



**Ms Mpho Nembilwi**  
Nkangala District Municipality  
PO Box 437  
Middleburg  
1050

Date:

Sep 2022

Enquiries: Lesiba Kgobe  
Tel: +27 13 699 7817

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

Dear Ms. Nembilwi

**KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR AUG 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 Aug 2022.

Hoping the above will meet your satisfaction.

Yours sincerely

Bongumusa A. Mashazi  
**GENERAL MANAGER**  
**DATE: 2022/10/26**

**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-2022
	Coal	Tons	1 818 083	398 639
	Fuel Oil	Tons	5 533	2039,62
	Limestone	Tons	72 917	21258

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Aug-2022
	Energy	GWh	3321,216	592,51
	Ash	Tons	663 583	114 369,5
	Gypsum	Tons	129 250	11 904,5
	RE PM	kg/MWh	not specified	0,048
	RE SOx	kg/MWh	not specified	4,425

**3 Energy source characteristics**

Fuel Characteristic	Units	Stipulated Range	Monthly Average Content
Coal CV	MJ/kg	not specified	21,110
Coal Sulphur	%	1,3	1,170
Ash in Coal	%	38	28,690

#### 4 Emissions Limits (mg/Nm<sup>3</sup>)

Associated Unit/Stack	PM	SO <sub>2</sub>	NO <sub>x</sub>
North	50	500	750
South	50	500	750

#### 5 Abatement Technology (%)

Associated Unit/Stack	Technology Type	Efficiency Aug-2022	Technology Type	Efficiency Aug-2022
Unit 1	FFP	99,980%	FGD	56,939%
Unit 2	FFP	99,986%	FGD	81,112%
Unit 3	FFP	99,961%	FGD	81,293%

Note: Both the FFP and FGD does not have bypass mode operation, hence plant 100% Utilised.

#### 6. Monitoring reliability (%)

Associated Unit/Stack	PM	SO <sub>2</sub>	NO	O <sub>2</sub>
Unit 1	98,5	95,5	94,5	94,7
Unit 2	100,0	100,0	95,7	97,3
Unit 3	78,4	92,1	79,7	90,6

#### 7. Emissions Performance

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

Associated Unit/Stack	PM	SO <sub>2</sub>	NO <sub>x</sub>
Unit 1	7,75	1 342	677
Unit 2	2,6	579	160
Unit 3	17,9	701	332
<b>SUM</b>	<b>28,3</b>	<b>2 622</b>	<b>1 168</b>

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
Unit 1	25	0	0	0	0	4,0
Unit 2	8	0	0	0	0	7,5
Unit 3	30	0	0	0	0	15,4
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>63</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Table 7.3: Operating days in compliance to SO<sub>2</sub> AEL Limit - August 2022

