

**GROOTVLEI POWER STATION MONTHLY EMISSIONS REPORT**

Atmospheric Emission License GPS/0015/2015/F02


**1 RAW MATERIALS AND PRODUCTS**

Raw Materials and Products	Raw Material Type	Units	Maximum Permitted Consumption Rate	Consumption Rate Apr-2021
	Coal	Tons	650 000	79 439,0
	Fuel Oil	Tons	20 000	1214,7
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Apr-2021
	Energy	GWh	806,4	279,19
	Ash	Tons	300 000	19 825
	RE PM	kg/MWh	not specified	0,10

## 2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.6 to < 1.2	0,59
Ash Content	%	27 to < 32	24,96

## 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 Apr-2021
Unit 1	Fabric Filter Plant (FFP)	99,751%
Unit 2	Fabric Filter Plant (FFP)	99,904%
Unit 3	Fabric Filter Plant (FFP)	99,838%
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	98,8	98,8	100,0
South				

## 6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>2</sub> (tons)
Unit 1	11,84	755,1	205,5
Unit 2	5,52	497,9	143,0
Unit 3	11,87	733,4	195,8
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>29,22</b>	<b>1 986,3</b>	<b>544,4</b>

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

Associated Unit/Stack	Normal	Grace	Section 30	Contra- vention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	23,2
South	0	0	0	0	0	
<b>SUM</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	





