

HENDRINA POWER STATION MONTHLY EMISSIONS REPORT  
Atmospheric Emission License 17/4/AEL/MP313/11/16



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1 RAW MATERIALS AND PRODUCTS

Raw Materials and Products	Raw Material Type	Units	Max. Permitted Consumption Rate	Consumption Rate Apr-2022
	Coal	Tons	820 000	105 227.0
	Fuel Oil	Tons	3 200	1043.56

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Apr-2022
	Energy	GWh	1440	339.62
	Ash	Tons	290 000	31 957
	RE PM	kg/MWh	not specified	0.163

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristics	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.6 to < 1	1.50
Ash Content	%	31 to < 35	30.37

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

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

4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Apr-2022
Unit 1	Fabric Filter Plant (FFP)	Unit Off-line
Unit 2	Fabric Filter Plant (FFP)	99.982%
Unit 3	Fabric Filter Plant (FFP)	Unit Off-line
Unit 4	Fabric Filter Plant (FFP)	100.000%
Unit 5	Fabric Filter Plant (FFP)	99.925%
Unit 6	Fabric Filter Plant (FFP)	99.962%
Unit 7	Fabric Filter Plant (FFP)	99.805%
Unit 8	Fabric Filter Plant (FFP)	Unit Off-line
Unit 9	Fabric Filter Plant (FFP)	Unit Off-line
Unit 10	Fabric Filter Plant (FFP)	Unit Off-line

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>	CO <sub>2</sub>
North	100.0	96.2	100.0	94.3	93.5
South	84.6	100.0	100.0	100.0	93.8

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 April-2022

Associated Unit/Stack	PM (tons)	SOx (tons)	NOx (tons)	CO <sub>2</sub> (tons)
North	5.5	1 104.2	495.1	138 342.3
South	49.8	2 228.7	1 217.5	0.0
SUM	55.2	3 333.0	1 712.6	138 342.3

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
North	22	0	0	0	0	9.5
South	30	0	0	0	0	38.0
SUM	52	0	0	0	0	

Comments: North Stack Units were offline for 8 days and PM Emissions was not reportable during that period.

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO <sub>x</sub> (mg/Nm <sup>3</sup> )
North	22	0	0	0	0	1 780.1
South	30	0	0	0	0	1 624.2
SUM	52	0	0	0	0	

Comments: Gaseous Emissions was not detected during the period the North Stack Units were offline

Table 6.4: Operating days in compliance to NO<sub>x</sub> AEL Limit - April 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO <sub>x</sub> (mg/Nm <sup>3</sup> )
North	22	0	0	0	0	803.9
South	30	0	0	0	0	892.9
SUM	52	0	0	0	0	

Comments: Gaseous Emissions was not detected during the period the North Stack Units were offline

