



Ms Mpho Nembilwi
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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 FEBRUARY 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 February 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 Feb-2022
	Coal	Tons	1 818 083	309 863
	Fuel Oil	Tons	5 533	3784,3
	Limestone	Tons	72 917	10954

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Feb-2022
	Energy	GWh	2999,808	430,20
	Ash	Tons	663 583	94 167,5
	Gypsum	Tons	129 250	6 134,2
	RE PM	kg/MWh	not specified	0,049
	RE SOx	kg/MWh	not specified	1,330

3 Energy source characteristics

Fuel Characteristic	Units	Stipulated Range	Monthly Average Content
Coal CV	MJ/kg	not specified	20,570
Coal Sulphur	%	1,3	1,290
Ash in Coal	%	38	30,390

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 Feb-2022	Technology Type	Efficiency Feb-2022
Unit 1	FFP	99,996%	FGD	98,054%
Unit 2	FFP	99,971%	FGD	89,831%
Unit 3	FFP	99,978%	FGD	95,135%
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	100,0	16,7	0,0	100,0	0,0
Unit 2	54,2	92,8	85,1	98,5	68,2
Unit 3	100,0	100,0	82,2	94,8	87,4
Unit 4					
Unit 5					
Unit 6					

7. Emissions Performance

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

Associated Unit/Stack	PM	SO _x	NO _x	CO ₂
Unit 1	0,4	15	112	70 106
Unit 2	15,9	470	633	374 944
Unit 3	4,6	87	131	90 650
Unit 4	0,0	0	0	0
Unit 5	0,0	0	0	0
Unit 6	0,0	0	0	0
SUM	20,9	572	876	535 699

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
Unit 1	4	0	0	0	0	2,9
Unit 2	22	0	0	0	0	10,0
Unit 3	11	0	0	0	0	16,5
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
SUM	37	0	0	0	0	