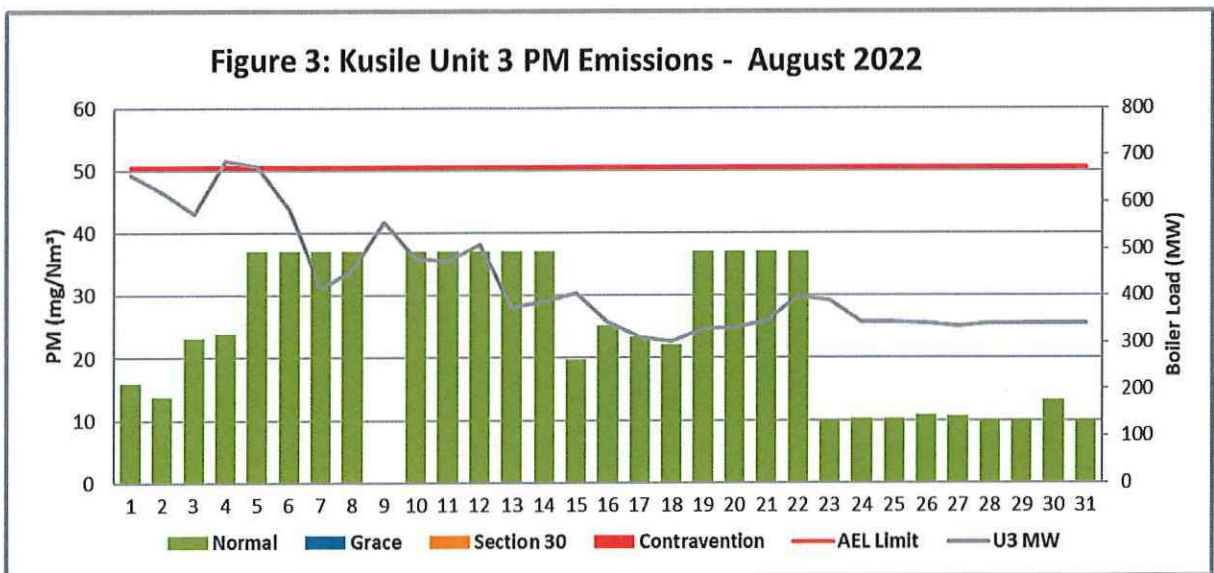
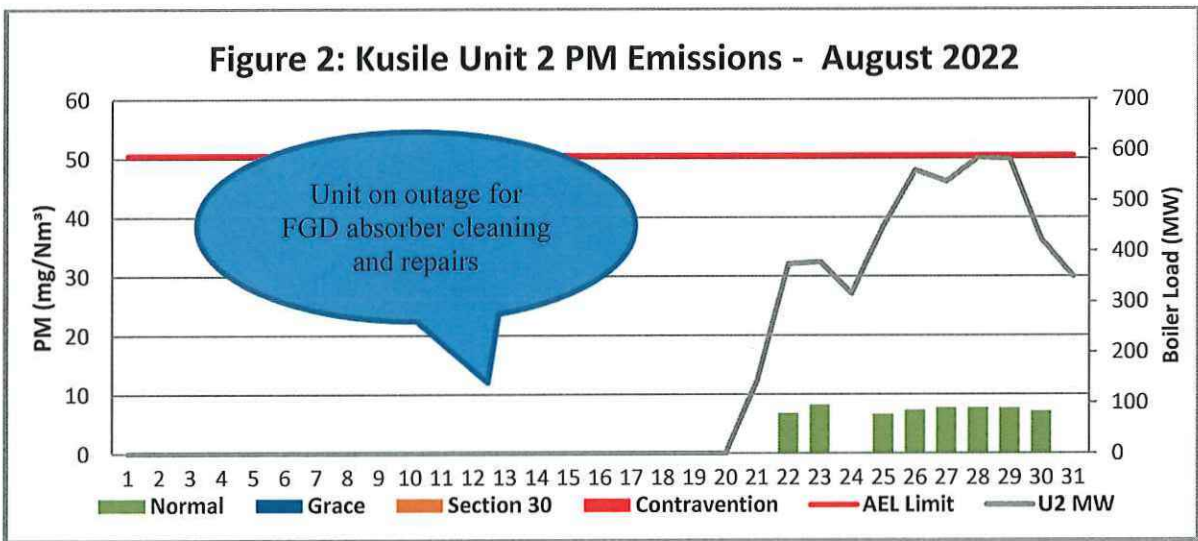
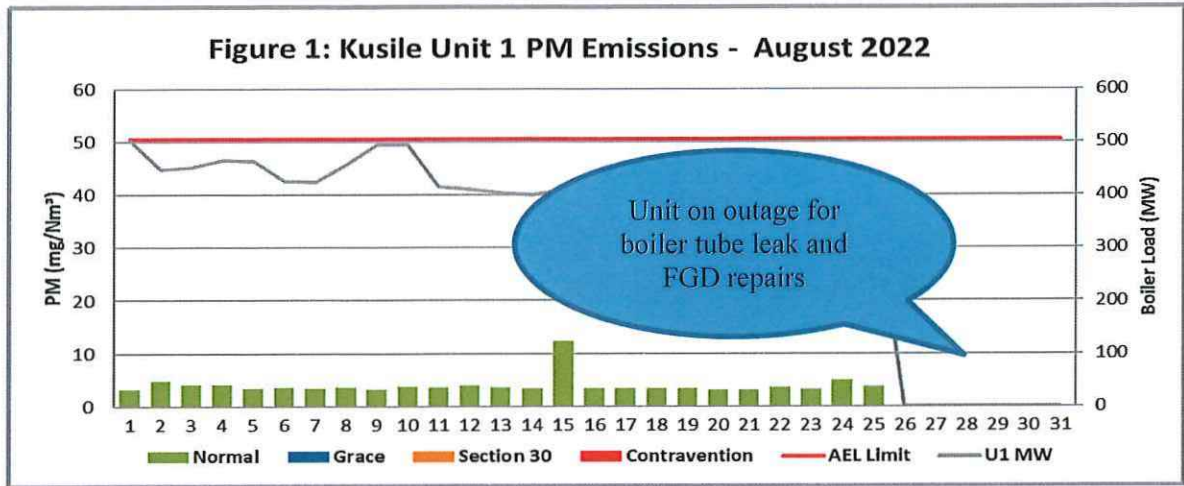
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO <sub>2</sub> (mg/Nm <sup>3</sup> )
Unit 1	10	15	0	0	15	663,4
Unit 2	3	3	5	0	8	956,8
Unit 3	19	9	3	0	12	619,2
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
<b>SUM</b>	<b>32</b>	<b>27</b>	<b>8</b>	<b>0</b>	<b>35</b>	

