

 Eskom	Matimba Power Station Emissions report	Matimba Power Station
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emissions report**

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Functional Area
Applicability: **Environment**

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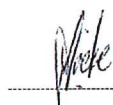
Report Date: **October 2021**

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Classification: **Controlled**

Compiled by

Functional Responsibility

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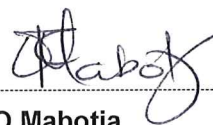
WC Mocke
Environmental Officer

Date: 2021/10/28



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Date: 29/10/2021



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Date: 2021/10/29

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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 June 2021.



Due to recommendations received from an internal emission data review the Matimba Power Station June 2021 emissions report was reviewed.

Changes were made to correlation curves which were incorrectly captured and averaged Quality Assurance level 2 (QAL2) test data was used where raw data was unreliable.

These changes influenced the pollutant tonnages and the monitor reliability reported in the revision 1 of the report. The influenced data has been updated and is provided in the specific sections in the report

During the period under review, Matimba experienced ten exceedances of the daily particulate matter emission limit ($50\text{mg}/\text{Nm}^3$). One exceedance resulted in a section 30 incident being reported. Other exceedances remained within the 48 hour grace period. No exceedances of the monthly SO_x limit ($3500\text{mg}/\text{Nm}^3$) or the daily NO_x limit ($750\text{ mg}/\text{Nm}^3$) occurred.

The Gaseous emission (SO_x and NO_x) monitors for unit 5 and unit 6 is currently not in service. The repairs of the monitors are currently on progress.

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	1 262 552
	Fuel Oil	Tons/month	1 200	782,6
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Production Rate
	Energy	GWh	4 212.6	2 127,73

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

2.2 Abatement technology

Table 2: Abatement Equipment Control Technology Utilised

Associated Unit	Technology Type	Minimum utilisation (%)	Actual Utilisation (%)
Unit 1	Electrostatic Precipitator	100%	99,9%
Unit 2	Electrostatic Precipitator	100%	99,9%
Unit 3	Electrostatic Precipitator	100%	99,9%
Unit 4	Electrostatic Precipitator	100%	99,9%
Unit 5	Electrostatic Precipitator	100%	99,9%
Unit 6	Electrostatic Precipitator	100%	99,9%
Associated Unit	Technology Type	Minimum utilisation (%)	Actual Utilisation (%)
Unit 1	SO ₃ Plant	100%	96,7%
Unit 2	SO ₃ Plant	100%	96,7%
Unit 3	SO ₃ Plant	100%	100%
Unit 4	SO ₃ Plant	100%	100%
Unit 5	SO ₃ Plant	100%	100%
Unit 6	SO ₃ Plant	100%	90%

Sulphur plant availability was below the required 100% for unit 1, unit 2 and unit 6 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%	1,11%
	Ash Content	30-40%	34,76%

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

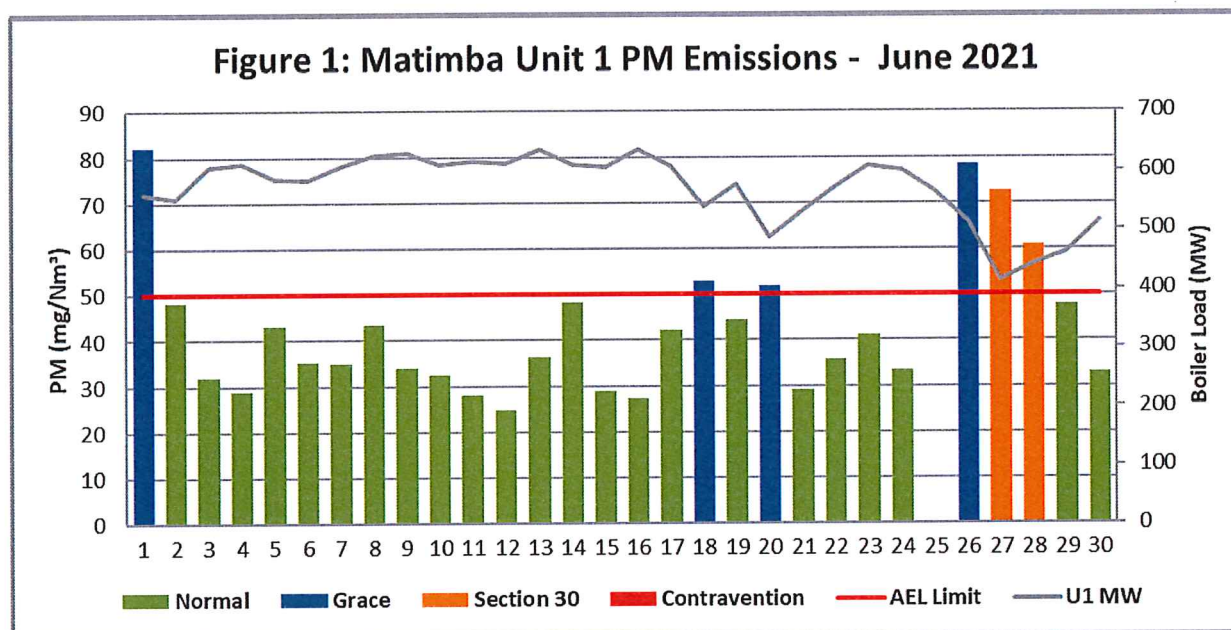


Figure 1: Particulate matter daily average emissions against emission limit for unit 1 for the month of June 2021

Interpretation:

Unit 1 exceeded the daily limit of 50mg/Nm³ on 1, 18, 20 and 26 to 28 June 2021. The 48-hour grace period was exceeded on the 27th of June 2021 after a unit start-up. The exceedances were due to breakdowns experienced on the dust handling plant. The incident has been reported as a section 30 incident to the department on 28 June 2021. The plant was repaired and emissions returned to below the limit on 29 June 2021.

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Unit 2 Particulate Emissions

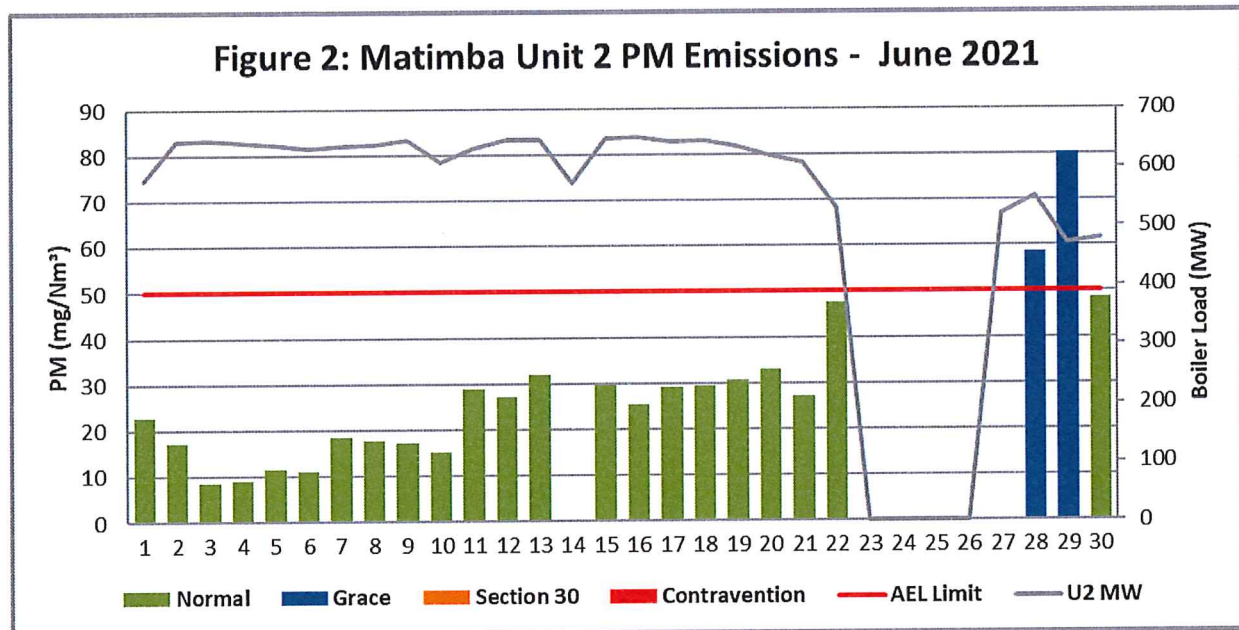


Figure 2: Particulate matter daily average emissions against emission limit for unit 2 for the month of June 2021

Interpretation:

Unit 2 PM emissions exceeded the limit of 50mg/Nm³ 28, 29 and 30 June 2021. The exceedance did not exceed the 48-hour grace period. The exceedances was due to breakdowns experienced on the ash handling plant.

