



**Ms Mpho Nembilwi**  
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PO Box 437  
Middleburg  
1050

Date:  
*August 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 JULY 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 July 2021.

Hoping the above will meet your satisfaction.

Yours sincerely

Justice Bore

**GENERAL MANAGER: KUSILE POWER STATION**

**DATE:** 2021/08/31

**1. KUSILE POWER STATION MONTHLY EMISSIONS REPORT: Atmospheric Emission License 17/4/AEL/MP312/11/12**



**2 Raw Materials and Products**

Raw Materials and Products	Raw Material Type	Units	Maximum Permitted Consumption Rate	Consumption Rate Jul-2021
	Coal	Tons	1 818 083	712 875
	Fuel Oil	Tons	5 533	1313,2
	Limestone	Tons	72 917	19395

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Jul-2021
	Energy	GWh	3321,216	764,42
	Ash	Tons	663 583	213 149,5
	Gypsum	Tons	129 250	10 861,0
	RE PM	kg/MWh	not specified	0,058
	RE SO <sub>2</sub>	kg/MWh	not specified	1,418

**3 Energy source characteristics**

Fuel Characteristic	Units	Stipulated Range	Monthly Average Content
Coal CV	MJ/kg	not specified	21,000
Coal Sulphur	%	1,3	0,840
Ash in Coal	%	38	29,900

KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR JULY 2021

**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 Jul-2021	Technology Type	Efficiency Jul-2021
Unit 1	<i>Unit on outage</i>			
Unit 2	FFP	99,983%	FGD	90,401%
Unit 3	FFP	99,971%	FGD	89,485%
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 <sub>2</sub>	NO	CO <sub>2</sub>	O <sub>2</sub>
Unit 1	<i>Unit on outage</i>				
Unit 2	99,9	96,8	96,7	96,5	96,8
Unit 3	98,3	94,0	90,5	96,8	69,0
Unit 4					
Unit 5					
Unit 6					

**7. Emissions Performance**

Table 7.1: Monthly tonnages for the month of July-2021

Associated Unit/Stack	PM	SO <sub>2</sub>	NO <sub>x</sub>	CO <sub>2</sub>
Unit 1	<i>Unit on outage</i>			
Unit 2	16,4	520	1 316	442 020
Unit 3	28,0	564	948	413 516
Unit 4	0,0	0	0	0
Unit 5	0,0	0	0	0
Unit 6	0,0	0	0	0
<b>SUM</b>	44,4	1 084	2 264	855 536



KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR JULY 2021

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
Unit 1	Unit on outage					
Unit 2	29	0	0	0	0	6,6
Unit 3	30	0	0	0	0	14,2
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>59</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 - July 2021

