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Dear Ms Mthembu

**TUTUKA POWER STATION MONTHLY REPORT FOR APRIL 2025**

This serves as the monthly report required in terms of Section 7.4 of Tutuka Power Station's Atmospheric Emission License (16/4/Lekwa/Eskom H SOC Ltd TPS/0013/2019/f03). The report includes verified emissions for Particulate Matters, Sulphur, and Nitrogen dioxides for the month of April 2025

The report outlines monthly trends for each monitored pollutant. In April 2025, the Station had four units operational: Units 2, 3, 4, and 5, while Units 1 and 6 remained offline. The NOx limit was exceeded in Unit 3 on the 9th of April and in Unit 5 on 10th of April; however, these exceedances occurred within the 48-hour grace period permitted for start-ups, shutdowns, and upset conditions.

Additionally, unit 3 dust emission limit was exceeded beyond the grace period for a single day on April 25th, 2025

## 1 RAW MATERIALS AND PRODUCTS

| Raw Materials and Products | Raw Material Type | Units | Max. Permitted | Actual Consumption Mar-2025 |
|---|---|---|---|---|
| | Coal | Tons | *1 200 000* | *573 072* |
| | Fuel Oil | Tons | *10 000* | *5455.05* |
| | | | | |
| **Production Rates** | **Product / By-Product Name** | **Units** | **Max. Production Capacity Permitted** | **Indicative Production Rate April-2025** |
| | Energy | GWh | *2 611* | 851.92 |
| | Ash | Tons | *350 000* | 1454.1 |
| | RE Ash | kg/MWh | *not specified* | 1.77 |

Note: Maximum energy rate is as per the maximum capacity stated in the AEL: [3 510 MW] x 24 hrs x days in Month/1000 to convert to GWh

## 2 ENERGY SOURCE CHARACTERISTICS

| Coal Characteristics | Units | Stipulated Range | Monthly Average Content |
|---|---|---|---|
| CV Content | MJ/kg | *16-24* | *21.71* |
| Sulphur Content | % | *0.6 TO 2.6* | *0.94* |
| Ash Content | % | *21 TO 33* | *24.73* |

## 3 EMISSION LIMITS (mg/Nm³)

| Associated Unit/Stack | PM | $SO_2$ | NOx |
|---|---|---|---|
| Unit 1 | *300* | *3400* | *1200* |
| Unit 2 | *300* | *3400* | *1200* |
| Unit 3 | *300* | *3400* | *1200* |
| Unit 4 | *300* | *3400* | *1200* |
| Unit 5 | *300* | *3400* | *1200* |
| Unit 6 | *300* | *3400* | *1200* |

## 4 ABATEMENT TECHNOLOGY (%)

| Associated Unit/Stack | Technology Type | Efficiency Mar-2025 |
|---|---|---|
| Unit 1 | *Electrostatic Precipitators (ESP)* | *Unit Off* |
| Unit 2 | *Electrostatic Precipitators (ESP)* | *99.3%* |
| Unit 3 | *Electrostatic Precipitators (ESP)* | *98.2%* |
| Unit 4 | *Electrostatic Precipitators (ESP)* | *99.4%* |
| Unit 5 | *Electrostatic Precipitators (ESP)* | *98.5%* |
| Unit 6 | *Electrostatic Precipitators (ESP)* | *Unit Off* |

Note: The ESP does not have bypass mode operation, hence plant considered 100% Utilised.

## 5 MONITOR RELIABILITY (%)

| Associated Unit/Stack | PM | $SO_2$ | NO |
|---|---|---|---|
| Unit 1 | *Off* | *Off* | *Off* |
| Unit 2 | *100.0* | *100.0* | *0.0* |
| Unit 3 | *100.0* | *51.5* | *0.0* |
| Unit 4 | *98.8* | *96.0* | *0.0* |
| Unit 5 | *100.0* | *0.0* | *0.0* |
| Unit 6 | *Off* | *Off* | *Off* |

SOx (units 3 and 5) and NOx (units 2 -5) monitors malfunctioned, and surrogate values were used to estimate the emissions

## 6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of April-2025

| Associated Unit/Stack | PM (tons) | $SO_2$ (tons) | $NO_x$ (tons) |
|---|---|---|---|
| Unit 1 | Off | Off | Off |
| Unit 2 | 192.3 | 1 704 | 793 |
| Unit 3 | 702.9 | 3 714 | 2 352 |
| Unit 4 | 197.9 | 2 641 | 1 401 |
| Unit 5 | 361.0 | 3 275 | 1 765 |
| Unit 6 | Off | Off | Off |
| SUM | 1 454.1 | 11 335 | 6 311 |