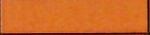

Table 7.3: Operating days in compliance to SO_x AEL Limit - February 2022

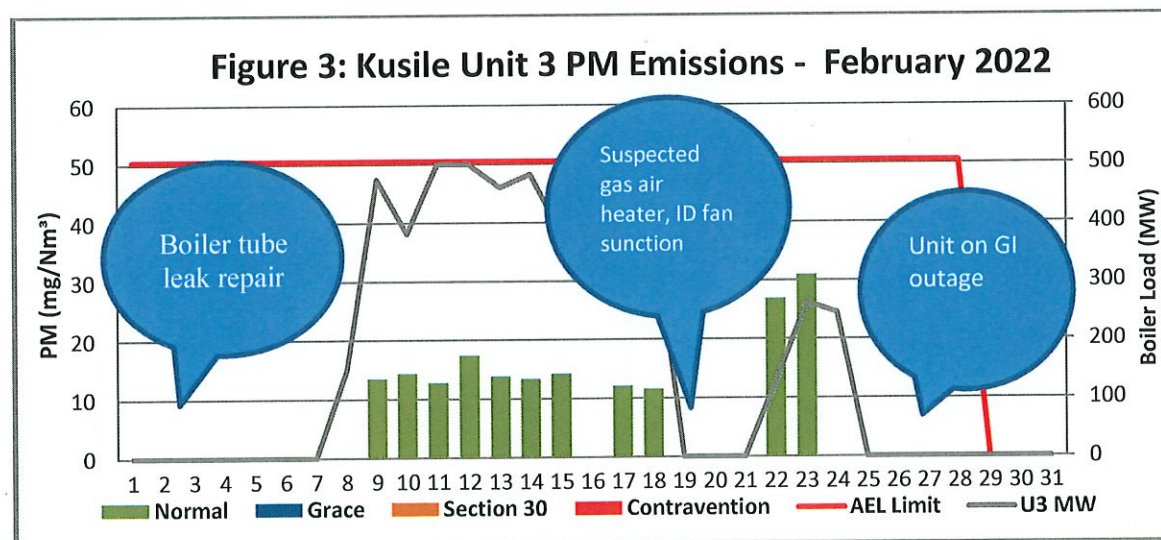
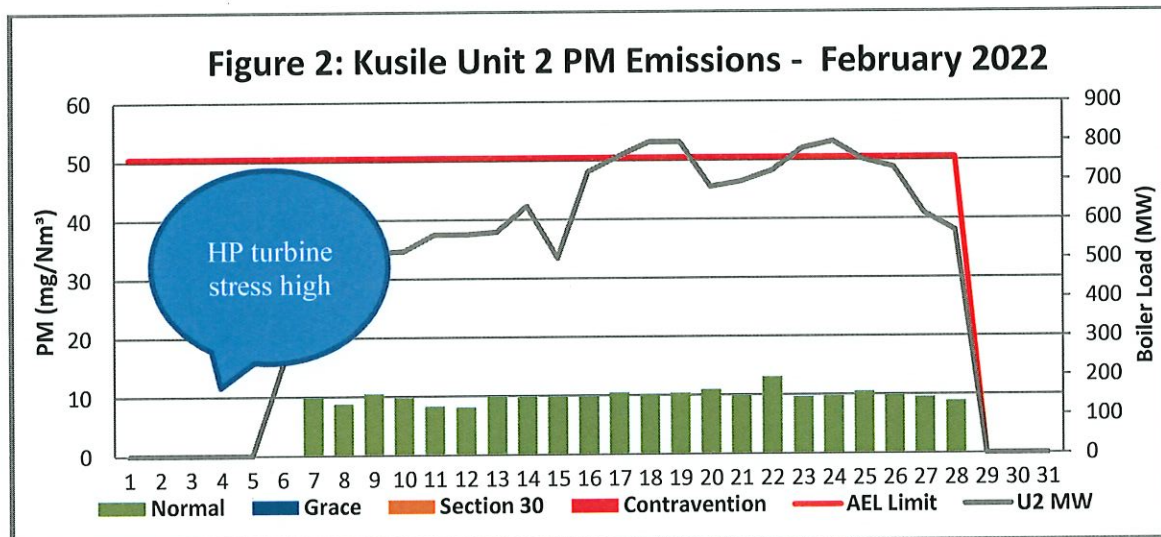
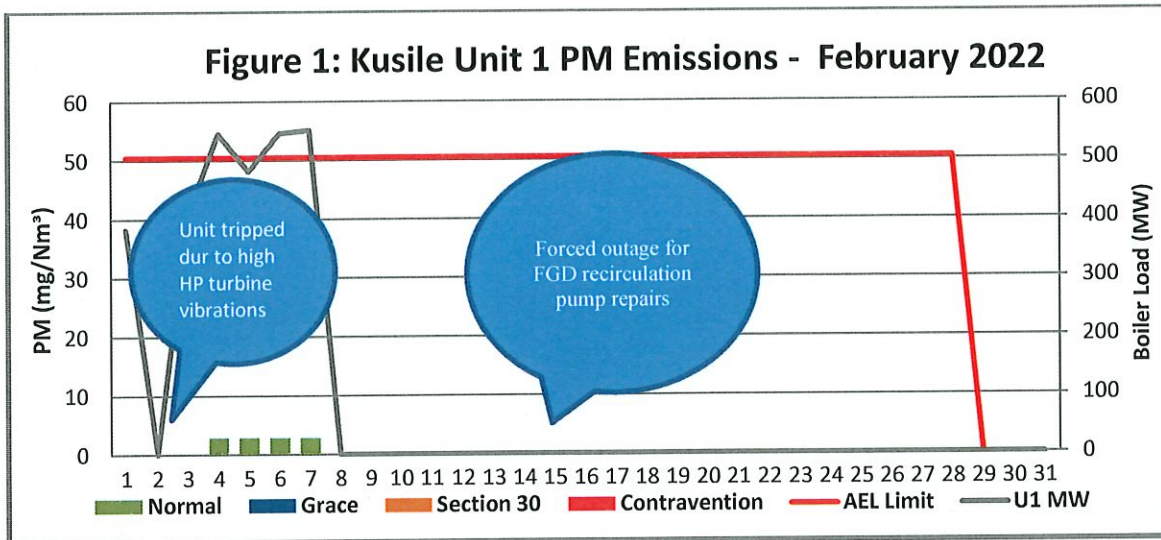
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO _x (mg/Nm ³)
Unit 1	6	0	0	0	0	55,9
Unit 2	22	1	0	0	1	265,3
Unit 3	14	0	0	0	0	185,7
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
SUM	42	1	0	0	1	

