



Ms Mpho Nembilwi
Nkangala District Municipality
PO Box 437
Middleburg
1050

Date:

April 2022

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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 MARCH 2022

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 2022.

Hoping the above will meet your satisfaction.

Yours sincerely

Bongumusa A. Mashazi
GENERAL MANAGER
DATE: 2022/04/25

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 Mar-2022
	Coal	Tons	1 818 083	278 241
	Fuel Oil	Tons	5 533	1019,04
	Limestone	Tons	72 917	16605

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Mar-2022
	Energy	GWh	3321,216	410,13
	Ash	Tons	663 583	83 110,6
	Gypsum	Tons	129 250	9 290,8
	RE PM	kg/MWh	not specified	0,077
	RE SOx	kg/MWh	not specified	1,617

3 Energy source characteristics

Fuel Characteristic	Units	Stipulated Range	Monthly Average Content
Coal CV	MJ/kg	not specified	20,400
Coal Sulphur	%	1,3	1,210
Ash in Coal	%	38	29,870

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 Mar-2022	Technology Type	Efficiency Mar-2022
Unit 1	FFP	99,978%	FGD	83,410%
Unit 2	FFP	99,957%	FGD	93,091%
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.

6. Monitoring reliability (%)

Associated Unit/Stack	PM	SO ₂	NO	CO ₂	O ₂
Unit 1	0,0	100,0	100,0	0,0	100,0
Unit 2	56,6	89,8	89,1	95,7	89,0
Unit 3					
Unit 4					
Unit 5					
Unit 6					

7. Emissions Performance

Table 7.1: Monthly tonnages for the month of March-2022

Associated Unit/Stack	PM	SO _x	NO _x	CO ₂
Unit 1	0,7	60	54	75
Unit 2	31,0	603	1 147	489 444
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	31,7	663	1 201	489 519

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Table 7.2: Operating days in compliance to PM AEL Limit - March 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
Unit 1	3	0	0	0	0	12,1
Unit 2	31	0	0	0	0	11,8
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	
SUM	34	0	0	0	0	



