

## **Matimba Power Station Emissions** report

Matimba Power Station

**Matimba Power Station August** Title:

2021 emissions report

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Date: 13/10/2021

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Date: 2021/10/14

Revision: 1

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## 1. Report Summary

Matimba Power Station was issued with an Atmospheric Emission License (12/4/12L-W4/A4) in March 2020. Condition 7.7.1 of the License requires the license holder to submit monthly reports to the Department. This report contains the required information as specified in condition 7.7.1 for August 2021.



During the period under review, Matimba experienced 6 exceedances of the daily particulate matter emission limit ( $50 \text{mg/Nm}^3$ ) all these exceedances remained within the 48 hour grace period. No exceedances of the monthly  $SO_x$  limit ( $3500 \text{mg/Nm}^3$ ) or the daily  $NO_x$  limit ( $750 \text{mg/Nm}^3$ ) occurred.

The Gaseous emission ( $SO_x$  and  $NO_x$ ) monitors for unit4, unit 5 and unit 6 was not in service until 21 August 2021, repairs were made on the 21<sup>st</sup> and the monitors are currently operational.

Issues mentioned above are discussed further under the respective 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	1 308 919
	Fuel Oil	Tons/month	1 200	578,487
Production Rates	Product/ By- Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate
	Energy	GWh	4 212.6	2 139,393

The coal and fuel oil consumptions rates for the month of August 2021 were within the permitted maximum limit.

# 2.2 Abatement technology

Table 2: Abatement Equipment Control Technology Utilised

Associated Unit	Technology Type	Minimum utilisation (%)	Efficiency (%)
Unit 1	Electrostatic Precipitator	100%	99,9%
Unit 2	Electrostatic Precipitator	100%	99,94%
Unit 3	Electrostatic Precipitator	100%	99,91%
Unit 4	Electrostatic Precipitator	100%	99,92%
Unit 5	Electrostatic Precipitator	100%	99,96%
Unit 6	Electrostatic Precipitator	100%	99,95%
Associated	Technology Type	Minimum utilisation	Actual Utilisation (%)
Unit		(%)	
Unit 1	SO₃ Plant	100%	100%
Unit 2	SO₃ Plant	100%	100%
Unit 3	SO₃ Plant	100%	77,42%
Unit 4	SO₃ Plant	100%	100%
Unit 5	SO₃ Plant	100%	93,33%
Unit 6	SO₃ Plant	100%	100%

Sulphur plant availability was below the required 100% for unit 3 and unit 5 due to unexpected breakdowns.

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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	0.8-1.6%	1,2%
Coal burned	Ash Content	30-40%	35,2%

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** 

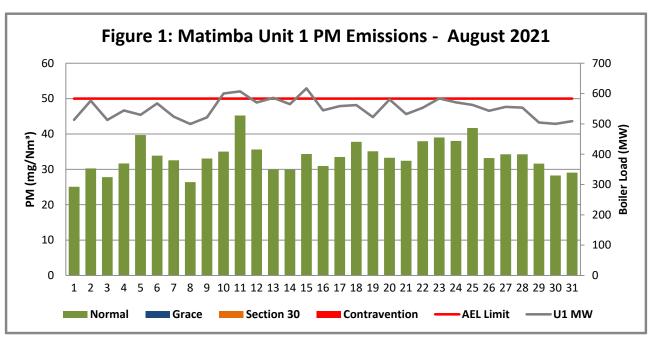


Figure 1: Particulate matter daily average emissions against emission limit for unit 1 for the month of August 2021

# Interpretation:

All daily averages below particulate emission limit of 50 mg/Nm<sup>3</sup>.

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### **Unit 2 Particulate Emissions**

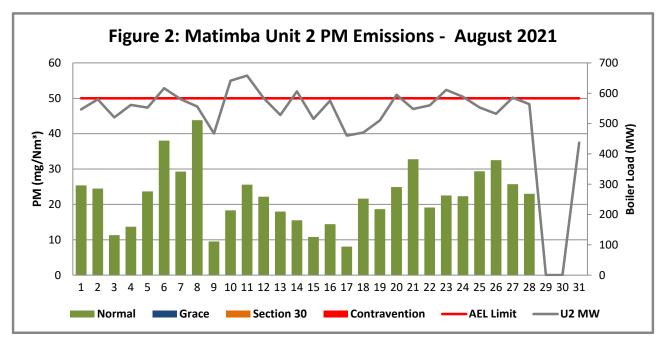


Figure 2: Particulate matter daily average emissions against emission limit for unit 2 for the month of August 2021

# Interpretation:

All daily averages below particulate emission limit of 50 mg/Nm<sup>3</sup>.

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### **Unit 3 Particulate Emissions**

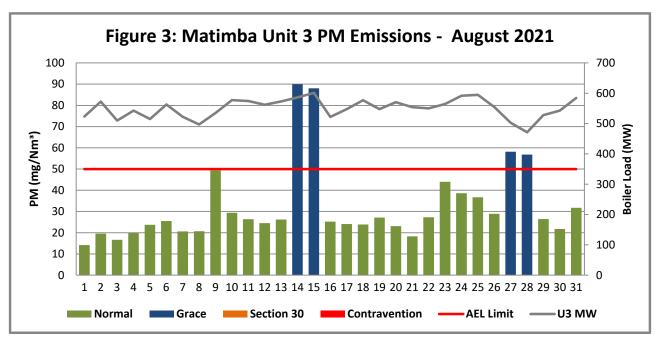


Figure 3: Particulate matter daily average emissions against emission limit for unit 3 for the month of August 2021

# Interpretation:

Unit 3 exceeded the daily limit of 50mg/Nm³ on 14, 15, 27 and 28 August 2021. The exceedance was due to breakdowns experienced on the dust handling plant. The exceedances did not exceed the 48-hour grace period.

