



Ms Nompumelelo Simelane
Nkangala District Municipality
PO Box 437
Middleburg
1050

Date:

June 2023

Enquiries: Lesiba Kgobe
Tel: +27 13 699 7817

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

Dear Ms. Simelane

KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR MAY 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 May 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: *2023/06/27*

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 May-2023
	Coal	Tons	1 818 083	192 104
	Fuel Oil	Tons	5 533	148.535
	Limestone	Tons	72 917	8331

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate May-2023
	Energy	GWh	3321.216	374.56
	Ash	Tons	663 583	58 207.4
	Gypsum	Tons	129 250	4 665.0
	RE PM	kg/MWh	not specified	0.021
	RE SOx	kg/MWh	not specified	0.181

3 Energy source characteristics

Fuel Characteristic	Units	Stipulated Range	Monthly Average Content
Coal CV	MJ/kg	not specified	20.740
Coal Sulphur	%	1.3	0.950
Ash in Coal	%	38	30.300
Fuel Oil (FO) CV	MJ/kg	not specified	43.300
Fuel Oil Sulphur	%	3	2.490

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 May-2023	Technology Type	Efficiency May-2023
Unit 1	Unit on outage			
Unit 2	Unit on outage			
Unit 3	Unit on outage			
Unit 4	FFP	99.985%	FGD	99.979%

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	80.6	99.6	99.6	99.6

Note: Due to chimney flue gas incidents CEMS not available for Unit 1,2 and 3.

7. Emissions Performance

Table 7.1: Monthly tonnages for the month of May - 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	7.8	68	577
SUM	7.8	68	577

Table 7.2: Operating days in compliance to PM AEL Limit - May 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	30					6.2
SUM	30					

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

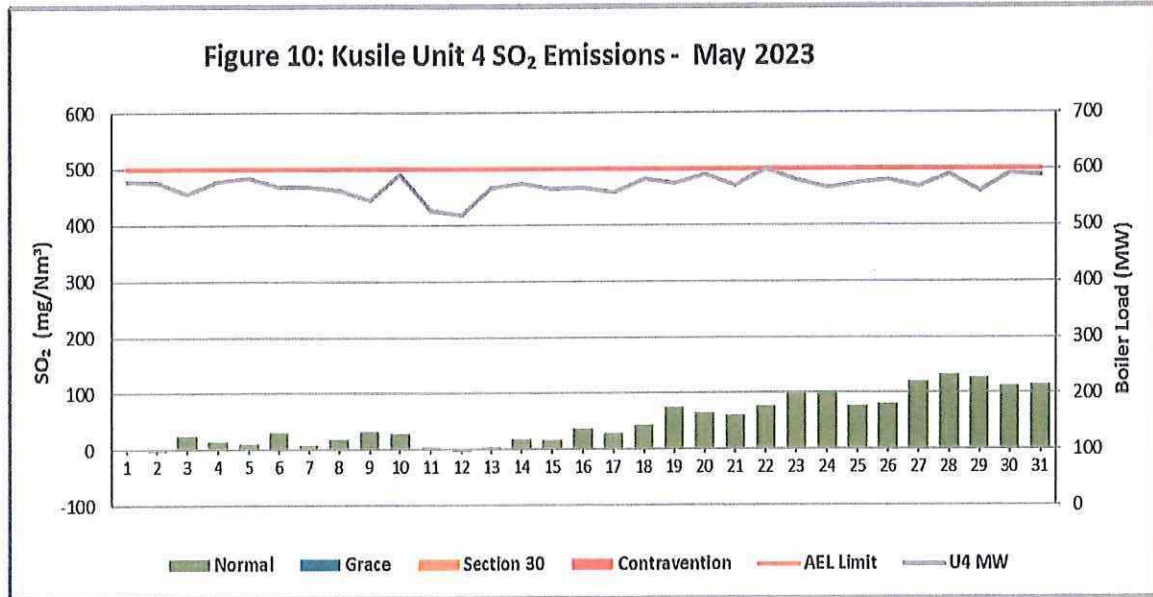
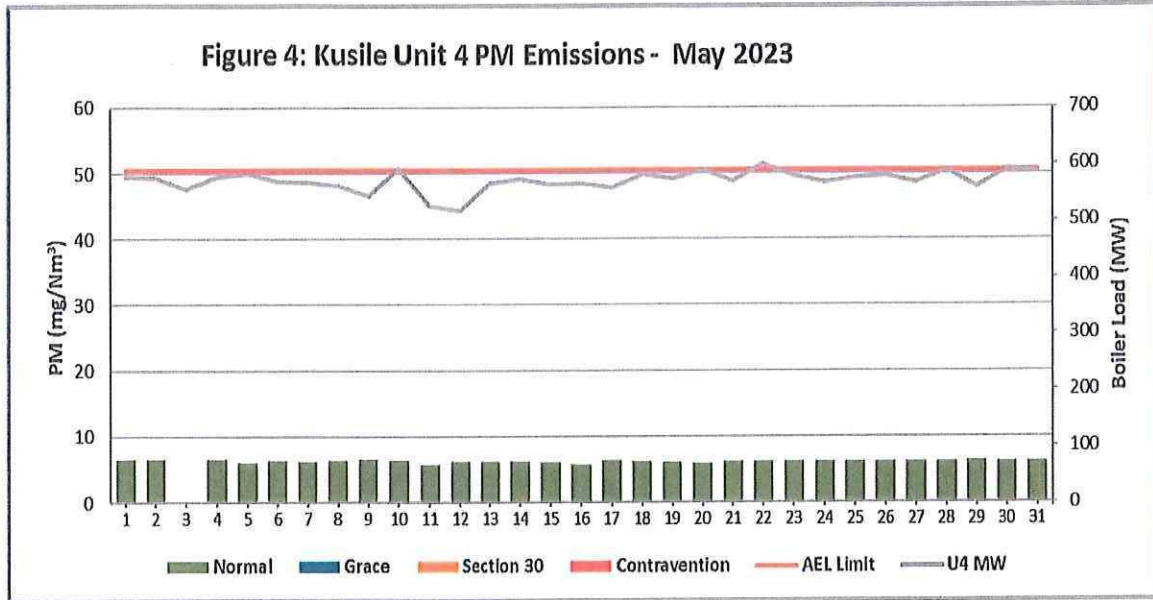
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm ³)
Unit 1	Unit on outage					
Unit 2	Unit on outage					
Unit 3	Unit on outage					
Unit 4	31					50.3
SUM	31					