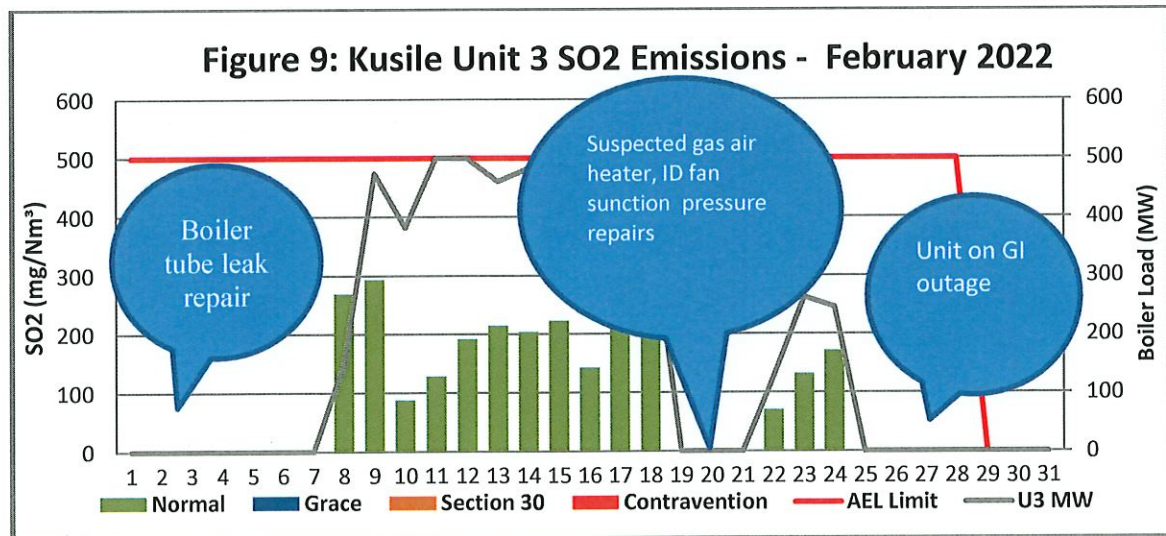
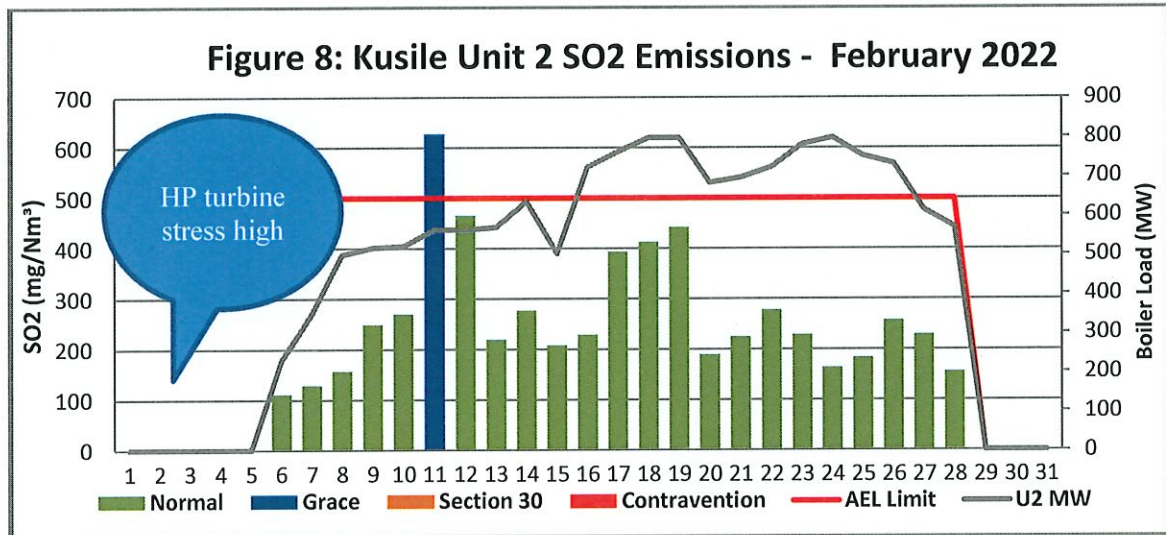
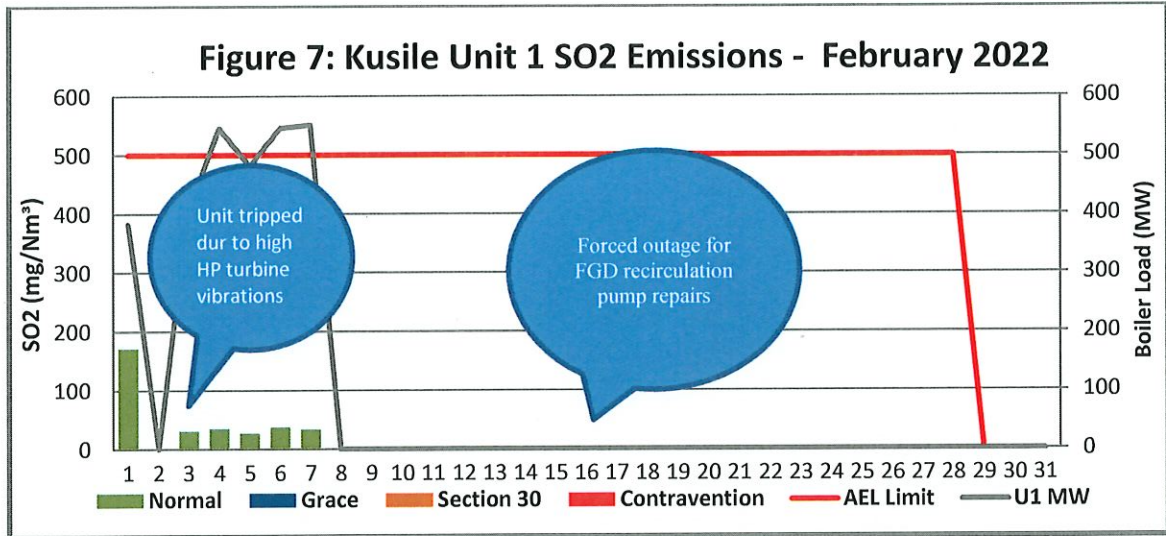
Table 7.4: Operating days in compliance to NO_x AEL Limit - February 2022

