



Generation

Gert Sibande District Municipality
Corner of Joubert & Oosthuise Streets
Ermelo
2350

Attention:

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AND

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GROOTVLEI POWER STATION

Atmospheric Emission License GPS/0015/2024/F04

BOILER ENGINEERING MANAGER

2025/10/17

DATE

ENGINEERING MANAGER

2025/10/17

DATE

ENVIRONMENTAL MANAGER

2025/10/17

DATE

GROOTVLEI POWER STATION MONTHLY EMISSIONS REPORT
Atmospheric Emission License GPS/0015/2024/F04



1 RAW MATERIALS AND PRODUCTS

Raw Materials and Products	Raw Material Type	Units	Max Permitted Consumption Rate	Consumption Rate Sept-2025
	Coal	Tons	650 000	65 917
	Fuel Oil	Tons	20 000	685.240
Production Rates	Product / By-Product Name	Units	Max Production Capacity Permitted	Indicative Production Rate Sept-2025
	Energy	GWh	864.000	109.807
	Ash	Tons	300 000	16 927.000
	RE Ash	kg/MWh	not specified	0.058

Note: Max energy rate = AEL capacity [1,200 MW] × 24 hrs × days in month ÷ 1,000 (to convert to GWh).

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	18-24 (MJ/kg)	20.420
Sulphur Content	%	< 1.46 (%)	0.790
Ash Content	%	24.7 to < 38.1 (%)	25.680

3 EMISSION LIMITS (mg/Nm³)

	Daily Limit		
Associated Unit/Stack	PM	SO ₂	NO _x
North	100	3500	1100
South	100	3500	1100

4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	FFP Efficiency
North	Fabric Filter Plant (FFP)	99.958%
South	Fabric Filter Plant (FFP)	Off-line

Note: The FFP does not have a bypass mode; therefore, it operates at 100% utilization.

5 DATA RELIABILITY (%)

Associated Unit/Stack	PM	SO ₂	NO	O ₂
North	100.0	94.0	93.8	95.2
South		Off	Off	Off

Note: NO_x emissions are measured as NO in PPM. The final NO_x value is expressed as total NO₂ equivalent.

6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for September 2025

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)
Unit 1	5.2	688	158
Unit 2	Off	Off	Off
Unit 3	1.2	186	48
Unit 4	Off	Off	Off
Unit 5	Off	Off	Off
Unit 6	Off	Off	Off
SUM	6.38	874	206

Table 6.2: PM AEL Daily Compliance - September 2025

Associated Unit/Stack	Normal	Grace	Section 30	NC	Total Exceedance	Mnth Avg (mg/Nm ³)
North	26	0	0	0	0	12.4
South	0	0	0	0	0	Off
SUM	26	0	0	0	0	

Table 6.3: SO₂ AEL Daily Compliance - September 2025

Associated Unit/Stack	Normal	Grace	Section 30	NC	Total Exceedance	Mnth Avg (mg/Nm ³)
North	28	0	0	0	0	1 506.3
South	Off	Off	Off	Off	Off	Off
SUM	28	0	0	0	0	

Table 6.4: NO_x AEL Daily Compliance - September 2025

Associated Unit/Stack	Normal	Grace	Section 30	NC	Total Exceedance	Mnth Avg (mg/Nm ³)
North	28	0	0	0	0	346.3
South	Off	Off	Off	Off	Off	Off
SUM	28	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: Grootvlei North Stack PM Emissions - September 2025

