

KOMATI POWER STATION MONTHLY EMISSIONS REPORT

Atmospheric Emission License 17/4/AEL/MP313/12/12


1 RAW MATERIALS AND PRODUCTS

Raw Materials and Products	Raw Material Type	Units	Maximum Permitted Consumption Rate	Consumption Rate Apr-2021
	Coal	Tons	460 000	19 047
	Fuel Oil	Tons	5 000	209

Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Apr-2021
	Energy	GWh	684	33
	Ash	Tons	160 000	5
	RE PM	kg/MWh	0.46	0.14

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	16-24	22.565
Sulphur Content	%	<= 1.2	0.474
Ash Content	%	<= 33	21.163

3 EMISSION LIMITS (mg/Nm³)

Associated Unit/Stack	PM	SO _x	NO _x
East	100	3500	1300
West	100	3500	1300

4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Apr-2021
Unit 1	<i>Electro Static Precipitators (ESP)</i>	<i>Unit Off-line</i>
Unit 2	<i>Electro Static Precipitators (ESP)</i>	<i>Unit Off-line</i>
Unit 3	<i>Electro Static Precipitators (ESP)</i>	<i>Unit Off-line</i>
Unit 4	<i>Electro Static Precipitators (ESP)</i>	<i>Unit Off-line</i>
Unit 5	<i>Electro Static Precipitators (ESP)</i>	<i>Unit Off-line</i>
Unit 6	<i>Electro Static Precipitators (ESP)</i>	<i>Unit Off-line</i>
Unit 7	<i>Electro Static Precipitators (ESP)</i>	<i>Unit Off-line</i>
Unit 8	<i>Electro Static Precipitators (ESP)</i>	<i>Unit Off-line</i>
Unit 9	<i>Electro Static Precipitators (ESP)</i>	99.9%

*Note: Abatement plant does not have bypass mode operation, hence plant 100% Utilised.

5 MONITOR RELIABILITY (%)

Associated Unit/Stack	PM	SO ₂	NO	CO ₂	O ₂	Temp
East						
West	94.9	94.5	94.5	94.5	94.5	94.9

6 EMISSION PERFORMANCE

Table 4: Monthly tonnages for the month of April-2021

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO ₂ (tons)	CO ₂ (tons)
1	0.0	0.0	0.0	0
2	0.0	0.0	0.0	0
3	0.0	0.0	0.0	0
4	0.0	0.0	0.0	0
5	0.0	0.0	0.0	0
6	0.0	0.0	0.0	0
7	0.0	0.0	0.0	0
8	0.0	0.0	0.0	0
9	4.8	387.3	232.5	41 084
SUM	4.8	387.3	232.5	41 084

Table 6.2: Operating days in compliance to PM AEL Limit - April 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
East	0	0	0	0	0	
West	17	0	0	0	0	28.3
SUM	17	0	0	0	0	

Table 6.3: Operating days in compliance to SO_x AEL Limit - April 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO _x (mg/Nm ³)
East	0	0	0	0	0	
West	17	0	0	0	0	1 776.1
SUM	17	0	0	0	0	

Table 6.4: Operating days in compliance to NO_x AEL Limit - April 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm ³)
East	0	0	0	0	0	
West	17	0	0	0	0	1 073.6
SUM	17	0	0	0	0	

