



The Municipal Manager
Gert Sibande District Municipality
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Date: 11 June 2024

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Dear Mr Hlanyane

TUTUKA POWER STATION MONTHLY REPORT FOR MAY 2024

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 March 2024

The report presents monthly trends for each monitored pollutant. Units 3, 5 and 6 were offload for the month of May 2024. There were only three exceedances for Particulate Matter recorded in units 1 and 2 combined, which fell within the 48-hour period allowed for start-ups, maintenance and shut down.

1 RAW MATERIALS AND PRODUCTS

Raw Materials and Products	Raw Material Type	Units	Max. Permitted	Actual Consumption May-2024
	Coal	Tons	1 200 000	309 953
	Fuel Oil	Tons	10 000	3394.65
Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Indicative Production Rate May-2024
	Energy	GWh	2 611	580.7
	Ash	Tons	350 000	401
	RE Ash	kg/MWh	not specified	0.72

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

Generation

Tutuka Power Station
Standerton/Bethal Road
Private Bag X2016 Standerton 2430 SA
Tel +27 17 749 9237 www.eskom.co.za
Eskom Holdings SOC Ltd Reg No 2002/015527/30

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2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristics	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/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 May-2024
Unit 1	Electro Static Precipitators (ESP)	99.7%
Unit 2	Electro Static Precipitators (ESP)	97.8%
Unit 3	Electro Static Precipitators (ESP)	Unit Off
Unit 4	Electro Static Precipitators (ESP)	99.6%
Unit 5	Electro Static Precipitators (ESP)	Unit Off
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 ₂	NO	O ₂
Unit 1	99.2	100.0	100.0	99.6
Unit 2	100.0	98.2	31.4	98.8
Unit 3	Off	Off	Off	Off
Unit 4	100.0	17.5	17.5	16.9
Unit 5	Off	Off	Off	Off
Unit 6	Off	Off	Off	Off

Gas monitors were not working properly in units 2 and 4, surrogate values from QAL 2 reports were used to estimate the concentrations.

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Table 6.1: Monthly tonnages for the month of May-2024

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)
Unit 1	122.6	1 125	444
Unit 2	150.7	1 182	502
Unit 3	Off	Off	Off
Unit 4	128.1	2 133	780
Unit 5	Off	Off	Off
Unit 6	Off	Off	Off
SUM	401.5	4 441	1 726

Table 6.2: Operating days in compliance to PM AEL Limit - May 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
Unit 1	11	2	0	0	2	227.7
Unit 2	24	1	0	0	1	218.0
Unit 3	Off	Off	Off	Off	Off	Off
Unit 4	16	0	0	0	0	119.3
Unit 5	Off	Off	Off	Off	Off	Off
Unit 6	Off	Off	Off	Off	Off	Off
SUM	51	3	0	0	3	

Table 6.3: Operating days in compliance to SO₂ AEL Limit - May 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm ³)
Unit 1	13	0	0	0	0	1 943.5
Unit 2	26	0	0	0	0	1 718.6
Unit 3	Off	Off	Off	Off	Off	Off
Unit 4	19	0	0	0	0	1 935.5
Unit 5	Off	Off	Off	Off	Off	Off
Unit 6	Off	Off	Off	Off	Off	Off
SUM	58	0	0	0	0	

Table 6.4: Operating days in compliance to NO_x AEL Limit - May 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm ³)
Unit 1	13	0	0	0	0	771.3
Unit 2	26	0	0	0	0	742.3
Unit 3	Off	Off	Off	Off	Off	Off
Unit 4	19	0	0	0	0	706.7
Unit 5	Off	Off	Off	Off	Off	Off
Unit 6	Off	Off	Off	Off	Off	Off
SUM	58	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

