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Date: 15 May 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 to a fault with 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.

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	1.34

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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2. ENERGY SOURCE CHARACTERISTICS

Coal Characteristics	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	16-24	21.840
Sulphur Content	%	0.6 TO 2.6	1.050
Ash Content	%	21 TO 33	24.200

3. EMISSION LIMITS (mg/Nm³)

Associated Unit/Stack	PM	SO ₂	NO _x
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 operational, hence plant considered 100% Utilised.

5 MONITOR RELIABILITY (%)

Associated Unit/Stack	PM	SO ₂	NO	O ₂
Unit 1	Off	Off	Off	Off
Unit 2	99.6	0.0	0.0	0.0
Unit 3	99.4	0.0	0.0	0.0
Unit 4	99.7	0.0	0.0	0.0
Unit 5	100.0	0.0	0.0	0.0
Unit 6	Off	Off	Off	Off

NB: Gas monitors malfunctioned and surrogate values were used to estimate the emissions

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6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)
Unit 1	Off	Off	Off
Unit 2	69.8	686	386
Unit 3	229.5	1 164	534
Unit 4	345.7	4 128	1 744
Unit 5	82.8	1 287	674
Unit 6	Off	Off	Off
SUM	727.8	7 265	3 338

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 ³)
Unit 1	Off	Off	Off	Off	Off	Off
Unit 2	10	0	0	0	0	199.7
Unit 3	1	3	0	3	6	526.0
Unit 4	30	0	0	0	0	199.5
Unit 5	11	0	0	0	0	136.6
Unit 6	Off	Off	Off	Off	Off	Off
SUM	52	3	0	3	6	

Table 6.3: Operating days in compliance to SO₂ AEL Limit - January 2025

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm ³)
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
SUM	66	0	0	0	0	

Table 6.4: Operating days in compliance to NO_x AEL Limit - January 2025

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm ³)
Unit 1	Off	Off	Off	Off	Off	Off
Unit 2	13	0	0	0	0	973.6
Unit 3	6	0	0	0	0	1 096.2
Unit 4	31	0	0	0	0	1 016.1
Unit 5	2	0	0	0	0	1 118.8
Unit 6	Off	Off	Off	Off	Off	Off
SUM	52	0	0	0	0	

Note: NO_x emissions is measured as NO in PPM. Final NO_x value is expressed as total NO₂

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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

