

**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 Sep-2020
	Coal	Tons	460 000	33 246
	Fuel Oil	Tons	5 000	167
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Sep-2020
	Energy	GWh	684	53
	Ash	Tons	160 000	11
	RE PM	kg/MWh	0.46	0.20

## 2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	16-24	23.330
Sulphur Content	%	<= 1.2	0.600
Ash Content	%	<= 33	21.600

## 3 EMISSION LIMITS (mg/Nm<sup>3</sup>)

Associated Unit/Stack	PM	SOx	NOx
East	100	3500	1300
West	100	3500	1300

## 4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Sep-2020
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)	99.8%

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

## 5 MONITOR RELIABILITY (%)

Associated Unit/Stack	PM	SO <sub>2</sub>	NO	CO <sub>2</sub>	O <sub>2</sub>	Temp
East						
West	100.0	99.0	99.0	99.0	99.0	100.0

## 6 EMISSION PERFORMANCE

Table 4: Monthly tonnages for the month of September-2020

Associated Unit/Stack	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>2</sub> (tons)	CO <sub>2</sub> (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	10.7	631.2	406.4	69 294
<b>SUM</b>	<b>10.7</b>	<b>631.2</b>	<b>406.4</b>	<b>69 294</b>

Table 6.2: Operating days in compliance to PM AEL Limit - September 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
East	0	0	0	0	0	
West	24	0	0	0	0	33.8
<b>SUM</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Table 6.3: Operating days in compliance to SO<sub>x</sub> AEL Limit - September 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO <sub>x</sub> (mg/Nm <sup>3</sup> )
East	0	0	0	0	0	
West	24	0	0	0	0	1 779.3
<b>SUM</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

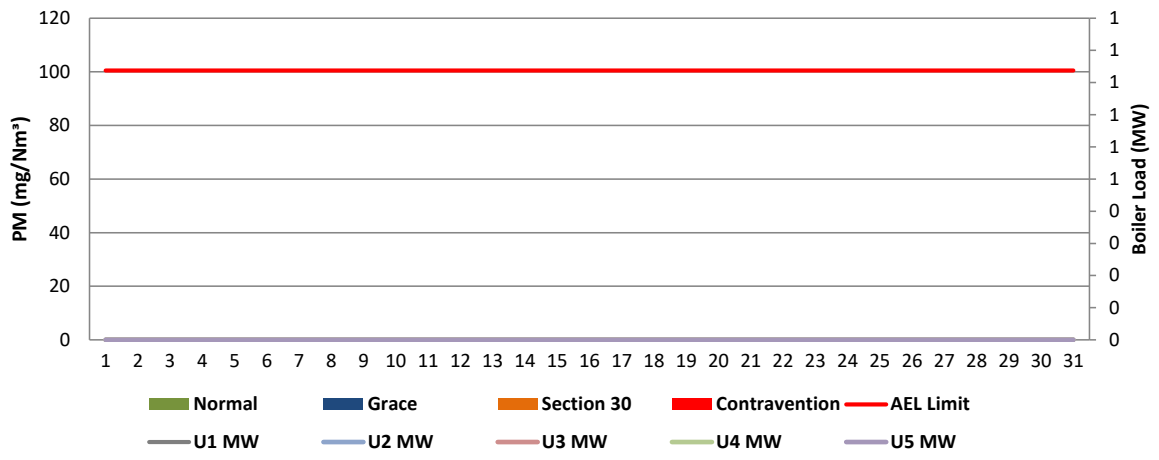
Table 6.4: Operating days in compliance to NO<sub>x</sub> AEL Limit - September 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO <sub>x</sub> (mg/Nm <sup>3</sup> )
East	0	0	0	0	0	
West	24	0	0	0	0	1 149.4
<b>SUM</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