 Table 6.3: Operating days in compliance to SO<sub>x</sub> AEL Limit - April 2021

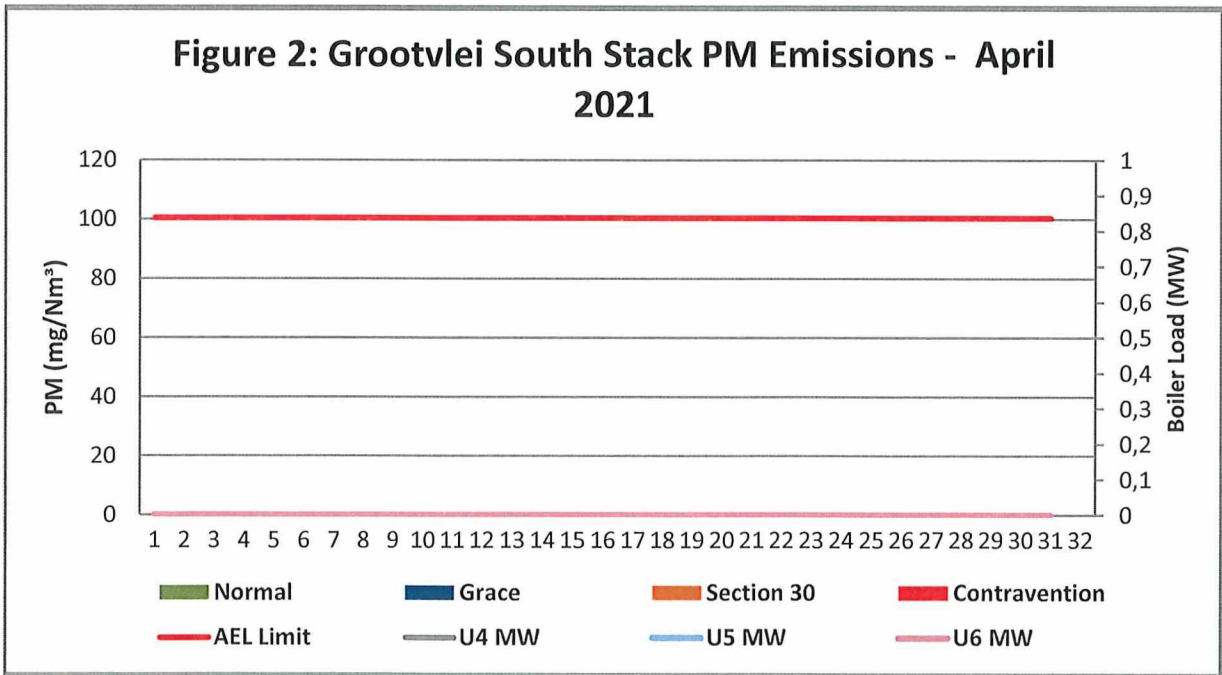
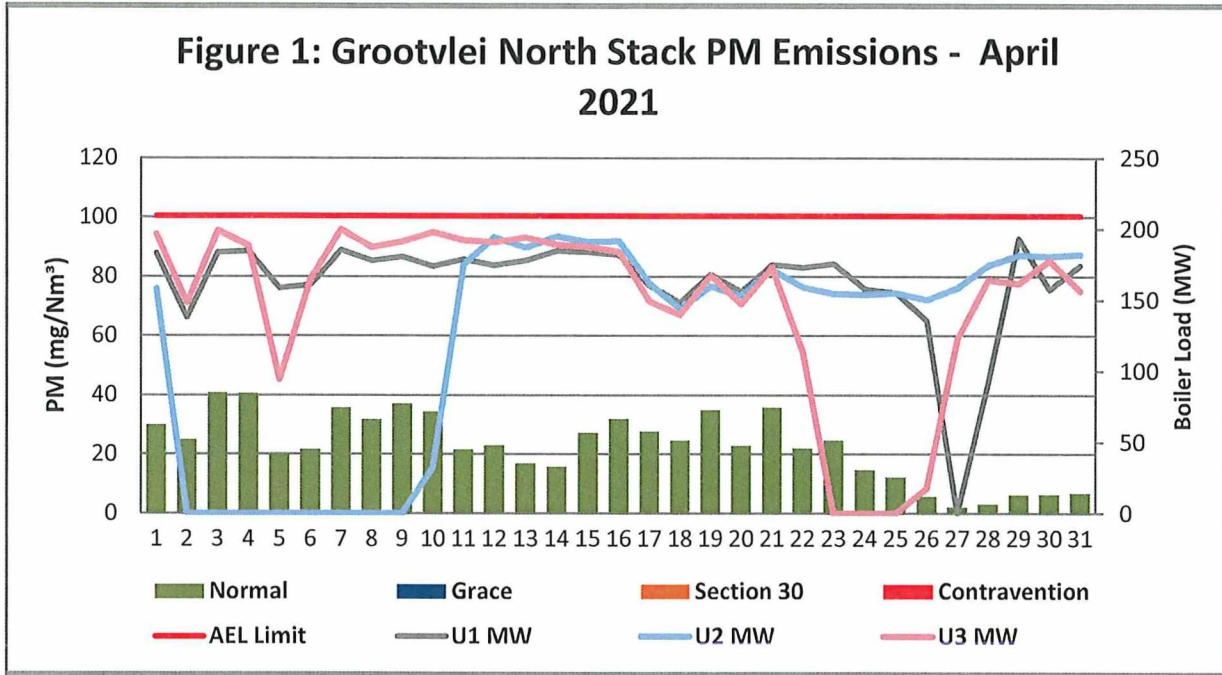
Associated Unit/Stack	Normal	Grace	Section 30	Contra- vention	Total Exceedance	Average SO <sub>x</sub> (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	1 475,0
South	0	0	0	0	0	
<b>SUM</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

