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Date:
17 September 2025

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**MAJUBA POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF AUGUST 2025**

This serves as the monthly report required in terms of Majuba Power Station's Atmospheric Emission License (MPS/0014/2025/F05) under section 7.6 routine reporting and record keeping. The emissions are for the month of August 2025. Verified emissions of particulates are included. $SO_2$ and NOx (as $NO_2$) emissions are included for all units. Greenhouse gases are excluded as per the agreement reached between Eskom and the Department of Forestry, Fisheries and the Environmental in the first quarter of 2017/18 financial year's MINTEC and MINMEC management meeting.

## Raw Materials and Products

**Table 1. Quantity of Raw Materials and Products used/produced for the month of August 2025**

| Raw Materials and Products used | Raw Material Type | Unit | Maximum Permitted Consumption/ Rate (Quantity) | Consumption/ Rate in Month of August 2025 |
|---|---|---|---|---|
| | Coal | Tons/month | 1 800 000 | 672 461 |
| | Fuel Oil | Tons/month | 6 000 | 2 183.7 |
| | | | | |
| **Production Rates** | **Product/ By-Product Name** | **Unit** | **Maximum Production Rate Permitted (Quantity)** | **Production Rate in Month of August 2025** |
| | Energy | GWh | 3 058 | 1 115.9 |
| | Ash | Tons/month | 429 746 | 209 202.6 |

## Abatement Technology

**Table 2. Abatement Equipment Control Technology for the month of August 2025**

| Associated Unit | Technology Type | Actual Utilisation (%) for the month of August 2025 | *Minimum Control Efficiency (%) |
|---|---|---|---|
| Unit 1 | Fabric Filter Plant | 100 | 99.95 |
| Unit 2 | Fabric Filter Plant | 100 | 99.93 |
| Unit 3 | Fabric Filter Plant | 0 | Off-line |
| Unit 4 | Fabric Filter Plant | 100 | 99.97 |
| Unit 5 | Fabric Filter Plant | 100 | 99.94 |
| Unit 6 | Fabric Filter Plant | 100 | 99.93 |

*Calculated from the assumption of 90% fly ash to 10% bottom ash and percentage ash as measured in coa

## Energy Source Characteristics

**Table 3. Energy Source Material Characteristics for the month of August 2025**

| Characteristic | Stipulated Limit (Unit) | Monthly Average Content |
|---|---|---|
| **Sulphur Content** | <1.25% | 0.63 |
| **Ash Content** | <33.84% | 31.11 |

## Emissions Reporting

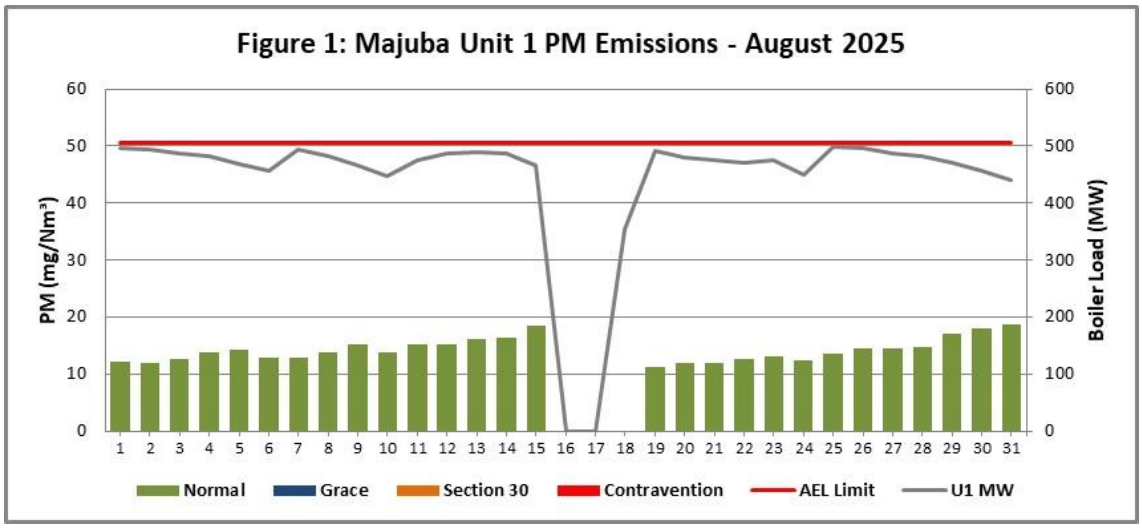


**Figure 1. Particulate Matter emissions (daily averages) for the month of August 2025 against emission limit for Unit 1.**

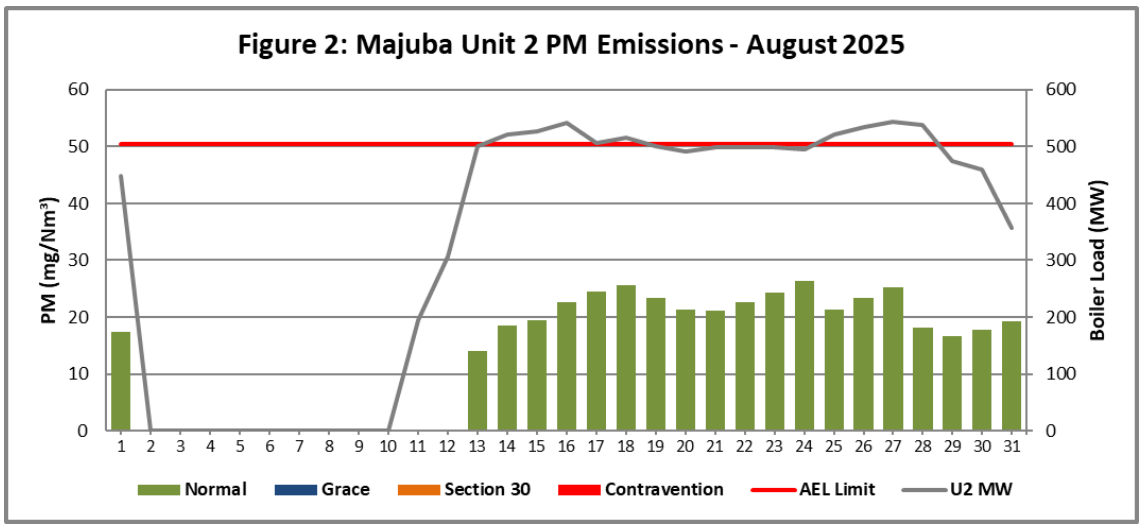


**Figure 2. Particulate Matter emissions (daily averages) for the month of August 2025 against emission limit for Unit 2.**

