



Ms Nompumelelo Simelane
Nkangala District Municipality
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Middleburg
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Date

September 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 AUGUST 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 August 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

Christopher Nani

ACTING GENERAL MANAGER

DATE: *29/09/2023*

**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 Aug-2023
	Coal	Tons	1 818 083	179 322
	Fuel Oil	Tons	5 533	226.432
	Limestone	Tons	72 917	5965

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Aug-2023
	Energy	GWh	3321.216	370.13
	Ash	Tons	663 583	52 720.6
	Gypsum	Tons	129 250	3 340.4
	RE PM	kg/MWh	not specified	0.013
	RE SOx	kg/MWh	not specified	0.265

3 Energy source characteristics

Fuel Characteristic	Units	Stipulated Range	Monthly Average Content
Coal CV	MJ/kg	not specified	20.840
Coal Sulphur	%	1.3	0.740
Ash in Coal	%	38	29.900
Ash in FO	%	0.02	0.020

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4 Emissions Limits (mg/Nm³)

Associated Unit/Stack	PM	SO ₂	NO _x
North	50	1000	750
South	50	1000	750

5 Abatement Technology (%)

Associated Unit/Stack	Technology Type	Efficiency Aug-2023	Technology Type	Efficiency Aug-2023
Unit 1	<i>Unit on outage</i>			
Unit 2	<i>Unit on outage</i>			
Unit 3	<i>Unit on outage</i>			
Unit 4	FFP	99.990	FGD	99.959

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	<i>Unit on outage</i>			
Unit 2	<i>Unit on outage</i>			
Unit 3	<i>Unit on outage</i>			
Unit 4	93.5	90.4	90.8	91.5

7. Emissions Performance

Table 7.1 Monthly tonnages for the month of Aug - 2023

Associated Unit/Stack	PM	SO ₂	NO _x
Unit 1	<i>Unit on outage</i>		
Unit 2	<i>Unit on outage</i>		
Unit 3	<i>Unit on outage</i>		
Unit 4	4.9	98	619
SUM	4.9	98	619

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Table 7.2: Operating days in compliance to PM AEL Limit - August 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	29					4.0
SUM	29					

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

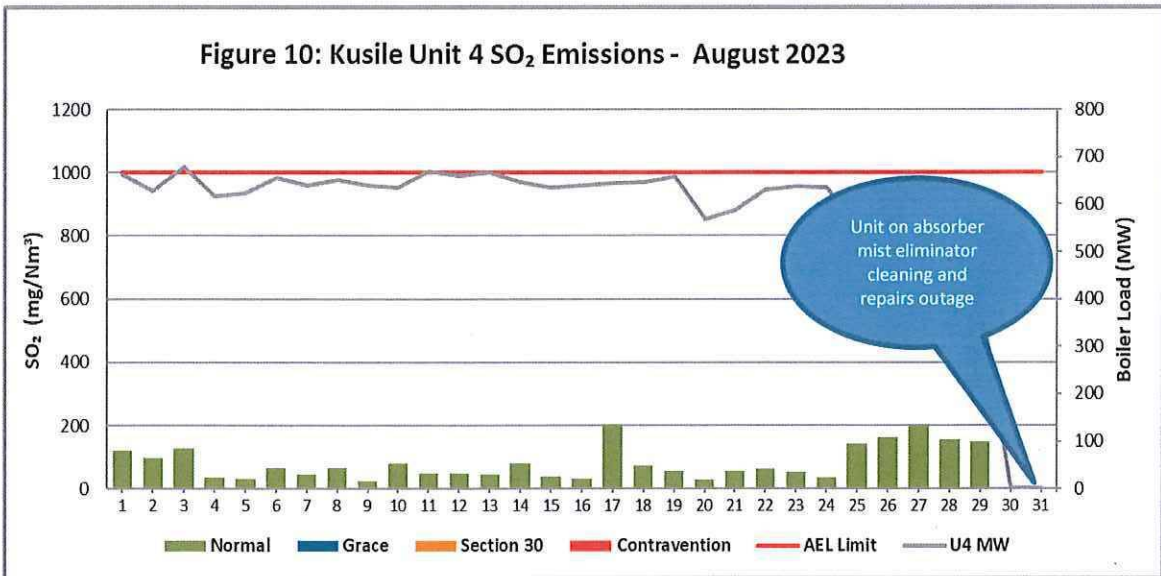
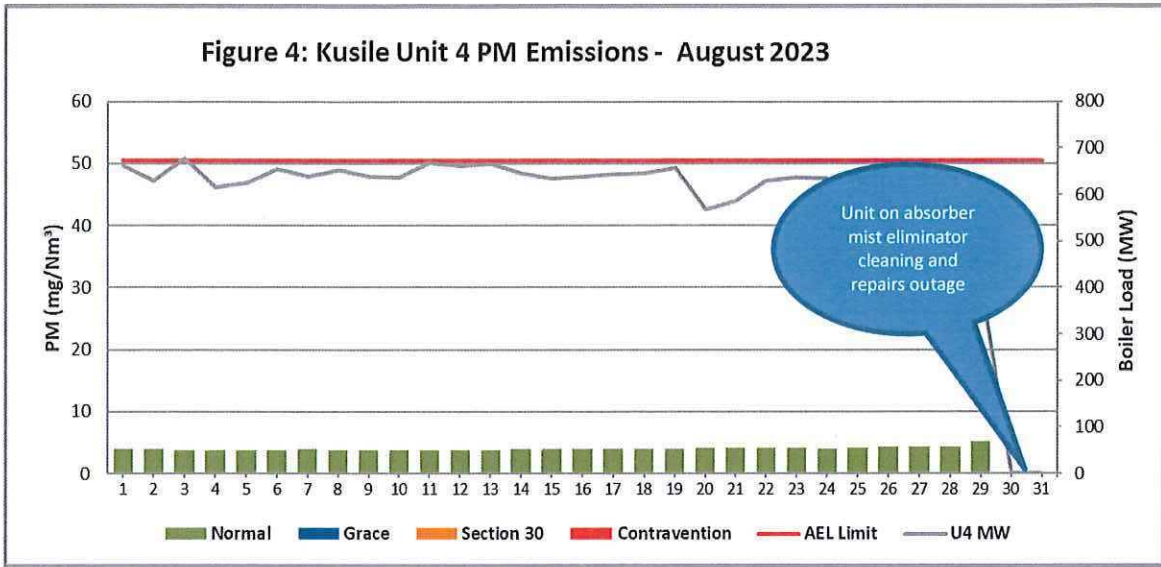
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm ³)
Unit 1	Unit on outage					
Unit 2	Unit on outage					
Unit 3	Unit on outage					
Unit 4	29					81.4
SUM	29					

