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Date:
 11 August 2023

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Dear Mr Hlanyane

TUTUKA POWER STATION MONTHLY REPORT FOR JULY 2023

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 of Particulate Matters, Sulphur, and Nitrogen dioxides for the month of July 2023

The report presents monthly trends for each monitored pollutant. Units 1, 2, 5 and 6 were offload for the month of July 2023. There were no exceedances of the dust and gases operating limits recorded in July 2023.

1. RAW MATERIALS AND PRODUCTS

Raw Materials and Products	Raw Material Type	Units	Max. Permitted	Actual Consumption Jul-2023
	Coal	Tons	1 200 000	206 313
	Fuel Oil	Tons	10 000	4447.26
Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Indicative Production Rate Jul-2023
	Energy	GWh	2 611.440	348.798
	Ash	Tons	350 000	269.4
	RE Ash	kg/MWh	not specified	0.798

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	21.230
Sulphur Content	%	0.6 TO >2.6	0.900
Ash Content	%	21 TO >33	26.260

3. EMISSIONS LIMIT (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

4. ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Apr-2022
Unit 1	Electrostatic Precipitators (ESP)	Unit OFF
Unit 2	Electrostatic Precipitators (ESP)	Unit OFF
Unit 3	Electrostatic Precipitators (ESP)	Unit OFF
Unit 4	Electrostatic Precipitators (ESP)	Unit OFF
Unit 5	Electrostatic Precipitators (ESP)	Unit OFF
Unit 6	Electrostatic 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	OFF	OFF	OFF	OFF
Unit 2	OFF	OFF	OFF	OFF
Unit 3	100.0	0.0	0.0	0.0
Unit 4	99.4	99.9	0.0	0.0
Unit 5	OFF	OFF	OFF	OFF
Unit 6	OFF	OFF	OFF	OFF

Note:

- The gas monitors were not working properly and surrogate values from Parallel tests reports (QAL 2) were used to estimate the gas concentrations and to Tonnages.

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6. EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of July-2023

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)
Unit 1	OFF	OFF	OFF
Unit 2	OFF	OFF	OFF
Unit 3	123.5	1 420	520
Unit 4	145.8	2 650	1 193
Unit 5	OFF	OFF	OFF
Unit 6	OFF	OFF	OFF
SUM	269.4	4 070	1 713

Table 6.2: Operating days in compliance to PM AEL Limit - July 2023

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	OFF	OFF	OFF	OFF	OFF	OFF
Unit 3	9	0	0	0	0	206.1
Unit 4	28	0	0	0	0	103.4
Unit 5	OFF	OFF	OFF	OFF	OFF	OFF
Unit 6	OFF	OFF	OFF	OFF	OFF	OFF
SUM	37	0	0	0	0	

Table 6.3: Operating days in compliance to SO₂ AEL Limit - July 2023

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	OFF	OFF	OFF	OFF	OFF	OFF
Unit 3	9	0	0	0	0	2 370.6
Unit 4	28	0	0	0	0	1 889.6
Unit 5	OFF	OFF	OFF	OFF	OFF	OFF
Unit 6	OFF	OFF	OFF	OFF	OFF	OFF
SUM	37	0	0	0	0	

