

**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 Mar-2021
	Coal	Tons	820 000	2 654.2
	Fuel Oil	Tons	3 200	462.52

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Mar-2021
	Energy	GWh	1488	389.95
	Ash	Tons	290 000	676
	RE PM	kg/MWh	not specified	0.232

**2 ENERGY SOURCE CHARACTERISTICS**

Coal Characteristics	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.6 to < 1	0.97
Ash Content	%	31 to < 35	25.48

**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 Mar-2021
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)	96.147%
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>	CO <sub>2</sub>
North	94.9	93.8	93.8	92.6	88.3
South	100.0	100.0	100.0	100.0	99.7

#### 6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of March-2021

Associated Unit/Stack	PM (tons)	SOx (tons)	NOx (tons)	CO <sub>2</sub> (tons)
North	5.2	694.7	375.5	66 837.2
South	85.2	4 376.9	2 547.0	441 464.2
SUM	90.3	5 071.7	2 922.5	508 301.4

Table 6.2: Operating days in compliance to PM AEL Limit - March 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
North	25	0	0	0	0	11.4
South	31	0	0	0	0	37.4
SUM	56	0	0	0	0	

Table 6.3: Operating days in compliance to SOx AEL Limit - March 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm <sup>3</sup> )
North	26	0	0	0	0	1 463.5
South	31	0	0	0	0	1 899.7
SUM	57	0	0	0	0	

Table 6.4: Operating days in compliance to NOx AEL Limit - March 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm <sup>3</sup> )
North	26	0	0	0	0	781.6
South	23	4	4	0	8	1 096.1
SUM	49	4	4	0	8	