Figure 1: Tutuka Unit 1 PM Emissions - May 2024

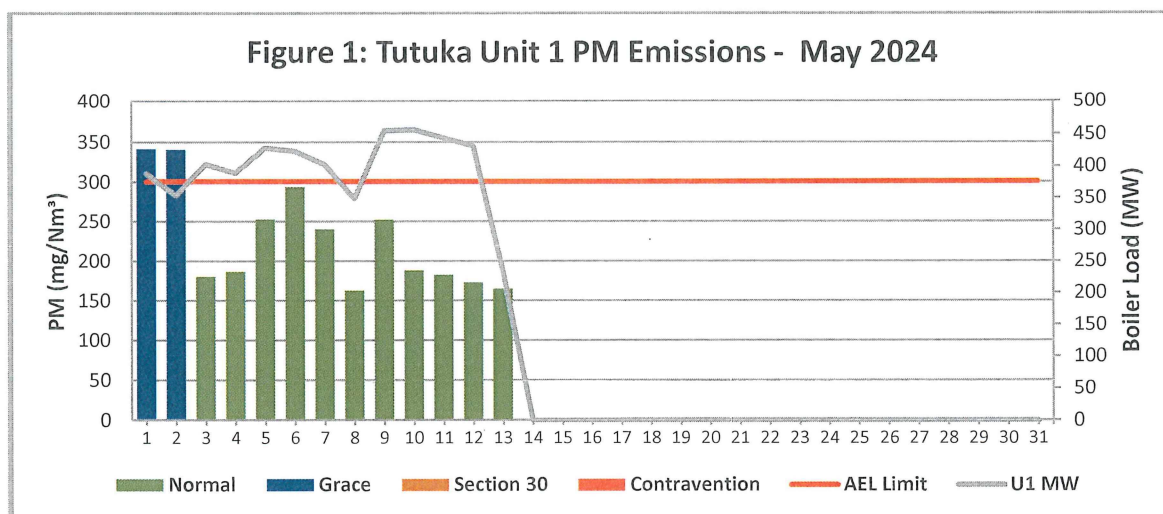