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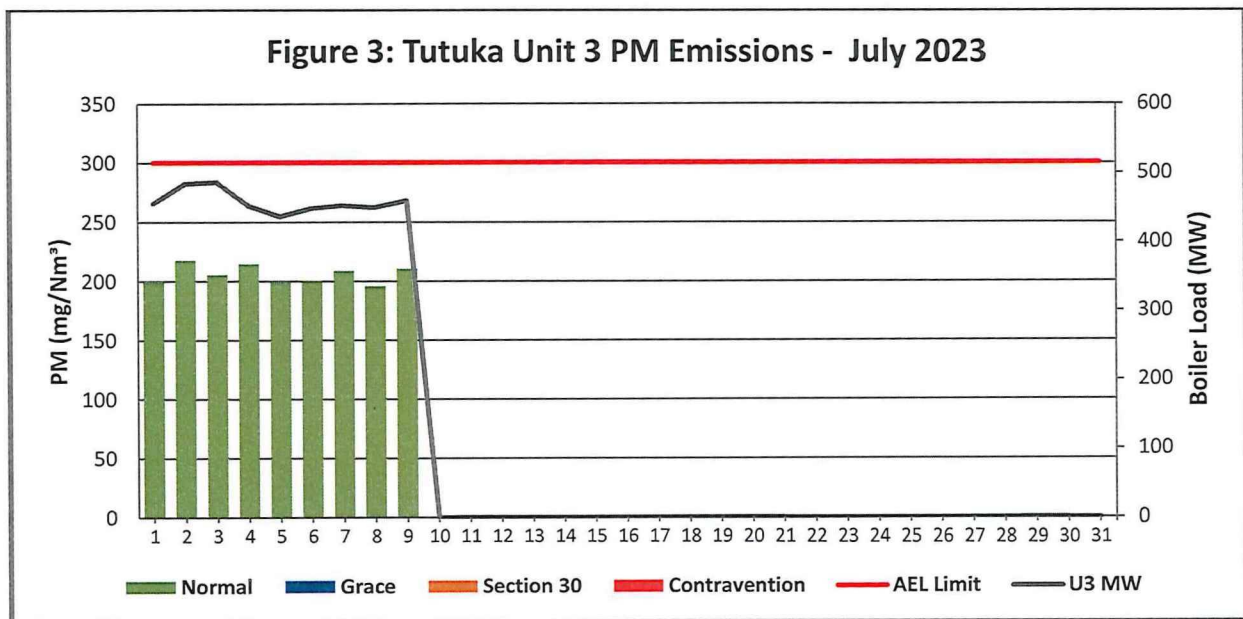
Table 6.4: Operating days in compliance to NOx AEL Limit - July 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm ³)
Unit 1	OFF	OFF	OFF	OFF	OFF	OFF
Unit 2	OFF	OFF	OFF	OFF	OFF	OFF
Unit 3	9	0	0	0	0	867.5
Unit 4	28	0	0	0	0	852.3
Unit 5	OFF	OFF	OFF	OFF	OFF	OFF
Unit 6	OFF	OFF	OFF	OFF	OFF	OFF
SUM	37	0	0	0	0	

