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Date:
05 July 2021

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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 MARCH 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 March 2021.

Hoping the above will meet your satisfaction.

Yours sincerely

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Justice Bore
GENERAL MANAGER: KUSILE

KUSILE POWER STATION MONTHLY EMISSIONS REPORT FOR MARCH 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 Mar-2021
	Coal	Tons	1 818 083	369 412
	Fuel Oil	Tons	5 533	3204.85
	Limestone	Tons	72 917	21564.29

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Mar-2021
	Energy	GWh	3321.216	497.07
	Ash	Tons	663 583	105 297.2
	Gypsum	Tons	129 250	12 076.0
	RE PM	kg/MWh	<i>not specified</i>	0.038
	RE SOx	kg/MWh	<i>not specified</i>	1.451

2. ENERGY SOURCE CHARACTERISTICS

Fuel Characteristic	Units	Stipulated Range	Monthly Average Content
Coal CV	MJ/kg	<i>not specified</i>	21.589
Coal Sulphur	%	1.3	0.781
Ash in Coal	%	38	28.504
Fuel Oil (FO) CV	MJ/kg	<i>not specified</i>	
Fuel Oil Sulphur	%	3	
Ash in FO	%	0.02	

3. EMISSION LIMITS (mg/Nm³)

Associated Unit/Stack	PM	SO _x	NO _x
North	50	500	750
South	50	500	750

4. ABATEMET TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Mar-2021	Technology Type	Efficiency Mar-2021
Unit 1	FFP	99.980%	FGD	81.392%
Unit 2	FFP	99.980%	FGD	90.340%
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 ₂	NO	CO ₂	O ₂
Unit 1	47.2	100.0	100.0	99.7	99.5
Unit 2	99.5	96.4	96.5	91.4	96.5
Unit 3					
Unit 4					
Unit 5					

6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM	SO _x	NO _x	CO ₂
Unit 1	8.8	456	1 365	465 737
Unit 2	10.0	265	813	210 318
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
SUM	18.9	721	2 178	676 056

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
Unit 1	30	0	0	0	0	4.2
Unit 2	27	0	0	0	0	6.3
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	
SUM	57	0	0	0	0	

Table 6.3: Operating days in compliance to SO_x AEL Limit - March 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO _x (mg/Nm ³)
Unit 1	31	0	0	0	0	200.6
Unit 2	30	0	0	0	0	139.2
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	
SUM	61	0	0	0	0	

Table 6.4: Operating days in compliance to NOx AEL Limit - March 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm ³)
Unit 1	31	0	0	0	0	599.6
Unit 2	30	0	0	0	0	456.6
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	
SUM	61	0	0	0	0	