Table 6.5: Legend Description

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

Figure 1: Komati East Stack PM Emissions - April 2021

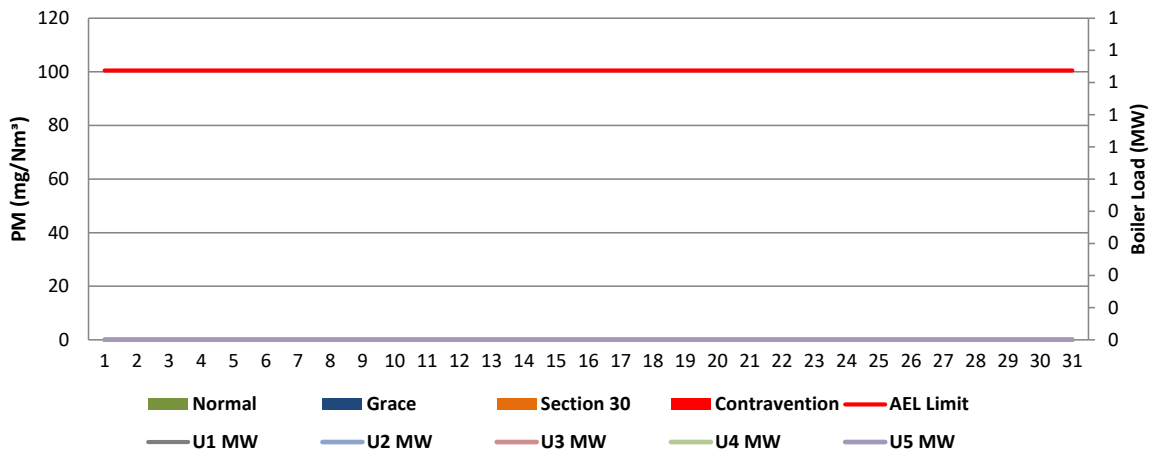


Figure 2: Komati West Stack PM Emissions - April 2021

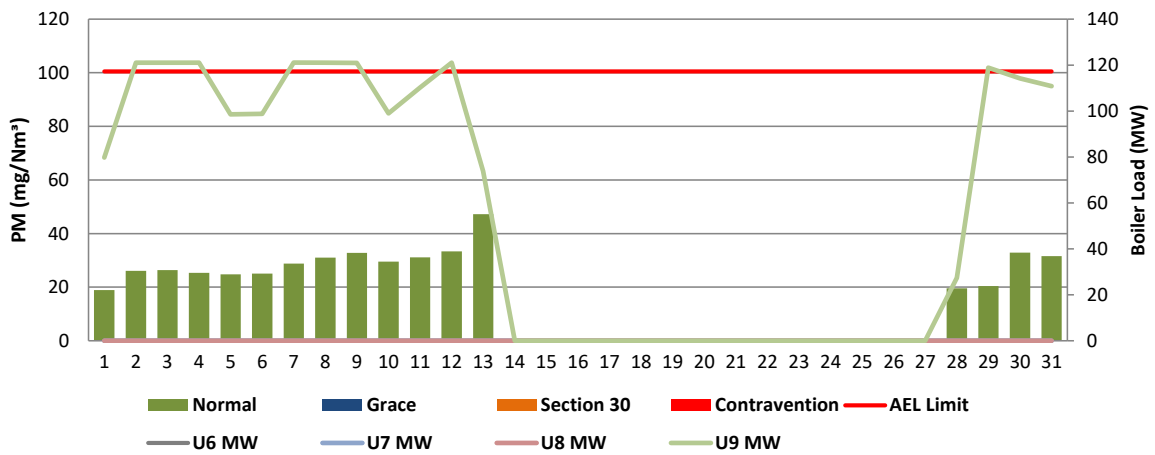