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#### **Unit 4 Particulate Emissions**

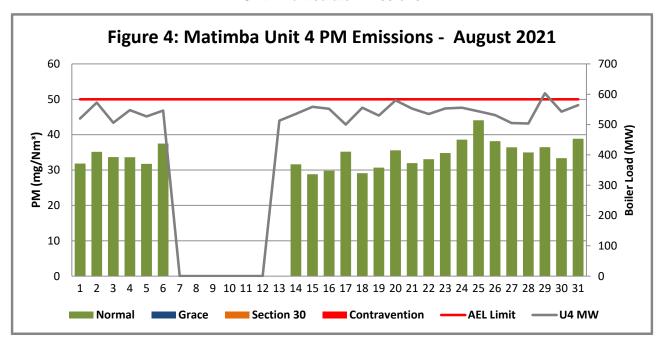


Figure 4: Particulate matter daily average emissions against emission limit for unit 4 for the month of August 2021

# Interpretation:

All daily averages below particulate emission limit of 50 mg/Nm<sup>3</sup>.

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### **Unit 5 Particulate Emissions**

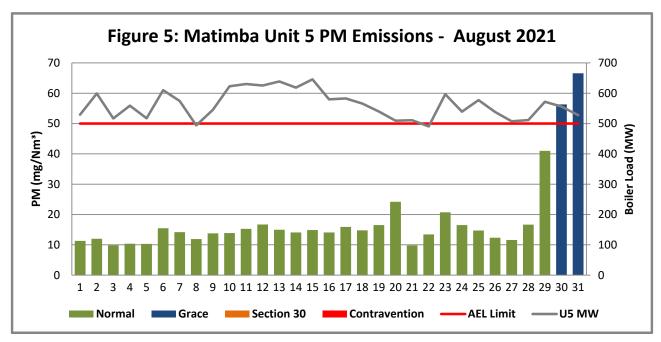


Figure 5: Particulate matter daily average emissions against emission limit for unit 5 for the month of August 2021

## Interpretation:

Unit 5 PM emissions exceeded the limit of 50mg/Nm³ on 30 and 31 August 2021. The exceedances were due to breakdowns on the dust handling plant. The exceedance did not exceed the 48-hour grace period.

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### **Unit 6 Particulate Emissions**

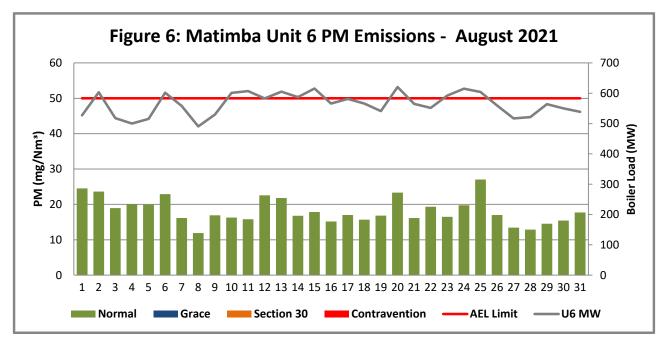


Figure 6: Particulate matter daily average emissions against emission limit for unit 6 for the month of August 2021

## Interpretation:

All daily averages below particulate emission limit of 50 mg/Nm<sup>3</sup>.

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### 2.4.2 Gaseous Emissions

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

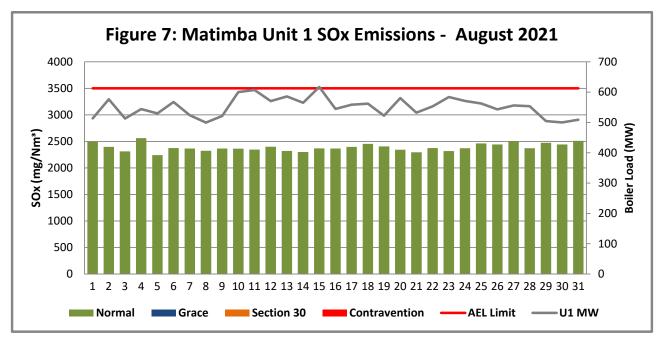


Figure 7: SO<sub>2</sub> daily average emissions against emission limit for unit 1 for the month of August 2021 Interpretation:

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

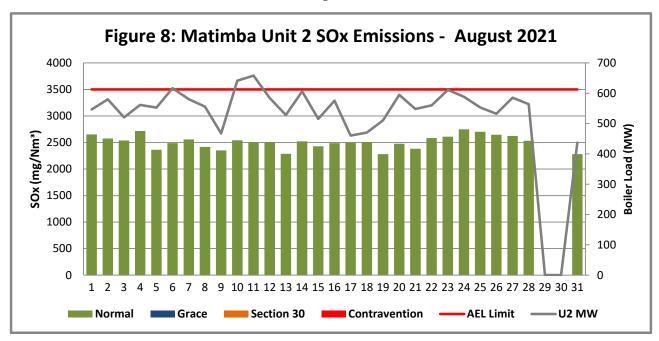


Figure 8: SO2 daily average emissions against emission limit for unit 2 for the month of August 2021 Interpretation:

