Eskom	Matimba Power Station Emissions report	Matimba Power Station

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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 July 2021.

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

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

These changes influenced the pollutant tonnages and the monitor reliability reported in 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 28 exceedances of the daily particulate matter emission limit (50mg/Nm^3). Three exceedances 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 (3500mg/Nm^3) or the daily NO_x limit (750 mg/Nm^3) occurred.

The Gaseous emission (SO_x and NO_x) monitors for unit4, unit 5 and unit 6 was not in service during July 2021. The repairs of the monitors have since been completed.

Issues mentioned above are discussed further under the respective 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	1 219 662
	Fuel Oil	Tons/month	1 200	1162,022
Production Rates	**Product/ By-Product Name**	**Unit**	**Maximum Production Capacity Permitted (Quantity)**	**Production Rate**
	Energy	GWh	4 212.6	2 094,359

The coal and fuel oil consumptions rates for the month of July 2021 were within the permitted maximum limit. An increased amount of Fuel oil was used in the month of July. This was due to multiple start-ups that occurred on unit 4.

2.2 Abatement technology

Table 2: Abatement Equipment Control Technology Utilised

Associated Unit	Technology Type	Minimum utilisation (%)	Actual Utilisation (%)
Unit 1	Electrostatic Precipitator	100%	99,87%
Unit 2	Electrostatic Precipitator	100%	99,88%
Unit 3	Electrostatic Precipitator	100%	99,95%
Unit 4	Electrostatic Precipitator	100%	99,91%
Unit 5	Electrostatic Precipitator	100%	99,91%
Unit 6	Electrostatic Precipitator	100%	99,88%
Associated Unit	**Technology Type**	**Minimum utilisation (%)**	**Actual Utilisation (%)**
Unit 1	SO_3 Plant	100%	100%
Unit 2	SO_3 Plant	100%	100%
Unit 3	SO_3 Plant	100%	96,77%
Unit 4	SO_3 Plant	100%	100%
Unit 5	SO_3 Plant	100%	100%
Unit 6	SO_3 Plant	100%	90,32%

Sulphur plant availability was below the required 100% for unit 3 and unit 6 due to unexpected breakdowns.

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%	1,06%
	Ash Content	30-40%	34,68%

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

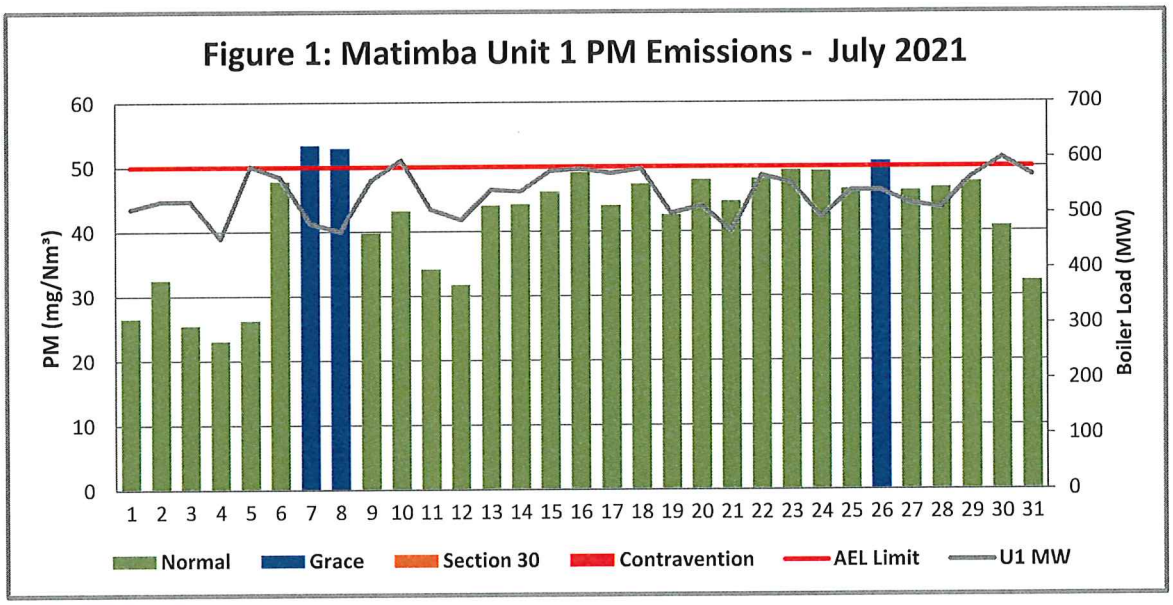

Figure 1: Particulate matter daily average emissions against emission limit for unit 1 for the month of July 2021

Interpretation:

Unit 1 exceeded the daily limit of 50mg/Nm^3 on 7, 8 and 26 July 2021. The exceedances were due to breakdowns experienced on the dust handling plant. The exceedances did not exceed the 48-hour grace period.

Unit 2 Particulate Emissions

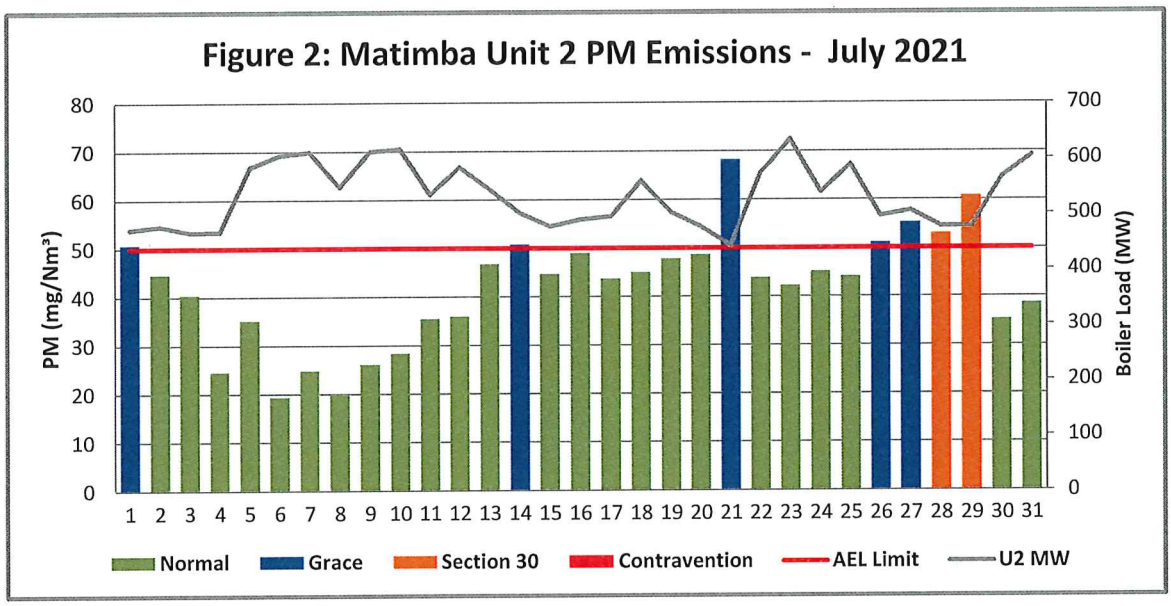

Figure 2: Particulate matter daily average emissions against emission limit for unit 2 for the month of July 2021

Interpretation:

Unit 2 PM emissions exceeded the limit of 50mg/Nm^3 on 1, 14, 21 and 26 to 29 July 2021. The exceedances were due to breakdowns on the dust handling plant. The exceedance from 26 to 29 July 2021 exceeded the 48 hour grace period and was reported as a section 30 incident.

Unit 3 Particulate Emissions

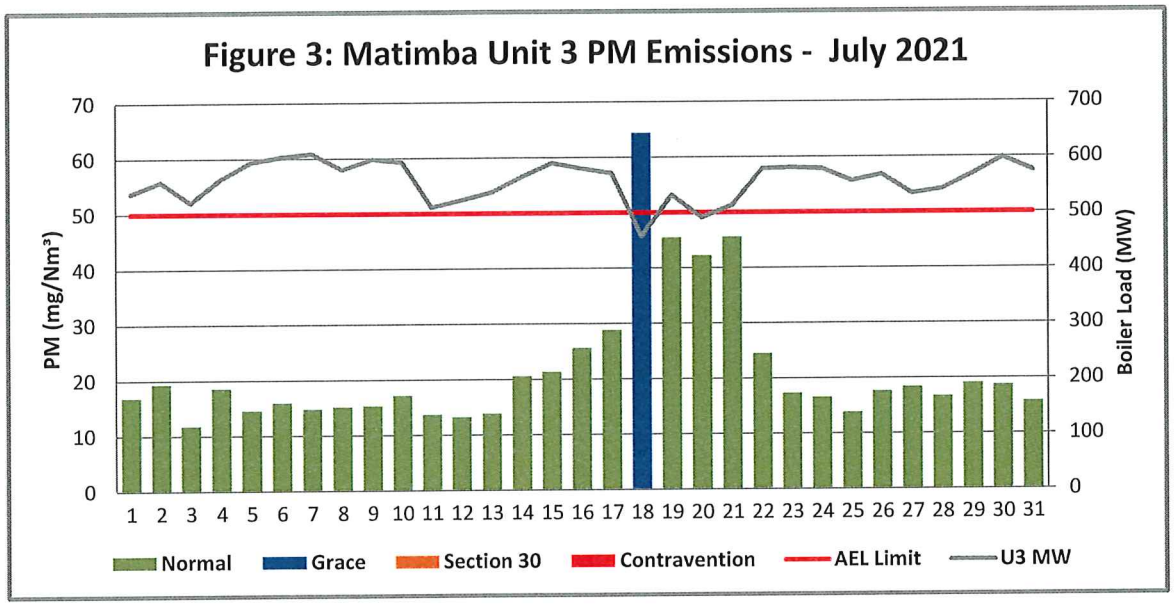

Figure 3: Particulate matter daily average emissions against emission limit for unit 3 for the month of July 2021

Interpretation:

Unit 3 exceeded the daily limit of 50mg/Nm^3 on 18 July 2021. The exceedance was due to breakdowns experienced on the dust handling plant. The exceedance did not exceed the 48-hour grace period.

