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Date: 12 January 2025

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Dear Ms Mthembu

### TUTUKA POWER STATION MONTHLY REPORT FOR JANUARY 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 January 2025

The report presents monthly trends for each monitored pollutant. The Station had 4-units onload for the month of January 2025, units 2, 3, 4 and 5. Units 1 and 6 were offload. The Station exceeded the PM limit in unit 3, beyond the 48-hour grace period allowed for start-ups, maintenance and shut down grace. This was due a fault in the Dust Handling Plant caused by a failure of C2 Dust transfer. The C2 dust transfer spare was then sourced and installed on the 28th of January 2025.

There were NOx limit exceedances recorded in units 3 and 5. Smokestack lifts have not been working due to electrical faults; hence gas monitors have not been accessible for maintenance and calibrations.

### 1. RAW MATERIALS AND PRODUCTS

| Raw Materials and Products | Raw Material Type         | Units  | Max. Permitted                     | Actual Consumption Jan-2025         |
|----------------------------|---------------------------|--------|------------------------------------|-------------------------------------|
|                            | Coal                      | Tons   | 1 200 000                          | 308 809                             |
|                            | Fuel Oil                  | Tons   | 10 000                             | 3705.46                             |
| Production Rates           | Product / By-Product Name | Units  | Max. Production Capacity Permitted | Indicative Production Rate Jan-2025 |
|                            | Energy                    | GWh    | 2 611                              | 546.5                               |
|                            | Ash                       | Tons   | 350 000                            | 74 732                              |
|                            | RE Ash                    | kg/MWh | not specified                      | 1.01                                |

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

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Eskom Holdings SOC Ltd Reg No 2002/015527/30



## TUTUKA POWER STATION MONTHLY REPORT FOR JANUARY 2025

### 2. ENERGY SOURCE CHARACTERISTICS

| Coal Characteristic | Units | Stipulated Range | Monthly Average Content |
|---------------------|-------|------------------|-------------------------|
| CV Content          | MJ/kg | 16-24            | 21.430                  |
| Sulphur Content     | %     | 0.6 TO 2.6       | 1.180                   |
| Ash Content         | %     | 21 TO 33         | 25.490                  |

### 3. EMISSION LIMITS (mg/Nm<sup>3</sup>)

| Associated Unit/Stack | PM  | SO <sub>2</sub> | NO <sub>x</sub> |
|-----------------------|-----|-----------------|-----------------|
| 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            |

| Associated Unit/Stack | Technology Type                     | Efficiency Jan-2025 |
|-----------------------|-------------------------------------|---------------------|
| Unit 1                | Electro-Static Precipitators (ESP)  | Unit Off            |
| Unit 2                | Electro- Static Precipitators (ESP) | 97.8%               |
| Unit 3                | Electro -Static Precipitators (ESP) | 98.99%              |
| Unit 4                | Electro- Static Precipitators (ESP) | 99.6%               |
| Unit 5                | Electro- Static Precipitators (ESP) | 99.0%               |
| Unit 6                | Electro- Static Precipitators (ESP) | Unit Off            |

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

### 5 MONITOR RELIABILITY (%)

| Associated Unit/Stack | PM    | SO <sub>2</sub> | NO    | O <sub>2</sub> |
|-----------------------|-------|-----------------|-------|----------------|
| Unit 1                | Off   | Off             | Off   | Off            |
| Unit 2                | 99.6  | 100.0           | 100.0 | 92.3           |
| Unit 3                | 99.4  | 100.0           | 100.0 | 97.0           |
| Unit 4                | 99.7  | 97.8            | 100.0 | 98.7           |
| Unit 5                | 100.0 | 100.0           | 100.0 | 93.0           |
| Unit 6                | Off   | Off             | Off   | Off            |

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### 6 EMISSION PERFORMANCE

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

| Associated Unit/Stack | PM (tons)    | SO <sub>2</sub> (tons) | NO <sub>x</sub> (tons) |
|-----------------------|--------------|------------------------|------------------------|
| Unit 1                | Off          | Off                    | Off                    |
| Unit 2                | 56.9         | 522                    | 315                    |
| Unit 3                | 63.8         | 317                    | 210                    |
| Unit 4                | 345.2        | 2 900                  | 1 743                  |
| Unit 5                | 76.7         | 1 214                  | 716                    |
| Unit 6                | Off          | Off                    | Off                    |
| <b>SUM</b>            | <b>542.7</b> | <b>4 954</b>           | <b>2 985</b>           |