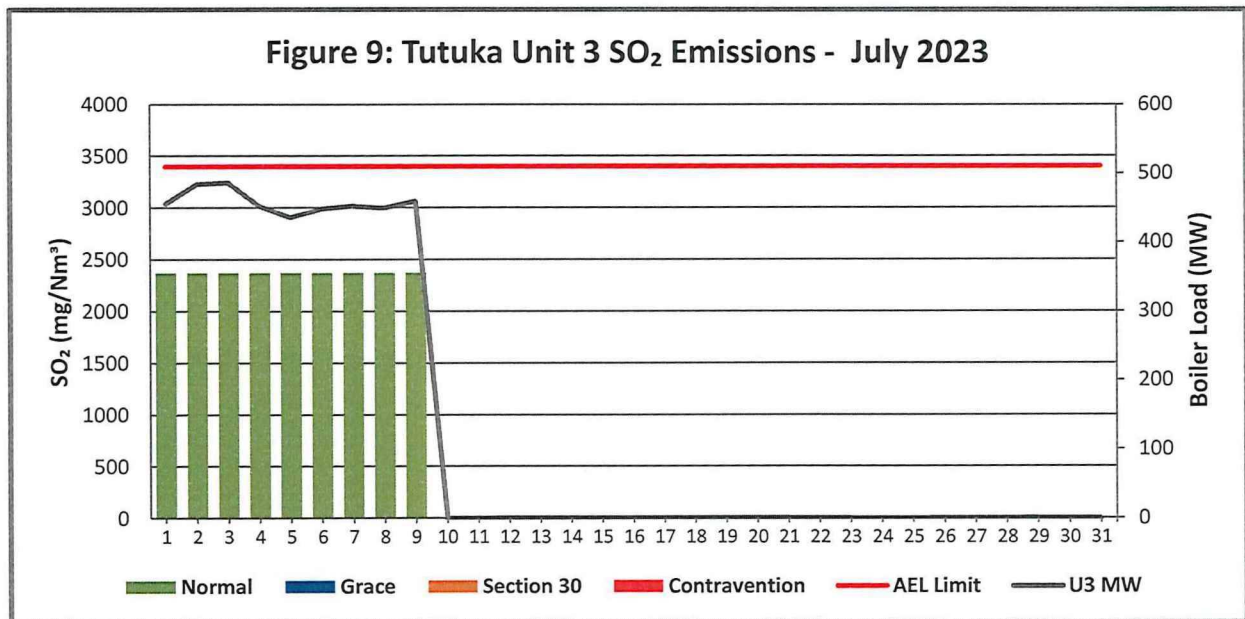
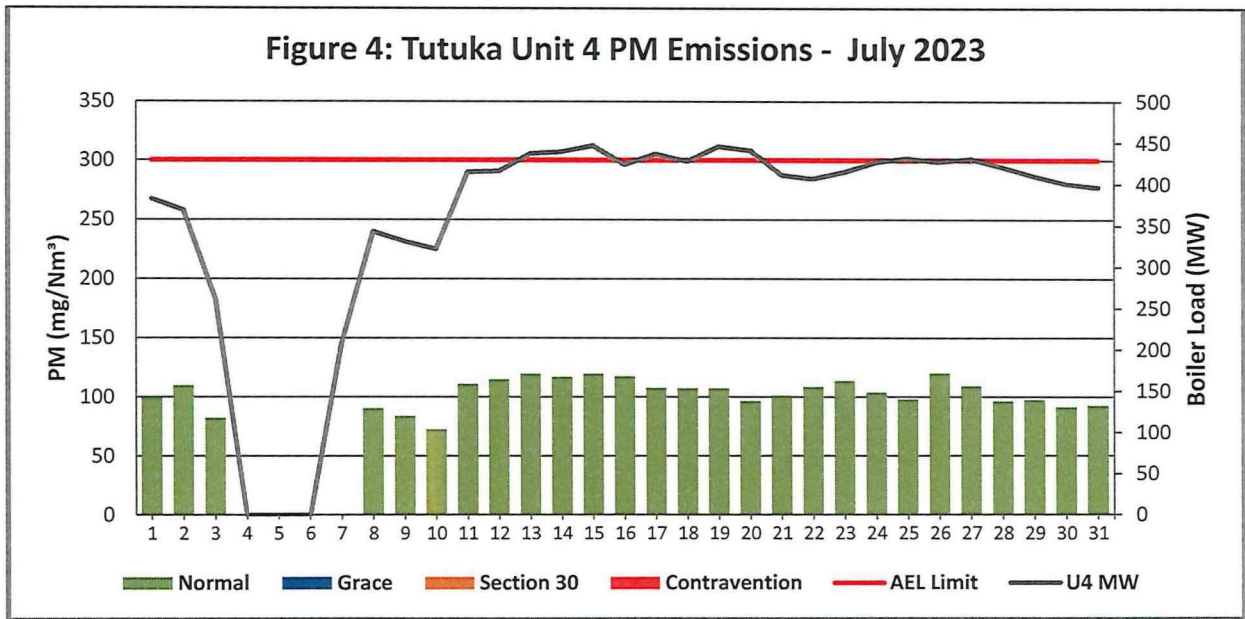
Note: NOx emissions are measured as NO in PPM. Final NOx value is expressed as total NO₂