Figure 3: Komati East Stack SOx Emissions - April 2021

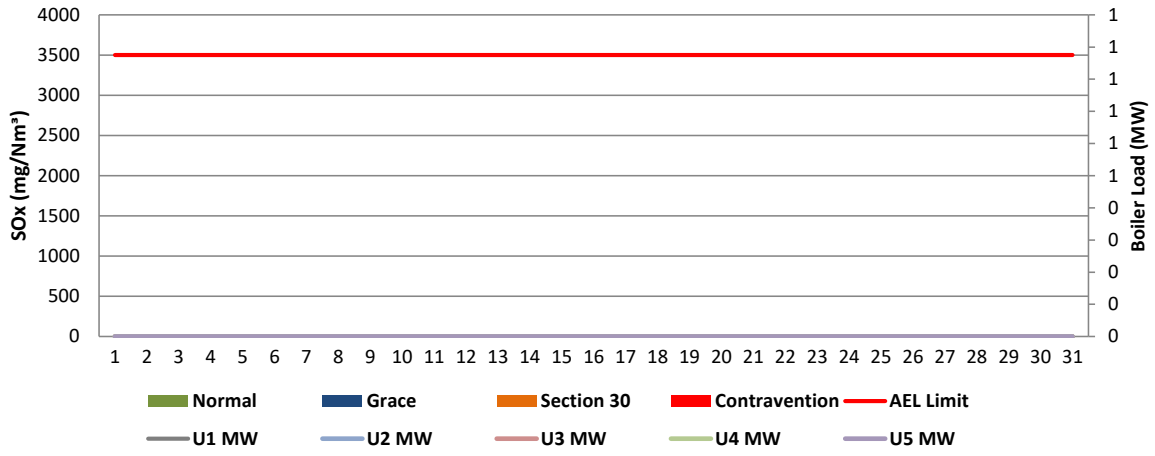


Figure 4: Komati West Stack SOx Emissions - April 2021

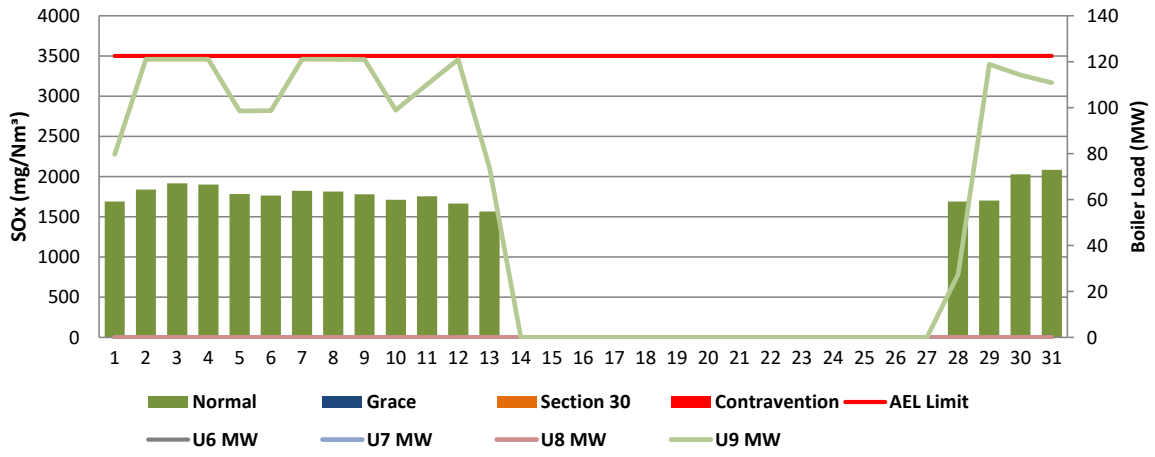


Figure 5: Komati East Stack NOx Emissions - April 2021

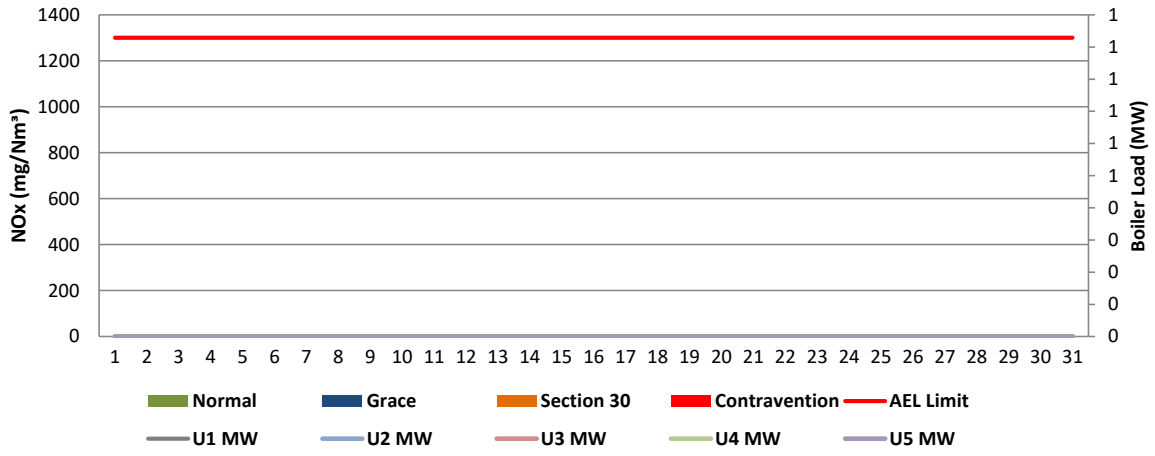
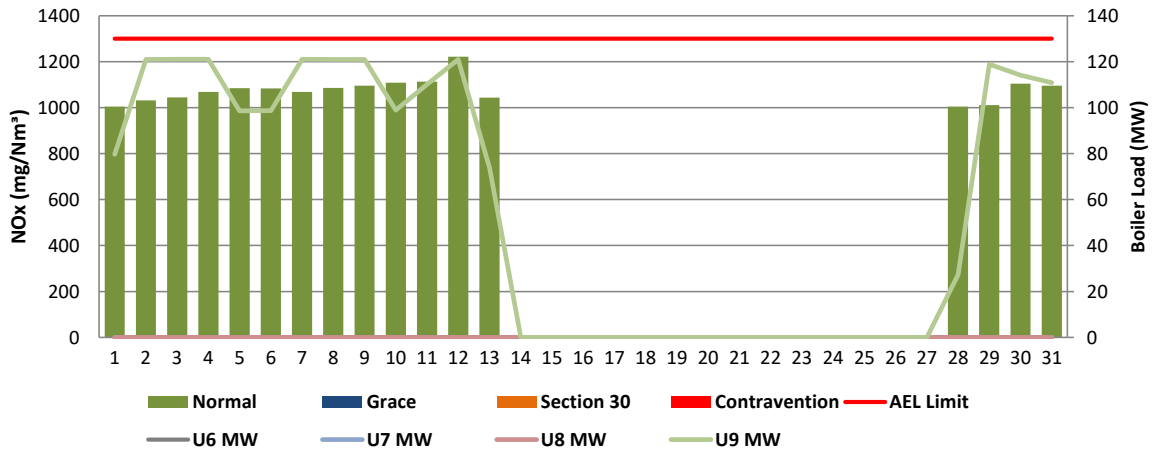