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

| Associated Unit/Stack | Normal    | Grace    | Section 30 | Contravention | Total Exceedance | Average PM (mg/Nm <sup>3</sup> ) |
|-----------------------|-----------|----------|------------|---------------|------------------|----------------------------------|
| Unit 1                | Off       | Off      | Off        | Off           | Off              | Off                              |
| Unit 2                | 10        | 0        | 0          | 0             | 0                | 199.7                            |
| Unit 3                | 1         | 3        | 0          | 0             | 3                | 369.2                            |
| Unit 4                | 30        | 0        | 0          | 0             | 0                | 199.3                            |
| Unit 5                | 11        | 0        | 0          | 0             | 0                | 136.6                            |
| Unit 6                | Off       | Off      | Off        | Off           | Off              | Off                              |
| <b>SUM</b>            | <b>52</b> | <b>3</b> | <b>0</b>   | <b>0</b>      | <b>3</b>         |                                  |

Table 6.3: Operating days in compliance to SO<sub>2</sub> AEL Limit - January 2025

| Associated Unit/Stack | Normal    | Grace    | Section 30 | Contravention | Total Exceedance | Average SO <sub>2</sub> (mg/Nm <sup>3</sup> ) |
|-----------------------|-----------|----------|------------|---------------|------------------|-----------------------------------------------|
| Unit 1                | Off       | Off      | Off        | Off           | Off              | Off                                           |
| Unit 2                | 13        | 0        | 0          | 0             | 0                | 1 744.3                                       |
| Unit 3                | 8         | 0        | 0          | 0             | 0                | 1 744.2                                       |
| Unit 4                | 31        | 0        | 0          | 0             | 0                | 1 718.0                                       |
| Unit 5                | 14        | 0        | 0          | 0             | 0                | 2 302.7                                       |
| Unit 6                | Off       | Off      | Off        | Off           | Off              | Off                                           |
| <b>SUM</b>            | <b>66</b> | <b>0</b> | <b>0</b>   | <b>0</b>      | <b>0</b>         |                                               |

Table 6.4: Operating days in compliance to NO<sub>x</sub> AEL Limit - January 2025

| Associated Unit/Stack | Normal    | Grace    | Section 30 | Contravention | Total Exceedance | Average NO <sub>x</sub> (mg/Nm <sup>3</sup> ) |
|-----------------------|-----------|----------|------------|---------------|------------------|-----------------------------------------------|
| Unit 1                | Off       | Off      | Off        | Off           | Off              | Off                                           |
| Unit 2                | 13        | 0        | 0          | 0             | 0                | 1 004.1                                       |
| Unit 3                | 6         | 0        | 0          | 2             | 2                | 1 138.3                                       |
| Unit 4                | 31        | 0        | 0          | 0             | 0                | 1 015.4                                       |
| Unit 5                | 2         | 0        | 0          | 12            | 12               | 1 268.9                                       |
| Unit 6                | Off       | Off      | Off        | Off           | Off              | Off                                           |
| <b>SUM</b>            | <b>52</b> | <b>0</b> | <b>0</b>   | <b>12</b>     | <b>12</b>        |                                               |

Note: NO<sub>x</sub> emissions is measured as NO in PPM. Final NO<sub>x</sub> value is expressed as total NO<sub>2</sub>

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Table 6.5: Legend  
Description

