

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


1 RAW MATERIALS AND PRODUCTS

Raw Materials and Products	Raw Material Type	Units	Max. Permitted Consumption Rate	Consumption Rate Apr-2023
	Coal	Tons	820 000	104 390.0
Fuel Oil	Tons	3 200	866.78	

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Apr-2023
	Energy	GWh	1440	166.08
Ash	Tons	290 000	25 294	
RE PM	kg/MVh	not specified	0.195	

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristics	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.6 to < 1	0.68
Ash Content	%	31 to < 35	24.23

 3 EMISSION LIMITS (mg/Nm³)

Associated Unit/Stack	PM	SO ₂	NO _x
North	75	3500	1200
South	75	3500	1200

4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Apr-2023
Unit 1	Fabric Filter Plant (FFP)	Unit Off-line
Unit 2	Fabric Filter Plant (FFP)	100.000%
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)	Unit Off-line
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 ₂	NO	O ₂	CO ₂
North	0.0	100.0	0.0	0.0	0
South	100.0	0.0	0.0	0.0	0

Note: NOx emissions is measured as NO in PPM. Final NOx value is expressed as total NO₂

6 EMISSION PERFORMANCE

There is no emissions tons because boilers for the North Stack were all offline

Table 6.1: Monthly tonnages for the month of April-2023

Associated Unit/Stack	PM (tons)	SO _x (tons)	NO _x (tons)
North	0.0	0.0	0.0
South	32.5	0.0	0.0
SUM	32.5	0.0	0.0

The number of number of days under normal operation for North Stack is zero because boilers for North Stack were all offline

Table 6.2: Operating days in compliance to PM AEL Limit - April 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
North	0	0	0	0	0	
South	30	0	0	0	0	32.0
SUM	30	0	0	0	0	

Table 6.3: Operating days in compliance to SO₂ AEL Limit - April 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm ³)
North	0	0	0	0	0	
South	0	0	0	0	0	
SUM	0	0	0	0	0	

Table 6.4: Operating days in compliance to NO_x AEL Limit - April 2023

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm ³)
North	0	0	0	0	0	
South	0	0	0	0	0	
SUM	0	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

