

**HENDRINA POWER STATION MONTHLY EMISSIONS REPORT**

Atmospheric Emission License 17/4/AEL/MP313/11/16



About Corona virus/ COVID-19:

WhatsApp Support Line: 0600-123456

Twitterinstagramwhatsappyoutube

**COVID-19**

Online Resource & News Portal  
SAcoronavirus.co.za



**1 RAW MATERIALS AND PRODUCTS**

Raw Materials and Products	Raw Material Type	Units	Max. Permitted Consumption Rate	Consumption Rate Oct-2022
	Coal	Tons	820 000	134 174.0
	Fuel Oil	Tons	3 200	933.782

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Oct-2022
	Energy	GWh	1488	200.06
	Ash	Tons	290 000	31 450
	RE PM	kg/MWh	not specified	0.233

**2 ENERGY SOURCE CHARACTERISTICS**

Coal Characteristics	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.6 to < 1	0.94
Ash Content	%	31 to < 35	23.44

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

Associated Unit/Stack	PM	SO <sub>2</sub>	NO <sub>x</sub>
North	75	3200	1200
South	75	3200	1200

**4 ABATEMENT TECHNOLOGY (%)**

Associated Unit/Stack	Technology Type	Efficiency Oct-2022
Unit 1	Fabric Filter Plant (FFP)	Unit Off-line
Unit 2	Fabric Filter Plant (FFP)	Unit Off-line
Unit 3	Fabric Filter Plant (FFP)	Unit Off-line
Unit 4	Fabric Filter Plant (FFP)	Unit Off-line
Unit 5	Fabric Filter Plant (FFP)	Unit Off-line
Unit 6	Fabric Filter Plant (FFP)	100.000%
Unit 7	Fabric Filter Plant (FFP)	100.000%
Unit 8	Fabric Filter Plant (FFP)	Unit Off-line
Unit 9	Fabric Filter Plant (FFP)	Unit Off-line
Unit 10	Fabric Filter Plant (FFP)	100.000%

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	O <sub>2</sub>
North				
South	100.0	100.0	100.0	99.2

**Comments:** North Stack boiler units were offline throughout the month and there was no release of emissions.

Note: NO<sub>x</sub> emissions is measured as NO in PPM. Final NO<sub>x</sub> value is expressed as total NO<sub>2</sub>

**6 EMISSION PERFORMANCE**

Table 6.1: Monthly tonnages for the month of October-2022

Associated Unit/Stack	PM (tons)	SO <sub>x</sub> (tons)	NO <sub>x</sub> (tons)
North	0.0	0.0	0.0
South	46.6	2 044.0	1 111.5
<b>SUM</b>	46.6	2 044.0	1 111.5

Table 6.2: Operating days in compliance to PM AEL Limit - October 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
North	0	0	0	0	0	
South	31	0	0	0	0	38.1
<b>SUM</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Comment: North Stack Units were non-operational throughout the month

Table 6.3: Operating days in compliance to SO<sub>2</sub> AEL Limit - October 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO <sub>2</sub> (mg/Nm <sup>3</sup> )
North	0	0	0	0	0	
South	31	0	0	0	0	1 650.8
<b>SUM</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Comment: North Stack Units were non-operational throughout the month

Table 6.4: Operating days in compliance to NOx AEL Limit - October 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm <sup>3</sup> )
North	0	0	0	0	0	
South	31	0	0	0	0	893.4
<b>SUM</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Comment: North Stack Units were non-operational throughout the month

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: Hendrina North Stack PM Emissions - October 2022

