



**Ms Mpho Nembilwi**  
Nkangala District Municipality  
PO Box 437  
Middleburg  
1050

Date  
*Jan 2021*

Enquiries Lesiba Kgobe  
Tel +27 13 699 7817

Ref *Kusile Power Station AEL (17/4/AEL/MP312/11/12)*

Dear Ms Nembilwi

**KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR DECEMBER 2020**

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 December 2020.

Hoping the above will meet your satisfaction.

Yours sincerely

Justice Bore

**GENERAL MANAGER: KUSILE POWER STATION**

**DATE: 02/02/2021**

KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR DECEMBER 2020

**1 Raw Materials and Products**

Raw Materials and Products	Raw Material Type	Units	Maximum Permitted Consumption Rate	Consumption Rate Dec-2020
	Coal	Tons	1 818 083	185 509
	Fuel Oil	Tons	5 533	270.404
	Limestone	Tons	72 917	21814

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Dec-2020
	Energy	GWh	3321.216	281.74
	Ash	Tons	663 583	53 760.4
	Gypsum	Tons	129 250	12 216.0
	RE PM	kg/MWh	not specified	0.028
	RE SOx	kg/MWh	not specified	0.714

**2 Abatement Technology**

Associated Unit/Stack	Technology Type	Efficiency Dec-2020	Technology Type	Efficiency Dec-2020
Unit 1	FFP	99.983%	FGD	92.828%
Unit 2	FFP		FGD	
Unit 3	FFP		FGD	
Unit 4	FFP		FGD	
Unit 5	FFP		FGD	
Unit 6	FFP		FGD	

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

**3. Monitoring reliability**

Associated Unit/Stack	PM	SO <sub>2</sub>	NO	CO <sub>2</sub>	O <sub>2</sub>
Unit 1	86.6	94.3	95.5	55.5	95.5
Unit 2					
Unit 3					
Unit 4					
Unit 5					
Unit 6					

KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR DECEMBER 2020

**4. Emissions Performance**

Table 1: Monthly tonnages for the month of December-2020

Associated Unit/Stack	PM	SO <sub>x</sub>	NO <sub>x</sub>	CO <sub>2</sub>
Unit 1	8.0	201	458	257 653
Unit 2	0.0	0	0	0
Unit 3	0.0	0	0	0
Unit 4	0.0	0	0	0
Unit 5	0.0	0	0	0
Unit 6	0.0	0	0	0
<b>SUM</b>	<b>8.0</b>	<b>201</b>	<b>458</b>	<b>257 653</b>

Table 2: Operating days in compliance to PM AEL Limit - December 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
Unit 1	24	0	0	0	0	3.2
Unit 2	0	0	0	0	0	
Unit 3	0	0	0	0	0	
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
<b>SUM</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Table 3: Operating days in compliance to SO<sub>x</sub> AEL Limit - December 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO <sub>x</sub> (mg/Nm <sup>3</sup> )
Unit 1	24	0	0	0	0	98.6
Unit 2	0	0	0	0	0	
Unit 3	0	0	0	0	0	
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
<b>SUM</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