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 - March 2021

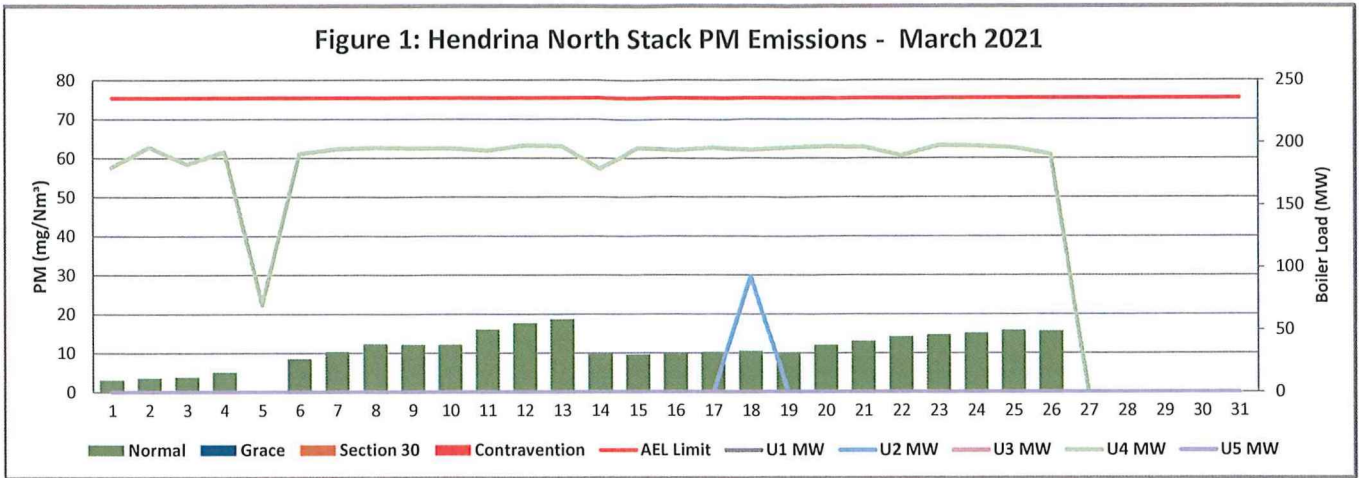


Figure 2: Hendrina South Stack PM Emissions - March 2021

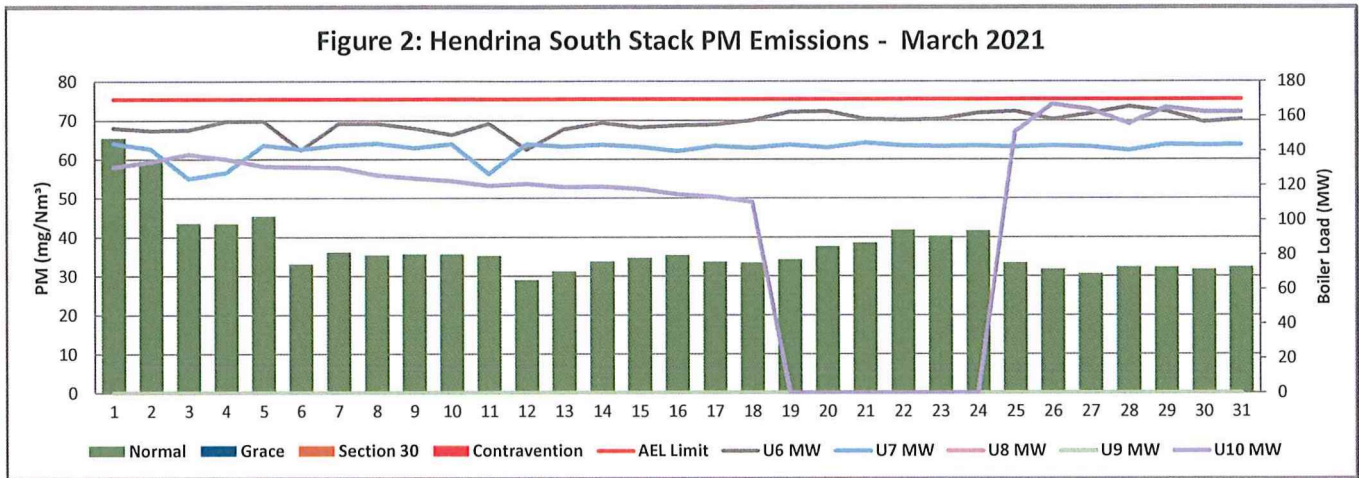


Figure 3: Hendrina North Stack SOx Emissions - March 2021