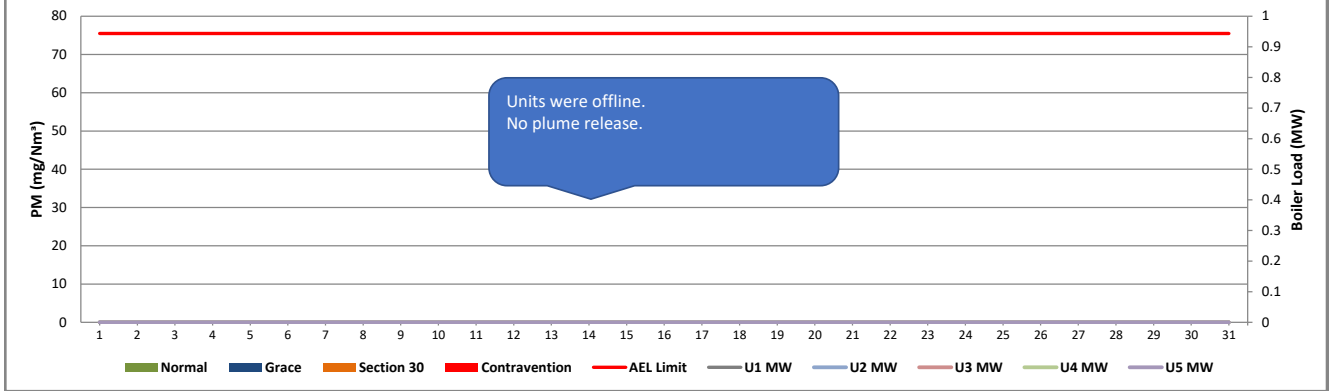


Figure 2: Hendrina South Stack PM Emissions - October 2022

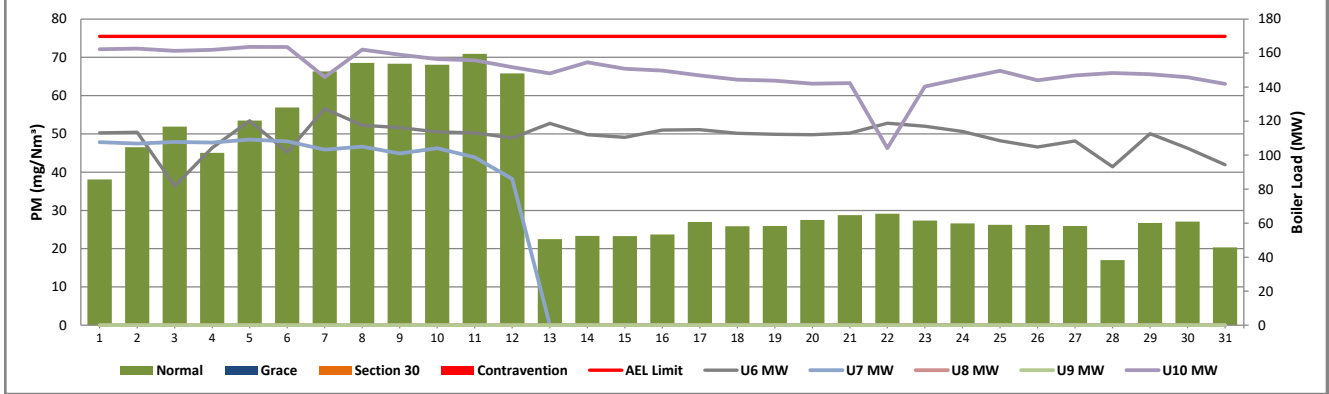


Figure 3: Hendrina North Stack SO<sub>2</sub> Emissions - October 2022

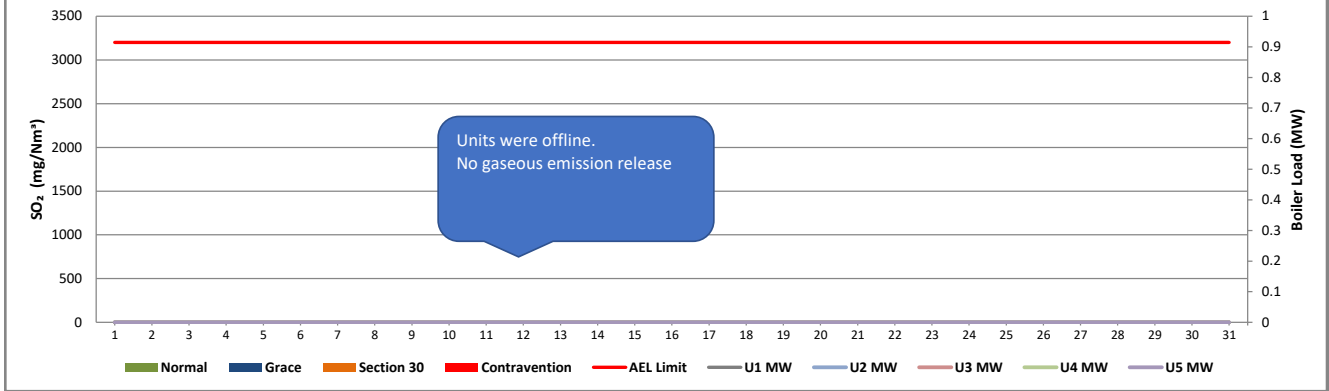