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Unit 3 Particulate Emissions

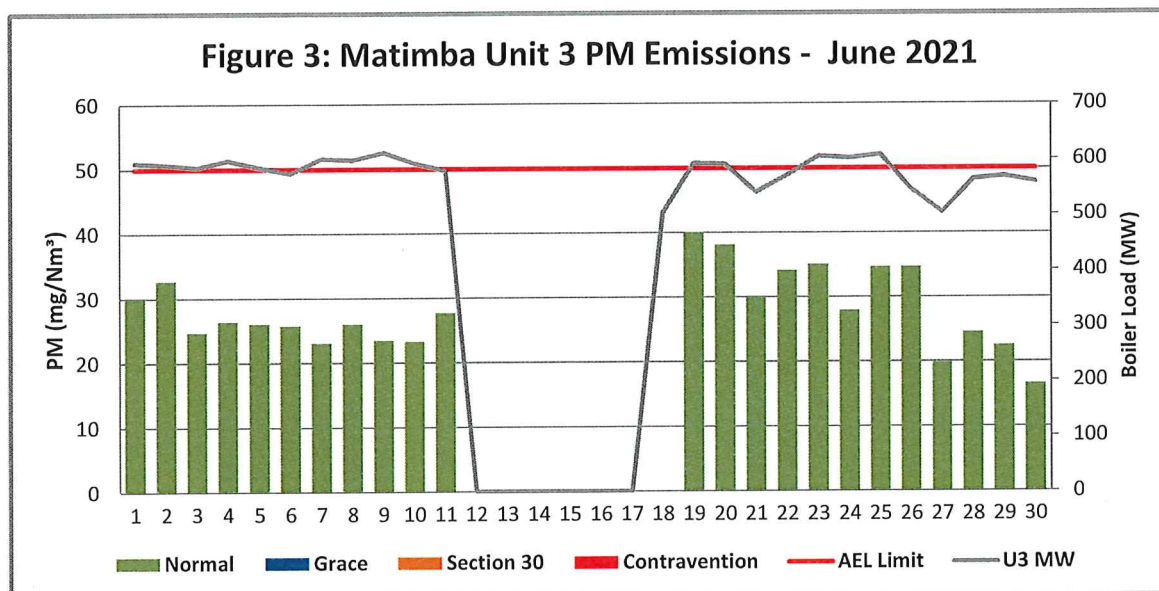


Figure 3: Particulate matter daily average emissions against emission limit for unit 3 for the month of June 2021

Interpretation:

All daily averages below particulate emission limit of 50 mg/Nm³.

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Unit 4 Particulate Emissions

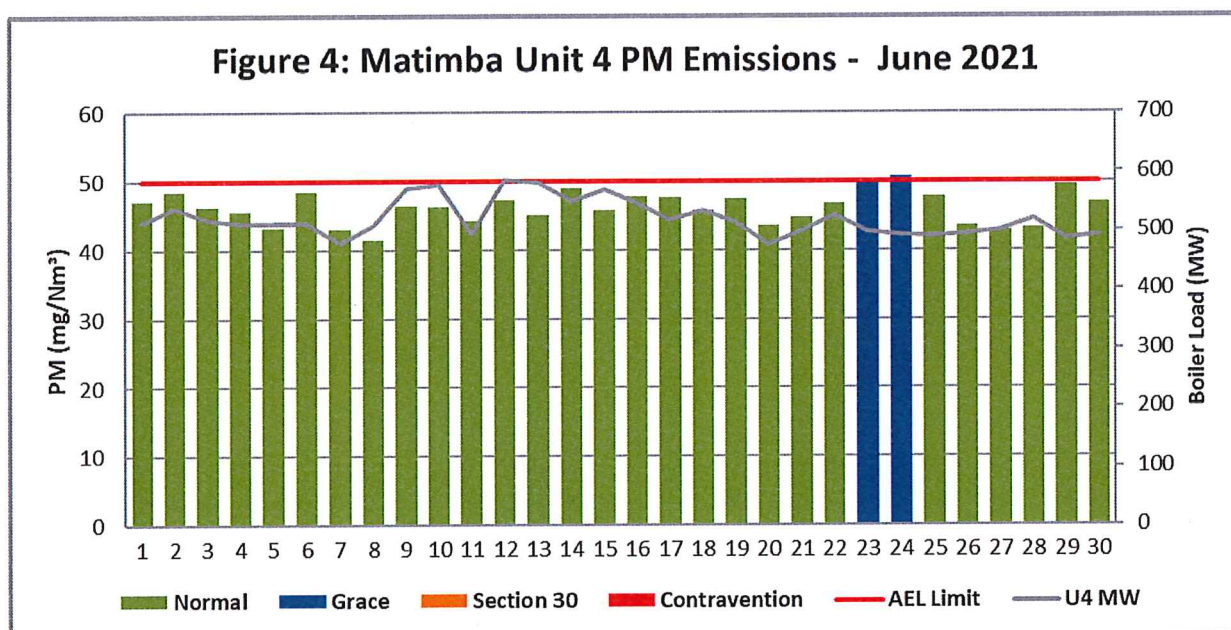


Figure 4: Particulate matter daily average emissions against emission limit for unit 4 for the month of June 2021

Interpretation:

Unit 4 exceeded the particulate emission limit of 50 mg/Nm³ on 23 and 24 June 2021. The exceedances were due to defects on the ash handling plant. The plant was repaired and emissions returned to normal. The exceedances did not exceed the 48-hour grace period.

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Unit 5 Particulate Emissions

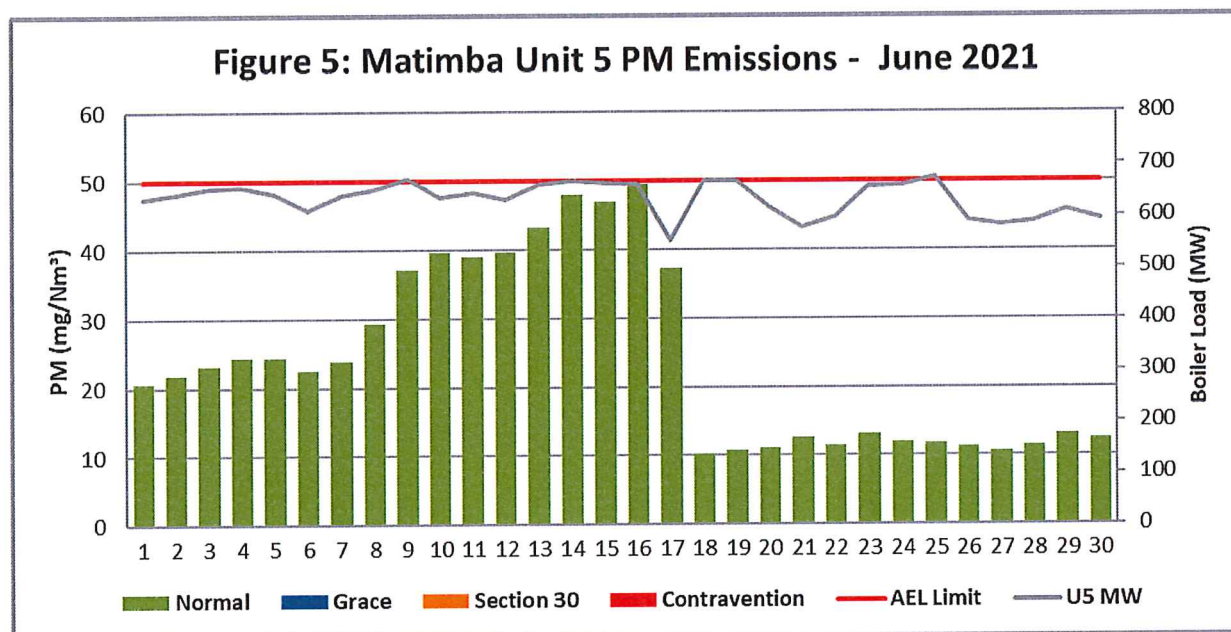


Figure 5: Particulate matter daily average emissions against emission limit for unit 5 for the month of June 2021

Interpretation:

All daily averages below particulate emission limit of 50 mg/Nm³. Increased emissions were experienced from 8 to 17 June 2021. It was determined that the increase in emissions were due to ash build-up on the emission monitor optical lens. The lens was cleaned and emission readings reduced from 18 June 2021 onwards.

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Unit 6 Particulate Emissions

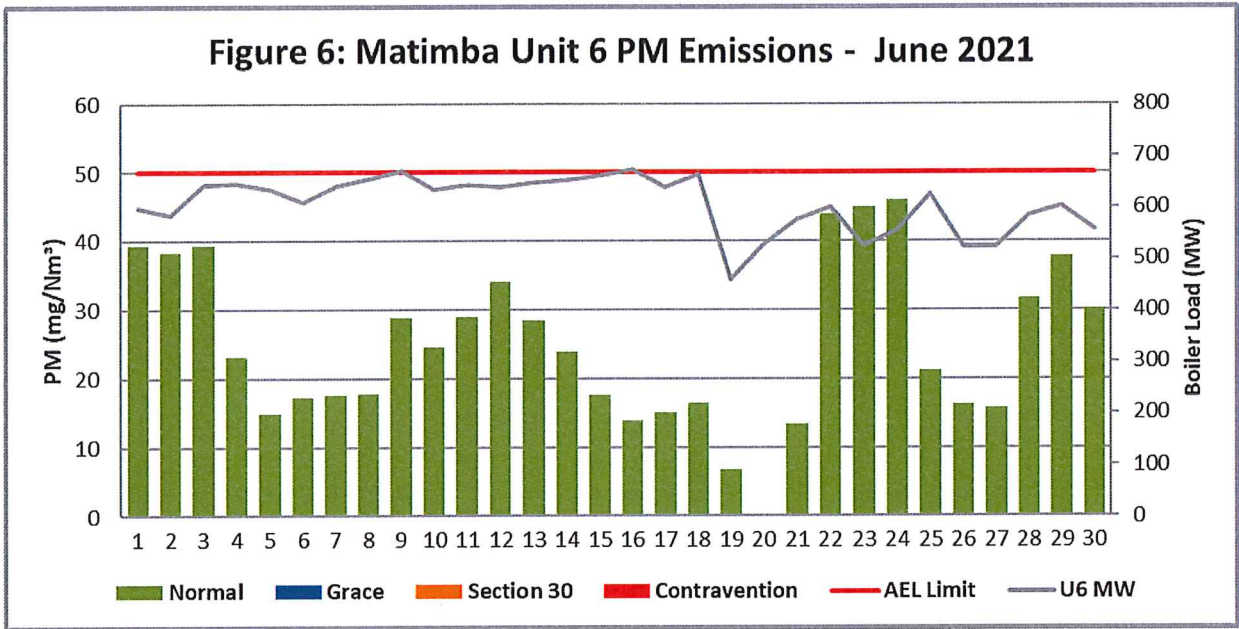


Figure 6: Particulate matter daily average emissions against emission limit for unit 6 for the month of June 2021

Interpretation:

All daily averages below particulate emission limit of 50 mg/Nm³.