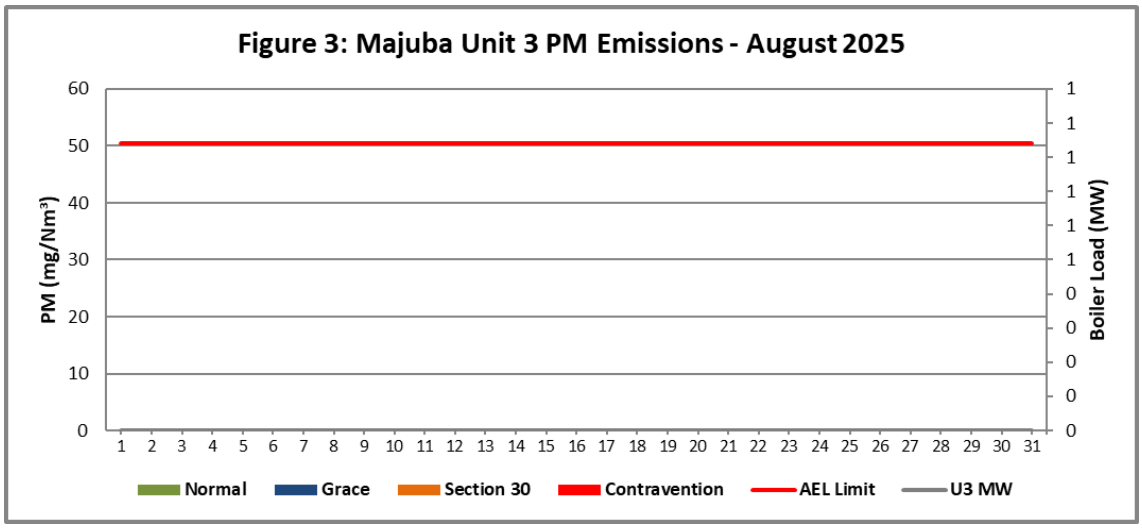


**Figure 3. Particulate Matter emissions (daily averages) for the month of August 2025 against emission limit for Unit 3.**

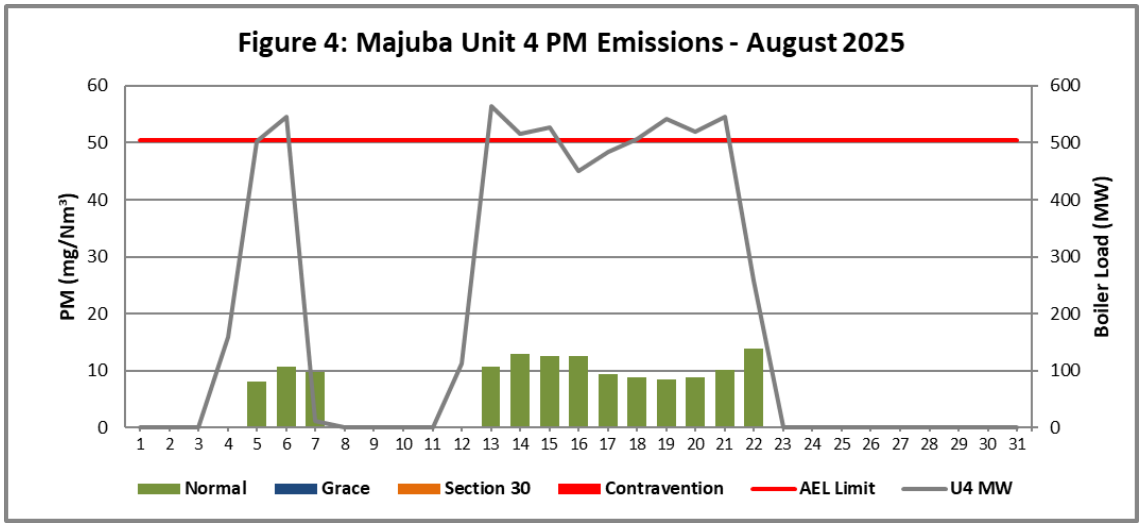


**Figure 4. Particulate Matter emissions (daily averages) for the month of August 2025 against emission limit for Unit 4.**

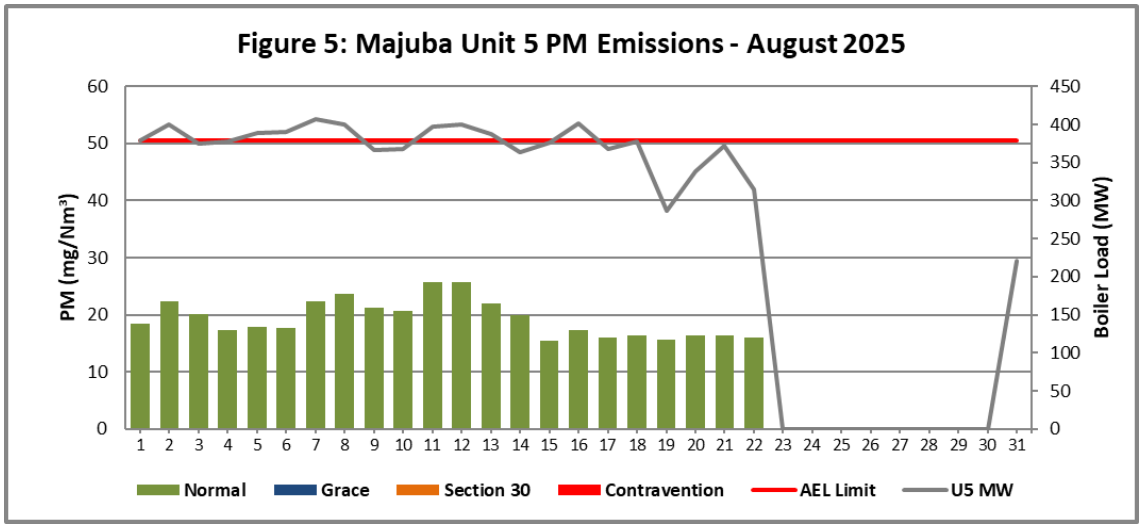


**Figure 5. Particulate Matter emissions (daily averages) for the month of August 2025 against emission limit for Unit 5.**