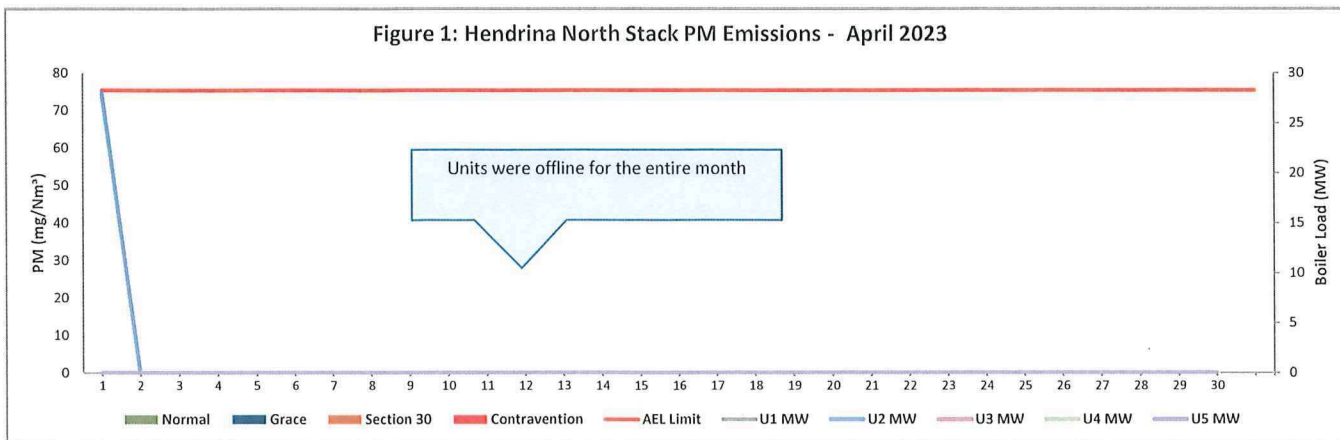


Figure 1: PM Emissions trends for North Stack- April 2023

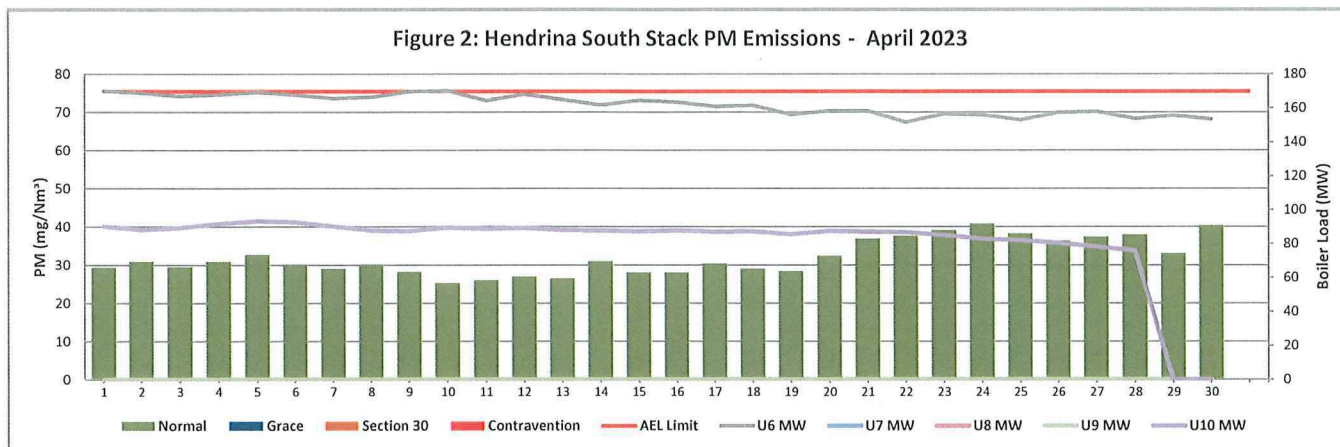


Figure 2: PM Emissions trends for South Stack- April 2023

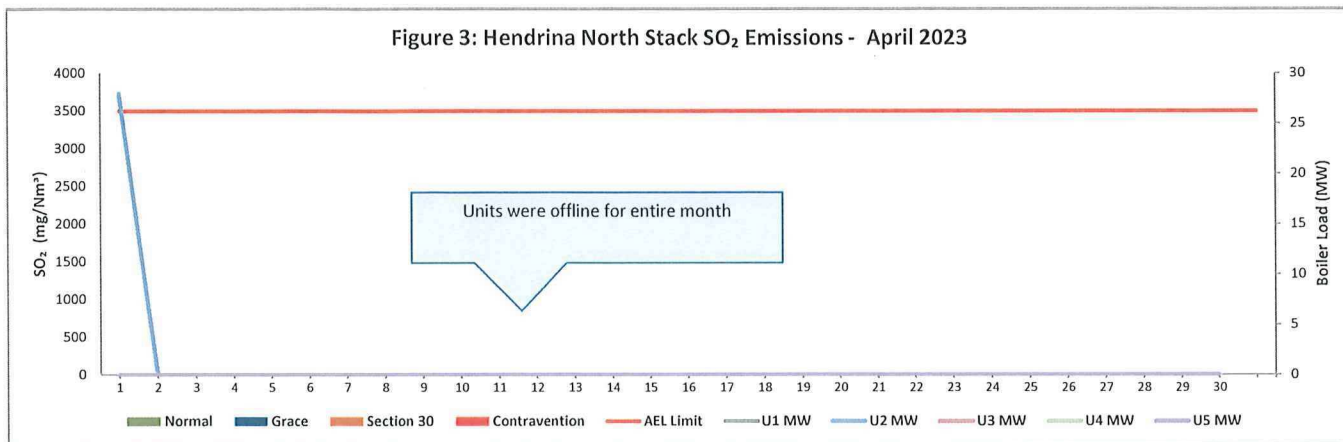


Figure 3: Sulphur dioxide Emissions trends for South Stack- April 2023

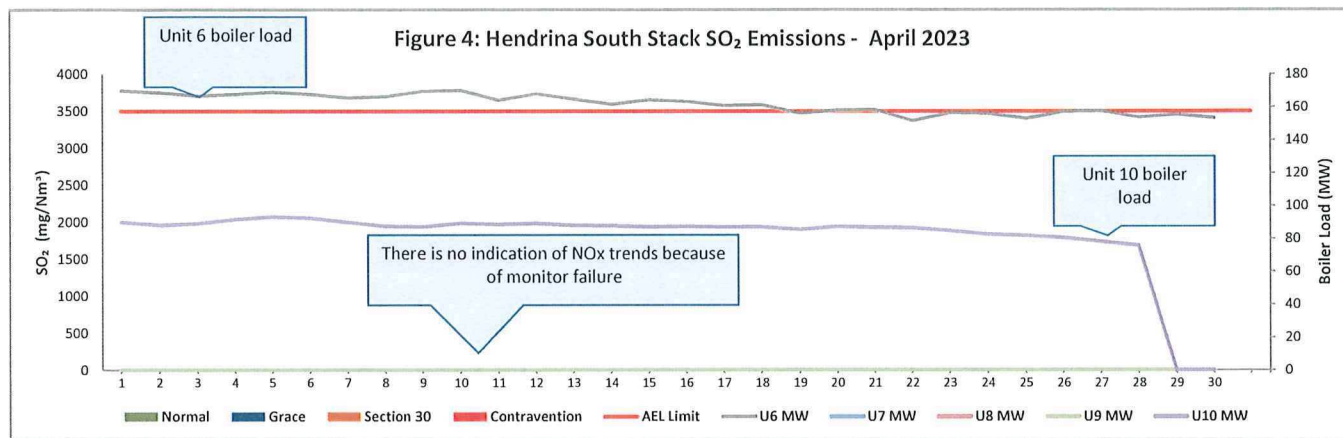


Figure 4: Sulphur dioxide Emissions trends for North Stack- April 2023

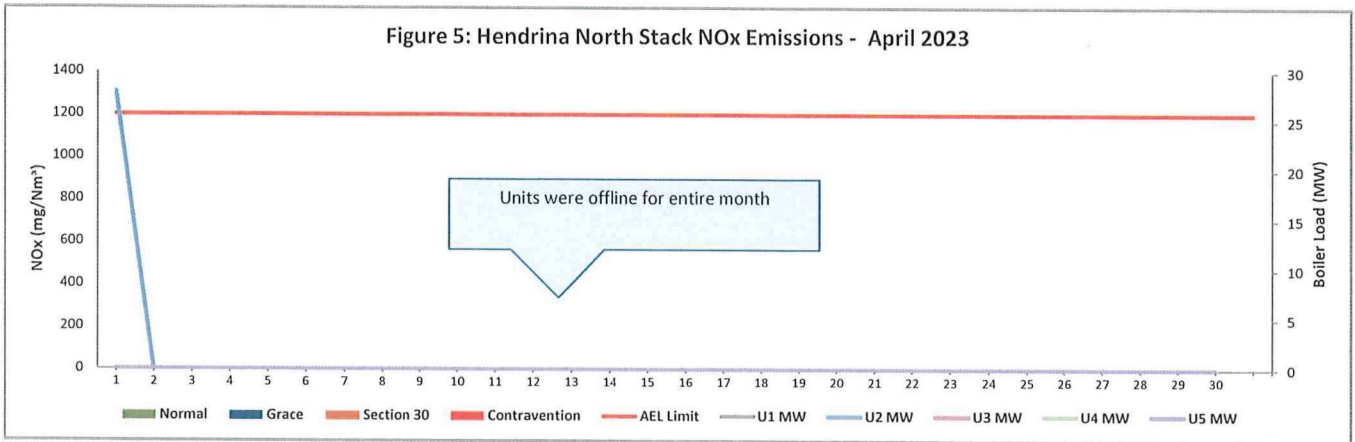


Figure 5: Nitrogen dioxide Emissions trends for North Stack- April 2023

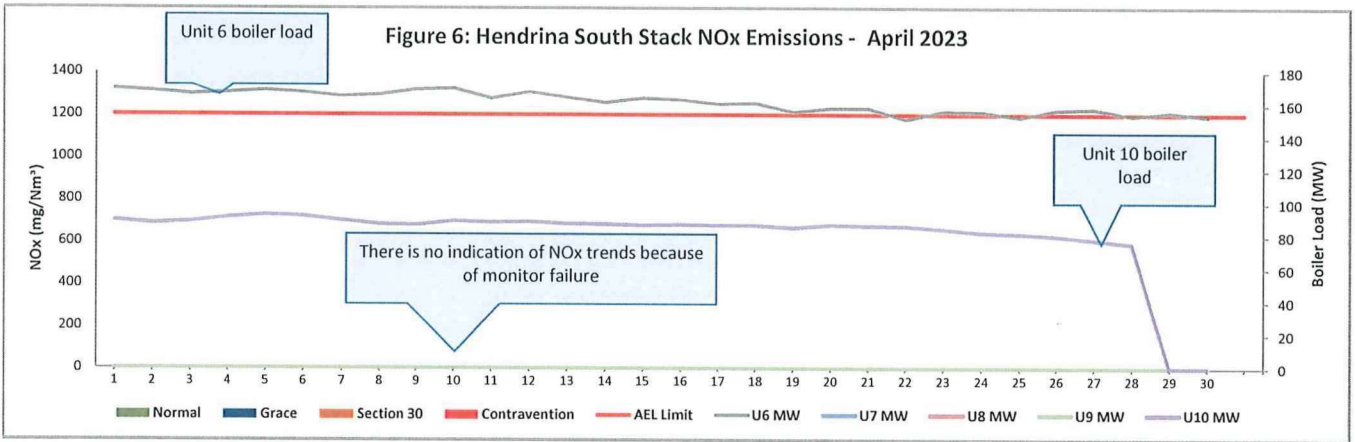


Figure 6: Nitrogen dioxide Emissions trends for North Stack- April 2023

7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1 PM Start-up information for the month of April-2023

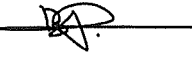
South Stack	Event 1	
Unit No.	Unit 10	
Breaker Open (BO)	9:25 pm	2023/04/28
Draught Group (DG) Shut Down (SD)	9:55 pm	2023/04/28
BO to DG SD (duration)	00:00:30	DD:HH:MM
Fires in time		
Synch. to Grid (or BC)		
Fires in to BC (duration)		DD:HH:MM
Emissions below limit from BC (end date)		
Emissions below limit from BC (duration)		DD:HH:MM

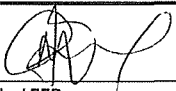
8. Complaints register


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
There were no complaints related to air quality received during the month of April 2023.					

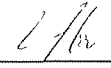
9 General

There was no emissions related incident/s North Stack Units were offline for entire month

 19/05/2023
 Compiled: Environmental Officer Date

 22/05/2023
 Boiler/ FFP Date
 Marco Cossa

 2023/05/24
 Authorised by GM Date
 T Lekalakala

 21/05/2023
 Validated by Manager Environmental Date
 L Ntila

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