



Generation

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

**Attention:**

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AND

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**Date: 2025/08/19**

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**10**

**Total number of annexes:**

**GROOTVLEI POWER STATION**

Atmospheric Emission License GPS/0015/2015/F02

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**BOILER ENGINEERING MANAGER**

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2025/08/19

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**DATE**

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**ENGINEERING MANAGER**

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2025/08/19

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**ENVIRONMENTAL MANAGER**

\_\_\_\_\_  
2025/08/19

\_\_\_\_\_  
**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	Maximum Permitted Consumption Rate	Consumption Rate Jul-2025
	Coal	Tons	650 000	157 615.8
	Fuel Oil	Tons	20 000	2 508.75
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Indicative Production Rate Jul-2025
	Energy	GWh	892.8	250.48
	Ash	Tons	300 000	39 047
	RE PM	kg/MWh	not specified	0.15

Note: Maximum energy production is calculated as: (200MW x 6 Units) x 24hrs x Days in month/1000 = GWh.

## 2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	18-24	20.61
Sulphur Content	%	< 1.46	0.66
Ash Content	%	24.7 to < 38.1	24.77

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

Associated Unit/Stack	PM	SO <sub>2</sub>	NO
North	100	3500	1100
South	100	3500	1100

## 4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency
Unit 1	Fabric Filter Plant (FFP)	99.871%
Unit 2	Fabric Filter Plant (FFP)	99.781%
Unit 3	Fabric Filter Plant (FFP)	99.888%
Unit 4	Fabric Filter Plant (FFP)	Unit Off-line
Unit 5	Fabric Filter Plant (FFP)	Unit Off-line
Unit 6	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>
North	100.0	99.6	99.6	96.6
South	-	-	-	-

Note: NO<sub>x</sub> emissions is measured as NO in PPM. Final NO<sub>x</sub> value is expressed as total NO<sub>2</sub>

## 6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of July-2025

Associated Unit/Stack	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>x</sub> (tons)
Unit 1	16.56	909.4	263.5
Unit 2	5.69	392.6	121.9
Unit 3	14.84	814.1	232.6
Unit 4	0.00	0.0	0.0
Unit 5	0.00	0.0	0.0
Unit 6	0.00	0.0	0.0
<b>SUM</b>	<b>37.09</b>	<b>2 116.0</b>	<b>617.9</b>

Table 6.2: Operating days in compliance to PM AEL Limit - July 2025

Associated Unit/Stack	Normal	Grace	Section 30	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
North	31	0	0	0	30.9
South	0	0	0	0	
<b>SUM</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Table 6.3: Operating days in compliance to SO<sub>2</sub> AEL Limit - July 2025

Associated Unit/Stack	Normal	Grace	Section 30	Total Exceedance	Average SO <sub>2</sub> (mg/Nm <sup>3</sup> )
North	31	0	0	0	1 694.0
South	0	0	0	0	
<b>SUM</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Table 6.4: Operating days in compliance to NO<sub>x</sub> AEL Limit - July 2025

Associated Unit/Stack	Normal	Grace	Section 30	Total Exceedance	Average NO <sub>x</sub> (mg/Nm <sup>3</sup> )
North	31	0	0	0	491.4
South	0	0	0	0	
<b>SUM</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Note: NO<sub>x</sub> emissions is measured as NO in PPM. Final NO<sub>x</sub> value is expressed as total NO<sub>2</sub>