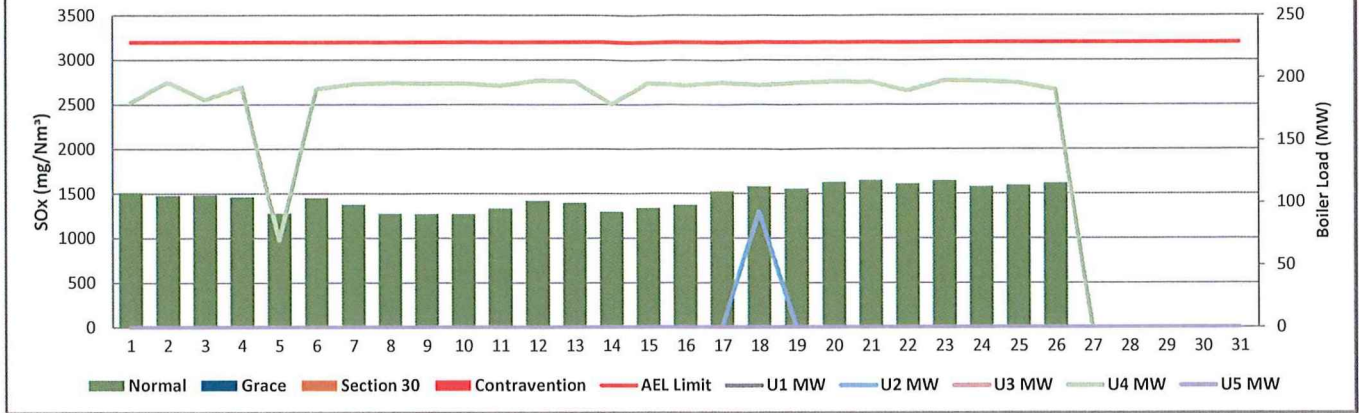


Figure 4: Hendrina South Stack SOx Emissions - March 2021

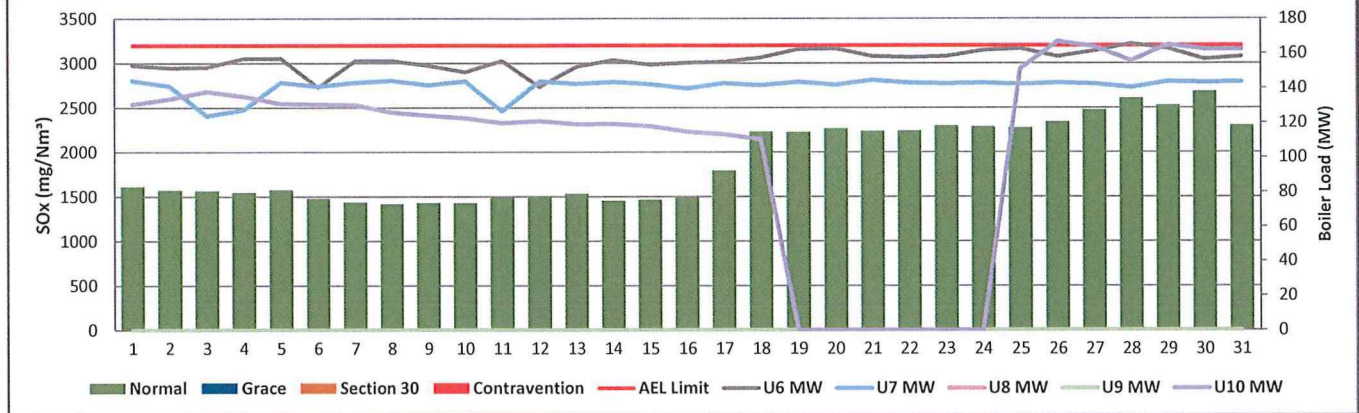


Figure 5: Hendrina North Stack NOx Emissions - March 2021

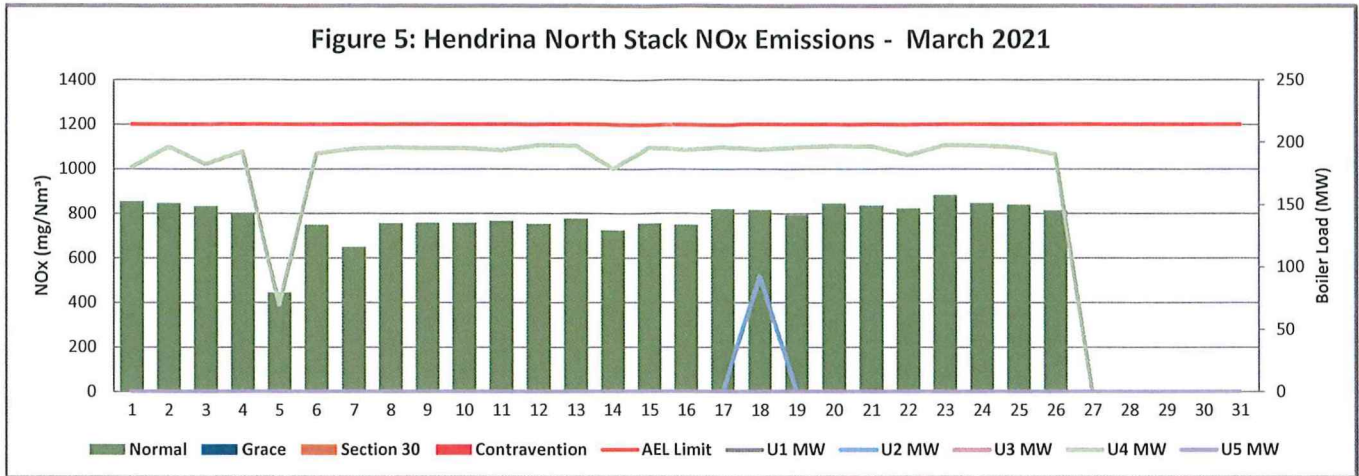
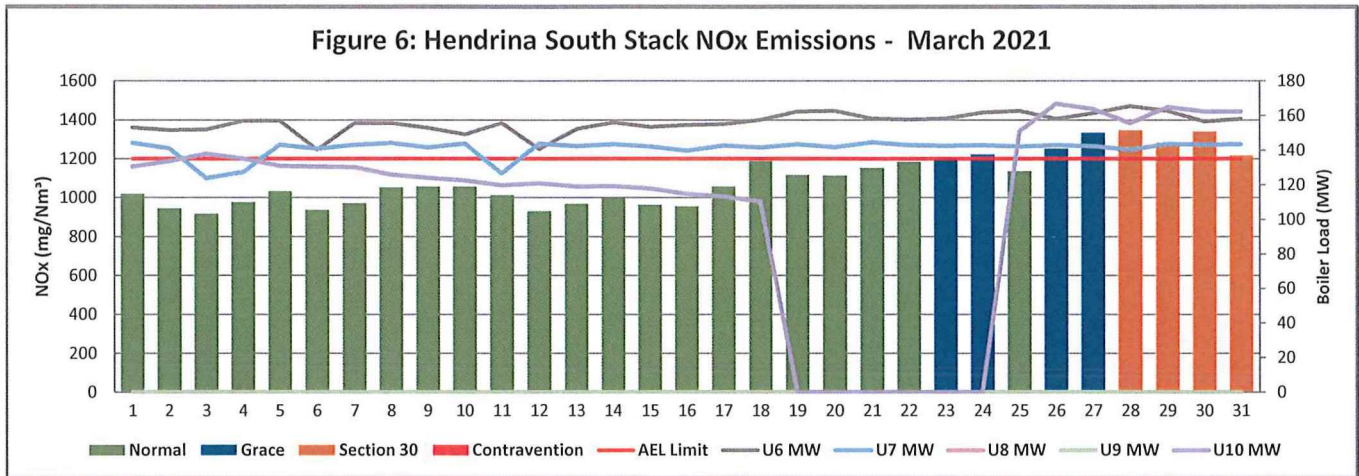