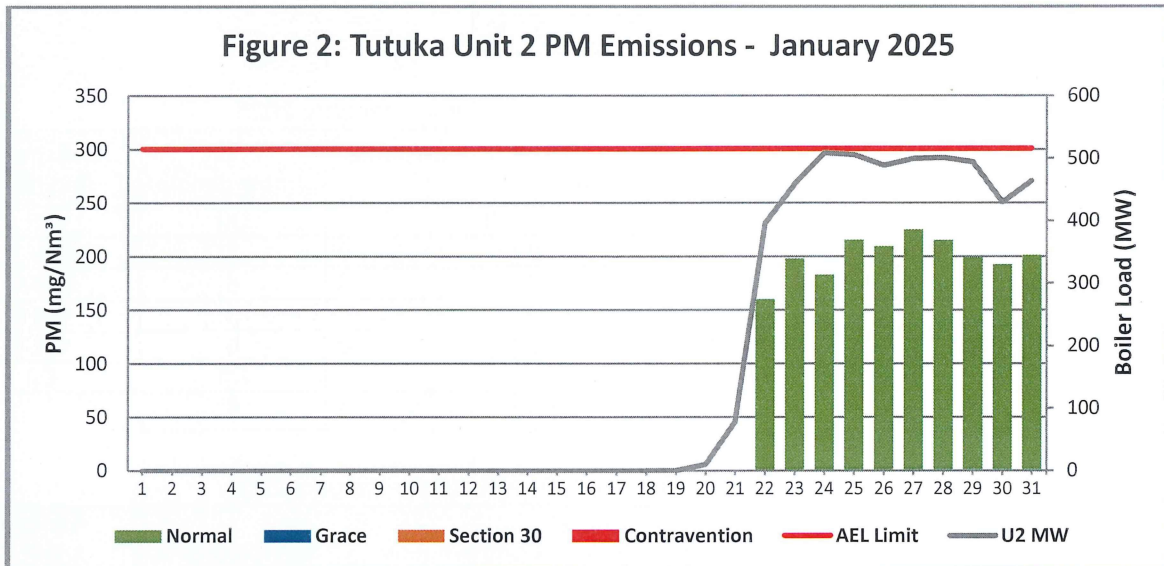
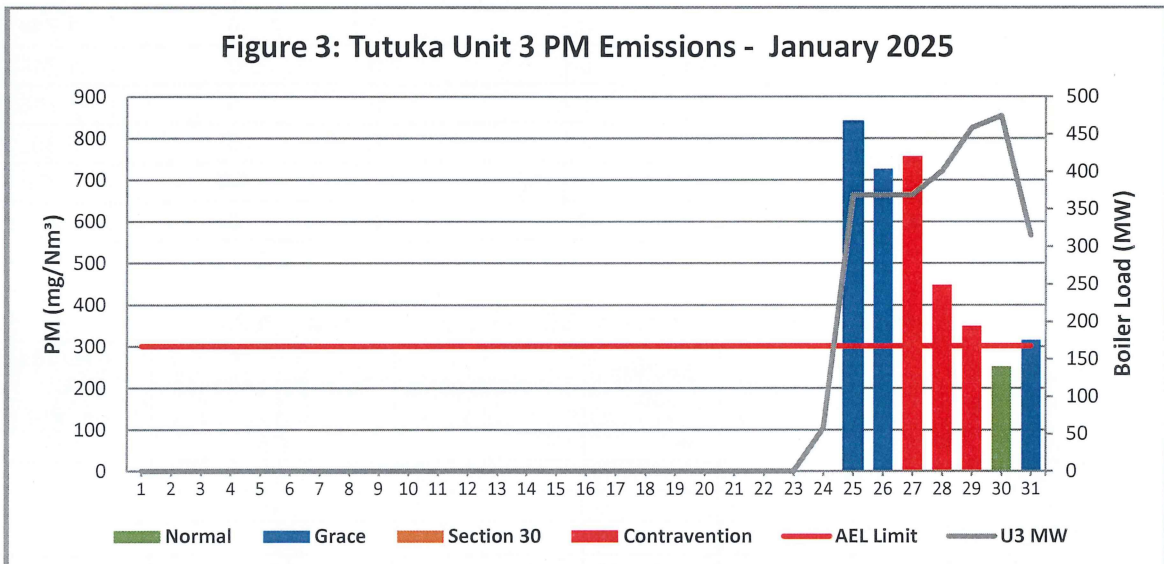


Figure 3: Tutuka Unit 3 PM Emissions - January 2025



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Figure 4: Tutuka Unit 4 PM Emissions - January 2025