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2.4.2 Gaseous Emissions

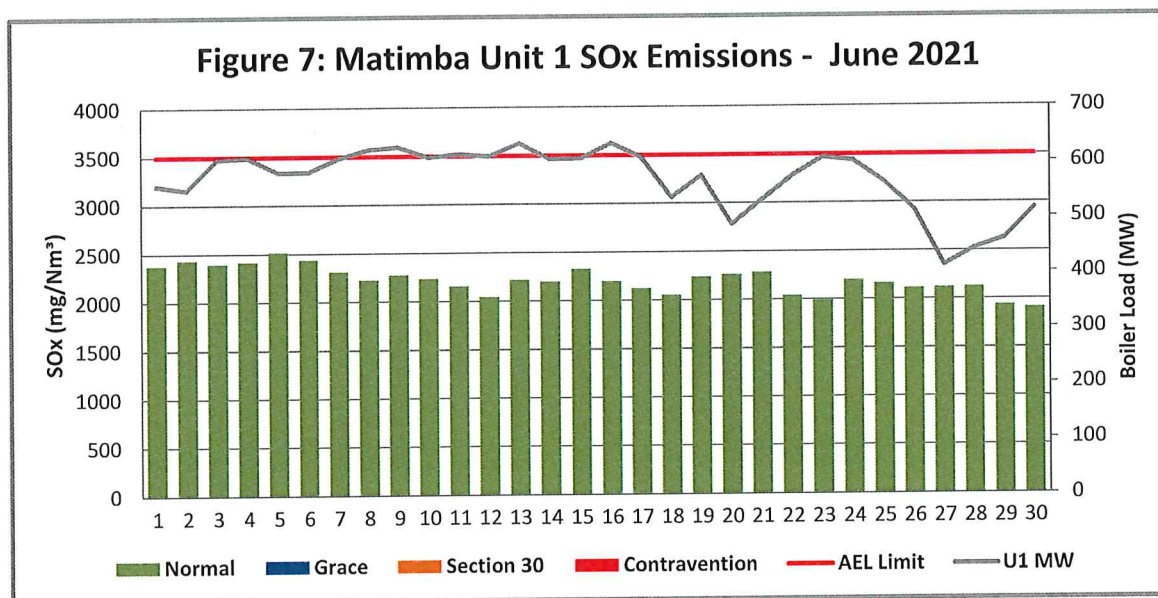
Unit 1 SO₂ Emissions

Figure 7: SO₂ daily average emissions against emission limit for unit 1 for the month of June 2021

Interpretation:

All daily averages below SO₂ emission monthly limit of 3500 mg/Nm³.

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Unit 2 SO₂ Emissions

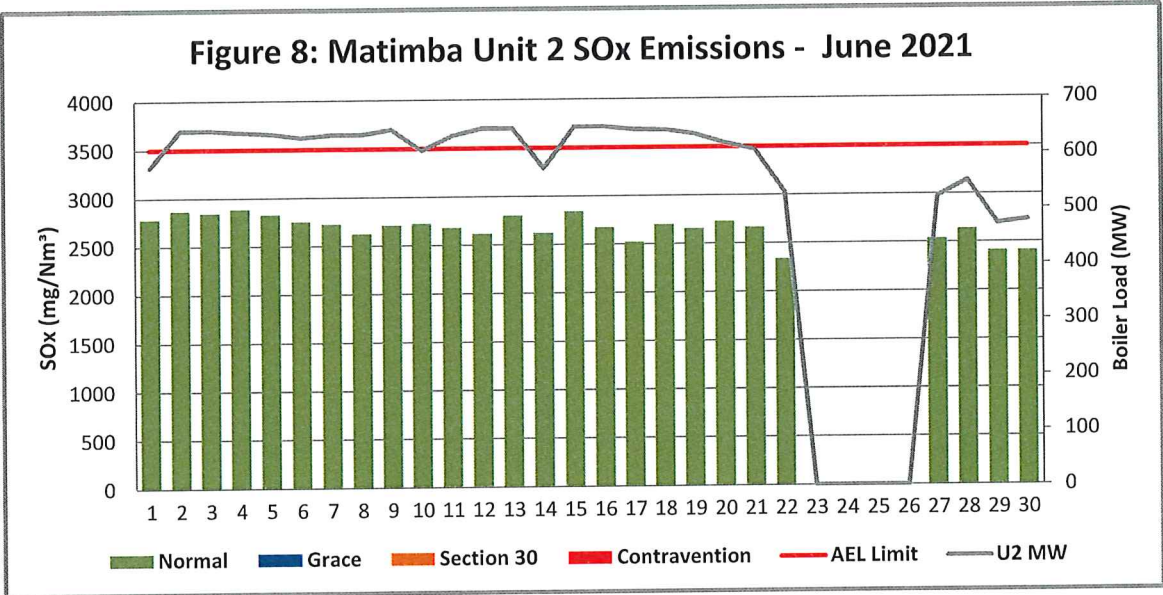


Figure 8: SO₂ daily average emissions against emission limit for unit 2 for the month of June 2021

Interpretation:

All daily averages below SO₂ emission monthly limit of 3500 mg/Nm³.

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Unit 3 SO₂ Emissions

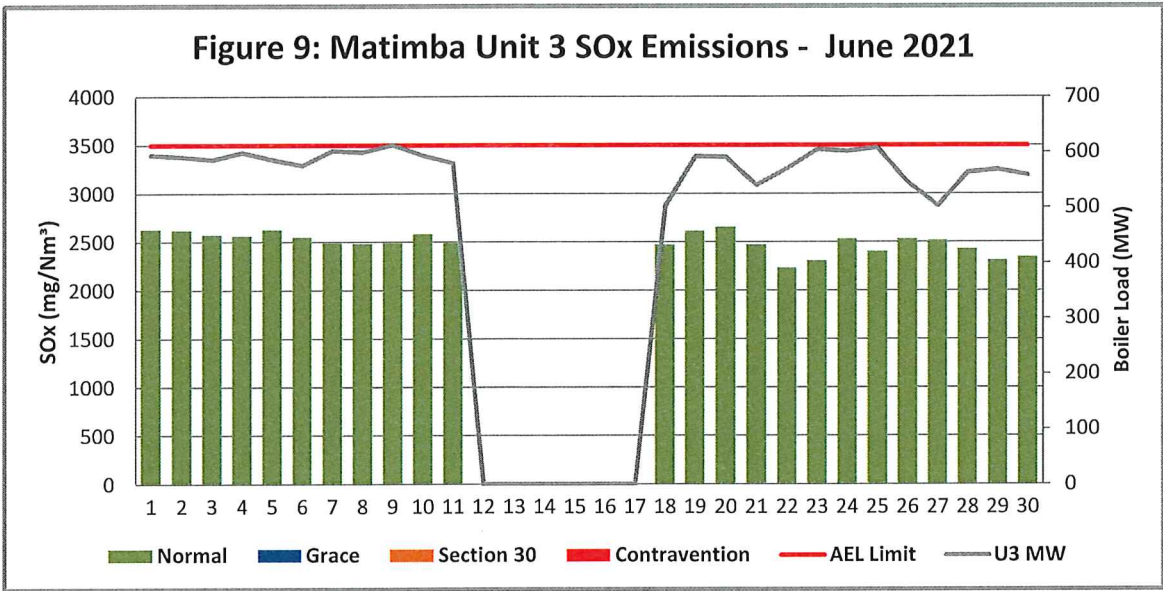


Figure 9: SO₂ daily average emissions against emission limit for unit 3 for the month of June 2021

Interpretation:

All daily averages below SO₂ emission monthly limit of 3500 mg/Nm³.

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Unit 4 SO₂ Emissions

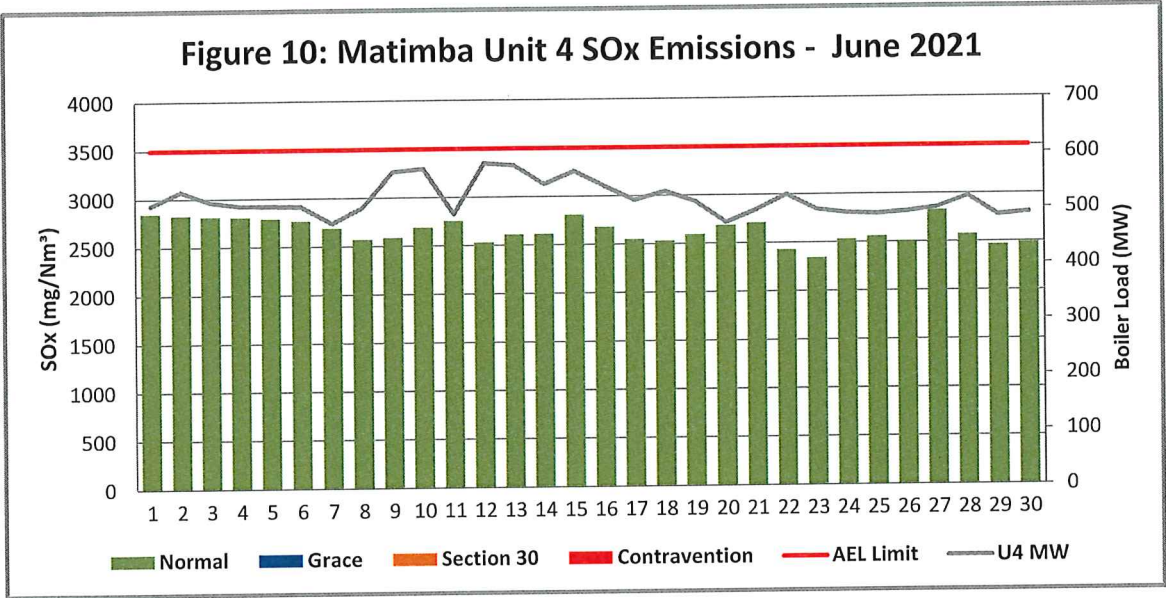


Figure 10: SO₂ daily average emissions against emission limit for unit 4 for the month of June 2021

Interpretation:

All daily averages below SO₂ emission monthly limit of 3500 mg/Nm³.