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

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

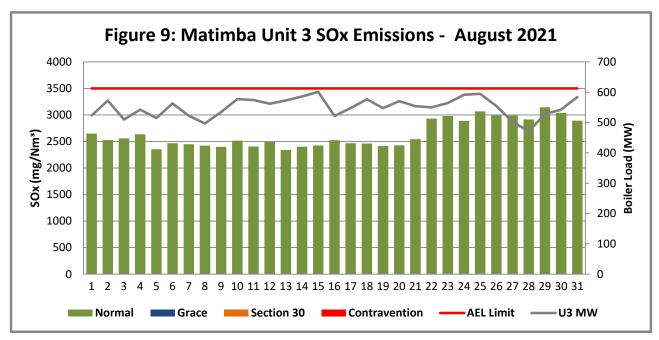


Figure 9: SO2 daily average emissions against emission limit for unit 3 for the month of August 2021 Interpretation:

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

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

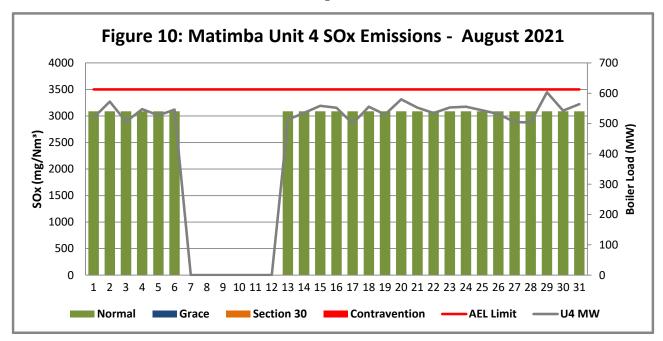


Figure 10: SO2 daily average emissions against emission limit for unit 4 for the month of August 2021

#### Interpretation:

All daily averages below SO<sub>2</sub> emission monthly limit of 3500 mg/Nm<sup>3</sup>. Unit 4 Gaseous emission monitor was unavailable since 08 July 2021. Due to a directive issued to Matimba Power Station preventing the use of the stack lift providing access to the emission monitor, maintenance personnel were only able to access the monitor for inspection on 22 July 2021. It was determined that the cause for the failure was water ingress on the monitor. Averaged values were used for August 2021 SOx reporting. The monitor was repaired on 21 August 2021 and is currently operational.

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

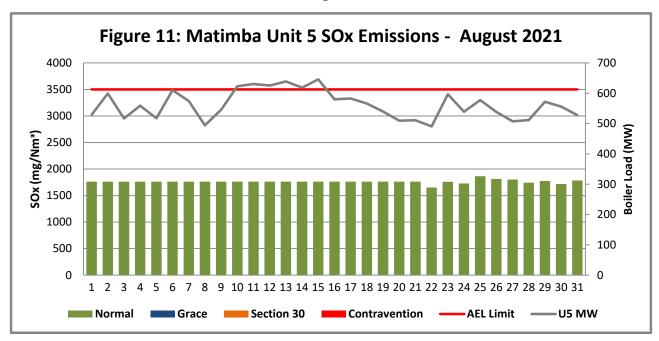


Figure 11: SO2 daily average emissions against emission limit for unit 5 for the month of August 2021

### Interpretation:

All daily averages below SO<sub>2</sub> emission monthly limit of 3500 mg/Nm<sup>3</sup>. Unit 5 Gaseous emission monitor failed on the 24<sup>th</sup> of June 2021. Due to a directive issued to Matimba Power Station preventing the use of the stack lift providing access to the emission monitor, maintenance personnel were only able to access the monitor for inspection on 22 July 2021. It was determined that the cause for the failure was water ingress on the monitor. Averaged values were used for SOx reporting from 1 to 21 August 2021. The monitor was repaired on 21 August 2021 and is currently operational.

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

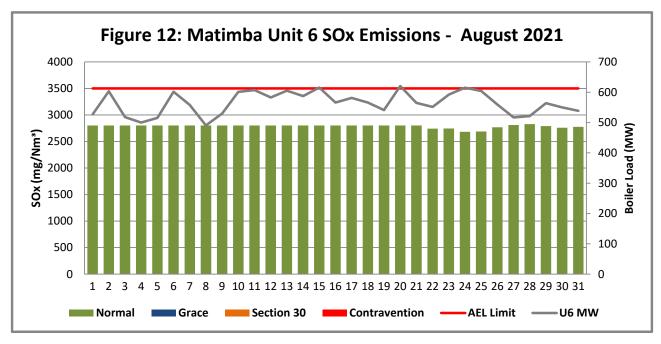


Figure 12: SO2 daily average emissions against emission limit for unit 6 for the month of August 2021

#### Interpretation:

As per the notification sent to your office on the 4<sup>th</sup> of August 2021, the Gaseous emission monitor for unit 6 has been defective since the 17<sup>th</sup> of April 2021. Due to a directive issued to Matimba Power Station preventing the use of the stack lift providing access to the emission monitor, maintenance personnel were only able to access the monitor for inspection on 22 July 2021. It was determined that the cause for the failure was water ingress on the monitor. Averaged values were used for SOx reporting from 1 to 21 August 2021. The monitor was repaired on 21 August 2021 and is currently operational.