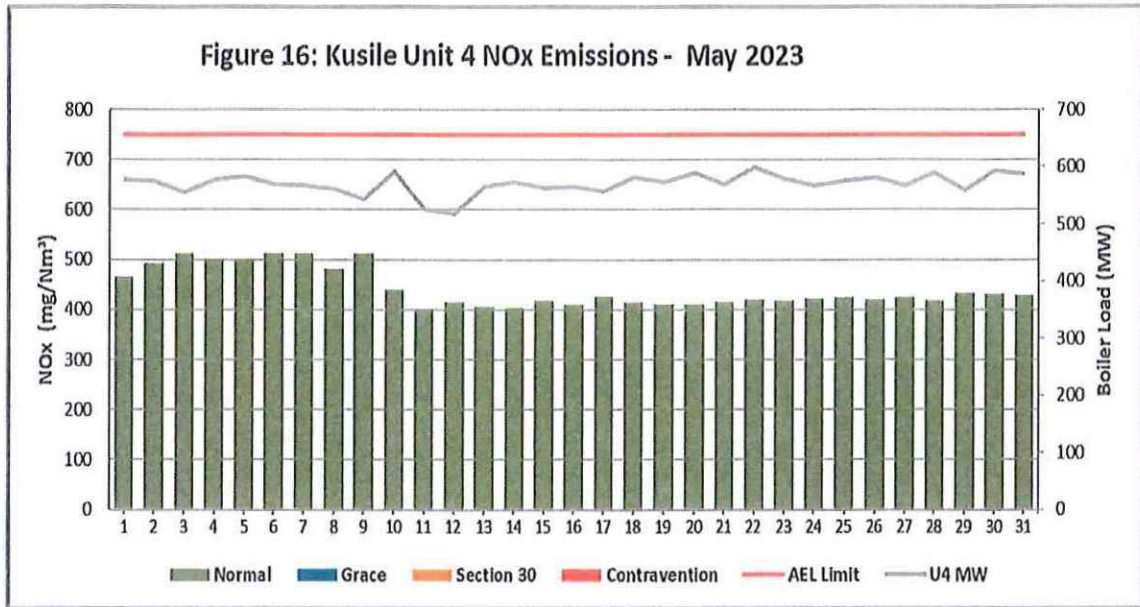
Table 7.4: Operating days in compliance to NO_x AEL Limit – May 2023

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	31					442.2
SUM	31					

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		Event 3	
Breaker Open (BO)	BO previously	BO previously	5:40 pm	2023/05/02	11:35 am	2023/05/09
Draught Group (DG) Shut Down (SD)	n/a	n/a	5:40 pm	2023/05/02	DG did not trip or SD	DG did not trip or SD
BO to DG SD (duration)	n/a	DD:HH:MM	00:00:00	DD:HH:MM	n/a	DD:HH:MM
Fires in time			6:05 pm	2023/05/02	1:50 pm	2023/05/09
Synch. to Grid (or BC)			11:55 pm	2023/05/02	3:40 pm	2023/05/09
Fires in to BC (duration)		DD:HH:MM	00:05:50	DD:HH:MM	00:01:50	DD:HH:MM
Emissions below limit from BC (end date)			not > limit	not > limit	not > limit	not > limit
Emissions below limit from BC (duration)		DD:HH:MM	n/a	DD:HH:MM	n/a	DD:HH:MM

9. Complaints

No complaints reported for the month of May 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						