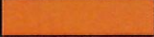

Table 7.3: Operating days in compliance to SOx AEL Limit - March 2022

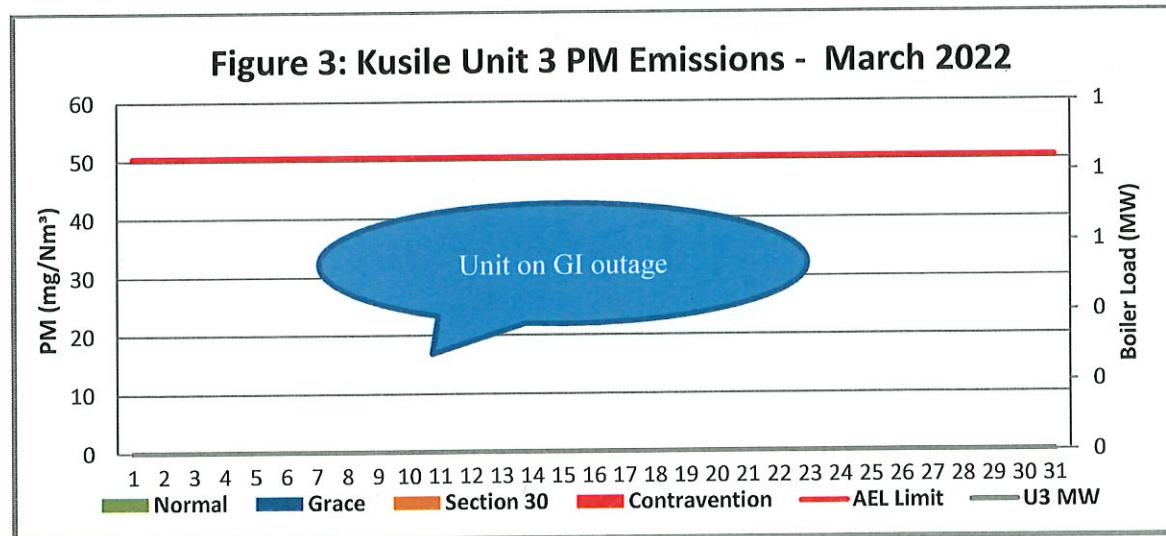
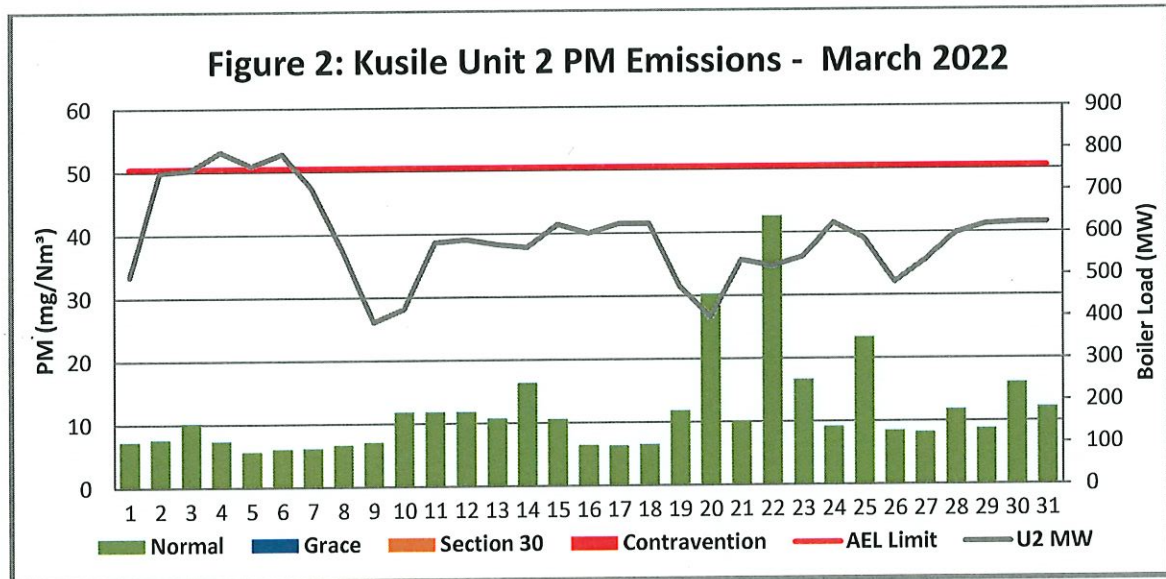
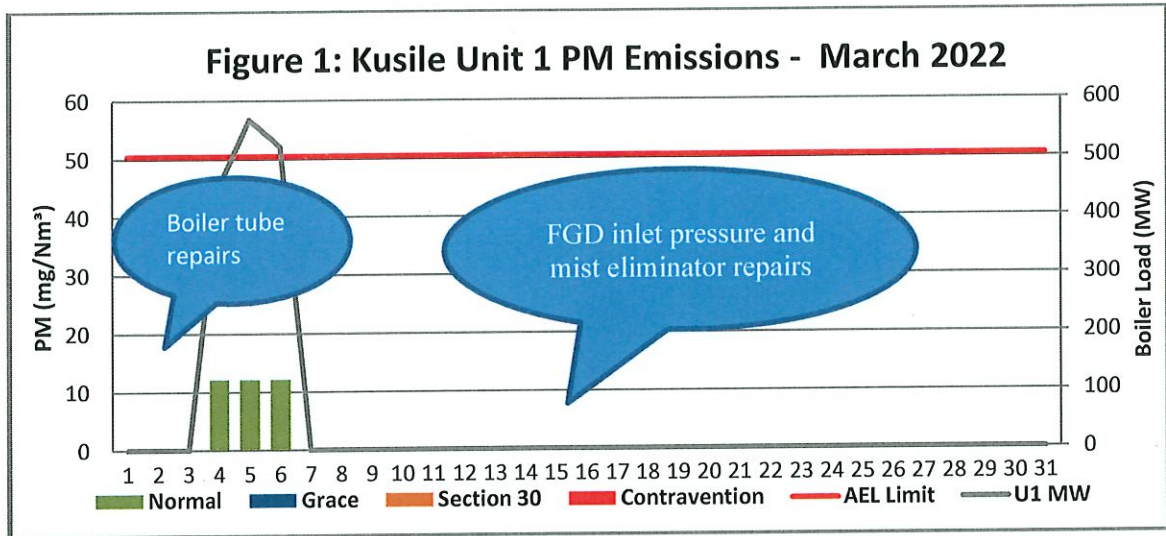
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm ³)
Unit 1	3	0	0	0	0	362,4
Unit 2	31	0	0	0	0	223,2
Unit 3	0	0	0	0	0	
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
SUM	34	0	0	0	0	