Table 6.2: Operating days in compliance to PM AEL Limit - April 2025

| Associated Unit/Stack | Normal | Grace | Section 30 | Contravention | Total Exceedance | Average PM (mg/Nm³) |
|---|---|---|---|---|---|---|
| Unit 1 | Off | Off | Off | Off | Off | Off |
| Unit 2 | 29 | 2 | 0 | 0 | 2 | 219.8 |
| Unit 3 | 21 | 6 | 0 | 1 | 7 | 300.8 |
| Unit 4 | 31 | 0 | 0 | 0 | 0 | 137.4 |
| Unit 5 | 27 | 0 | 0 | 0 | 0 | 226.5 |
| Unit 6 | Off | Off | Off | Off | Off | Off |
| SUM | 108 | 7 | 0 | 1 | 9 | |

Table 6.3: Operating days in compliance to $SO_2$ AEL Limit - April 2025

| Associated Unit/Stack | Normal | Grace | Section 30 | Contravention | Total Exceedance | Average $SO_2$ (mg/Nm³) |
|---|---|---|---|---|---|---|
| Unit 1 | Off | Off | Off | Off | Off | Off |
| Unit 2 | 26 | 0 | 0 | 0 | 0 | 1 942.3 |
| Unit 3 | 30 | 0 | 0 | 0 | 0 | 1 620.8 |
| Unit 4 | 26 | 0 | 0 | 0 | 0 | 1 843.5 |
| Unit 5 | 22 | 0 | 0 | 0 | 0 | 2 046.7 |
| Unit 6 | Off | Off | Off | Off | Off | Off |
| SUM | 82 | 0 | 0 | 0 | 0 | |

Table 6.4: Operating days in compliance to NOx AEL Limit - April 2025

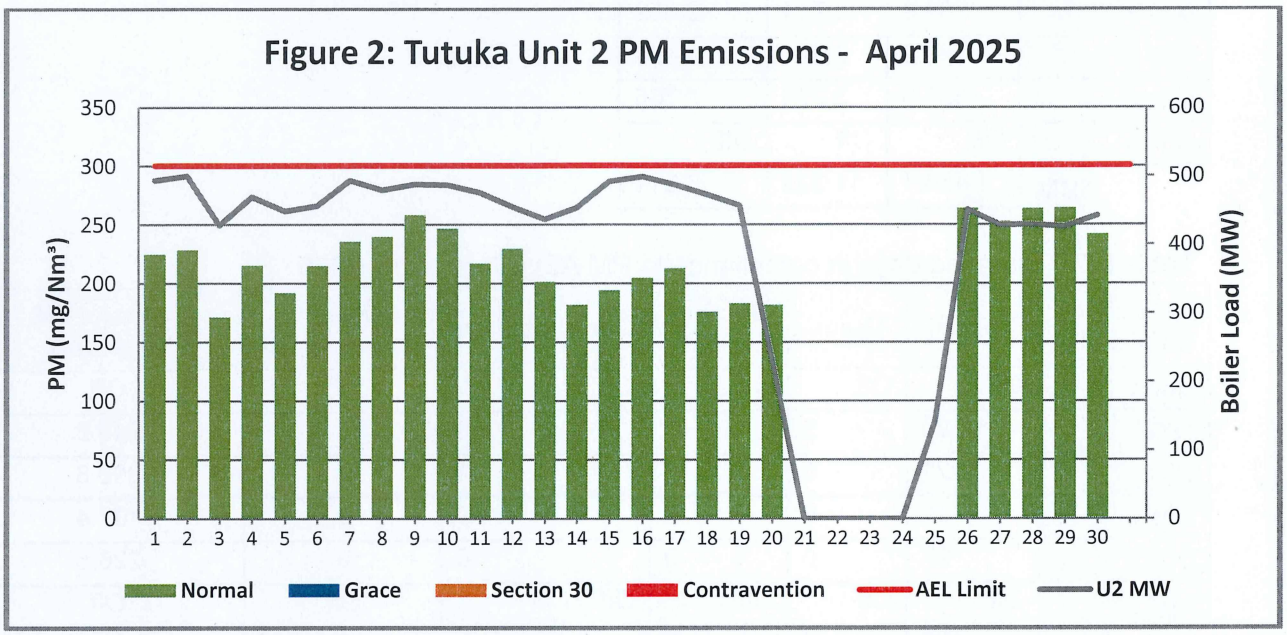
| Associated Unit/Stack | Normal | Grace | Section 30 | Contravention | Total Exceedance | Average NOx (mg/Nm³) |
|---|---|---|---|---|---|---|
| Unit 1 | Off | Off | Off | Off | Off | Off |
| Unit 2 | 26 | 0 | 0 | 0 | 0 | 903.3 |
| Unit 3 | 29 | 0 | 0 | 1 | 1 | 1 027.3 |
| Unit 4 | 26 | 0 | 0 | 0 | 0 | 972.2 |
| Unit 5 | 21 | 0 | 0 | 1 | 1 | 1 111.2 |
| Unit 6 | Off | Off | Off | Off | Off | Off |
| SUM | 81 | 0 | 0 | 1 | 1 | |