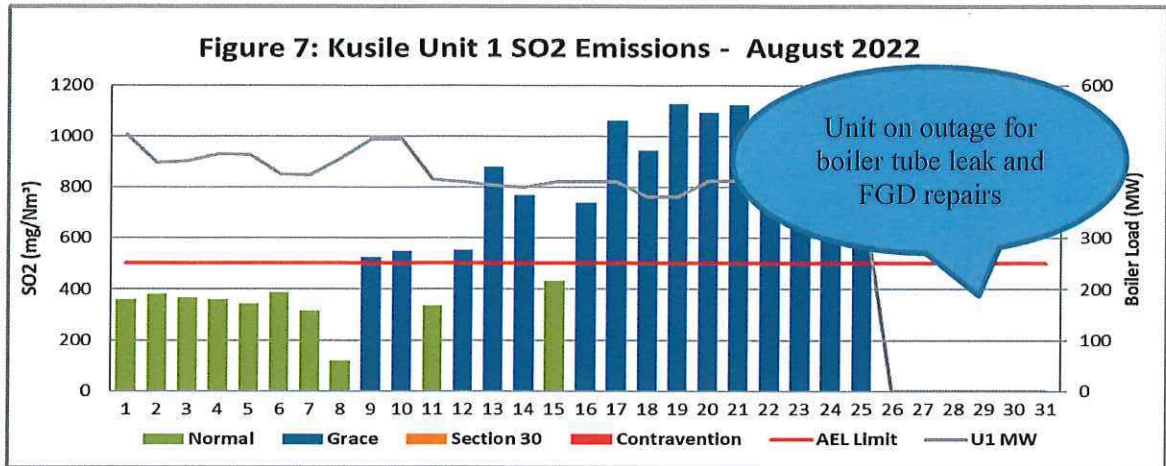
Table 7.4: Operating days in compliance to NO<sub>x</sub> AEL Limit - August 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO <sub>x</sub> (mg/Nm <sup>3</sup> )
Unit 1	25	0	0	0	0	333,0
Unit 2	11	0	0	0	0	289,5
Unit 3	31	0	0	0	0	262,6
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>67</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