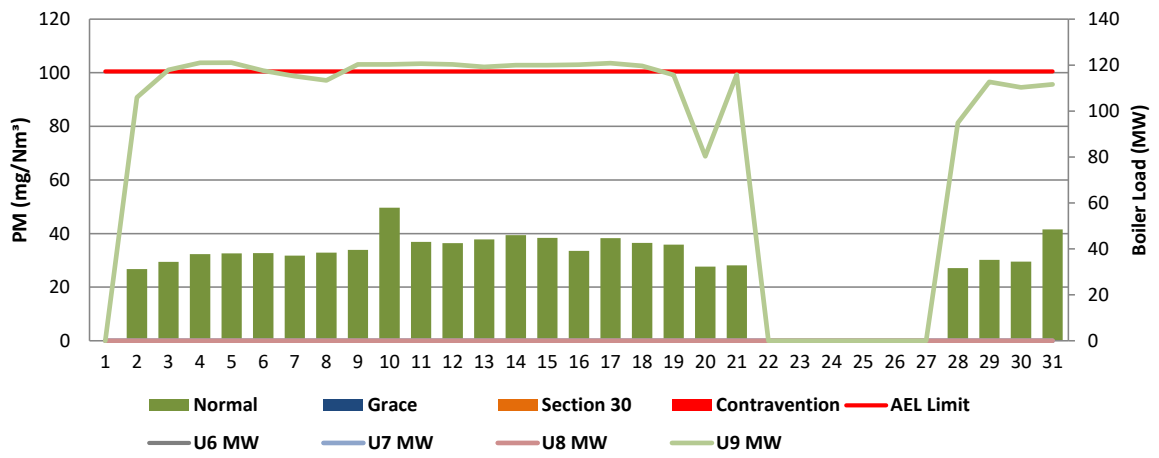
Table 6.5: Legend Description

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

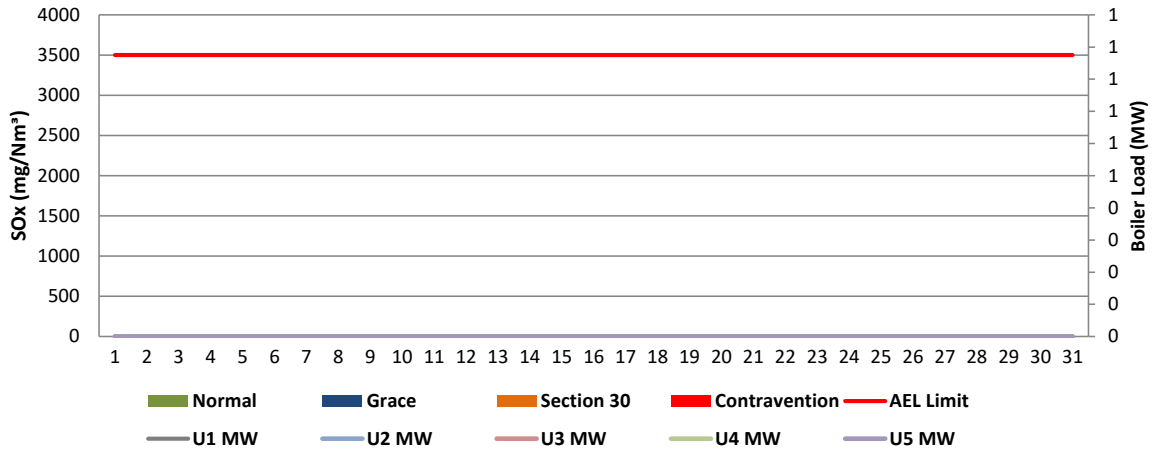
**Figure 1: Komati East Stack PM Emissions - September 2020**



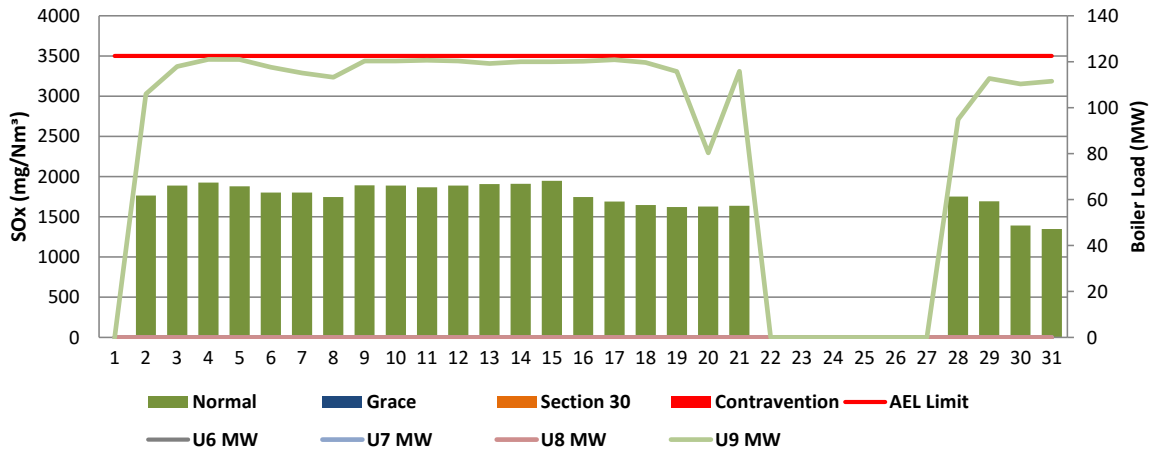
**Figure 2: Komati West Stack PM Emissions - September 2020**



