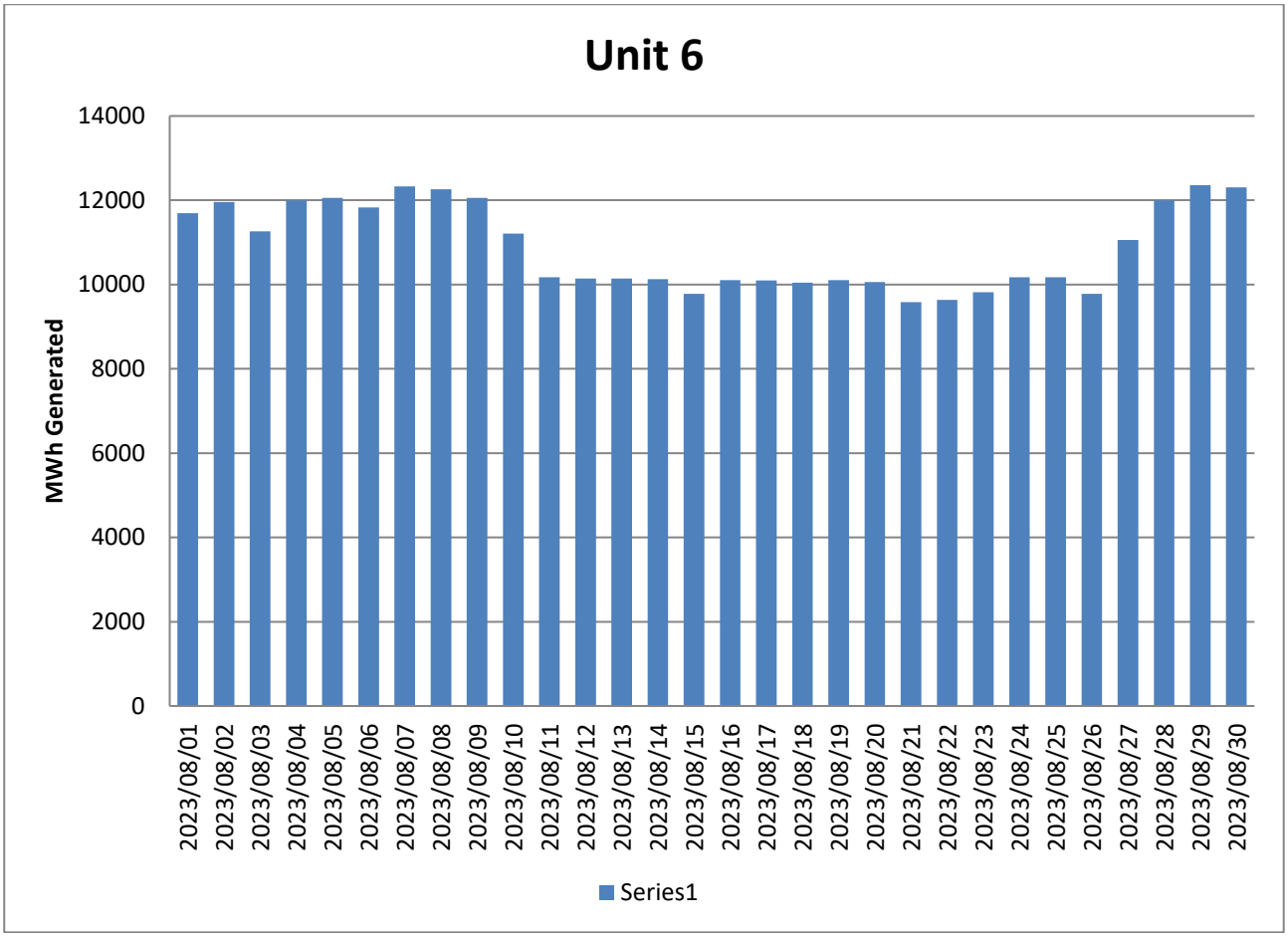

Figure 24: Unit 6 daily generated power in MWh for the month of August 2023

2.5 Pollutant Tonnages

The emitted pollutant tonnages for August 2023 are provided in table 6.