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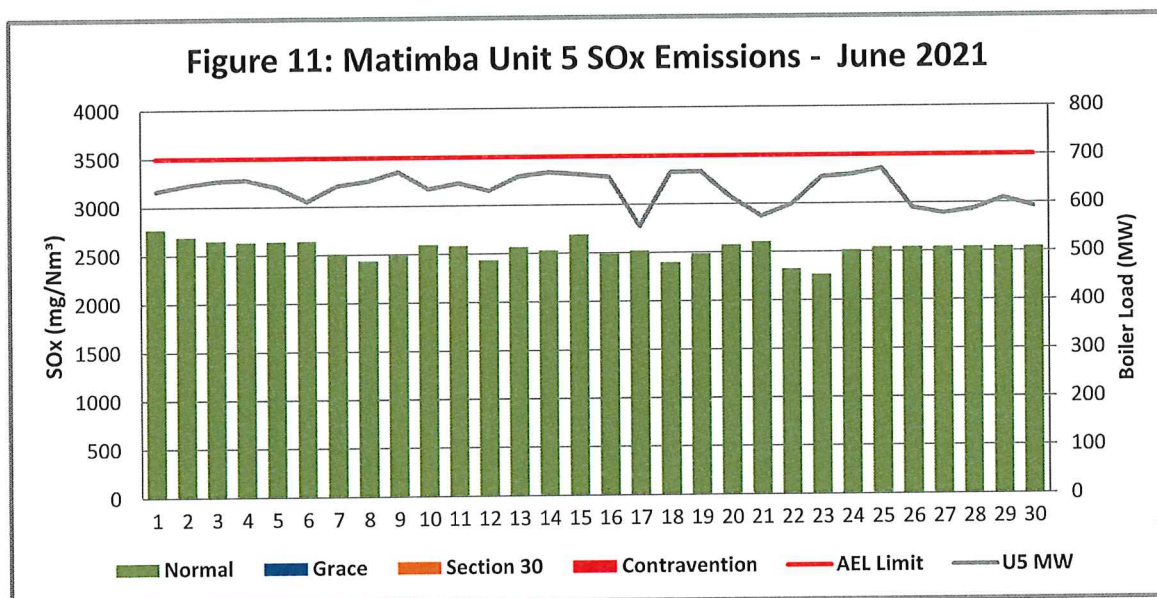
Unit 5 SO₂ Emissions

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

Interpretation:

All daily averages below SO₂ emission monthly limit of 3500 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. The suspected cause for the failure is water ingress on the monitor. The monitor is currently being repaired and the water is being drained. Averaged values were used from 24 to 30 June 2021 for SO_x reporting.

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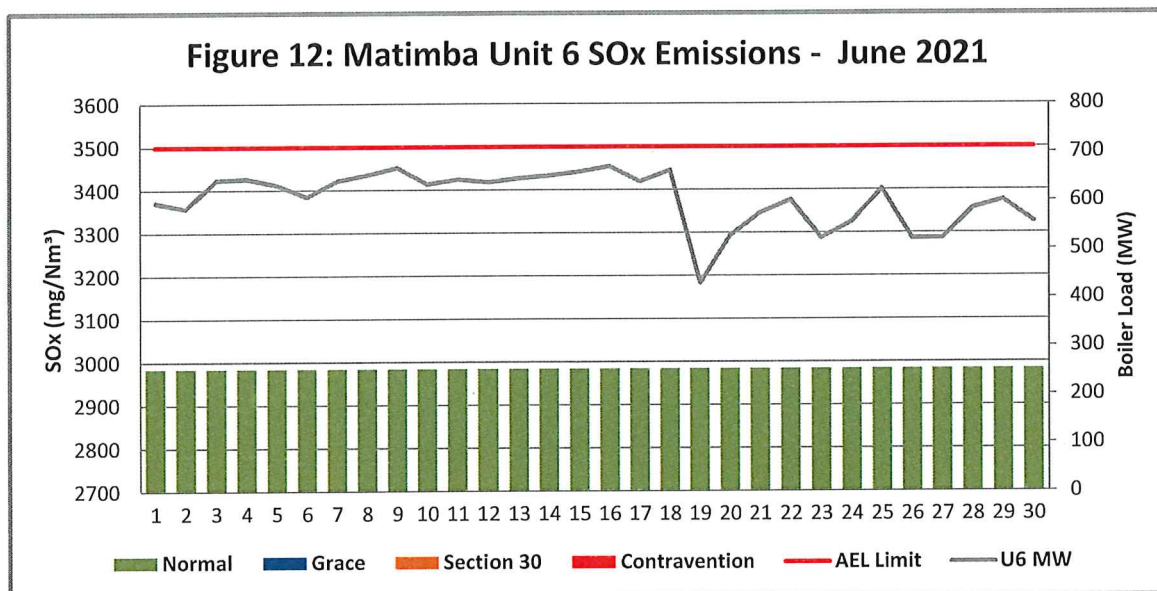
Unit 6 SO₂ Emissions

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

Interpretation:

As per the notification sent to your office on the 4th of June 2021, the Gaseous emission monitor for unit 6 has been defective since the 17th of April 2021. The supplier was notified, however, could not access the monitor for repairs due to defects on the stack lift causing a safety risk. The lifts were repaired and the repair of the monitor is in progress. Averaged gaseous emission data from the QAL 2 test report was used to report gaseous emissions for unit 6.

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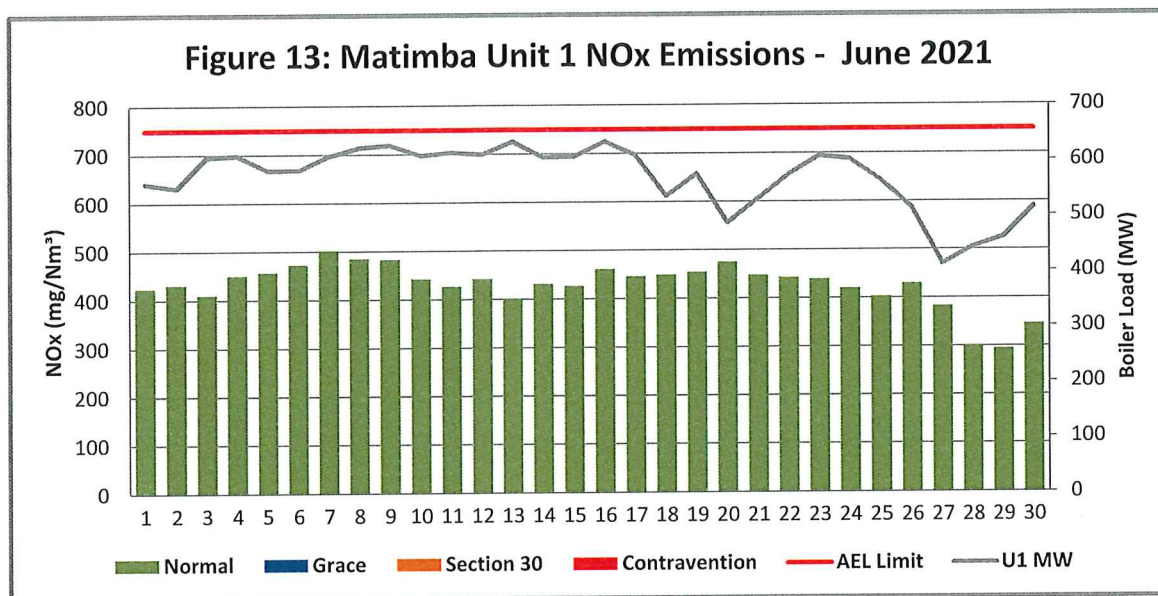
Unit 1 NO_x Emissions

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

Interpretation:

All daily averages below NO_x emission limit of 750 mg/Nm³.

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Unit 2 NO_x Emissions

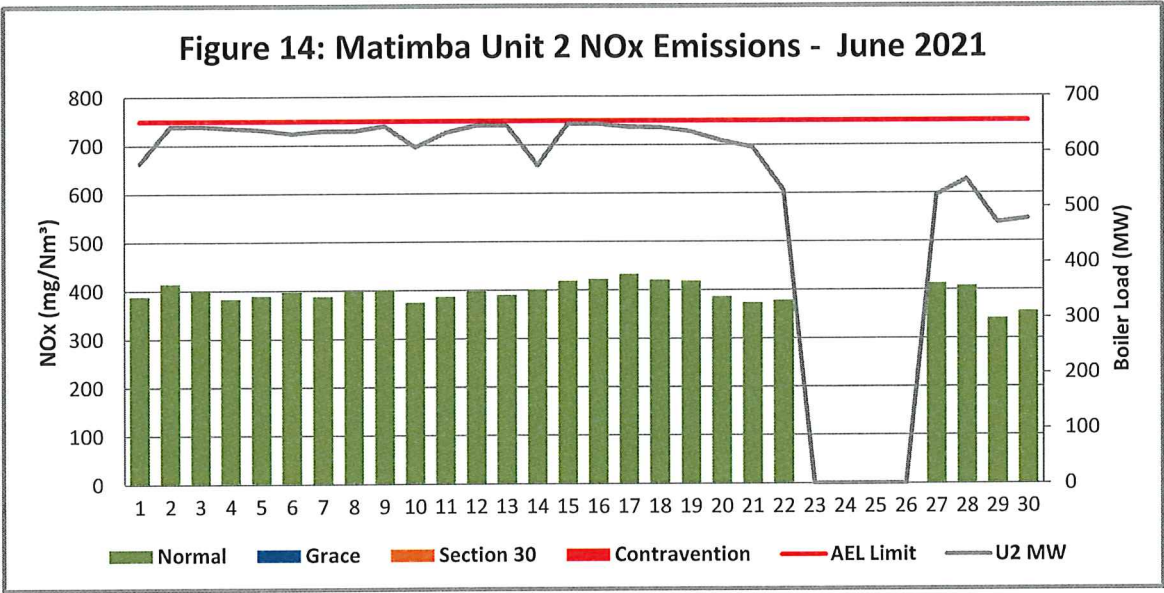


Figure 14: NO_x daily average emissions against emission limit for unit 2 for the month of June 2021

Interpretation:

All daily averages below NO_x emission limit of 750 mg/Nm³.

