

**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 Aug 2020
	Coal	Tons	460 000	29 895
	Fuel Oil	Tons	5 000	79
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Aug-2020
	Energy	GWh	707	51
	Ash	Tons	160 000	11
	RE PM	kg/MWh	0.46	0.21

## 2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	16-24	23.940
Sulphur Content	%	<= 1.2	0.524
Ash Content	%	<= 33	20.131

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

Associated Unit/Stack	PM	SO <sub>x</sub>	NO <sub>x</sub>
East	100	3500	1300
West	100	3500	1300

## 4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Aug-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	96.0	94.8	94.6	94.7	94.6	96.0

## 6 EMISSION PERFORMANCE

Table 4: Monthly tonnages for the month of August-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	10.8	595.3	393.2	67 462
<b>SUM</b>	<b>10.8</b>	<b>595.3</b>	<b>393.2</b>	<b>67 462</b>

Table 6.2: Operating days in compliance to PM AEL Limit - August 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	31.5
<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 - August 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	1 682.3
<b>SUM</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

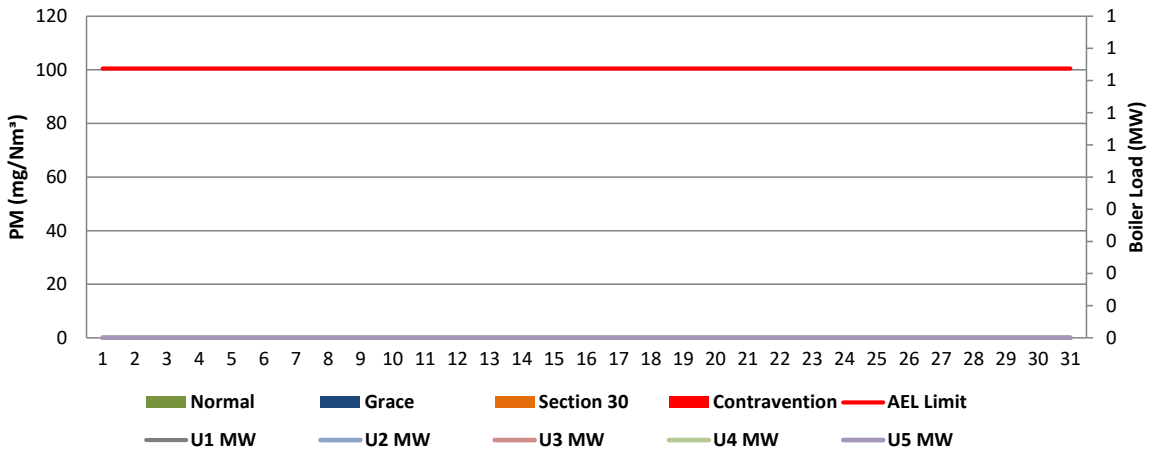
Table 6.4: Operating days in compliance to NO<sub>x</sub> AEL Limit - August 2020

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	1 096.0
<b>SUM</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