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

### 6.5 1 PARTICULATE MATTERS

Figure 2: Tutuka Unit 2 PM Emissions - January 2025

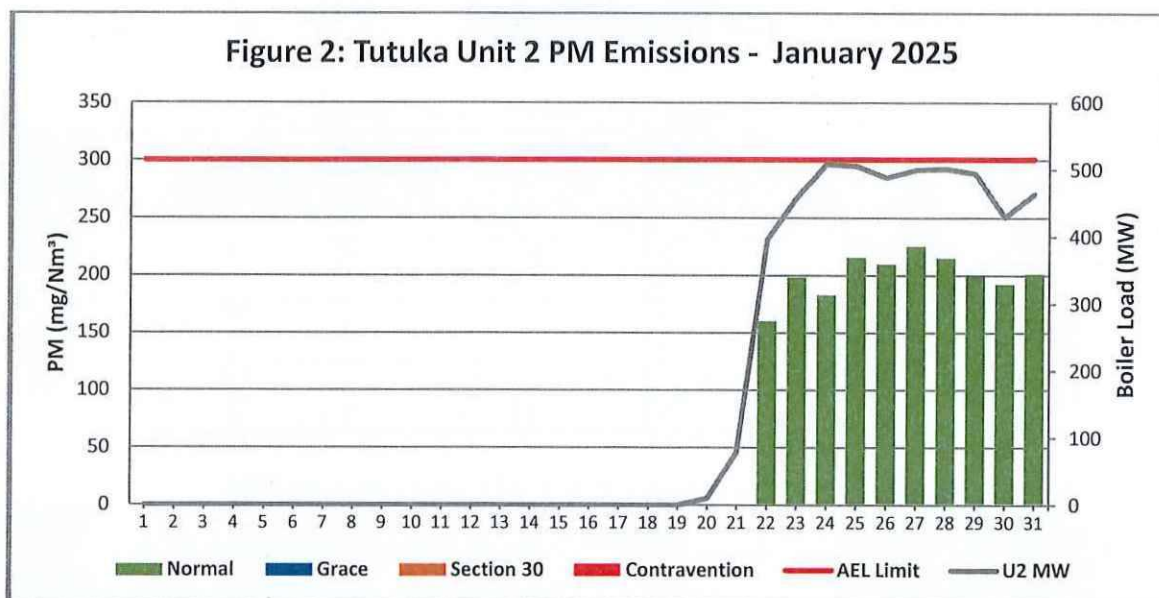
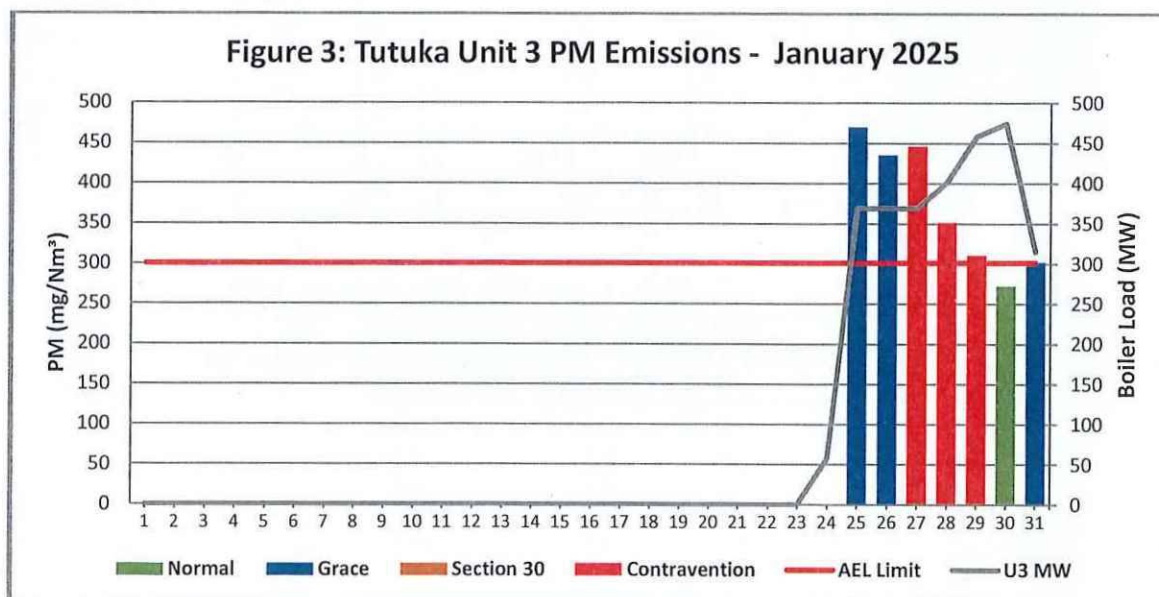
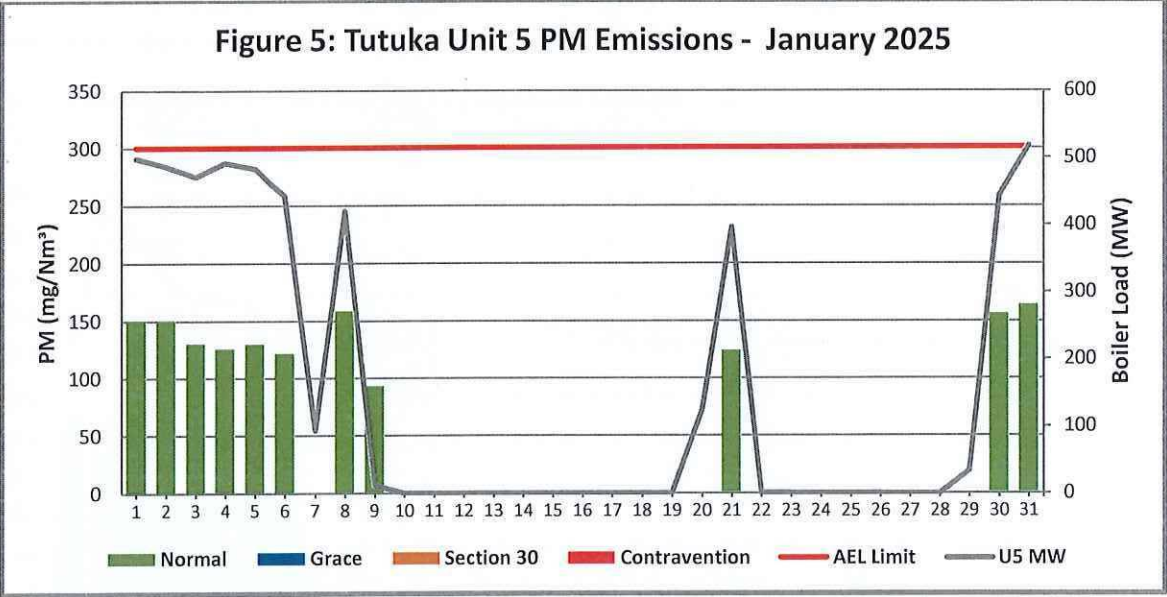
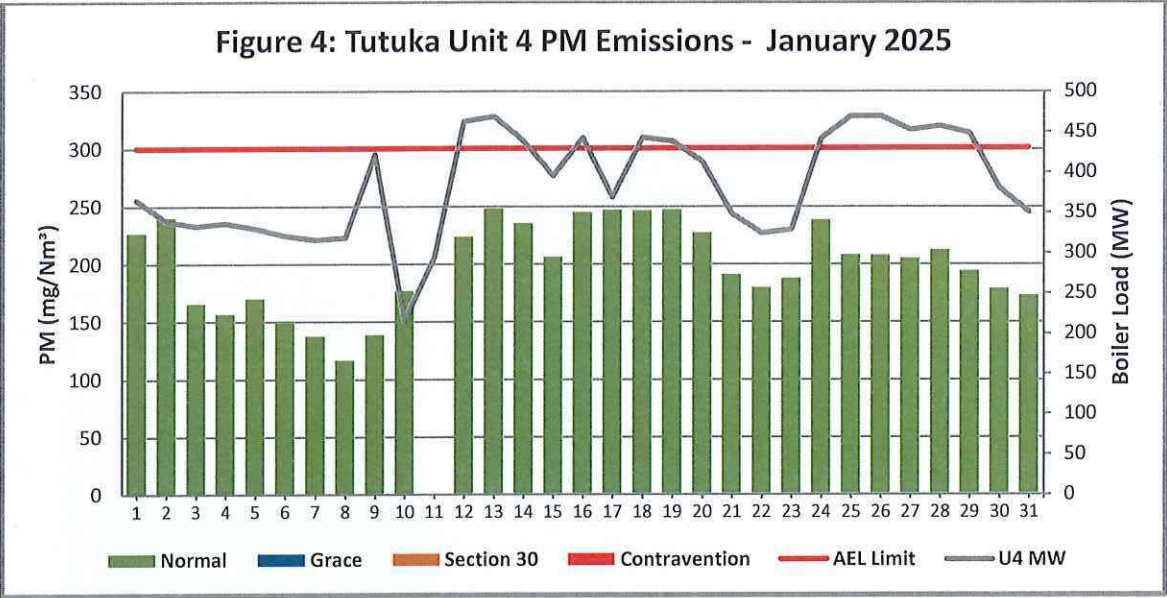