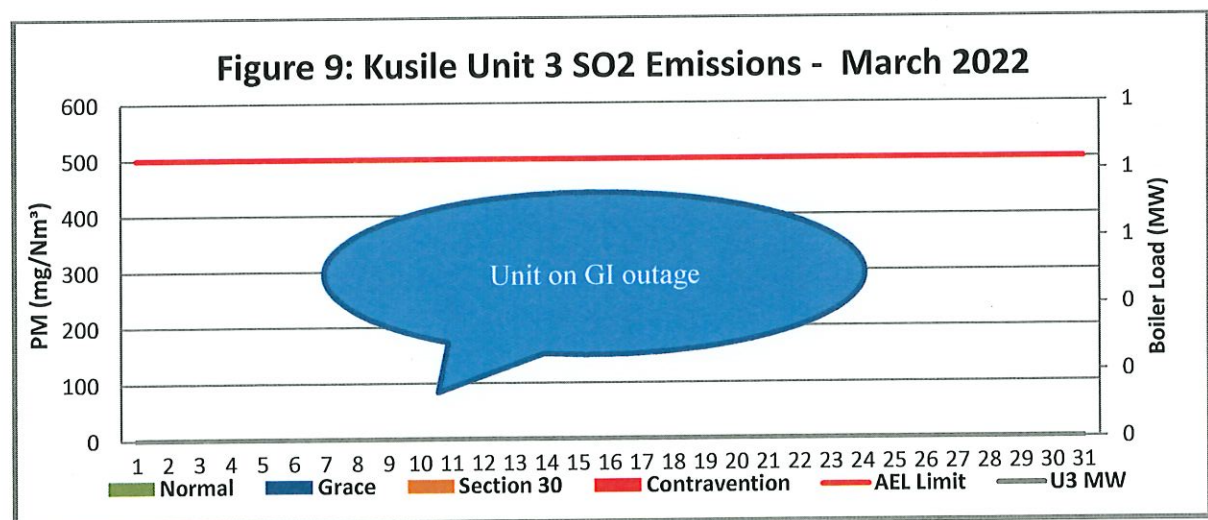
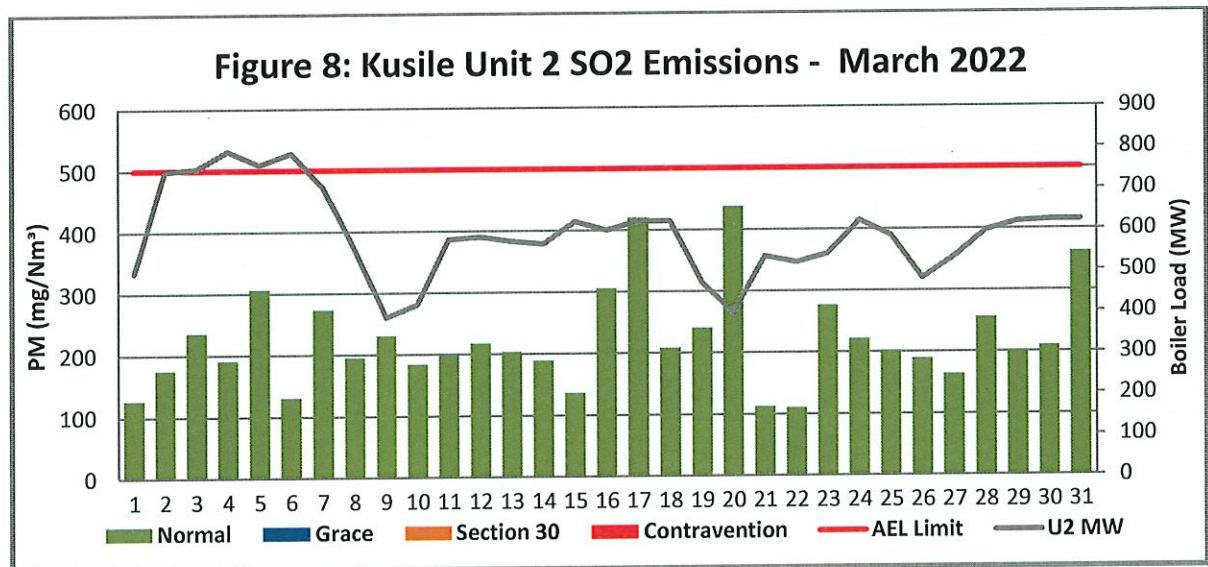
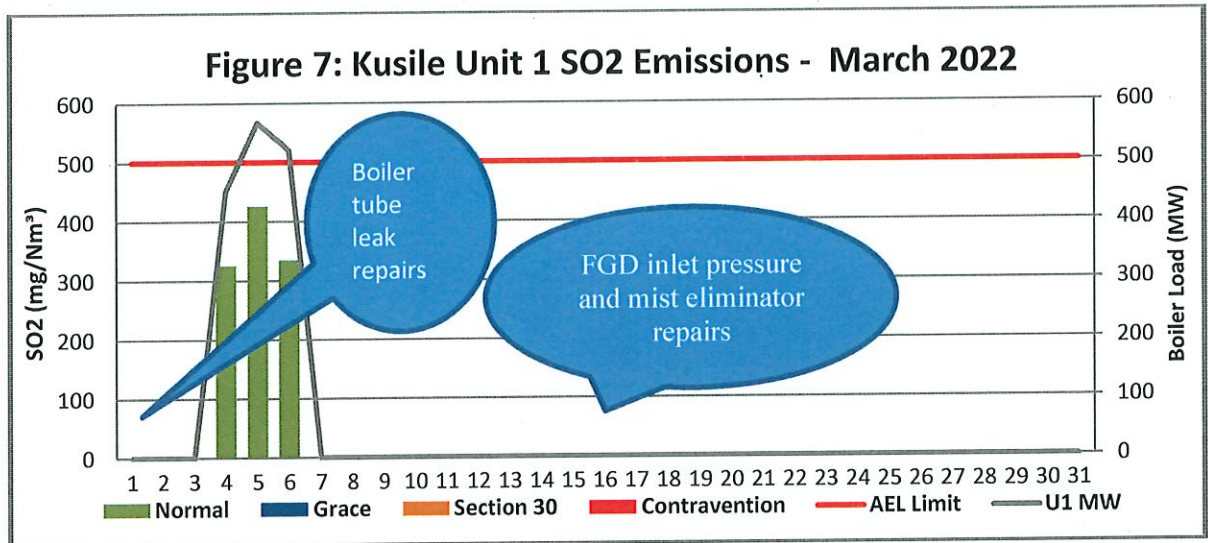
Table 6.4: Operating days in compliance to NOx AEL Limit - March 2022