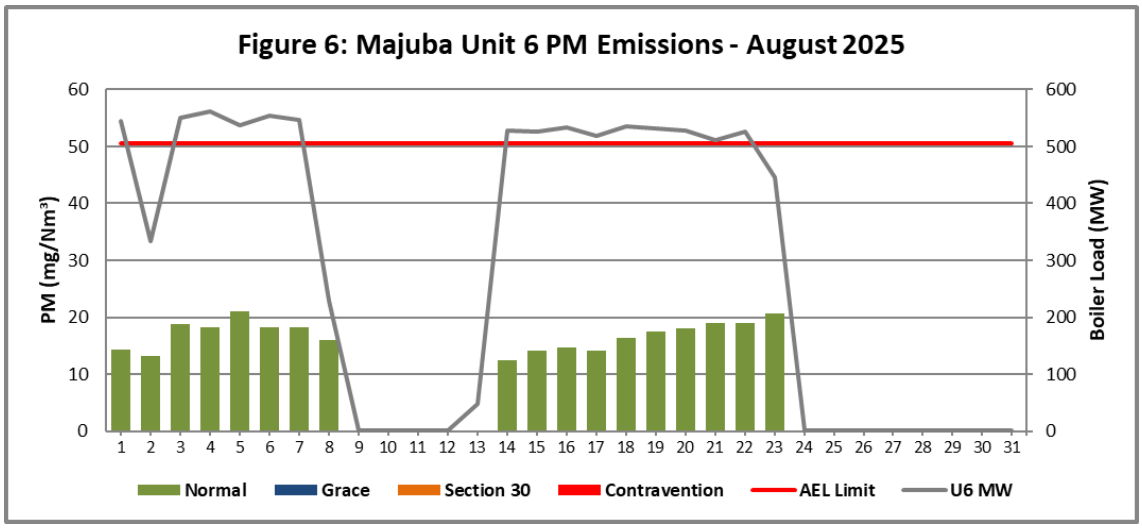


**Figure 6. Particulate Matter emissions (daily averages) for the month of August 2025 against emission limit for Unit 6.**