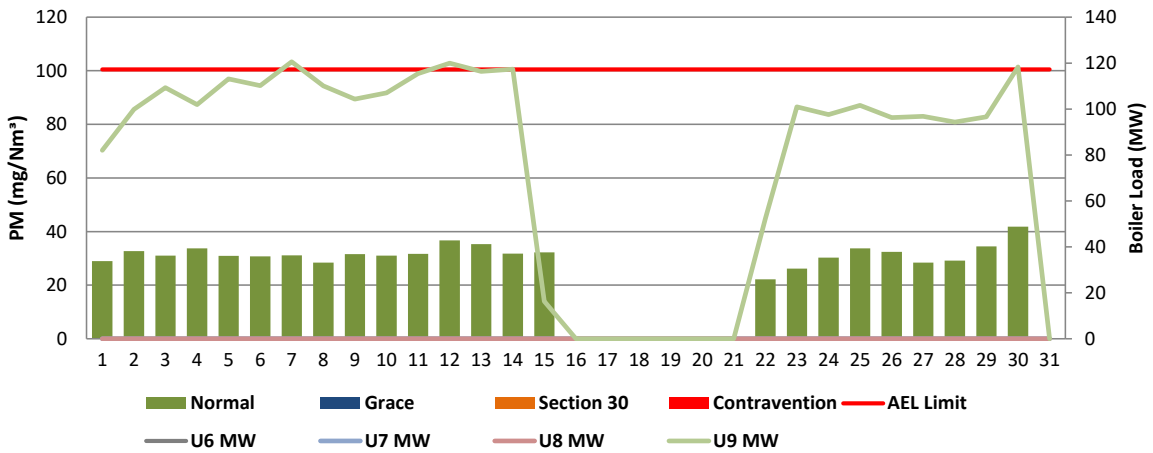
Table 6.5: Legend Description

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

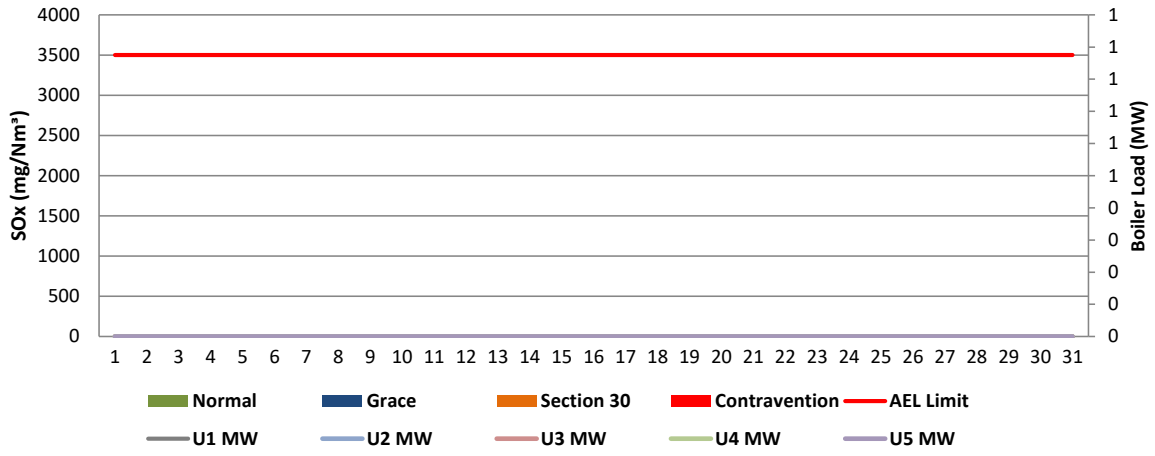
**Figure 1: Komati East Stack PM Emissions - August 2020**



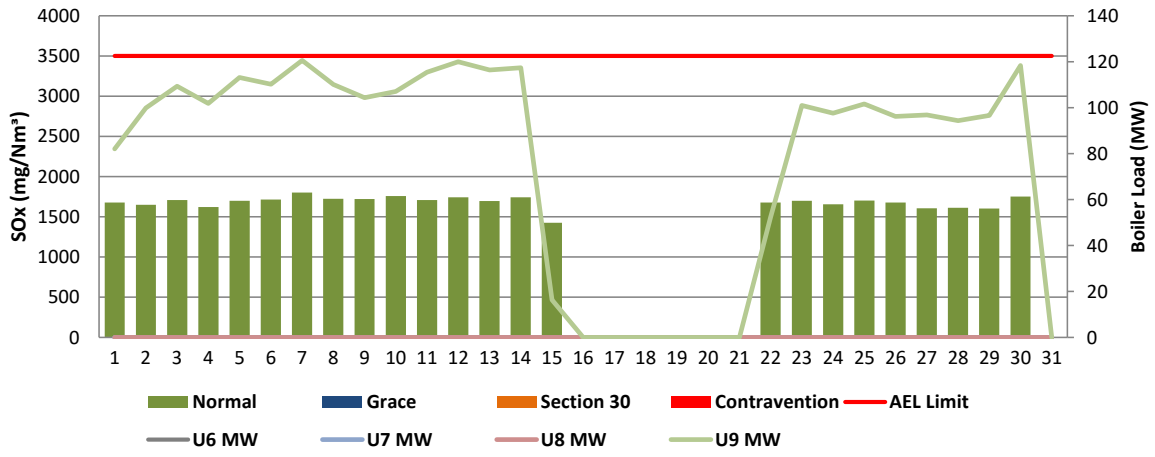
**Figure 2: Komati West Stack PM Emissions - August 2020**



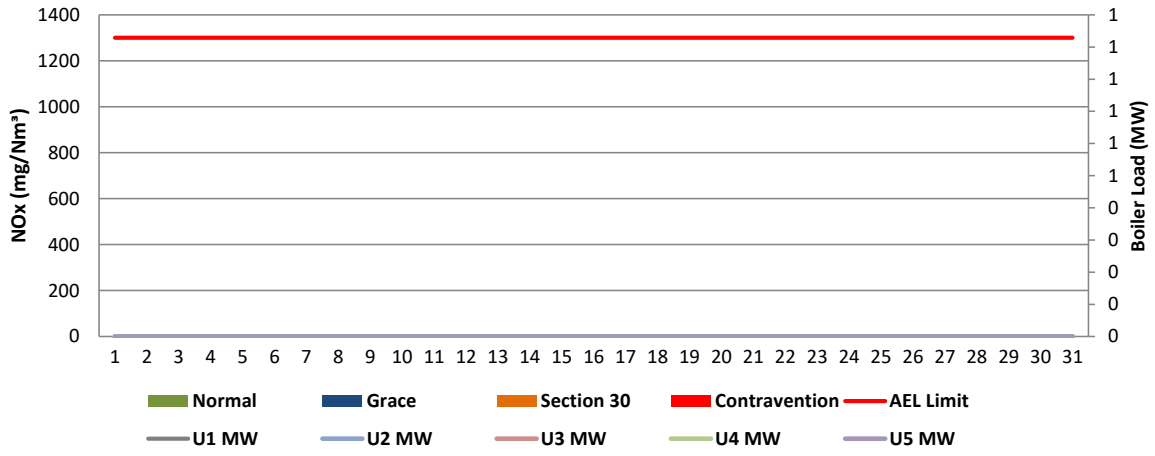
**Figure 3: Komati East Stack SOx Emissions - August 2020**