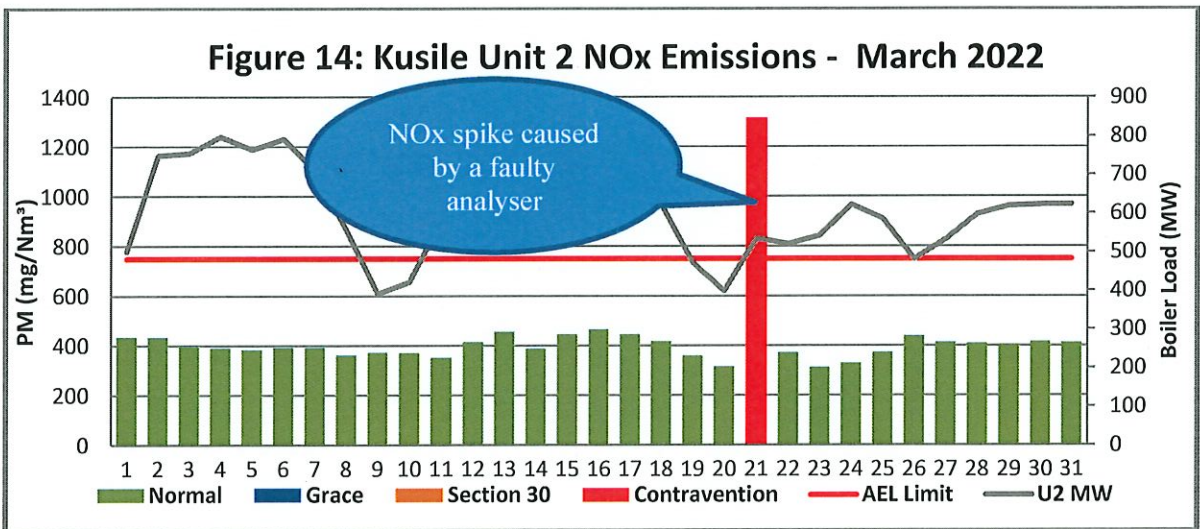
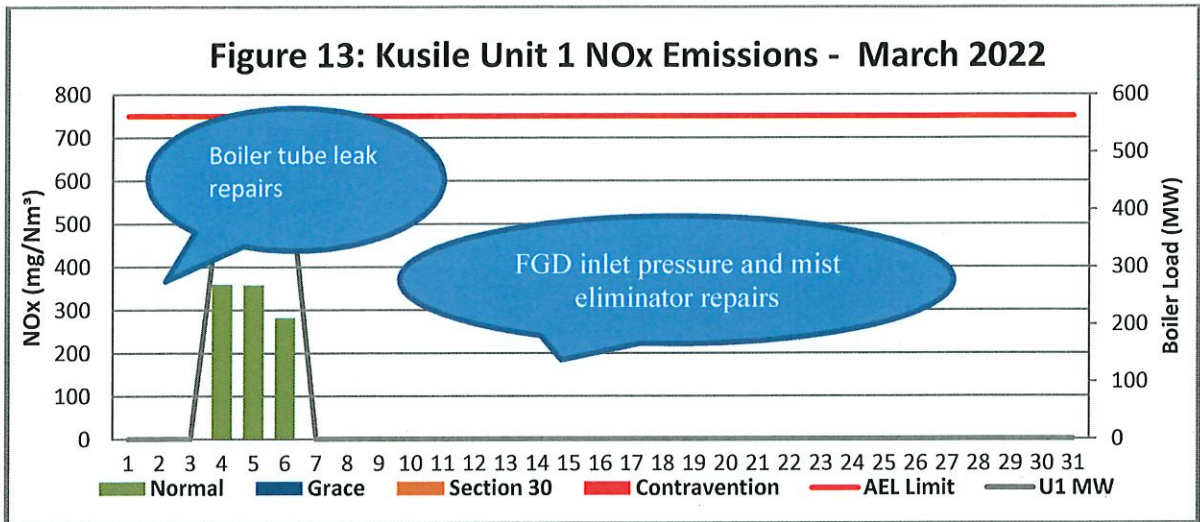
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm ³)
Unit 1	3	0	0	0	0	333,4
Unit 2	30	0	0	1	1	425,6
Unit 3	0	0	0	0	0	
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
SUM	33	0	0	1	1	