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Unit 3 NO_x Emissions

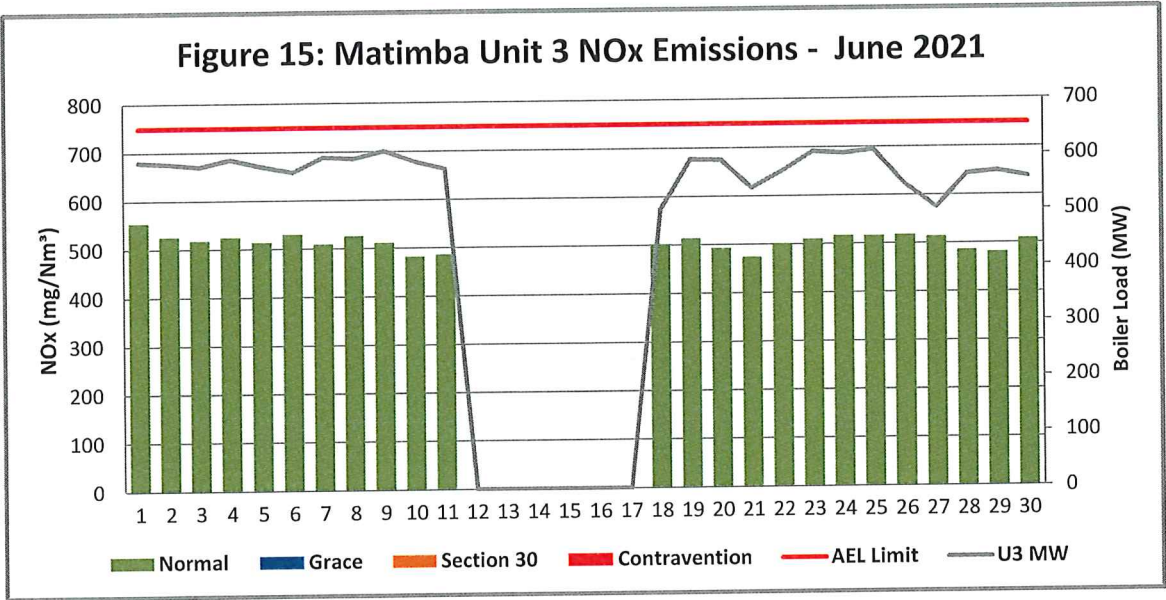


Figure 15: NO_x daily average emissions against emission limit for unit 3 for the month of June 2021

Interpretation:

All daily averages below NO_x emission limit of 750 mg/Nm³.

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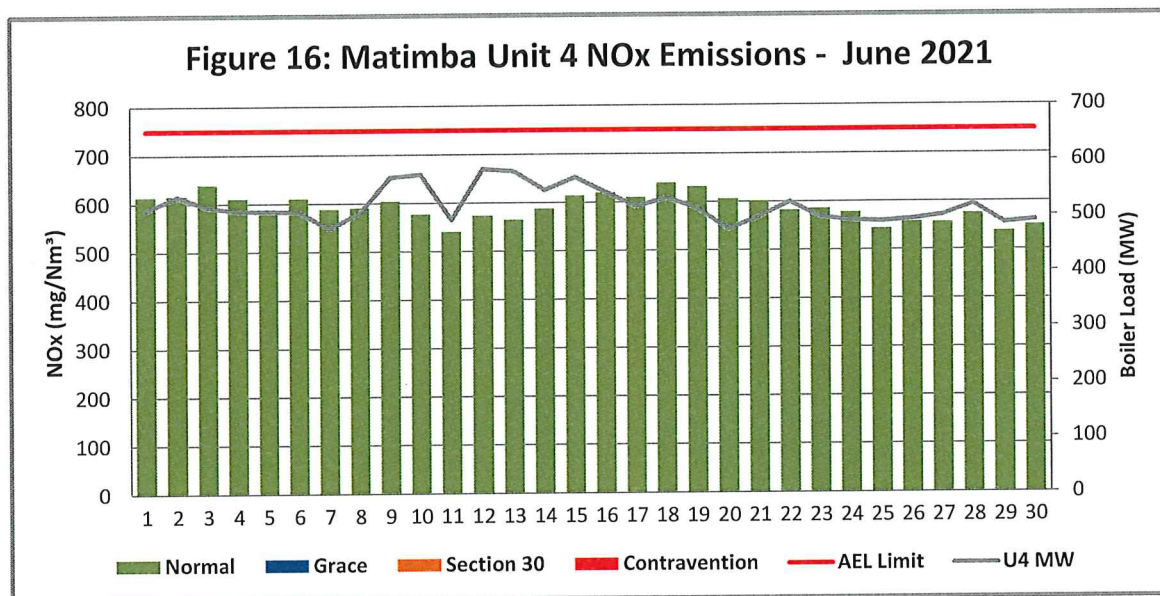
Unit 4 NO_x Emissions

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

Interpretation:

All daily averages below NO_x emission limit of 750 mg/Nm³.

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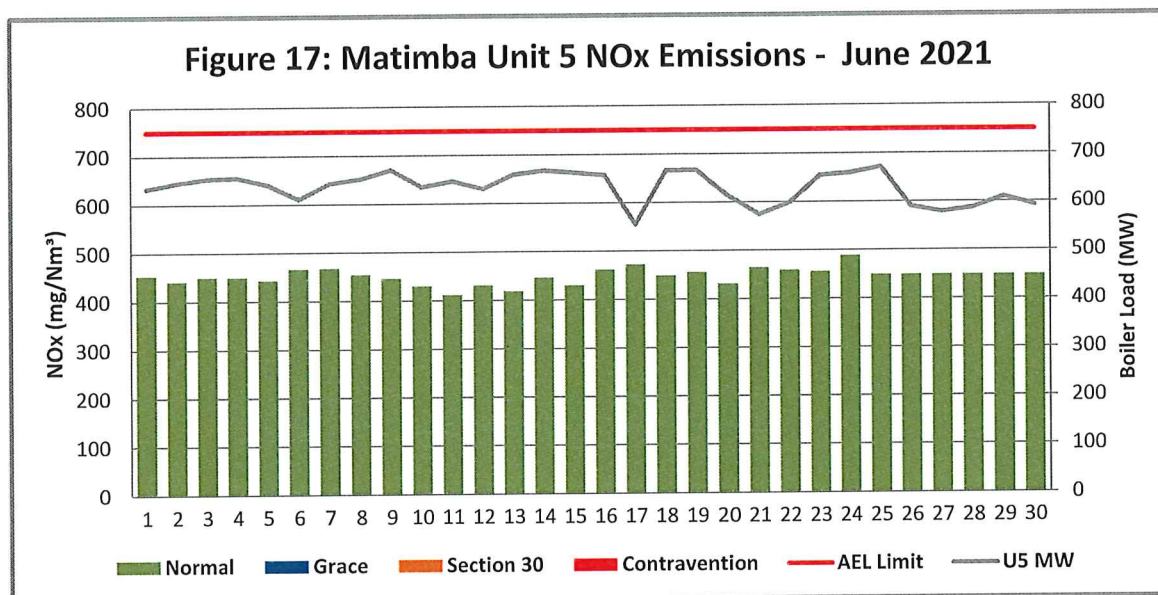
Unit 5 NO_x Emissions

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

Interpretation:

All daily averages below NO_x emission 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. The suspected cause for the failure is water ingress on the monitor. The monitor is currently being repaired and the water is being drained. Averaged values were used from 24 to 30 June 2021 for NO_x reporting.

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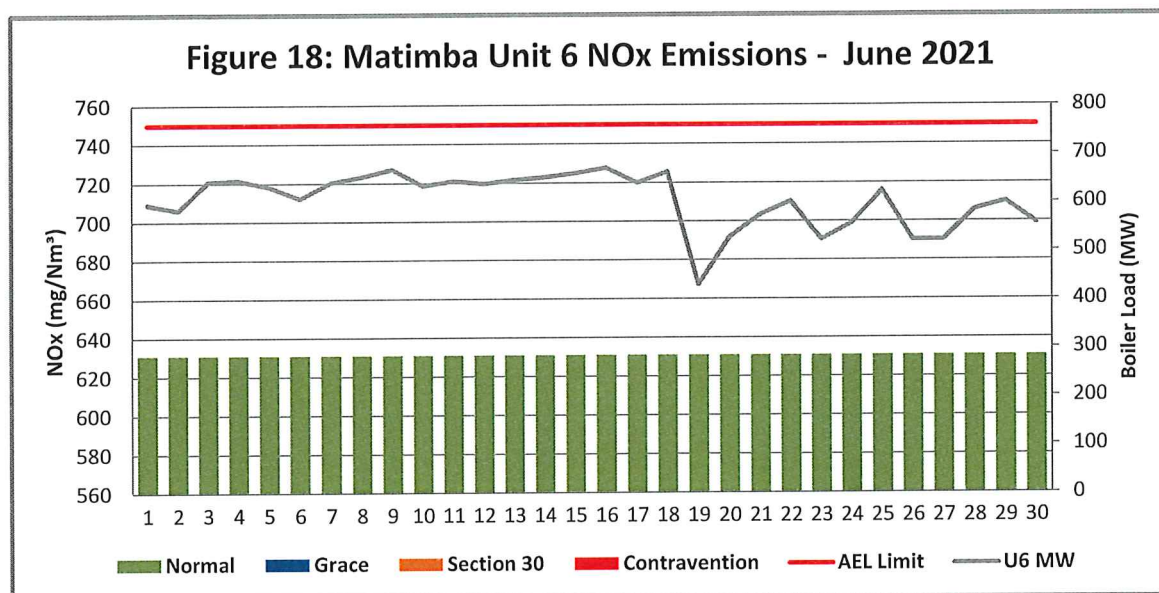
Unit 6 NO_x Emissions

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

Interpretation:

As per the notification sent to your office on the 4th of June 2021, the Gaseous emission monitor for unit 6 has been defective since the 17th of April 2021. The supplier was notified, however, could not access the monitor for repairs due to defects on the stack lift causing a safety risk. The lifts were repaired and the repair of the monitor is in progress. Averaged gaseous emission data from the QAL 2 test report was used to report gaseous emissions for unit 6.