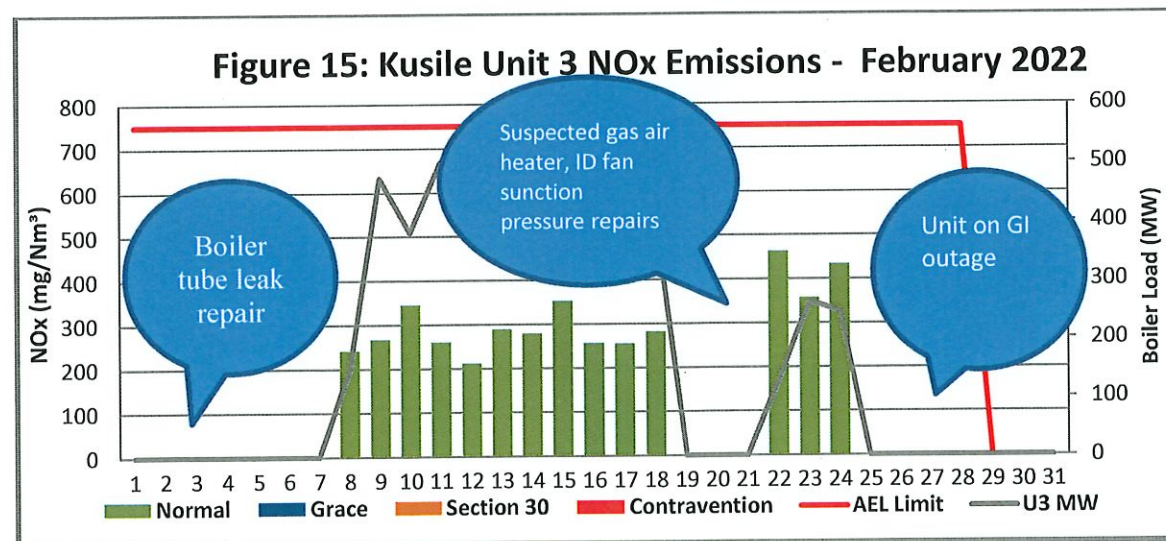
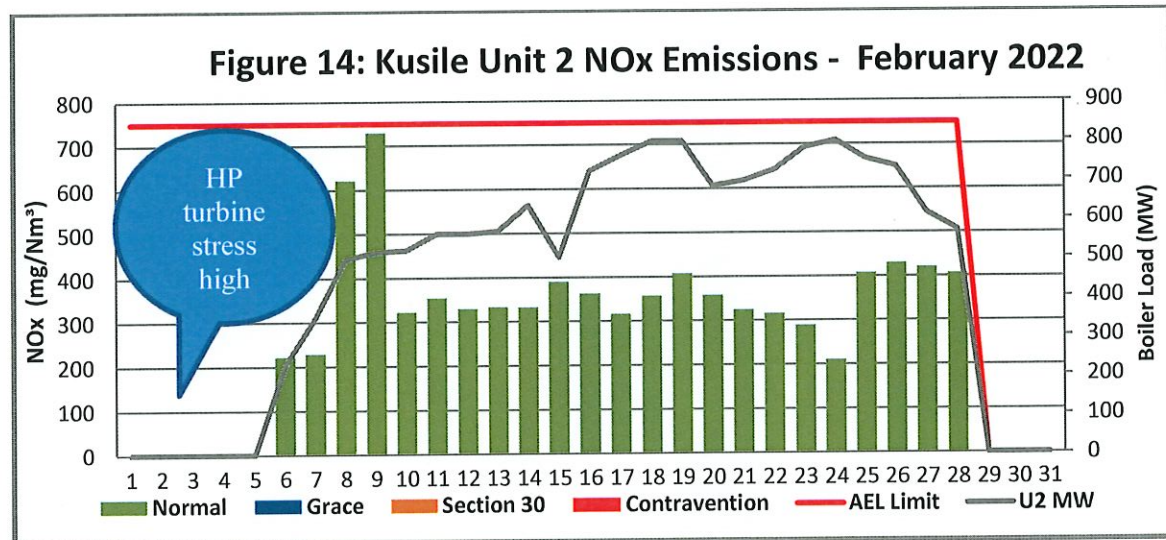
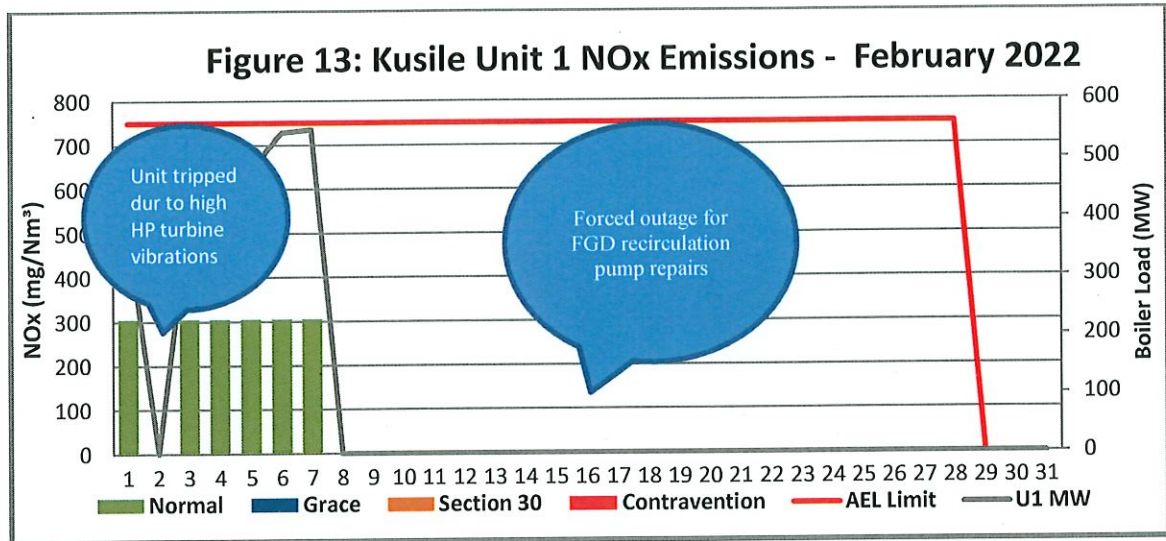
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm ³)
Unit 1	6	0	0	0	0	306,0
Unit 2	23	0	0	0	0	368,5
Unit 3	14	0	0	0	0	307,3
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
SUM	43	0	0	0	0	

