

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 May 2021
	Coal	Tons	460 000	28 616
	Fuel Oil	Tons	5 000	365
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate May-2021
	Energy	GWh	707	49
	Ash	Tons	160 000	12
	RE PM	kg/MWh	0.29	0.24

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	16-24	23.362
Sulphur Content	%	<= 1.2	0.581
Ash Content	%	<= 33	20.352

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 May-2021
Unit 1	Electro Static Precipitators (ESP)	Unit Off-line
Unit 2	Electro Static Precipitators (ESP)	Unit Off-line
Unit 3	Electro Static Precipitators (ESP)	Unit Off-line
Unit 4	Electro Static Precipitators (ESP)	Unit Off-line
Unit 5	Electro Static Precipitators (ESP)	Unit Off-line
Unit 6	Electro Static Precipitators (ESP)	Unit Off-line
Unit 7	Electro Static Precipitators (ESP)	Unit Off-line
Unit 8	Electro Static Precipitators (ESP)	Unit Off-line
Unit 9	Electro Static Precipitators (ESP)	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	100.0	98.5	96.2	86.7	90.6	99.5

6 EMISSION PERFORMANCE

Table 4: Monthly tonnages for the month of May-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	11.9	642.4	365.1	62 076
SUM	11.9	642.4	365.1	62 076

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

Associated Unit/Stack	Normal	Grace	Section 30	Contraven- tion	Total Exceedance	Average PM (mg/Nm ³)
East	0	0	0	0	0	
West	25	0	0	0	0	36.5
SUM	25	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contraven- tion	Total Exceedance	Average SO _x (mg/Nm ³)
East	0	0	0	0	0	
West	25	0	0	0	0	1 831.5
SUM	25	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contraven- tion	Total Exceedance	Average NO _x (mg/Nm ³)
East	0	0	0	0	0	
West	25	0	0	0	0	1 044.3
SUM	25	0	0	0	0	