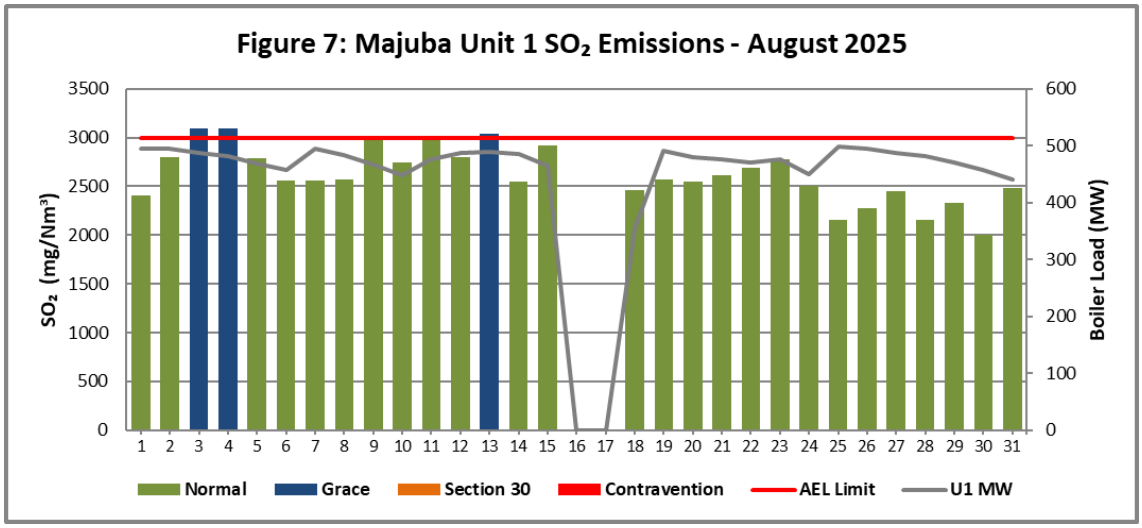


**Figure 7. $SO_2$ emissions (daily averages) for the month of August 2025 against emission limit for Unit 1.**

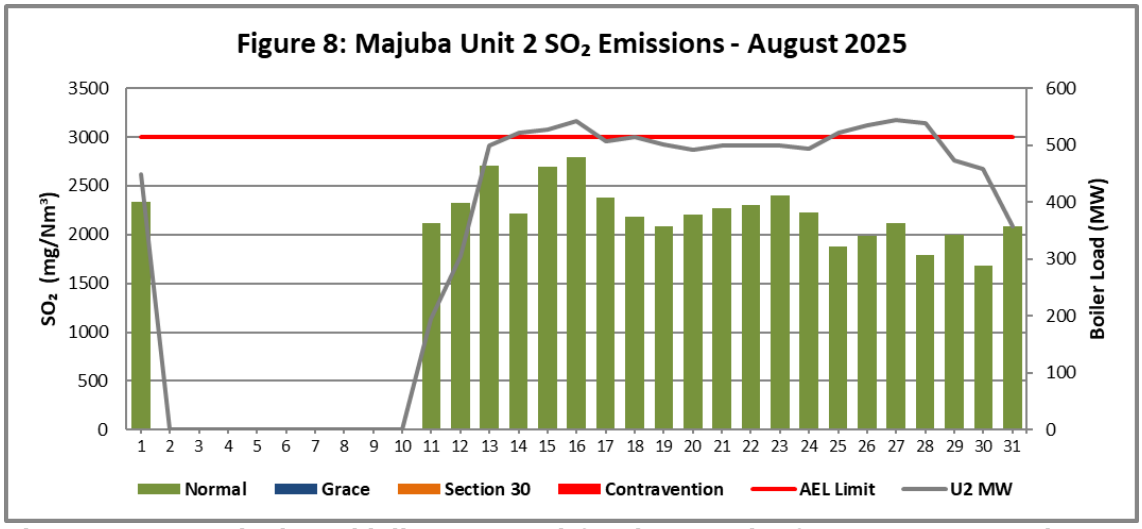


**Figure 8. $SO_2$ emissions (daily averages) for the month of August 2025 against emission limit for Unit 2.**

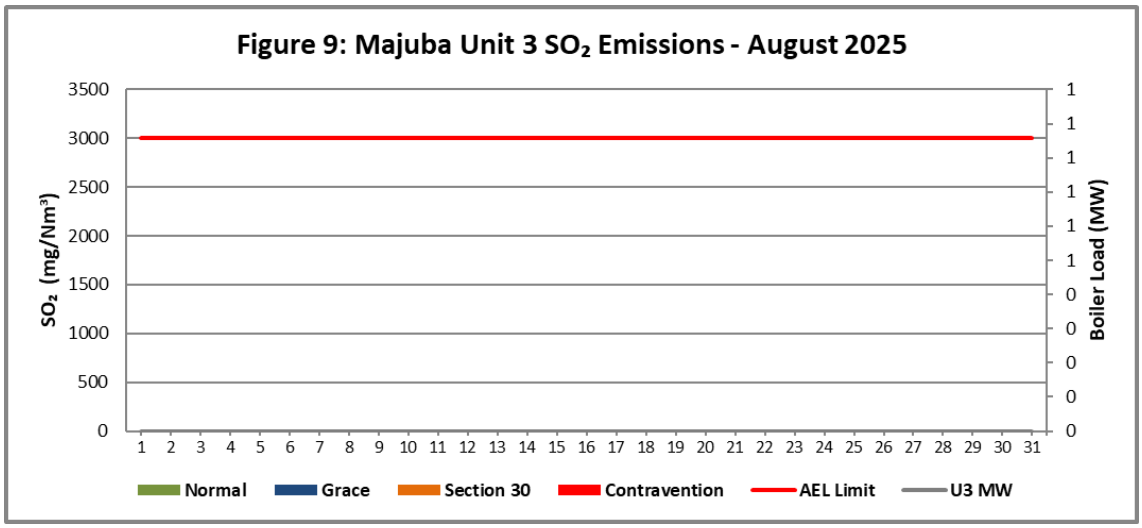


**Figure 9. $SO_2$ emissions (daily averages) for the month of August 2025 against emission limit for Unit 3.**

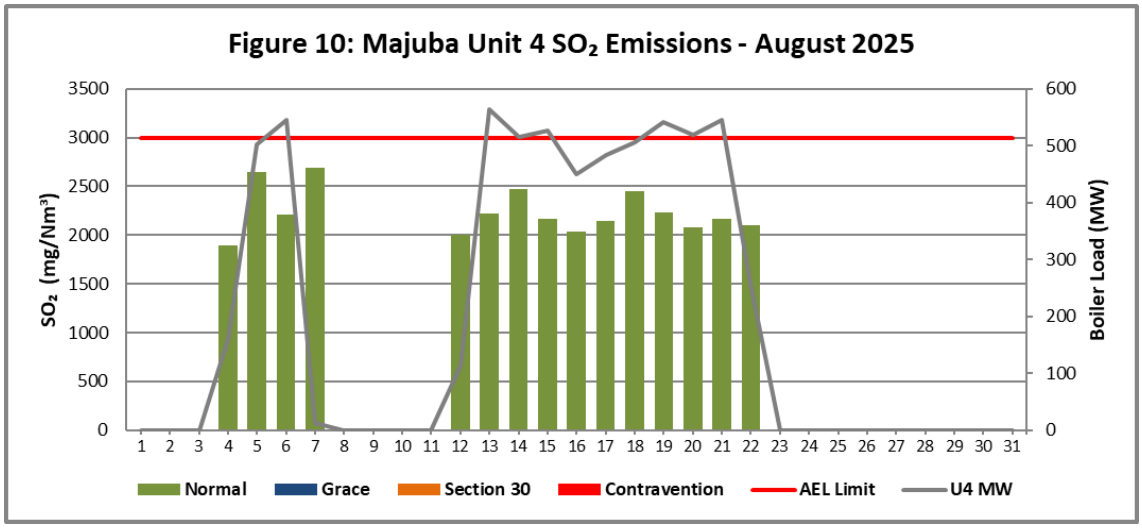


**Figure 10. $SO_2$ emissions (daily averages) for the month of August 2025 against emission limit for Unit 4.**

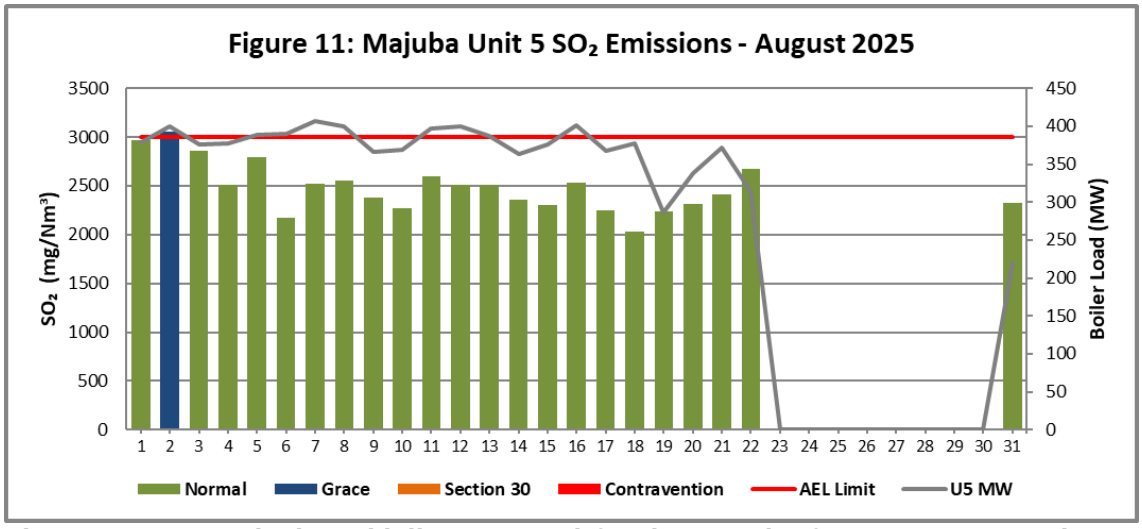