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







8. Shut down and Light up information

Table 8. PM Start-up information for the month of Feb-2022

Unit No. 1	Event 1		Event 2		Event 3	
Breaker Open (BO)			6:45 pm	2022/02/04	7:25 am	2022/02/07
Draught Group (DG) Shut Down (SD)			DG did not trip or SD	DG did not trip or SD	7:30 am	2022/02/07
BO to DG SD (duration)		DD:HH:MM	n/a	DD:HH:MM	07:07:30	DD:HH:MM
Fires in time	4:00 am	2022/02/01	3:01 pm	2022/02/04		
Synch. to Grid (or BC)	6:45 pm	2022/02/03	2:55 pm	2022/02/05		
Fires in to BC (duration)	02:14:45	DD:HH:MM	00:23:54	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

Unit No. 2	Event 1		Event 2	
Breaker Open (BO)	BO previously	BO previously	2:30 am	2022/02/20
Draught Group (DG) Shut Down (SD)	n/a	n/a	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
Fires in time	5:36 pm	2022/02/05	3:27 am	2022/02/20
Synch. to Grid (or BC)	3:15 pm	2022/02/06	1:05 pm	2022/02/20
Fires in to BC (duration)	00:21:39	DD:HH:MM	00:09:38	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

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Unit No. 3	Event 1		Event 2		Event 3	
Breaker Open (BO)	BO previously	BO previously	6:10 pm	2022/02/15	11:55 am	2022/02/18
Draught Group (DG) Shut Down (SD)	n/a	n/a	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
Fires in time	2:30 am	2022/02/08	4:30 am	2022/02/16	1:55 am	2022/02/20
Synch. to Grid (or BC)	10:25 pm	2022/02/08	4:30 am	2022/02/16	1:55 am	2022/02/21
Fires in to BC (duration)	00:19:55	DD:HH:MM	00:00:00	DD:HH:MM	01:00:00	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)	n/a	DD:HH:MM	n/a	DD:HH:MM	n/a	DD:HH:MM

9. Complaints

No complaints received during the month of Feb - 2022