Table 6.5: Legend Description

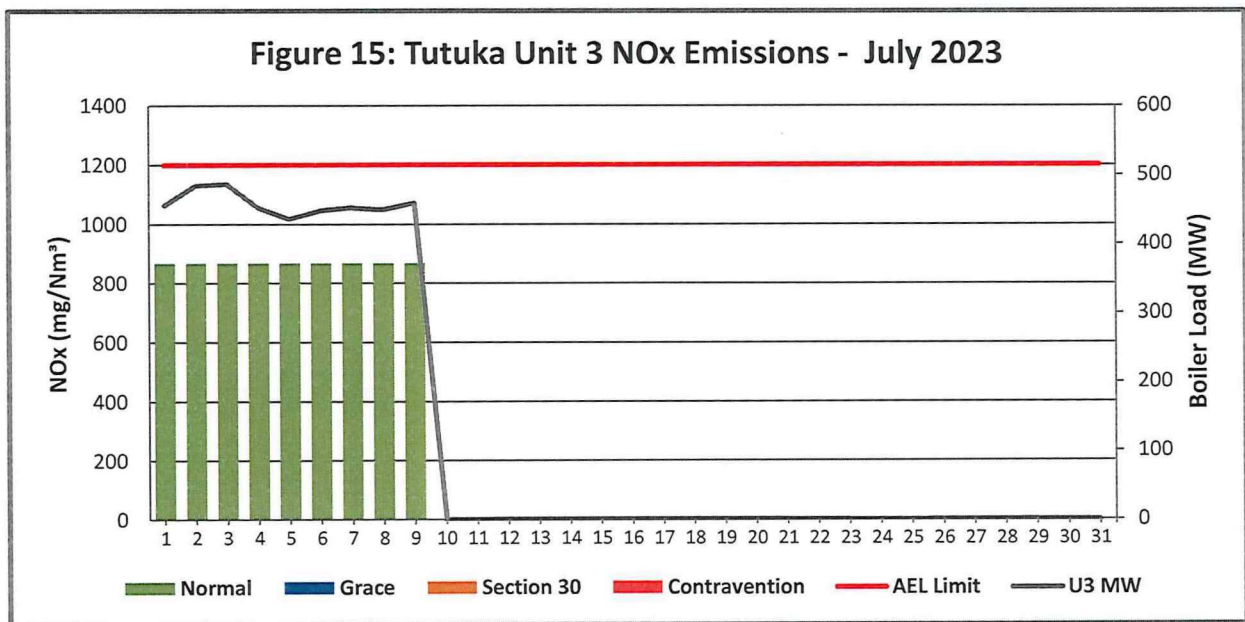
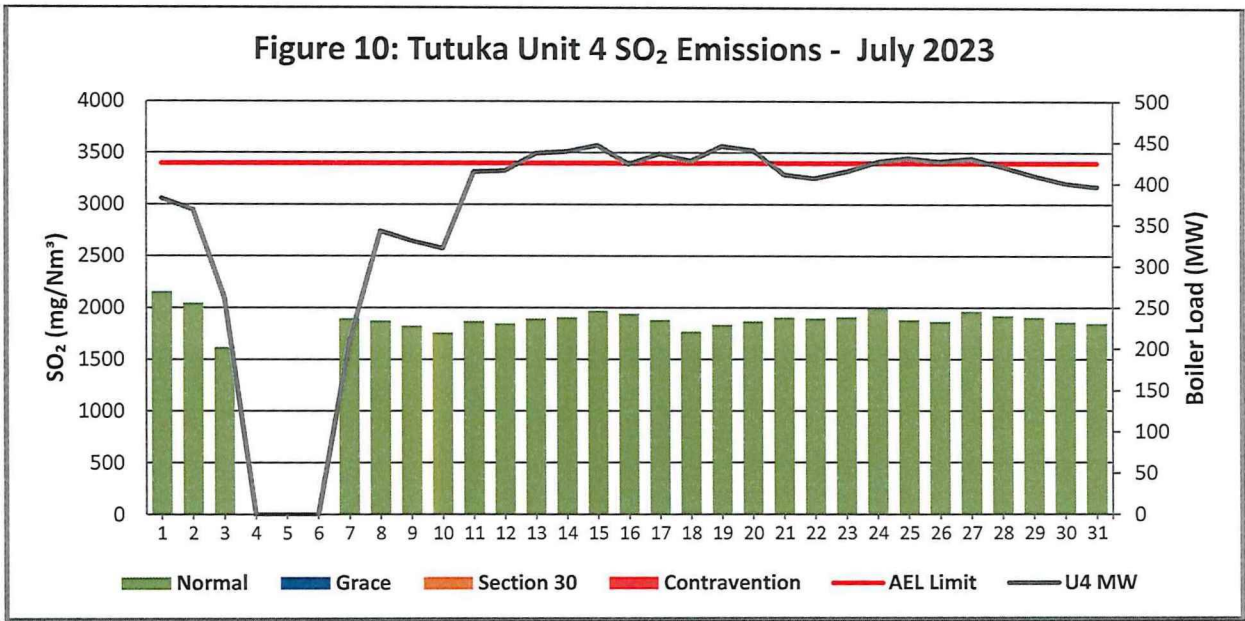
Condition	Colour	Description
Normal	Green	Emissions below Emission Limit Value (ELV)
Grace	Blue	Emissions above the ELV during grace period
Section 30	Orange	Emissions above ELV during a NEMA S30 incident
Contravention	Red	Emissions above ELV but outside grace or S30 incident conditions