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

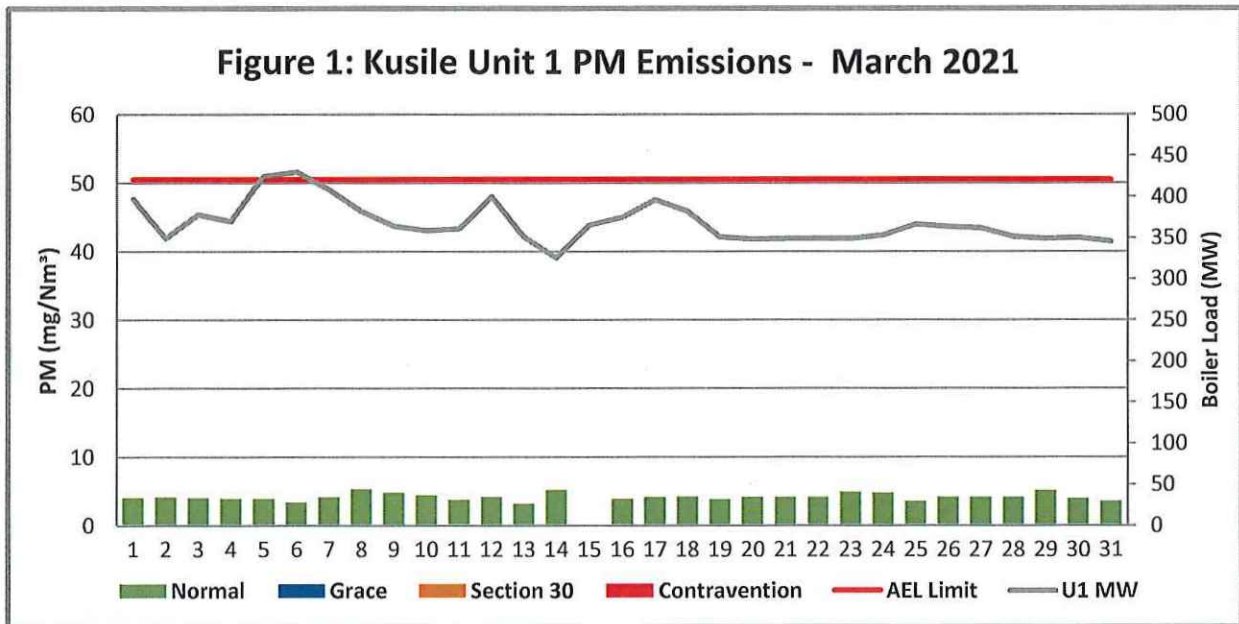


Figure 2: Kusile Unit 2 PM Emissions - March 2021

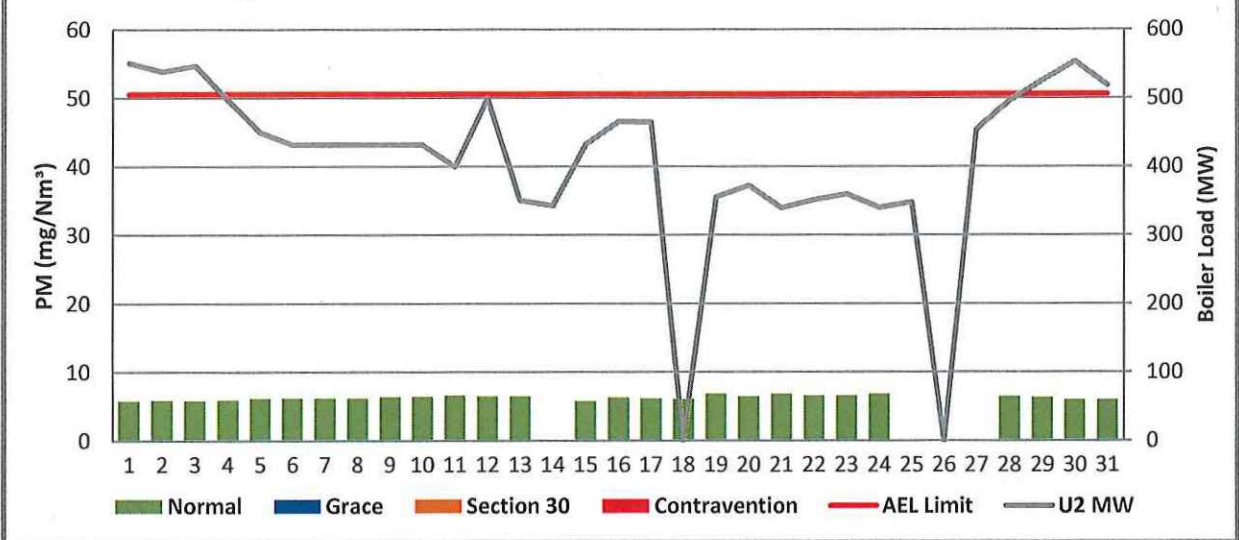


Figure 7: Kusile Unit 1 SOx Emissions - March 2021