**Figure 11. $SO_2$ emissions (daily averages) for the month of August 2025 against emission limit for Unit 5.**

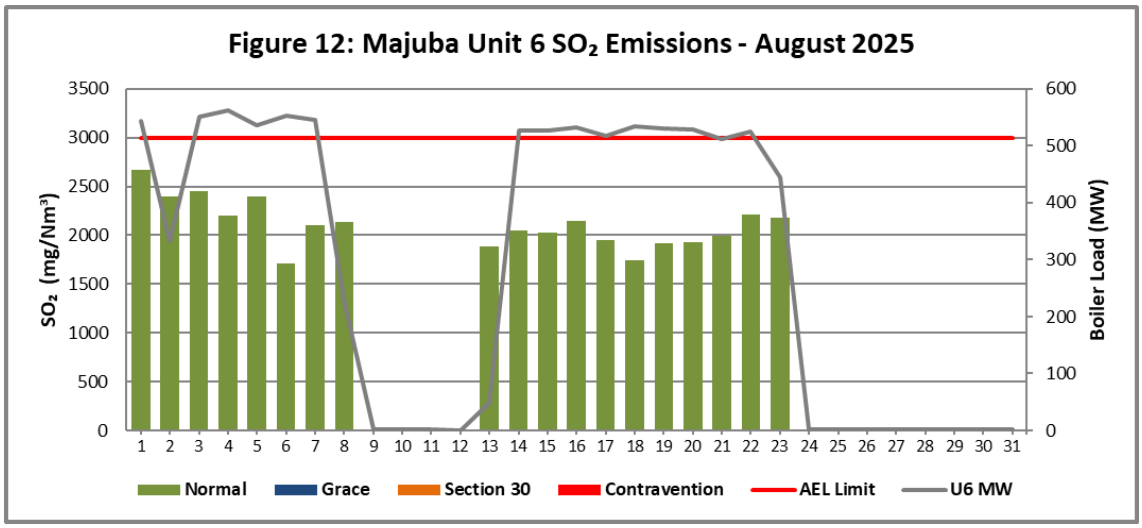


**Figure 12. $SO_2$ emissions (daily averages) for the month of August 2025 against emission limit for Unit 6.**

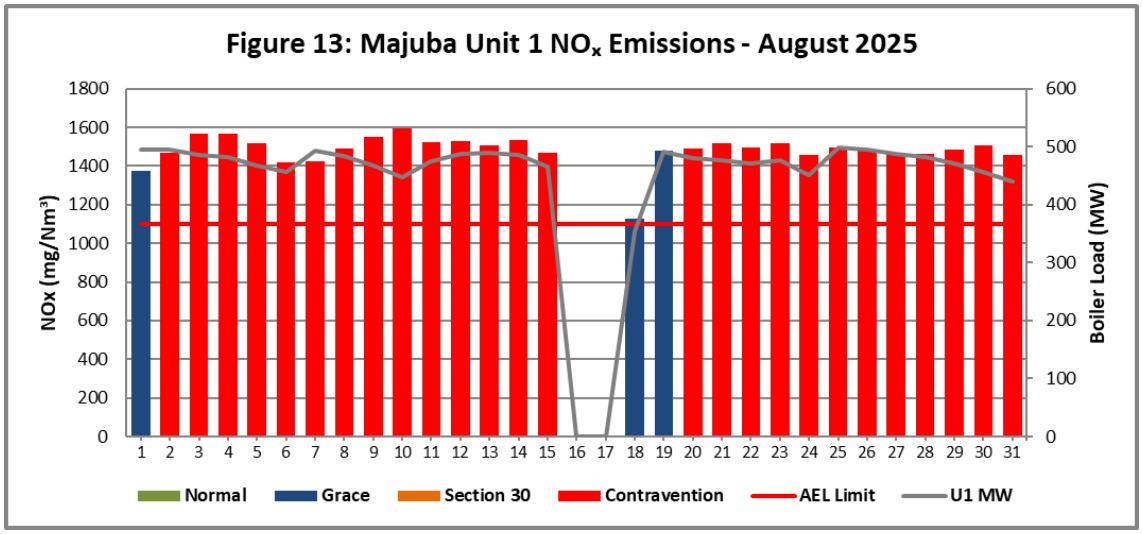


**Figure 13. NOx emissions (daily averages) for the month of August 2025 against emission limit for Unit 1.**

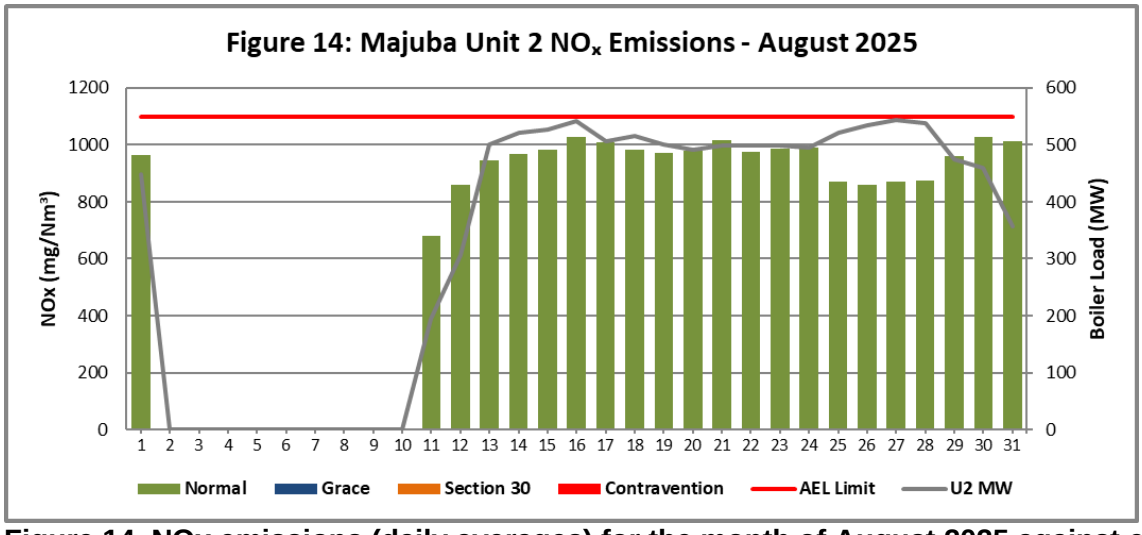


**Figure 14. NOx emissions (daily averages) for the month of August 2025 against emission limit for Unit 2.**

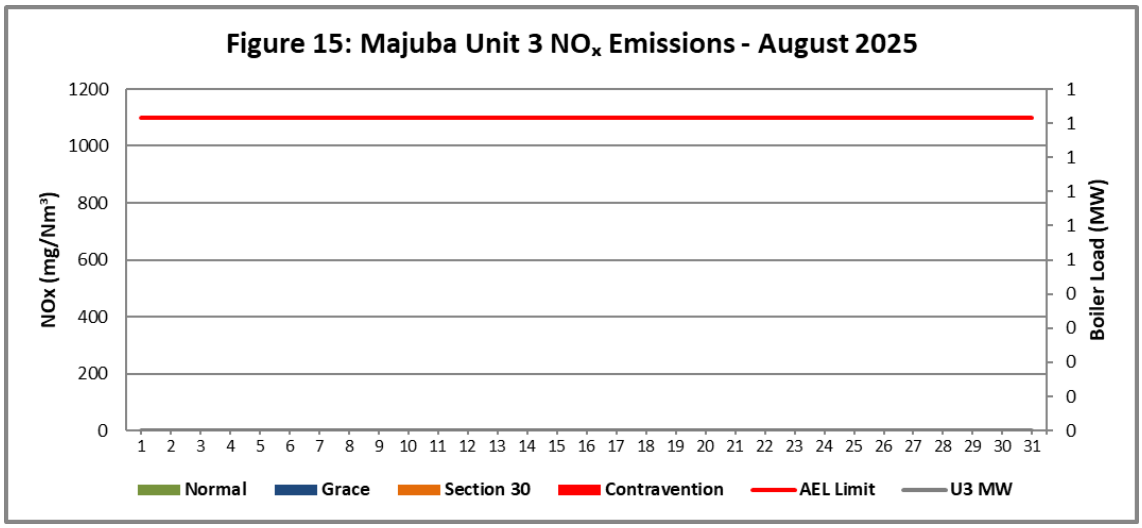


**Figure 15. NOx emissions (daily averages) for the month of August 2025 against emission limit for Unit 3.**

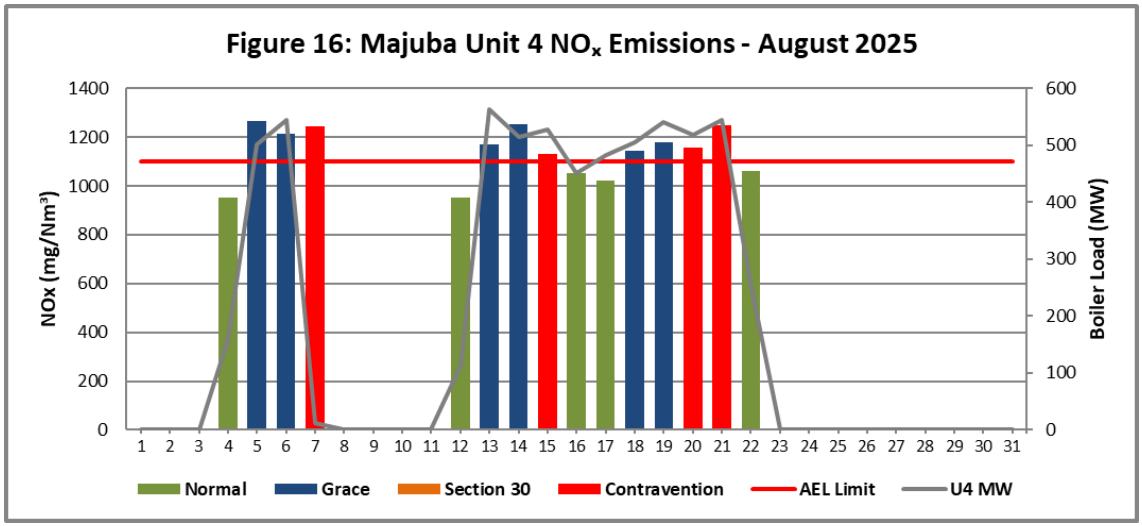