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		

Figure 1: Grootvlei North St. PM Emissions - July 2025

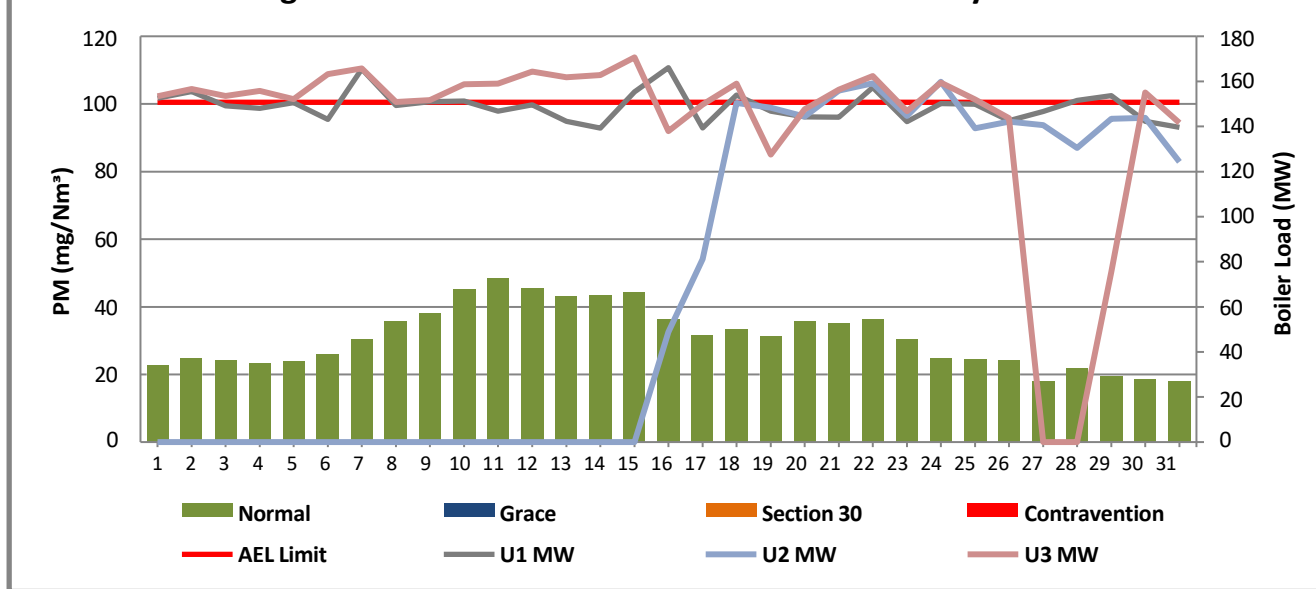


Figure 2: Grootvlei South St. PM Emissions - July 2025

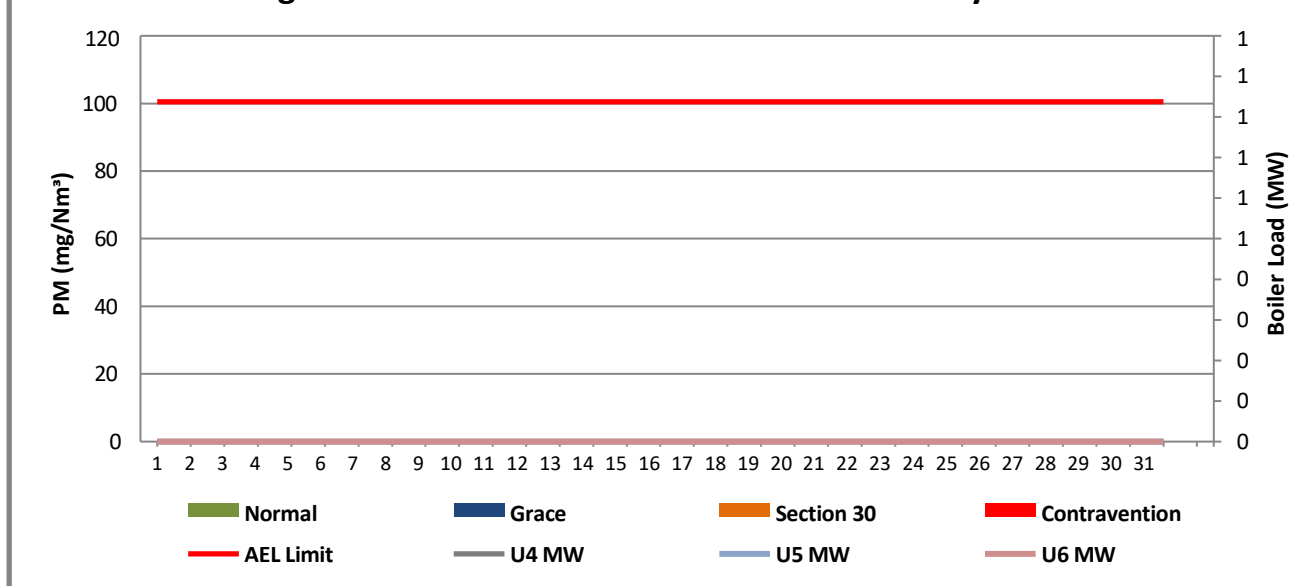