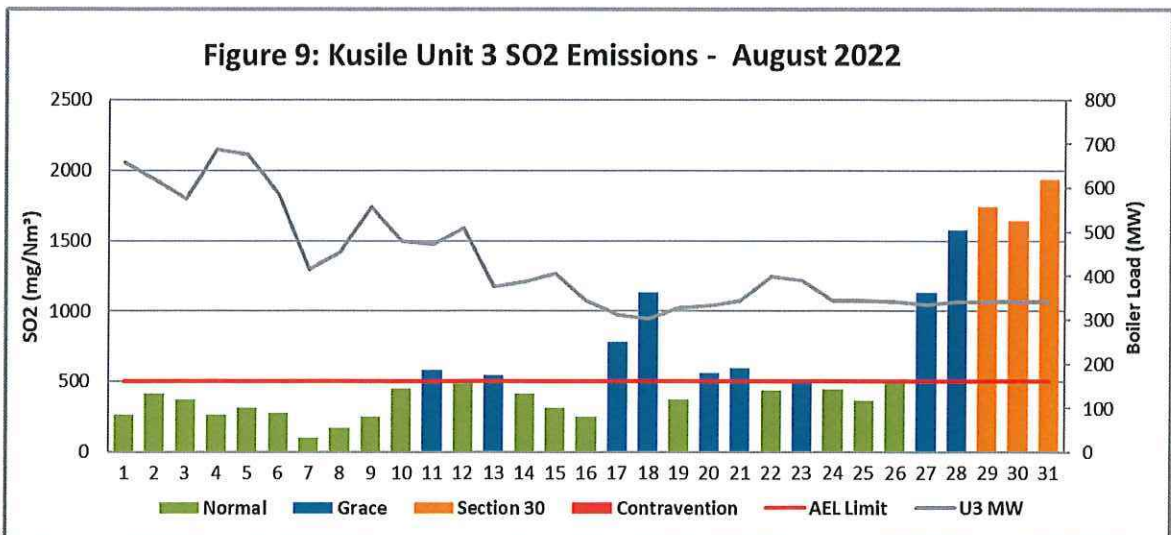
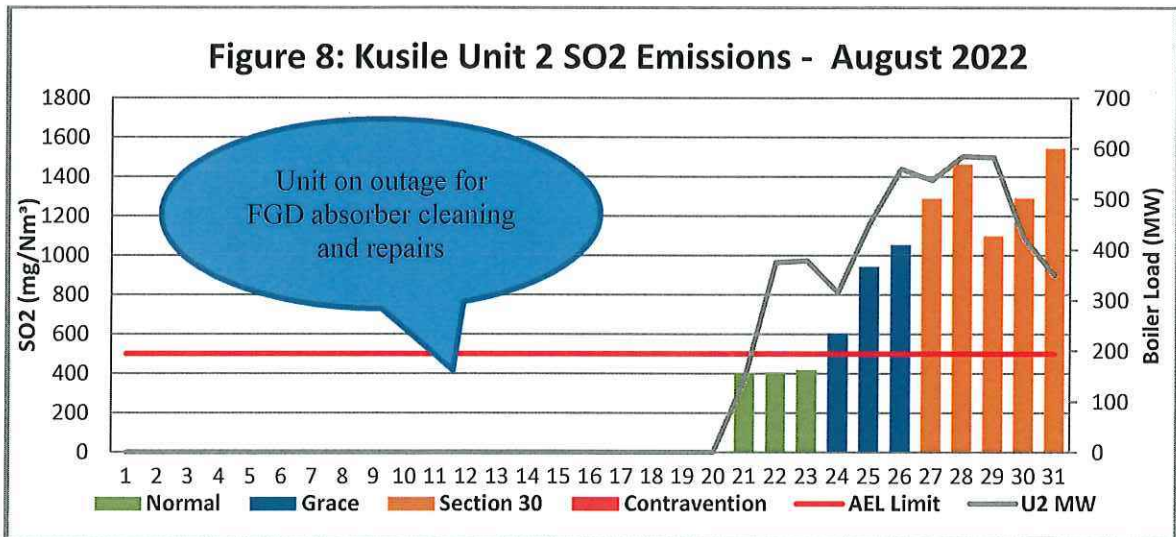
Table 7.5: Legend Description