Figure 3: Tutuka Unit 3 PM Emissions - January 2025

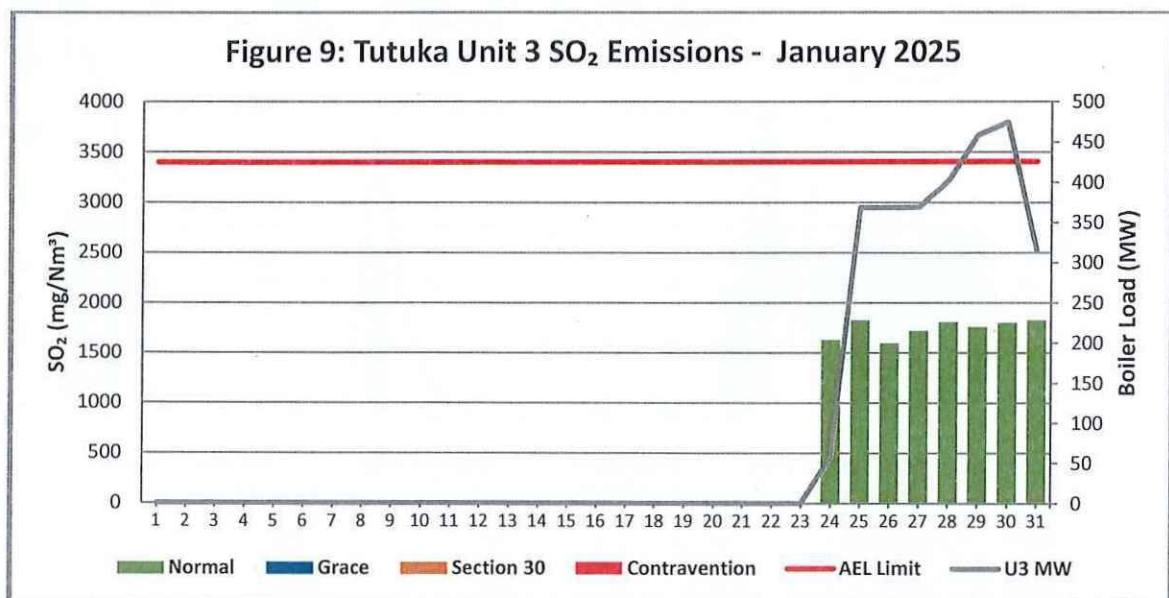
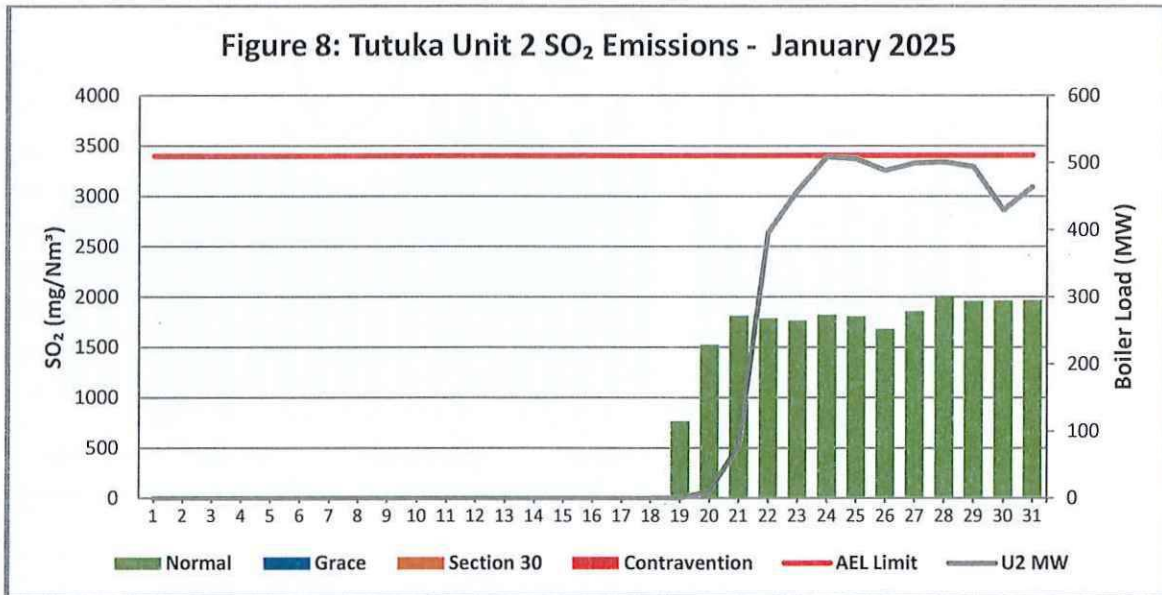