**Figure 16. NOx emissions (daily averages) for the month of August 2025 against emission limit for Unit 4**

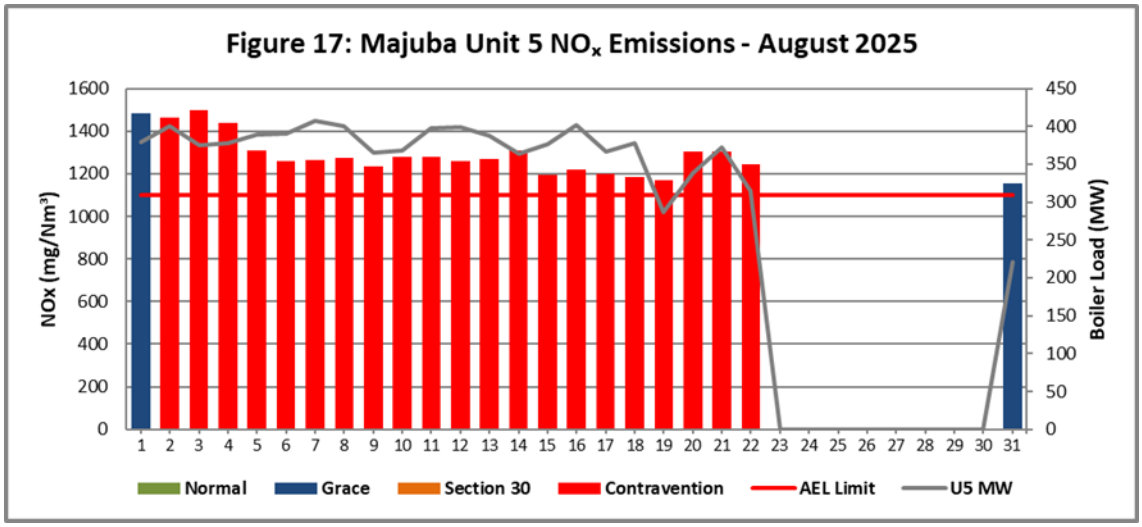


**Figure 17. NOx emissions (daily averages) for the month of August 2025 against emission limit for Unit 5**

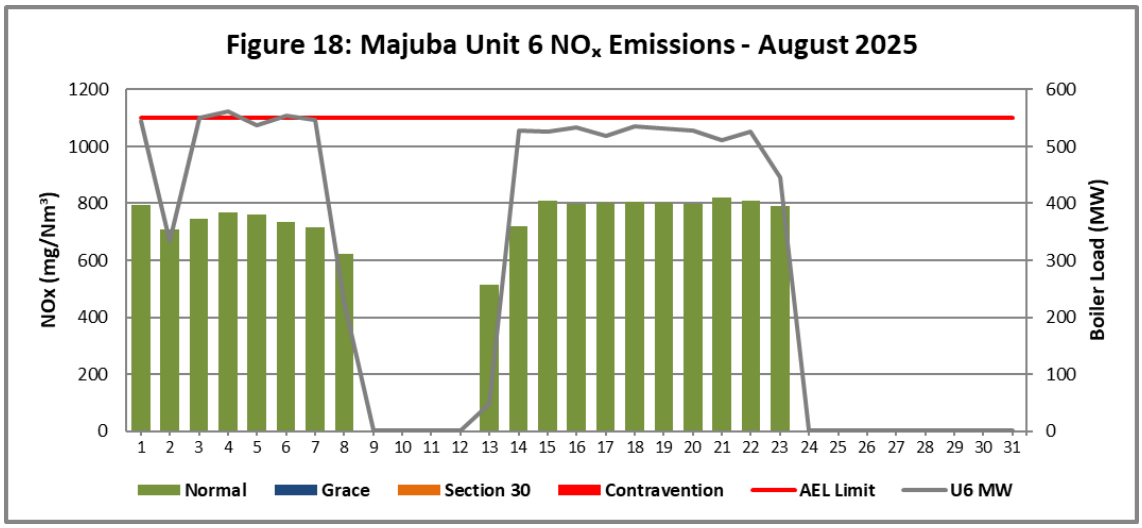


**Figure 18. NOx emissions (daily averages) for the month August 2025 against emission limit for Unit 6**

**Table 4: Monthly tonnages for the month of August 2025**

| Unit | PM (tons) | $SO_2$ (tons) | NOx (tons) |
|---|---|---|---|
| **Unit 1** | 23.3 | 4 580 | 2 604 |
| **Unit 2** | 30.3 | 3 460 | 1 483 |
| **Unit 3** | Off | Off | Off |
| **Unit 4** | 7.5 | 1 877 | 972 |
| **Unit 5** | 25.8 | 3 477 | 1 804 |
| **Unit 6** | 22.3 | 3 077 | 1 122 |