Figure 6: Komati West Stack NOx Emissions - April 2021



7 SHUT DOWN AND LIGHT UP INFORMATION

Table 6.1. PM Start-up information for the month of April-2021

East Stack	<i>Event 1</i>		<i>Event 2</i>		<i>Event 3</i>		<i>Event 4</i>	
Unit No.	<i>no event</i>		<i>no event</i>		<i>no event</i>		<i>no event</i>	
Breaker Open (BO)								
Draught Group (DG) Shut Down (SD)								
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time								
Synch. to Grid (or BC)								
Fires in to BC (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)								
Emissions below limit from BC (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM

East Stack ...continued	<i>Event 5</i>		<i>Event 6</i>		<i>Event 7</i>		<i>Event 8</i>	
Unit No.	<i>no event</i>		<i>no event</i>		<i>no event</i>		<i>no event</i>	
Breaker Open (BO)								
Draught Group (DG) Shut Down (SD)								
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time								
Synch. to Grid (or BC)								
Fires in to BC (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)								
Emissions below limit from BC (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM

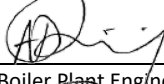
West Stack	<i>Event 1</i>		<i>Event 2</i>		<i>Event 3</i>		<i>Event 4</i>	
Unit No.	<i>no event</i>		<i>Unit 9</i>		<i>Unit 9</i>		<i>no event</i>	
Breaker Open (BO)			12:55 PM	2021/04/10	2:00 AM	2021/04/13	3:45 AM	2021/04/25
Draught Group (DG) Shut Down (SD)			2:05 PM	2021/04/10	10:20 PM	2021/04/13	4:35 AM	2021/04/25
BO to DG SD (duration)		DD:HH:MM	00:01:10	DD:HH:MM	00:20:20	DD:HH:MM	00:00:50	DD:HH:MM
Fires in time			2:10 PM	2021/04/10	4:55 PM	2021/04/27		
Synch. to Grid (or BC)			8:35 PM	2021/04/10	10:30 PM	2021/04/28		
Fires in to BC (duration)		DD:HH:MM	00:06:25	DD:HH:MM	01:05:35	DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)			3:00 AM	2021/04/11	5:00 AM	2021/04/29		
Emissions below limit from BC (duration)		DD:HH:MM	00:06:25	DD:HH:MM	00:06:30	DD:HH:MM		DD:HH:MM


West Stack ...continued	<i>Event 5</i>		<i>Event 6</i>		<i>Event 7</i>		<i>Event 8</i>	
Unit No.	<i>no event</i>		<i>no event</i>		<i>no event</i>		<i>no event</i>	
Breaker Open (BO)								
Draught Group (DG) Shut Down (SD)								
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time								
Synch. to Grid (or BC)								
Fires in to BC (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)								
Emissions below limit from BC (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM


7.2: Point Source emissions released during start-up (fires-in) and Shut-down (SD) for the month of April-2021 in mg/Nm³

[Include reference to once off test showing typical emissions rates during fires in and SD]

11 General


 Boiler Plant Engineering Date 2021/05/17


 Environmental Manager Date 2021/05/12


 General Manager Date 2021/05/17

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