



Ms Mpho Nembilwi
Nkangala District Municipality
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Date:
September 2021

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

Dear Ms Nembilwi

KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR AUGUST 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 August 2021.

Hoping the above will meet your satisfaction.

Yours sincerely

Bongumusa A. Mashazi
GENERAL MANAGER
DATE: 2021/09/28

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-2021
	Coal	Tons	1 818 083	406 664
	Fuel Oil	Tons	5 533	1857,879
	Limestone	Tons	72 917	12494

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Aug-2021
	Energy	GWh	3321,216	499,75
	Ash	Tons	663 583	118 257,9
	Gypsum	Tons	129 250	6 996,6
	RE PM	kg/MWh	not specified	0,048
	RE SOx	kg/MWh	not specified	1,399

3 Energy source characteristics

Fuel Characteristic	Units	Stipulated Range	Monthly Average Content
Coal CV	MJ/kg	not specified	21,350
Coal Sulphur	%	1,3	0,890
Ash in Coal	%	38	29,080

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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 Aug-2021	Technology Type	Efficiency Aug-2021
Unit 1	<i>Unit on outage</i>			
Unit 2	FFP	99,988%	FGD	89,911%
Unit 3	FFP	99,972%	FGD	88,918%
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

6. Monitoring reliability (%)

Associated Unit/Stack	PM	SO ₂	NO	CO ₂	O ₂
Unit 1	<i>Unit on outage</i>				
Unit 2	100,0	99,2	100,0	94,0	100,0
Unit 3	57,9	98,4	99,5	99,2	99,5
Unit 4					
Unit 5					
Unit 6					

7. Emissions Performance

Table 7 1 Monthly tonnages for the month of August-2021

Associated Unit/Stack	PM	SO ₂	NO _x	CO ₂
Unit 1	<i>Unit on outage</i>			
Unit 2	4,4	232	355	118 139
Unit 3	19,5	468	1 013	410 011
Unit 4	0,0	0	0	0
Unit 5	0,0	0	0	0
Unit 6	0,0	0	0	0
SUM	23,9	699	1 369	528 150

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Table 7.2: Operating days in compliance to PM AEL Limit - August 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
Unit 1	<i>Unit on outage</i>					
Unit 2	11	0	0	0	0	7,3
Unit 3	29	0	0	0	0	9,1
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
SUM	40	0	0	0	0	