Table 7.5: Legend Description

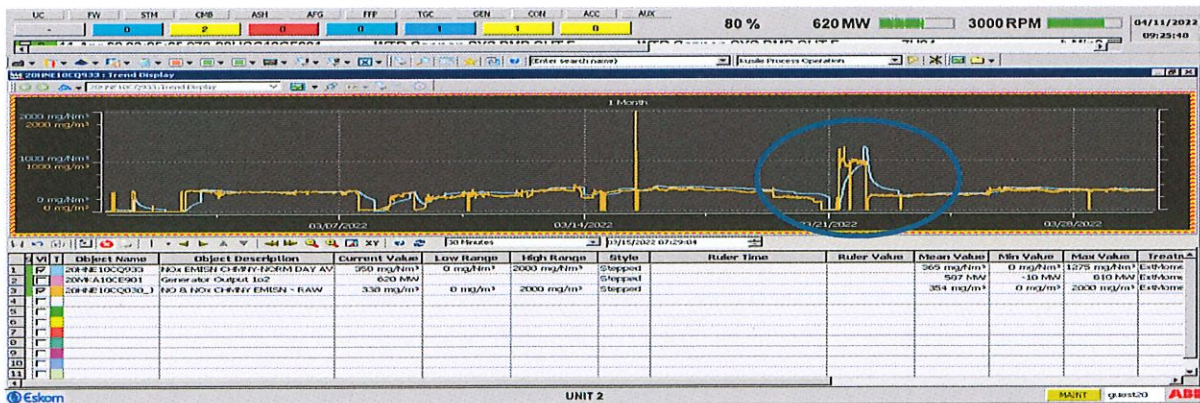
Condition	Colour	Description
Normal		Emissions below Emission Limit Value (ELV)
Grace		Emissions above the ELV during grace period
Section 30		Emissions above ELV during a NEMA S30 incident
Contravention		Emissions above ELV but outside grace or S30 incident conditions