Unit 4 Particulate Emissions

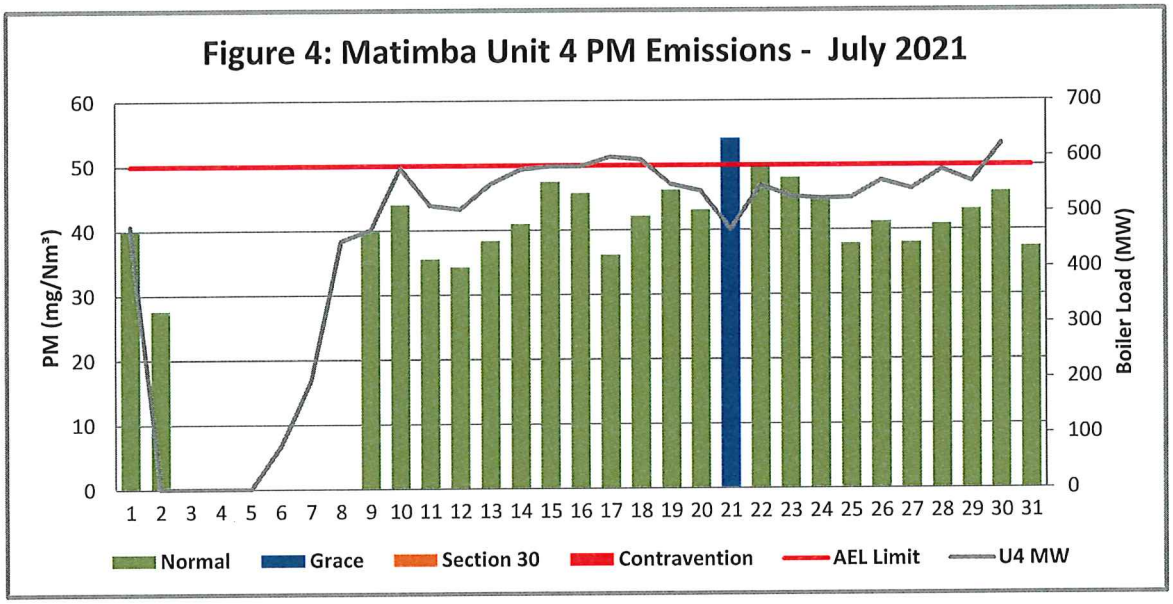

Figure 4: Particulate matter daily average emissions against emission limit for unit 4 for the month of July 2021

Interpretation:

Unit 4 exceeded the daily limit of 50mg/Nm^3 on 18 July 2021. The exceedance was due to breakdowns experienced on the dust handling plant. The exceedance did not exceed the 48-hour grace period.

Unit 5 Particulate Emissions

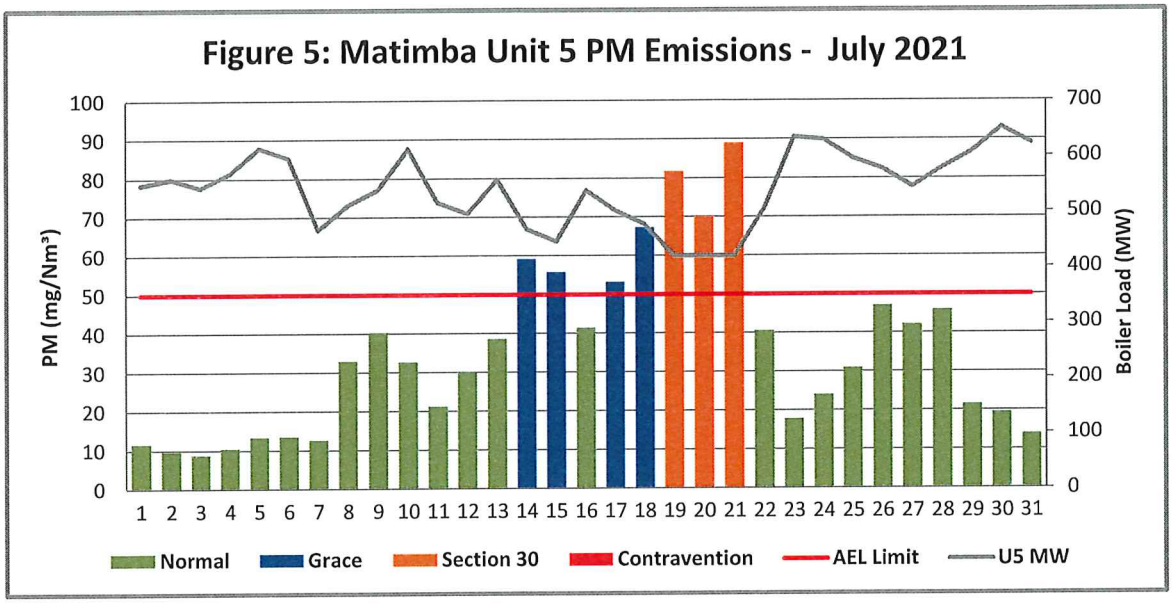

Figure 5: Particulate matter daily average emissions against emission limit for unit 5 for the month of July 2021

Interpretation:

Unit 5 PM emissions exceeded the limit of 50mg/Nm^3 on 14, 15 and 17 to 21 July 2021. The exceedances were due to breakdowns on the dust handling plant. The exceedance from 17 to 21 July 2021 exceeded the 48 hour grace period and was reported as a section 30 incident.

Unit 6 Particulate Emissions

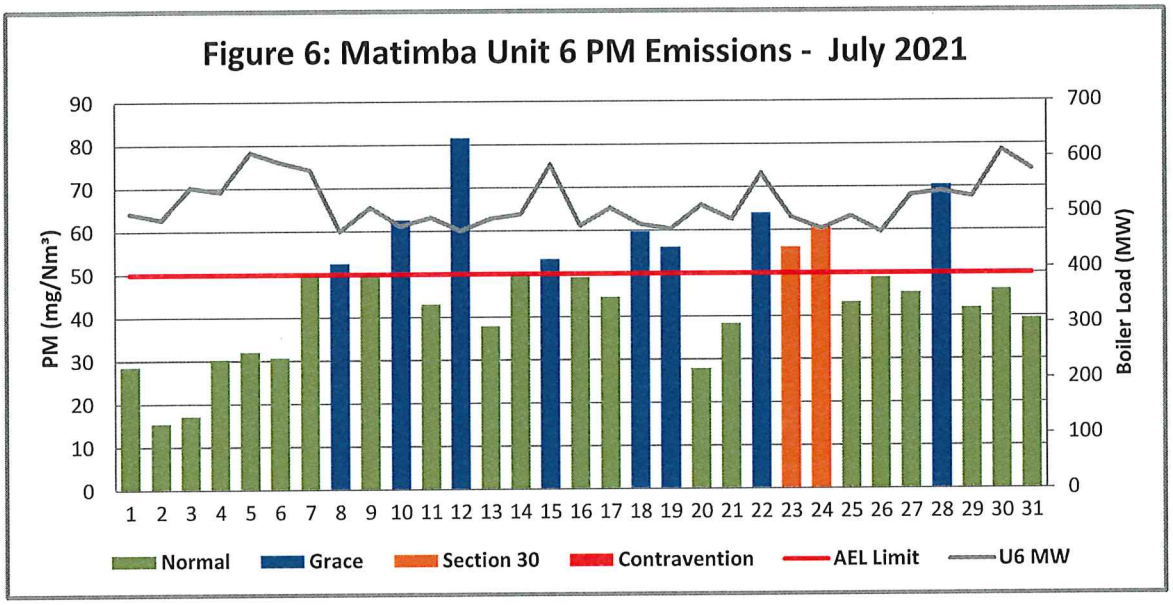

Figure 6: Particulate matter daily average emissions against emission limit for unit 6 for the month of July 2021

Interpretation:

Unit 6 PM emissions exceeded the limit of 50mg/Nm^3 on 8, 10, 12, 15, 18, 19, 22 to 24 and 28 July 2021. The exceedances were due to breakdowns on the dust handling plant. The exceedance from 22 to 24 July 2021 exceeded the 48 hour grace period and was reported as a section 30 incident.