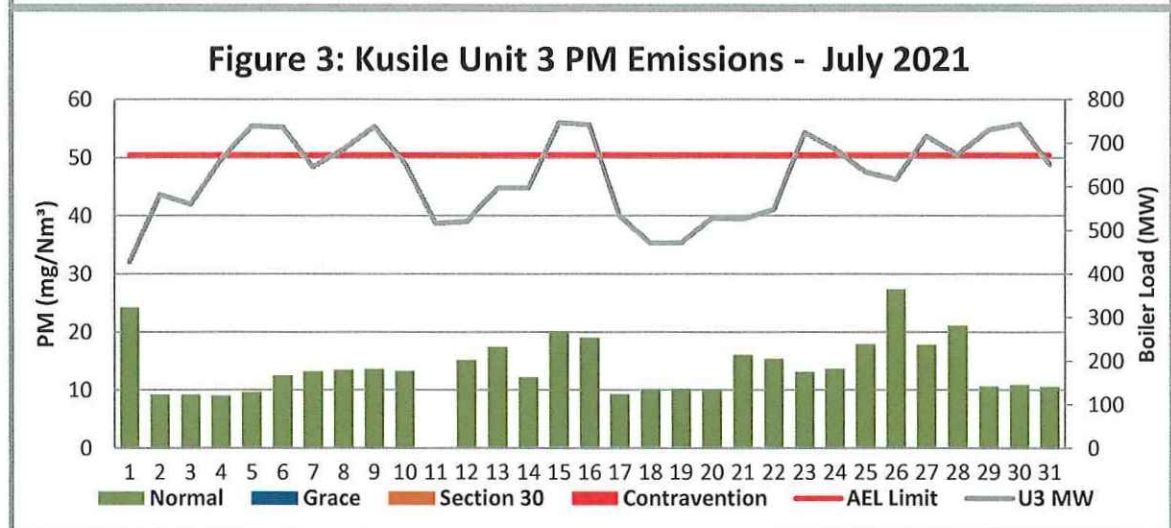
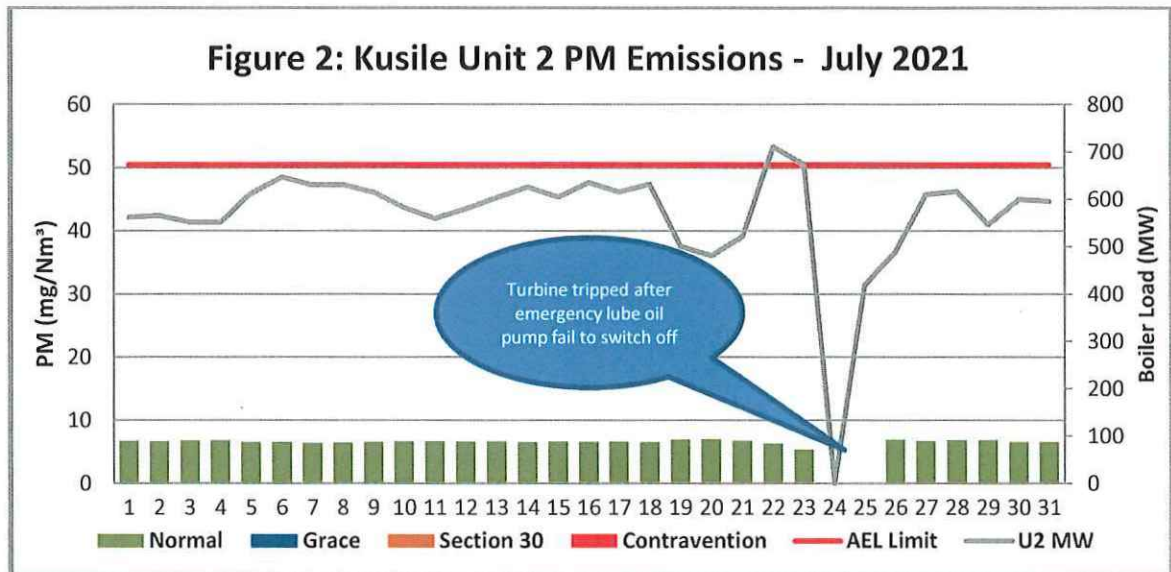
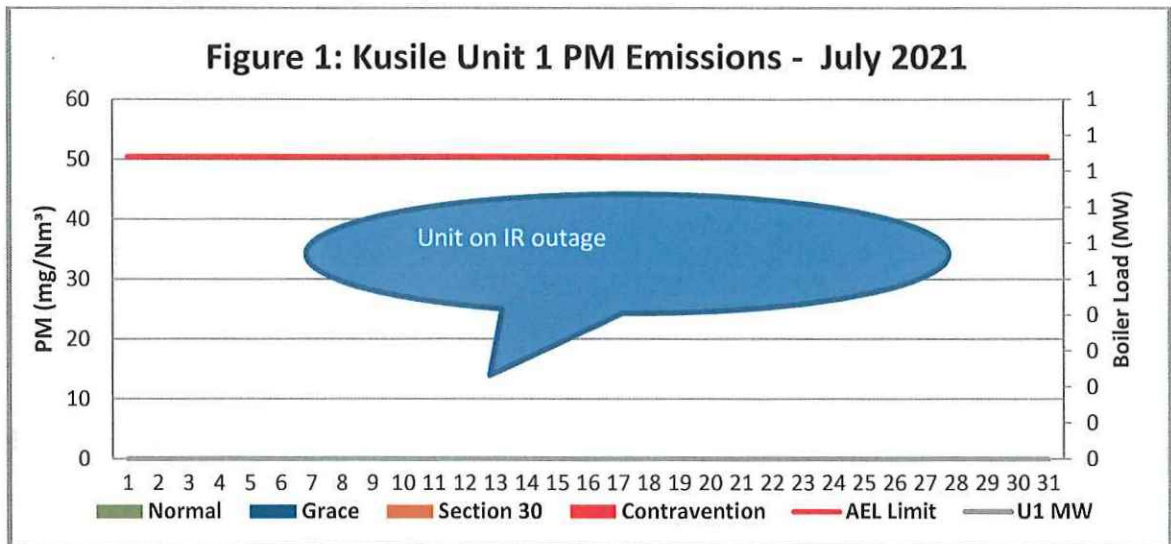
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO <sub>2</sub> (mg/Nm <sup>3</sup> )
Unit 1	Unit on outage					
Unit 2	30	0	0	0	0	208,2
Unit 3	28	3	0	0	3	289,0
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
<b>SUM</b>	<b>58</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	