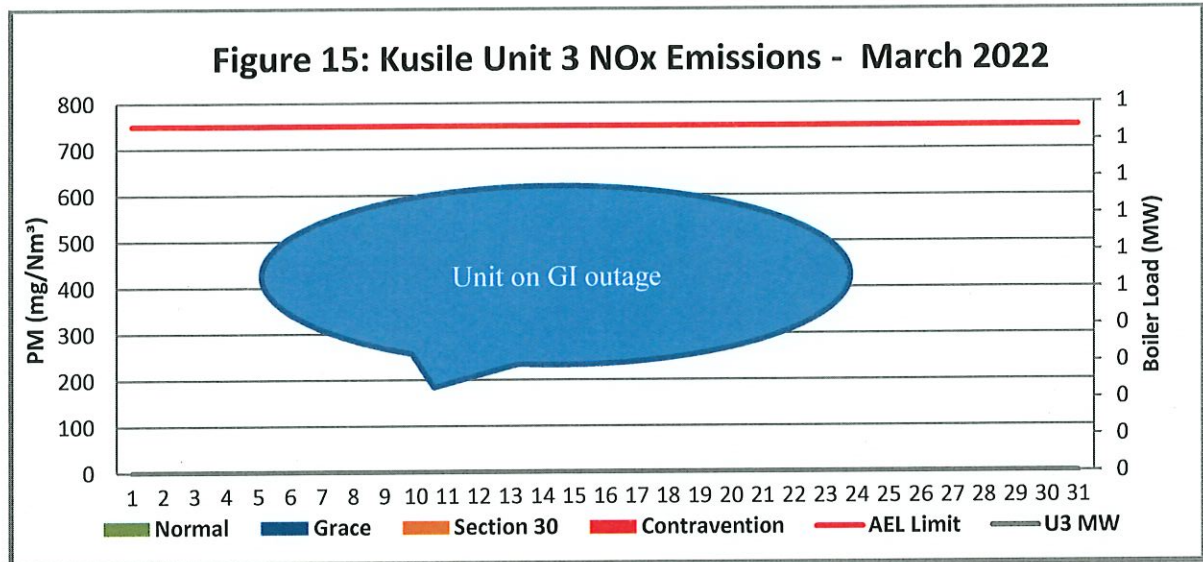


Please take note that the NOx exceedance recorded on the 21 March 2022 was as results of a faulty instruments. Upon investigation is was discovered that the analyser is not reading correctly and C&I Maintenance attended to the fault. Below is the trends showing the behaviour of the monitor on the day.



The following action we taken to address:

Repair the faulty analyser	C&I Maintenance	Completed
Calibrate the NOx monitor	C&I Maintenance	Completed



8. Shut down and Light up information

Unit No. 1	Event 1		Event 2	
Breaker Open (BO)	BO previously	BO previously	1:25 am	2022/03/06
Draught Group (DG) Shut Down (SD)	n/a	n/a	5:55 pm	2022/03/06
BO to DG SD (duration)	n/a	DD:HH:MM	00:16:30	DD:HH:MM
Fires in time	10:14 pm	2022/03/03		
Synch. to Grid (or BC)	12:15 pm	2022/03/04		
Fires in to BC (duration)	00:14:00	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

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Unit No. 2	Event 1	
Breaker Open (BO)	3:00 am	2022/03/07
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	5:57 am	2022/03/09
Synch. to Grid (or BC)	12:59 pm	2022/03/09
Fires in to BC (duration)	00:07:02	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

9. Complaints

No complaints received during the month of March - 2022