2.4.2 Gaseous Emissions

Unit 1 SO_2 Emissions

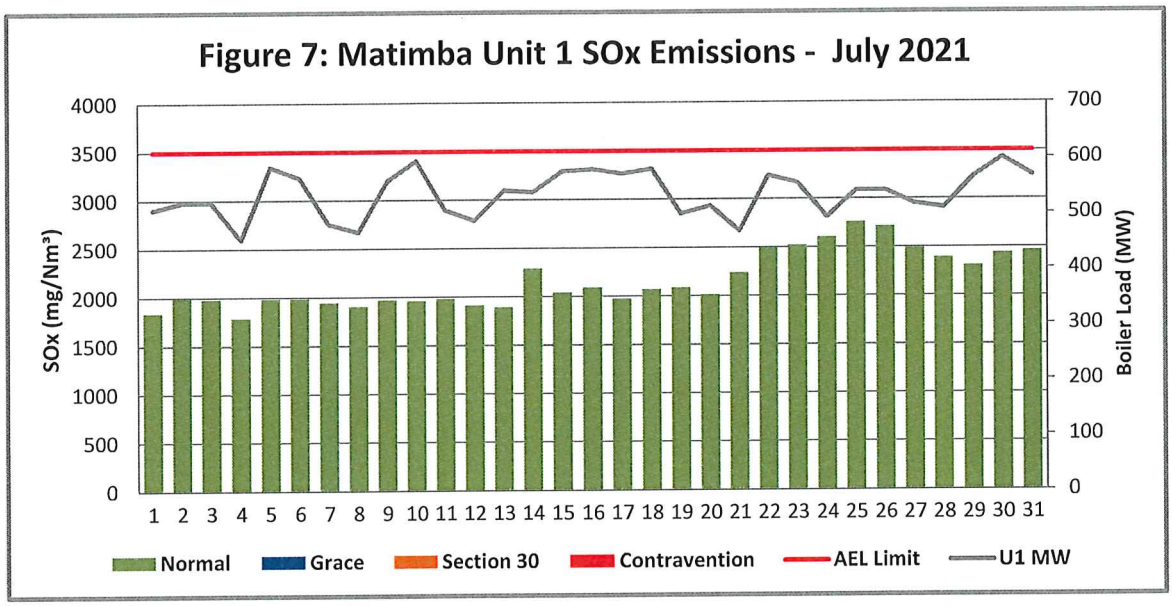

Figure 7: SO_2 daily average emissions against emission limit for unit 1 for the month of July 2021

Interpretation:

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

Unit 2 SO_2 Emissions

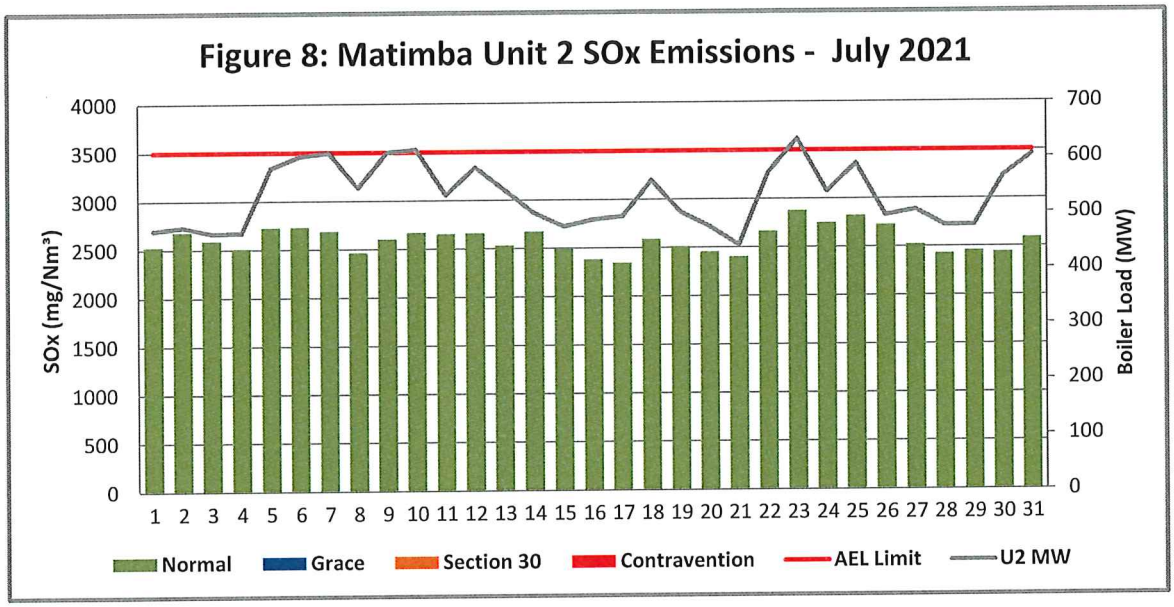

Figure 8: SO2 daily average emissions against emission limit for unit 2 for the month of July 2021

Interpretation:

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

Unit 3 SO_2 Emissions

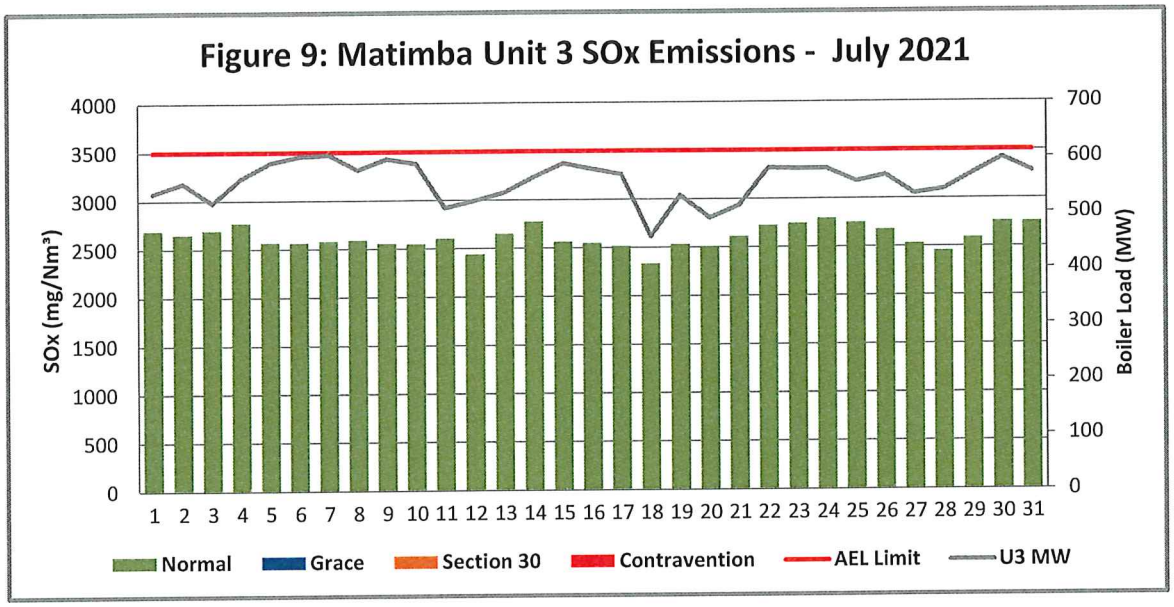

Figure 9: SO2 daily average emissions against emission limit for unit 3 for the month of July 2021

Interpretation:

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

Unit 4 SO_2 Emissions

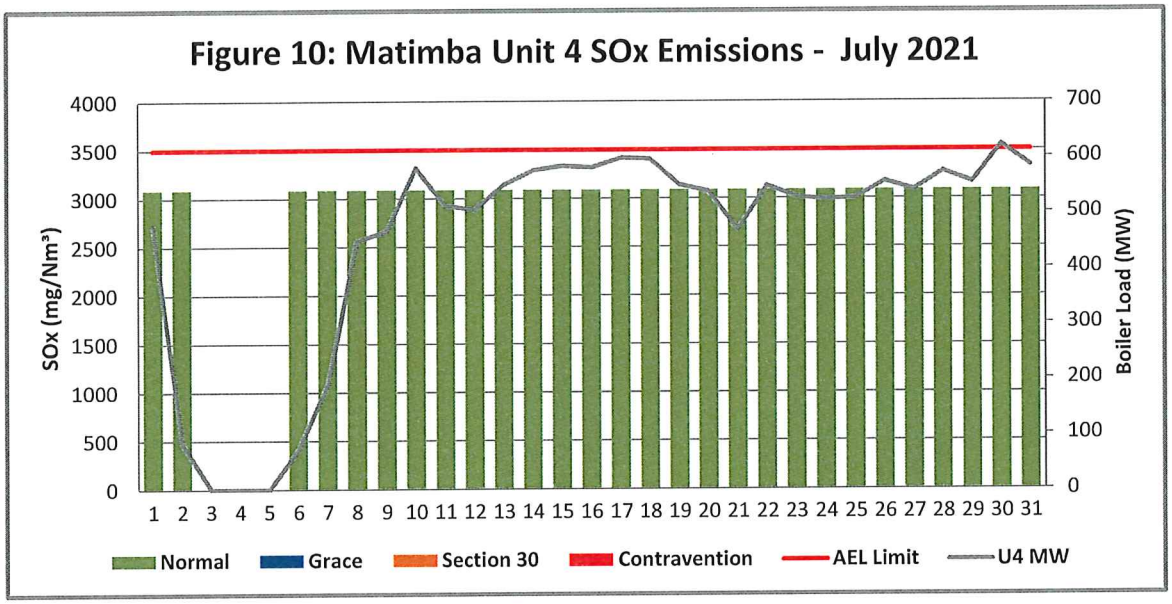

Figure 10: SO2 daily average emissions against emission limit for unit 4 for the month of July 2021

Interpretation:

All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3. Unit 4 Gaseous emission monitor was unavailable since the unit was started on 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. The suspected cause for the failure is water ingress on the monitor. The monitor has since been repaired. Averaged values were used for July 2021 SOx reporting.