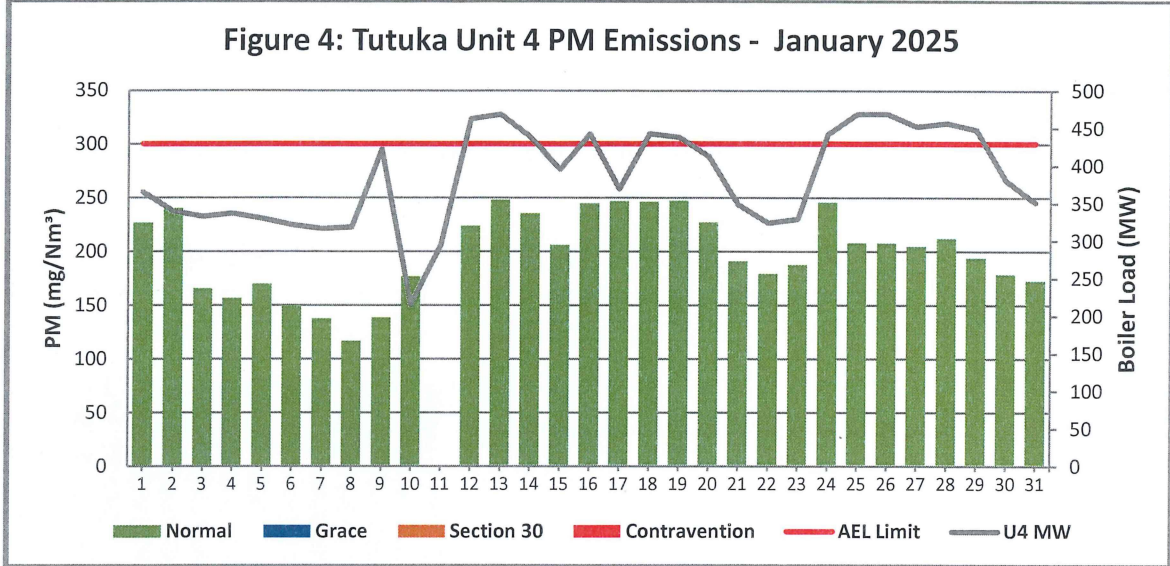
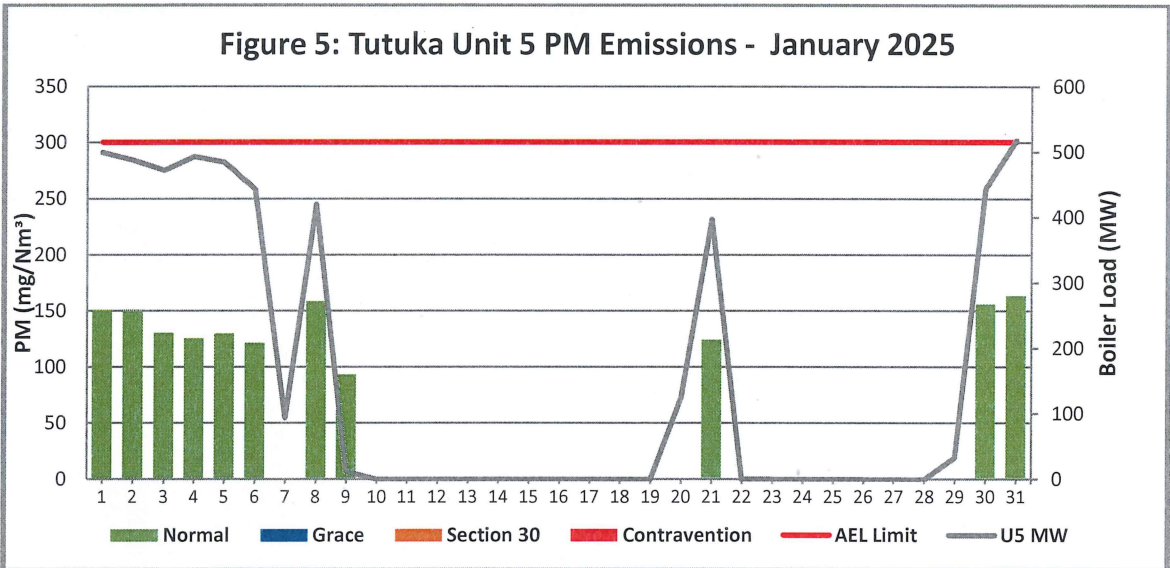


Figure 5: Tutuka Unit 5 PM Emissions - January 2025



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6.5.2 SULPHUR OXIDES (SO_x)

