



Ms Nompumelelo Simelane
Nkangala District Municipality
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1050

Date:

March 2023

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Ref: *Kusile Power Station AEL (17/4/AEL/MP311/12/01)*

Dear Ms. Simelane

KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR FEBRUARY 2022

This serves as the monthly report required in terms of Section 7.6 in Kusile Power Station's Atmospheric Emission License: 17/4/AEL/MP311/12/01. The emissions are for the month of February 2023. Please take note that Unit 1, 2 and 3 are off due to the flue gas duct collapse incident that occurred in Oct 2022.

Hoping the above will meet your satisfaction.

Yours sincerely

Bongumusa A. Mashazi
GENERAL MANAGER
DATE: 30 March 2023

1. KUSILE POWER STATION MONTHLY EMISSIONS REPORT: Atmospheric Emission License 17/4/AEL/MP311/12/01



2. Raw Materials and Products

Raw Materials and Products	Raw Material Type	Units	Maximum Permitted Consumption Rate	Consumption Rate Feb-2023
	Coal	Tons	1 818 083	204 307
	Fuel Oil	Tons	5 533	19.64
	Limestone	Tons	72 917	10573

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Feb-2023
	Energy	GWh	2999.808	415.85
	Ash	Tons	663 583	55 573.5
	Gypsum	Tons	129 250	5 920.9
	RE PM	kg/MWh	not specified	0.022
	RE SOx	kg/MWh	not specified	0.513

3. Energy source characteristics

Fuel Characteristic	Units	Stipulated Range	Monthly Average Content
Coal CV	MJ/kg	not specified	21.438
Coal Sulphur	%	1.3	0.806
Ash in Coal	%	38	27.201
Fuel Oil (FO) CV	MJ/kg	not specified	42.300
Fuel Oil Sulphur	%	3	2.630

4. Emissions Limits (mg/Nm³)

Associated Unit/Stack	PM	SO ₂	NO _x
North	50	500	750
South	50	500	750

5 Abatement Technology (%)

Associated Unit/Stack	Technology Type	Efficiency Feb-2023	Technology Type	Efficiency Feb-2023
Unit 1	FFP	Unit on outage		
Unit 2	FFP	Unit on outage		
Unit 3	FFP	Unit on outage		
Unit 4	FFP	99.982%	FGD	99.928%

Note: Both the FFP and FGD does not have bypass mode operation, hence plant 100% Utilised.

6. Monitoring reliability (%)

Associated Unit/Stack	PM	SO ₂	NO	O ₂
Unit 1	Unit on outage			
Unit 2	Unit on outage			
Unit 3	Unit on outage			
Unit 4	25.3	98.1	95.4	95.1

Note: The dust monitor failed and needed to change the probe, hence the monitor was not working for some part of the month. The probe has been changed and the monitor put back to service.

7. Emissions Performance

Table 7.1: Monthly tonnages for the month of Feb - 2023

Associated Unit/Stack	PM	SO ₂	NO _x
Unit 1	Unit on outage		
Unit 2	Unit on outage		
Unit 3	Unit on outage		
Unit 4	9.0	213	516
SUM	9.0	213	516

Table 7.2: Operating days in compliance to PM AEL Limit - February 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
Unit 1	Unit on outage					
Unit 2	Unit on outage					
Unit 3	Unit on outage					
Unit 4	28					5.9
SUM	28					

Table 7.3: Operating days in compliance to SO₂ AEL Limit - February 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm ³)
Unit 1	Unit on outage					
Unit 2	Unit on outage					
Unit 3	Unit on outage					
Unit 4	28					138.6
SUM	28					

Table 7.4: Operating days in compliance to NO_x AEL Limit - February 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm ³)
Unit 1	Unit on outage					
Unit 2	Unit on outage					
Unit 3	Unit on outage					
Unit 4	28					338.9
SUM	28					

Table 7.5: 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: Kusile Unit 4 PM Emissions - February 2023