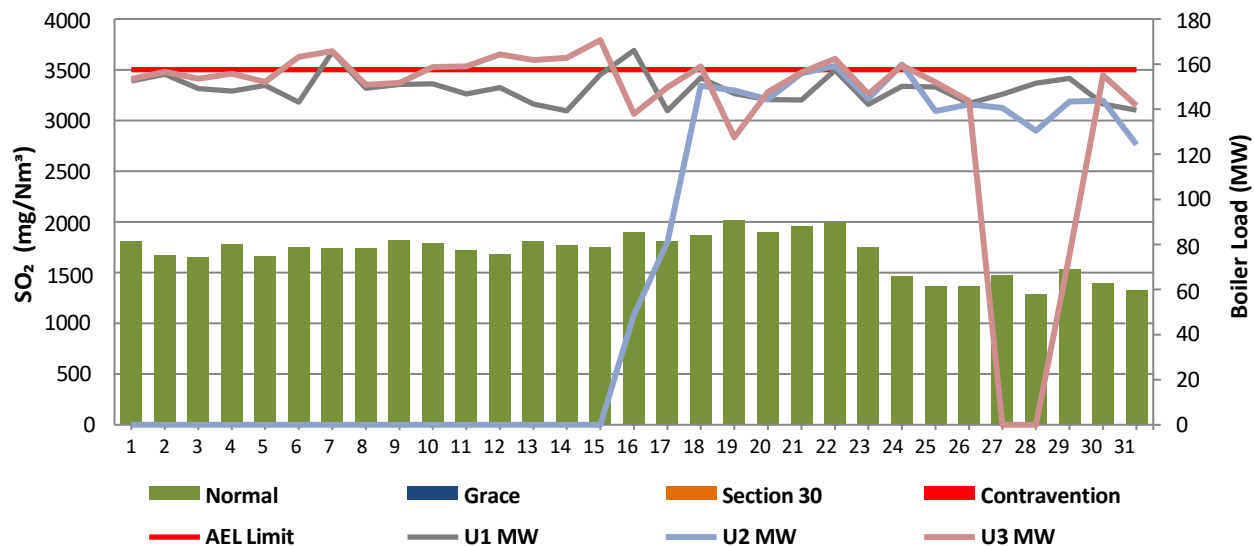
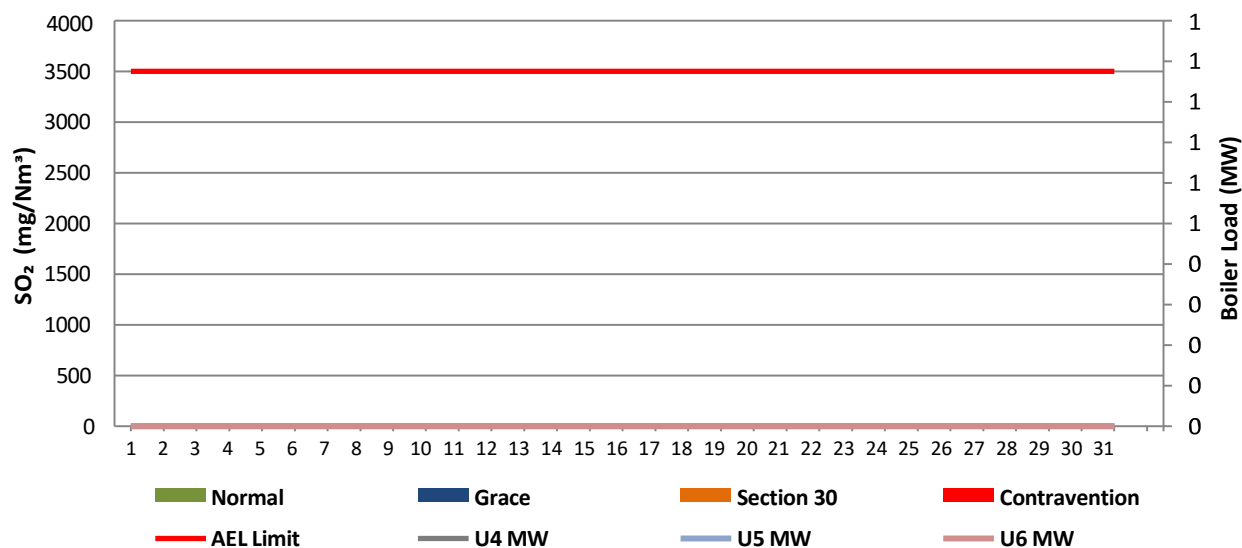
Figure 3: Grootvlei North St. SO<sub>2</sub> Emissions - July 2025Figure 4: Grootvlei South St. SO<sub>2</sub> Emissions - July 2025