 Table 6.4: Operating days in compliance to NO<sub>x</sub> AEL Limit - April 2021

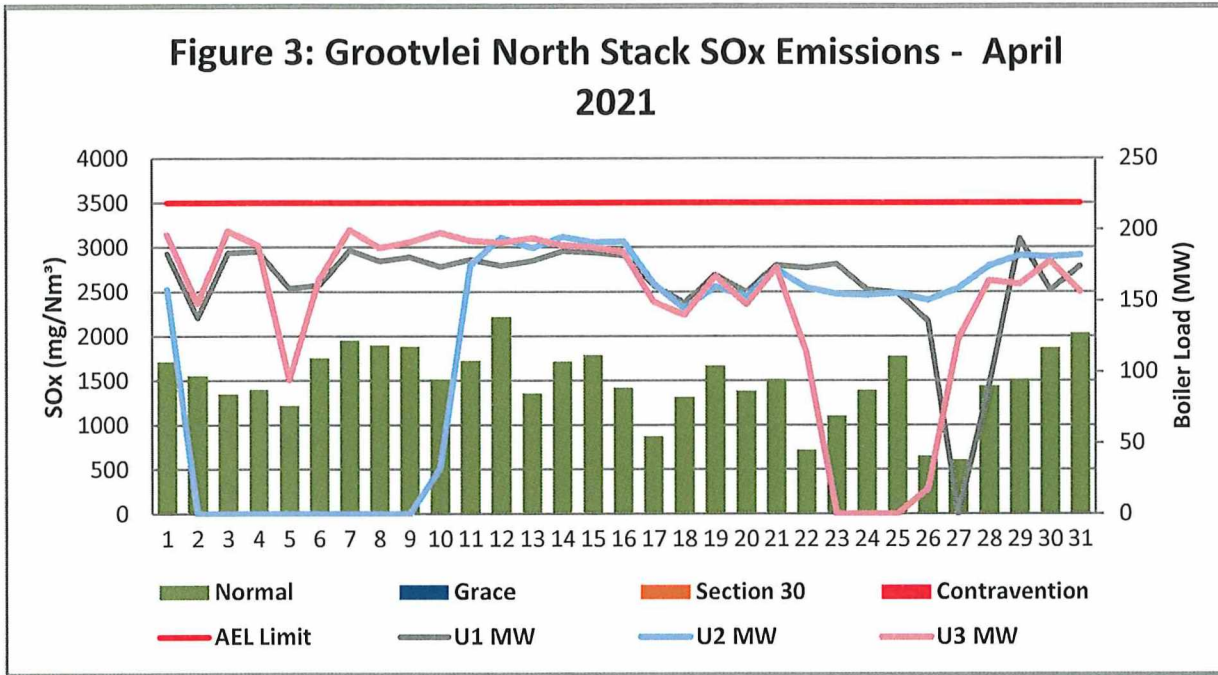
Associated Unit/Stack	Normal	Grace	Section 30	Contra- vention	Total Exceedance	Average NO <sub>x</sub> (mg/Nm <sup>3</sup> )
North	31	0	0	0	0	413,5
South	0	0	0	0	0	
<b>SUM</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Table 6.5: Legend Description

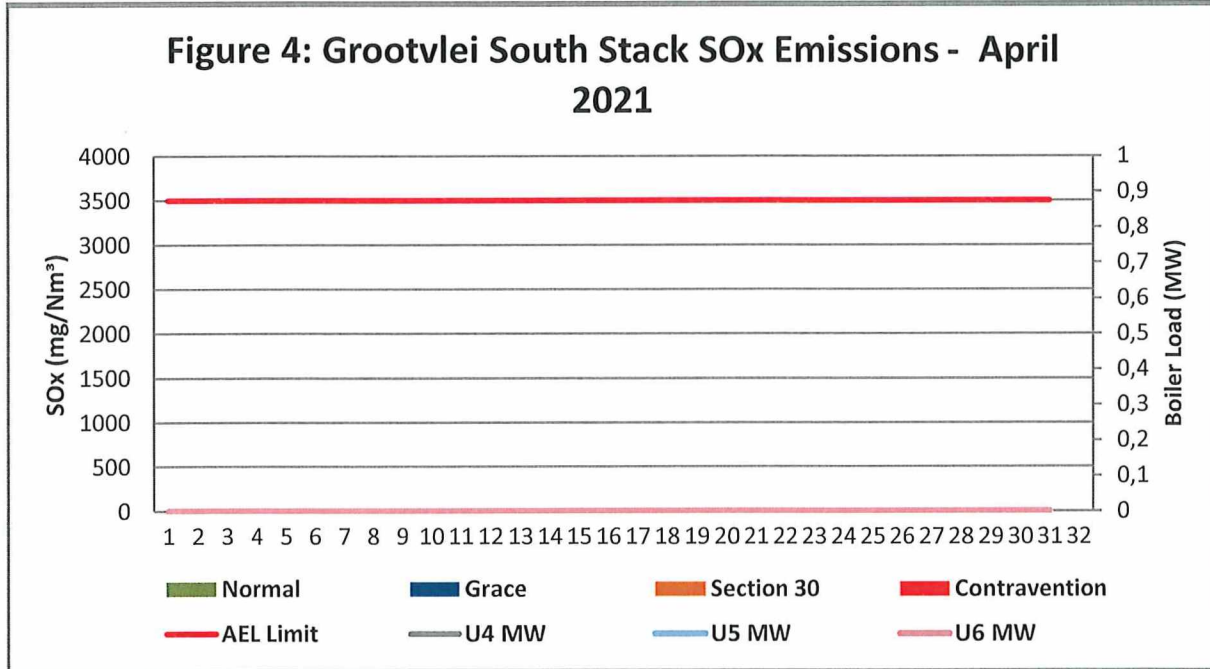
Condition	Colour	Description
Normal		Emissions below Emission Limit Value (ELV)
Grace		Emissions above the ELV during grace period
Section 30		Emissions above ELV during a NEMA S30 incident
Contra- vention		Emissions above ELV but outside grace or S30 incident conditions