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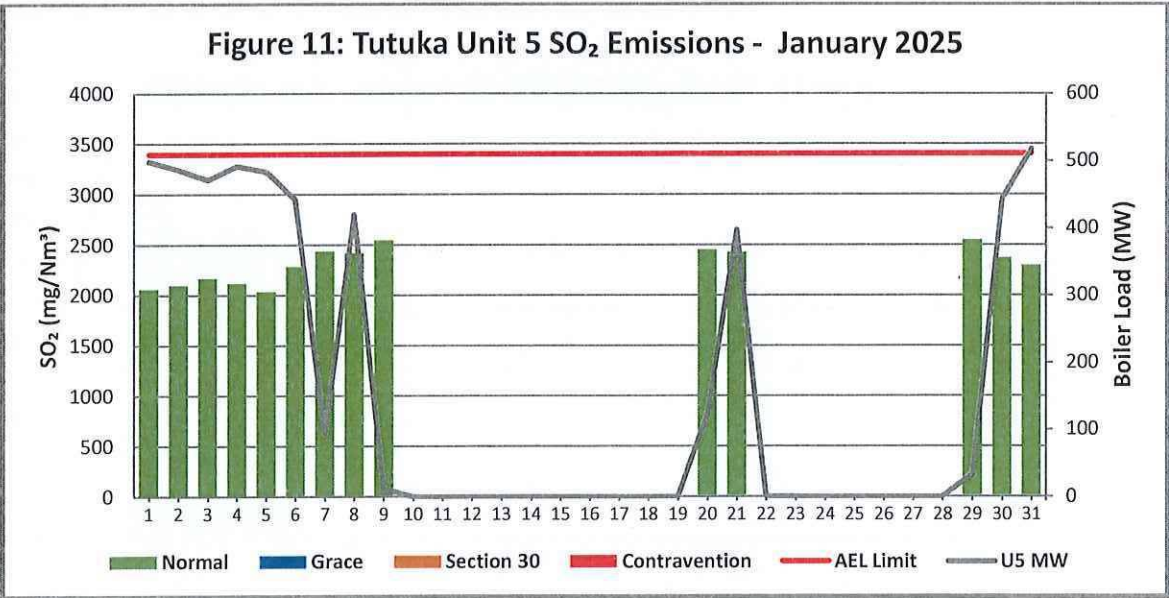
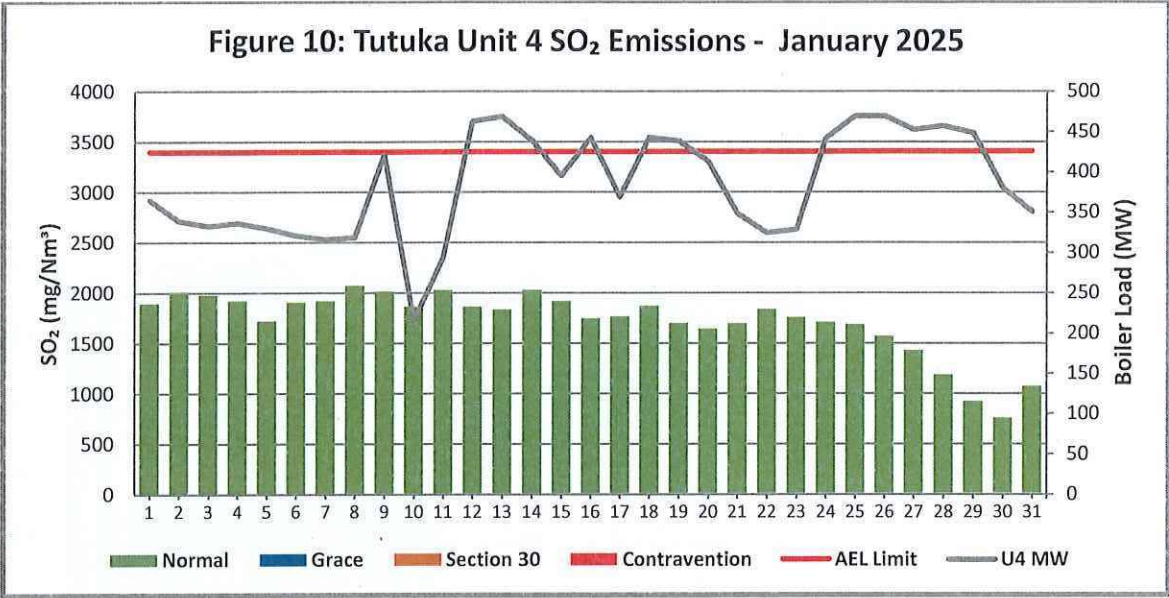


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### 6.5.2 SULPHUR OXIDES (SO<sub>x</sub>)