Figure 6: Hendrina South Stack NOx Emissions - March 2021



## 7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1 PM Start-up information for the month of March-2021

North 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>10:35 PM</i>	<i>2021/03/04</i>	<i>11:15 AM</i>	<i>2021/03/26</i>				
Draught Group (DG) Shut Down (SD)	<i>10:45 PM</i>	<i>2021/03/04</i>	<i>05:25 PM</i>	<i>2021/03/26</i>				
BO to DG SD (duration)	<i>00:00:10</i>	DD:HH:MM	<i>00:06:10</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	<i>10:10 AM</i>	<i>2021/03/05</i>						
Synch. to Grid (or BC)	<i>10:00 PM</i>	<i>2021/03/05</i>						
Fires in to BC (duration)	<i>00:11:50</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	<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		DD:HH:MM		DD:HH:MM

North Stack ... Continued	<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

South Stack	Event 1		Event 2		Event 3		Event 4	
Unit No.	Unit 10		no event		no event		no event	
Breaker Open (BO)		#REF!						
Draught Group (DG) Shut Down (SD)		#REF!						
BO to DG SD (duration)	n/a	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	08:00 AM	2021/03/25						
Synch. to Grid (or BC)	12:05 PM	2021/03/17						
Fires in to BC (duration)	#####	DD:HH:MM		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		DD:HH:MM

South Stack ...Continued	Event 1		Event 2		Event 3		Event 4	
Unit No.	no event		no event		no event		no event	
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-2021 in mg/Nm³

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




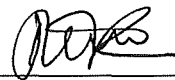
Remember to add attachments here, see ReportAddendum Tab

*Reserved for Addendum XXXX*

11 General

South Stack Nox exceeded from 28 March 2021 as indicated in Figure 6 above, before we implemented the new correlation calibration factors

  
 17-May-21  
 \_\_\_\_\_  
 Compiled: Environmental Officer                      Date  
 B. Madipe  
 \_\_\_\_\_  
 Authorised by GM    Date  
 L. Ndube    24/05/2021

\_\_\_\_\_  
 Boiler/ FFP    Date  
 Marco Cossa  
 \_\_\_\_\_  
 Validated by Manager                      Boiler      or      Environmenta                      Date  
 J. Ramagoma  25/05/2021  
 R. Nelwamondo J. Ramagoma

Compiled by    Boiler Engineering Department  
 For              Nkangala District Municipality  
 Copies         Eskom Environmental Management  
  
                   Group Technology Engineering  
  
                   Hendrina Power Station

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