Figure 8: Tutuka Unit 2 SO₂ Emissions - January 2025

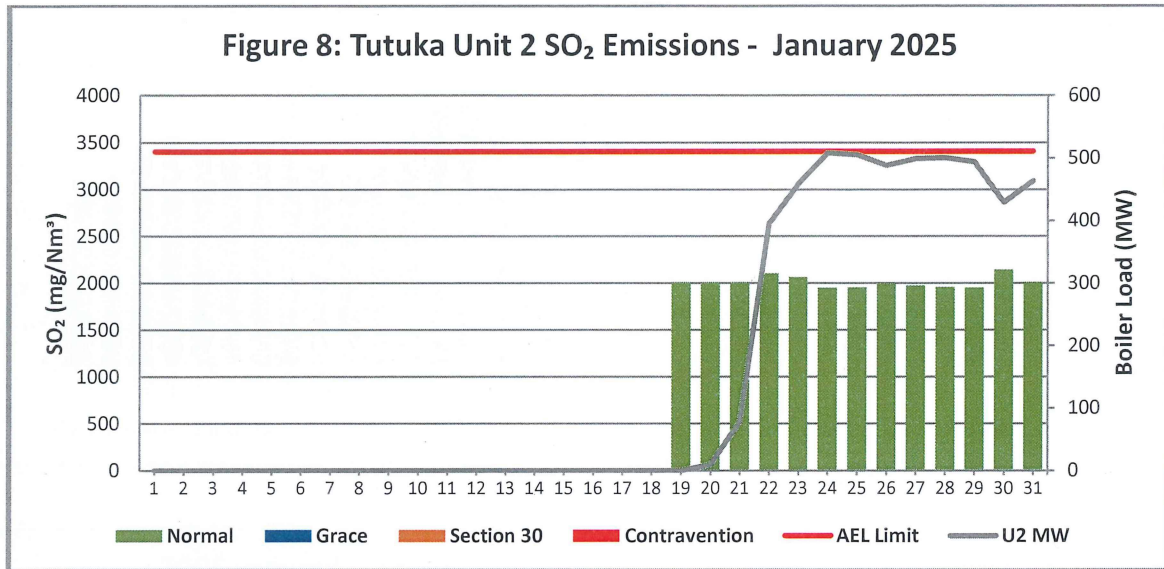
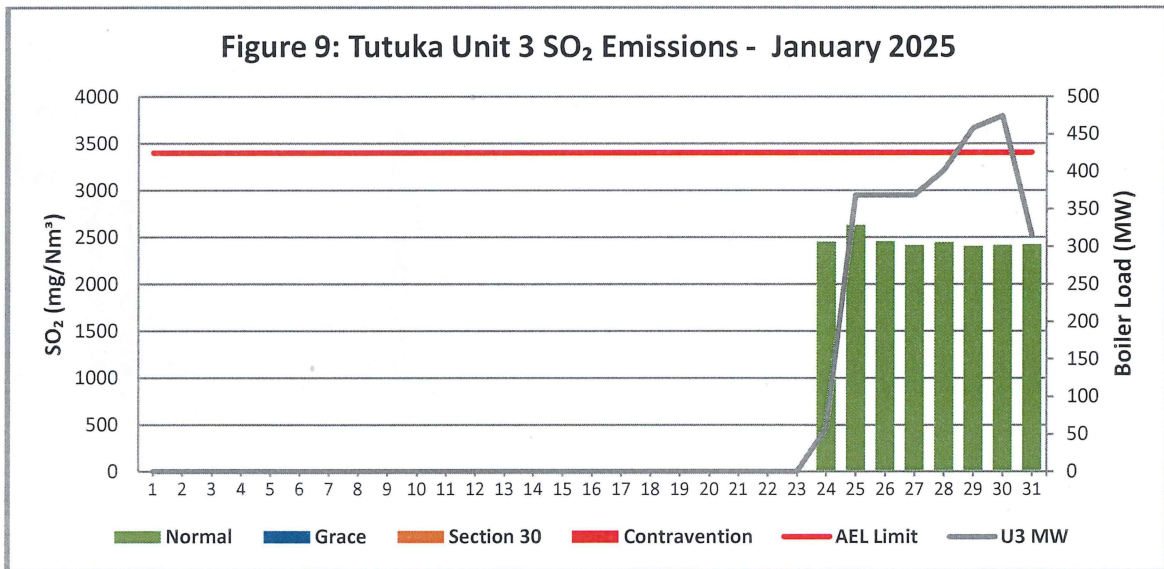


Figure 9: Tutuka Unit 3 SO₂ Emissions - January 2025



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Figure 10: Tutuka Unit 4 SO₂ Emissions - January 2025