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 - April 2022

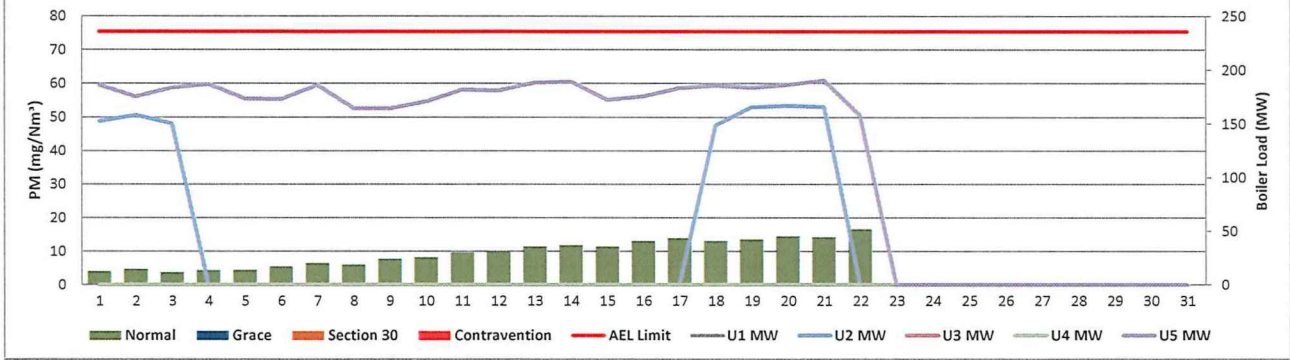


Figure 2: Hendrina South Stack PM Emissions - April 2022

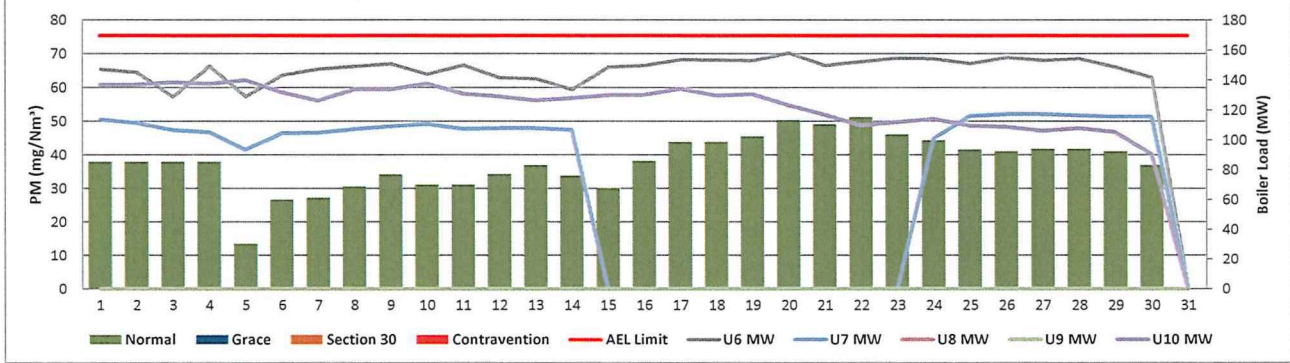


Figure 3: Hendrina North Stack SOx Emissions - April 2022