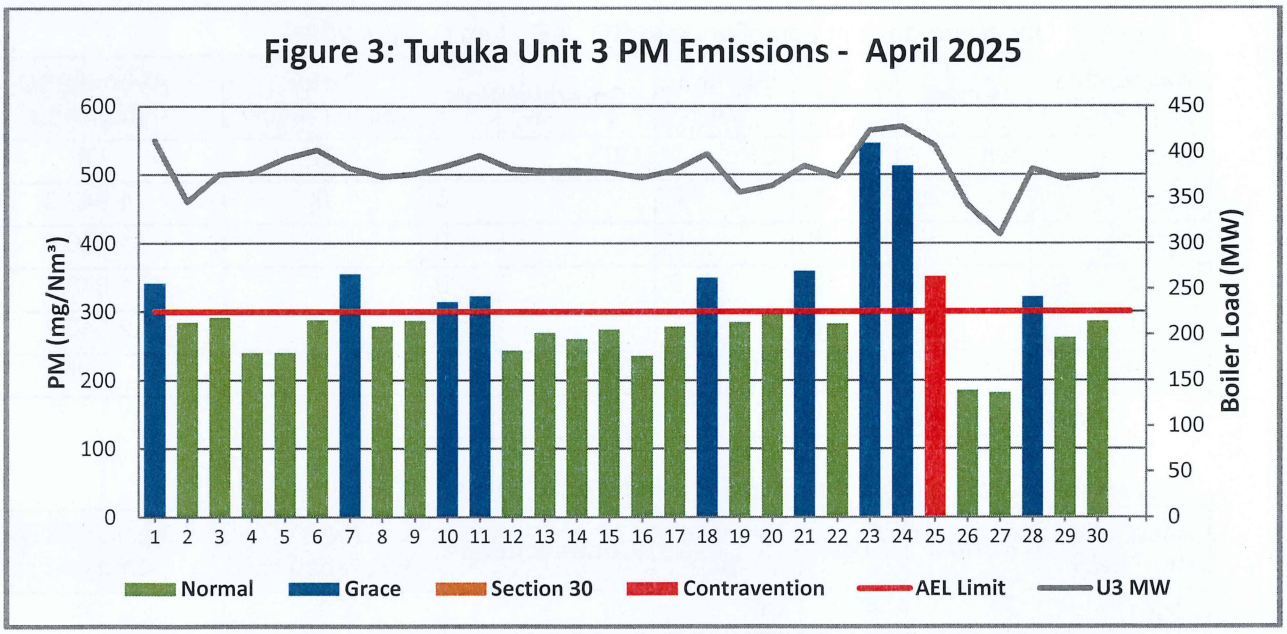
**Note: NOx emissions is measured as NO in PPM. Final NOx value is expressed as total $NO_2$**

Table 6.5: Legend
Description

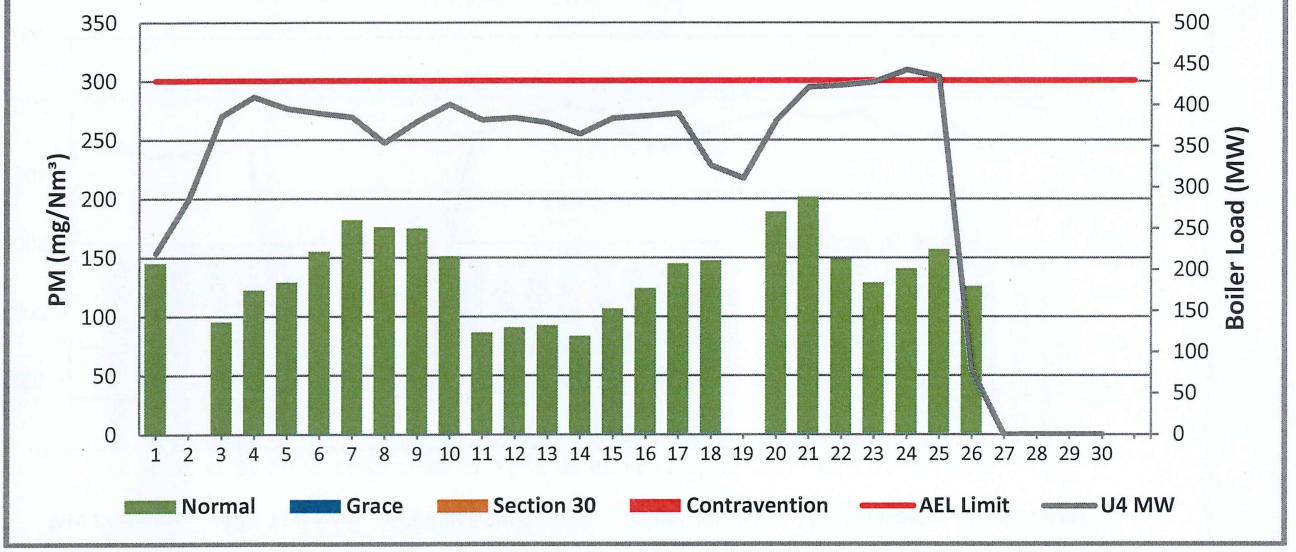
| Condition | Colour | Description |
|---|---|---|