Table 6.4: Operating days in compliance to NO<sub>x</sub> AEL Limit - July 2021

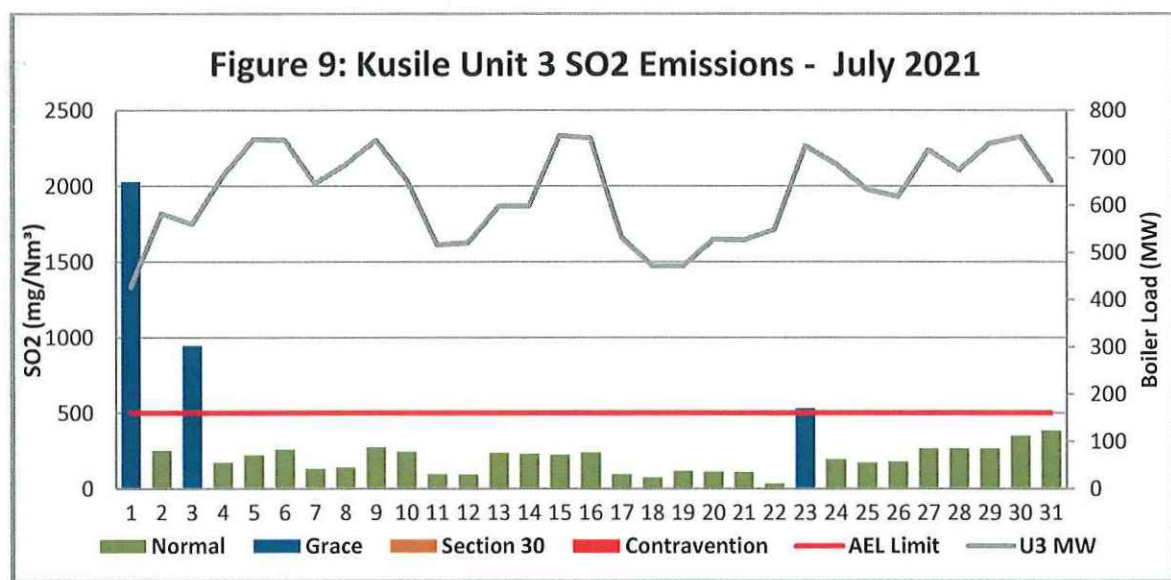
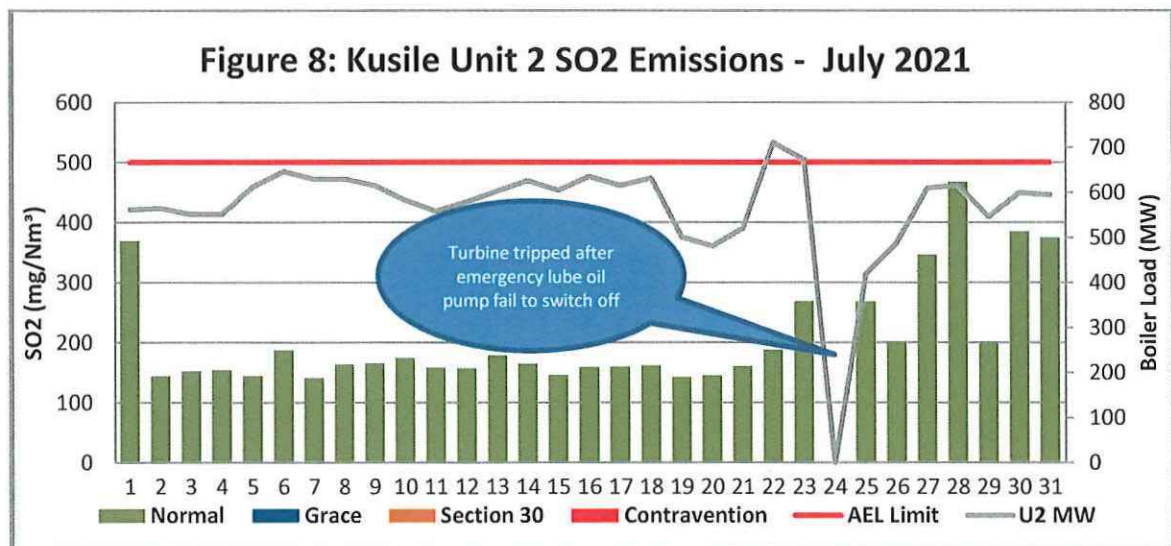
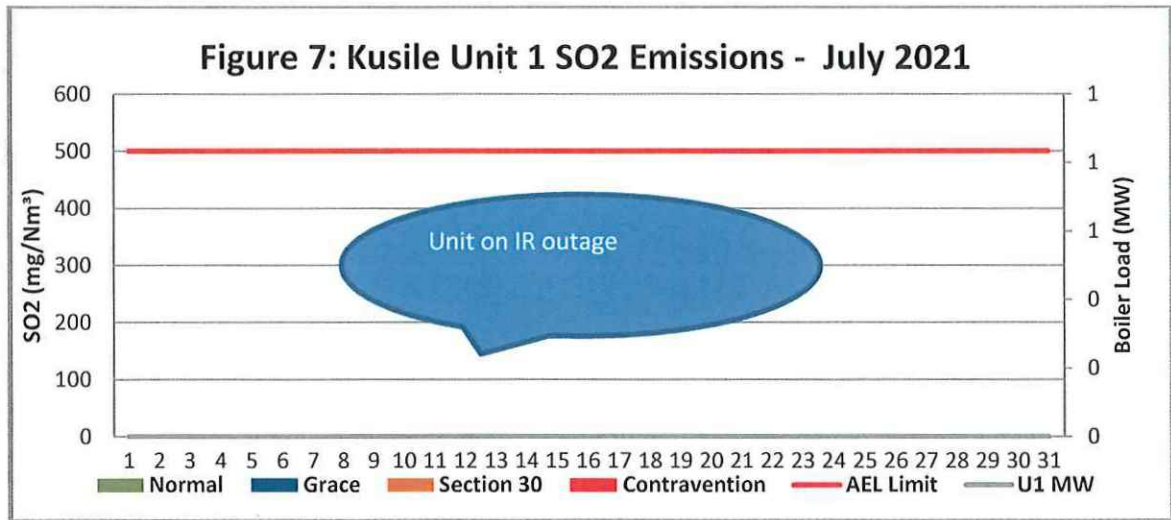
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO <sub>x</sub> (mg/Nm <sup>3</sup> )
Unit 1	Unit on outage					
Unit 2	30	0	0	0	0	523,6
Unit 3	31	0	0	0	0	437,3
Unit 4	0	0	0	0	0	
Unit 5	0	0	0	0	0	
Unit 6	0	0	0	0	0	
<b>SUM</b>	<b>61</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Table 7.5: Legend Description