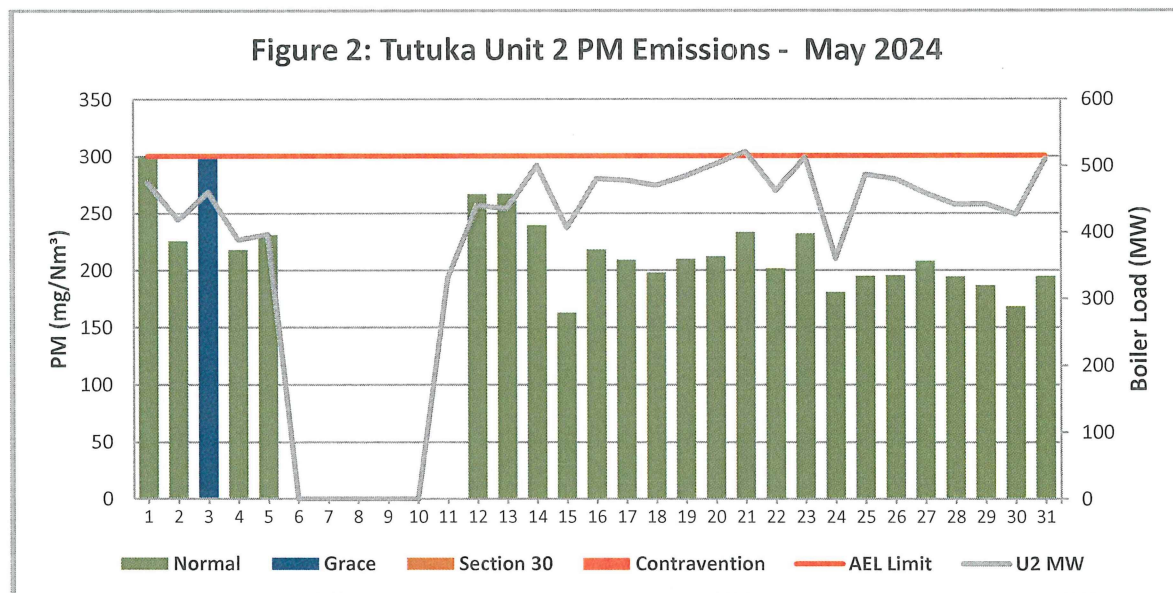
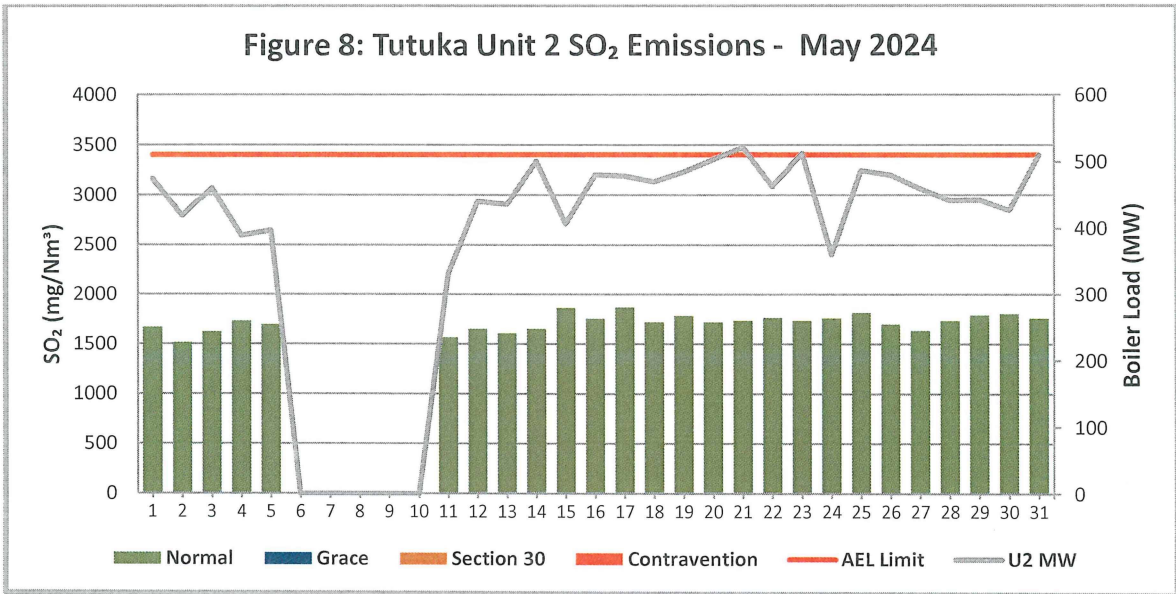