Figure 4: Hendrina South Stack SO<sub>2</sub> Emissions - October 2022

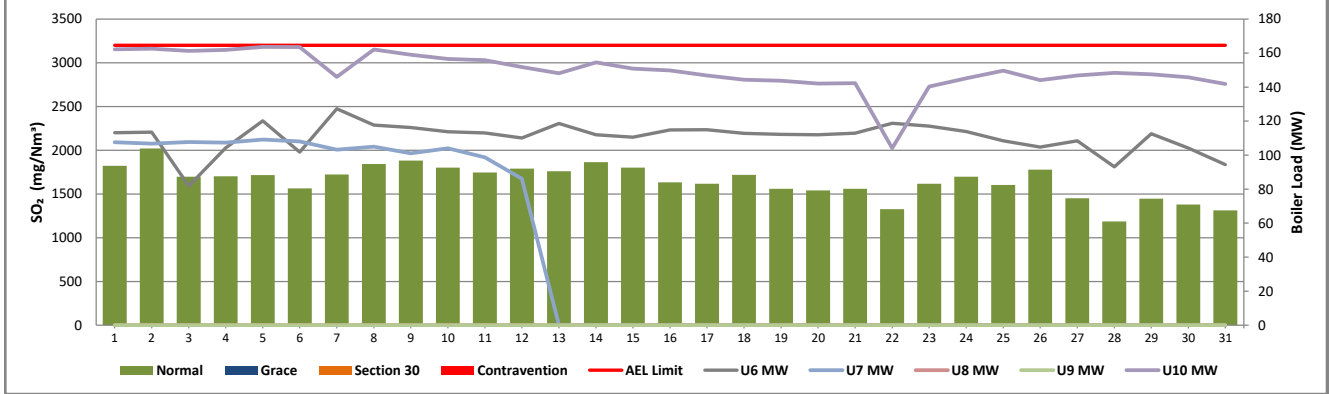


Figure 5: Hendrina North Stack NOx Emissions - October 2022

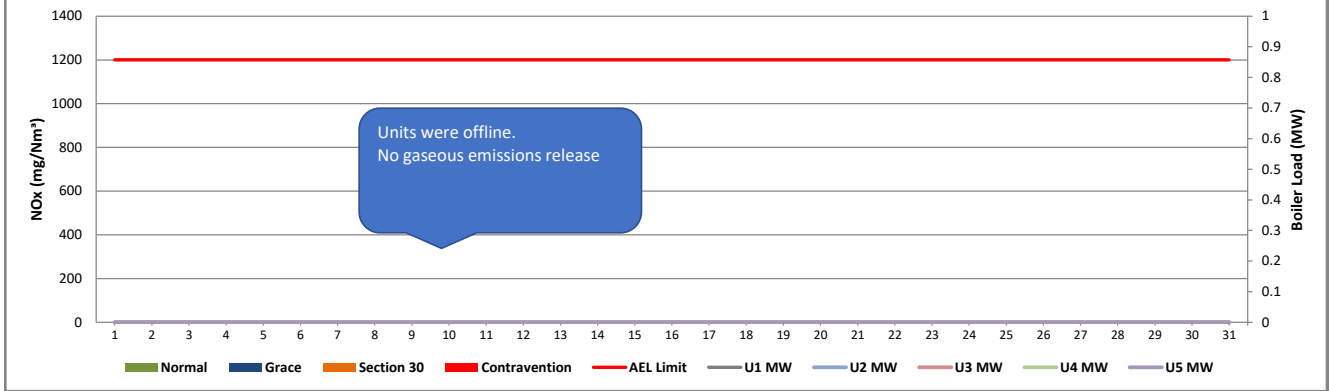
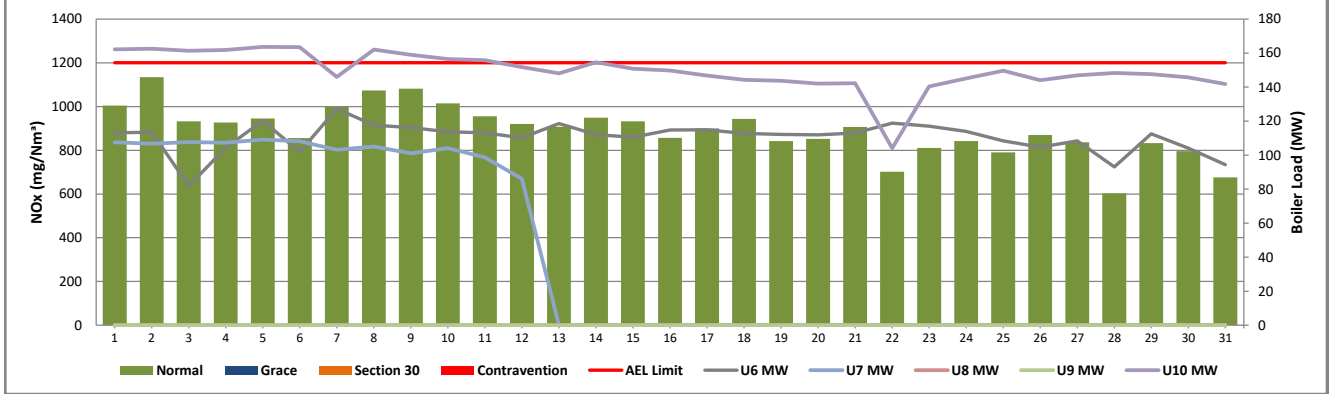