| | | |
|---|---|---|
| Normal | | Emissions below Emission Limit Value (ELV) |
| Grace | | Emissions above the ELV during grace period |
| Section 30 | | Emissions above ELV during a NEMA S30 incident |
| Contravention | | Emissions above ELV but outside grace or S30 incident conditions |

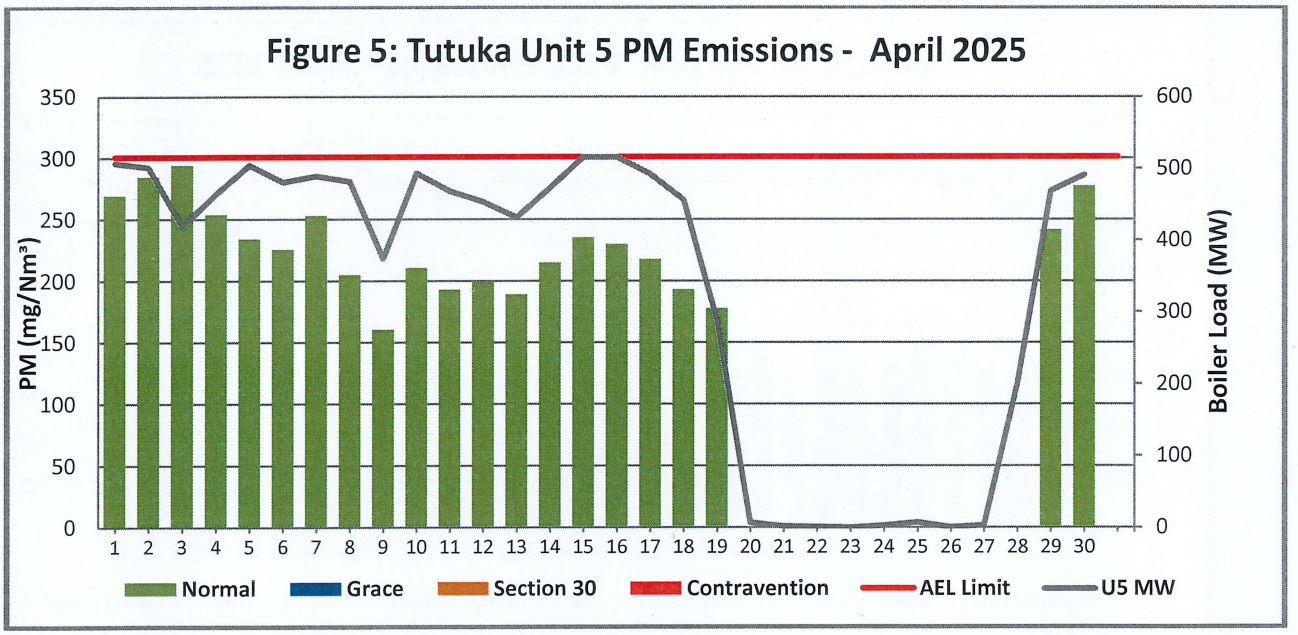


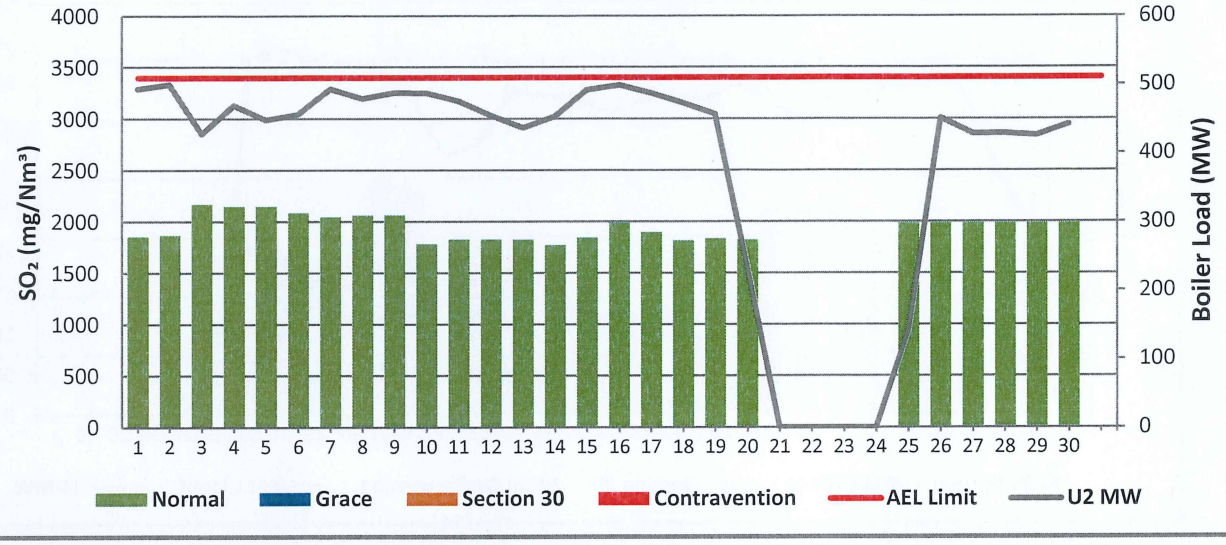
## Figure 4: Tutuka Unit 4 PM Emissions - April 2025