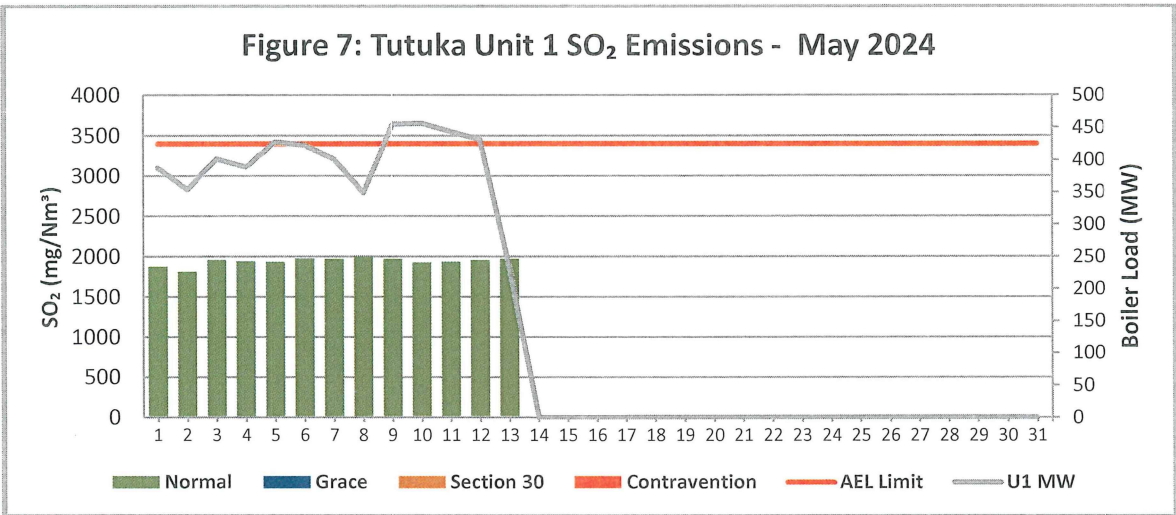
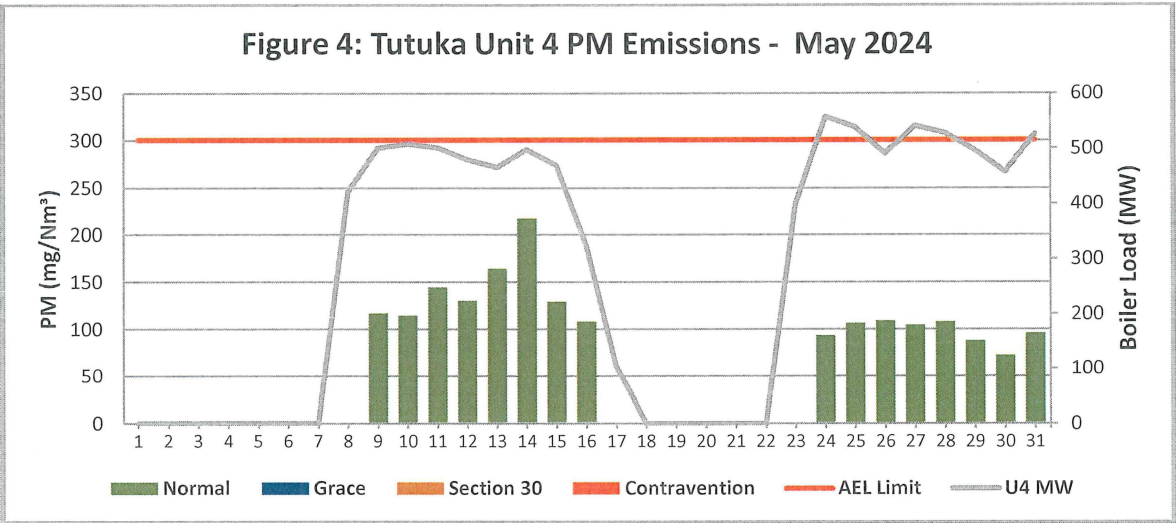