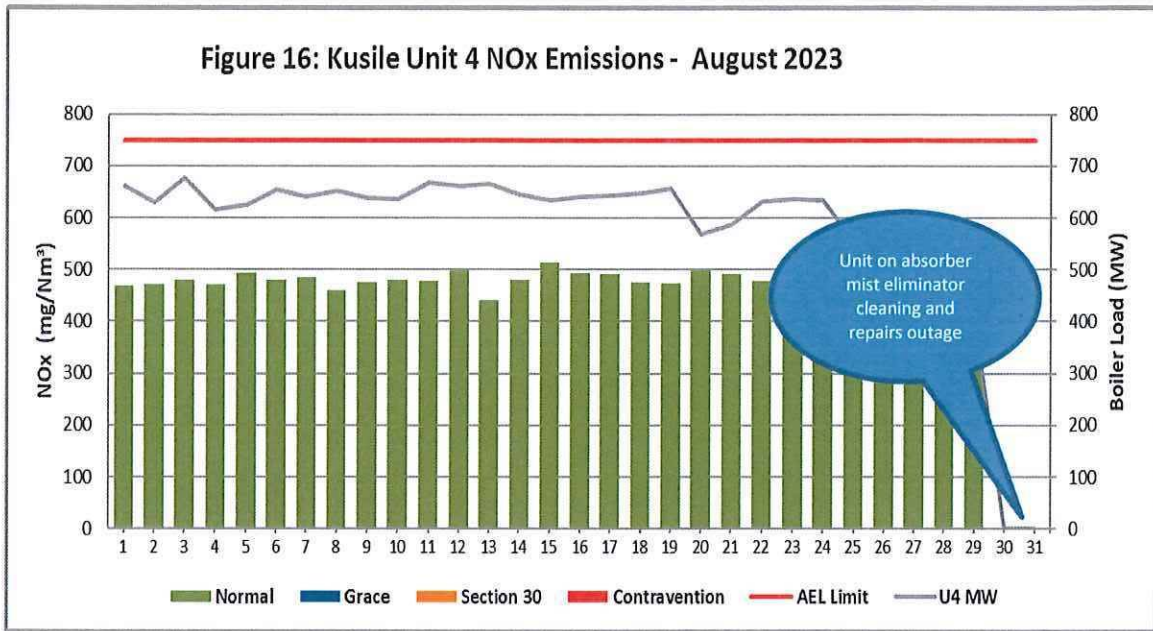
Table 7.4: Operating days in compliance to NO_x AEL Limit - August 2023

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	29					481.2
SUM	29					

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)	4:55 pm	2023/08/01	7:45 pm	2023/08/20	1:35 am	2023/08/29
Draught Group (DG) Shut Down (SD)	4:55 pm	2023/08/01	DG did not trip or SD	DG did not trip or SD	10:40 pm	2023/08/29
BO to DG SD (duration)	00:00:00	DD:HH:MM	n/a	DD:HH:MM	00:21:05	DD:HH:MM
Fires in time	5:30 pm	2023/08/01	7:45 pm	2023/08/20		
Synch. to Grid (or BC)	11:15 am	2023/08/02	9:20 pm	2023/08/20		
Fires in to BC (duration)	00:17:45	DD:HH:MM	00:01:35	DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	not > limit	not > limit	not > limit	not > limit		
Emissions below limit from BC (duration)	n/a	DD:HH:MM	n/a	DD:HH:MM		DD:HH:MM

*KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR AUGUST 2023 -
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9. Complaints

No complaints reported for the month of August 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						