

**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 Mar-2020
	Coal	Tons	460 000	
	Fuel Oil	Tons	5 000	
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Mar-2020
	Energy	GWh	707	126
	Ash	Tons	160 000	35
	RE PM	kg/MWh	0,46	0,27

## 2 ENERGY SOURCE CHARACTERISTICS

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

## 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 Mar-2020
Unit 1	<i>Electro Static Precipicators (ESP)</i>	<i>Unit Off-line</i>
Unit 2	<i>Electro Static Precipicators (ESP)</i>	<i>Unit Off-line</i>
Unit 3	<i>Electro Static Precipicators (ESP)</i>	<i>Unit Off-line</i>
Unit 4	<i>Electro Static Precipicators (ESP)</i>	99,8%
Unit 5	<i>Electro Static Precipicators (ESP)</i>	<i>Unit Off-line</i>
Unit 6	<i>Electro Static Precipicators (ESP)</i>	<i>Unit Off-line</i>
Unit 7	<i>Electro Static Precipicators (ESP)</i>	<i>Unit Off-line</i>
Unit 8	<i>Electro Static Precipicators (ESP)</i>	<i>Unit Off-line</i>
Unit 9	<i>Electro Static Precipicators (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 <sub>2</sub>	NO	CO <sub>2</sub>	O <sub>2</sub>	Temp
East	97,8	88,9	90,3		92,2	97,8
West	100,0	93,1	98,3		98,4	100,0

## 6 EMISSION PERFORMANCE

Table 4: Monthly tonnages for the month of March-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	16,1	822,3	383,1	
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	18,6	1 038,3	562,3	
SUM	34,6	1 860,6	945,4	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
East	25	1	0	0	1	40,4
West	31	0	0	0	0	33,7
SUM	56	1	0	0	1	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average SO <sub>x</sub> (mg/Nm <sup>3</sup> )
East	23	3	0	0	3	2 195,5
West	30	0	0	0	0	1 949,1
SUM	53	3	0	0	3	

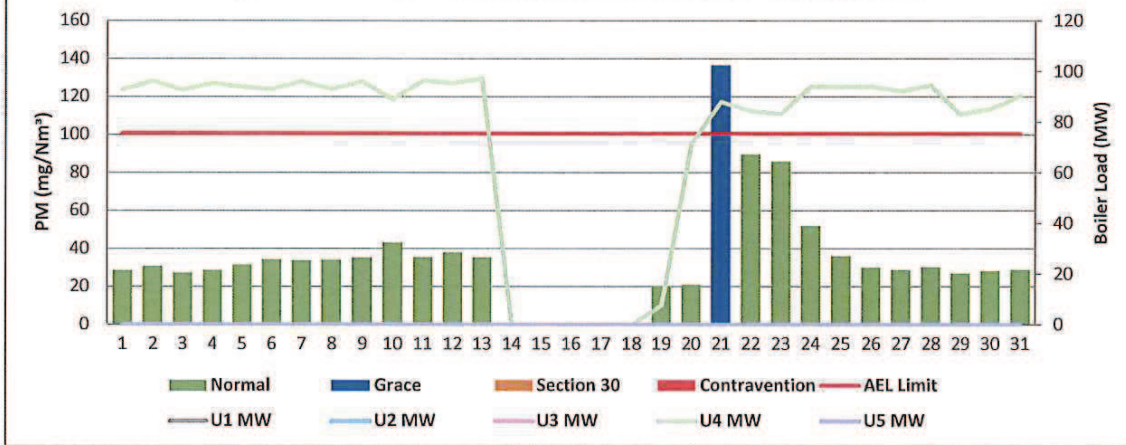
Table 6.4: Operating days in compliance to NO<sub>x</sub> AEL Limit - March 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average NO <sub>x</sub> (mg/Nm <sup>3</sup> )
East	26	0	0	0	0	967,4
West	31	0	0	0	0	1 022,9
SUM	57	0	0	0	0	