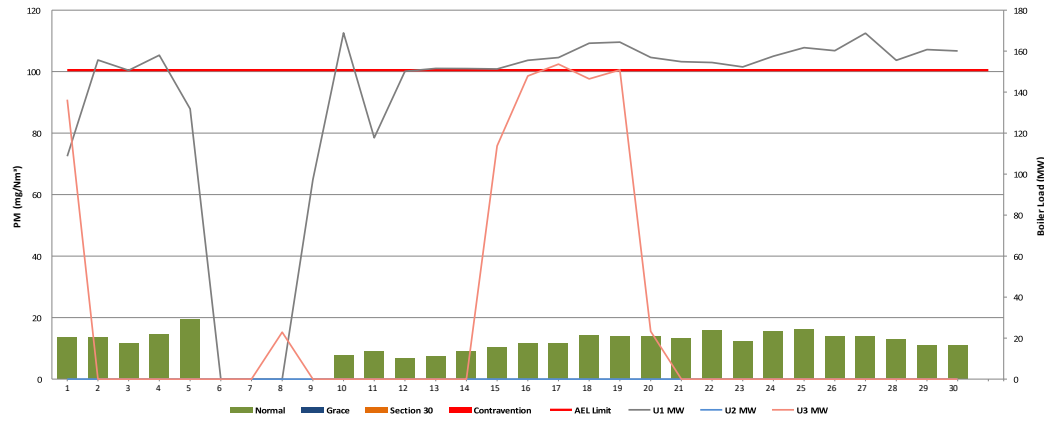
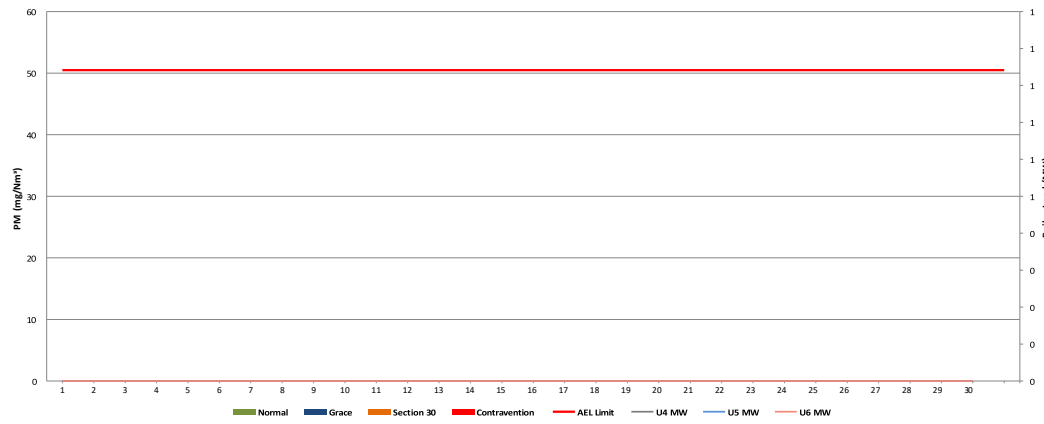


Figure 2: Grootvlei South Stack PM Emissions - September 2025



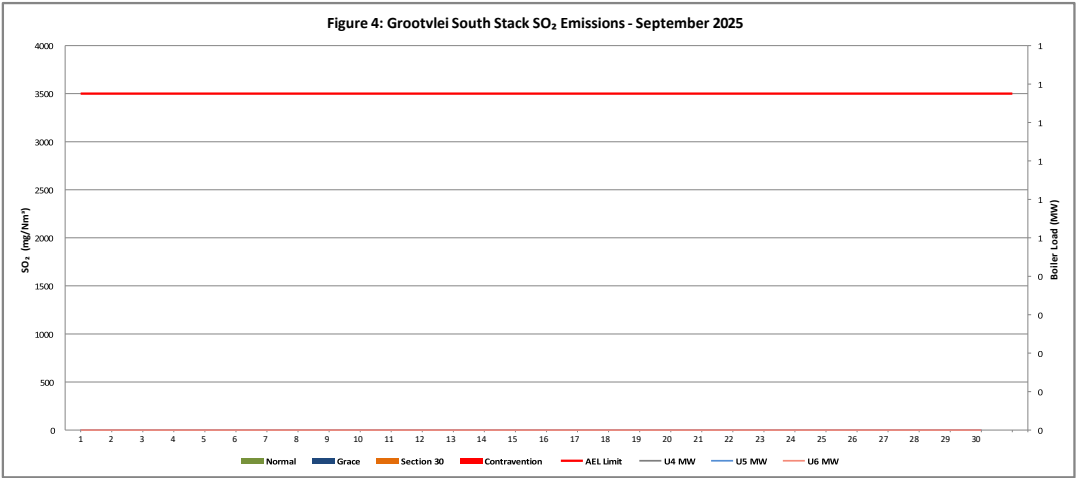
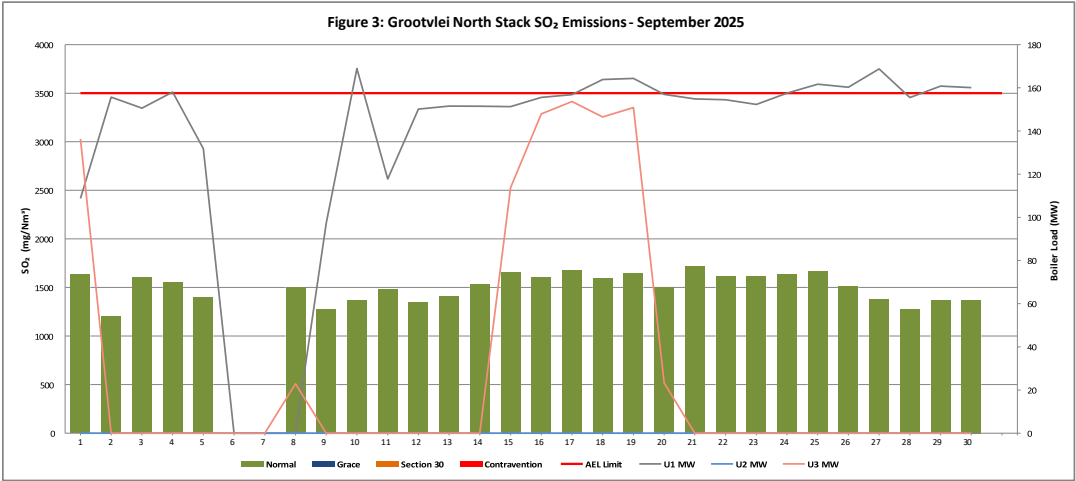


