

**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 2020
	Coal	Tons	460 000	31 474
	Fuel Oil	Tons	5 000	487
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Apr-2020
	Energy	GWh	684	52
	Ash	Tons	160 000	22
	RE PM	kg/MWh	0.46	0.42

## 2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	16-24	
Sulphur Content	%	<= 1.2	0.550
Ash Content	%	<= 33	21.150

## 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 Apr-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)	99.7%
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)	99.5%

\*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	100.0	100.0	100.0		100.0	100.0
West	81.9	83.4	81.4		80.4	81.8

## 6 EMISSION PERFORMANCE

Table 4: Monthly tonnages for the month of April-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	
2	0.0	0.0	0.0	
3	0.0	0.0	0.0	
4	13.6	627.2	379.6	
5	0.0	0.0	0.0	
6	0.0	0.0	0.0	
7	0.0	0.0	0.0	
8	0.0	0.0	0.0	
9	8.0	162.8	92.3	
<b>SUM</b>	<b>21.6</b>	<b>790.0</b>	<b>471.9</b>	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
East	21	0	0	0	0	39.6
West	8	1	0	0	1	61.8
<b>SUM</b>	<b>29</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	

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

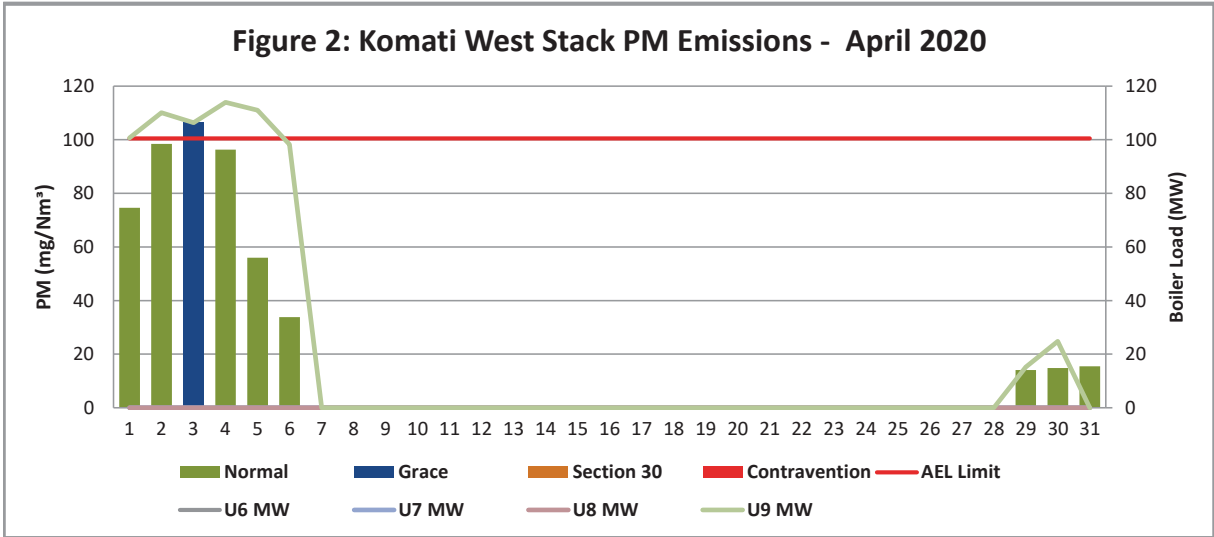
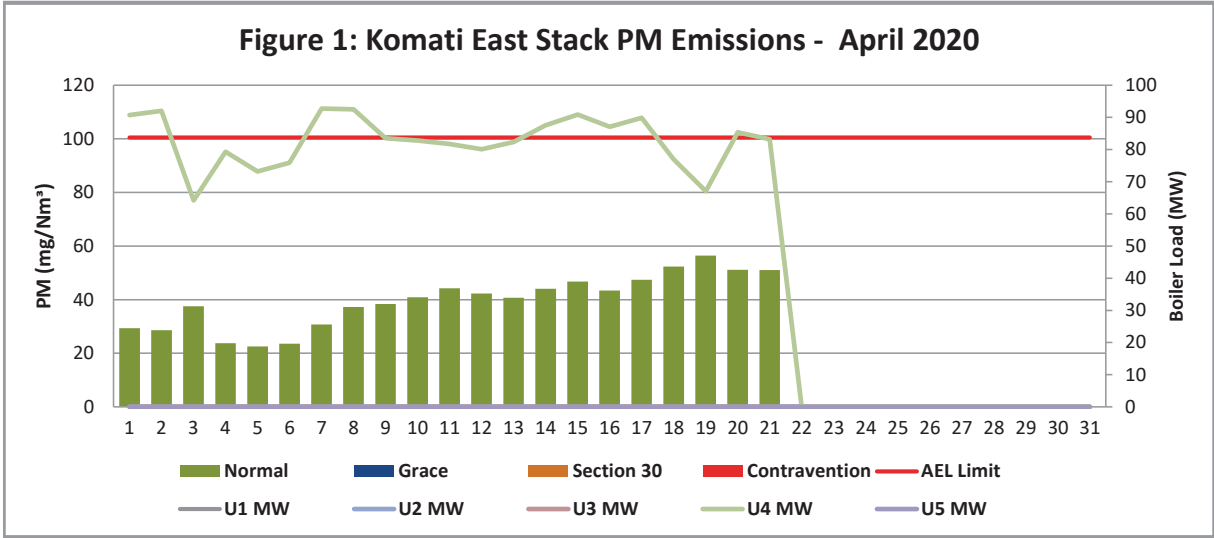
Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average SO <sub>x</sub> (mg/Nm <sup>3</sup> )
East	21	0	0	0	0	1 843.5
West	9	0	0	0	0	1 516.7
<b>SUM</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