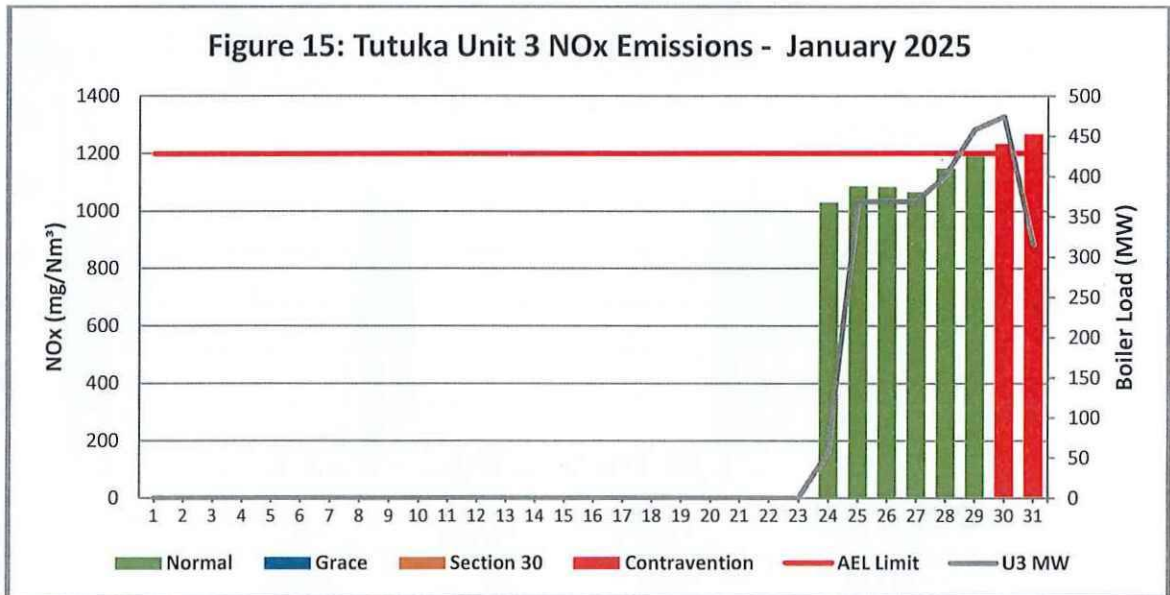
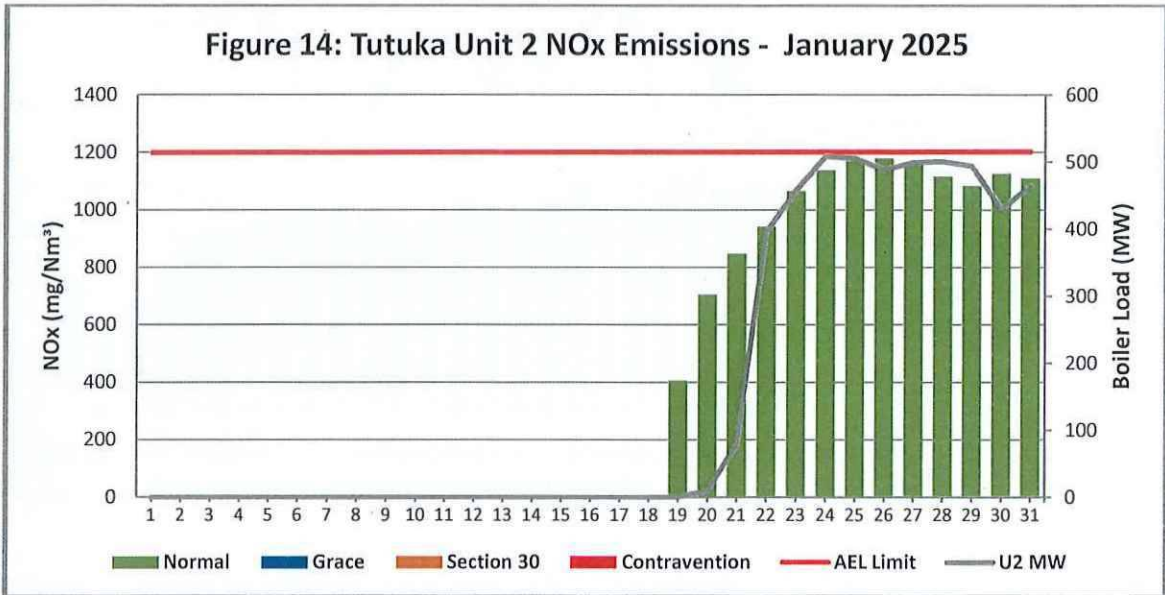


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### 6.5.3 NITROGEN OXIDES (NO<sub>x</sub>)



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Figure 16: Tutuka Unit 4 NO<sub>x</sub> Emissions - January 2025