Table 6: Pollutant tonnages for the month of August 2023

Associated Unit/Stack	PM (tons)	SO_2 (tons)	NO_x (tons)	CO_2 (tons)
Unit 1	80,6	2 892,9	512,6	243 592
Unit 2	85,7	5 698,8	923,5	379 490
Unit 3	38,5	4 970,1	891,4	369 127
Unit 4	60,0	4 141,6	829,1	223 794
Unit 5	100,6	2 521,2	456,9	193 201
Unit 6	99,1	3 818,1	797,8	398 074
SUM	464,4	24 042,7	4 411,4	1807279

2.6 Operating days in compliance to PM AEL Limit

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
Unit 1	3	8	0	16	24	57,4
Unit 2	21	4	0	4	8	51,4
Unit 3	23	1	0	0	1	26,5
Unit 4	9	10	0	6	16	59,8
Unit 5	14	5	0	12	17	58,1
Unit 6	16	4	0	11	15	55,7
SUM	**56**	**23**	**0**	**26**	**49**	

2.7 Operating days in compliance to SOx AEL Limit

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm³)
Unit 1	27	0	0	0	0	1 908,4
Unit 2	30	0	0	0	0	2 418,3
Unit 3	25	0	0	0	0	2 338,0
Unit 4	27	0	0	0	0	2 461,6
Unit 5	31	0	0	0	0	1 205,3
Unit 6	31	0	0	0	0	1 628,3
SUM	**109**	**0**	**0**	**0**	**0**	

2.8 Operating days in compliance to NOx AEL Limit

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
Unit 1	27	0	0	0	0	338,0
Unit 2	30	0	0	0	0	391,6
Unit 3	25	0	0	0	0	417,3
Unit 4	27	0	0	0	0	490,7
Unit 5	31	0	0	0	0	219,5
Unit 6	31	0	0	0	0	340,9
SUM	**109**	**0**	**0**	**0**	**0**	

2.9 Reference values

Table 10: Reference values for data provided, August 2023

Compound / Parameter	Units of Measure	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Oxygen	%	5,70	9,58	4,47	7,57	5,92	6,85
Moisture	%	4,22	3,02	5,90	2,60	4,11	1,63
Velocity	m/s	19,1	33,9	27,9	24,1	22,8	28,7
Temperature	°C	134,8	121,0	130,1	125,8	126,4	164,4
Pressure	mBar	929,0	936,0	920,8	931,4	922,2	918,7

2.10 Continuous Emission Monitors

2.10.1 Reliability

Continuous emission monitors were available for more than 80% of the reporting period. The emitted pollutant tonnages for August 2023 are provided in table 6.

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

Associated Unit/Stack	PM	SO_2	NO	CO_2
Unit 1	*100,0*	*99,8*	*99,8*	*99,8*
Unit 2	*99,6*	*100,0*	*89,6*	*99,7*
Unit 3	*100,0*	*100,0*	*99,8*	*99,7*
Unit 4	*100,0*	*100,0*	*100,0*	*98,4*
Unit 5	*100,0*	*99,3*	*88,3*	*58,5*
Unit 6	*98,1*	*99,7*	*99,7*	*99,5*

2.10.2 Changes, downtime, and repairs

Unit 1

- No adjustments done on the CEMs.
- No downtime or repairs done on the particulate monitors

Unit 2

- No adjustments done on the CEMs.
- No downtime or repairs done on the particulate monitors

Unit 3

- No adjustments done on the CEMs.
- No downtime or repairs done on the particulate monitors

Unit 4

- No adjustments done on the CEMs.
- No downtime or repairs done on the particulate monitors

Unit 5

- No adjustments done on the CEMs.
- No downtime or repairs done on the particulate monitors

Unit 6

- No adjustments done on the CEMs.
- No downtime or repairs done on the particulate monitors

2.10.3 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 spot tests were done in August 2023.