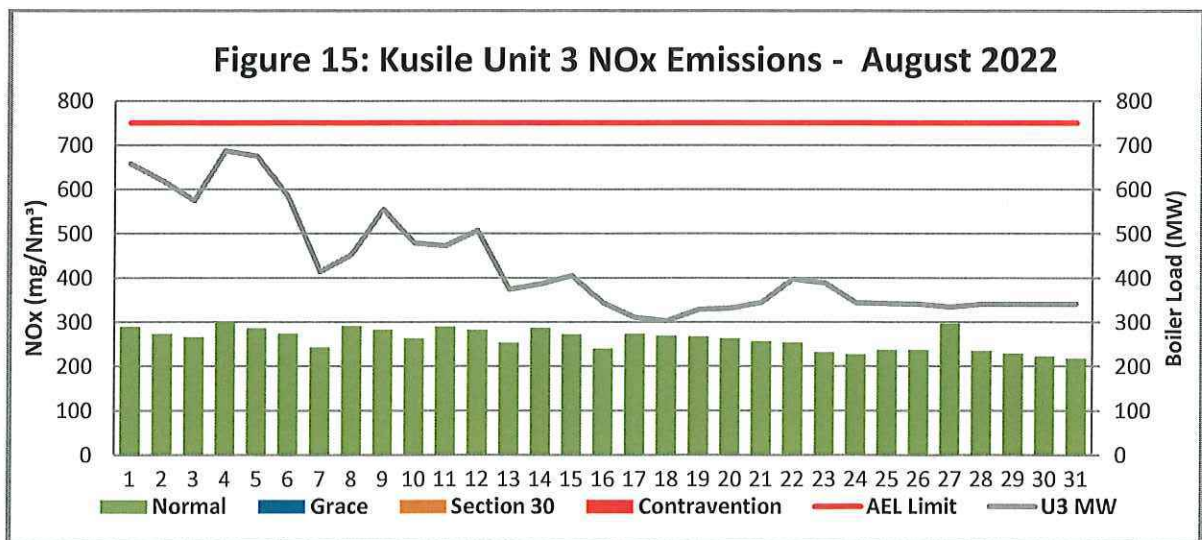
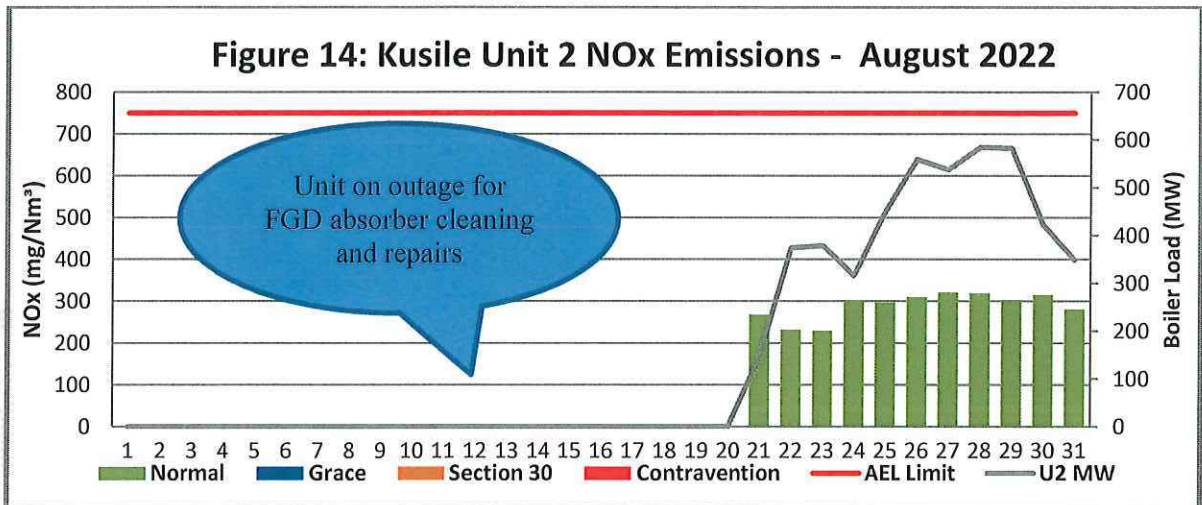
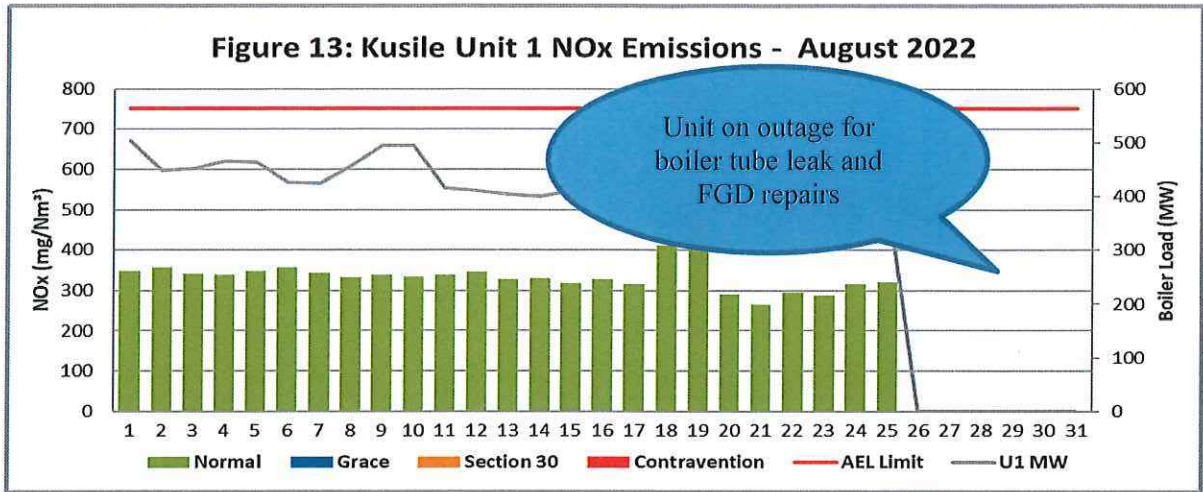
Condition	Colour	Description
Normal		Emissions below Emission Limit Value (ELV)
Grace		Emissions above the ELV during grace period
Section 30		Emissions above ELV during a NEMA S30 incident
Contravention		Emissions above ELV but outside grace or S30 incident conditions