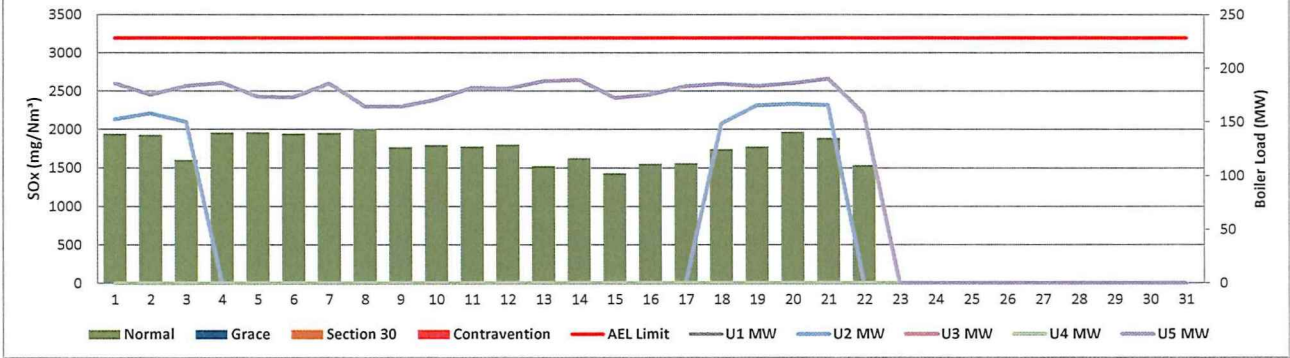


Figure 4: Hendrina South Stack SOx Emissions - April 2022

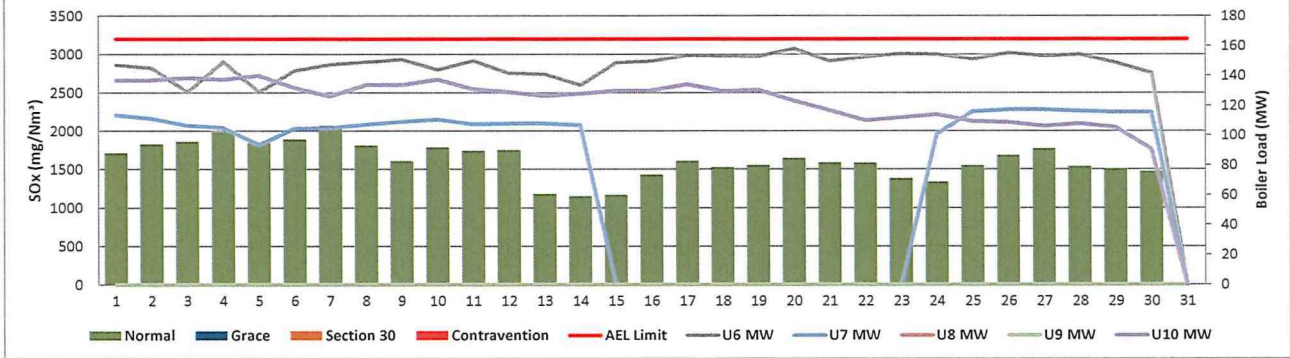


Figure 5: Hendrina North Stack NOx Emissions - April 2022

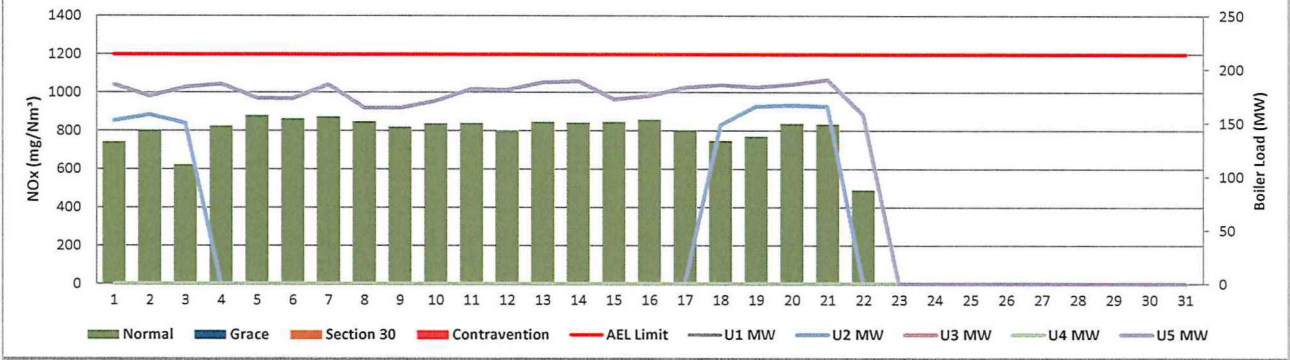
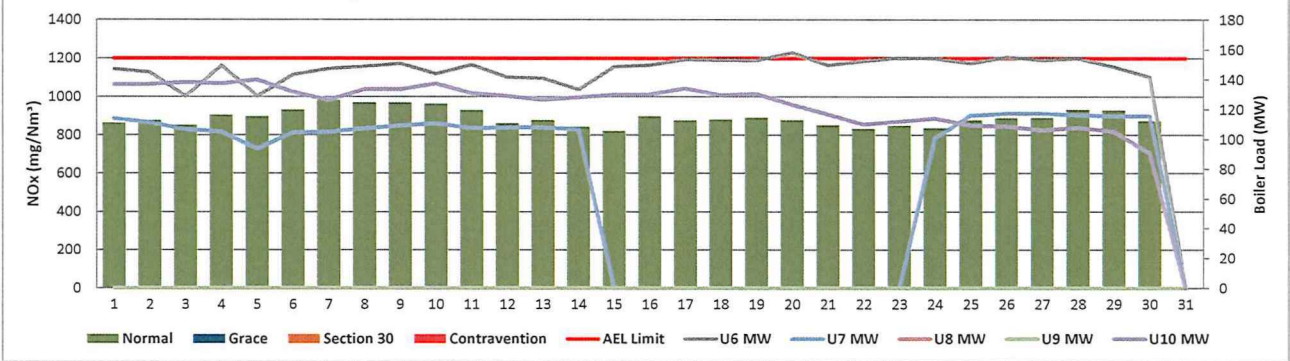