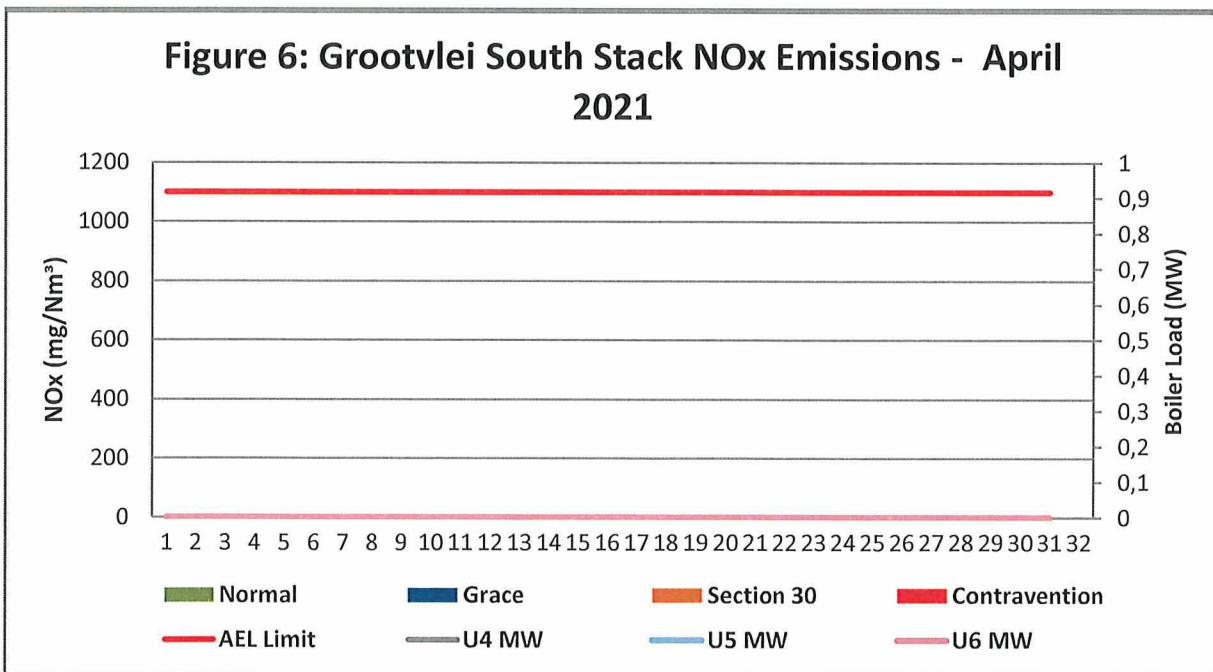
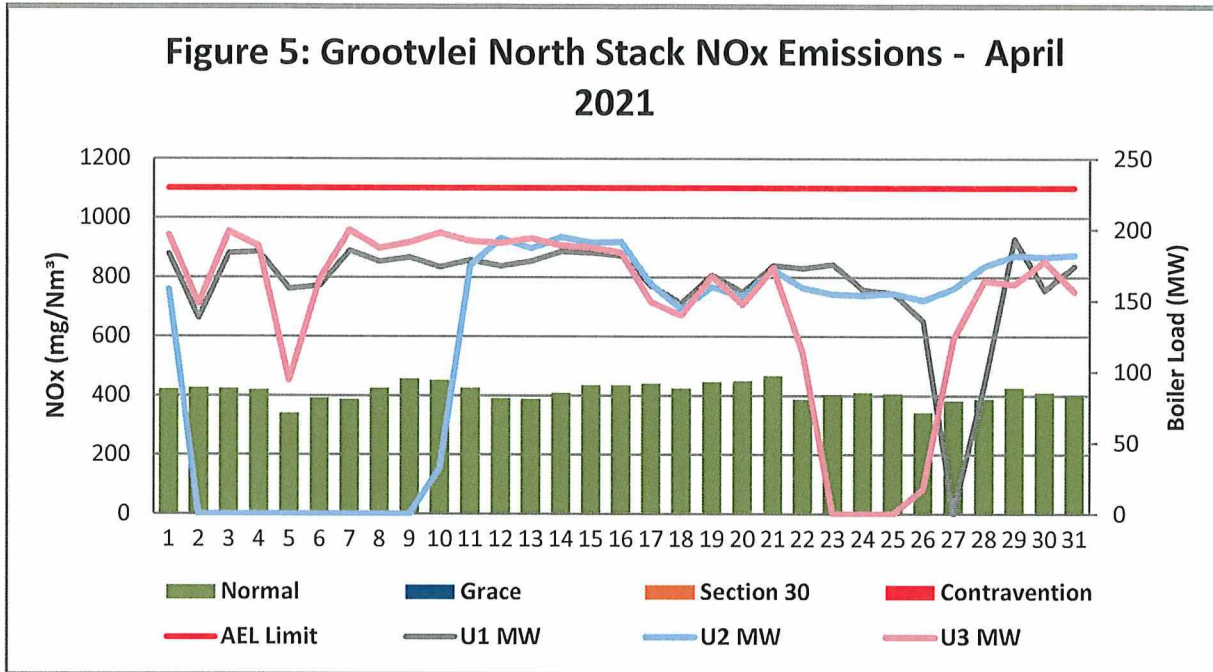