Unit 5 SO_2 Emissions

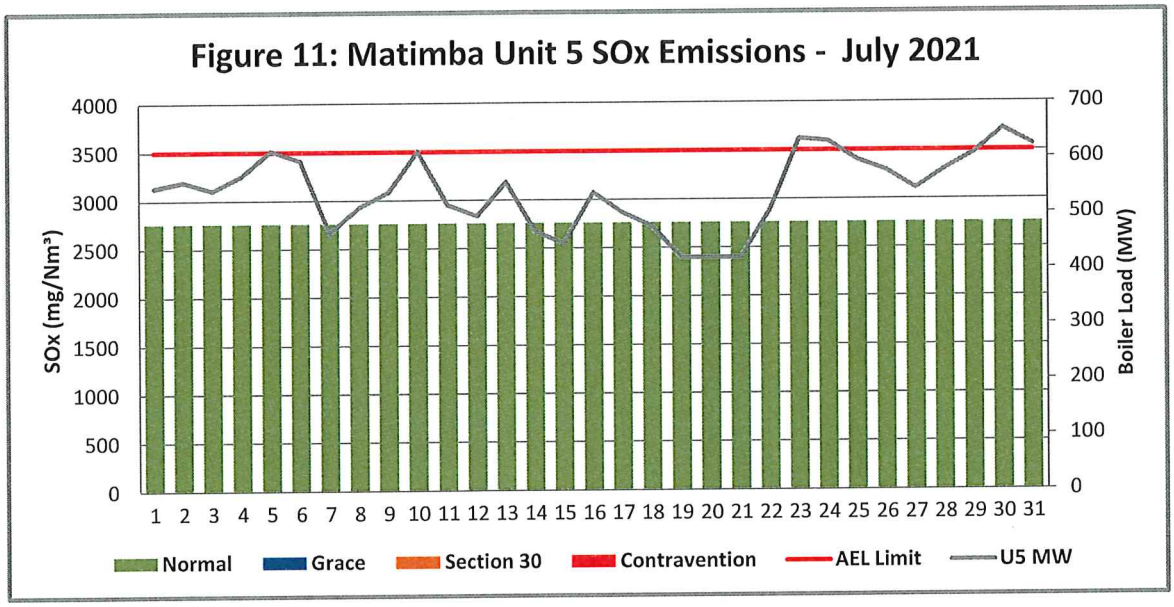

Figure 11: SO2 daily average emissions against emission limit for unit 5 for the month of July 2021

Interpretation:

All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3. 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 has since been repaired. Averaged values were used for July 2021 SOx reporting.

Unit 6 SO_2 Emissions

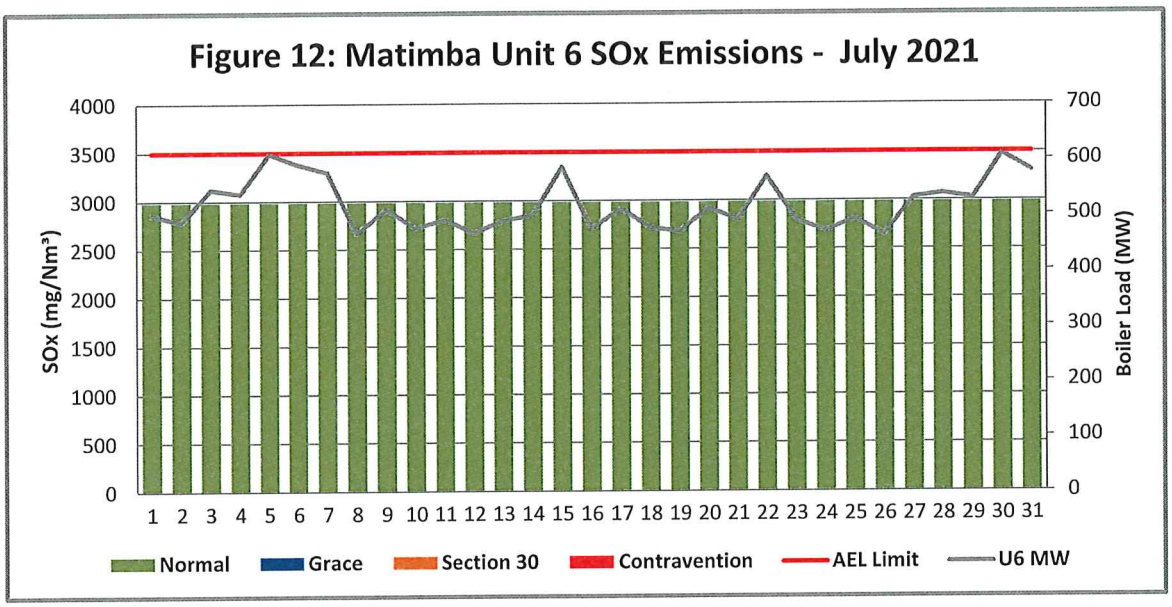

Figure 12: SO2 daily average emissions against emission limit for unit 6 for the month of July 2021

Interpretation:

As per the notification sent to your office on the 4th of July 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 completed. Averaged values were used for July 2021 SOx reporting.

Unit 1 NO_x Emissions

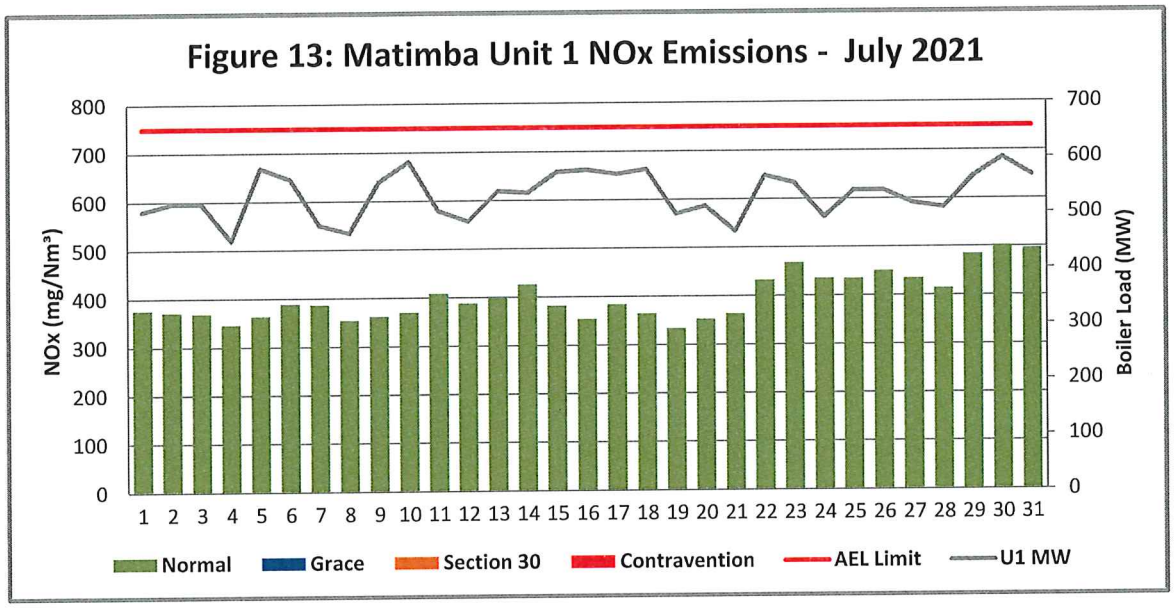

Figure 13: NOx daily average emissions against emission limit for unit 1 for the month of July 2021

Interpretation:

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

Unit 2 NO_x Emissions

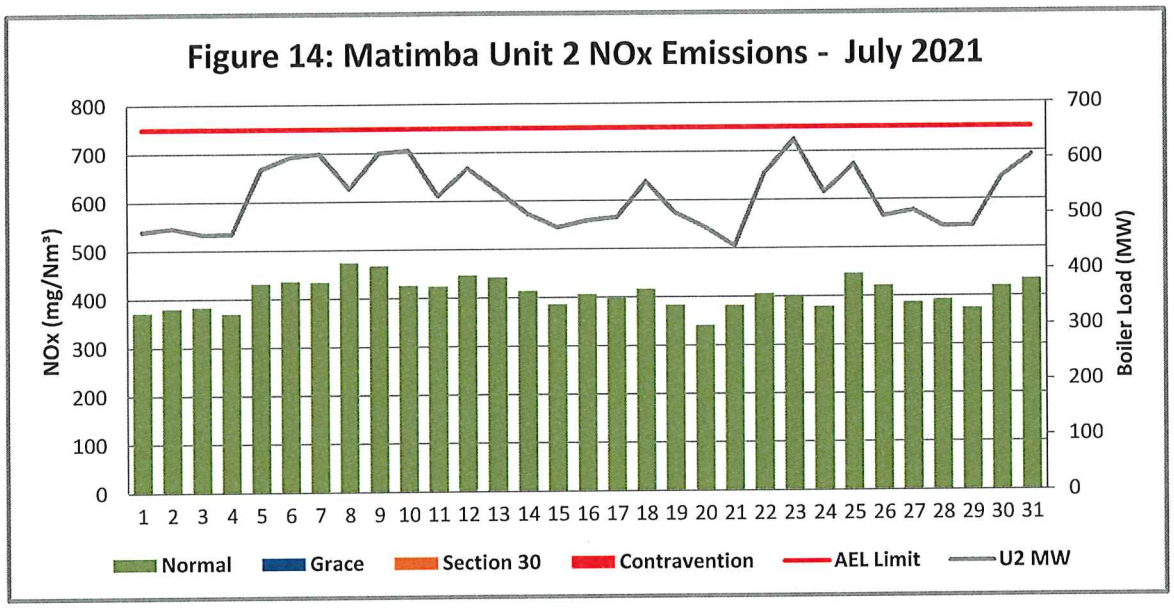

Figure 14: NOx daily average emissions against emission limit for unit 2 for the month of July 2021

Interpretation:

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

Unit 3 NO_x Emissions

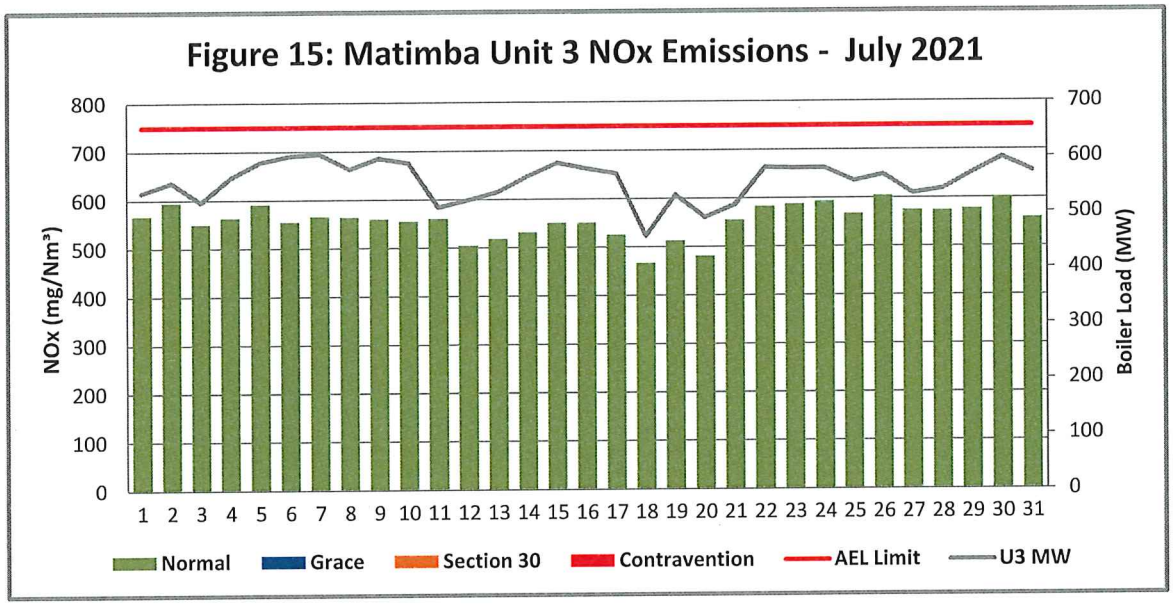

Figure 15: NOx daily average emissions against emission limit for unit 3 for the month of July 2021

Interpretation:

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

Unit 4 NO_x Emissions

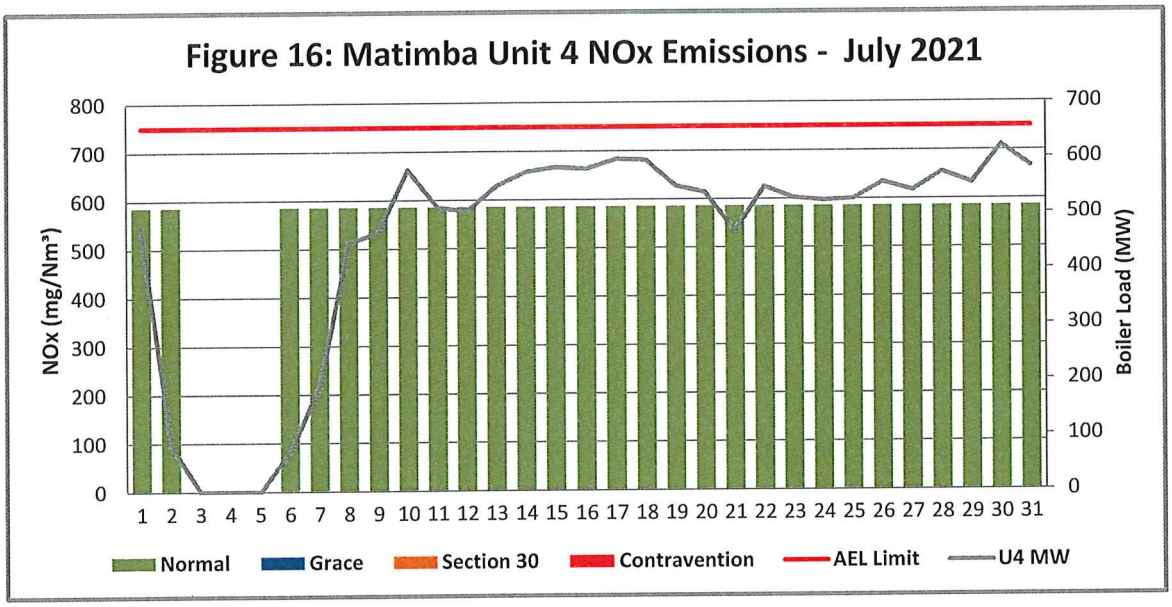

Figure 16: NOx daily average emissions against emission limit for unit 4 for the month of July 2021

Interpretation:

All daily averages below SO_2 emission monthly limit of 3500 mg/Nm³. Unit 4 Gaseous emission monitor was unavailable since the unit was started on 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. The suspected cause for the failure is water ingress on the monitor. The monitor has since been repaired. Averaged values were used from 8 to 31 July 2021 for NOx reporting.

Unit 5 NO_x Emissions

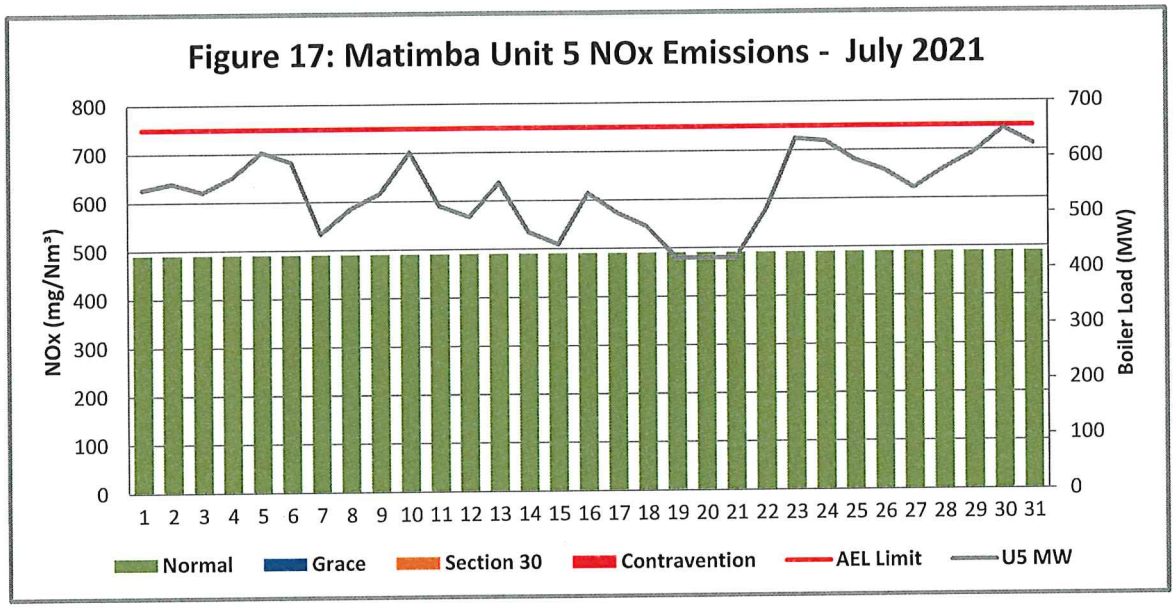

Figure 17: NOx daily average emissions against emission limit for unit 5 for the month of July 2021

Interpretation:

All daily averages below SO_2 emission monthly limit of 3500 mg/Nm^3. 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 has since been repaired. Averaged values were used for July 2021 NOx reporting.

Unit 6 NO_x Emissions

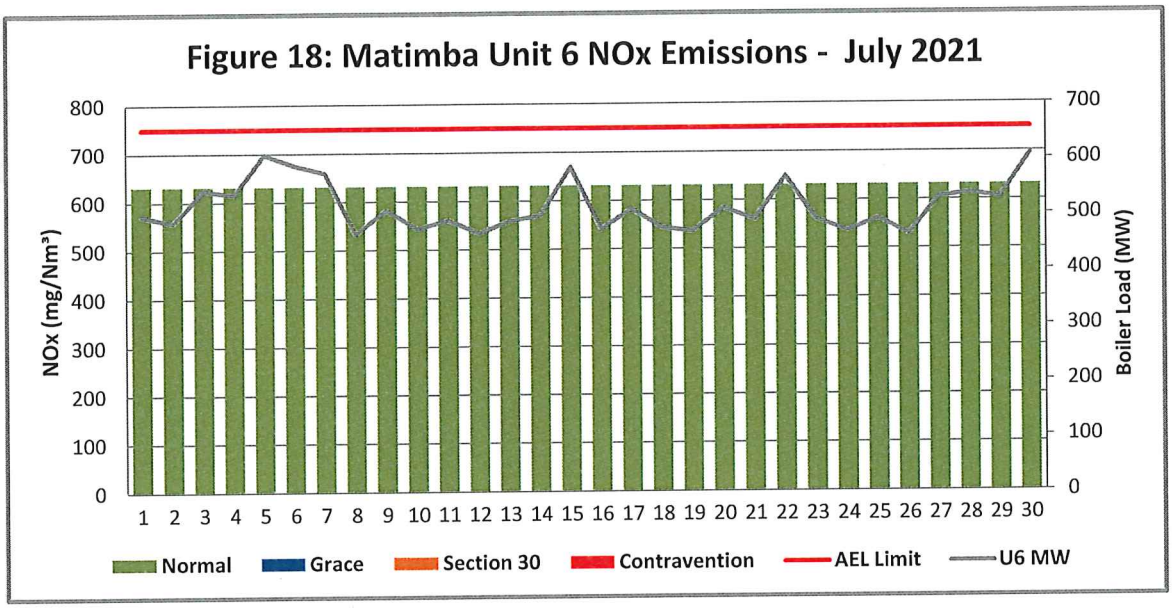

Figure 18: NOx daily average emissions against emission limit for unit 6 for the month of July 2021

Interpretation:

As per the notification sent to your office on the 4th of July 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 completed. Averaged values were used for July 2021 NOx reporting.

