

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 Nov-2023
	Coal	Tons	820,000	66,014.0
	Fuel Oil	Tons	3,200	627.84

Production Rates	Product / By-Product Name	Units	Max. Production Capacity Permitted	Production Rate Nov-2023
	Energy	GWh	1440	92.80
	Ash	Tons	290,000	14,576
	RE PM	kg/MWh	not specified	0.311

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristics	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.6 to < 1	0.62
Ash Content	%	20 to < 35	22.08

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 Nov-2023
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)	100.000%
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)	Unit Off-line

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	100.0	100.0	100.0	0.0	97.6744186
South	97.5	99.7	72.4	98.9	99.67656012

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

6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM (tons)	SOx (tons)	NOx (tons)
North	0.0	0.0	0.0
South	28.8	1,249.3	349.1
SUM	28.8	1,249.3	349.1

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm ³)
North	0	0	0	0	0	
South	29	0	0	0	0	44.9
SUM	29	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SO ₂ (mg/Nm ³)
North	0	0	0	0	0	
South	30	0	0	0	0	1,884.1
SUM	30	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NO _x (mg/Nm ³)
North	0	0	0	0	0	
South	30	0	0	0	0	525.9
SUM	30	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

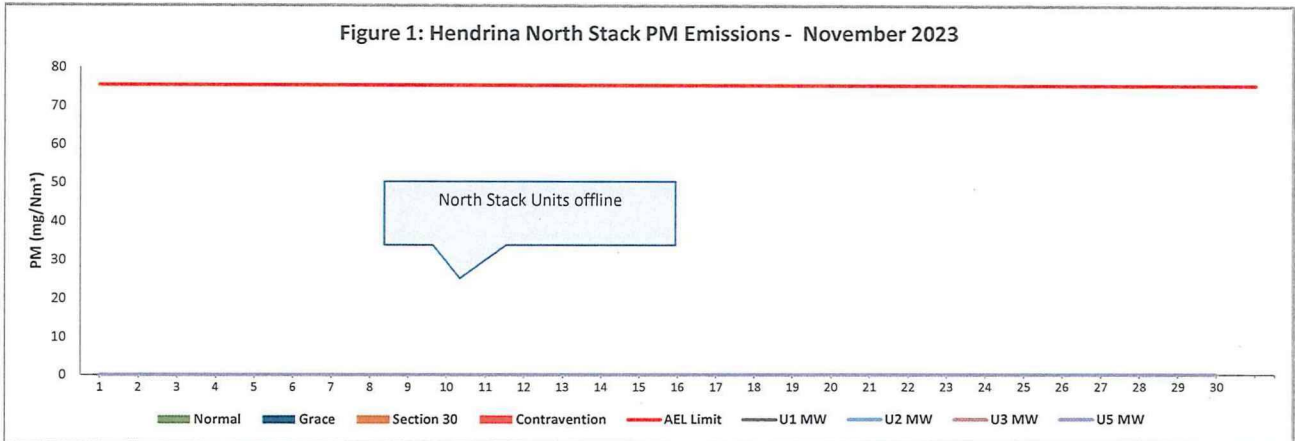


Figure 1: PM Emissions trends for North Stack- November 2023

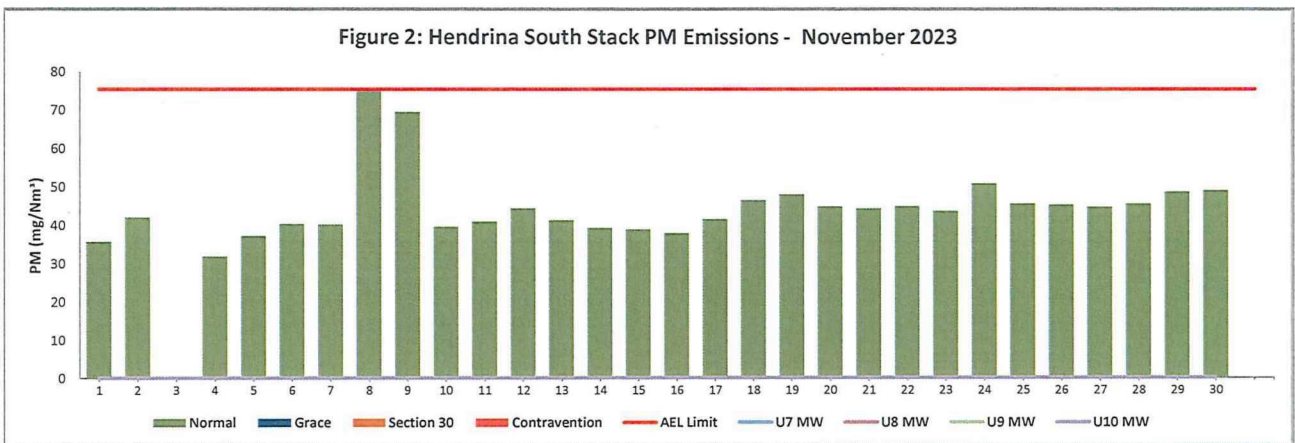


Figure 2: PM Emissions trends for South Stack- November 2023

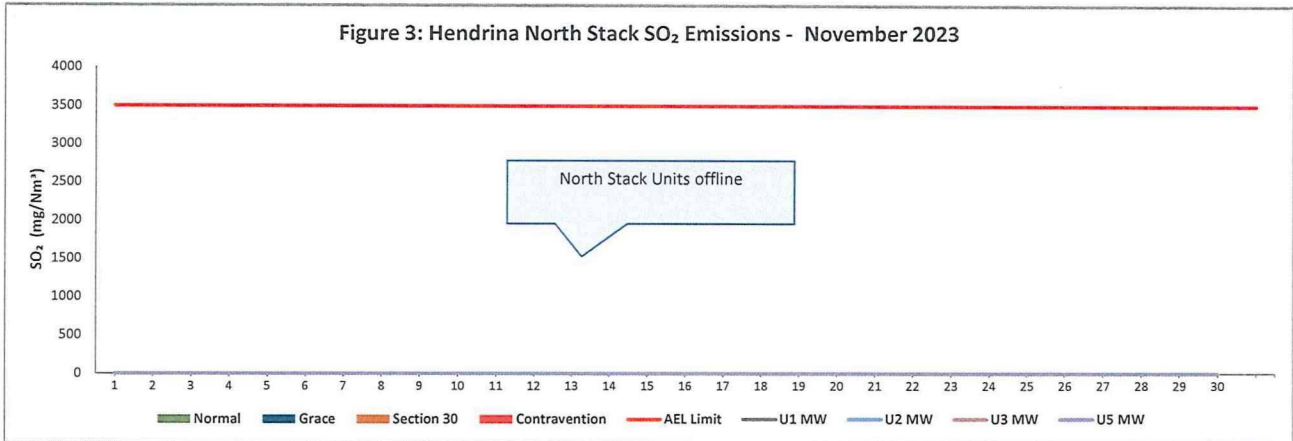


Figure 3: Sulphur dioxide Emissions trends for North Stack- November 2023

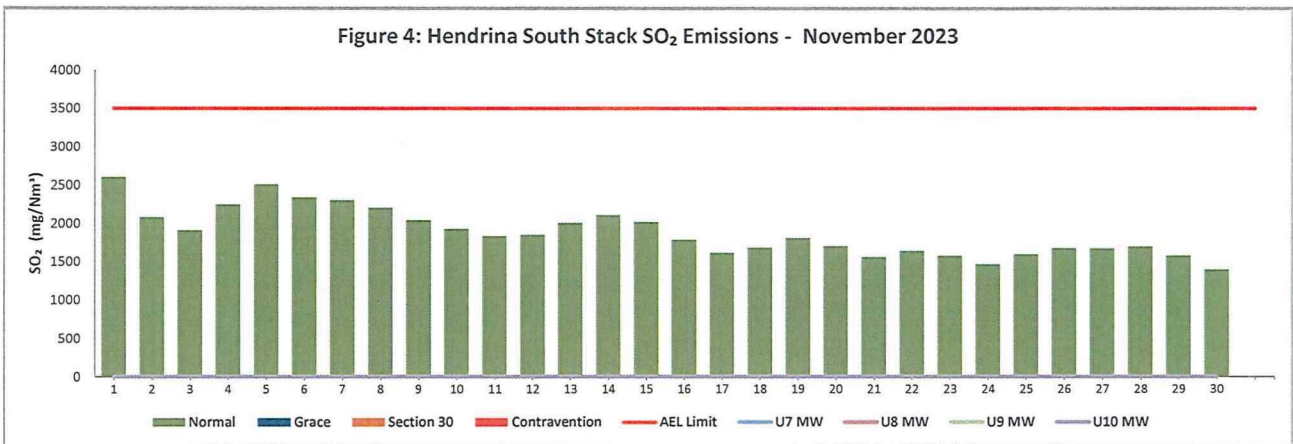


Figure 4: Sulphur dioxide Emissions trends for South Stack- November 2023

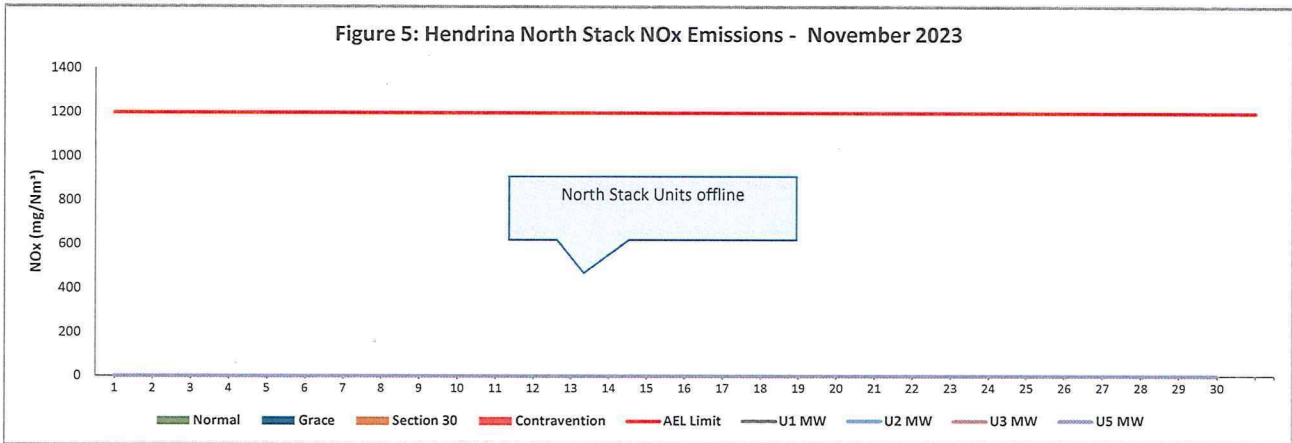


Figure 5: Nitrogen dioxide Emissions trends for North Stack- November 2023

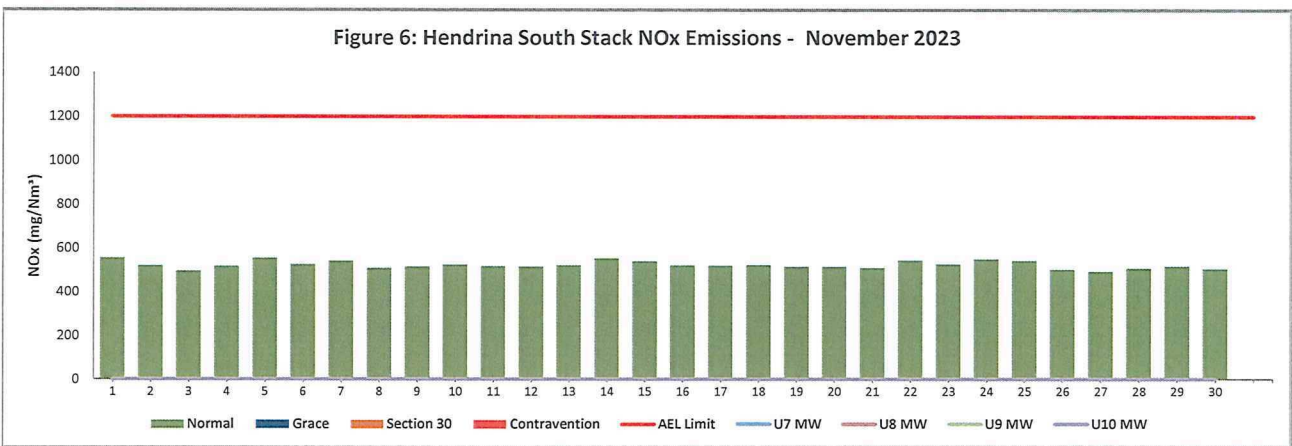


Figure 6: Nitrogen dioxide Emissions trends for South Stack- November 2023

7 SHUT DOWN AND LIGHT UP INFORMATION

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

South Stack	Event 1	
Unit No.	Unit 6	
Breaker Open (BO)	7:45 PM	02/11/2023
Draught Group (DG) Shut Down (SD)	7:45 PM	02/11/2023
BO to DG SD (duration)		DD:HH:MM
Fires in time	11:40 PM	02/11/2023
Synch. to Grid (or BC)	5:40 AM	03/11/2023
Fires in to BC (duration)	00:06:00	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

7.2: Point Source emissions released during start-up (fires-in) and Shut-down (SD) for the month of November-2023 in mg/Nm³

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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
<i>The Station did not receive complaints related to air quality during the month of November 2023.</i>					

9 General

North Stack Units were offline.

 20/12/2023

Compiled: Environmental Officer
B. Madiope

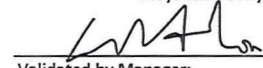


Authorised by: GM
T. Lekalakala



27/12/2023

Boiler/ FFP
Moyahabo Cetlyff Maoto



28/12/2023

Validated by Manager: Environmental
L. Ntila

Compiled by: Boiler Engineering Department

For: Nkangala District Municipality

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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
PSGM