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Date:  
05 July 2021

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

Dear Ms. Nembilwi

**KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR FEBRUARY 2021**

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 2021.

Hoping the above will meet your satisfaction.

Yours sincerely

Yours sincerely



Justice Bore  
**GENERAL MANAGER: KUSILE**

# KUSILE POWER STATION MONTHLY EMISSIONS REPORT FOR FEBRUARY 2021

Atmospheric Emission License 17/4/AEL/MP312/11/12



## 1. RAW MATERIALS AND PRODUCTS

Raw Materials and Products	Raw Material Type	Units	Maximum Permitted Consumption Rate	Consumption Rate Feb-2021
	Coal	Tons	1 818 083	296 176
	Fuel Oil	Tons	5 533	3098.8
	Limestone	Tons	72 917	31067.14
Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Feb-2021
	Energy	GWh	2999.808	367.15
	Ash	Tons	663 583	76 828.1
	Gypsum	Tons	129 250	17 364.0
	RE PM	kg/MWh	not specified	0.028
	RE SOx	kg/MWh	not specified	1.247

## 2. ENERGY SOURCE CHARACTERISTICS

Fuel Characteristic	Units	Stipulated Range	Monthly Average Content
Coal CV	MJ/kg	<i>not specified</i>	20.850
Coal Sulphur	%	1.3	0.710
Ash in Coal	%	38	25.940
Fuel Oil (FO) CV	MJ/kg	<i>not specified</i>	
Fuel Oil Sulphur	%	3	
Ash in FO	%	0.02	

## 3. EMISSION LIMITS (mg/Nm<sup>3</sup>)

Associated Unit/Stack	PM	SOx	NOx
North	50	500	750
South	50	500	750

## 4. ABATEMET TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Feb-2021	Technology Type	Efficiency Feb-2021
Unit 1	FFP	99.985%	FGD	83.373%
Unit 2	FFP	99.985%	FGD	89.834%
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.

## 5. MONITOR RELIABILITY (%)

Associated Unit/Stack	PM	SO <sub>2</sub>	NO	CO <sub>2</sub>	O <sub>2</sub>
Unit 1	37.0	73.9	99.9	13.2	93.6
Unit 2	67.1	99.8	100.0	84.6	98.9
Unit 3					
Unit 4					
Unit 5					
Unit 6					

## 6. EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of February-2021

Associated Unit/Stack	PM	SO <sub>x</sub>	NO <sub>x</sub>	CO <sub>2</sub>
Unit 1	3.1	188	490	233 651
Unit 2	7.2	270	664	258 365
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>10.2</b>	<b>458</b>	<b>1 155</b>	<b>492 016</b>