Figure 6: Hendrina South Stack NOx Emissions - April 2022



## 7 SHUT DOWN AND LIGHT UP INFORMATION

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

North Stack	Event 1		Event 2		Event 3	
Unit No.	Unit 2		Unit 2		Unit 5	
Breaker Open (BO)	4:15 am	2022/04/03	8:45 pm	2022/04/21	4:55 am	2022/04/22
Draught Group (DG) Shut Down (SD)	2:45 pm	2022/04/03	8:45 pm	2022/04/22	4:15 pm	2022/04/22
BO to DG SD (duration)	00:10:30	DD:HH:MM	01:00:00	DD:HH:MM	00:11:20	DD:HH:MM
Fires in time	5:40 pm	2022/04/17				
Synch. to Grid (or BC)	5:40 am	2022/04/18				
Fires in to BC (duration)	00:12:00	DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	not > limit	not > limit				
Emissions below limit from BC (duration)	n/a	DD:HH:MM		DD:HH:MM		DD:HH:MM

South Stack	<i>Event 1</i>		<i>Event 2</i>		<i>Event 3</i>	
Unit No.	<i>Unit 6</i>		<i>Unit 7</i>		<i>Unit 10</i>	
Breaker Open (BO)	8:55 am	2022/04/05	8:35 pm	2022/04/14	3:45 pm	2022/04/29
Draught Group (DG) Shut Down (SD)	12:05 pm	2022/04/05	10:15 am	2022/04/15	3:45 pm	2022/04/29
BO to DG SD (duration)	00:03:10	DD:HH:MM	00:13:40	DD:HH:MM		DD:HH:MM
Fires in time	4:40 pm	2022/04/05	2022/04/24	2022/04/24		
Synch. to Grid (or BC)	9:40 pm	2022/04/05	4:10 pm	2022/04/24		
Fires in to BC (duration)	00:05:00	DD:HH:MM	00:05:00	DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	not > limit	not > limit	not > limit	not > limit		
Emissions below limit from BC (duration)	n/a	DD:HH:MM	n/a	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-2022 in mg/Nm<sup>3</sup>

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**8 EMERGENCY GENERATION**

There was no unit start-up on emergency generation

**9 COMPLAINTS REGISTER**



No complaints received

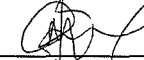
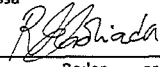
**10 S30 INCIDENT OR LEGAL CONTRAVENTION REGISTER**

None

11 General

South Stack PM monitor malfunctioned from end of March until 3rd of April. Averaged data was applied, and communication regarding the malfunction and replacement of monitor was sent to the Municipality.

 20 May 2022  
 \_\_\_\_\_  
 Compiled: Environmental Officer Date  
 B Madipe  
  
 24 May 2022  
 \_\_\_\_\_  
 Authorised by GM Date  
 A Van Greuning

 24/05/2022  
 \_\_\_\_\_  
 Boiler/ FFP Date  
 Marco Cossa  
  
 24 May 2022  
 \_\_\_\_\_  
 Validated by Manager Boiler or Environmental Date  
 R Goliada J Ramagoma

Compiled by Boiler Engineering Department  
 For Nkangala District Municipality  
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 R Rampiar  
 E Patel  
  
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 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