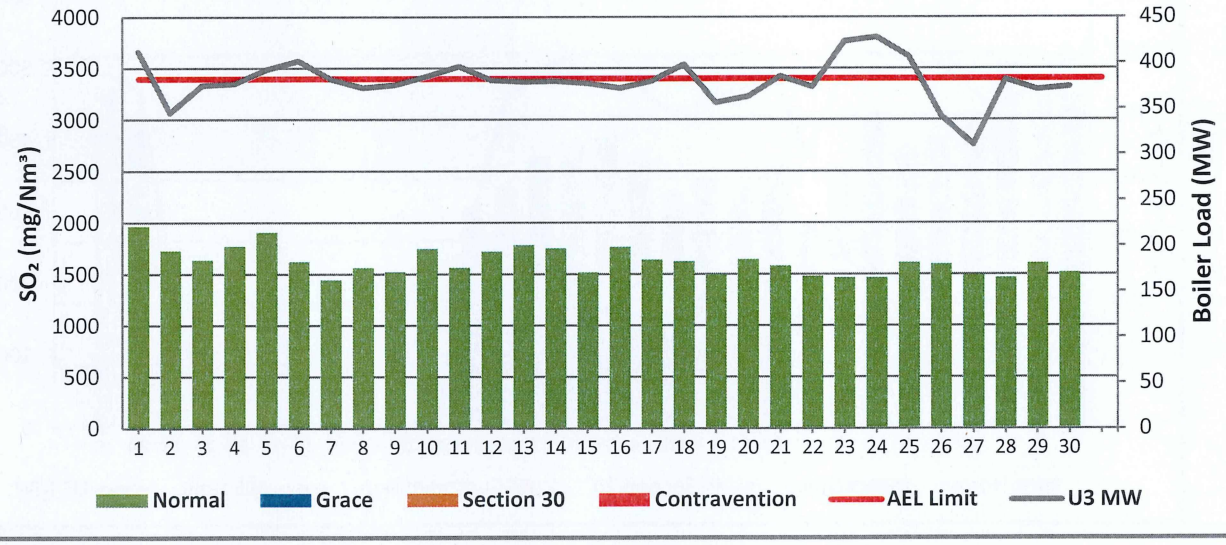

## Figure 5: Tutuka Unit 5 PM Emissions - April 2025



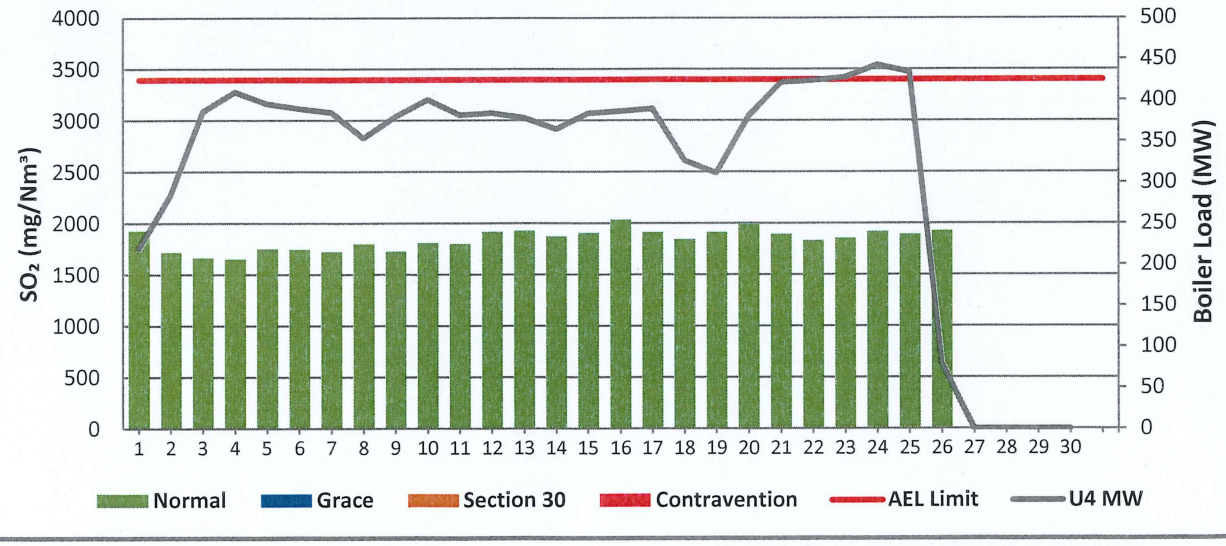
## Figure 8: Tutuka Unit 2 $SO_2$ Emissions - April 2025



