

**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



Department of Health  
REPUBLIC OF SOUTH AFRICA



**1 RAW MATERIALS AND PRODUCTS**

Raw Materials and Products	Raw Material Type	Units	Max. Permitted Consumption Rate	Consumption Rate Jul-2022
	Coal	Tons	820 000	149 630.0
Fuel Oil	Tons	3 200	882.227	

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Jul-2022
	Energy	GWh	1488	267.84
Ash	Tons	290 000	38 679	
RE PM	kg/MWh	not specified	0.188	

**2 ENERGY SOURCE CHARACTERISTICS**

Coal Characteristics	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.6 to < 1	0.89
Ash Content	%	31 to < 35	25.85

**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 Jul-2022
Unit 1	Fabric Filter Plant (FFP)	Unit Off-line
Unit 2	Fabric Filter Plant (FFP)	99.893%
Unit 3	Fabric Filter Plant (FFP)	Unit Off-line
Unit 4	Fabric Filter Plant (FFP)	Unit Off-line
Unit 5	Fabric Filter Plant (FFP)	99.863%
Unit 6	Fabric Filter Plant (FFP)	99.865%
Unit 7	Fabric Filter Plant (FFP)	99.860%
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	100.0	62.8	62.6	62.4
South	100.0	100.0	99.9	100.0

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

**6 EMISSION PERFORMANCE**

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

Associated Unit/Stack	PM (tons)	SOx (tons)	NOx (tons)
North	16.8	1 312.9	506.9
South	33.5	1 753.6	856.2
<b>SUM</b>	50.3	3 066.5	1 363.1

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	21.2
South	29	2	0	0	2	37.1
<b>SUM</b>	<b>60</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	

Comments: The Station has exceeded PM emission limit on a grace period for 48 hours on the South Stack, hence 2 days is not counted as normal operation days

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO <sub>2</sub> (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	1 661.9
South	31	0	0	0	0	1 687.2
<b>SUM</b>	<b>62</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 - July 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO <sub>x</sub> (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	640.5
South	31	0	0	0	0	817.8
<b>SUM</b>	<b>62</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: Hendrina North Stack PM Emissions - July 2022