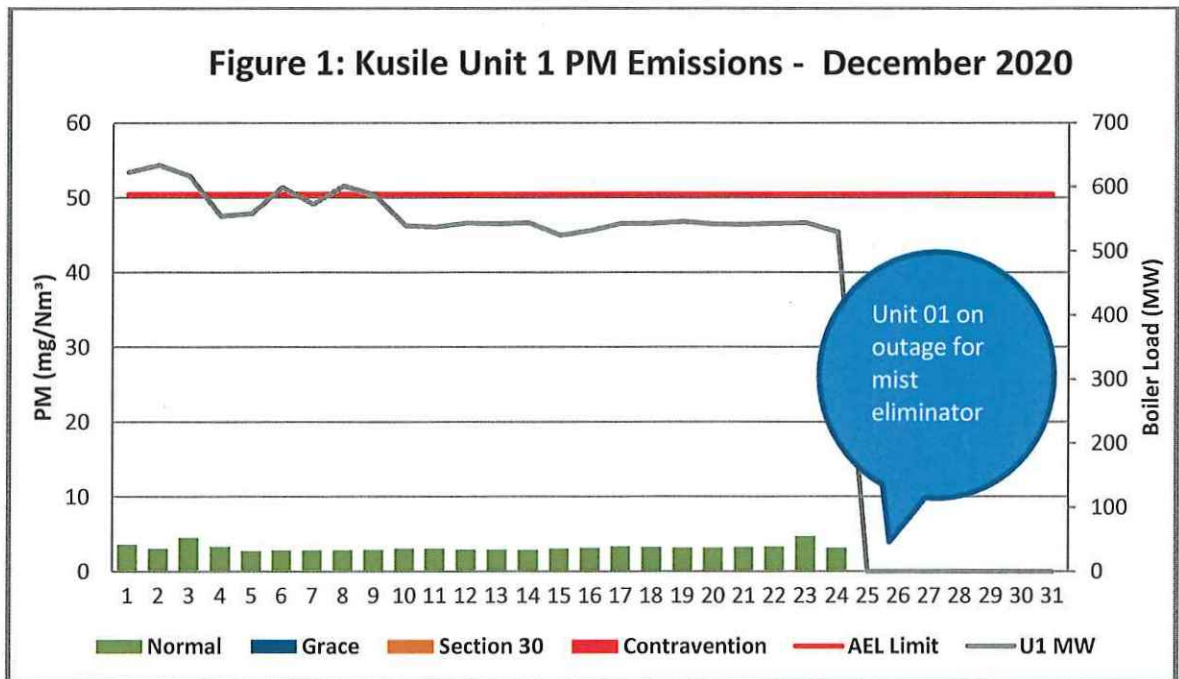
KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR DECEMBER 2020

Table .4: Operating days in compliance to NOx AEL Limit - December 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm <sup>3</sup> )
Unit 1	24	0	0	0	0	233.4
Unit 2	0	0	0	0	0	
Unit 3	0	0	0	0	0	
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
<b>SUM</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