Table 6.5: 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

Figure 1: Komati East Stack PM Emissions - May 2021

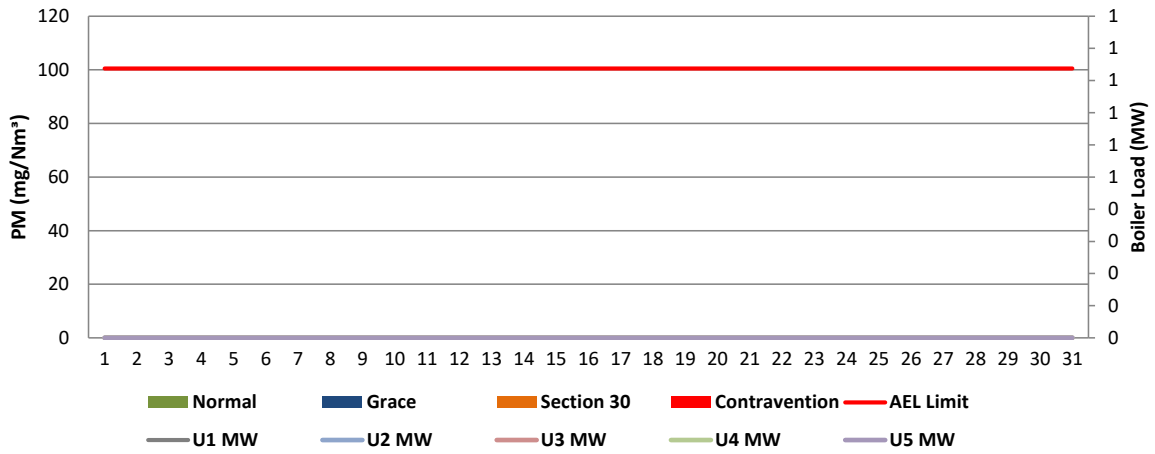


Figure 2: Komati West Stack PM Emissions - May 2021

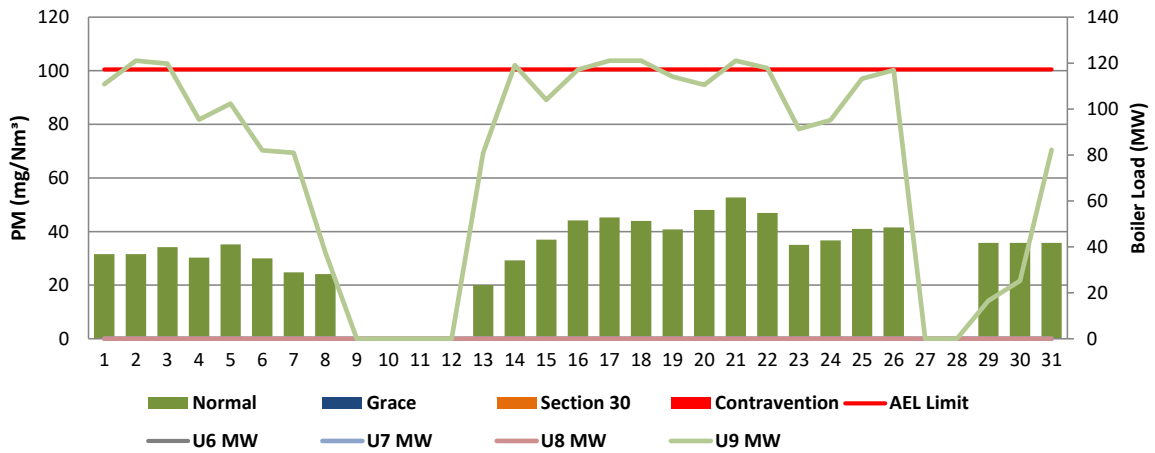


Figure 3: Komati East Stack SOx Emissions - May 2021

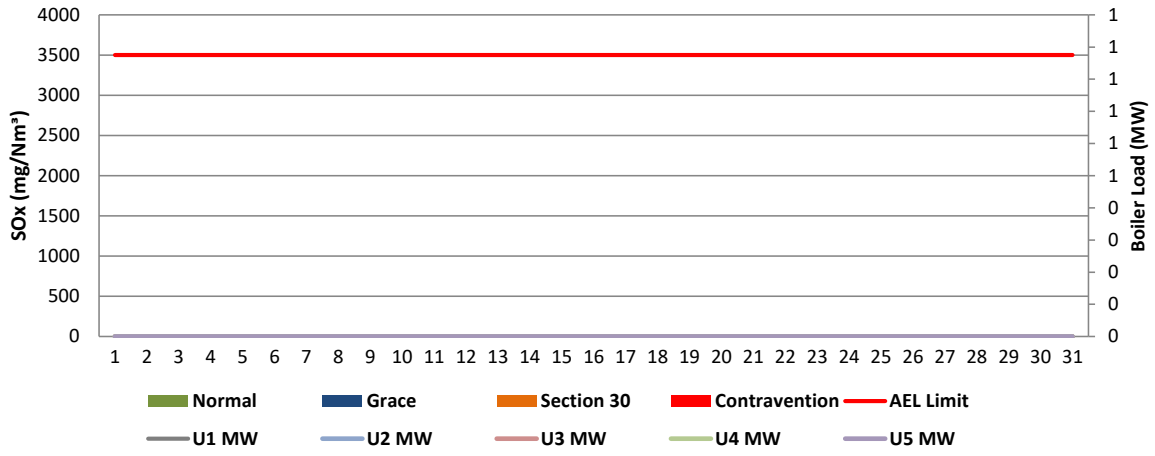


Figure 4: Komati West Stack SOx Emissions - May 2021

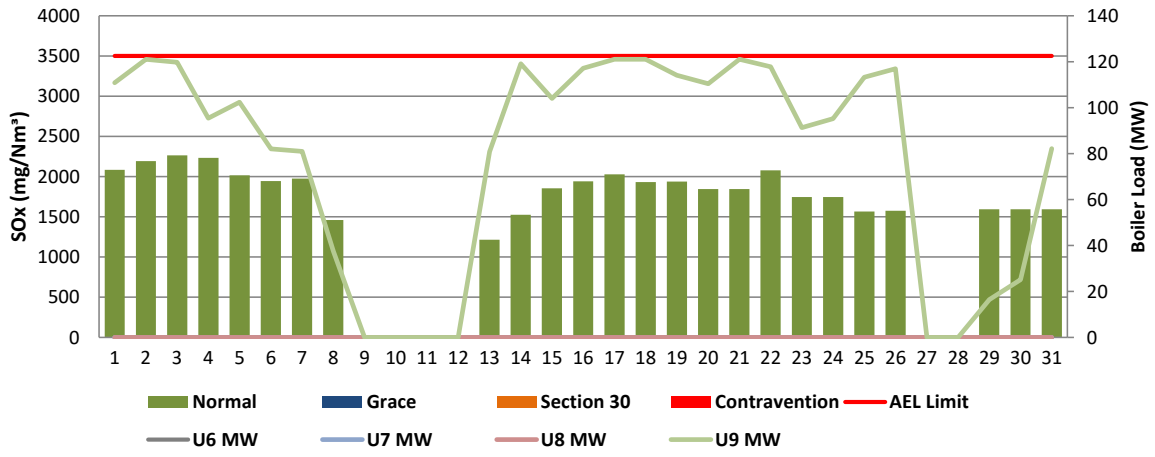


Figure 5: Komati East Stack NOx Emissions - May 2021

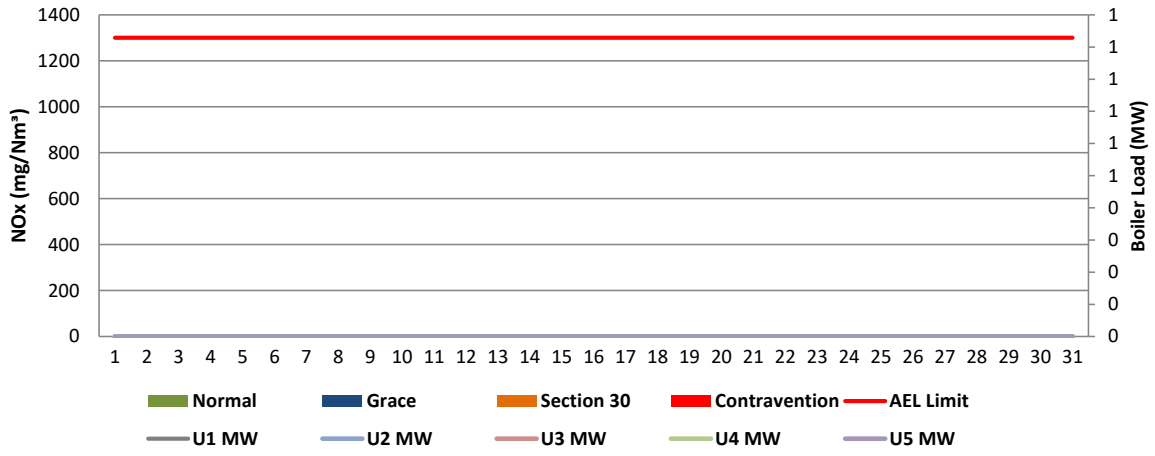
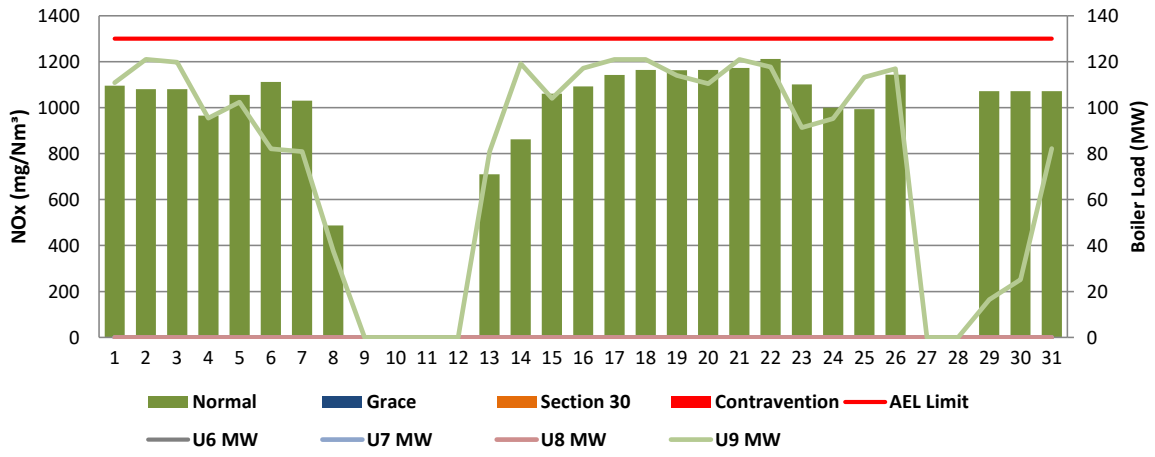


Figure 6: Komati West Stack NOx Emissions - May 2021



7 SHUT DOWN AND LIGHT UP INFORMATION

Table 6.1. PM Start-up information for the month of May-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)			<i>12:40 AM</i>	<i>2021/05/08</i>	<i>8:50 PM</i>	<i>2021/05/26</i>		
Draught Group (DG) Shut Down (SD)			<i>2:15 PM</i>	<i>2021/05/08</i>	<i>8:55 AM</i>	<i>2021/05/27</i>		
BO to DG SD (duration)		DD:HH:MM	<i>00:13:35</i>	DD:HH:MM	<i>00:12:05</i>	DD:HH:MM		DD:HH:MM
Fires in time			<i>3:20 PM</i>	<i>2021/05/12</i>	<i>7:35 PM</i>	<i>2021/05/28</i>		
Synch. to Grid (or BC)			<i>12:55 PM</i>	<i>2021/05/13</i>	<i>9:05 AM</i>	<i>2021/05/31</i>		
Fires in to BC (duration)		DD:HH:MM	<i>00:21:35</i>	DD:HH:MM	<i>02:13:30</i>	DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)			<i>12:00 AM</i>	<i>2021/05/14</i>	<i>12:00 AM</i>	<i>2021/06/01</i>		
Emissions below limit from BC (duration)		DD:HH:MM	<i>00:11:05</i>	DD:HH:MM	<i>00:14:55</i>	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

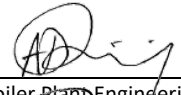
7.2: Point Source emissions released during start-up (fires-in) and Shut-down (SD) for the month of May-2021 in mg/Nm³

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


Remember to add attachments here; see ReportAddendum Tab

Reserved for Addendum XXXX


11 General


2021/07/13

 Boiler Plant Engineering Date

pp 
2021/07/13

 Environmental Manager Date


2021/07/13

 General Manager Date

Compiled by: Boiler Engineering Department

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For: Department of Forestry, Fisheries and Environme Air Pollution Control Officer

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 Goitsehang Nkomo Boiler Engineering Manager
 Mkgadi Mvambo Environmental Manager
 Falakhe Mdluli Compliance Manager
 Jurie Pieterse Production Manager