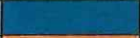


Table 7.3: Operating days in compliance to SO₂ AEL Limit - August 2021

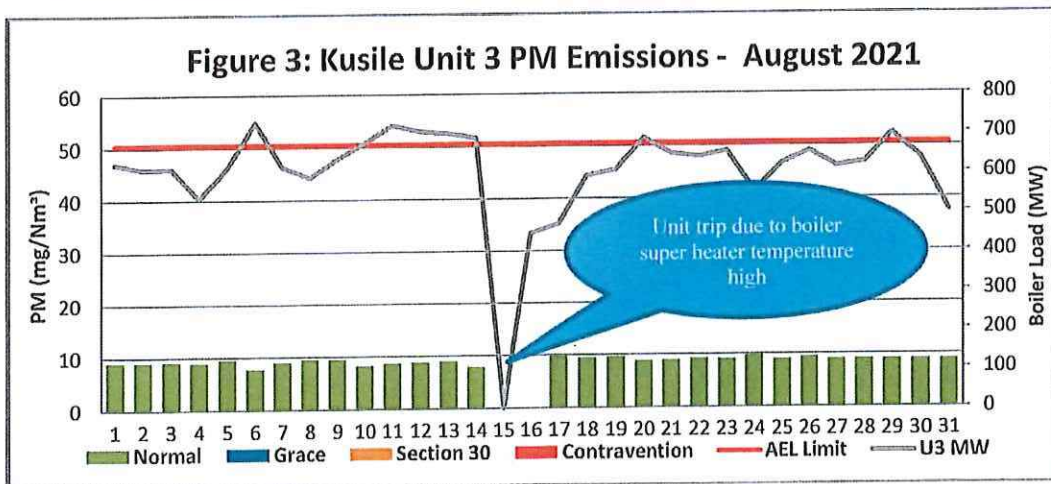
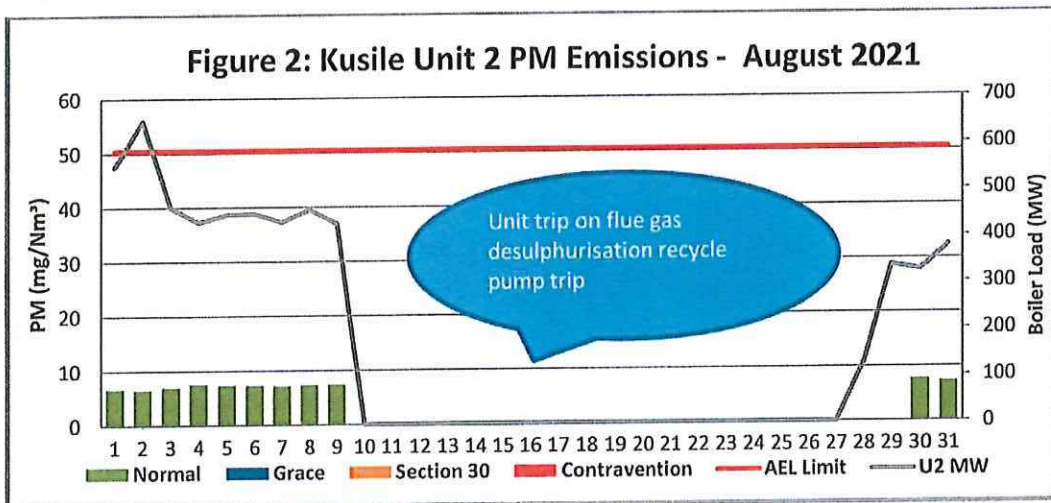
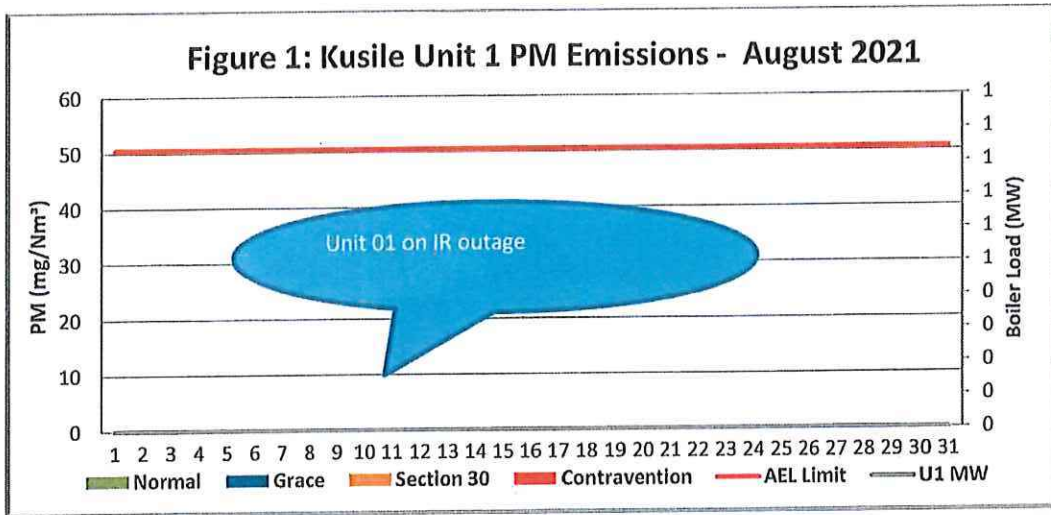
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm ³)
Unit 1	<i>Unit on outage</i>					
Unit 2	13	0	0	0	0	283,6
Unit 3	29	1	0	0	1	220,4
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
SUM	42	1	0	0	1	