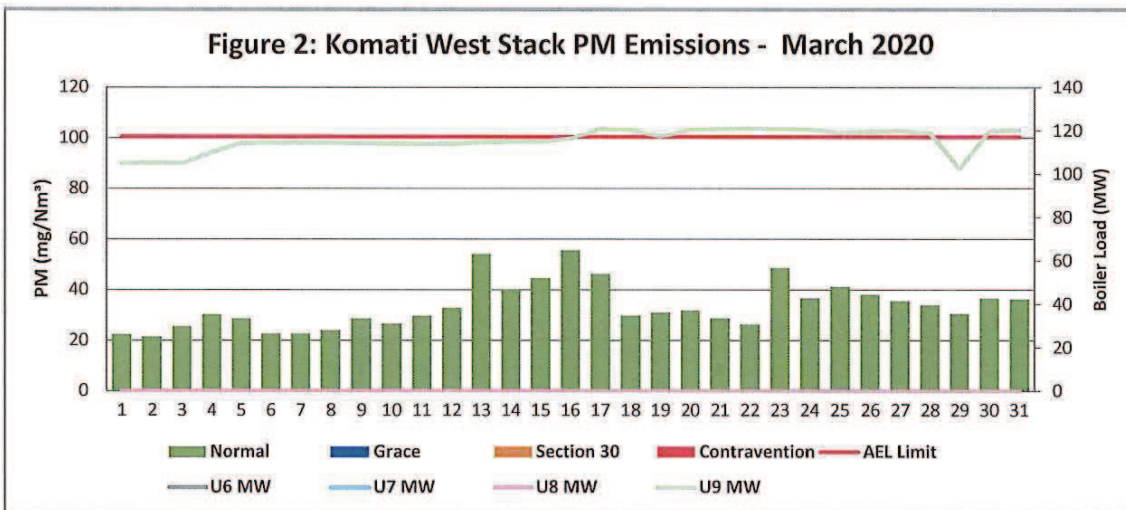
Table 6.5: Legend Description

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
Contra-vention		Emissions above ELV but outside grace or S30 incident conditions

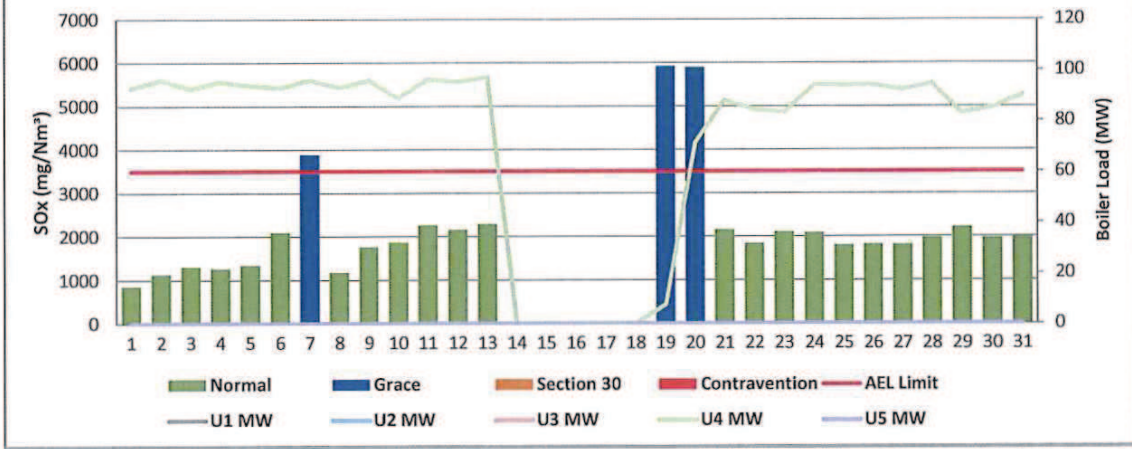
**Figure 1: Komati East Stack PM Emissions - March 2020**