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

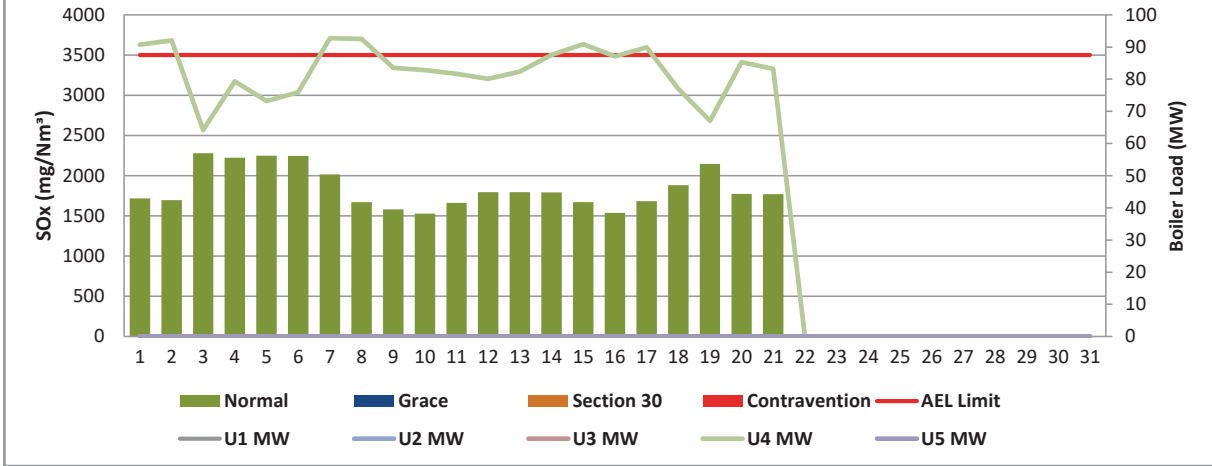
Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average NO <sub>x</sub> (mg/Nm <sup>3</sup> )
East	21	0	0	0	0	1 098.4
West	9	0	0	0	0	846.5
<b>SUM</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Table 6.5: Legend Description