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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, 27 July 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	
<p align="center">MONTHLY INPUT DATA FOR THE STATION</p> <p align="center">Please only insert relevant monthly data inputs into the blue cells below</p> <p align="center">Choose from a dropdown menu in the green cells</p> <p align="center">The total VOC emissions for the month are in the red cells</p> <p align="center">IMPORTANT: Do not change any other cells without consulting the AQ CoE</p>		
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:	782,595	
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 absorbance	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
<p>*Calculations performed on this spreadsheet are taken from the USEPA AP-42- Section 7.1 Organic Liquid Storage Tanks - January 1996. This spreadsheet is derived from materials provided by Jimmy Peress, PE, 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.</p>		

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2.4.4 Greenhouse gas (CO₂) emissions

CO₂ 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 June 2021

Date	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
2021/06/01	13441,3	13725,9	14223,5	12209	15084,8	14176,8
2021/06/02	13257,1	15298,3	14128,9	12841	15300,4	13863,6
2021/06/03	14547,9	15300,9	13985	12372	15546,6	15280,3
2021/06/04	14664,1	15233,2	14310,7	12173	15581,9	15387,4
2021/06/05	14044,5	15148	13985,4	12170	15254,4	15110,7
2021/06/06	14017	15018,1	13779,9	12176	14536,8	14477,3
2021/06/07	14594,7	15097,7	14358,1	11350	15246,9	15231,7
2021/06/08	14995,4	15121,5	14331,9	12083	15504,7	15541,2
2021/06/09	15111,9	15334	14648,9	13585	15972	15924,1
2021/06/10	14640,3	14411,9	14189,5	13766	15093,3	15098,9
2021/06/11	14754,3	14998,9	13362,4	11734	15353,1	15286,6
2021/06/12	14684,3	15321,3	0	13946	15001,3	15185,3
2021/06/13	15247,3	9048,6	0	13884	15707	15397,4
2021/06/14	14609,2	7909,33	0	13084	15857,6	15480,1
2021/06/15	14527,5	15392,5	0	13538	15766,7	15704,5
2021/06/16	15259,1	15401,6	0	12968	15696,7	15979,6
2021/06/17	14605,2	15239,2	0	12312	13148,1	15185,1
2021/06/18	12921,7	15262,6	10176,2	12690	15853	15796,8
2021/06/19	13812,5	15049,3	14113,1	12223	15873,1	720,933
2021/06/20	11704,5	14656,3	14110,9	11299	14624,7	8556,4
2021/06/21	12747,9	14354,8	12926,1	11841	13688,4	13673,6
2021/06/22	13743,9	12384,3	13579,3	12501	14207,8	14256,6
2021/06/23	14585,9	0	14462,1	11858	15577,8	12445,2
2021/06/24	11864,4	0	14334,9	11738	15657,5	13181,6
2021/06/25	12308,6	0	14537,6	11689	16005,9	14870,4
2021/06/26	12324,3	0	13038,8	11771	14027,3	12390,3
2021/06/27	9939,8	10036,2	12006,1	11954	13808,7	12398,7
2021/06/28	10592,9	13035,7	13446,5	12398	13956,9	13866,9
2021/06/29	11053,6	11146,8	13575,5	11571	14498,8	14297,4
2021/06/30	12370,7	11306,4	13331,9	11694	14093,7	13235,7

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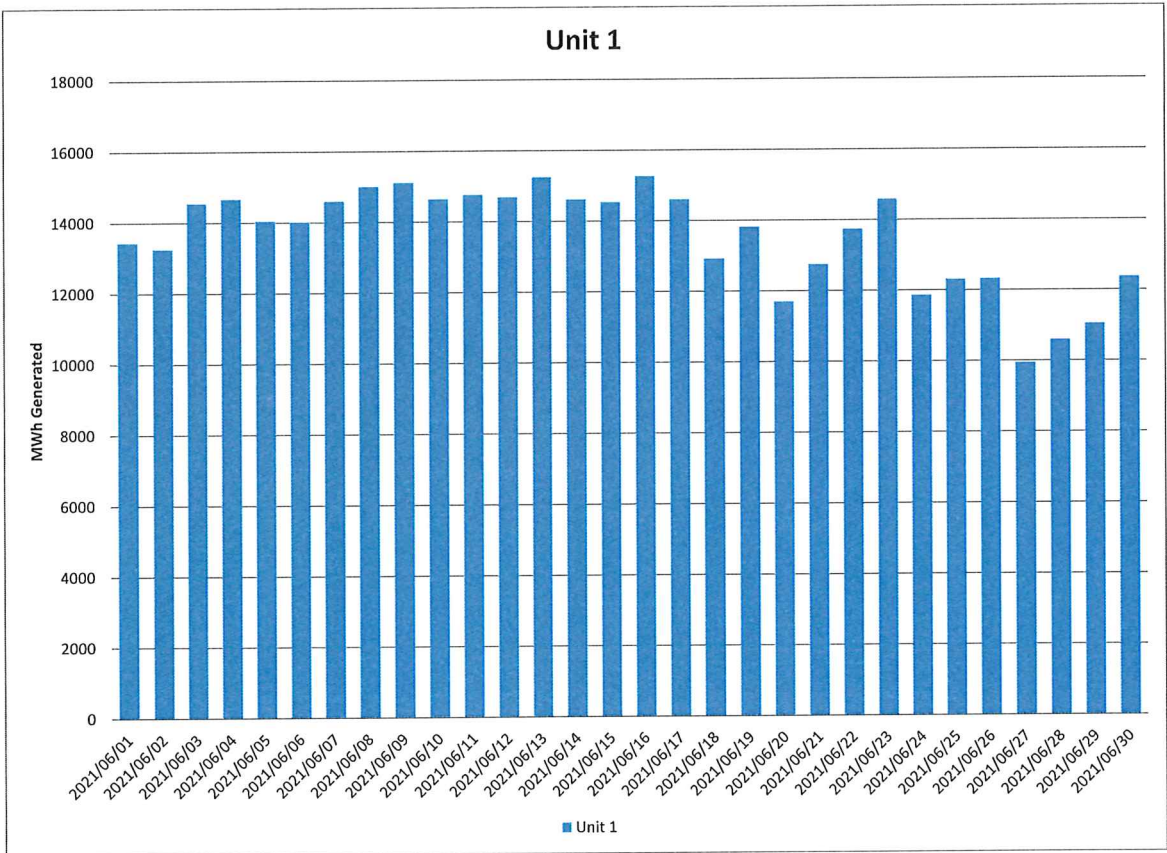


Figure 19: Unit 1 daily generated power in MWh for the month of June 2021

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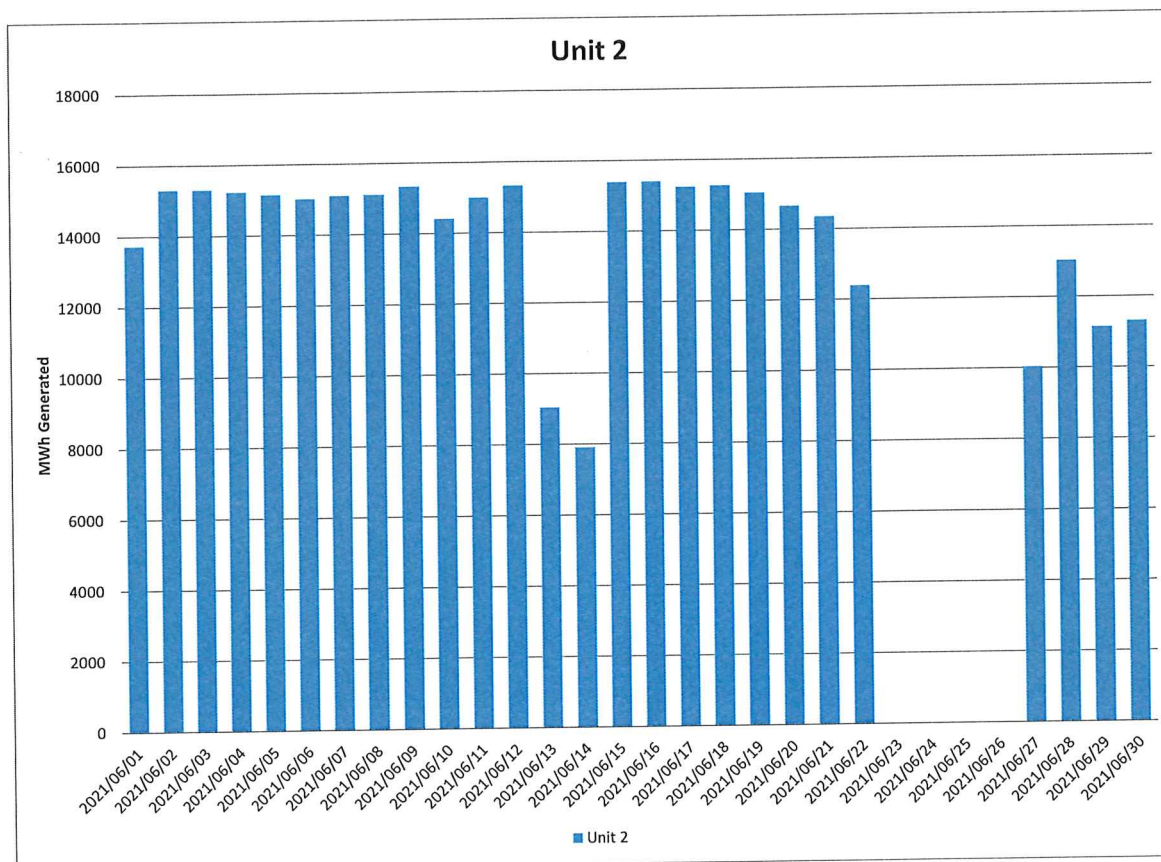