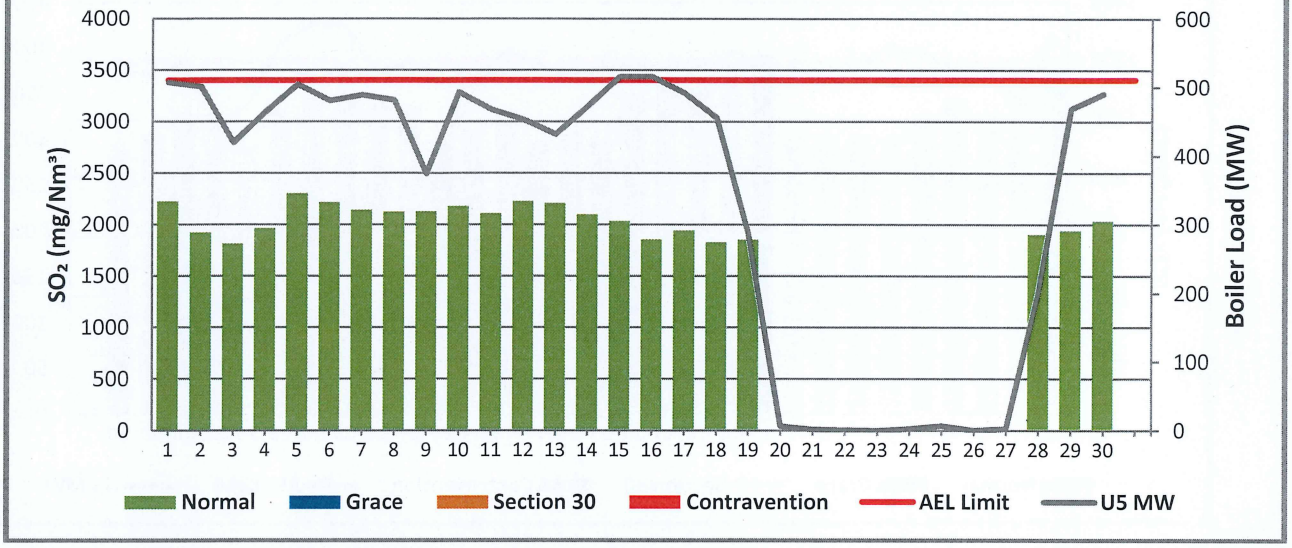

## Figure 9: Tutuka Unit 3 $SO_2$ Emissions - April 2025



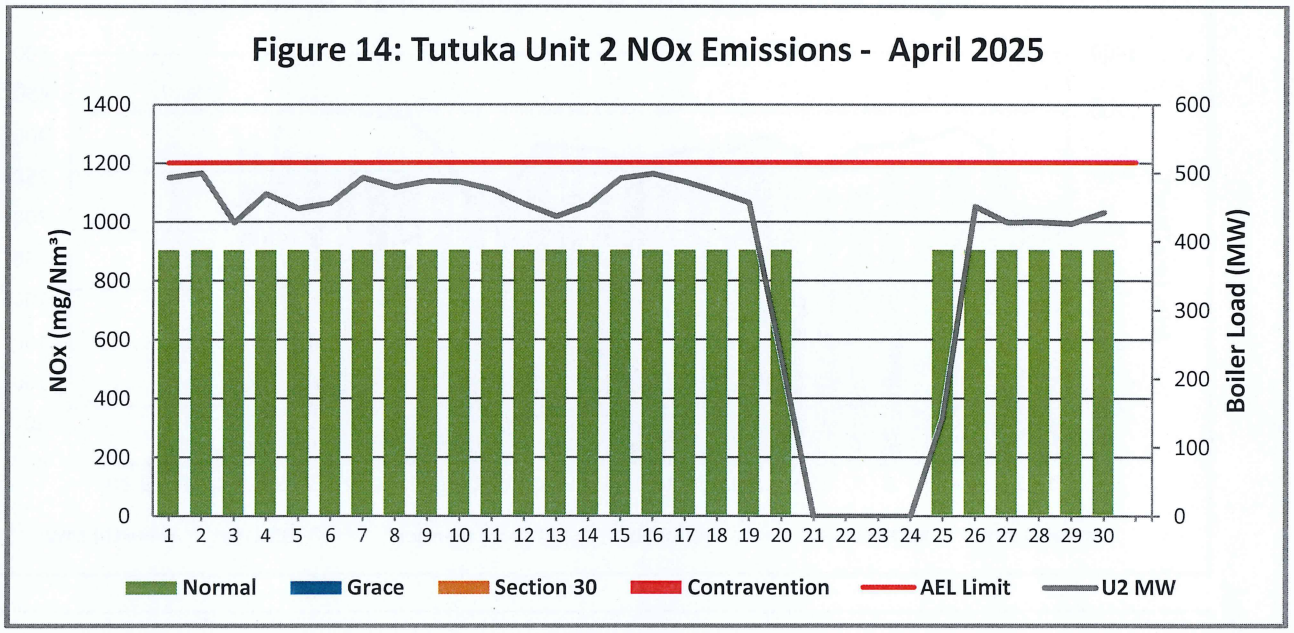