Figure 2: Tutuka Unit 2 PM Emissions - May 2024



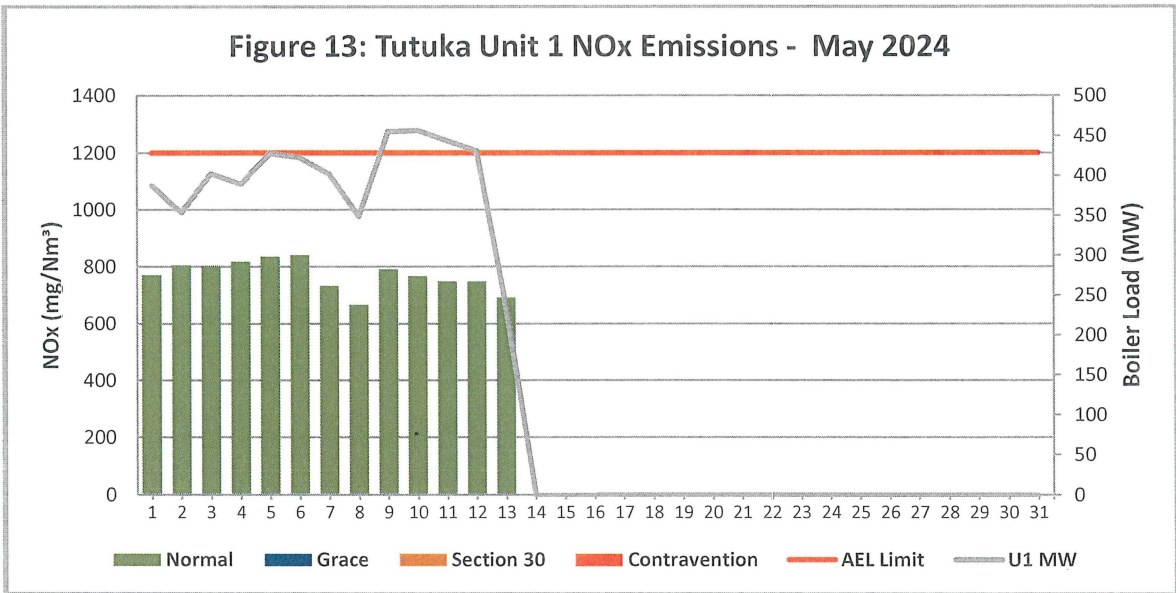
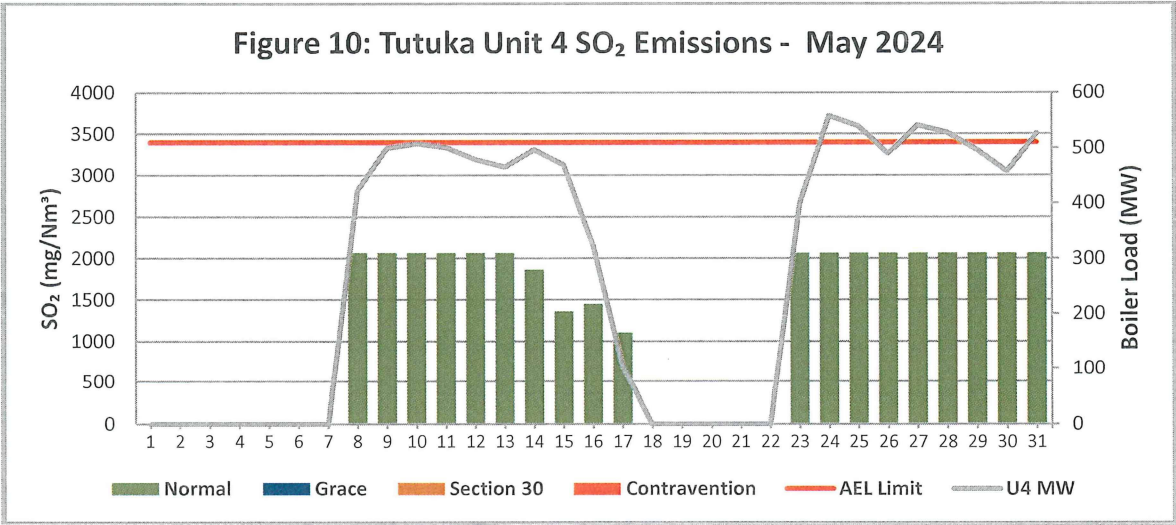
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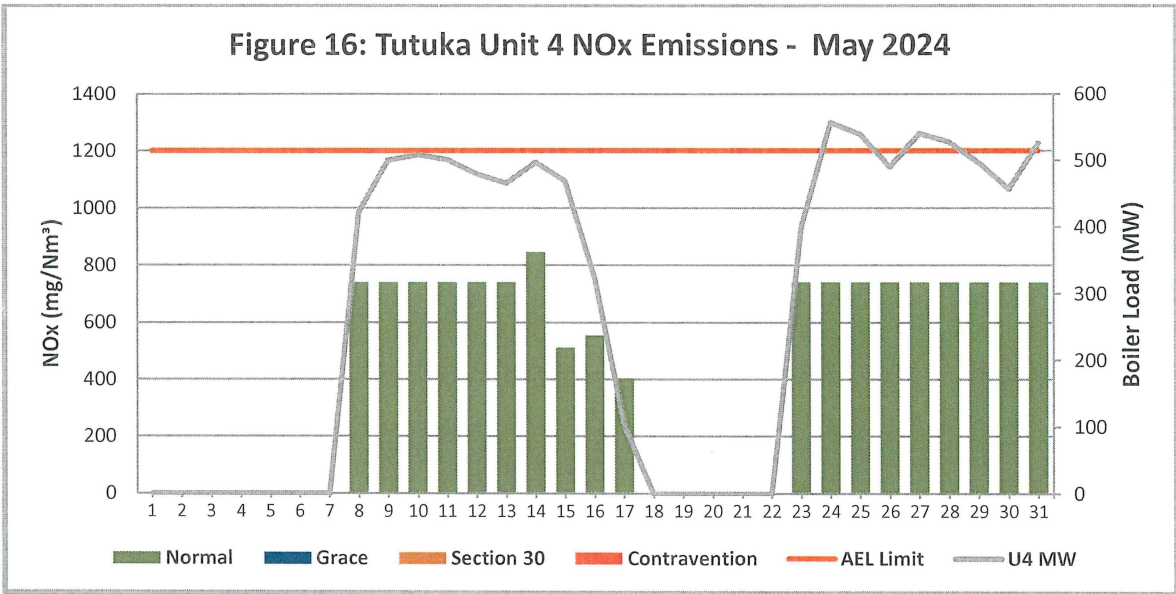
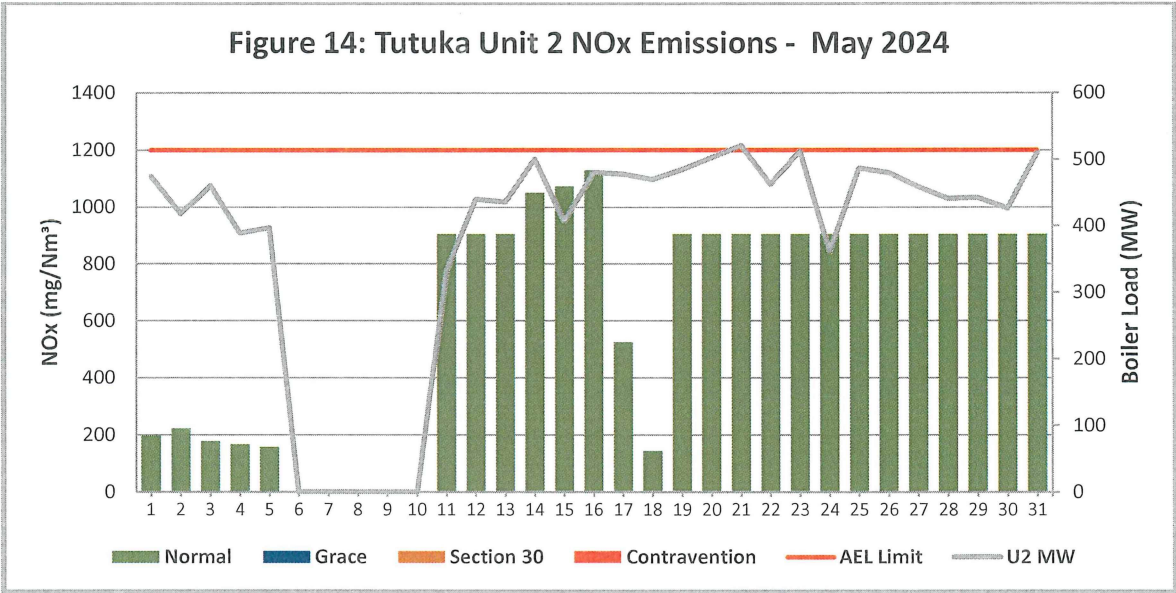


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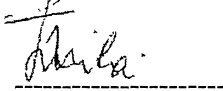
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7. COMPLAINTS REGISTER

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 May 2024.					

Yours Sincerely

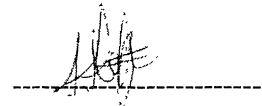
Compiled by:



Xoli Jila

EMISSIONS CONTROL OFFICER

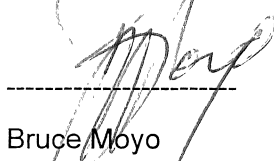
Supported by:



Mike Molepo

Snr CHEMIST: BOILER ENGINEERING

Approved by:



Bruce Moyo

GENERAL MANAGER

13/06/2024