2.4.3 Total Volatile Organic Compounds

Table 4: Total volatile compound estimates

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

Date:	Friday, 27 August 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 *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:	July	
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:	*1162,022*	
Molecular weight of the fuel oil:	166,00	Lb/lb-mole
METEROLOGICAL DATA FOR THE MONTH	Data	Unit
Daily average ambient temperature	17,66	°C
Daily maximum ambient temperature	25,87	°C
Daily minimum ambient temperature	10,47	°C
Daily ambient temperature range	15,40	°C
Daily total insolation factor	3,47	kWh/m²/day
Tank paint colour	*Grey/medium*	NA
Tank paint solar absorbtance	0,68	NA
FINAL OUTPUT:	Result	Unit
Breathing losses:	0,53	kg/month
Working losses:	0,03	kg/month
TOTAL LOSSES (Total TVOC Emissions for the month):	0,56	kg/month

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

2.4.4 Greenhouse gas (CO_2) emissions

CO_2 emissions are reported in terms of the Greenhouse gas reporting regulations (GN 43712, 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 July 2021

Date	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
2021/07/01	12197,3	11158,5	12824,5	11318	13050,1	11899,7
2021/07/02	12522,6	11298,3	13322,6	6,933	13300,6	11591,2
2021/07/03	12527,7	11032,4	12437,7	0	12934,5	12989,1
2021/07/04	7357,13	11052,7	13470,9	0	13568,6	12800,9
2021/07/05	14038,9	13838,9	14190,1	0	14635,8	14489,6
2021/07/06	13562,3	14342,7	14408,5	12,4	14195,4	14061,3
2021/07/07	11567,6	14486	14546,3	813,6	11115,7	13732,4
2021/07/08	11221,5	12980,9	13842,3	6594	12182,1	11075,9
2021/07/09	13436,9	14512,3	14282,6	11121	12827,6	12098,4
2021/07/10	14304,4	14602,9	14159,7	13811	14595,8	11298,3
2021/07/11	12164,9	12660,8	12209,4	12178	12279,9	11682,9
2021/07/12	11715,9	13824,7	12509,8	12044	11816,9	11092,5
2021/07/13	13006,8	12877,9	12854,6	13095	13272,2	11607,9
2021/07/14	12936,1	11908,1	13505,9	13715	11143,3	7838,07
2021/07/15	13818,1	11316,5	14097,5	13890	10620,3	13959,3
2021/07/16	13912	11600,1	13855,3	13847	12809	11296,4
2021/07/17	13725	11698,9	13646,1	14260	11933,7	12054,4
2021/07/18	13917,6	13246,5	10938,4	14208	11344,2	11356
2021/07/19	11986,1	11881,3	12694,3	13071	9996,4	11144,3
2021/07/20	12320,6	11263,7	11717,5	12781	9996,1	12180
2021/07/21	11225,1	10463,7	12255,5	11176	9996,4	9405,6
2021/07/22	13623,7	13597,7	13819,8	13056	12046,4	13542,7
2021/07/23	13297,8	15047,4	13863,5	12545	15078,8	11645,5
2021/07/24	11827,1	12775,2	13820,3	12429	14976,6	11146,7
2021/07/25	12967,4	13970,3	13295,5	12509	14170,4	11696,9
2021/07/26	12964,9	11721,4	13558,7	13235	13718,8	11002,5
2021/07/27	12393,7	11949,7	12735,6	12869	12952,4	12588,7
2021/07/28	12217	11270,8	12927	13657	13769,4	12746,7
2021/07/29	13567,3	11278,6	13584,3	13202	14453,1	12517,7
2021/07/30	14387,1	13374,3	14285,1	14793	15488,6	14518,1
2021/07/31	13618,2	14300,1	13728,9	13896	14820,6	13700,3