Table 6.2: Operating days in compliance to PM AEL Limit - February 2021

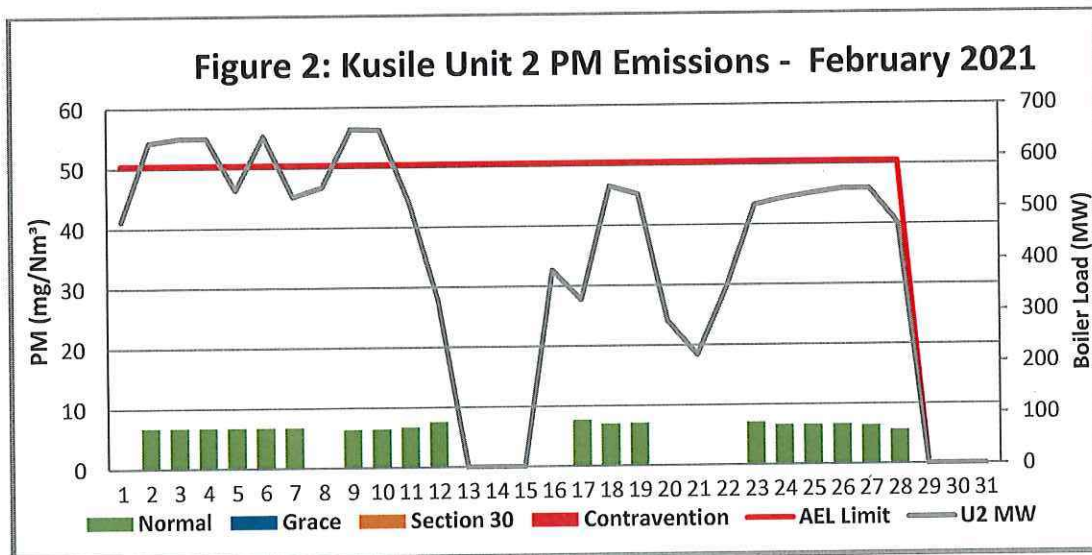
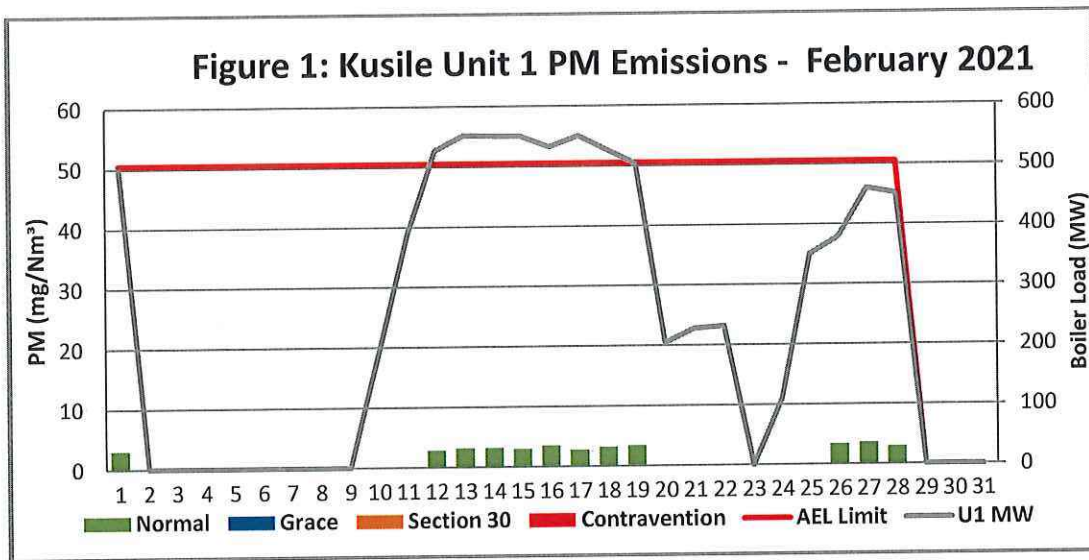
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
Unit 1	12	0	0	0	0	3.2
Unit 2	19	0	0	0	0	6.8
Unit 3	0	0	0	0	0	
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
<b>SUM</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

