

CAMDEN POWER STATION MONTHLY EMISSIONS REPORT

Atmospheric Emission License CPS/0012/2019/F03


1 RAW MATERIALS AND PRODUCTS

Raw Materials and Products	Raw Material Type	Units	Maximum Permitted Consumption	Actual Consumption Dec-2021
	Coal	Tons	550 000	382 629,00
	Fuel Oil	Tons	5 000	6 918,01
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Actual Production Dec-2021
	Energy	GWh	1600	660,78
	Ash	Tons	not specified	82 648
	RE PM	kg/MWh	not specified	0,170

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	19,56	23,05
Sulphur Content	%	< 2	0,90
Ash Content	%	25 to 35	21,60

3 EMISSION LIMITS (mg/Nm³)

Associated Unit/Stack	PM	SO _x	NO _x
Stack 1	100	3500	1100
Stack 2	100	3500	1100
Stack 3	100	3500	1100
Stack 4	100	3500	1100

4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Dec-2021
Unit 1	Fabric Filter Plant (FFP)	99,6%
Unit 2	Fabric Filter Plant (FFP)	99,80%
Unit 3	Fabric Filter Plant (FFP)	99,77%
Unit 4	Fabric Filter Plant (FFP)	99,73%
Unit 5	Fabric Filter Plant (FFP)	99,93%
Unit 6	Fabric Filter Plant (FFP)	99,94%
Unit 7	Fabric Filter Plant (FFP)	99,94%
Unit 8	Fabric Filter Plant (FFP)	99,93%

Note: Abatement plant does not have bypass mode operation, hence plant 100% Utilised.

5 MONITOR RELIABILITY (%)

Associated Unit/Stack	PM	SO ₂	NO	CO ₂	O ₂
Stack 1	100,0	94,9	99,5	0,0	0,0
Stack 2	100,0	99,8	99,8	0,0	0,0
Stack 3	100,0	98,4	98,7	0,0	0,0
Stack 4	98,5	94,4	94,2	0,0	0,0

6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)	CO ₂ (tons)
1	26,5	876	359	109 291
2	15,4	855	352	107 233
3	26,6	1 158	692	149 259
4	16,5	650	376	80 700
5	7,7	1 178	596	140 821
6	7,0	1 133	569	136 056
7	6,1	1 169	510	147 922
8	6,8	1 237	541	158 497
SUM	112,5	8 254	3 994	1 029 779

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
Stack 1	28	0	0	0	0	39,3
Stack 2	31	0	0	0	0	38,1
Stack 3	31	0	0	0	0	10,7
Stack 4	30	0	0	0	0	8,2
SUM	120	0	0	0	0	

Table 6.3: Operating days in compliance to SOx AEL Limit - December 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm³)
Stack 1	29	0	0	0	0	1 461,9
Stack 2	31	0	0	0	0	1 607,8
Stack 3	31	0	0	0	0	1 598,8
Stack 4	31	0	0	0	0	1 495,6
SUM	122	0	0	0	0	

Table 6.4: Operating days in compliance to NOx AEL Limit - December 2021

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
Stack 1	29	0	0	0	0	600,8
Stack 2	31	0	0	0	0	962,5
Stack 3	31	0	0	0	0	803,5
Stack 4	31	0	0	0	0	650,1
SUM	122	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: Camden Stack 1 PM Emissions - December 2021