Table 7.4: Operating days in compliance to NO_x AEL Limit - August 2021

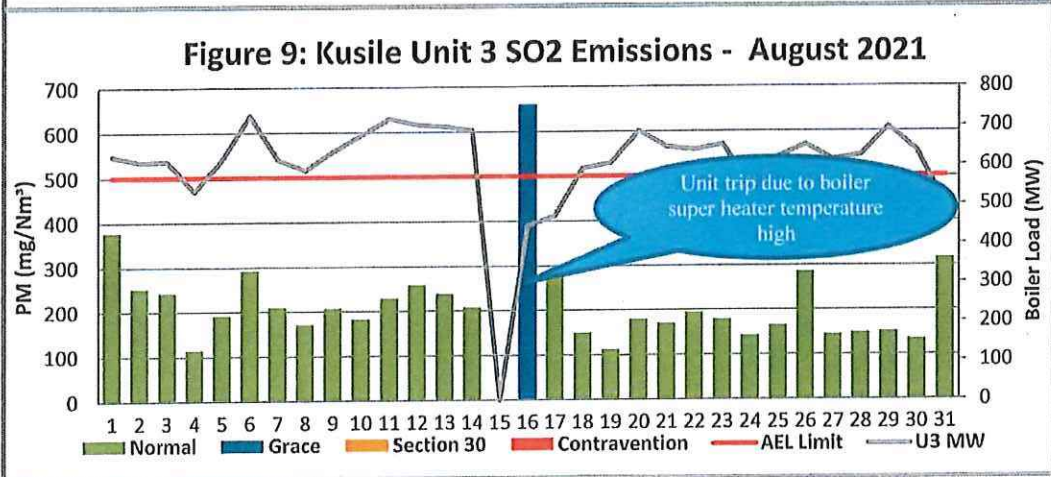
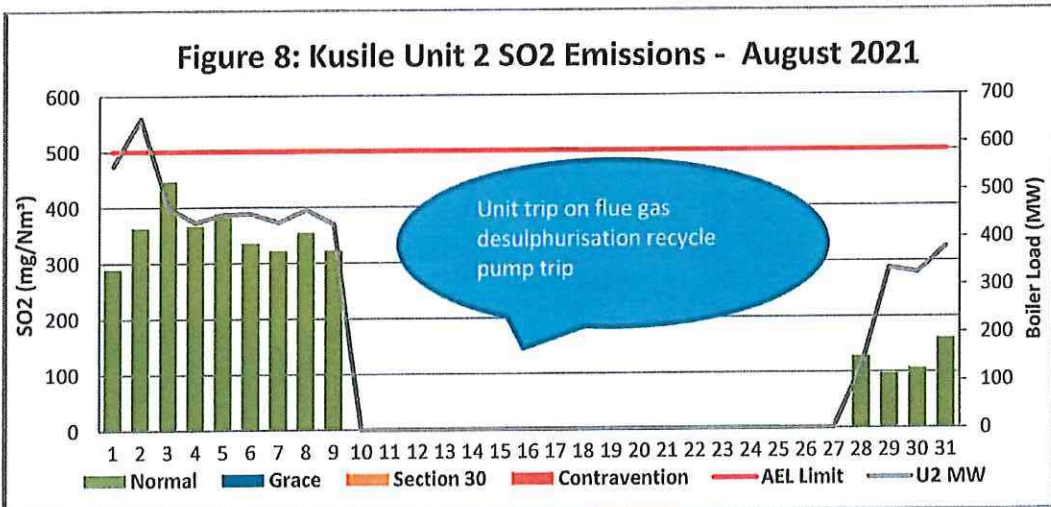
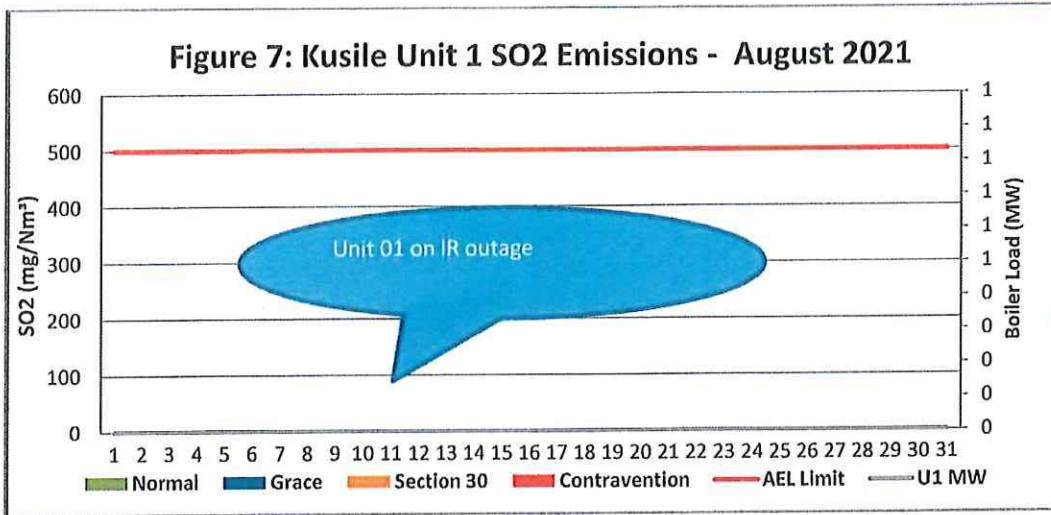
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm ³)
Unit 1	0	0	0	0	0	
Unit 2	13	0	0	0	0	476,5
Unit 3	30	0	0	0	0	459,1
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
SUM	43	0	0	0	0	