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

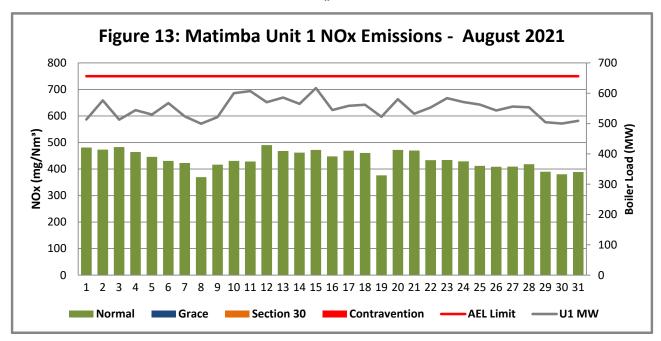


Figure 13: NOx daily average emissions against emission limit for unit 1 for the month of August 2021

## Interpretation:

All daily averages below NOx emission limit of 750 mg/Nm<sup>3</sup>.

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

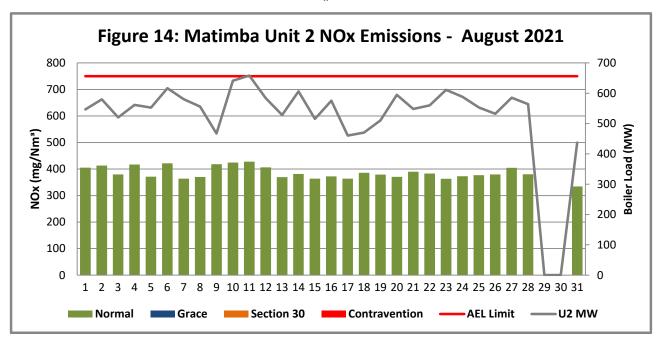


Figure 14: NOx daily average emissions against emission limit for unit 2 for the month of August 2021

## Interpretation:

All daily averages below NOx emission limit of 750 mg/Nm<sup>3</sup>.

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

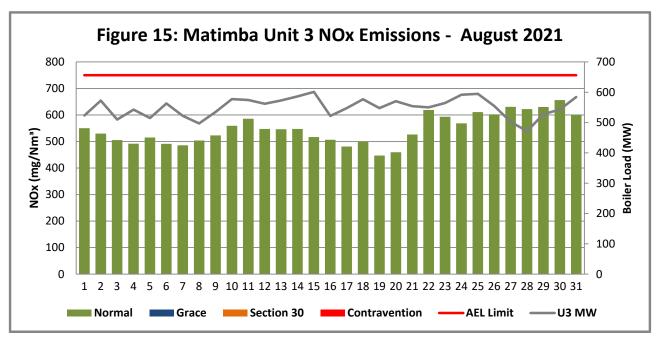


Figure 15: NOx daily average emissions against emission limit for unit 3 for the month of August 2021

## Interpretation:

All daily averages below NOx emission limit of 750 mg/Nm<sup>3</sup>.

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

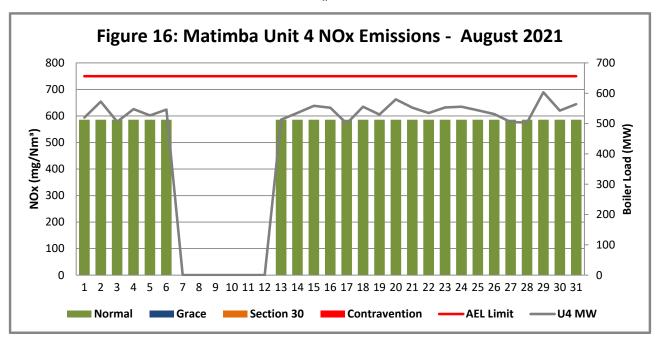


Figure 16: NOx daily average emissions against emission limit for unit 4 for the month of August 2021

#### Interpretation:

All daily averages below NOx emission limit of 750 mg/Nm³. Unit 4 Gaseous emission monitor was unavailable since 08 July 2021. Due to a directive issued to Matimba Power Station preventing the use of the stack lift providing access to the emission monitor, maintenance personnel were only able to access the monitor for inspection on 22 July 2021. It was determined that the cause for the failure was water ingress on the monitor. Averaged values were used for August 2021 NOx reporting. The monitor was repaired on 21 August 2021 and is currently operational.