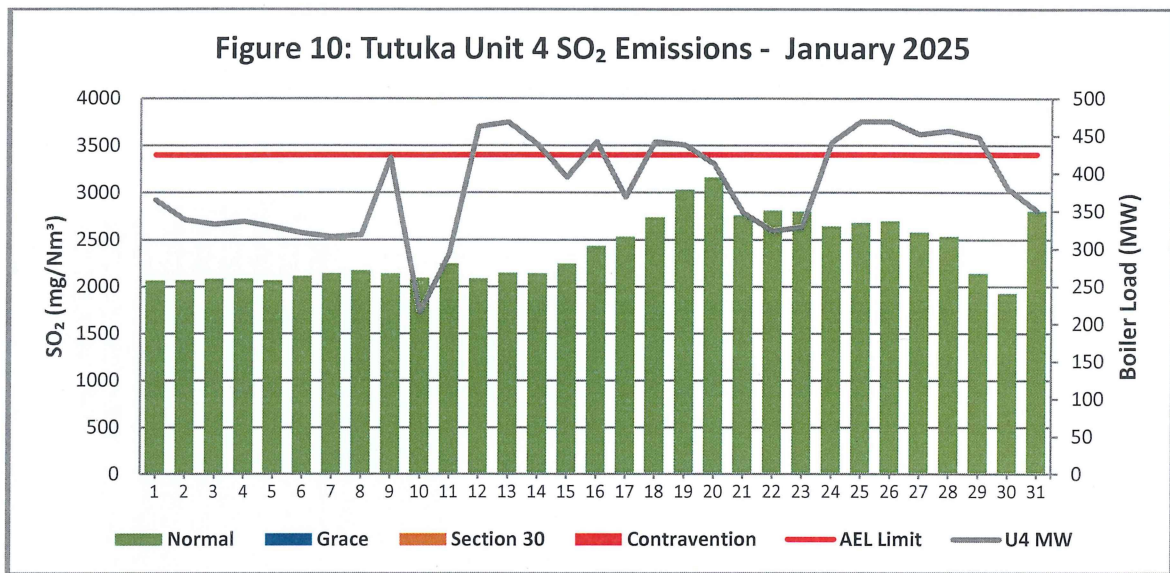
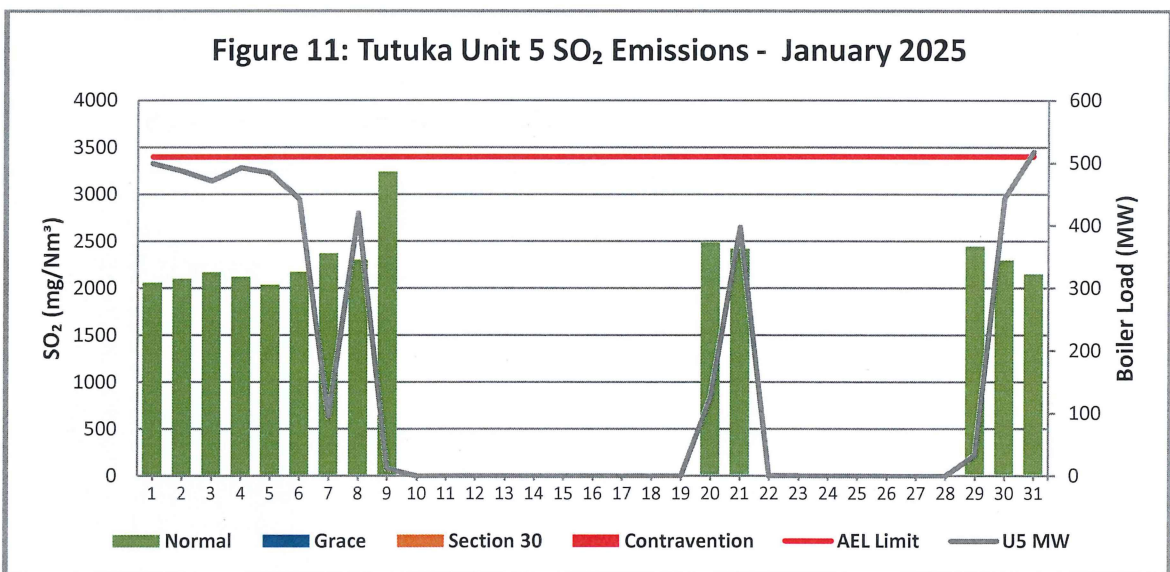