Figure 5: Grootvlei North St. NOx Emissions - July 2025

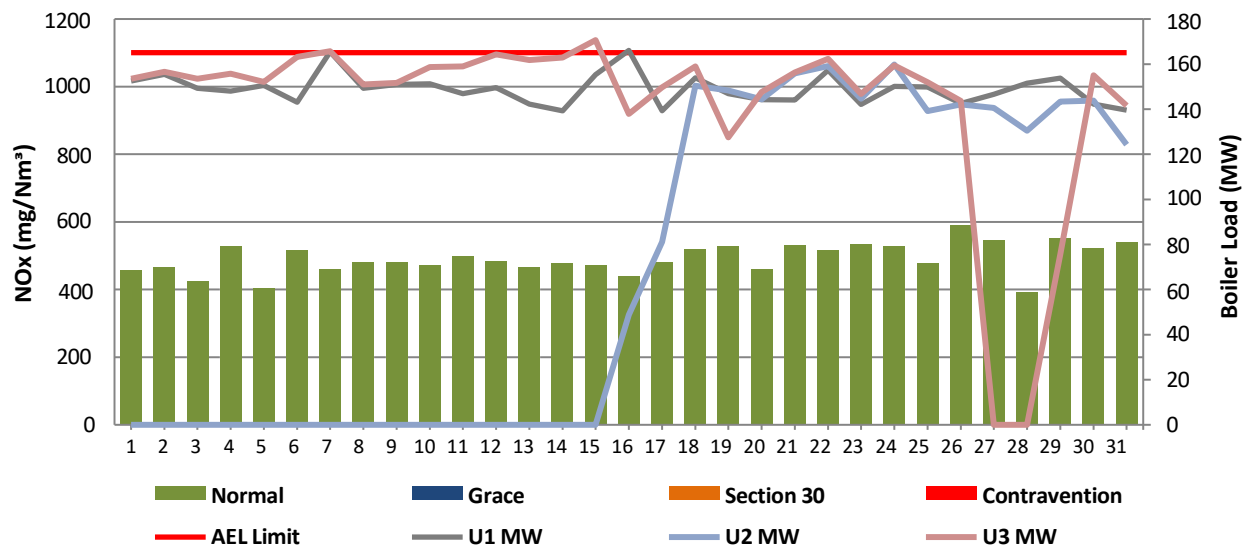
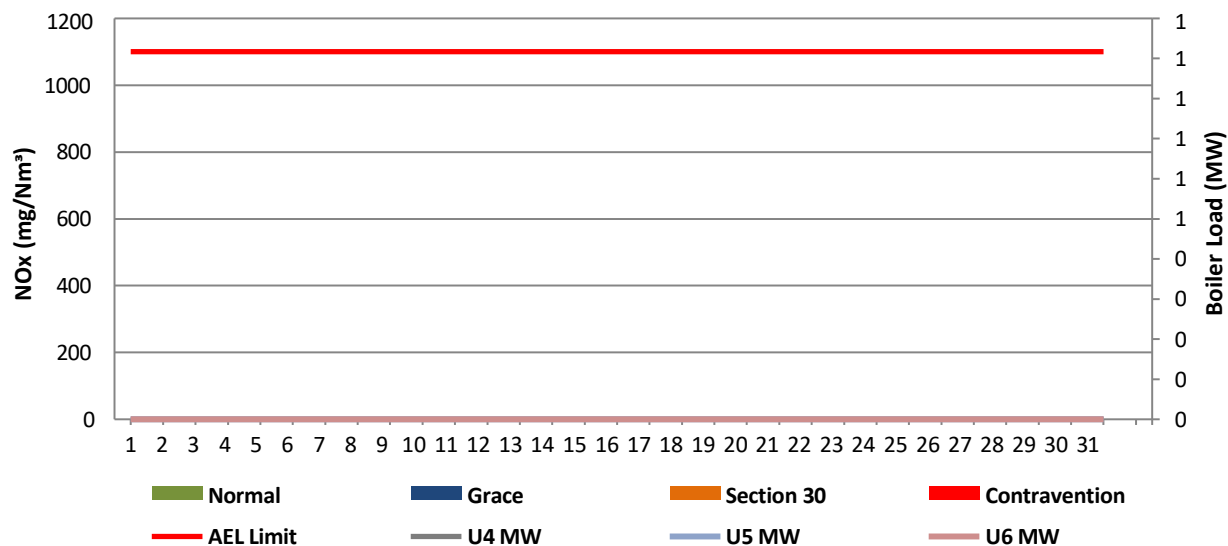


