



**Ms Nompumelelo Simelane**  
Nkangala District Municipality  
PO Box 437  
Middleburg  
1050

Date:  
*August 2023*

Enquiries: Lesiba Kgobe  
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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 JULY 2023**

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 July 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

Luvuyo Feni  
**ACTING GENERAL MANAGER**  
DATE: *29/8/23*

**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 Jul-2023
	Coal	Tons	1 818 083	195 922
	Fuel Oil	Tons	5 533	8.436
	Limestone	Tons	72 017	9276

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Jul-2023
	Energy	GWh	3214.08	380.99
	Ash	Tons	796 300	62 303.3
	Gypsum	Tons	155 100	5 194.6
	RE PM	kg/MWh	not specified	0.014
	RE SOx	kg/MWh	not specified	0.318

**3 Energy source characteristics**

Fuel Characteristic	Units	Stipulated Range	Monthly Average Content
Coal CV	MJ/kg	not specified	21.140
Coal Sulphur	%	1.3	0.710
Ash in Coal	%	38	29.200
Fuel Oil (FO) CV	MJ/kg	not specified	43.600
Fuel Oil Sulphur	%	3	2.510

**4 Emissions Limits (mg/Nm<sup>3</sup>)**

Associated Unit/Stack	PM	SO <sub>2</sub>	NO <sub>x</sub>
North	50	1000	750
South	50	1000	750

**5 Abatement Technology (%)**

Associated Unit/Stack	Technology Type	Efficiency Jul-2023	Technology Type	Efficiency Jul-2023
Unit 1	Unit on outage			
Unit 2	Unit on outage			
Unit 3	Unit on outage			
Unit 4	FFP	99.991	FGD	99.965

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

**6. Monitoring reliability (%)**

Associated Unit/Stack	PM	SO <sub>2</sub>	NO	O <sub>2</sub>
Unit 1	Unit on outage			
Unit 2	Unit on outage			
Unit 3	Unit on outage			
Unit 4	100.0	99.6	99.6	99.3

**7. Emissions Performance**

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

Associated Unit/Stack	PM	SO <sub>2</sub>	NO <sub>x</sub>
Unit 1	Unit on outage		
Unit 2	Unit on outage		
Unit 3	Unit on outage		
Unit 4	5.2	121	598
<b>SUM</b>	5.2	121	598

Table 72: Operating days in compliance to PM AEL Limit - July 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
Unit 1	Unit on outage					
Unit 2	Unit on outage					
Unit 3	Unit on outage					
Unit 4	31					4.1
<b>SUM</b>	<b>31</b>					

Table 7.3: Operating days in compliance to SO<sub>2</sub> AEL Limit - July 2023

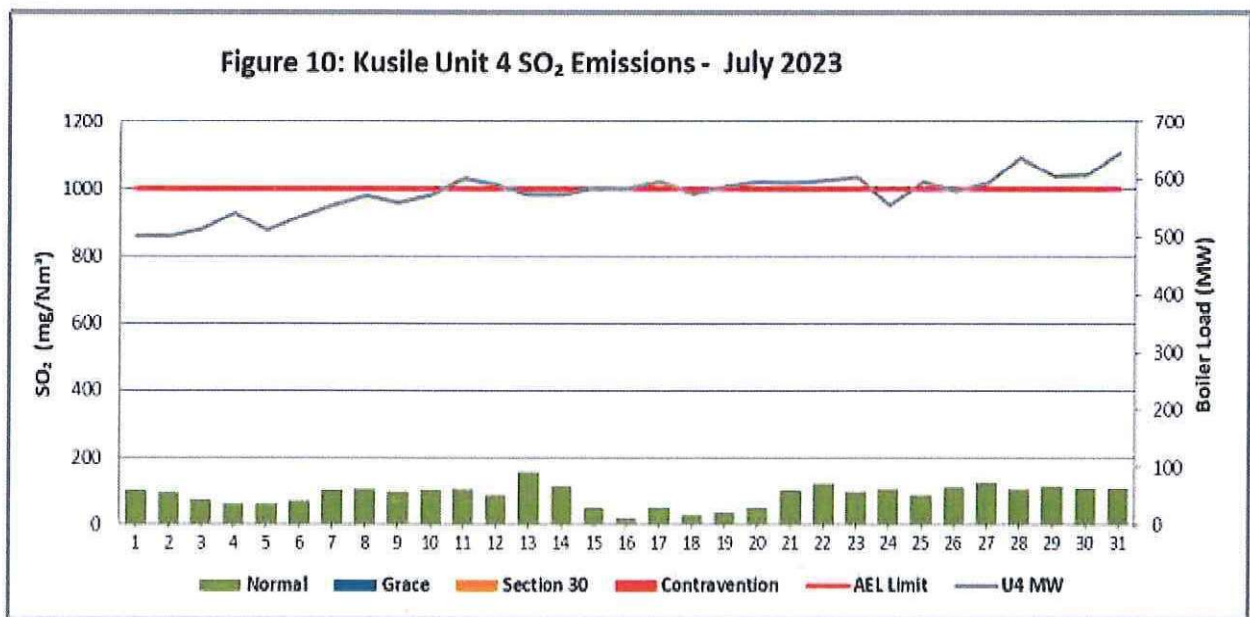
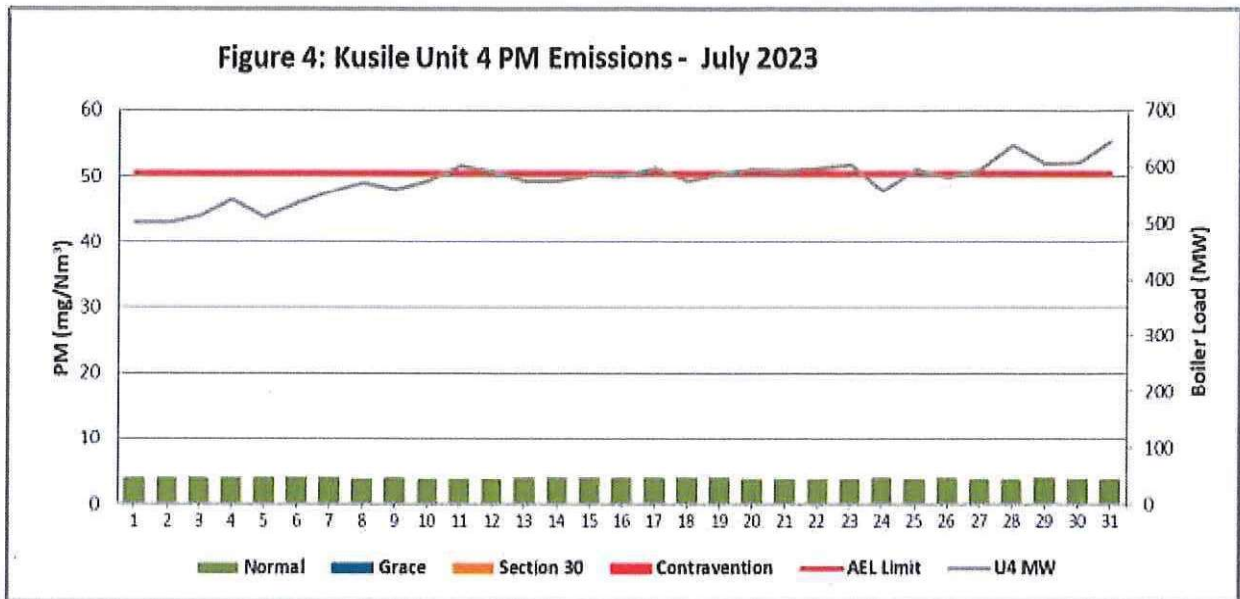
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO <sub>2</sub> (mg/Nm <sup>3</sup> )
Unit 1	Unit on outage					
Unit 2	Unit on outage					
Unit 3	Unit on outage					
Unit 4	31					90.9
<b>SUM</b>	<b>31</b>					