**Table 5: Average monthly concentrations (mg/Nm³) for the month of August 2025**

| Unit | PM (Mg/Nm³) | $SO_2$ (Mg/Nm³) | NOx (Mg/Nm³) |
|---|---|---|---|
| **1** | 14.3 | 2 616.5 | 1 481.2 |
| **2** | 21.1 | 2 217.6 | 946.5 |
| **3** | Off | Off | Off |
| **4** | 10.5 | 2 235.0 | 1 136.6 |
| **5** | 19.3 | 2 483.5 | 1 286.0 |
| **6** | 16.9 | 2 110.0 | 753.5 |

**Table 6: Each unit and respective days operating in compliance to the AEL PM Emission Limits**

| Associated Unit/Stack | Normal | Grace | Section 30 | Contravention | Total Exceedance |
|---|---|---|---|---|---|
| **Unit 1** | 28 | 0 | 0 | 0 | 0 |
| **Unit 2** | 20 | 0 | 0 | 0 | 0 |
| **Unit 3** | Off | Off | Off | Off | Off |
| **Unit 4** | 13 | 0 | 0 | 0 | 0 |
| **Unit 5** | 22 | 0 | 0 | 0 | 0 |
| **Unit 6** | 18 | 0 | 0 | 0 | 0 |

**Table 7: Each unit and respective days operating in compliance to the AEL $SO_2$ Emission Limits**

| Associated Unit/Stack | Normal | Grace | Section 30 | Contravention | Total Exceedance |
|---|---|---|---|---|---|
| **Unit 1** | 26 | 3 | 0 | 0 | 3 |
| **Unit 2** | 22 | 0 | 0 | 0 | 0 |
| **Unit 3** | Off | Off | Off | Off | Off |
| **Unit 4** | 15 | 0 | 0 | 0 | 0 |
| **Unit 5** | 22 | 1 | 0 | 0 | 1 |
| **Unit 6** | 19 | 0 | 0 | 0 | 0 |

**Table 8: Each unit and respective days operating in compliance to the AEL NOX Emission Limits**

| Associated Unit/Stack | Normal | Grace | Section 30 | Contravention | Total Exceedance |
|---|---|---|---|---|---|
| **Unit 1** | 0 | 3 | 0 | 26 | 29 |
| **Unit 2** | 22 | 0 | 0 | 0 | 0 |
| **Unit 3** | Off | Off | Off | Off | Off |
| **Unit 4** | 5 | 6 | 0 | 4 | 10 |
| **Unit 5** | 0 | 2 | 0 | 21 | 23 |
| **Unit 6** | 19 | 0 | 0 | 0 | 0 |

**Table 9: Data Reliability (%)**

| Associated Unit/Stack | PM | $SO_2$ | NO | $O_2$ |
|---|---|---|---|---|
| Unit 1 | 100.0 | 100.0 | 100.0 | 34.5 |
| Unit 2 | 100.0 | 100.0 | 100.0 | 74.4 |
| Unit 3 | Off | Off | Off | Off |
| Unit 4 | 99.4 | 99.4 | 99.6 | 97.6 |
| Unit 5 | 100.0 | 100.0 | 100.0 | 99.7 |
| Unit 6 | 100.0 | 100.0 | 98.7 | 98.7 |