**Figure 3: Grootvlei North Stack SOx Emissions - April 2021**



**Figure 4: Grootvlei South Stack SOx Emissions - April 2021**





**7 SHUT DOWN AND LIGHT UP INFORMATION**

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

North Stack	Event 1		Event 2		Event 3		Event 4	
Unit No.	Unit 1		Unit 1		Unit 2		Unit 2	
Breaker Open (BO)	9:10 PM	2021/04/19	11:30 AM	2021/04/26	5:40 AM	2021/04/01	11:10 AM	2021/04/22
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD	11:40 AM	2021/04/27	7:50 PM	2021/04/01	3:35 PM	2021/04/22
BO to DG SD (duration)	n/a	DD:HH:MM	01:00:10	DD:HH:MM	00:14:10	DD:HH:MM	00:04:25	DD:HH:MM
Fires in time	9:10 PM	2021/04/19	1:20 AM	2021/04/28	12:50 PM	2021/04/10	4:00 PM	2021/04/22
Synch. to Grid (or BC)	7:05 AM	2021/04/20	12:55 PM	2021/04/28	11:10 PM	2021/04/10	2:05 PM	2021/04/23
Fires in to BC (duration)	00:09:55	DD:HH:MM	00:11:35	DD:HH:MM	00:10:20	DD:HH:MM	00:22:05	DD:HH:MM
Emissions below limit from BC (end date)	not > limit	not > limit	not > limit	not > limit	not > limit	not > limit	not > limit	not > limit
Emissions below limit from BC (duration)	n/a	DD:HH:MM	n/a	DD:HH:MM	n/a	DD:HH:MM	n/a	DD:HH:MM

North Stack ...Cont.	Event 1		Event 2		Event 3		Event 4	
Unit No.	Unit 2		Unit 3		no event		no event	
Breaker Open (BO)	4:00 PM	2021/04/24	1:20 AM	2021/04/22				
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD	9:55 AM	2021/04/22				
BO to DG SD (duration)	n/a	DD:HH:MM	00:08:35	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	4:00 PM	2021/04/24	10:25 AM	2021/04/26				
Synch. to Grid (or BC)	7:25 PM	2021/04/24	7:15 AM	2021/04/27				
Fires in to BC (duration)	00:03:25	DD:HH:MM	00:20:50	DD:HH:MM		DD:HH:MM		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	n/a	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

South Stack ...Cont.	<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 April-2021 in mg/Nm<sup>3</sup>**

**[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 off-line.

  
Environmental Department Date

  
Boiler Engineering 12-05-2021 Date

  
General Manager 18/05/2021 Date

Compiled by Boiler Engineering Department

FFP System Engineer

For: Gert Sibande District Municipality

Chief Air Pollution Control Officer

Copies: Eskom Environmental Management

D Herbst

Group Technology Engineering

R Rampiar  
E. Patel

Grootvlie Power Station:

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