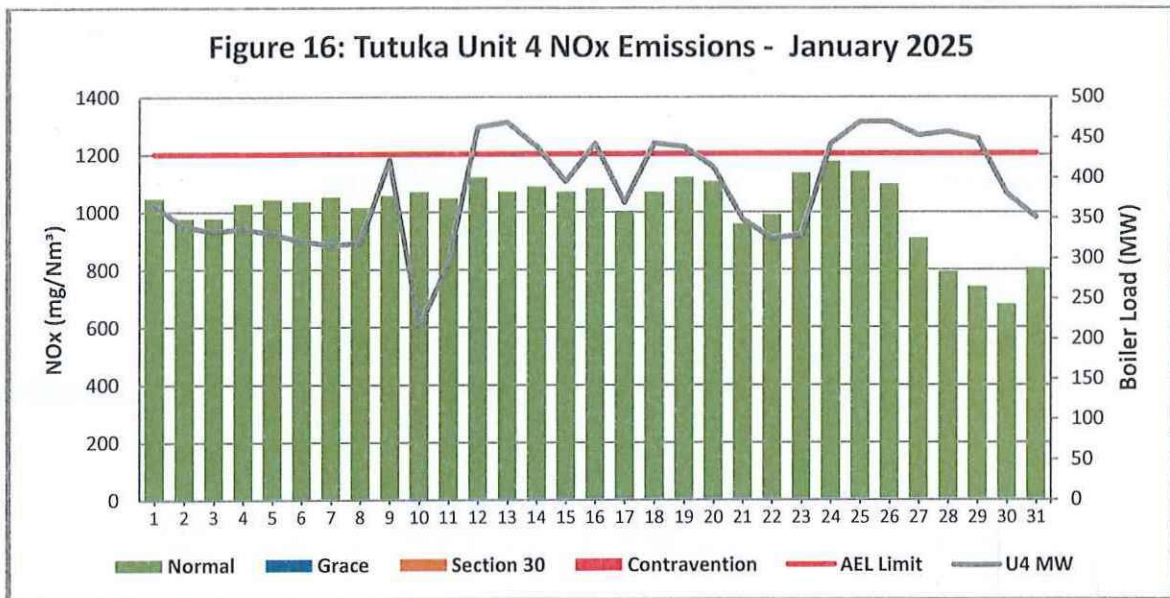
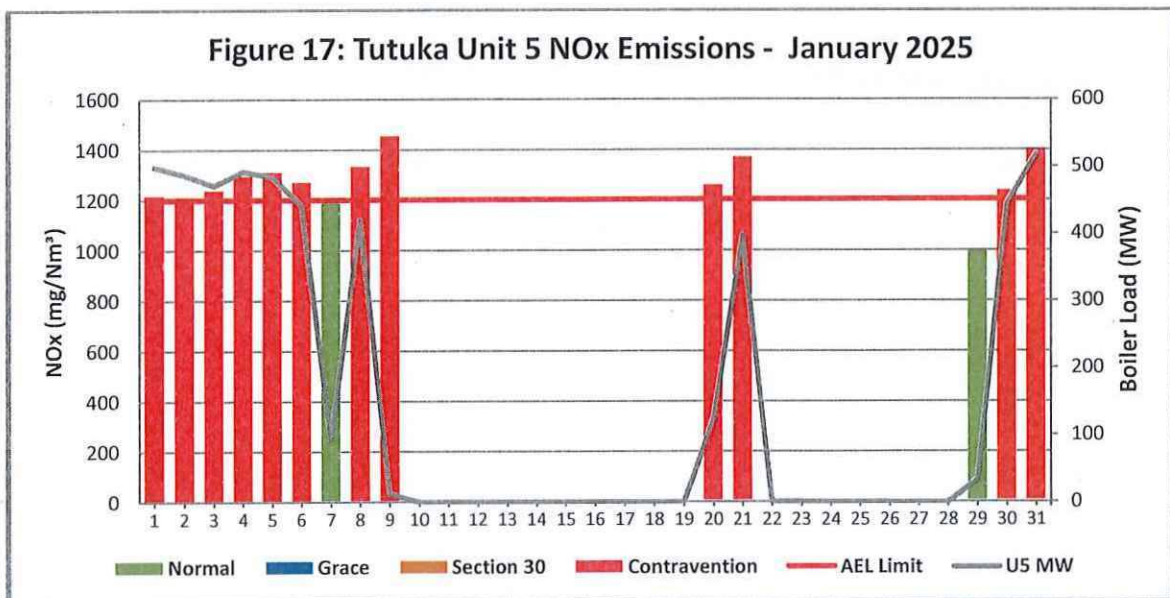


Figure 17: Tutuka Unit 5 NO<sub>x</sub> Emissions - January 2025



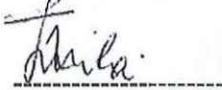
## 7. COMPLAINTS REGISTER

| 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 January 2025. |                     |                                                               |                                                     |                                            |                                           |

TUTUKA POWER STATION MONTHLY REPORT FOR JANUARY 2025

Yours Sincerely

Compiled by:



Xoli Jila

**SNR ENVIRONMENTAL ADVISOR**

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