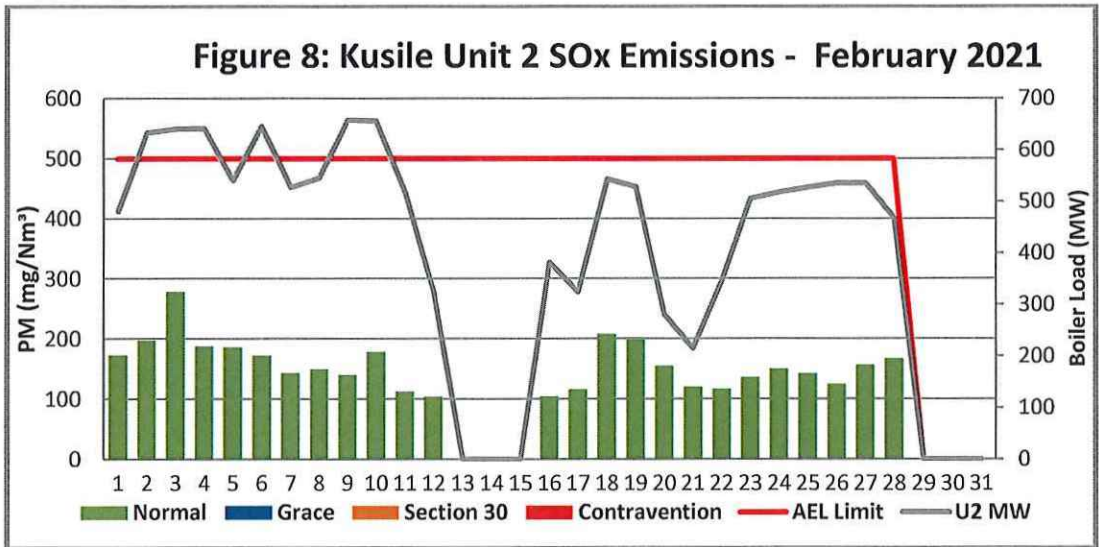
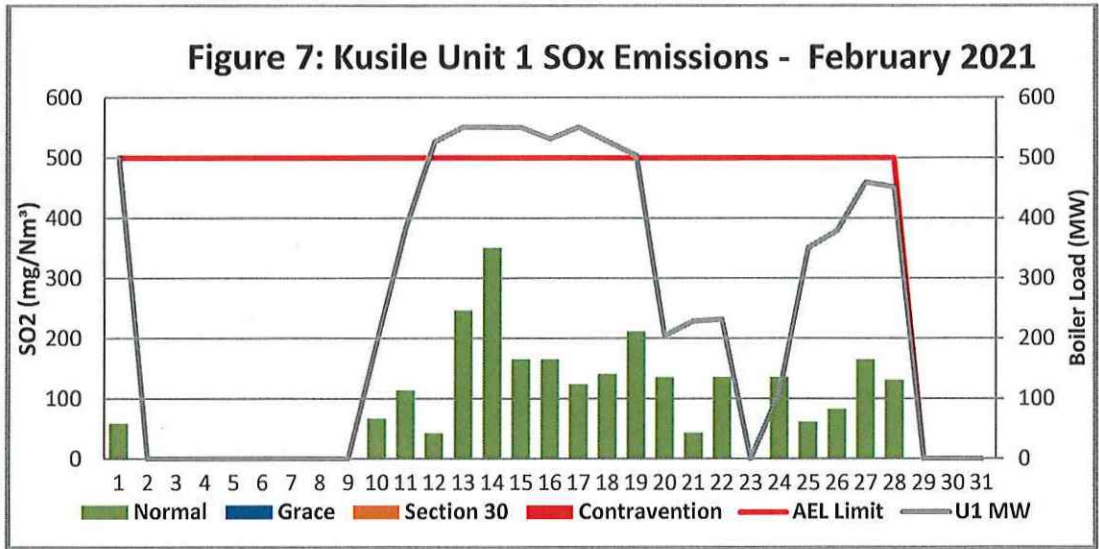
Table 6.3: Operating days in compliance to SO<sub>x</sub> AEL Limit - February 2021