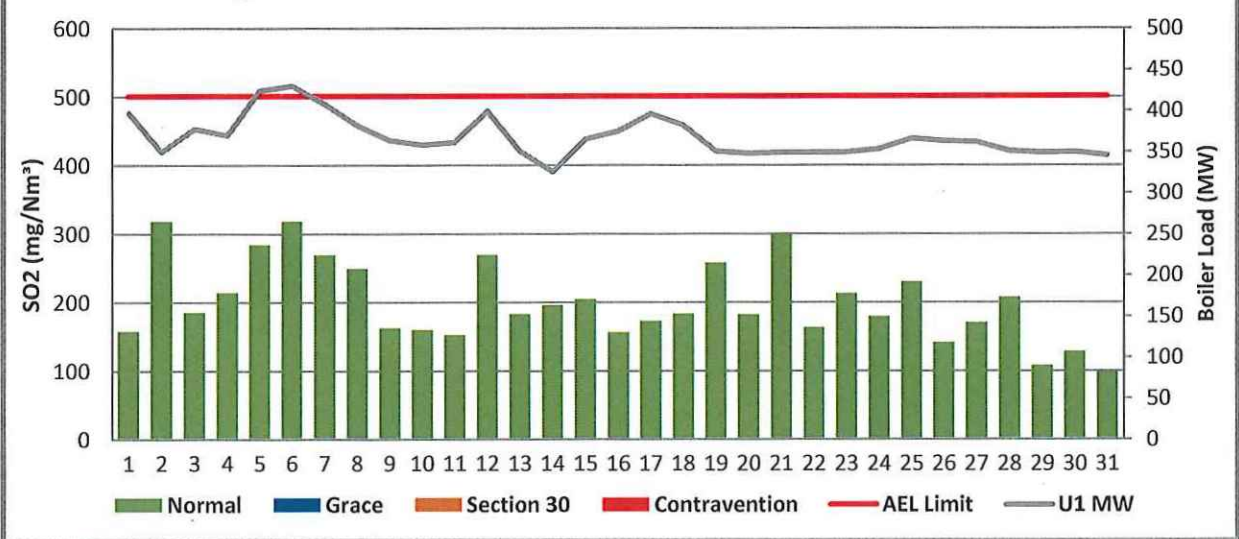


Figure 8: Kusile Unit 2 SOx Emissions - March 2021

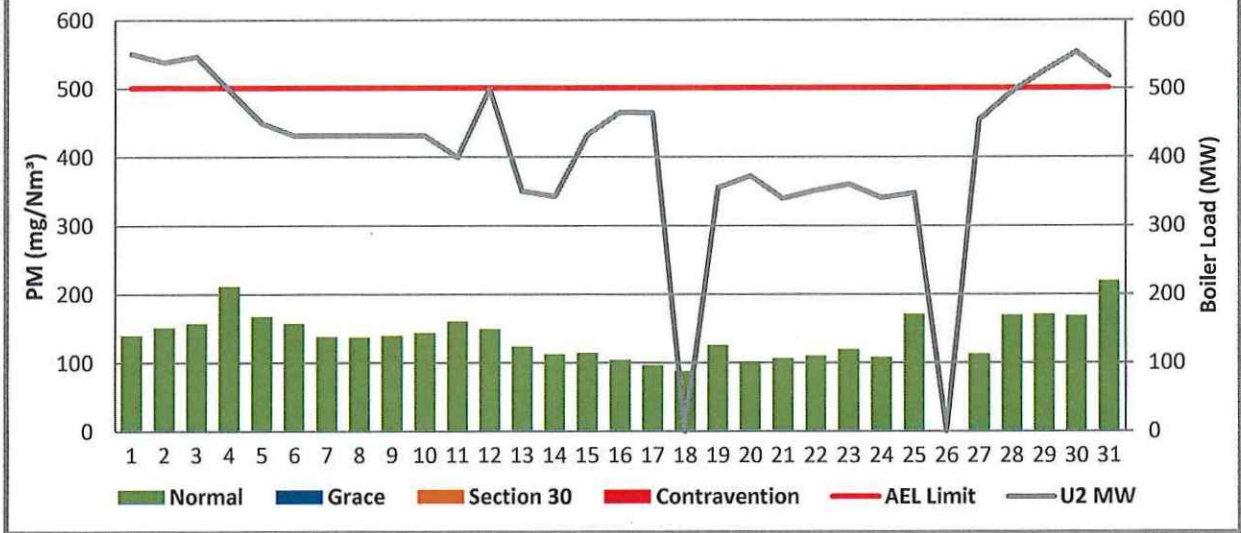
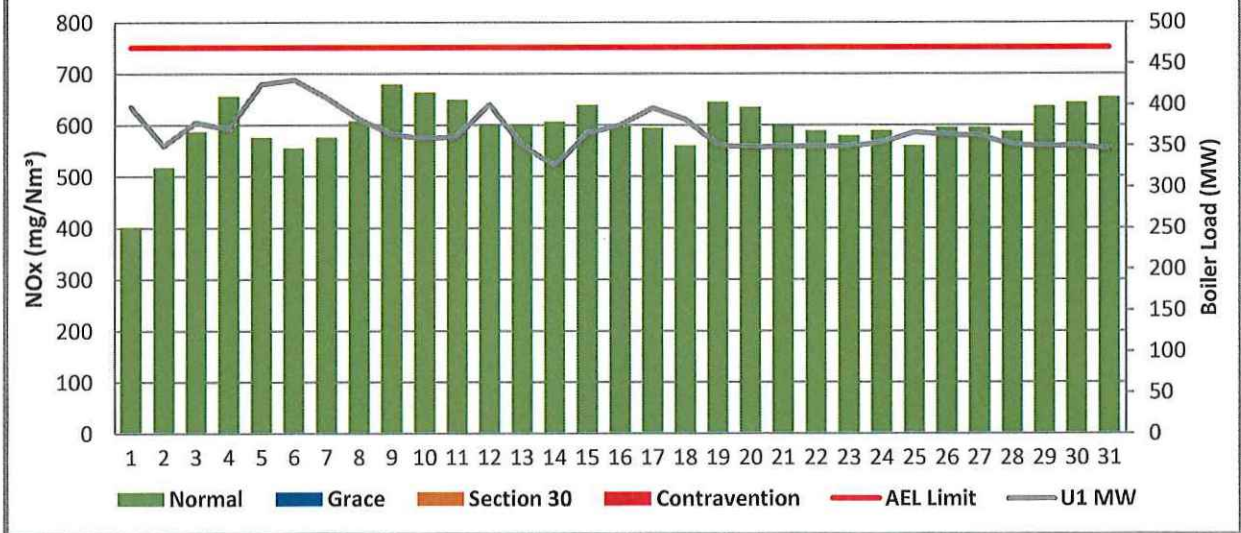
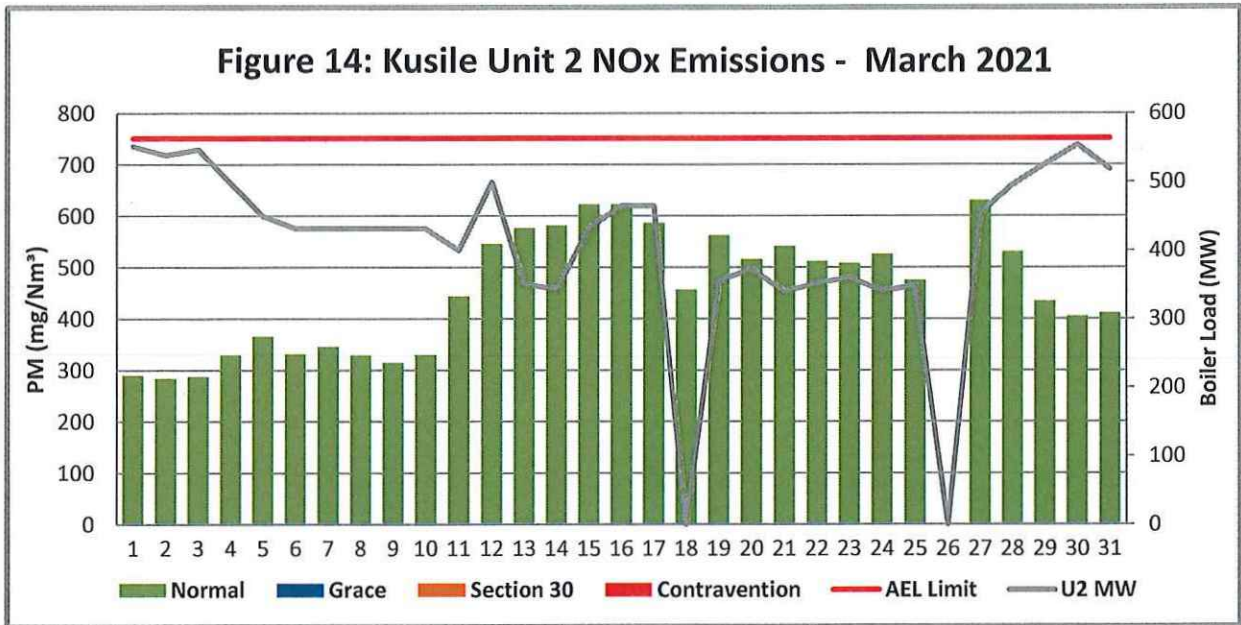