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

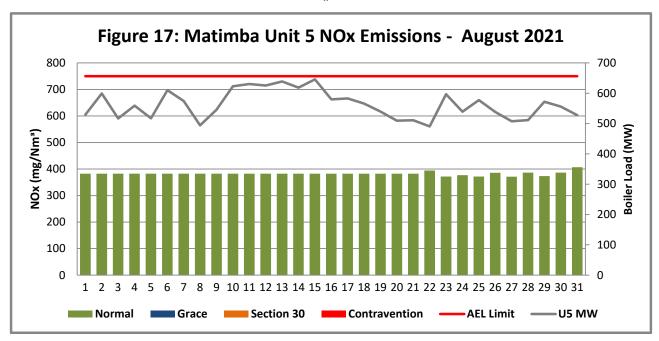


Figure 17: NOx daily average emissions against emission limit for unit 5 for the month of August 2021

### Interpretation:

All daily averages below  $NO_x$  emission monthly limit of 750 mg/Nm³. Unit 5 Gaseous emission monitor failed on the 24th of June 2021. Due to a directive issued to Matimba Power Station preventing the use of the stack lift providing access to the emission monitor, maintenance personnel were only able to access the monitor for inspection on 22 July 2021. It was determined that the cause for the failure was water ingress on the monitor. Averaged values were used for NOx reporting from 1 to 21 August 2021. The monitor was repaired on 21 August 2021 and is currently operational.

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

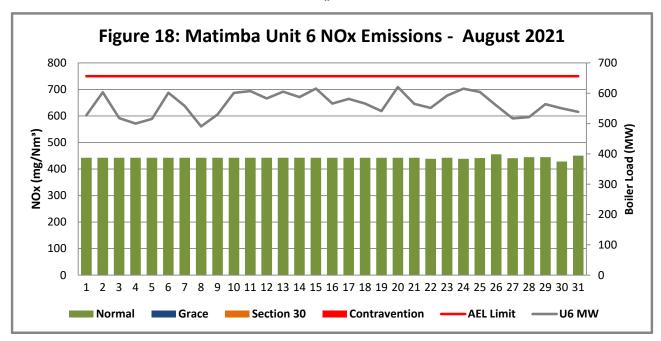


Figure 18: NOx daily average emissions against emission limit for unit 6 for the month of August 2021

### Interpretation:

All daily averages below  $NO_x$  emission monthly limit of 750 mg/Nm³. As per the notification sent to your office on the 4th of August 2021, the Gaseous emission monitor for unit 6 has been defective since the 17th of April 2021. Due to a directive issued to Matimba Power Station preventing the use of the stack lift providing access to the emission monitor, maintenance personnel were only able to access the monitor for inspection on 22 July 2021. It was determined that the cause for the failure was water ingress on the monitor. Averaged values were used for SOx reporting from 1 to 21 August 2021. The monitor was repaired on 21 August 2021 and is currently operational.

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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:	Tuesday, 14 September 2021			
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 <u>blue cells</u> below Choose from a dropdown menu in the <u>green cells</u>

The total VOC emissions for the month are in the <u>red cells</u>

IMPORTANT: Do not change any other cells without consulting the AQ CoE

MONTH:	August			
GENERAL INFORMATION:			ta	Unit
Total number of fue	el oil tanks:	4	•	NA
Height of tank:		13,	34	m
Diameter of tank:		9,5	53	m
Net fuel oil through	put for the month:	<u>578,</u>	<u>487</u>	
Molecular weight of	the fuel oil:	166,	,00	Lb/lb-mole
METEROLOGICAL	DATA FOR THE MONTH	Dat	ta	Unit
Daily average ambi	ent temperature	20,	46	°C
Daily maximum amb	pient temperature	28,	86	°C
Daily minimum amb	ient temperature	12,	76	°C
Daily ambient temp	erature range	16,	09	°C
Daily total insolatio	n factor	4,2	23	kWh/m²/day
Tank paint colour		Grey/m	<u>edium</u>	NA
Tank paint solar absorbtance			88	NA
FINAL OUTPUT:		Res	ult	Unit
Breathing losses: 0,56 kg/month			kg/month	
Working losses:		0,02 kg/month		
TOTAL LOSSES (T	TOTAL LOSSES (Total TVOC Emissions for the month): 0,58 kg/month			kg/month
*O-landa ('	and the second of the second o	LICEDA AD 40 Continu	- 740	

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

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

CO<sub>2</sub> emissions are reported in terms of the Greenhouse gas reporting regulations (GN 43712, No.R. 994) 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 August 2021

Date	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
2021/08/01	12328	12925	12492	12390	12599	12530
2021/08/02	13837	13717	13672	13623	14262	14336
2021/08/03	12323	12328	12178	12058	12306	12310
2021/08/04	13058	13279	12959	13029	13302	10975
2021/08/05	12718	13057	12293	12550	12319	12257
2021/08/06	13621	14580	13441	11546	14516	14313
2021/08/07	12574	13728	12467	0	13674	13275
2021/08/08	11998	13148	11866	0	11769	11653
2021/08/09	12522	11048	12773	0	12989	12587
2021/08/10	14415	15177	13794	0	14823	14297
2021/08/11	14577	15575	13718	0	15004	14442
2021/08/12	13689	13808	13419	0	14878	13866
2021/08/13	14063	12485	13682	12086	15202	14393
2021/08/14	13564	14356	13999	12730	14720	13963
2021/08/15	14808	12199	14359	13283	15362	14639
2021/08/16	13067	13620	12463	13148	13797	13468
2021/08/17	13400	10878	13074	9258	13866	13823
2021/08/18	13492	11119	13770	13229	13469	13457
2021/08/19	12532	12076	13069	12607	12846	12860
2021/08/20	13930	14069	13619	13813	8548	14764
2021/08/21	12770	12954	13228	13156	12169	13431
2021/08/22	13276	13245	13131	12727	8271	13113
2021/08/23	14005	14455	13480	13168	14198	14084
2021/08/24	13706	13906	14127	13233	12832	14626
2021/08/25	13502	13081	14203	12938	13732	14367
2021/08/26	13035	10572	13244	12641	12802	13299
2021/08/27	13352	13850	12000	12018	12072	12288
2021/08/28	13291	9628	11254	11980	12168	12388
2021/08/29	12115	0	12602	14368	13608	13410
2021/08/30	12001	0	12955	12915	13233	13079
2021/08/31	12218	3303	13954	13442	12556	12806