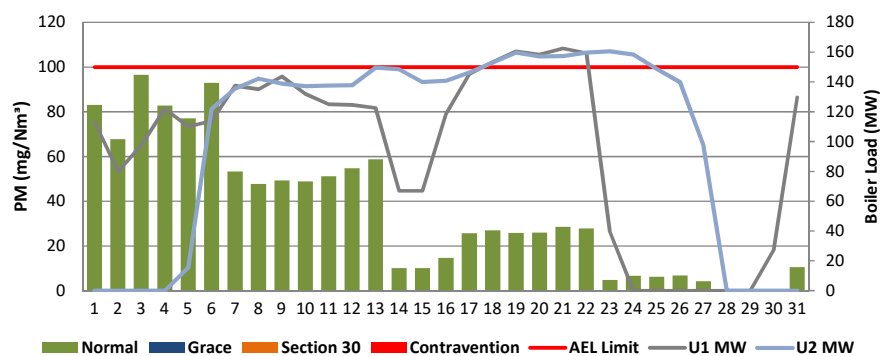


Figure 2: Camden Stack 2 PM Emissions - December 2021

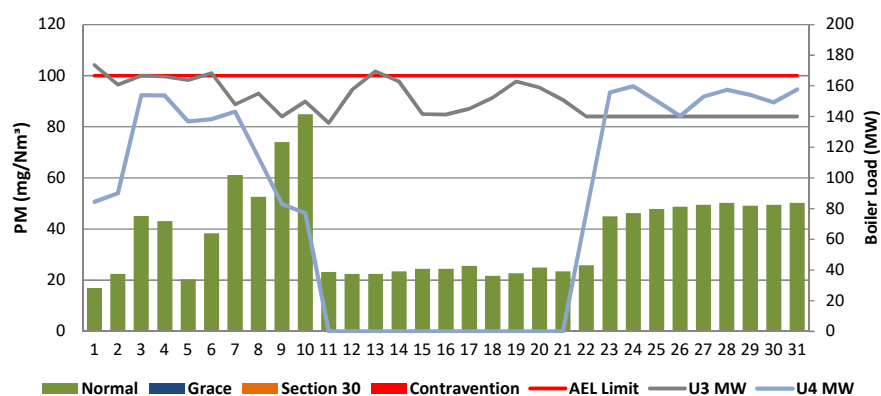


Figure 3: Camden Stack 3 PM Emissions - December 2021

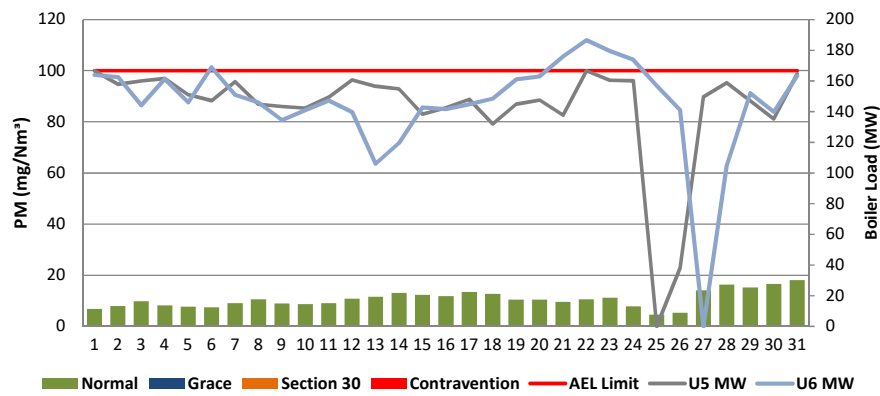


Figure 4: Camden Stack 4 PM Emissions - December 2021

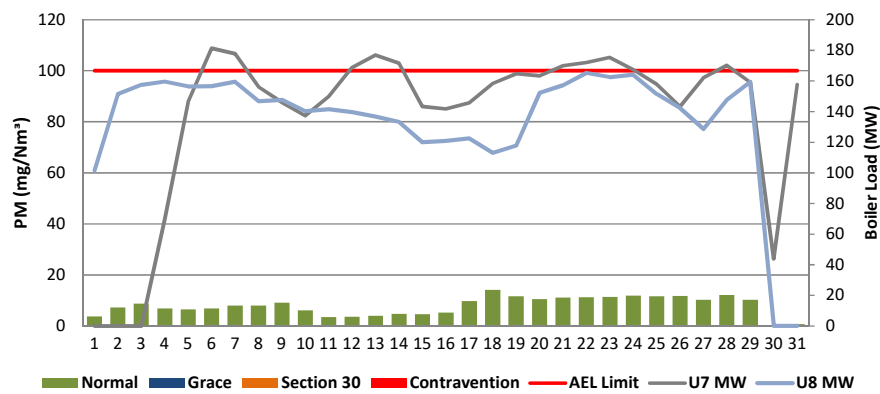