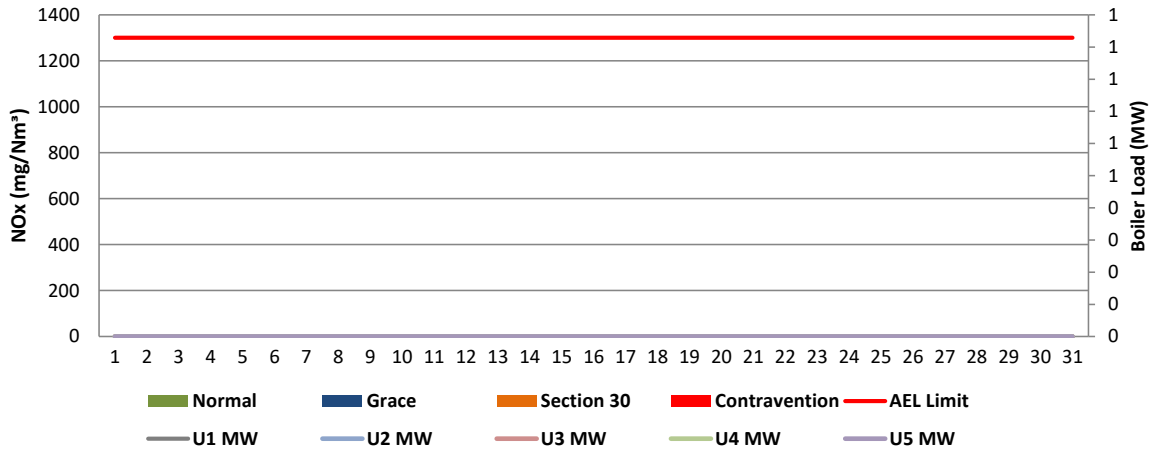
**Figure 3: Komati East Stack SOx Emissions - September 2020**



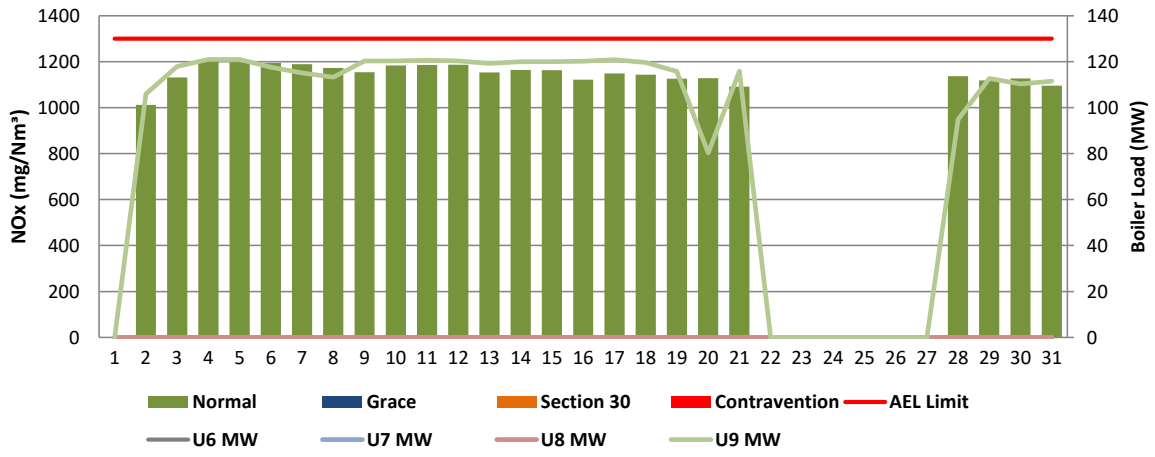
**Figure 4: Komati West Stack SOx Emissions - September 2020**



**Figure 5: Komati East Stack NOx Emissions - September 2020**



**Figure 6: Komati West Stack NOx Emissions - September 2020**



## 7 SHUT DOWN AND LIGHT UP INFORMATION

Table 6.1. PM Start-up information for the month of September-2020

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>Unit 9</i>		<i>Unit 9</i>		<i>Unit 9</i>		<i>no event</i>	
Breaker Open (BO)			12:10 PM	2020/09/19	8:05 PM	2020/09/21		
Draught Group (DG) Shut Down (SD)			1:20 PM	2020/09/19	9:10 AM	2020/09/22		
BO to DG SD (duration)		DD:HH:MM	00:01:10	DD:HH:MM	00:13:05	DD:HH:MM		DD:HH:MM
Fires in time	5:45 PM	2020/09/01	5:25 AM	2020/09/20	6:30 PM	2020/09/27		
Synch. to Grid (or BC)	7:20 AM	2020/09/02	2:55 PM	2020/09/20	10:30 AM	2020/09/28		
Fires in to BC (duration)	00:13:35	DD:HH:MM	00:09:30	DD:HH:MM	00:16:00	DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	12:00 AM	2020/09/03	not > limit	not > limit	12:00 AM	2020/09/29		
Emissions below limit from BC (duration)	00:16:40	DD:HH:MM	n/a	DD:HH:MM	00:13:30	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 September-2020 in mg/Nm<sup>3</sup>

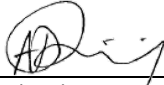
[Include reference to once off test showing typical emissions rates during fires in and SD]





Remember to add attachments here; see ReportAddendum Tab

Reserved for Addendum XXXX

**11 General**


 2021/04/29  
Boiler Plant Engineering      Date

 2021/04/21  
Environmental Manager      Date

 2021.04.29  
General Manager      Date

Compiled by: Boiler Engineering Department

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Falakhe Mdluli      Compliance Manager