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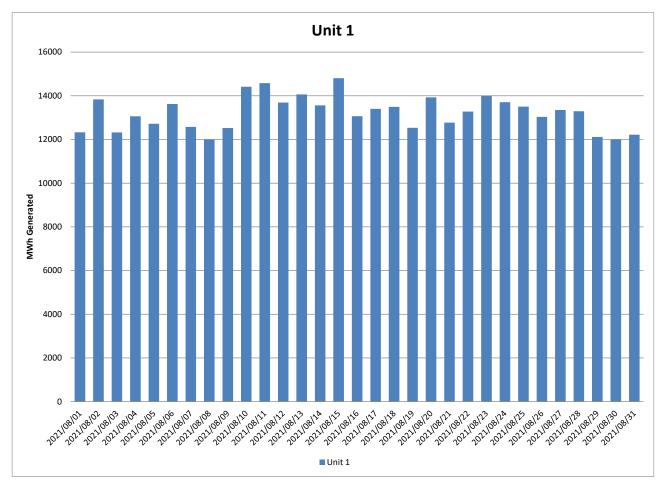


Figure 19: Unit 1 daily generated power in MWh for the month of August 2021

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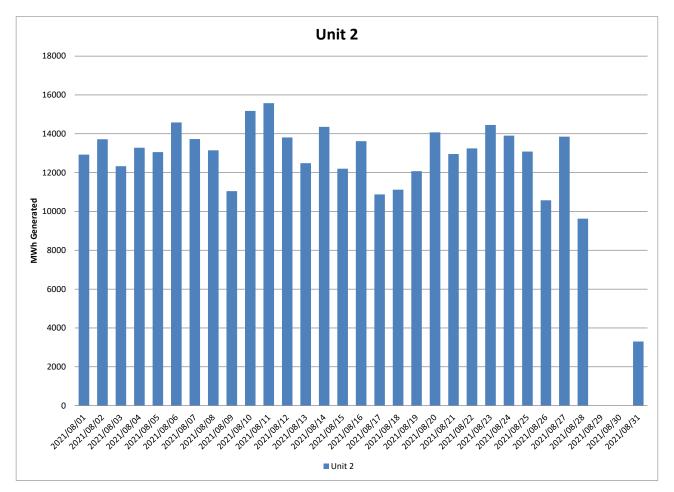


Figure 20: Unit 2 daily generated power in MWh for the month of August 2021

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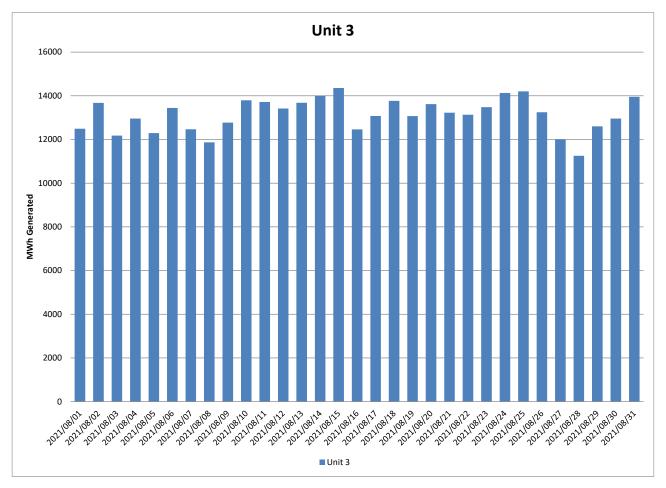


Figure 21: Unit 3 daily generated power in MWh for the month of August 2021

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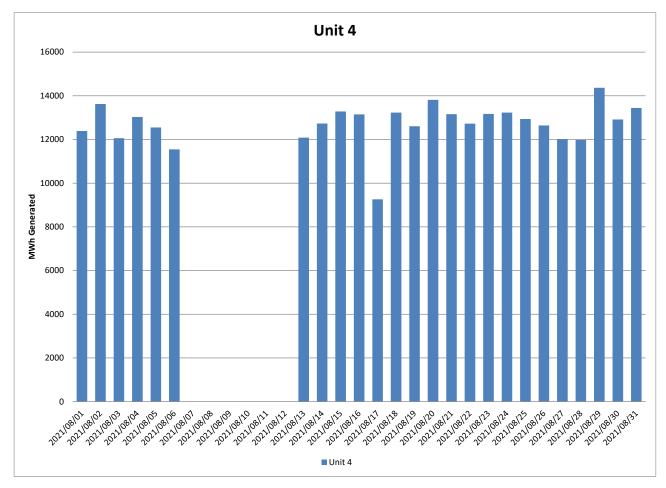