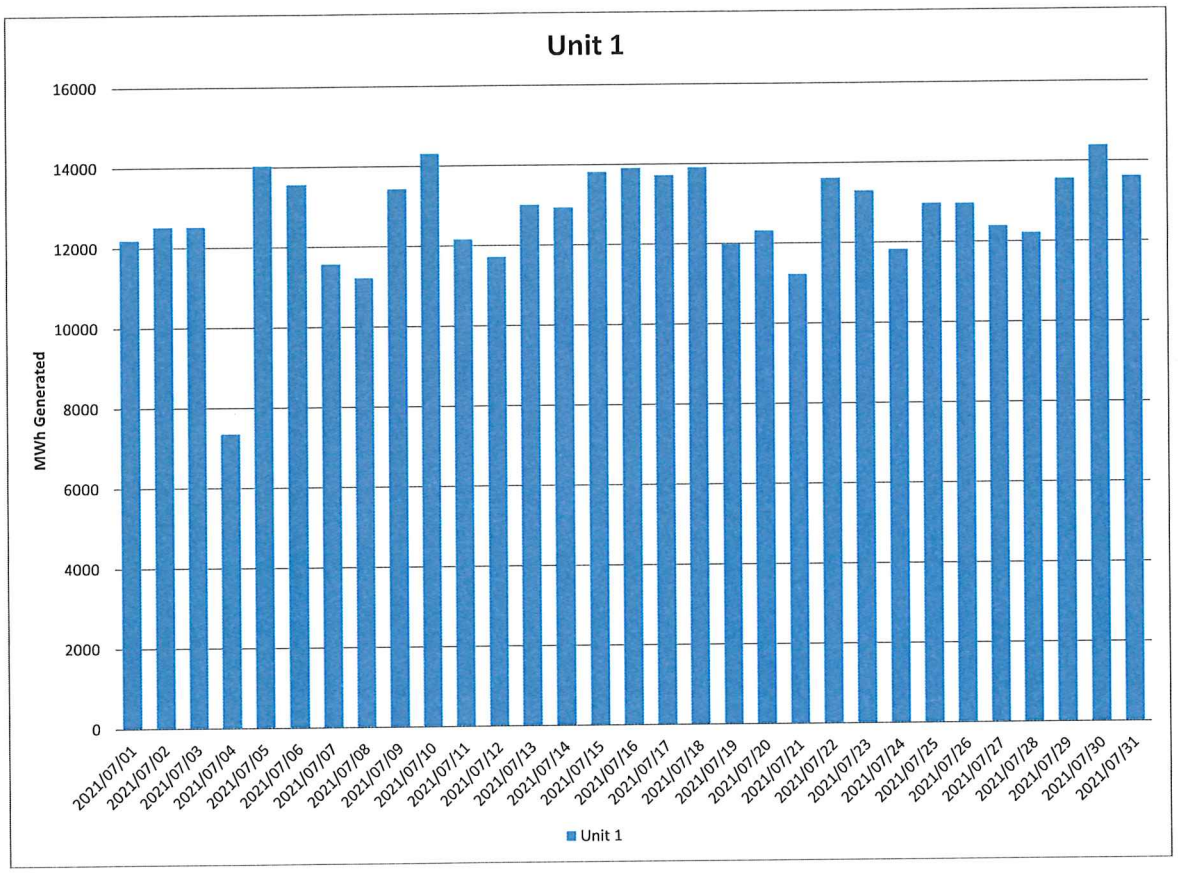

Figure 19: Unit 1 daily generated power in MWh for the month of July 2021

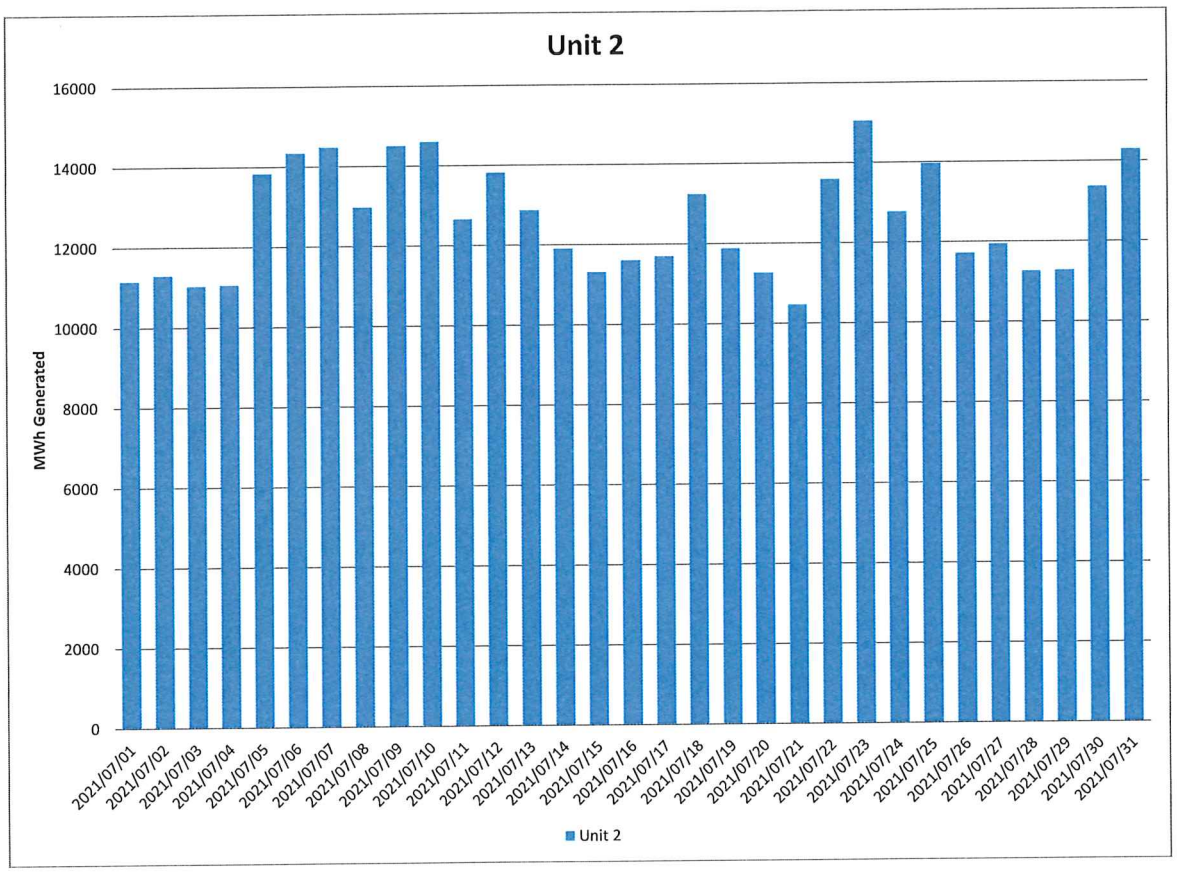

Figure 20: Unit 2 daily generated power in MWh for the month of July 2021

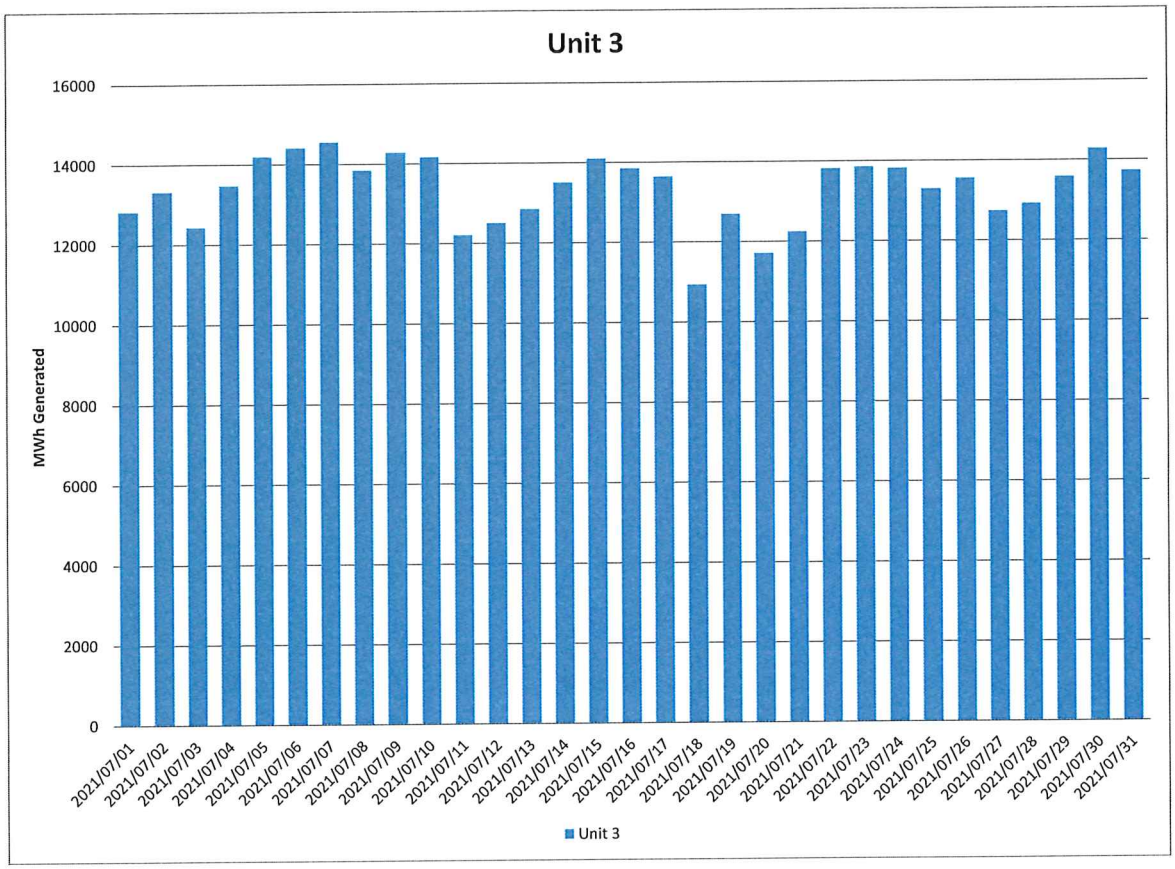

Figure 21: Unit 3 daily generated power in MWh for the month of July 2021

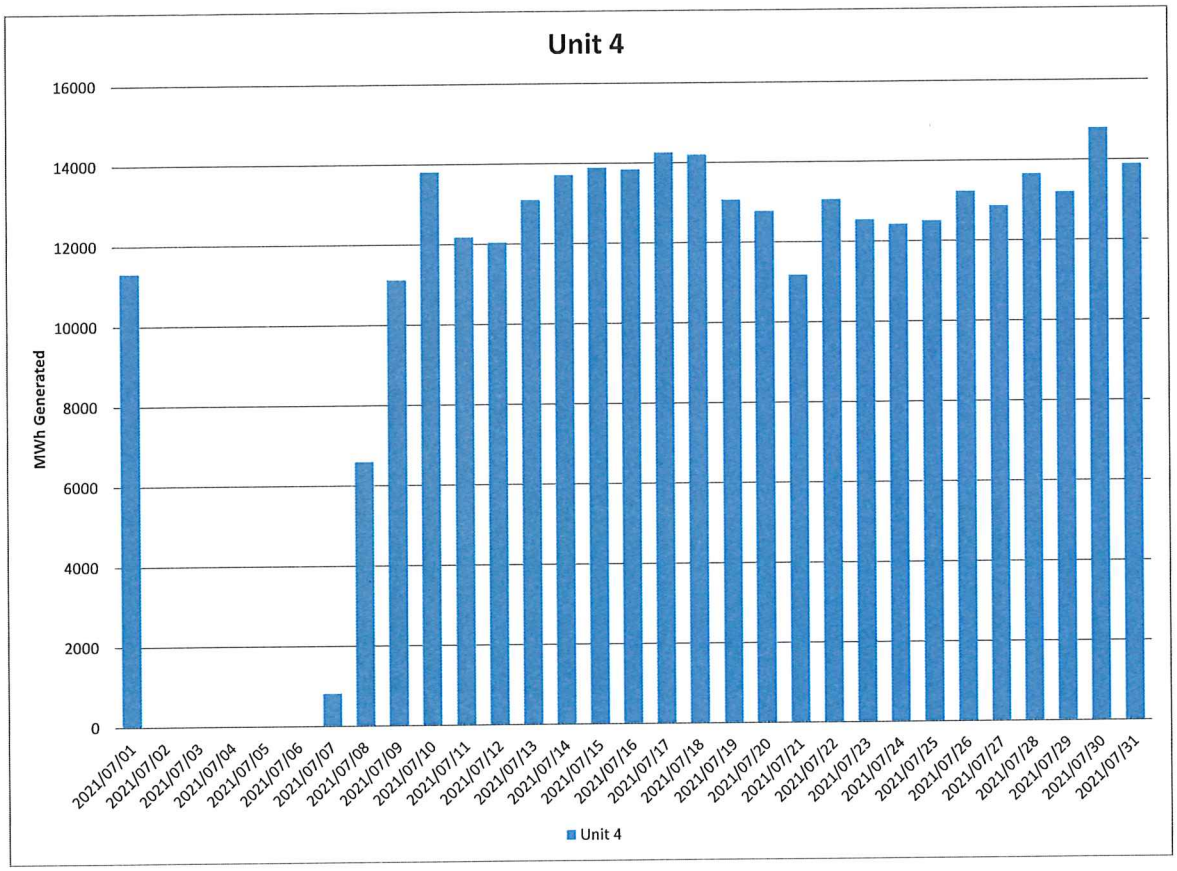

Figure 22: Unit 4 daily generated power in MWh for the month of July 2021

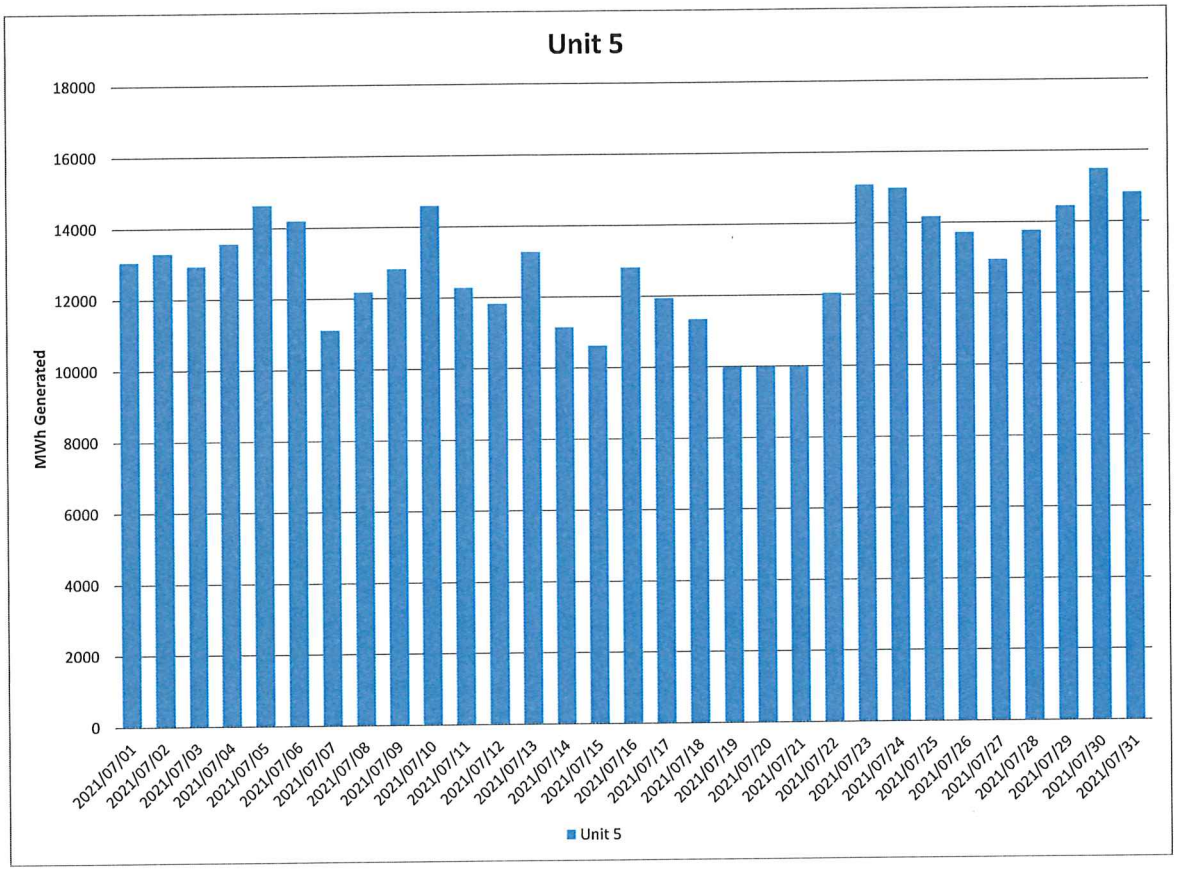

Figure 23: Unit 5 daily generated power in MWh for the month of July 2021

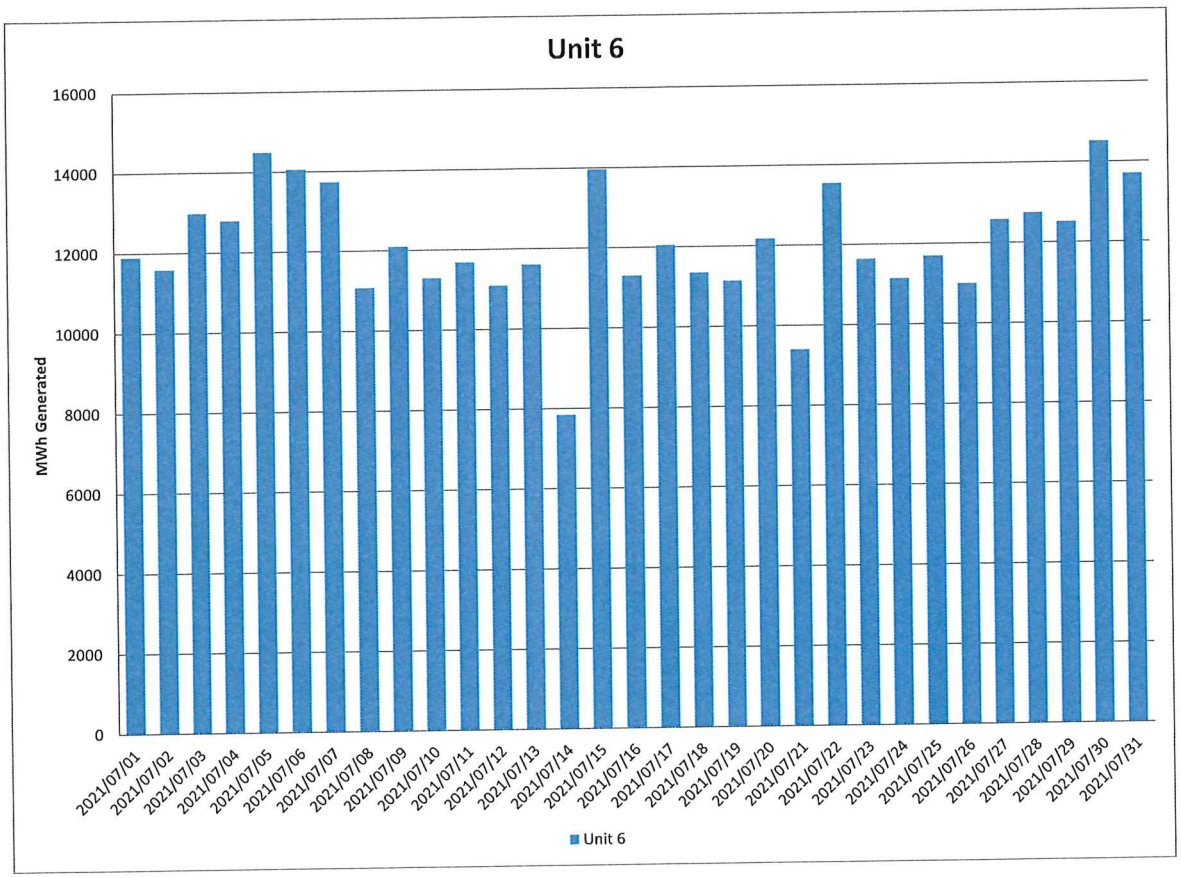

Figure 24: Unit 6 daily generated power in MWh for the month of July 2021

2.6 Pollutant Tonnages

Table 6: Pollutant tonnages for the month of July 2021

Associated Unit/Stack	PM (tons)	SO_2 (tons)	NO_x (tons)	CO_2 (tons)
Unit 1	82,8	5 006,3	927,4	451 450
Unit 2	77,0	5 288,8	836,1	400 467
Unit 3	42,5	5 903,9	1 258,2	406 897
Unit 4	58,6	5 795,5	1 099,5	350 035
Unit 5	61,4	4 908,1	872,5	324 300
Unit 6	76,8	6 275,2	1 326,8	389 176
SUM	399,1	33 177,8	6 320,5	2 322 326

The emitted pollutant tonnages for July 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	%	8,38	6,12	7,61	8,11	9,13	8,16
Moisture	%	4,25	4,65	3,86	4,22	5,35	4,12
Velocity	m/s	30,0	23,6	27,4	29,4	24,9	27,7
Temperature	°C	138,6	129,2	131,1	124,0	132,0	123,0
Pressure	mBar	940,6	876,8	921,3	921,4	925,3	892,9

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

2.8 Continuous Emission Monitors

2.8.1 Reliability

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

Associated Unit/Stack	PM	SO_2	NO	CO_2
Unit 1	100,0	100,0	100,0	82,1
Unit 2	100,0	100,0	99,9	0,0
Unit 3	100,0	99,9	99,9	100,0
Unit 4	96,0	0,0	0,0	0,0
Unit 5	100,0	0,0	0,0	0,0
Unit 6	99,0	0,0	0,0	0,0

Gaseous emission monitor for Unit 4, Unit 5 and Unit 6 has been identified to be defective on 02 July, 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 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 have been completed. All three monitors have been repaired.

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 is defective.
- 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

2.9 Start-up information

Table 9: Start-up information

Unit	1	
Fires in	04 July 2021	11h05
Synchronization with Grid	04 July 2021	15h05
Emissions below limit	04 July 2021	17h33