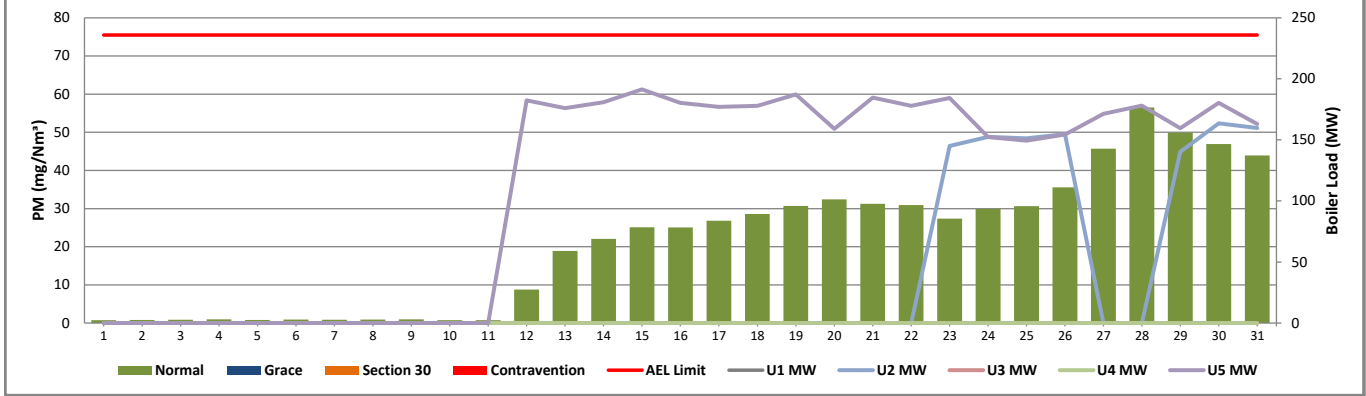


Figure 2: Hendrina South Stack PM Emissions - July 2022

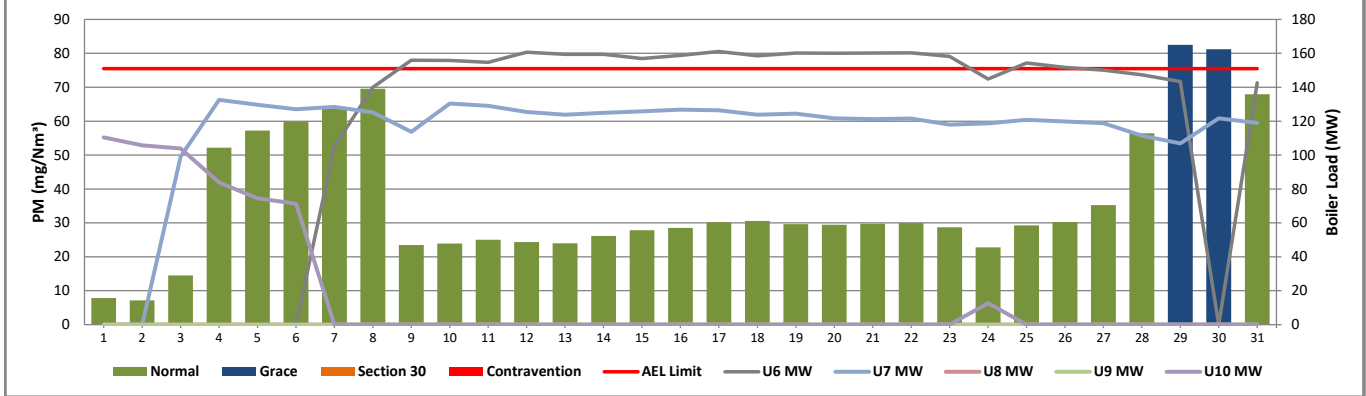


Figure 3: Hendrina North Stack SO<sub>2</sub> Emissions - July 2022