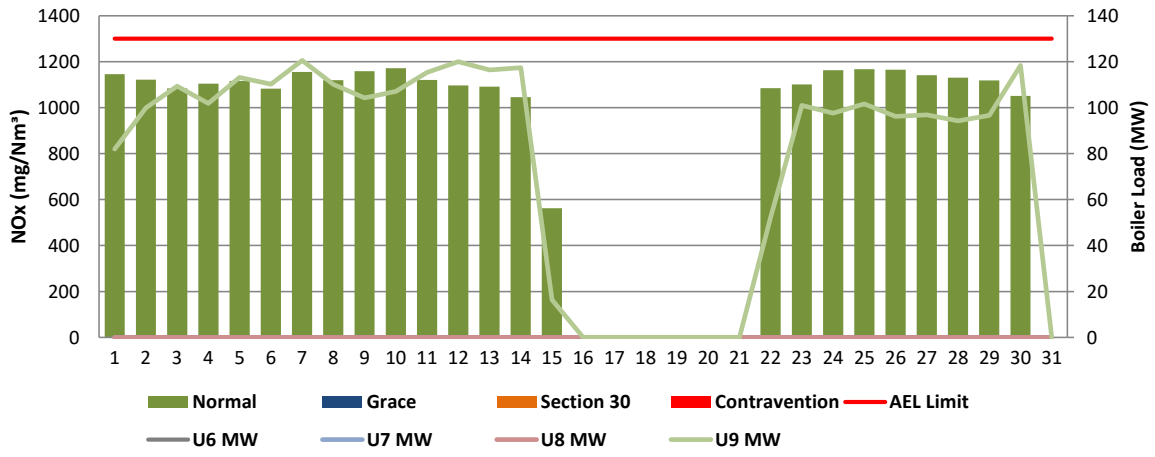
**Figure 4: Komati West Stack SOx Emissions - August 2020**



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



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



**7 SHUT DOWN AND LIGHT UP INFORMATION**

Table 6.1. PM Start-up information for the month of August-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>no event</i>		<i>no event</i>		<i>no event</i>	
Breaker Open (BO)	<i>12:20 AM</i>	<i>2020/08/15</i>	<i>11:30 PM</i>	<i>2020/08/30</i>				
Draught Group (DG) Shut Down (SD)	<i>8:40 AM</i>	<i>2020/08/15</i>	<i>7:40 AM</i>	<i>2020/08/31</i>				
BO to DG SD (duration)	<i>00:08:20</i>	DD:HH:MM	<i>00:08:10</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	<i>3:20 AM</i>	<i>2020/08/22</i>						
Synch. to Grid (or BC)	<i>4:55 PM</i>	<i>2020/08/22</i>						
Fires in to BC (duration)	<i>00:13:35</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	<i>3:00 AM</i>	<i>2020/08/23</i>						
Emissions below limit from BC (duration)	<i>00:10:05</i>	DD:HH:MM		DD:HH:MM		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 August-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


 2020/09/14  
Boiler Plant Engineering      Date

 2020/09/14  
Environmental Practitioner      Date

 2020/09/14  
General Manager      Date

Compiled by: Boiler Engineering Department

Adhir Debising      ESP & SO3 Engineer

For:      Department of Environmental Affairs and Tourism Air Pollution Control Officer

Copies:      Eskom Environmental Management

D Herbst  
B. Mccourt

Group Technology Engineering

R Rampiar  
E. Patel

Komati Power Station:

Bongani Mashimbye      Engineering Manager  
Sello Mametja      General Manager (Acting)  
Goitsewang Nkomo      Boiler Engineering Manager  
Mokgadi Mvambo      Environmental Manager(Acting)  
Falakhe Mdluli      Performance and TestManager  
Jurie Pieterse      Production Manager  
Ntsoaki Fakudze      Maintenance Manager (Acting)