## Figure 10: Tutuka Unit 4 $SO_2$ Emissions - April 2025



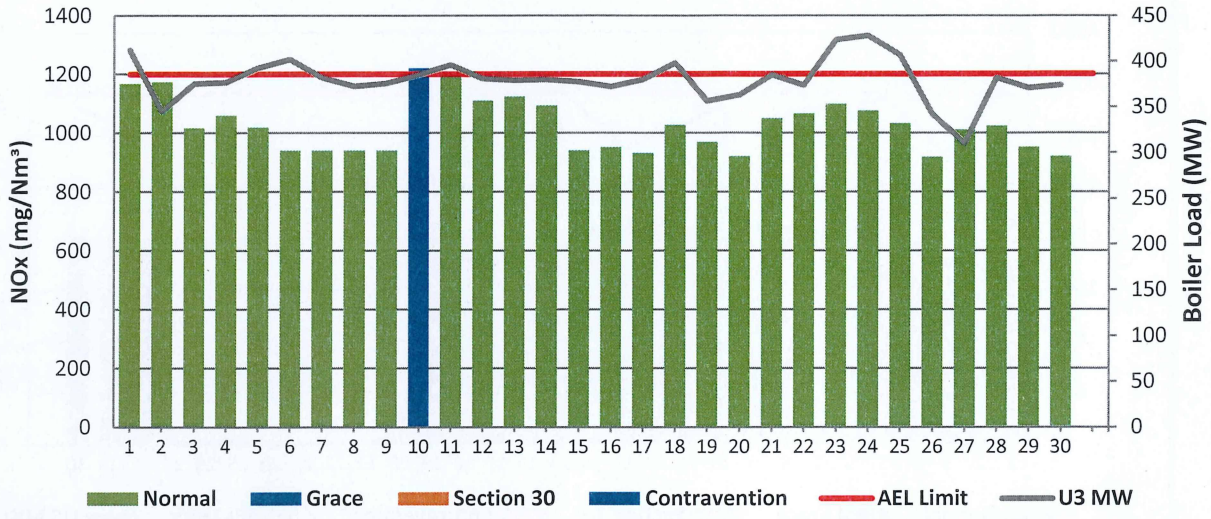
## Figure 11: Tutuka Unit 5 $SO_2$ Emissions - April 2025