Figure 22: Unit 4 daily generated power in MWh for the month of August 2021

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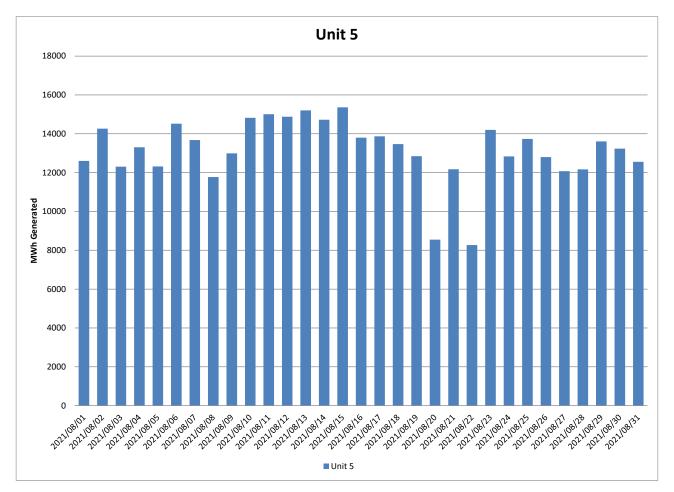


Figure 23: Unit 5 daily generated power in MWh for the month of August 2021

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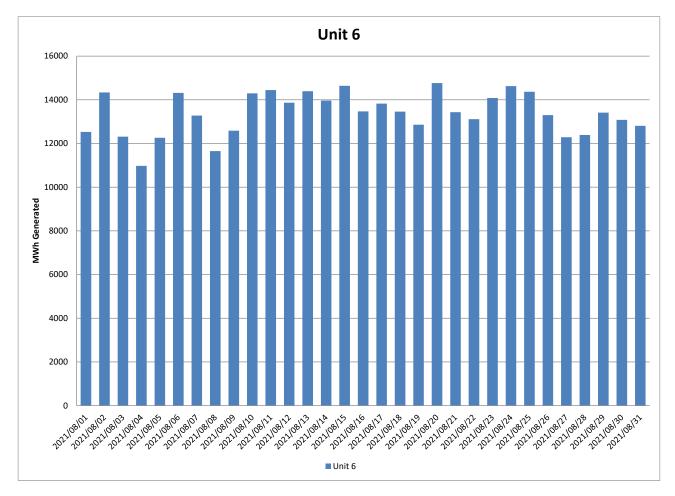


Figure 24: Unit 6 daily generated power in MWh for the month of August 2021

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## 2.6 Pollutant Tonnages

Table 6: Pollutant tonnages for the month of August 2021

Associated Unit/Stack	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>x</sub> (tons)
Unit 1	73,7	5 105,1	935,8
Unit 2	38,2	4 907,0	755,3
Unit 3	72,6	6 006,2	1 246,8
Unit 4	46,2	5 721,3	1 085,4
Unit 5	33,1	3 003,6	650,8
Unit 6	37,6	5 659,8	909,6
SUM	301,3	30 403,0	5 583,7

The emitted pollutant tonnages for August 2021 are provided in table 6. Averaged emission values were used for unit 4, 5 and 6 SOx and NOx pollutant tonnages due to the monitors being defective.

## 2.7 Reference values

Table 7: Reference values for data provided

Compound / Parameter	Units of Measure	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Oxygen	%	9,60	6,37	7,78	8,11	9,09	7,22
Moisture	%	4,55	4,77	3,86	4,22	4,95	3,18
Velocity	m/s	30,5	25,4	28,4	29,4	23,3	26,7
Temperature	°C	140,0	129,8	133,0	124,0	122,8	171,8
Pressure	mBar	938,4	877,1	919,3	912,8	932,4	923,1

Table 7 shows the reference values for the emission data provided for the month of August 2021.

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### 2.8 Continuous Emission Monitors

## 2.8.1 Reliability

Table 8: Average percentage (%) availability of monitors for the month of August 2021.

Associated Unit/Stack	РМ	SO <sub>2</sub>	NO	CO <sub>2</sub>
Unit 1	100,0	99,9	99,9	99,9
Unit 2	100,0	92,8	92,5	100,0
Unit 3	100,0	99,9	99,9	100,0
Unit 4	100,0	0,0	0,0	0,0
Unit 5	100,0	32,3	32,3	32,3
Unit 6	100,0	0,0	32,3	32,3

Gaseous emission monitor for Unit 4, Unit 5 and Unit 6 has been identified to be defective on 02 August, 24 June 2021 and 17 April 2021 respectively.

On the 13<sup>th</sup> of March 2021 a safety incident, which occurred on one of the stack lifts, led to the inspection and closure of both stack lifts until certain maintenance activities could be performed. Due to the stack lifts not being available the supplier could not access the gaseous monitors with the required equipment to perform maintenance.

The stack lifts have since been repaired and maintenance of the monitors was completed on 21 August 2021.