As per the notification to your office, Unit 1 is operating with expired correlation curves. The emission report for August 2022 will be backfitted and resubmitted once the test is completed.





**8. Shut down and Light up information**

Unit No. 2	Event 1		Event 2		Event 3	
Breaker Open (BO)	BO previously	BO previously	5:20 pm	2022/08/23	10:55 pm	2022/08/30
Draught Group (DG) Shut Down (SD)	n/a	n/a	5:20 pm	2022/08/23	10:55 pm	2022/08/30
BO to DG SD (duration)	n/a	DD:HH:MM	00:00:00	DD:HH:MM	00:00:00	DD:HH:MM
Fires in time	6:35 pm	2022/08/21	2:20 am	2022/08/24	12:15 am	2022/08/31
Synch. to Grid (or BC)	10:30 pm	2022/08/21	8:55 am	2022/08/24	1:00 am	2022/08/31
Fires in to BC (duration)	00:03:55	DD:HH:MM	00:06:35	DD:HH:MM	00:00:45	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

Unit No. 3	Event 1		Event 2	
Breaker Open (BO)	6:20 am	2022/08/09	12:05 pm	2022/08/18
Draught Group (DG) Shut Down (SD)	11:35 am	2022/08/09	DG did not trip or SD	DG did not trip or SD
BO to DG SD (duration)	00:05:15	DD:HH:MM	n/a	DD:HH:MM
Fires in time	1:25 pm	2022/08/09		
Synch. to Grid (or BC)	11:35 pm	2022/08/09		
Fires in to BC (duration)	00:10:10	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



### 9. Complaints

No complaints reported for the month of August 2022

<b>Date and time complaint was received</b>	<b>Complaint received</b>	<b>Source code name</b>	<b>Root cause analysis</b>	<b>Calculation of impact/emissions associated with incidents and dispersion modelling of pollutants where applicable.</b>	<b>Measures implemented or to be implemented to prevent recurrence</b>	<b>Date by which measures will be implemented</b>
N/A						