

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 Jun-2020
	Coal	Tons	460 000	45 240
	Fuel Oil	Tons	5 000	97
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Jun-2020
	Energy	GWh	684	70
	Ash	Tons	160 000	17
	RE PM	kg/MWh	0.46	0.25

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	16-24	23.030
Sulphur Content	%	<= 1.2	0.600
Ash Content	%	<= 33	21.680

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 Jun-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 ₂	NO	CO ₂	O ₂	Temp
East						
West	99.8	90.2	98.3	98.1	98.1	99.1

6 EMISSION PERFORMANCE

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

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	17.3	701.2	537.5	89 084
SUM	17.3	701.2	537.5	89 084

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
East	0	0	0	0	0	
West	30	1	0	0	1	38.4
SUM	30	1	0	0	1	

Table 6.3: Operating days in compliance to SOx AEL Limit - June 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm ³)
East	0	0	0	0	0	
West	31	0	0	0	0	1 484.0
SUM	31	0	0	0	0	

Table 6.4: Operating days in compliance to NOx AEL Limit - June 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm ³)
East	0	0	0	0	0	
West	31	0	0	0	0	1 146.8
SUM	31	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 - June 2020

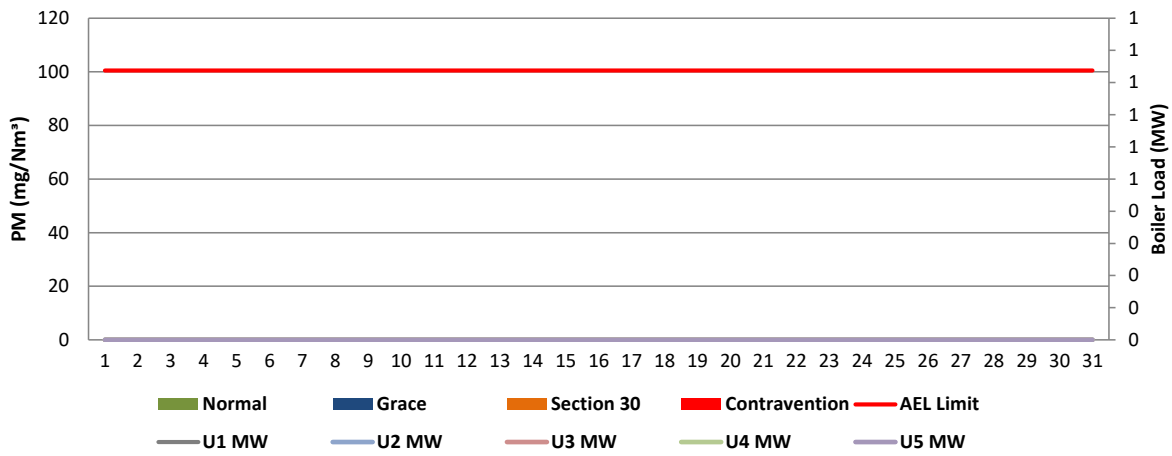


Figure 2: Komati West Stack PM Emissions - June 2020

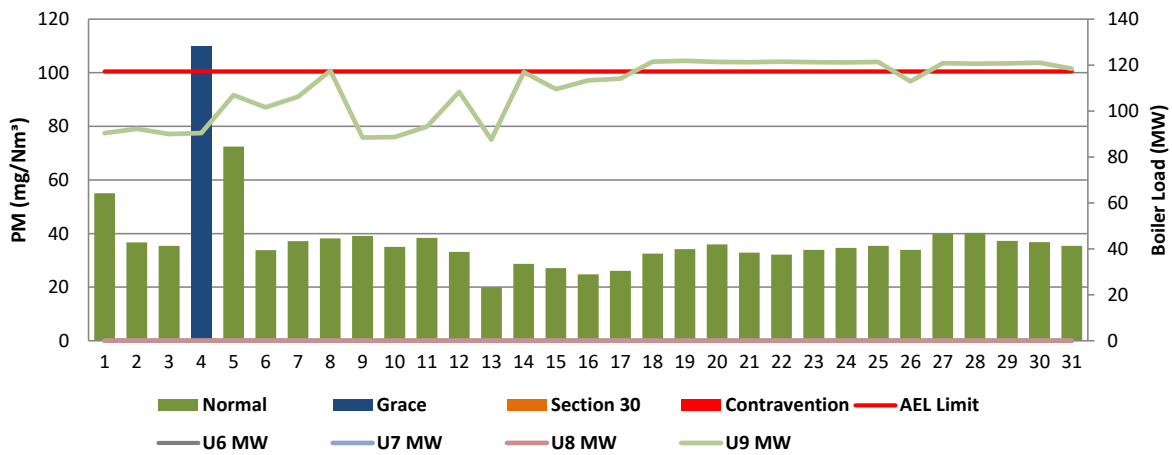


Figure 3: Komati East Stack SOx Emissions - June 2020

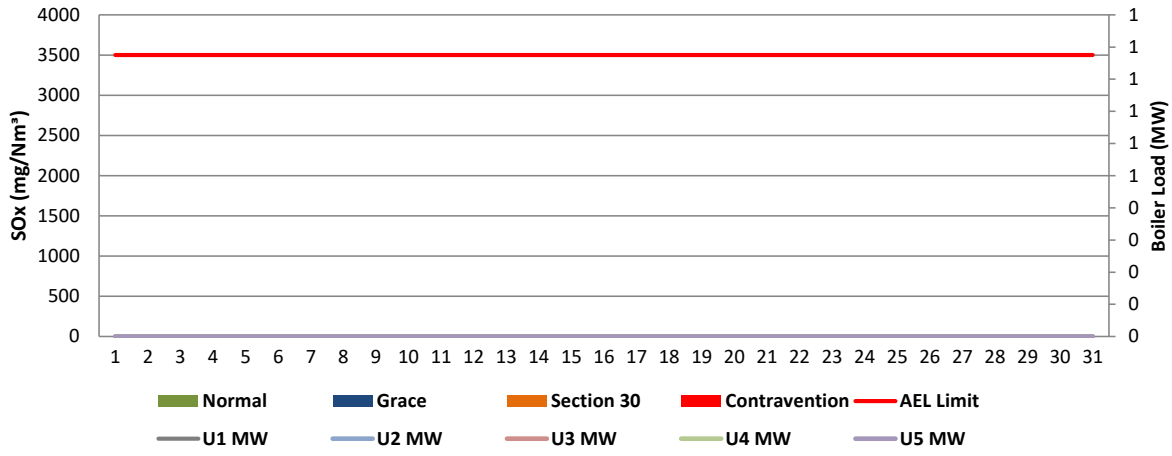


Figure 4: Komati West Stack SOx Emissions - June 2020

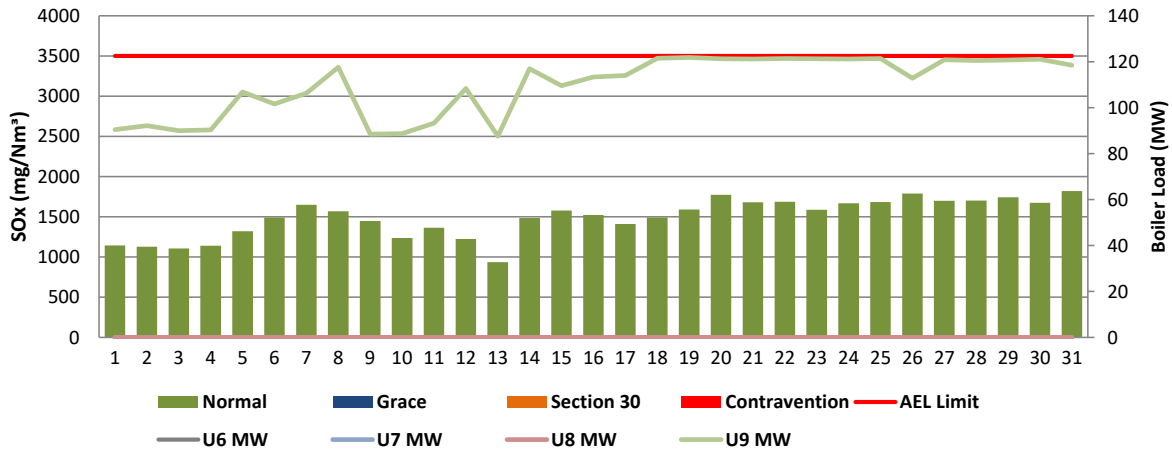


Figure 5: Komati East Stack NOx Emissions - June 2020

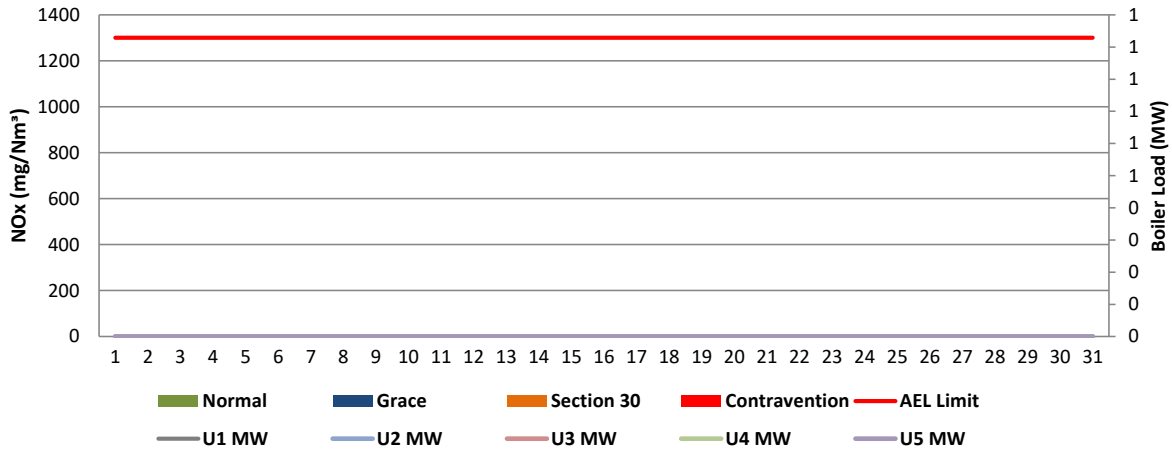
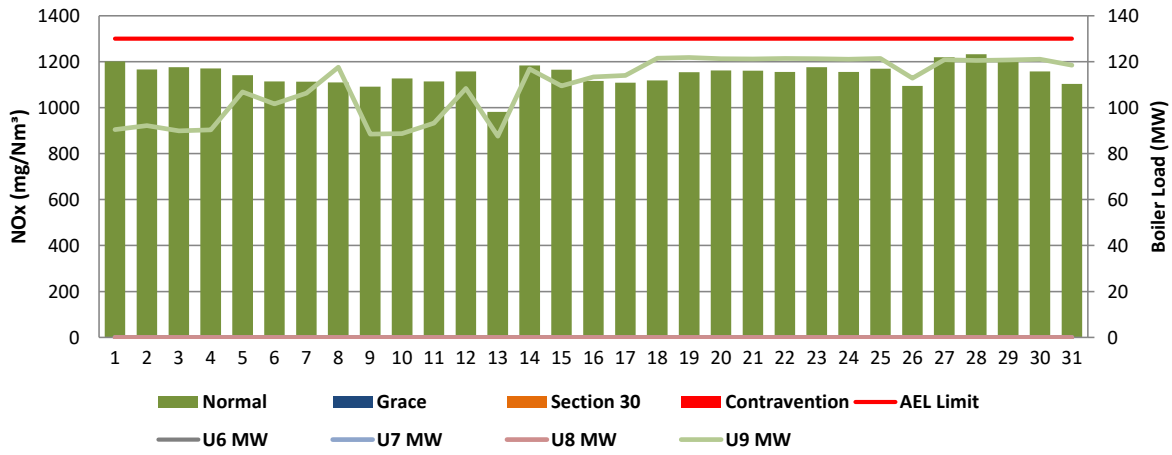


Figure 6: Komati West Stack NOx Emissions - June 2020



7 SHUT DOWN AND LIGHT UP INFORMATION

Table 6.1. PM Start-up information for the month of June-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>8:25 PM</i>	<i>2020/06/10</i>						
Draught Group (DG) Shut Down (SD)	<i>9:25 PM</i>	<i>2020/06/10</i>						
BO to DG SD (duration)	<i>00:01:00</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	<i>9:25 PM</i>	<i>2020/06/10</i>						
Synch. to Grid (or BC)	<i>2:15 PM</i>	<i>2020/06/11</i>						
Fires in to BC (duration)	<i>00:16:50</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>2020/06/12</i>						
Emissions below limit from BC (duration)	<i>00:09:45</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 June-2020 in mg/Nm³

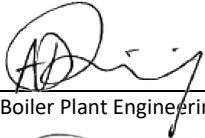
[[Include reference to once off test showing typical emissions rates during fires in and SD]]

Remember to add attachments here; see ReportAddendum Tab

Reserved for Addendum XXXX

11 General

2020/06/04 - Common Plant - SO3 plant steam leak and blanking maintenance work



2020/08/24

Boiler Plant Engineering Date



2020/08/21

Environmental Practitioner Date



2020/08/24

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 Mamejja	General Manager (Acting)
Goitsemang Nkomo	Boiler Engineering Manager
Mokgadi Mvambo	Environmental Manager(Acting)
Falakhe Mdluli	Performance and TestManager
Jurie Pieterse	Production Manager
Ntsoaki Fakudze	Maintenance Manager (Acting)