Fires in to synchronization	4	HOURS
Synchronization to < Emission limit	2.47	HOURS

Unit	4	
Fires in	06 July 2021	16h58
Synchronization with Grid	06 July 2021	23h48
Emissions below limit	07 July 2021	20h39
Fires in to synchronization	6.83	HOURS
Synchronization to < Emission limit	20.97	HOUR

Unit	4	
Fires in	07 July 2021	05h25
Synchronization with Grid	07 July 2021	12h06
Emissions below limit	07 July 2021	20h39
Fires in to synchronization	6.68	HOURS
Synchronization to < Emission limit	8.67	HOURS

Unit	4	
Fires in	07 July 2021	15h33
Synchronization with Grid	07 July 2021	18h06
Emissions below limit	07 July 2021	20h39
Fires in to synchronization	2.55	HOURS
Synchronization to < Emission limit	2.55	HOURS

Unit	4	
Fires in	08 July 2021	05h57
Synchronization with Grid	08 July 2021	09h09
Emissions below limit	08 July 2021	12h00
Fires in to synchronization	3.2	HOURS
Synchronization to < Emission limit	2.85	HOURS

Unit	6	
Fires in	14 July 2021	15h09
Synchronization with Grid	14 July 2021	18h57
Emissions below limit	14 July 2021	19h00
Fires in to synchronization	3.8	HOURS
Synchronization to < Emission limit	3	MINUTES

Unit	6	
Fires in	21 July 2021	10h03
Synchronization with Grid	21 July 2021	12h35

Emissions below limit	21 July 2021	16h53
Fires in to synchronization	2.53	HOURS
Synchronization to < Emission limit	4.3	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/Nm^3 emission limit during emergency generation on 7, 8 and 26 July 2021. Unit 2 particulate emissions exceeded the 50mg/Nm^3 emission limit during emergency generation on 14, 21, 26, 27, 28 and 29 July 2021. Unit 3 particulate emissions exceeded the 50mg/Nm^3 emission limit during emergency generation on 18 July 2021. Unit 5 particulate emissions exceeded the 50mg/Nm^3 emission limit during emergency generation on 14, 15, 17, 18, 19, 20 and 21 July 2021. Unit 6 particulate emissions exceeded the 50mg/Nm^3 emission limit during emergency generation on 8, 10, 15, 18, 19, 22, 23, 24 and 28 July 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

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_July 2021".

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.

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. 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

Marapong monthly Report_July 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