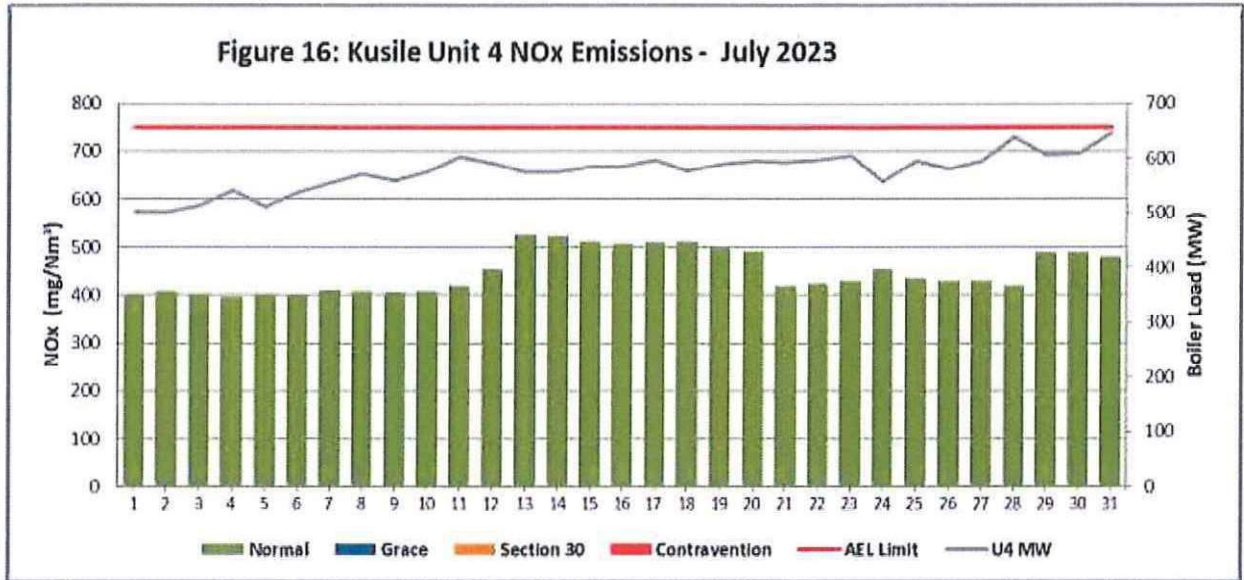
Table 7.4: Operating days in compliance to NO<sub>x</sub> AEL Limit – July 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO <sub>x</sub> (mg/Nm <sup>3</sup> )
Unit 1	Unit on outage					
Unit 2	Unit on outage					
Unit 3	Unit on outage					
Unit 4	31					448.0
<b>SUM</b>	<b>31</b>					

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





**8. Shut down and Light up information**

Unit No. 4	Event 1		Event 2	
Breaker Open (BO)	2:45 pm	2023/07/26	4:55 pm	2023/08/01
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD	4:55 pm	2023/08/01
BO to DG SD (duration)	n/a	DD:HH:MM		DD:HH:MM
Fires in time				
Synch. to Grid (or BC)				
Fires in to BC (duration)		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)				
Emissions below limit from BC (duration)		DD:HH:MM		DD:HH:MM

**9. Complaints**

No complaints reported for the month of July 2023

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