Figure 20: Unit 2 daily generated power in MWh for the month of June 2021

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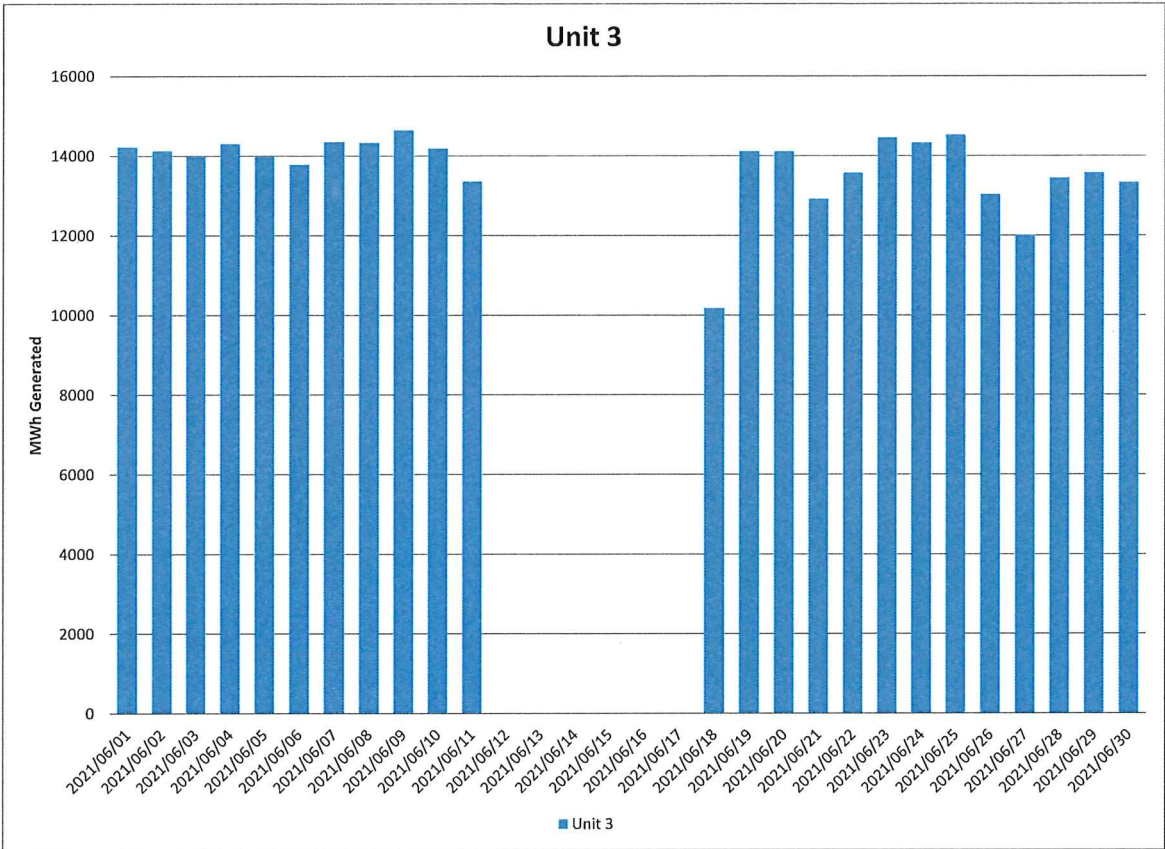


Figure 21: Unit 3 daily generated power in MWh for the month of June 2021

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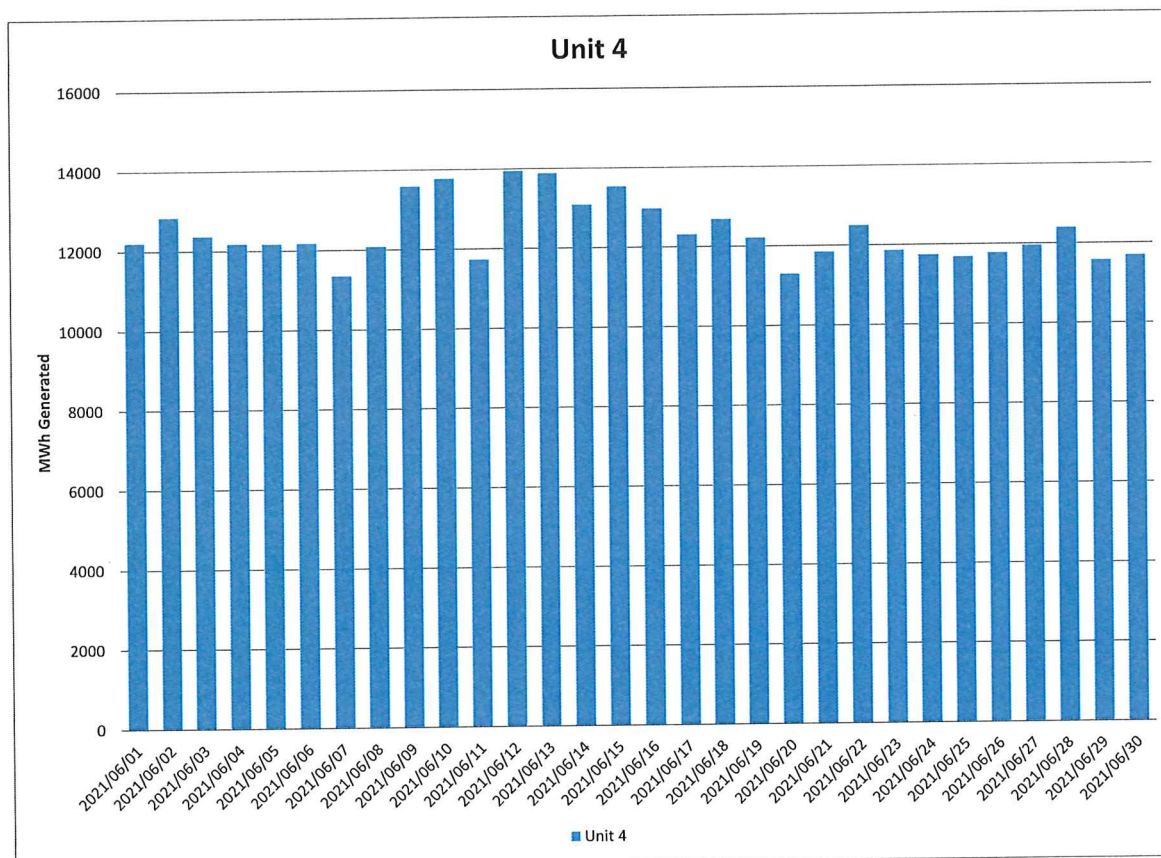


Figure 22: Unit 4 daily generated power in MWh for the month of June 2021

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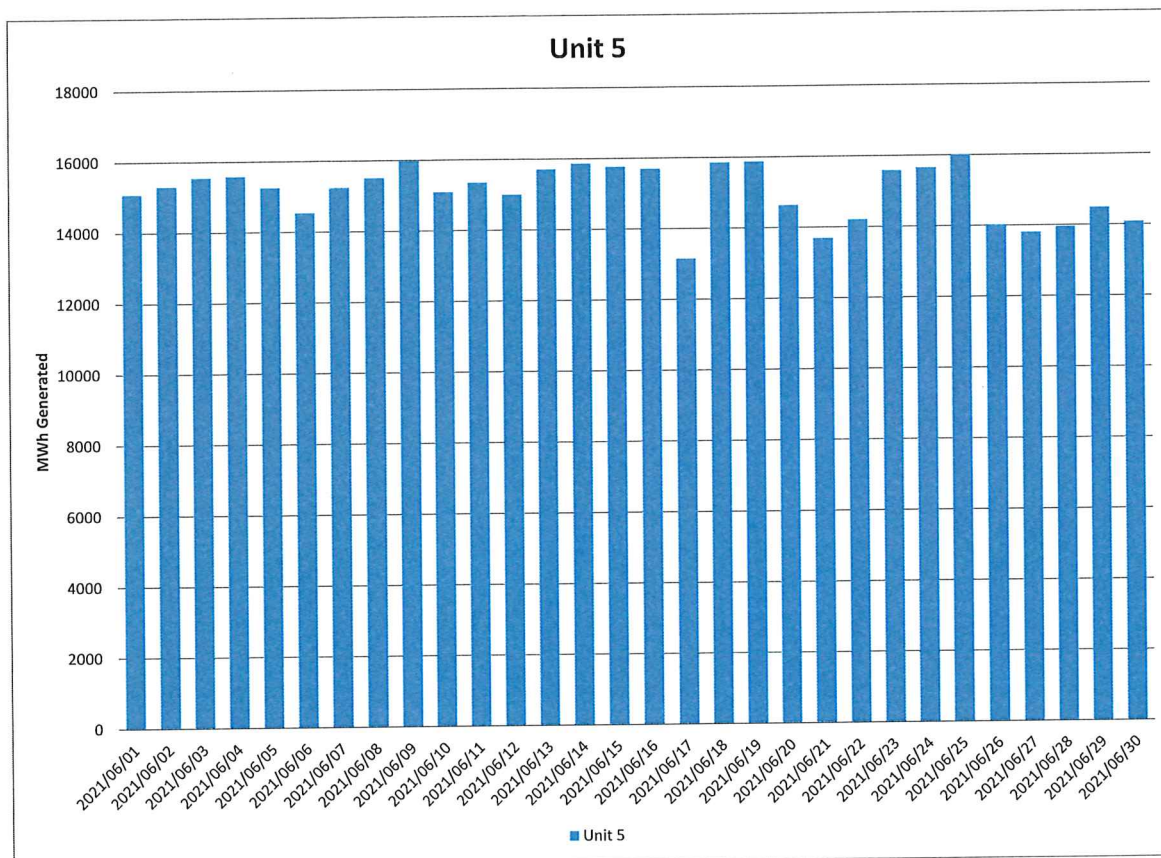