Figure 5: Grootvlei North Stack NO_x Emissions - September 2025

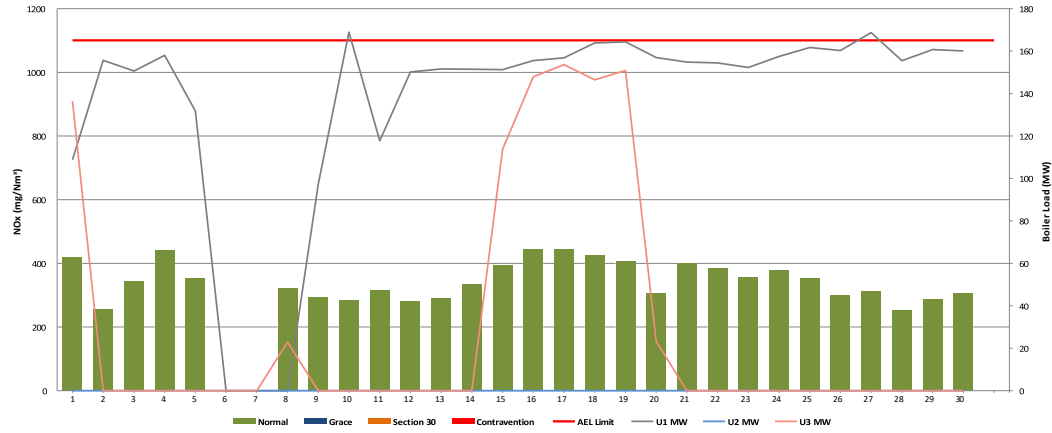
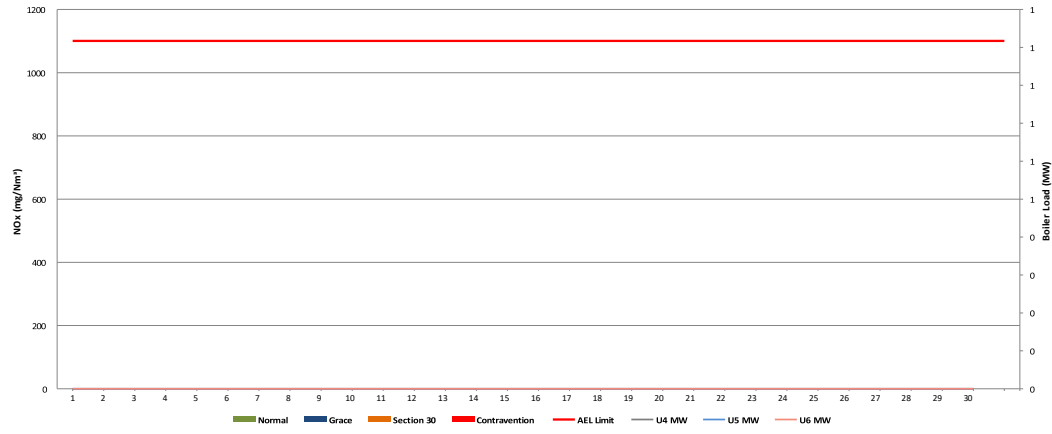