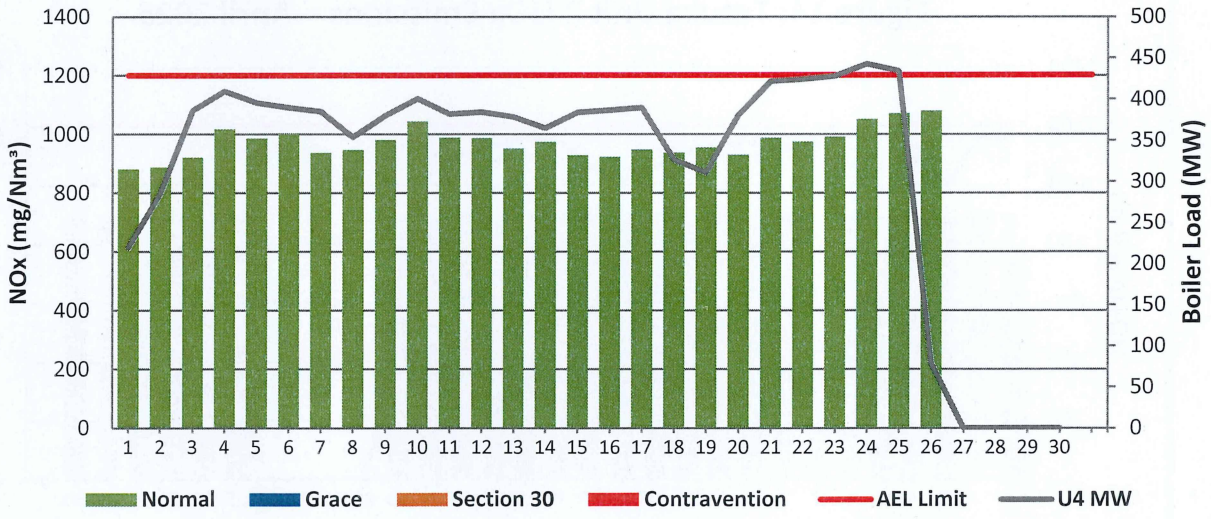

## Figure 14: Tutuka Unit 2 NOx Emissions - April 2025



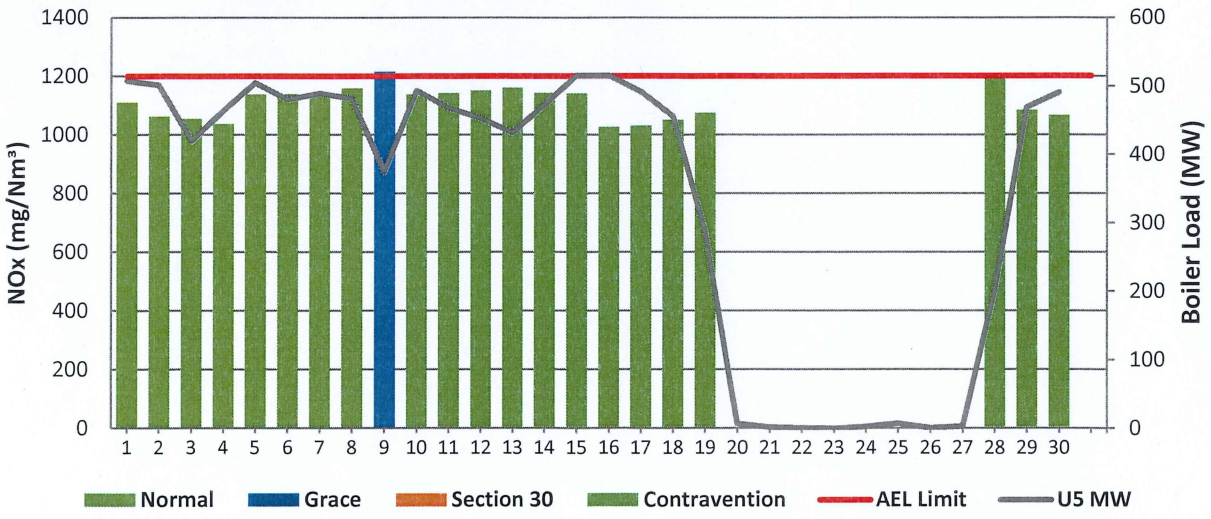
## Figure 15: Tutuka Unit 3 NOx Emissions - April 2025




## Figure 16: Tutuka Unit 4 NOx Emissions - April 2025




## Figure 17: Tutuka Unit 5 NOx Emissions - April 2025



## 7. COMPLAINTS REGISTER

| Source Code/Name | Root Cause Analysis | Calculation of Impacts/emissions associated with the incident | Dispersion modelling of pollutants where applicable | Measures implemented to prevent recurrence | Date by which measure will be implemented |
|---|---|---|---|---|---|
| No complaints were received for the month of April 2025. | | | | | |

Yours Sincerely

Compiled by:

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Xoli Jila

**SNR ENVIRONMENAL ADVISOR**

Supported by:

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