Figure 5: Camden Stack 1 SOx Emissions - December 2021

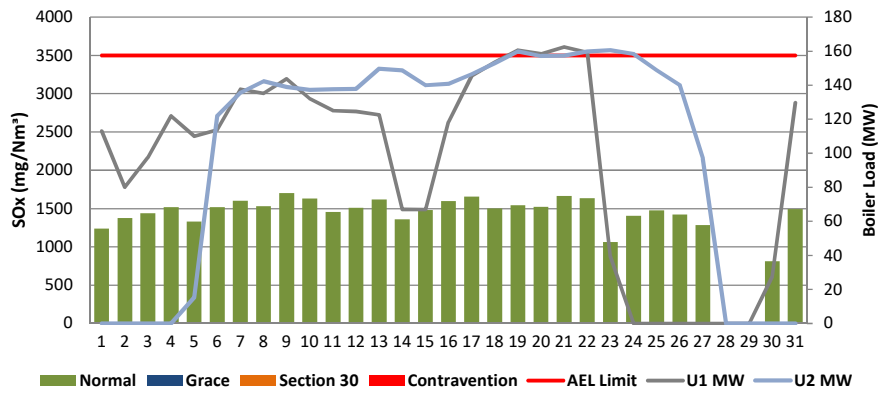


Figure 6: Camden Stack 2 SOx Emissions - December 2021

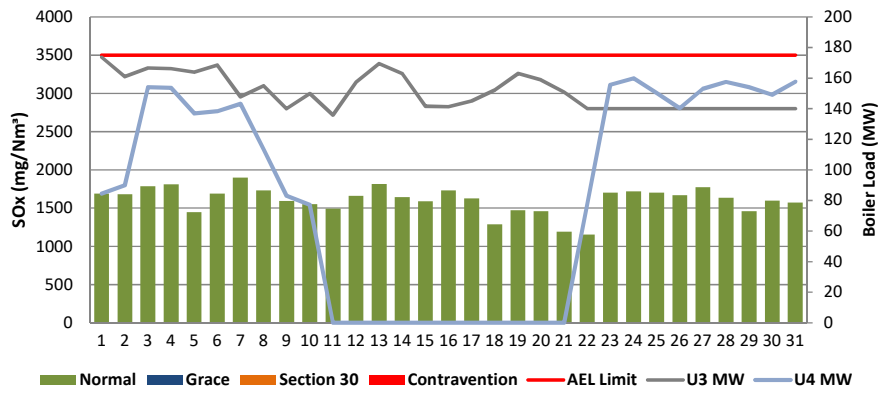


Figure 7: Camden Stack 3 SOx Emissions - December 2021

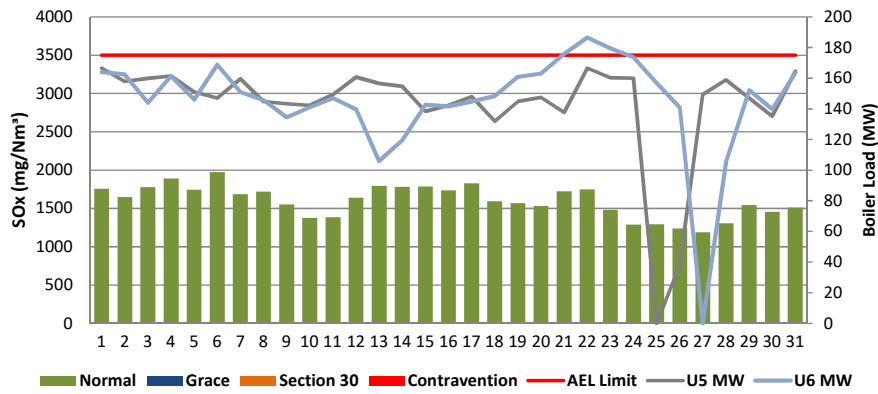