**Table 10: $CO_2$ and $O_2$ deviations of the Month of August 2025**

| | Final $O_2$ CEMS Data (%) | | | | | | $CO_2$ (Actual Dry %) | | | | | | SUM $CO_2$ + $O_2$ CEMS Data (%) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2025/09/12 | U1 | U2 | U3 | U4 | U5 | U6 | U1 | U2 | U3 | U4 | U5 | U6 | U1 | U2 | U3 | U4 | U5 | U6 |
| 2025/08/01 | 11.0 | 11.1 | | | 8.7 | 9.5 | 9.1 | 9.2 | | | 11.1 | 11.2 | 20.1 | 20.3 | | | 19.8 | 20.7 |
| 2025/08/02 | 11.7 | | | | 8.4 | 9.0 | 9.2 | | | | 11.1 | 11.2 | 20.8 | | | | 19.4 | 20.2 |
| 2025/08/03 | 12.2 | | | | 8.8 | 8.5 | 9.2 | | | | 11.1 | 11.3 | 21.3 | | | | 19.9 | 19.8 |
| 2025/08/04 | 12.1 | | | 12.5 | 8.4 | 8.8 | 9.2 | | | 7.9 | 11.2 | 11.4 | 21.3 | | | 20.4 | 19.6 | 20.2 |
| 2025/08/05 | 11.9 | | | 12.4 | 8.6 | 9.3 | 9.0 | | | 8.6 | 11.2 | 11.5 | 20.9 | | | 21.0 | 19.8 | 20.8 |
| 2025/08/06 | 12.2 | | | 11.1 | 8.5 | 8.7 | 8.8 | | | 9.5 | 11.2 | 11.5 | 21.1 | | | 20.6 | 19.6 | 20.2 |
| 2025/08/07 | 11.7 | | | 13.0 | 8.1 | 9.2 | 9.2 | | | 8.3 | 11.1 | 11.4 | 20.9 | | | 21.3 | 19.2 | 20.6 |
| 2025/08/08 | 11.8 | | | | 8.2 | 9.9 | 9.1 | | | | 11.2 | 11.5 | 20.9 | | | | 19.4 | 21.4 |
| 2025/08/09 | 12.3 | | | | 8.6 | | 8.8 | | | | 11.1 | | 21.1 | | | | 19.7 | |
| 2025/08/10 | 12.6 | | | | 8.4 | | 8.7 | | | | 11.1 | | 21.2 | | | | 19.5 | |
| 2025/08/11 | 12.0 | 11.1 | | | 8.3 | | 8.9 | 7.6 | | | 11.1 | | 20.9 | 18.7 | | | 19.4 | |
| 2025/08/12 | 12.0 | 11.1 | | 12.2 | 8.2 | | 9.1 | 8.7 | | 8.2 | 11.2 | | 21.1 | 19.8 | | 20.5 | 19.3 | |
| 2025/08/13 | 12.0 | 11.1 | | 10.9 | 8.7 | 11.8 | 8.9 | 8.9 | | 9.6 | 11.2 | 10.4 | 20.9 | 20.0 | | 20.5 | 19.9 | 22.1 |
| 2025/08/14 | 12.0 | 11.1 | | 11.9 | 9.3 | 9.9 | 9.1 | 9.2 | | 9.3 | 11.3 | 11.2 | 21.0 | 20.3 | | 21.2 | 20.6 | 21.1 |
| 2025/08/15 | 12.0 | 11.4 | | 10.8 | 8.8 | 10.2 | 8.7 | 9.1 | | 9.6 | 11.2 | 11.3 | 20.7 | 20.5 | | 20.4 | 20.0 | 21.5 |
| 2025/08/16 | | 11.5 | | 11.5 | 8.4 | 10.1 | | 9.4 | | 8.5 | 11.2 | 11.3 | | 20.9 | | 20.0 | 19.6 | 21.4 |
| 2025/08/17 | | 11.6 | | 10.7 | 9.0 | 10.1 | | 9.1 | | 9.4 | 11.2 | 11.2 | | 20.7 | | 20.1 | 20.2 | 21.3 |
| 2025/08/18 | 12.0 | 11.3 | | 12.0 | 8.4 | 9.9 | 9.0 | 9.3 | | 9.2 | 11.2 | 11.3 | 21.0 | 20.6 | | 21.2 | 19.6 | 21.2 |
| 2025/08/19 | 12.0 | 11.4 | | 11.0 | 9.0 | 9.8 | 9.0 | 9.2 | | 9.8 | 11.2 | 11.4 | 21.0 | 20.6 | | 20.8 | 20.2 | 21.1 |
| 2025/08/20 | 12.0 | 11.6 | | 10.4 | 9.1 | 9.7 | 9.0 | 9.0 | | 9.7 | 11.2 | 11.4 | 21.0 | 20.5 | | 20.1 | 20.3 | 21.2 |
| 2025/08/21 | 12.0 | 11.6 | | 10.8 | 8.5 | 10.1 | 9.0 | 9.0 | | 9.8 | 11.2 | 11.4 | 21.0 | 20.6 | | 20.6 | 19.7 | 21.6 |
| 2025/08/22 | 12.0 | 11.2 | | 10.3 | 8.9 | 9.9 | 9.0 | 9.2 | | 9.3 | 11.3 | 11.5 | 21.0 | 20.4 | | 19.6 | 20.2 | 21.3 |
| 2025/08/23 | 12.0 | 11.2 | | | | 10.0 | 9.0 | 9.3 | | | | 11.4 | 21.0 | 20.5 | | | | 21.4 |
| 2025/08/24 | 12.0 | 11.3 | | | | | 9.0 | 9.3 | | | | | 21.0 | 20.5 | | | | |
| 2025/08/25 | 12.0 | 10.6 | | | | | 9.0 | 9.7 | | | | | 21.0 | 20.3 | | | | |
| 2025/08/26 | 12.0 | 10.2 | | | | | 9.0 | 10.0 | | | | | 21.0 | 20.3 | | | | |
| 2025/08/27 | 12.0 | 10.1 | | | | | 9.0 | 10.2 | | | | | 21.0 | 20.3 | | | | |
| 2025/08/28 | 12.0 | 10.2 | | | | | 9.0 | 10.2 | | | | | 21.0 | 20.4 | | | | |
| 2025/08/29 | 12.0 | 11.0 | | | | | 9.0 | 9.6 | | | | | 21.0 | 20.5 | | | | |
| 2025/08/30 | 12.0 | 11.2 | | | | | 9.0 | 9.3 | | | | | 21.0 | 20.6 | | | | |
| 2025/08/31 | 12.0 | 11.4 | | | 10.5 | | 9.0 | 9.2 | | | 11.3 | | 21.0 | 20.6 | | | 21.8 | |

Calculation: $CO_2$% + $O_2$% = 19.5-21.5%
*Blank spaces indicate that the unit was offline during that period

## Emergency Generation

**Table 11: Emergency Generation for the month of August 2025**

| | Unit 1 | Unit 2 | Unit 3 | Unit 4 | Unit 5 | Unit 6 |
|---|---|---|---|---|---|---|
| **Emergency Generation hours declared by national Control** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Emergency Hours declared including hours after stand down** | 0 | 0 | 0 | 0 | 0 | 0 |
| **Hours over the Limit during Emergency Generation** | 0 | 0 | 0 | 0 | 0 | 0 |

## Comments on the performance and availability of each unit

### UNIT 1

The unit base loaded for most of the days during the month and off for two days. Twenty-four fabric filter bags were replaced during the month.

### UNIT 2

The unit base loaded for most of the days during the month and off for nine days. Forty-five fabric filter bags were replaced during the month.

### UNIT 3

The unit was on outage for the entire month. Twenty-five fabric filter bags were replaced during the month.

**UNIT 4**
The unit base loaded for most of the days during the month and off for sixteen days. Fifty-four fabric filter bags were replaced during the month.

**UNIT 5**
The unit base loaded for most of the days during the month and off for eight days. Twenty-three fabric filter bags were replaced during the month.

**UNIT 6**
The unit base loaded for most of the days during the month and off for twelve days. Twenty-one fabric filter bags were replaced during the month.

**Complaints Register**

**Table 12: Complaints for the month of August 2025**

| 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 |
|---|---|---|---|---|---|
| | No complaints were received in August 2025. | | | | |

**Area and or line source – management and mitigation measures**

There were no incidents or leaks at the fuel oil tanks, loading and offloading area for the month of August 2025.

**General**

Unit 2 $O_2$ monitor has been repaired. Unit 1 O2 monitor reliability was below 80%. The Original Equipment Manufacturer (OEM) will be onsite to repair the monitor. The exceedances on $NO_x$ are detailed in Table 8. The Station is tracking the actions from the investigation conducted and will provide feedback on the progress to the licensing authority.

Yours sincerely

Report compiled by:

Faith Kagoda Date 17/09/2025
**ENVIRONMENTAL MANAGER: (MAJUBA)**

Report verified by:

Lindani Madonsela Date 18/09/2025
**BOILER ENGINEERING MANAGER: (MAJUBA)**

Report approved by:

pp
Johan Swanepoel Date 18/09/2025
**ENGINEERING MANAGER: (MAJUBA)**