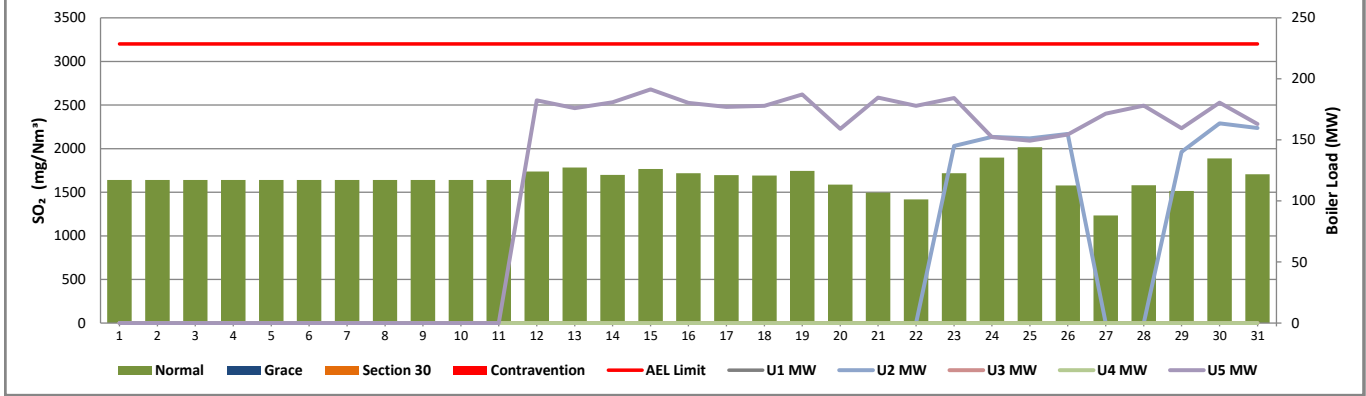
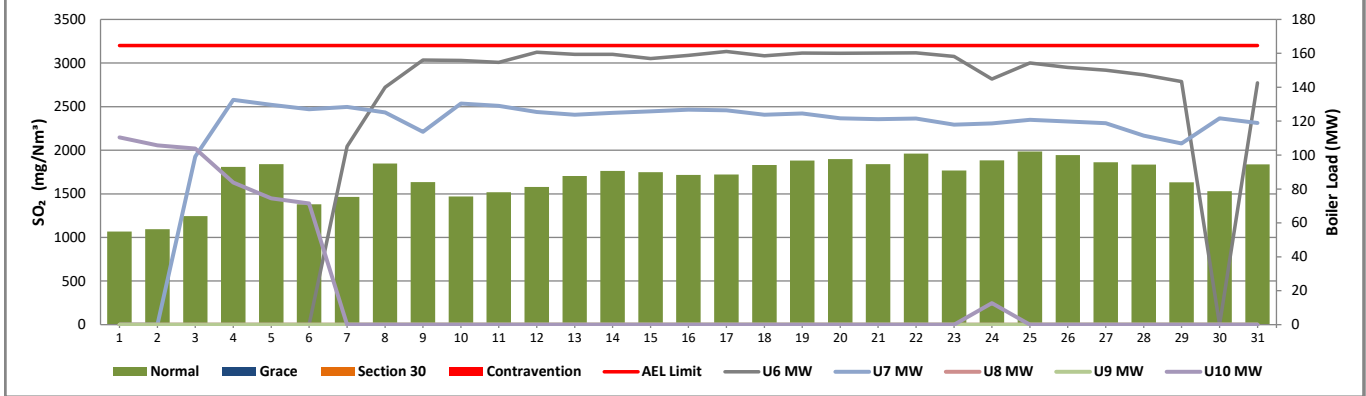
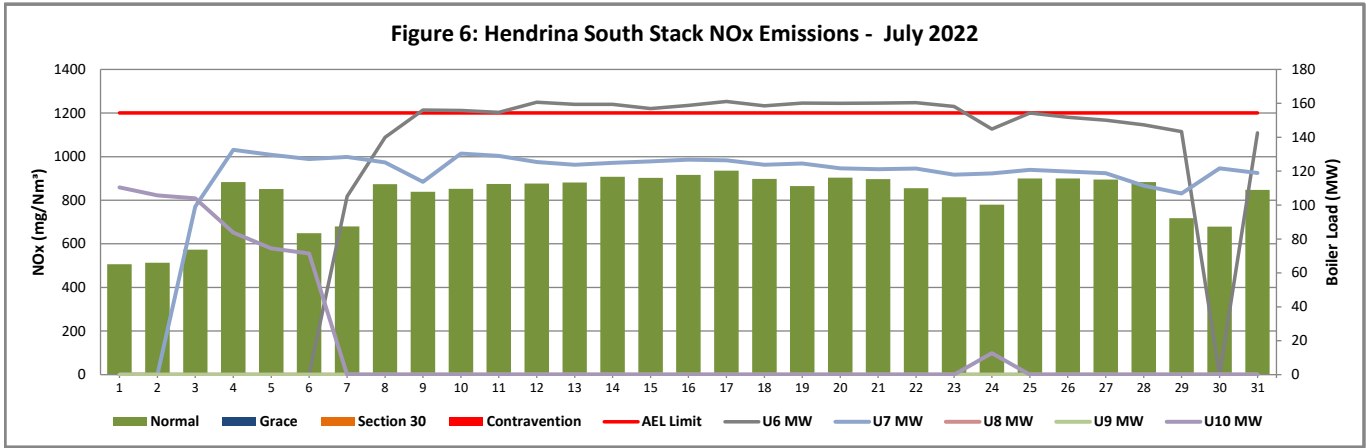
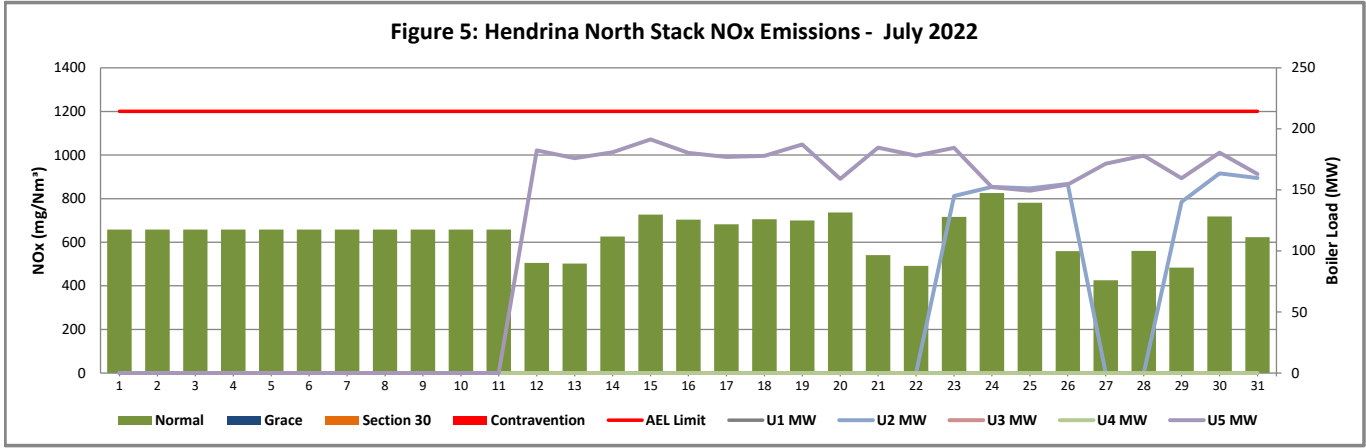