Figure 23: Unit 5 daily generated power in MWh for the month of June 2021

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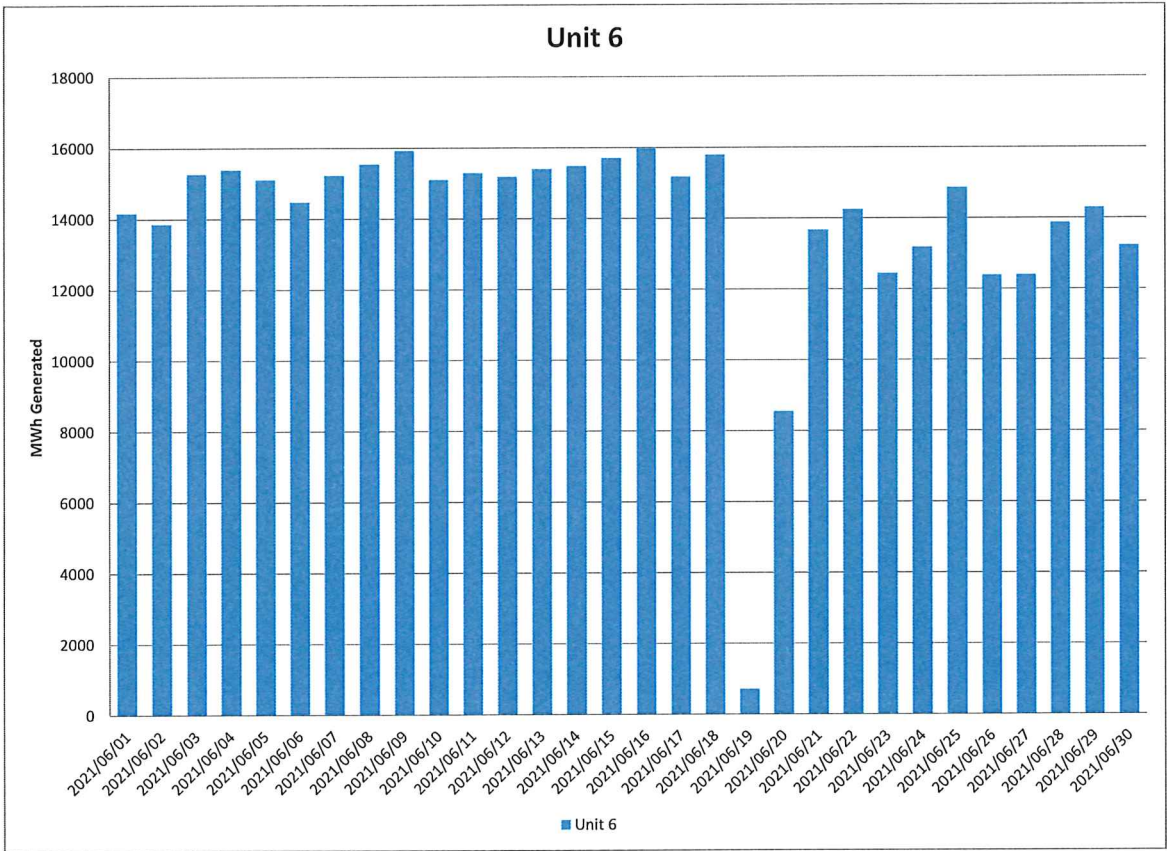


Figure 24: Unit 6 daily generated power in MWh for the month of June 2021

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2.6 Pollutant Tonnages

Table 6: Pollutant tonnages for the month of June 2021

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)	CO ₂ (tons)
Unit 1	84,0	5 074,4	988,9	452 314
Unit 2	41,4	4 547,4	671,8	328 687
Unit 3	44,3	4 825,0	984,7	310 896
Unit 4	75,0	4 786,0	1 069,2	348 865
Unit 5	52,7	5 299,1	935,5	401 125
Unit 6	51,5	5 919,1	1 251,5	367 095
SUM	348,8	30 451,0	5 901,7	2 208 982

The emitted pollutant tonnages for June 2021 are provided in table 6. The gaseous monitor for Unit 6 has been defective since the 17th of April 2021. Details are provided in section 2.8.1. Averaged gaseous emission data from the QAL 2 test report was used to report gaseous emissions for unit 6.

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	%	8,70	5,96	6,72	8,03	7,27	8,16
Moisture	%	4,39	4,95	4,18	3,00	5,28	4,12
Velocity	m/s	31,3	23,9	28,5	23,1	25,2	27,7
Temperature	°C	137,3	128,7	129,1	133,1	125,5	123,0
Pressure	mBar	939,1	878,6	921,7	939,0	936,8	892,9

Table 7 shows the reference values for the emission data provided for the month of June 2021. The gaseous monitor for Unit 6 has been defective since the 17th of April 2021. Details are provided in section 2.8.1.

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2.8 Continuous Emission Monitors

2.8.1 Reliability

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

Associated Unit/Stack	PM	SO ₂	NO	CO ₂
Unit 1	100,0	100,0	100,0	100,0
Unit 2	99,8	100,0	99,7	0,0
Unit 3	100,0	100,0	100,0	99,9
Unit 4	100,0	100,0	100,0	88,3
Unit 5	100,0	78,3	78,3	78,3
Unit 6	100,0	0,0	0,0	0,0

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

On the 13th 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 are 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 are in progress.

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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

- No adjustments done on the CEMs. Calibration of gaseous analysers is done every second week.
- No downtime or repairs done on the particulate monitors

Unit 5

- Unit 5 gaseous emission monitor is defective.
- No downtime or repairs done on the particulate monitors

Unit 6

- Unit 6 gaseous emission monitor is defective.
- 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	1	
Fires in	24 June 2021	22h37
Synchronization with Grid	25 June 2021	02h08
Emissions below limit	25 June 2021	13h00
Fires in to synchronization	3,52	HOURS
Synchronization to < Emission limit	10,87	HOURS

Unit	2	
Fires in	14 June 2021	05h41
Synchronization with Grid	14 June 2021	10h03
Emissions below limit	14 June 2021	12h53
Fires in to synchronization	4,37	HOURS
Synchronization to < Emission limit	2,83	HOUR

Unit	2	
Fires in	27 June 2021	00h35
Synchronization with Grid	27 June 2021	04h31
Emissions below limit	27 June 2021	14h05
Fires in to synchronization	3,93	HOURS
Synchronization to < Emission limit	9,57	HOURS

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Unit	3	
Fires in	17 June 2021	23h55
Synchronization with Grid	18 June 2021	03h44
Emissions below limit	18 June 2021	10h23
Fires in to synchronization	3,82	HOURS
Synchronization to < Emission limit	6,65	HOURS

Unit	6	
Fires in	19 June 2021	23h45
Synchronization with Grid	20 June 2021	03h05
Emissions below limit	20 June 2021	04h00
Fires in to synchronization	3,33	HOURS
Synchronization to < Emission limit	55	MINUTES

Unit	6	
Fires in	20 June 2021	07h35
Synchronization with Grid	20 June 2021	10h17
Emissions below limit	20 June 2021	11h06
Fires in to synchronization	2,7	HOURS
Synchronization to < Emission limit	49	MINUTES

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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	433	319	219	440	440	409
Emergency Hours declared including hours after stand down	450	336	308	457	457	426
Days over the Limit during Emergency Generation	5	2	0	2		

Unit 1 particulate emissions exceeded the 50mg/Nm³ emission limit during emergency generation on 18, 20, 26, 27 and 28 June 2021. Unit 2 particulate emissions exceeded the 50mg/Nm³ emission limit during emergency generation on 28 and 29 June 2021. Unit 4 particulate emissions exceeded the 50mg/Nm³ emission limit during emergency generation on 23 and 24 June 2021. The exceedance on Unit 1 from 26 to 28 June 2021 exceeded the 48 grace period and led to a section 30 incident being reported. The rest of the exceedances did not exceed the 48-hour grace period. Detailed emission information for particulate emissions can be found on figures 1 to 4.

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

2.12.2 Social responsibility conducted

None

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2.13 Ambient air quality monitoring

Two exceedances of the SO₂ 10-minute limit, eight exceedances of the PM_{2.5} daily limit and eleven exceedances of the PM₁₀ daily limit were noted. No other parameters exceeded the set limits during the monitoring period.

Ambient CO, PM_{2.5}, 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 85.7% and the station availability was 88.6%.

Detailed results can be found in Attachment 1, "Marapong monthly Report_June 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_June 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



GENERAL MANAGER: MATIMBA POWER STATION

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