Figure 6: Hendrina South Stack NOx Emissions - October 2022



**7 SHUT DOWN AND LIGHT UP INFORMATION**

Table 7.1 PM Start-up information for the month of October-2022

South Stack	<i>Event 1</i>		<i>Event 2</i>		<i>Event 3</i>		<i>Event 4</i>	
Unit No.	<i>Unit 6</i>		<i>Unit 7</i>		<i>Unit 10</i>		<i>no event</i>	
Breaker Open (BO)	<i>2:55 am</i>	<i>2022/10/03</i>	<i>8:45 pm</i>	<i>2022/10/12</i>	<i>1:05 am</i>	<i>2022/10/22</i>		
Draught Group (DG) Shut Down (SD)	<i>2:55 am</i>	<i>2022/10/03</i>	<i>8:45 pm</i>	<i>2022/10/12</i>	<i>1:05 am</i>	<i>2022/10/22</i>		
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	<i>3:00 pm</i>	<i>2022/10/06</i>			<i>23:03:00</i>	<i>2022/10/23</i>		
Synch. to Grid (or BC)	<i>3:30 pm</i>	<i>2022/10/06</i>			<i>3:30 am</i>	<i>2022/10/23</i>		
Fires in to BC (duration)	<i>00:00:30</i>	DD:HH:MM		DD:HH:MM	<i>00:00:30</i>	DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	<i>not &gt; limit</i>	<i>not &gt; limit</i>			<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	<i>n/a</i>	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 October-2022 in mg/Nm<sup>3</sup>

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



**8 EMERGENCY GENERATION**

There was no emergency generation for any boiler unit

**9 COMPLAINTS REGISTER**

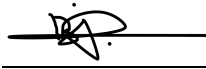
Source Code / Name	Root Cause Analysis	Calculation of Impacts / emissions associated with the incident	Dispersion modeling of pollutants where applicable	Date measure will be implemented	Measures implemented to prevent reoccurrence
<i>There were no complaints received</i>					

**10 S30 INCIDENT OR LEGAL CONTRAVENTION REGISTER**

No Section 30 or legal contravention for the month of October was recorded.

11 General

North Stack units were offline throughout the month of October.

 14/11/2022

Compiled: Environmental Officer Date  
B. Madiope

 16 November 2022

Authorised by: GM Date  
A Van Greuning


Compiled by: Boiler Engineering Department

For: Nkangala District Municipality

Copies: Eskom Environmental Management

Group Technology Engineering

Hendrina Power Station:

 15/11/2022

Verified by: System Engineer Date  
Boiler/ FFP  
Marco Cossa

FFP SE/ Environmental Officer

Air Quality Officer

D Herbst  
B Mccourt

R Rampiar  
E. Patel

Engineering Manager  
Operating Manager  
Maintenance Manager  
Unit Production Manager  
Boiler Engineering Manager  
System Engineer: Boiler Engineering  
Environmental Officer  
C & I Engineering Manager  
Production Manager  
Environmental Manager  
PSM