Figure 6: Grootvlei South Stack NO_x Emissions - September 2025



Event Description	Event 1		Event 2		Event 3		Event 4		Event 5		Event 6		Event 7		Event 8		
Unit 1	Breaker Open (BO)	8:25 pm	2025/09/05	3:55 am	2025/09/11												
	Draught Group (DG) Shut Down (SD)	DG did not trip or SD		DG did not trip or SD													
	BO to DG SD (duration)	n/a	DD:HH-MM	n/a	DD:HH-MM	DD:HH-MM		DD:HH-MM		DD:HH-MM		DD:HH-MM	DD:HH-MM		DD:HH-MM		
	Fires in time																
	Synch. to Grid (or BC)	2:35 am	2025/09/01														
	Fires in to BC (duration)		DD:HH-MM		DD:HH-MM		DD:HH-MM		DD:HH-MM		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		DD:HH-MM		DD:HH-MM	DD:HH-MM		DD:HH-MM		
Event Description	Event 1		Event 2		Event 3		Event 4		Event 5		Event 6		Event 7		Event 8		
Unit 2	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		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		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		DD:HH-MM		DD:HH-MM	DD:HH-MM		DD:HH-MM		
Event Description	Event 1		Event 2		Event 3		Event 4		Event 5		Event 6		Event 7		Event 8		
Unit 3	Breaker Open (BO)	9:30 pm	2025/09/01	3:55 am	2025/09/20												
	Draught Group (DG) Shut Down (SD)	DG did not trip or SD		DG did not trip or SD													
	BO to DG SD (duration)	n/a	DD:HH-MM	n/a	DD:HH-MM	DD:HH-MM		DD:HH-MM		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		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		DD:HH-MM		DD:HH-MM	DD:HH-MM		DD:HH-MM		
Event Description	Event 1		Event 2		Event 3		Event 4		Event 5		Event 6		Event 7		Event 8		
Unit 4	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		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		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		DD:HH-MM		DD:HH-MM	DD:HH-MM		DD:HH-MM		
Event Description	Event 1		Event 2		Event 3		Event 4		Event 5		Event 6		Event 7		Event 8		
Unit 5	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		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:										

8 EMERGENCY EVENTS AND PLANT FAILURES

Table 8. Emergency Generation per unit for the month of September 2025

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Emergency Generation hours declared by national Control						
Emergency Hours declared including hours after stand down						
Hours over the Limit during Emergency Generation						

9 COMPLAINTS REGISTER (e.g., noise, dust, offensive odours etc.)

Table 9. Complaints for the month of September 2025

Source Code / Name	Root Cause Analysis	Calculation of Impacts / emissions associated with the incident	Dispersion modeling of pollutants where applicable	Measures implemented to prevent reoccurrence	Date measure will be implemented
<i>(Insert name of</i>	<i>(Insert root cause for incident)</i>	<i>(Insert emissions associated with incident)</i>	<i>(Insert dispersion model information where applicable)</i>	<i>(Insert mitigation measures taken)</i>	<i>(Insert date of implementation of</i>

10 S30 INCIDENT OR LEGAL CONTRAVENTION REGISTER

To be completed in the case of a S30 incident or legal contravention:

[illegible]

8 GENERAL

The South stack is currently offline. The correlation test has expired, and the team is awaiting opacity calibration before planning a full correlation test. The monthly averages for PM, SO₂, and NO₂ are 12.4 mg/Nm³, 1506.3 mg/Nm³, and 346.3 mg/Nm³ at 10% O₂, respectively. No leaks were reported for the month.



Boiler Plant Engineering Manager

2025/10/17

Date



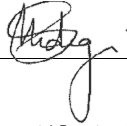
Environmental Practitioner

2025/10/17

Date

Themba Mokgosi

General Manager



2025/10/17

Date

Compiled by: Environmental Department

For: Department of Environmental Affairs and Tourism

Copies: Generation Environmental Management

Generation Compliance Management
Generation Asset Management

Grootvlei Power Station:

Learner Intern Grad Environmental

Chief Air Pollution Control Officer

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B Mccourt

R Rampiar
E Patel

Engineering Manager
Operating Manager
Maintenance Manager
Production Manager
Boiler Engineering Manager
System Engineer
Environmental Manager