2.11 Units Start-up information

Table 13: Start-up information

Unit	1	
Fires in	2023/08/02	13h17
Synchronization with Grid	2023/08/02	15h46
Emissions below limit	2023/08/03	00h01
Fires in, to synchronization	2,29	HOURS
Synchronization to < Emission limit	9,15	HOURS

Unit	2	
Fires in	2023/08/26	00h08
Synchronization with Grid	2023/08/26	12h36
Emissions below limit	2023/08/26	19h01
Fires in, to synchronization	12,28	HOURS
Synchronization to < Emission limit	6,25	HOURS

Unit	2	
Fires in	2023/08/26	18h26
Synchronization with Grid	2023/08/26	20h54
Emissions below limit	2023/08/26	20h54
Fires in, to synchronization	2,28	HOURS
Synchronization to < Emission limit	0	HOURS

Unit	3	
Fires in	2023/08/27	06h48
Synchronization with Grid	2023/08/27	11h16
Emissions below limit	2023/08/27	16h03
Fires in, to synchronization	4,28	HOURS
Synchronization to < Emission limit	4,47	HOURS

Unit	3	
Fires in	2023/08/29	12h22
Synchronization with Grid	2023/08/29	15h40
Emissions below limit	2023/08/29	16h06
Fires in, to synchronization	3,18	HOURS
Synchronization to < Emission limit	0,26	HOURS

Unit	4	
Fires in	2023/08/01	05h08
Synchronization with Grid	2023/08/01	14h29
Emissions below limit	2023/08/01	18h04
Fires in, to synchronization	9,21	HOURS
Synchronization to < Emission limit	3,35	HOURS

Unit	4	
Fires in	2023/08/15	04h07
Synchronization with Grid	2023/08/15	19h20
Emissions below limit	2023/08/16	01h05
Fires in, to synchronization	15,13	HOURS
Synchronization to < Emission limit	5,45	HOURS

Unit	5	
Fires in	2023/08/29	03h56
Synchronization with Grid	2023/08/29	22h19
Emissions below limit	2023/08/30	01h04
Fires in, to synchronization	18,23	HOURS
Synchronization to < Emission limit	2,45	HOURS

2.12 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	744	744	744	744	744	744
Emergency Hours declared including hours after stand down						
Days over the Limit during Emergency Generation	24	8	1	16	17	15

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

2.13 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
Manketti lodge And neighbouring farms	Operational changes -The ashing philosophy was updated to piggybacking format (increasing height of the dump by ashing on top of rehabilitated old ash body);	Average fugitive dust fallout for August 2023 on the Ash dumping facility in all directions of communities where complains originated from was 742,89 mg/m2/day	N/A	Acquire additional resources to extend the dust suppression with water at the ash dump to cover the piggybacking area.	Completed
Marapong Community members (social media)				Covering the exposed long-standing areas with topsoil.	November 2023
Onverwacht counsellor					

2.14 Air quality improvements and social responsibility conducted

2.14.1 Air quality improvements

None

2.14.2 Social responsibility conducted

None

2.15 Ambient air quality monitoring

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

2.16 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.

2.17 General

Name and reference number of the monitoring methods used:

1. Particulate and gas monitoring according to standards
    a. BS EN 14181:2004 - Quality Assurance of Automated Measuring Systems
    b. ESKOM internal standard 240-56242363 Emissions Monitoring and Reporting Standard

Sampling locations:

1. Stack one
    a. Particulates:
        i. S23º 40' 2.8" E027º 36' 34.8" 175m from ground level and 75m from the top.
    b. Gas:
        i. S23º 40' 2.8" E027º 36' 34.8" 100m from ground level and 150m from the top.
    c. Stack height
        i. 250 meter consist of 3 flues
2. Stack two
    a. Particulates:
        i. S23º 40' 14.8" E027º 36' 47.5" 175m from ground level and 75m from the top.
    b. Gas:
        i. S23º 40' 14.8" E027º 36' 47.5" 100m from ground level and 150m from the top.
    c. Stack height
        i. 250 meter consist of 3 flues

3. Attachments

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

Wikus van Rensburg

pp

GENERAL MANAGER: MATIMBA POWER STATION