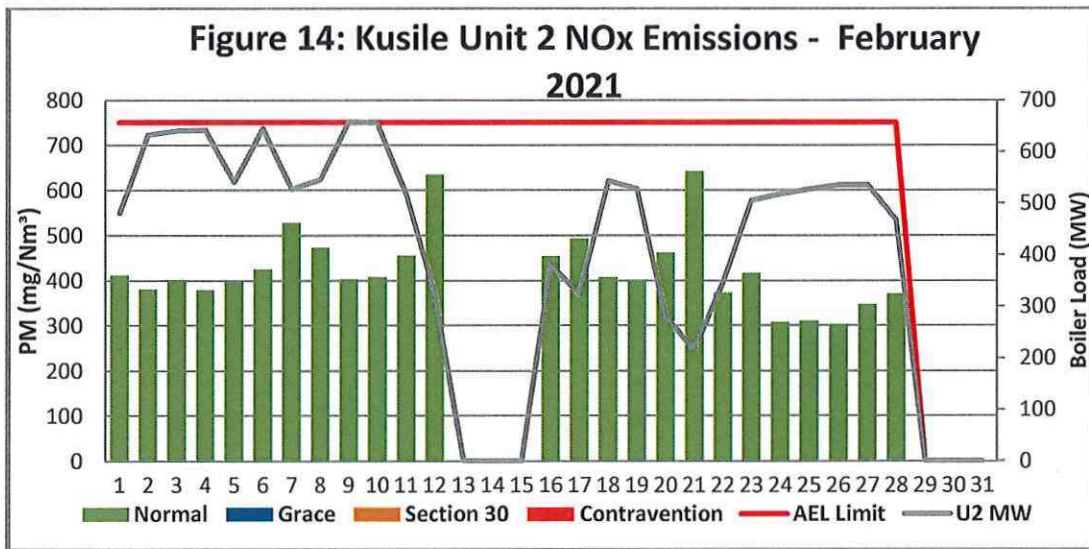
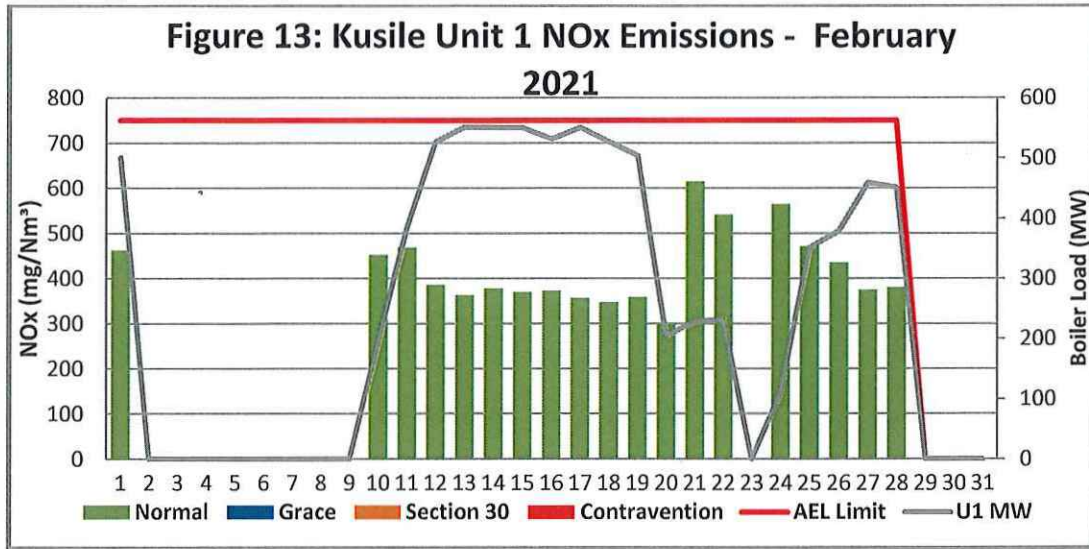
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO <sub>x</sub> (mg/Nm <sup>3</sup> )
Unit 1	19	0	0	0	0	136.0
Unit 2	25	0	0	0	0	157.6
Unit 3	0	0	0	0	0	
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
<b>SUM</b>	<b>44</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Table 6.5: 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







## 7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1. PM Start-up information for the month of February-2021

Unit No. 1	Event 1		Event 2		Event 3		Event 4	
Breaker Open (BO)	7:35 PM	2021/02/01	2:15 PM	2021/02/19				
Draught Group (DG) Shut Down (SD)	12:40 AM	2021/02/02	DG did not trip or SD	DG did not trip or SD				
BO to DG SD (duration)	00:05:05	DD:HH:MM	n/a	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	8:30 AM	2021/02/11	1:00 PM	2021/02/24				
Synch. to Grid (or BC)	7:15 PM	2021/02/11	3:45 PM	2021/02/24				
Fires in to BC (duration)	00:10:45	DD:HH:MM	00:02:45	DD:HH:MM		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		DD:HH:MM

Unit No. 2	Event 1		Event 2		Event 3		Event 4	
Breaker Open (BO)	BO previously	BO previously	1:30 PM	2021/02/07	10:10 PM	2021/02/12	2:10 PM	2021/02/19
Draught Group (DG) Shut Down (SD)	n/a	n/a	DG did not trip or SD	DG did not trip or SD	11:40 PM	2021/02/13	DG did not trip or SD	DG did not trip or SD
BO to DG SD (duration)	n/a	DD:HH:MM	n/a	DD:HH:MM	01:01:30	DD:HH:MM	n/a	DD:HH:MM
Fires in time			9:05 AM	2021/02/08	2:15 PM	2021/02/17	4:20 AM	2021/02/22
Synch. to Grid (or BC)			1:10 PM	2021/02/08	6:50 PM	2021/02/17	9:10 AM	2021/02/22
Fires in to BC (duration)		DD:HH:MM	00:04:05	DD:HH:MM	00:04:35	DD:HH:MM	00:04:50	DD:HH:MM
Emissions below limit from BC (end date)			not > limit	not > limit	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	n/a	DD:HH:MM

## 8. Complaints

No complaints received during the months February 2021