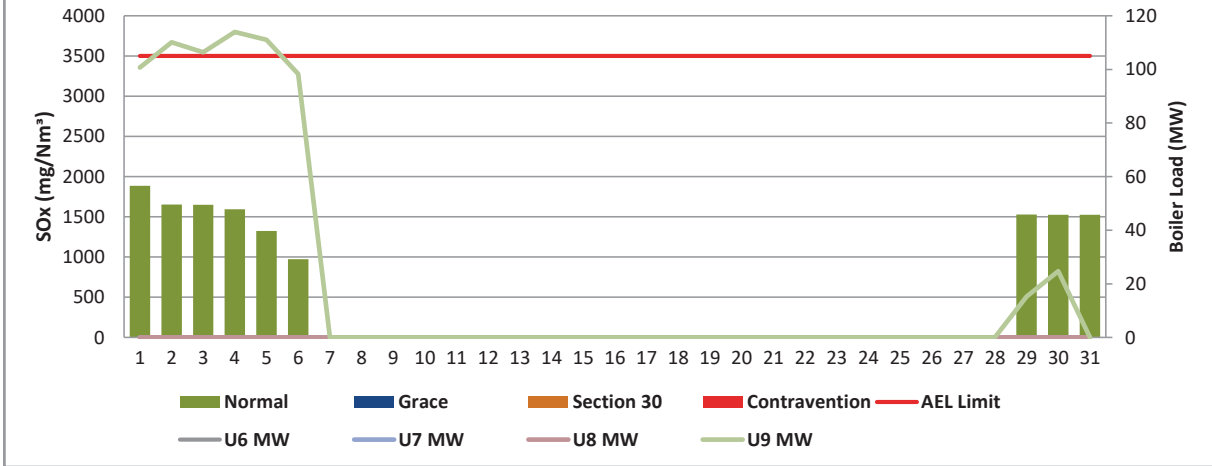
Condition	Colour	Description
Normal	Green	Emissions below Emission Limit Value (ELV)
Grace	Blue	Emissions above the ELV during grace period
Section 30	Orange	Emissions above ELV during a NEMA S30 incident
Contra-vention	Red	Emissions above ELV but outside grace or S30 incident conditions



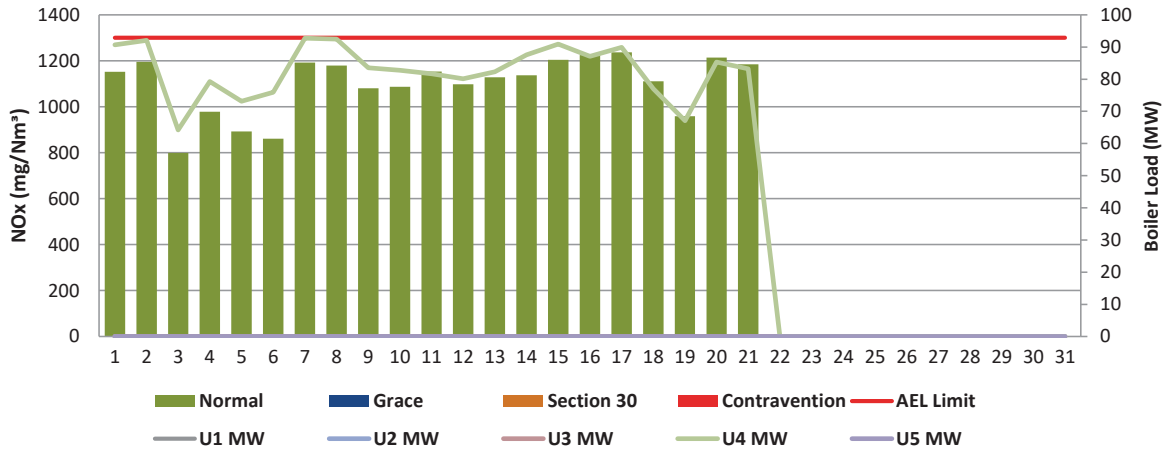
**Figure 3: Komati East Stack SOx Emissions - April 2020**