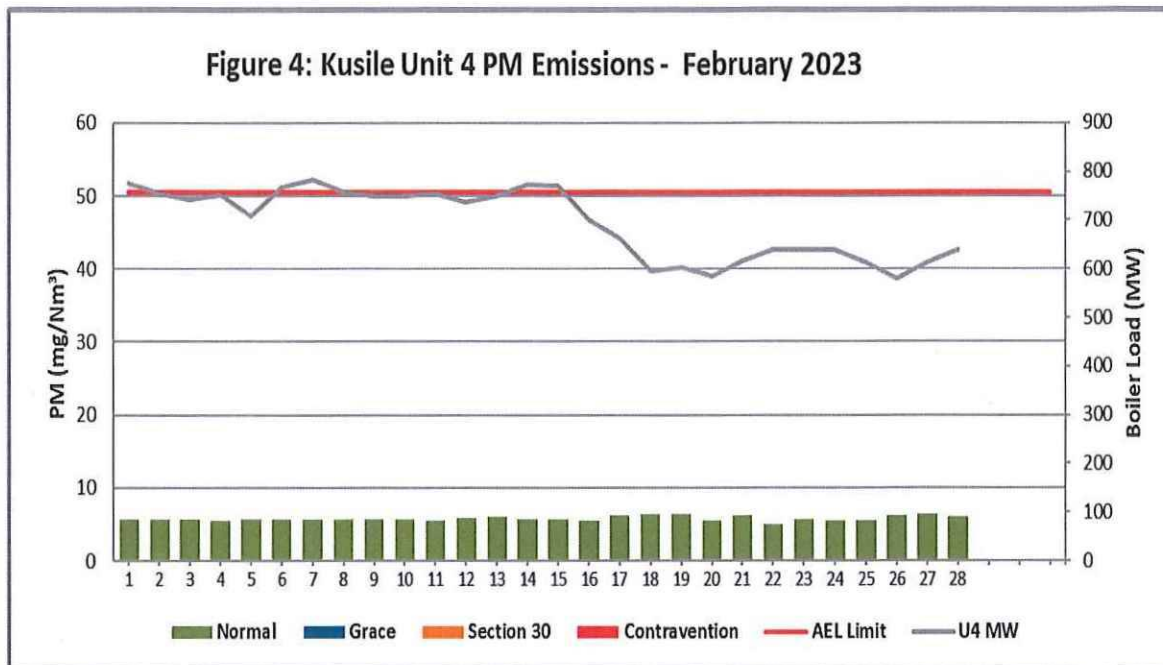
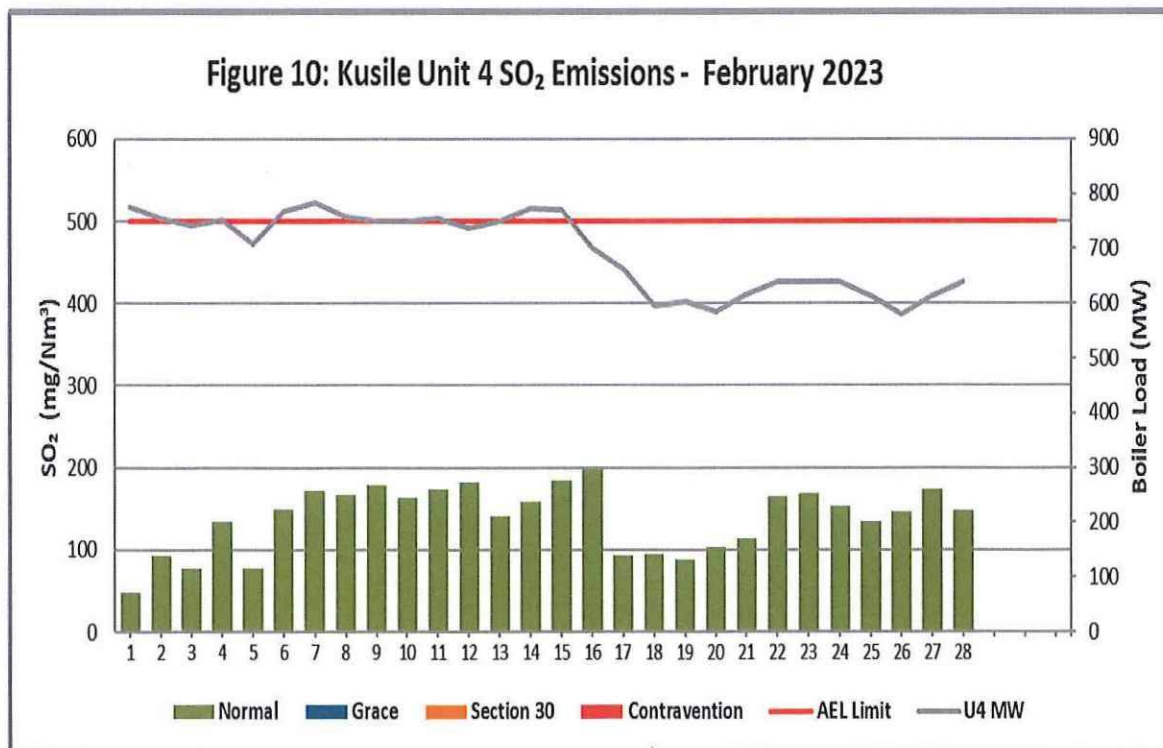
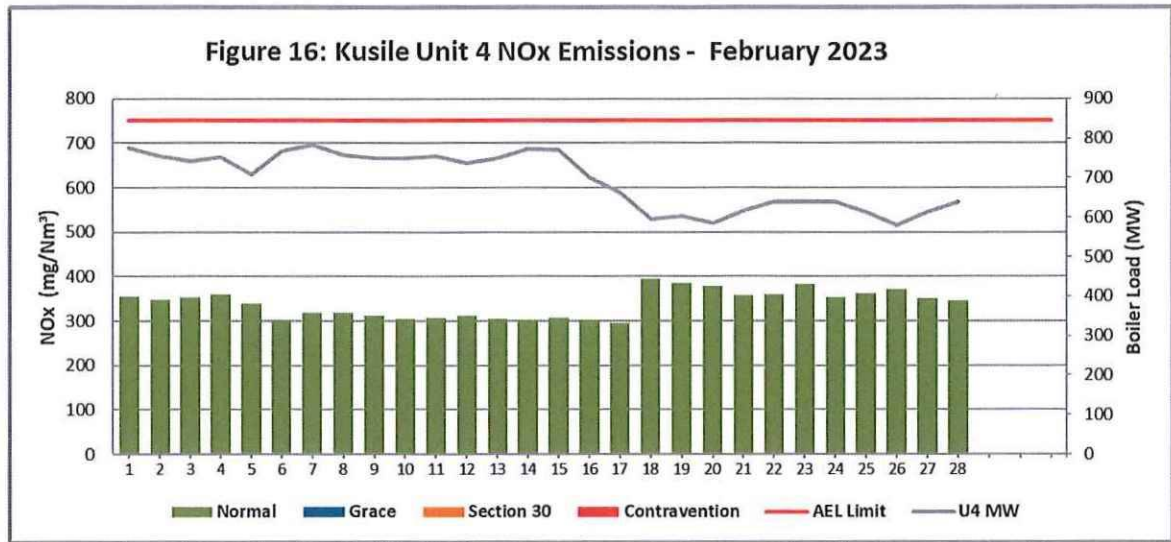


Figure 10: Kusile Unit 4 SO₂ Emissions - February 2023





8. Shut down and Light up information

No events recorded for the month of February 2023

9. Complaints

No complaints reported for the month of February 2023

Date and time complaint was received	Complaint received	Source code name	Root cause analysis	Calculation of impact/emissions associated with incidents and dispersion modelling of pollutants where applicable.	Measures implemented or to be implemented to prevent recurrence	Date by which measures will be implemented
N/A						