Figure 4: Hendrina South Stack SO<sub>2</sub> Emissions - July 2022





## 7 SHUT DOWN AND LIGHT UP INFORMATION

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

North Stack	<i>Event 1</i>		<i>Event 2</i>		<i>Event 3</i>		<i>Event 4</i>	
Unit No.	<i>Unit 2</i>		<i>Unit 2</i>		<i>Unit 5</i>		<i>no event</i>	
Breaker Open (BO)			<i>10:45 am</i>	<i>2022/07/26</i>				
Draught Group (DG) Shut Down (SD)			<i>11:55 am</i>	<i>2022/07/26</i>				
BO to DG SD (duration)		DD:HH:MM	<i>00:01:10</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	<i>1:00 pm</i>	<i>2022/07/22</i>			<i>09:12:00</i>	<i>2022/07/09</i>		
Synch. to Grid (or BC)	<i>1:00 am</i>	<i>2022/07/23</i>			<i>12:00 am</i>	<i>2022/07/11</i>		
Fires in to BC (duration)	<i>00:12:00</i>	DD:HH:MM		DD:HH:MM	<i>01:12:00</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

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 6</i>		<i>Unit 7</i>		<i>Unit 10</i>	
Breaker Open (BO)			<i>3:45 pm</i>	<i>2022/07/29</i>			<i>2:55 pm</i>	<i>2022/07/06</i>
Draught Group (DG) Shut Down (SD)			<i>3:45 pm</i>	<i>2022/07/29</i>			<i>2:55 pm</i>	<i>2022/07/06</i>
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	<i>12:10 am</i>	<i>2022/07/09</i>			<i>03:14:00</i>	<i>2022/07/03</i>		
Synch. to Grid (or BC)	<i>6:10 am</i>	<i>2022/07/07</i>			<i>8:00 pm</i>	<i>2022/07/03</i>		
Fires in to BC (duration)	<i>00:06:00</i>	DD:HH:MM		DD:HH:MM	<i>00:06:00</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 July-2022 in mg/Nm<sup>3</sup>

|



**8 EMERGENCY GENERATION**

There was no emergency generation

**9 COMPLAINTS REGISTER**


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

**10 S30 INCIDENT OR LEGAL CONTRAVENTION REGISTER**


*There was no section 30 incident*

11 General

South Stack PM emission limit exceeded from 29 to 30 August on grace period. The station was having maintenance interventions. Unit 6 experienced shut down and start-up between 29 and 30 August.

 15/08/2022

Compiled: Environmental Officer Date  
B. Madiope

 15 August 2022

Authorised by: GM (Acting) Date  
A Van Greuning

Compiled by: Boiler Engineering Department

For: Nkangala District Municipality

Copies: Eskom Environmental Management

Group Technology Engineering

Hendrina Power Station:

 15/08/2022

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