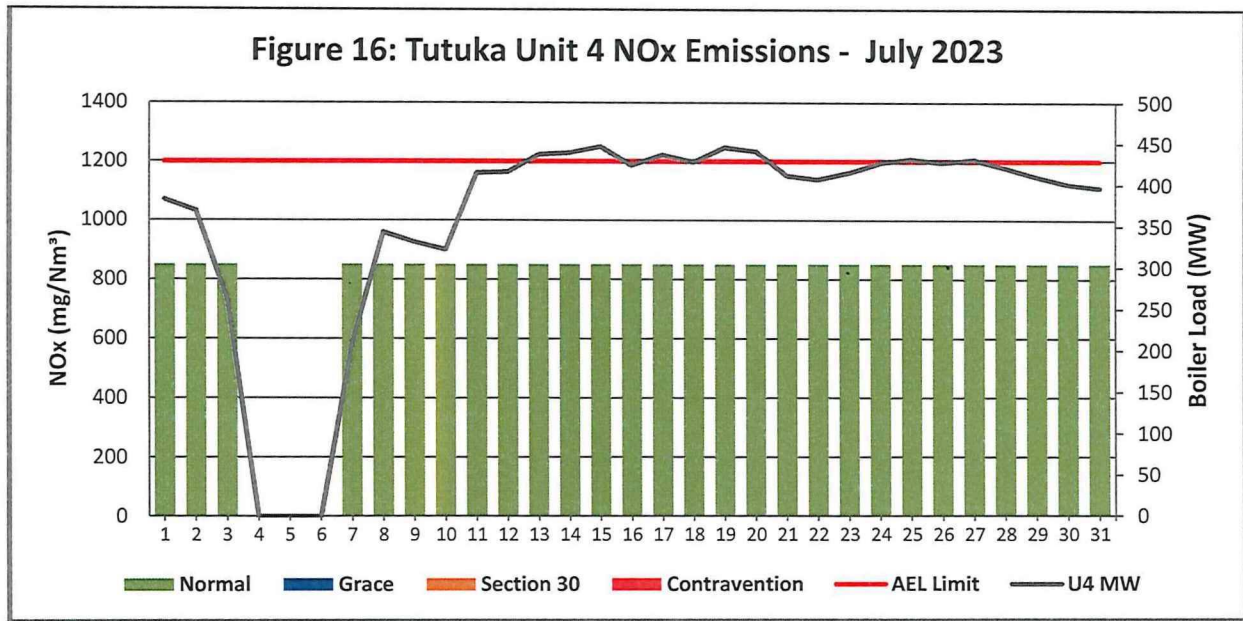
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7. COMPLAINTS REGISTER

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 July 2023. Copy of the incident register is attached					

For more information or enquiries contact the Tutuka environmental team.

Yours Sincerely

Compiled by:

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EMISSIONS CONTROL OFFICER

Supported by:

Mike Molepo
Snr CHEMIST: BOILER ENGINEERING

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Approved by:



Bruce Moyo
GENERAL MANAGER