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## 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

- Unit 4 gaseous emission monitor was repaired on 21 August 2021.
- No downtime or repairs done on the particulate monitors

#### Unit 5

- Unit 5 gaseous emission monitor was repaired on 21 August 2021.
- No downtime or repairs done on the particulate monitors

#### Unit 6

- Unit 6 gaseous emission monitor was repaired on 21 August 2021.
- No downtime or repairs done on the particulate monitors

### 2.8.3 Sampling dates and times

#### Continuous

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# 2.9 Start-up information

Table 9: Start-up information

Unit	2	
Fires in	26-08-2021	07h38
Synchronization with Grid	26-08-2021	09h28
Emissions below limit	26-08-2021	12h00
Fires in to synchronization	1,83	HOURS
Synchronization to < Emission limit	2,53	HOURS

Unit	2	
Fires in	31-08-2021	09h29
Synchronization with Grid	31-08-2021	16h17
Emissions below limit	31-08-2021	17h05
Fires in to synchronization	6,8	HOURS
Synchronization to < Emission limit	48	MINUTES

Unit	4	
Fires in	12-08-2021	19h02
Synchronization with Grid	13-08-2021	00h13
Emissions below limit	13-08-2021	05h14
Fires in to synchronization	5,18	HOURS
Synchronization to < Emission limit	5,02	HOURS

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Unit	4	
Fires in	17-08-2021	12h50
Synchronization with Grid	17-08-2021	14h21
Emissions below limit	17-08-2021	16h00
Fires in to synchronization	1,52	HOURS
Synchronization to < Emission limit	1,65	HOURS

Unit	5	
Fires in	20-08-2021	05h04
Synchronization with Grid	20-08-2021	09h37
Emissions below limit	20-08-2021	11H00
Fires in to synchronization	4,55	HOURS
Synchronization to < Emission limit	1,38	HOURS

Unit	5	
Fires in	22-08-2021	15h44
Synchronization with Grid	22-08-2021	19h15
Emissions below limit	22-08-2021	20H00
Fires in to synchronization	3,52	HOURS
Synchronization to < Emission limit	45	MINUTES

Unit	6	
Fires in	04-08-2021	19h11
Synchronization with Grid	04-08-2021	21h05

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Emissions below limit	04-08-2021	21h05
Fires in to synchronization	1,9	HOURS
Synchronization to < Emission limit	0	HOURS

## 2.10 Emergency generation

Table 10: Emergency generation

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Emergency Generation hours declared by national Control	249	256	256	108	256	244
Emergency Hours declared including hours after stand down	275	282	282	108	282	270
Days over the Limit during Emergency Generation	3	6	1	0	7	9

Unit 1 particulate emissions exceeded the 50mg/Nm³ emission limit during emergency generation on 7, 8 and 26 August 2021. Unit 2 particulate emissions exceeded the 50mg/Nm³ emission limit during emergency generation on 14, 21, 26, 27, 28 and 29 August 2021. Unit 3 particulate emissions exceeded the 50mg/Nm³ emission limit during emergency generation on 18 August 2021. Unit 5 particulate emissions exceeded the 50mg/Nm³ emission limit during emergency generation on 14, 15, 17, 18, 19, 20 and 21 August 2021. Unit 6 particulate emissions exceeded the 50mg/Nm³ emission limit during emergency generation on 8, 10, 15, 18, 19, 22, 23, 24 and 28 August 2021. Detailed emission information for particulate emissions can be found on figures 1 to 6.

## 2.11 Complaints register

Table 11: 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
None					

## 2.12 Air quality improvements and social responsibility conducted

## 2.12.1 Air quality improvements

None

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## 2.12.2 Social responsibility conducted

None

# 2.13 Ambient air quality monitoring

One exceedances of the  $SO_2$  10-minute limit, six exceedances of the  $PM_{2.5}$  daily limit and ten exceedances of the  $PM_{10}$  daily limit were noted. No other parameters exceeded the set limits during the monitoring period.

Ambient CO, PM2.5, PM10 and NO2 concentrations at Marapong monitoring site show influence of emissions from low level sources in the area while ambient Hg show influence of emissions from low level sources, tall stack emitters and other industrial activities. Ambient SO2 concentrations show influence of emissions from tall stack emitters and other industrial activities.

The average data recovery for the period was 51% and the station availability was 64,5%.

Detailed results can be found in Attachment 1, "Marapong monthly Report\_August 2021".

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# 2.14 Electrostatic precipitator and Sulphur plant status

#### Unit 1

- All precipitator fields in service.
- No abnormalities on the SO3 plant. Preventative maintenance done during the month.

#### Unit 2

- All precipitator fields in service.
- No abnormalities on the SO3 plant. Preventative maintenance done during the month.

#### Unit 3

- 2 out of 32 precipitator fields is out of service. Repairs will be done during the next opportunity outage.
- No abnormalities on the SO3 plant. Preventative maintenance done during the month.

### Unit 4

- 6 out of 32 precipitator fields is out of service.
- No abnormalities on the SO3 plant. Preventative maintenance done during the month.

#### Unit 5

- All precipitator fields in service.
- No abnormalities on the SO3 plant. Preventative maintenance done during the month.

#### Unit 6

- All precipitator fields in service.
- No abnormalities on the SO3 plant. 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 method 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

Marapong monthly Report\_August 2021

# 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

2021/10/14

GENERAL MANAGER: MATIMBA POWER STATION

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