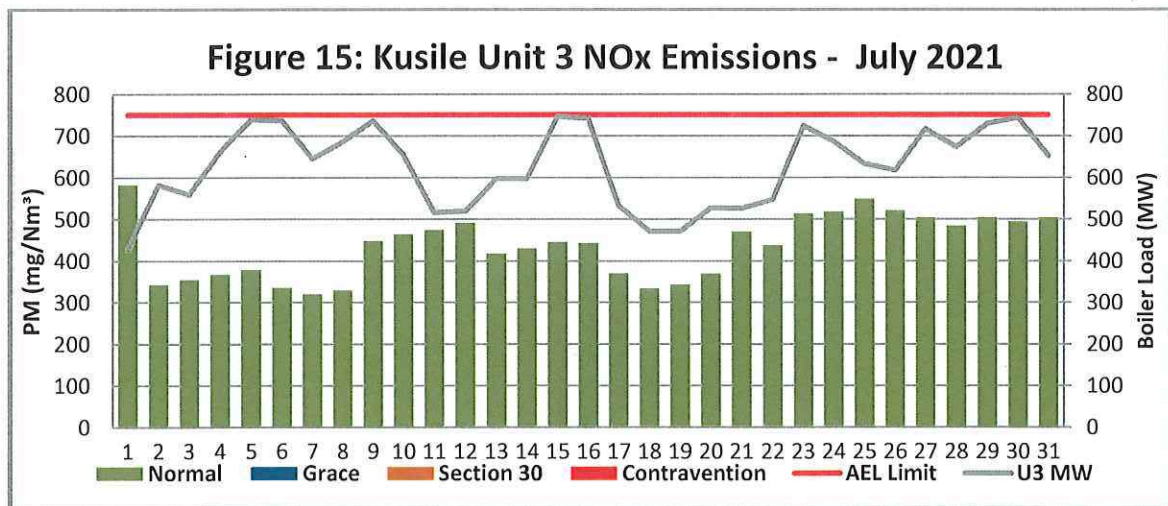
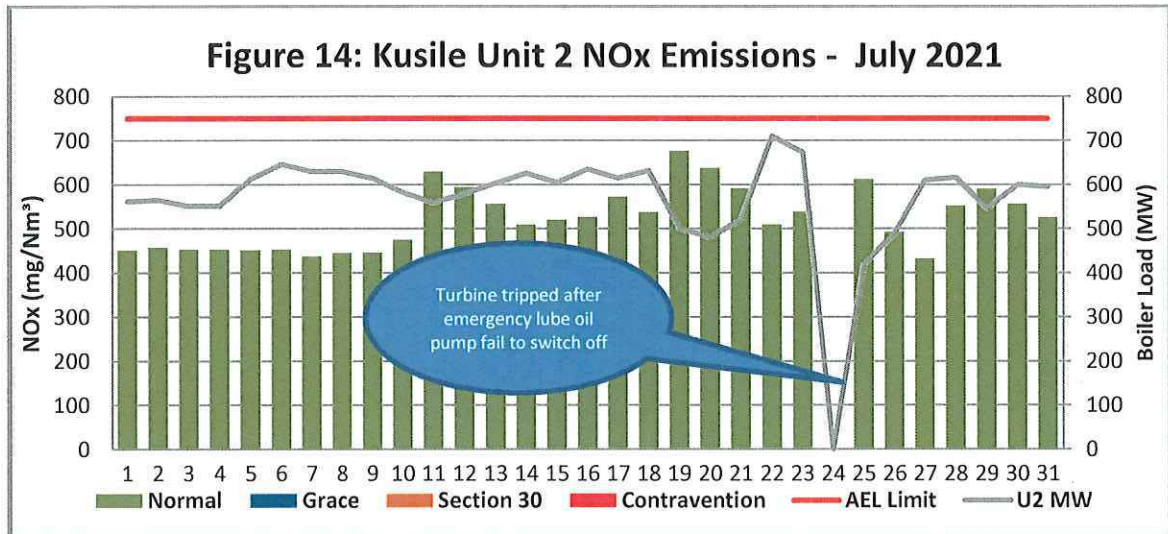
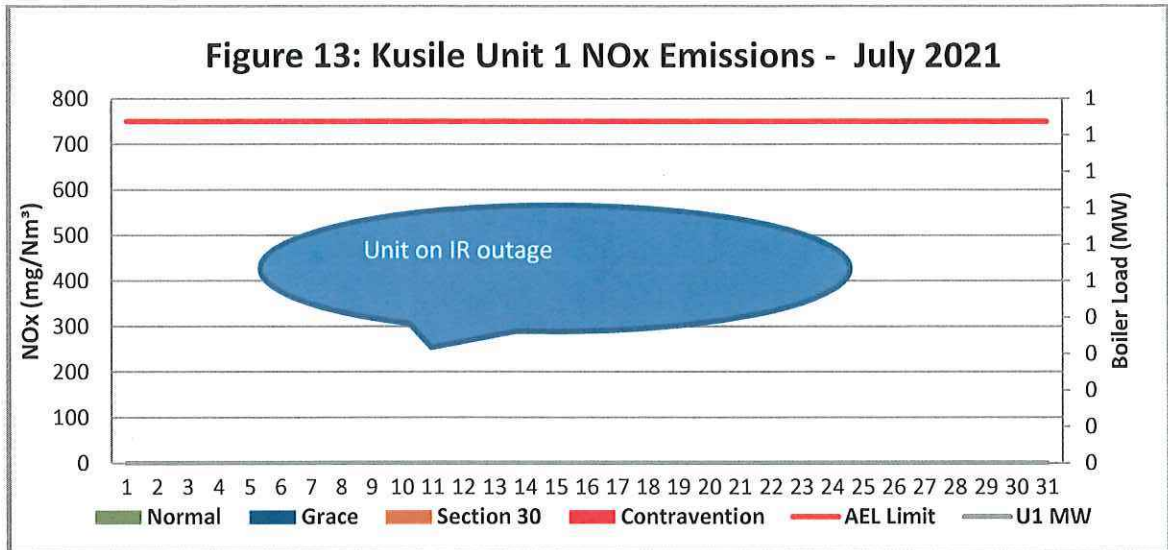
Condition	Colour	Description
Normal		Emissions below Emission Limit Value (ELV)
Grace		Emissions above the ELV during grace period
Section 30		Emissions above ELV during a NEMA S30 incident
Contravention		Emissions above ELV but outside grace or S30 incident conditions



KUSILE POWER STATION'S MONTHLY EMISSIONS REPORT FOR JULY 2021







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

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

Unit No. 2	Event 1	
Breaker Open (BO)	2:05 am	2021/07/23
Draught Group (DG) Shut Down (SD)	11:20 pm	2021/07/23
BO to DG SD (duration)	00:21:15	DD:HH:MM
Fires in time	2:05 am	2021/07/25
Synch. to Grid (or BC)	3:35 pm	2021/07/25
Fires in to BC (duration)	00:13:30	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

Unit No. 3	Event 1		Event 2		Event 3	
Breaker Open (BO)	BO previously	BO previously	11:40 pm	2021/07/10	2:25 am	2021/07/14
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			12:32 am	2021/07/11	2:53 am	2021/07/14
Synch. to Grid (or BC)			2:45 am	2021/07/11	12:15 pm	2021/07/14
Fires in to BC (duration)		DD:HH:MM	00:02:12	DD:HH:MM	00:09:21	DD:HH:MM
Emissions below limit from BC (end date)			not > limit	not > limit	not > limit	not > limit
Emissions below limit from BC (duration)		DD:HH:MM	n/a	DD:HH:MM	n/a	DD:HH:MM

**9. Complaints**

No complaints received during the month of July- 2021