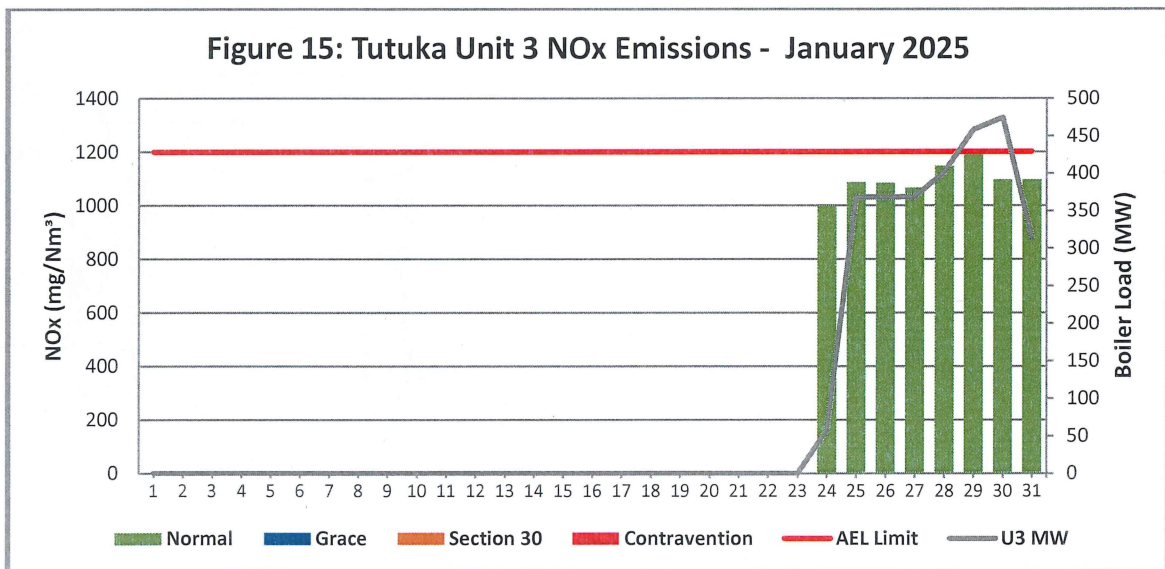
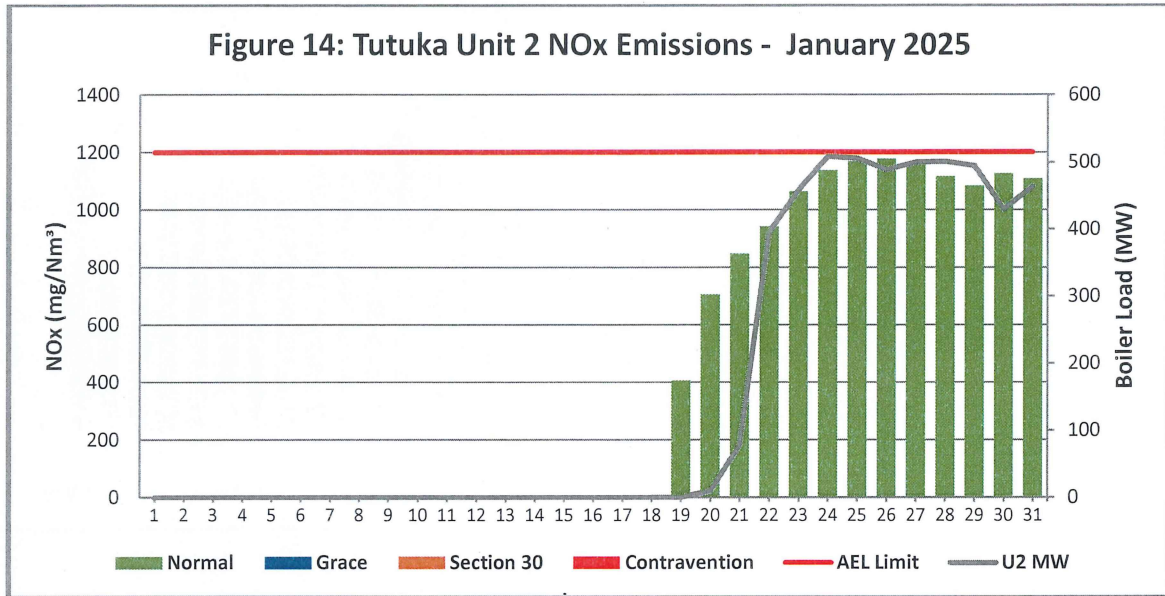
Figure 11: Tutuka Unit 5 SO₂ Emissions - January 2025



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6.5.3 NITROGEN OXIDES (NO_x)