Figure 13: Kusile Unit 1 NOx Emissions - March 2021





7 SHUT DOWN AND LIGHT UP INFORMATION

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

Unit No. 1	Event 1		Event 2		Event 3		Event 4	
Breaker Open (BO)	4:30 AM	2021/03/02	7:20 PM	2021/03/14				
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD	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		DD:HH:MM		DD:HH:MM
Fires in time	10:20 AM	2021/03/02	10:10 PM	2021/03/14				
Synch. to Grid (or BC)	3:30 PM	2021/03/02	3:45 AM	2021/03/15				
Fires in to BC (duration)	00:05:10	DD:HH:MM	00:05:35	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)	11:50 AM	2021/03/11	7:55 PM	2021/03/13	11:00 PM	2021/03/17	9:45 PM	2021/03/24
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	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	n/a	DD:HH:MM	n/a	DD:HH:MM
Fires in time	n/a	DD:HH:MM	2:20 PM	2021/03/14	6:05 AM	2021/03/18	11:50 PM	2021/03/26
Synch. to Grid (or BC)	n/a	DD:HH:MM	5:25 PM	2021/03/14	4:55 AM	2021/03/19	6:15 AM	2021/03/27
Fires in to BC (duration)	n/a	DD:HH:MM	00:03:05	DD:HH:MM	00:22:50	DD:HH:MM	00:06:25	DD:HH:MM
Emissions below limit from BC (end date)	n/a	DD:HH:MM	not > limit	not > limit	not > limit	not > limit	not > limit	not > limit
Emissions below limit from BC (duration)	n/a	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 month of March 2021.