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



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



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

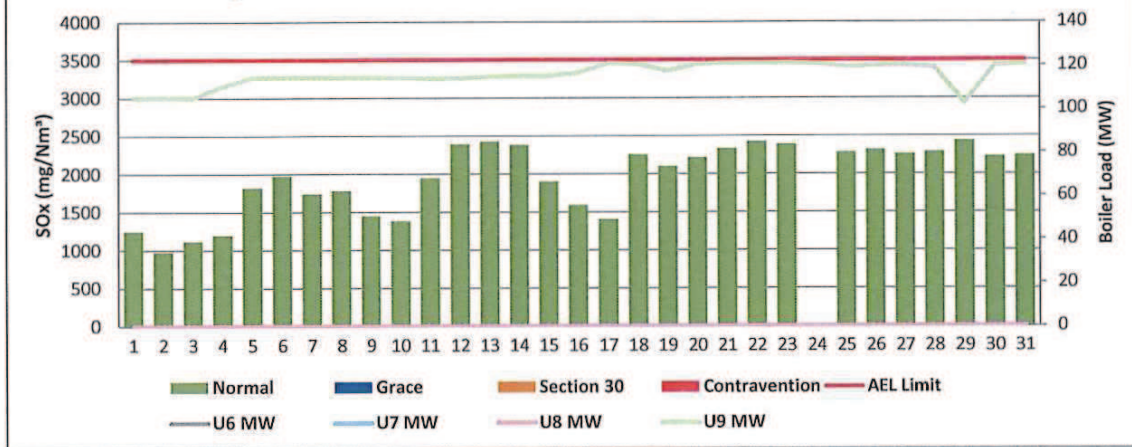


Figure 5: Komati East Stack NOx Emissions - March 2020

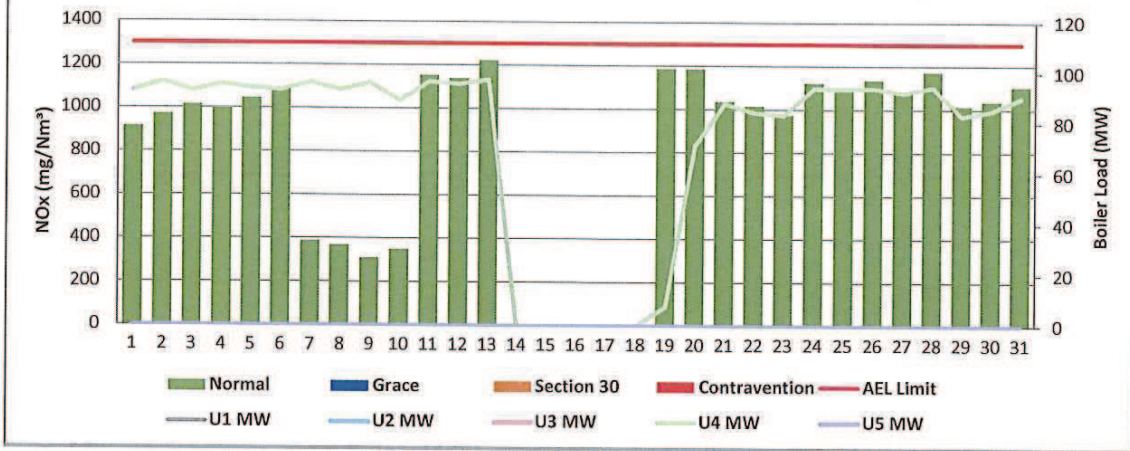
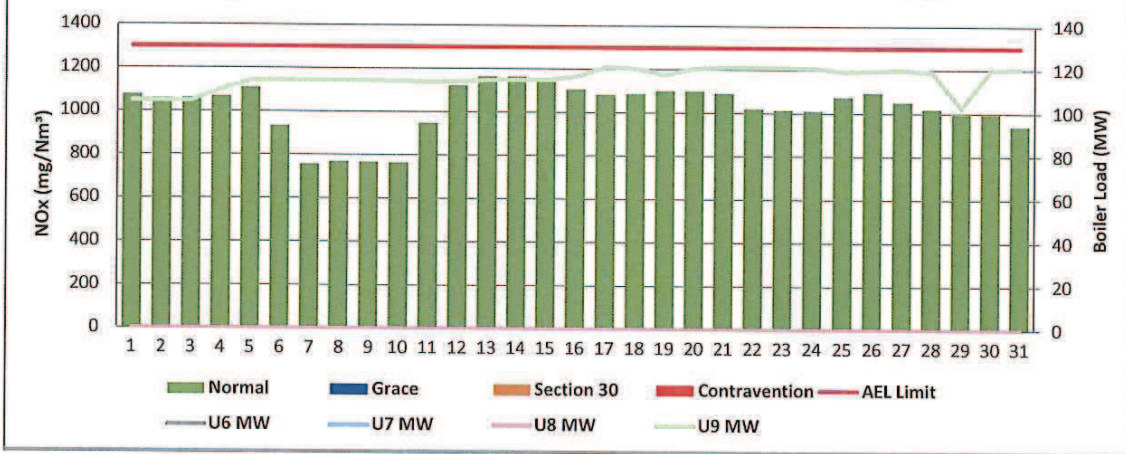


Figure 6: Komati West Stack NOx Emissions - March 2020



7 SHUT DOWN AND LIGHT UP INFORMATION

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

East Stack	<i>Event 1</i>		<i>Event 2</i>		<i>Event 3</i>		<i>Event 4</i>	
Unit No.	<i>Unit 4</i>		<i>no event</i>		<i>no event</i>		<i>no event</i>	
Breaker Open (BO)	<i>2:30 AM</i>	<i>2020/03/13</i>						
Draught Group (DG) Shut Down (SD)	<i>7:40 PM</i>	<i>2020/03/13</i>						
BO to DG SD (duration)	<i>00:17:10</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	<i>11:05 AM</i>	<i>2020/03/19</i>						
Synch. to Grid (or BC)	<i>11:40 PM</i>	<i>2020/03/19</i>						
Fires in to BC (duration)	<i>00:12:35</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	<i>12:00 AM</i>	<i>2020/03/22</i>						
Emissions below limit from BC (duration)	<i>02:00:20</i>	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>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 ...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 March-2020 in mg/Nm<sup>3</sup>


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



11 General


  
Boiler Plant Engineering      2020/04/14  
Date

  
Environmental Practitioner      2020/04/14  
Date

  
General Manager      2020/04/14  
Date

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Verified by: Boiler Engineering Department

Mokgadi Mvambo      Environmental Practitioner  
Adhir Debising      ESP & SO3 Engineer

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

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R Rampiar  
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Bongani Mashimbye      Engineering & Maintenance Manager  
Goitsewang Nkomo      Boiler Engineering Manager  
Thevan Pillay      Risk and Assurance Manager  
Jurie Pieterse      Production Manager