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Figure 16: Tutuka Unit 4 NOx Emissions - January 2025

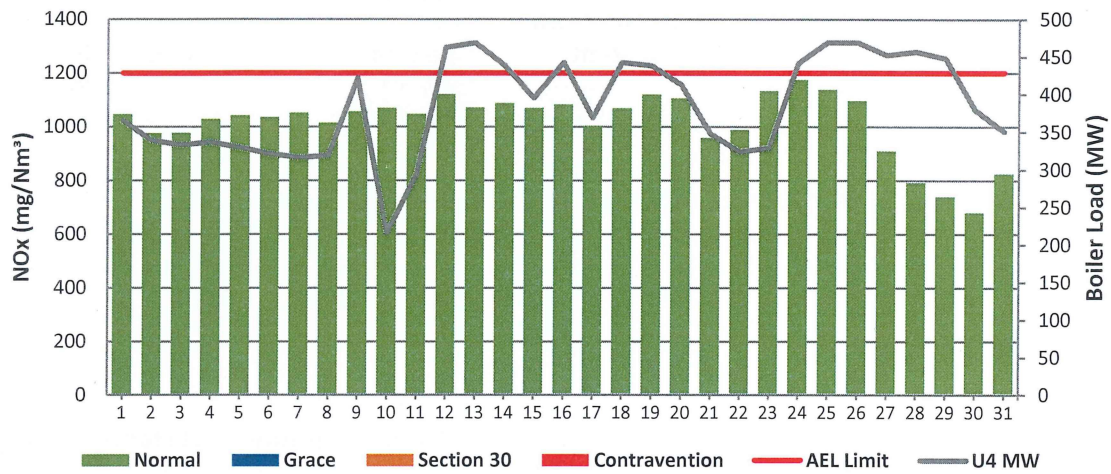
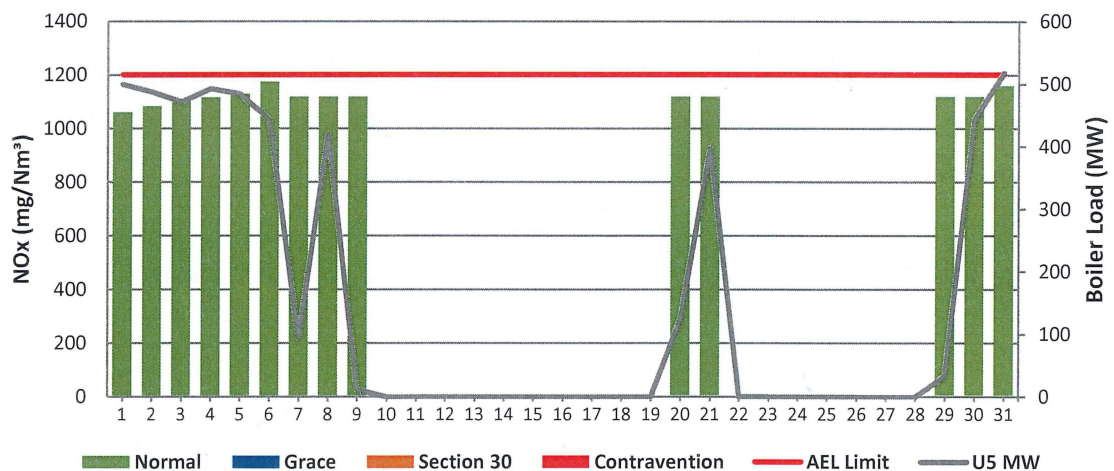


Figure 17: Tutuka Unit 5 NOx Emissions - January 2025



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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.					

Yours Sincerely

Compiled by:

Muswubi

Tshifiwa Muswubi

Environmental Officer:

TUTUKA POWER STATION

Date: 2025/05/2025

Recommended/Not Recommended

Xoli Jila

Xoli Jila

Acting Environmental Manager:

TUTUKA POWER STATION

Date: 2025/05/19

Supported / Not Supported by:

Mike Molepo

Mike Molepo

Senior Technologist

TUTUKA POWER STATION

Date:

Approved / Not Approved by:

Bruce Moyo

Bruce Moyo

General Manager:

TUTUKA POWER STATION

Date: 2025/05/19