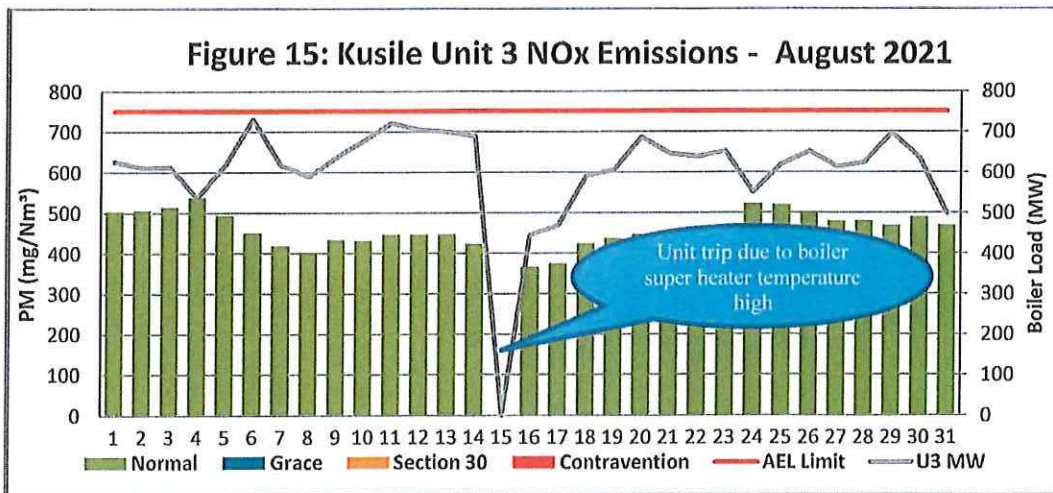
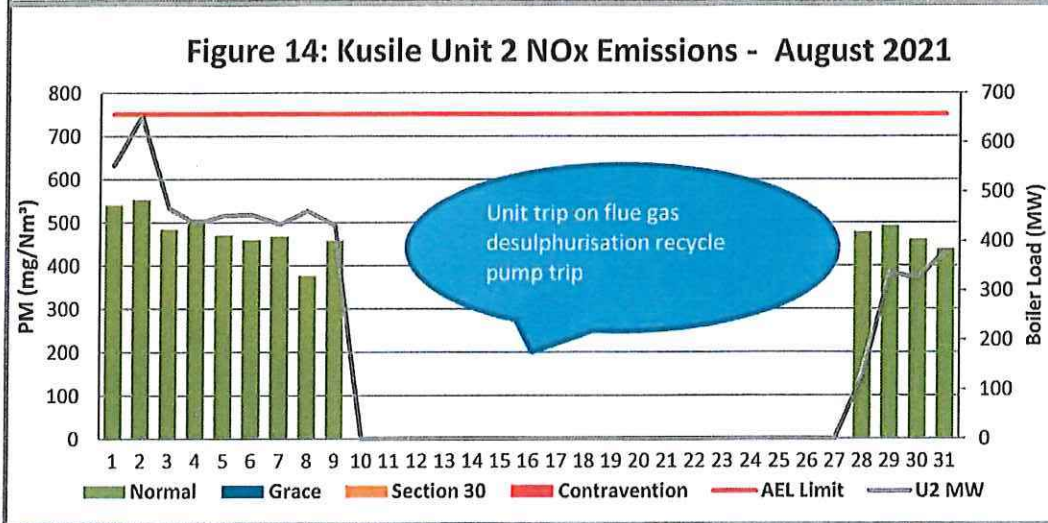
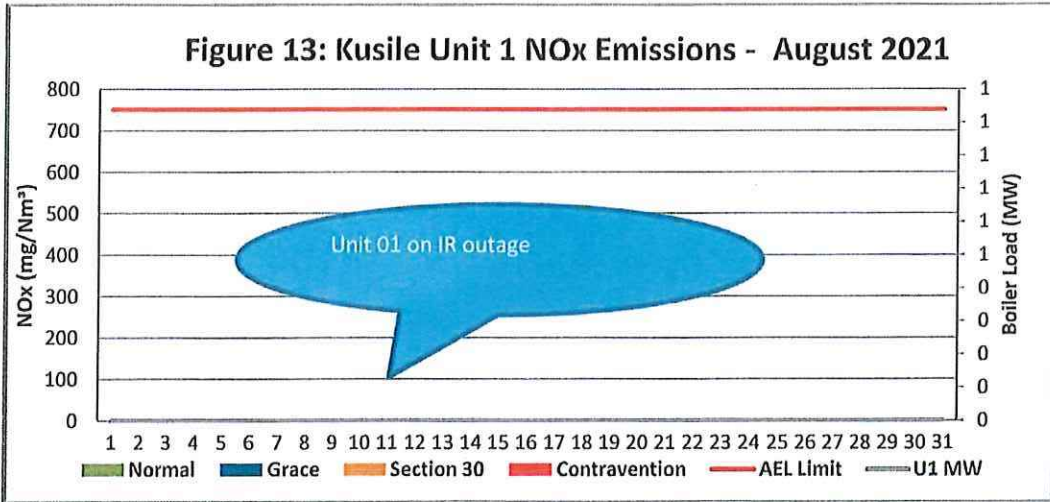
Table 7.5: Legend Description

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



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8. Shut down and Light up information

Table 8. PM Start-up information for the month of Aug-2021

Unit No. 2	Event 1		Event 2	
Breaker Open (BO)	1 50 pm	2021/08/07	11 20 am	2021/08/09
Draught Group (DG) Shut Down (SD)	2 15 pm	2021/08/07	6 15 pm	2021/08/10
BO to DG SD (duration)	00 00 25	DD HH MM	01 06 55	DD HH MM
Fires in time	2 30 pm	2021/08/07	12 35 pm	2021/08/09
Synch. to Grid (or BC)	9 00 pm	2021/08/07	12 15 pm	2021/08/29
Fires in to BC (duration)	00 06 30	DD HH MM	19 23 40	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

Unit No. 3	Event 1	
Breaker Open (BO)	8 55 pm	2021/08/14
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD
BO to DG SD (duration)	n/a	DD HH MM
Fires in time		
Synch. to Grid (or BC)		
Fires in to BC (duration)		DD HH MM
Emissions below limit from BC (end date)		
Emissions below limit from BC (duration)		DD HH MM

9. Complaints

No complaints received during the month of Aug - 2021