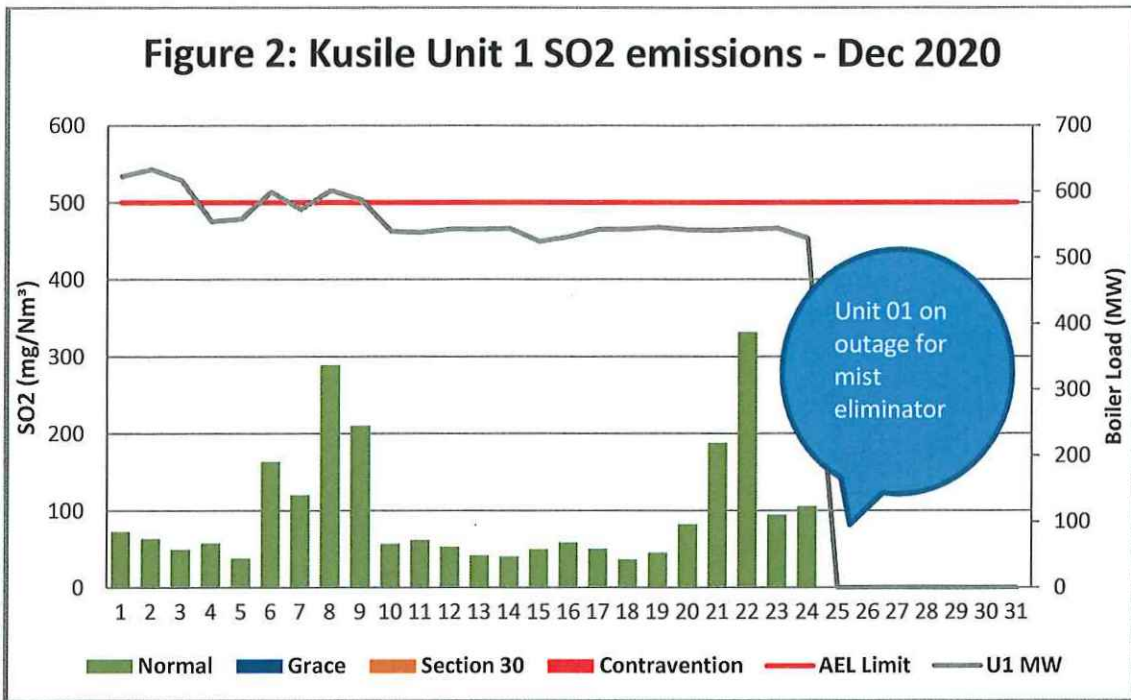
Table 5: Legend Description

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

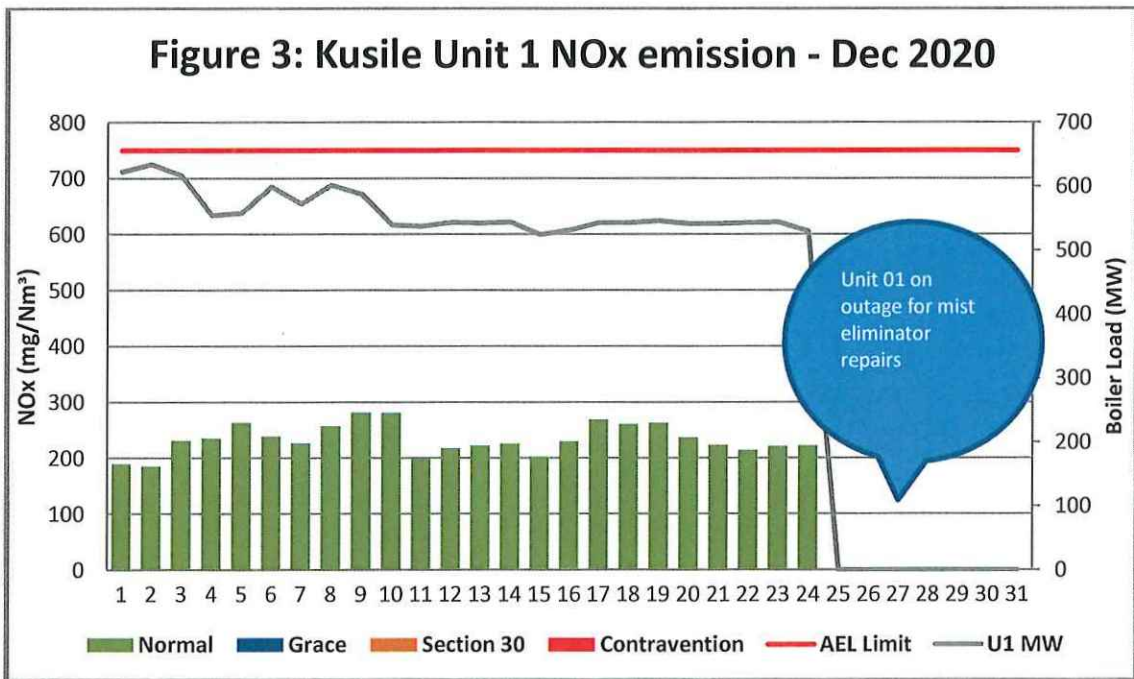




**Figure 2: Kusile Unit 1 SO2 emissions - Dec 2020**



**Figure 3: Kusile Unit 1 NOx emission - Dec 2020**



KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR DECEMBER 2020

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

**Table 6. PM Start-up information for the month of December-2020**

Unit No. 1	Event 1		Event 2	
Breaker Open (BO)	04:25 PM	2020/12/10	03:05 PM	2020/12/24
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD	08:15 PM	2020/12/24
BO to DG SD (duration)	n/a	DD:HH:MM	00:05:10	
Fires in time	07:25 PM	2020/12/10		
Synch. to Grid (or BC)	07:25 PM	2020/12/10		
Fires in to BC (duration)	00:00:00	DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	not > limit	not > limit		
Emissions below limit from BC (duration)	n/a	DD:HH:MM		DD:HH:MM

**8. Complaints**

No complaints received during the month of December - 2020