Figure 6: Grootvlei South St. NOx Emissions - July 2025



## 7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1. PM Start-up information for the month of July-2025

North Stack	Event 1		Event 2		Event 3		Event 4	
Unit No.	Unit 2		Unit 2		Unit 3		Unit 3	
Breaker Open (BO)			4:40 pm	2025/07/24	12:45 pm	2025/07/31	11:40 pm	2025/07/26
Draught Group (DG) Shut Down (SD)			DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	9:50 pm	2025/07/27
BO to DG SD (duration)		DD:HH:MM	n/a	DD:HH:MM	n/a	DD:HH:MM	00:22:10	DD:HH:MM
Fires in time	12:00 am	2025/07/16					8:05 pm	2025/07/28
Synch. to Grid (or BC)	12:00 am	1900/01/00					7:05 pm	2025/07/29
Fires in to BC (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM	00:23:00	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		DD:HH:MM		DD:HH:MM	n/a	DD:HH:MM

North Stack ...Cont.	Event 5		Event 6		Event 7		Event 8	
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



North Stack ...Cont	<i>Event 9</i>		<i>Event 10</i>		<i>Event 11</i>		<i>Event 12</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	<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

**7.2: Point Source emissions released during start-up (fires-in) and Shut-down (SD) for the month of July-2025 in mg/Nm<sup>3</sup>**

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

## ADDENDUM TO MONTHLY EMISSIONS REPORT

### 8 EMERGENCY EVENTS AND PLANT FAILURES

Emergency Generation *[This is only required for stations that are requested to report on this information]*

Table 8. Emergency Generation per unit for the month of July-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 July-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 affected person/source)</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 mitigation method)</i>

### 10 S30 INCIDENT OR LEGAL CONTRAVENTION REGISTER

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

Unit no	Incident Start Date	Incident End Date	Incident Cause	Remedial action	Date S30 initial notification sent	Date S30 investigation report sent	Date DEA Acknowledg-ment	Date DEA Acceptabl e	Comments / Reference No.

## 11 General

1. South Stack is currently offline.
2. The correlation test expired in March 2025, and a purchase order request is pending approval.
3. The monthly averages for PM, SO<sub>2</sub>, and NO<sub>2</sub> are 30.86, 1694.0, and 491.4 mg/Nm<sup>3</sup> at 10% O<sub>2</sub>, respectively.
4. No leaks were reported for the month.



2025/08/19

Environmental Department

Date

2025/08/19

Boiler Engineering

Date

General Manager

Date

Compiled by:

Learner Intern Grad Environmental

For: Department of Environmental Affairs and Tourism

Chief Air Pollution Control Officer

Copies: Eskom Environmental Management

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Grootvlie Power Station:

Engineering Manager  
Operating Manager  
Maintenance Manager  
Unit Production Manager  
Boiler Engineering Manager  
System Engineer  
Environmental Officer  
Performance and Test  
Production Manager