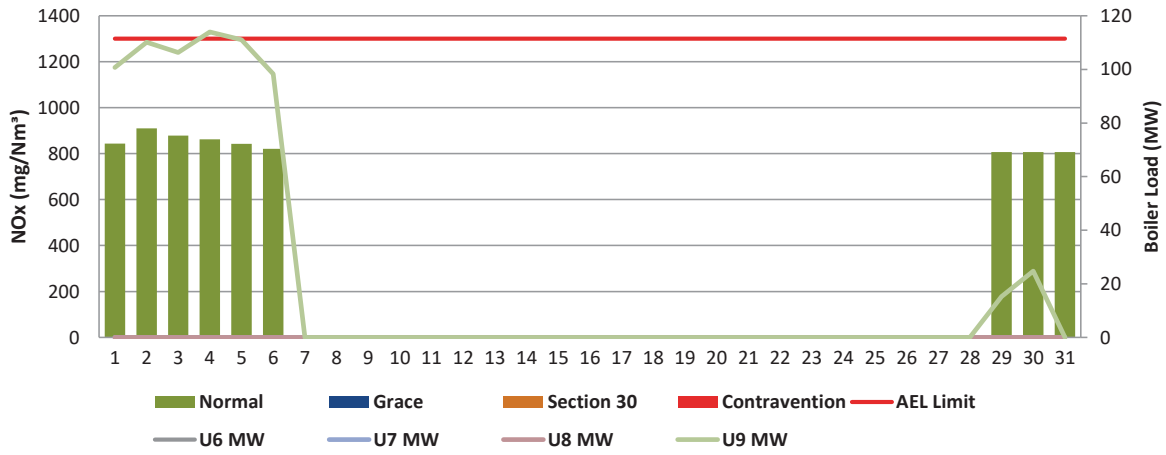
**Figure 4: Komati West Stack SOx Emissions - April 2020**



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



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



**7 SHUT DOWN AND LIGHT UP INFORMATION**

Table 6.1. PM Start-up information for the month of April-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)	<i>9:10 PM</i>	<i>2020/04/21</i>						
Draught Group (DG) Shut Down (SD)	<i>12:05 PM</i>	<i>2020/04/23</i>						
BO to DG SD (duration)	<i>01:14:55</i>	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>11:10 PM</i>	<i>2020/04/06</i>	<i>4:25 AM</i>	<i>2020/04/27</i>	<i>7:10 PM</i>	<i>2020/04/28</i>	<i>4:20 AM</i>	<i>2020/04/30</i>
Draught Group (DG) Shut Down (SD)	<i>9:00 AM</i>	<i>2020/04/07</i>	<i>6:15 AM</i>	<i>2020/04/28</i>	<i>3:45 AM</i>	<i>2020/04/30</i>	<i>12:50 PM</i>	<i>2020/05/01</i>
BO to DG SD (duration)	<i>00:09:50</i>	DD:HH:MM	<i>01:01:50</i>	DD:HH:MM	<i>01:08:35</i>	DD:HH:MM	<i>01:08:30</i>	DD:HH:MM
Fires in time	<i>2:00 AM</i>	<i>2020/05/02</i>						
Synch. to Grid (or BC)	<i>8:40 AM</i>	<i>2020/05/02</i>						
Fires in to BC (duration)	<i>00:06:40</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	<i>not &gt; limit</i>	<i>not &gt; limit</i>						
Emissions below limit from BC (duration)	<i>n/a</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 April-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

03/04/2020 - Unit 9 - SO3 control valve replacement


  
2020/05/20  
Boiler Plant Engineering      Date

  
2020/05/20  
Environmental Practitioner      Date

  
2020/05/20  
General Manager      Date

Compiled by: Boiler Engineering Department

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

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Sello Mameija      General Manager (Acting)  
Goitsehang Nkomo      Boiler Engineering Manager  
Richard Muswubi      Environmental Manager (Acting)  
Falakhe Mdluli      Performance and Test Manager  
Jurie Pieterse      Production Manager  
Ntsoaki Fakudze      Projects & Outage Manager (Acting)