Figure 8: Camden Stack 4 SOx Emissions - December 2021

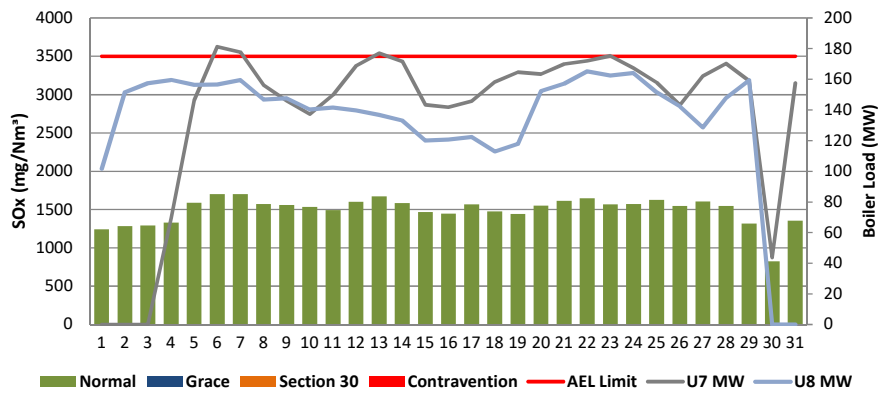


Figure 9: Camden Stack 1 NOx Emissions - December 2021

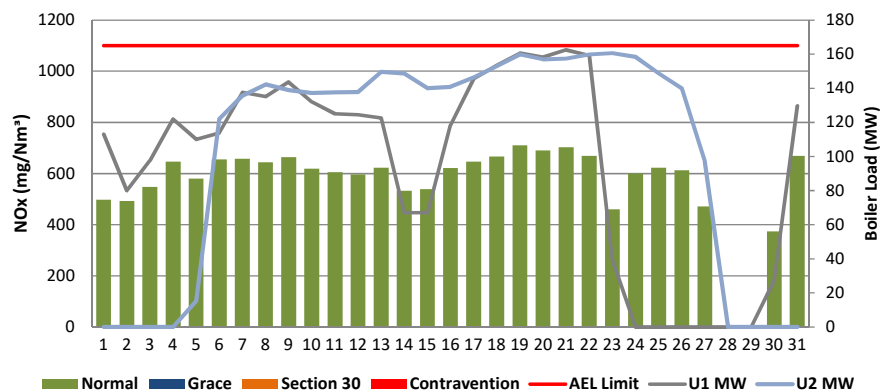


Figure 10: Camden Stack 2 NOx Emissions - December 2021

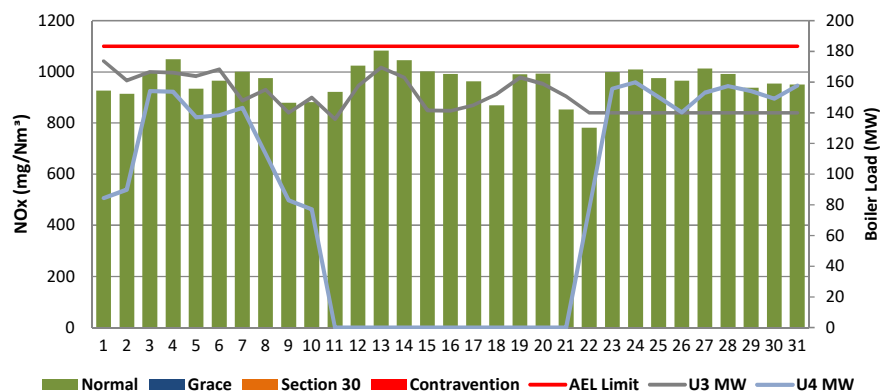


Figure 11: Camden Stack 3 NOx Emissions - December 2021

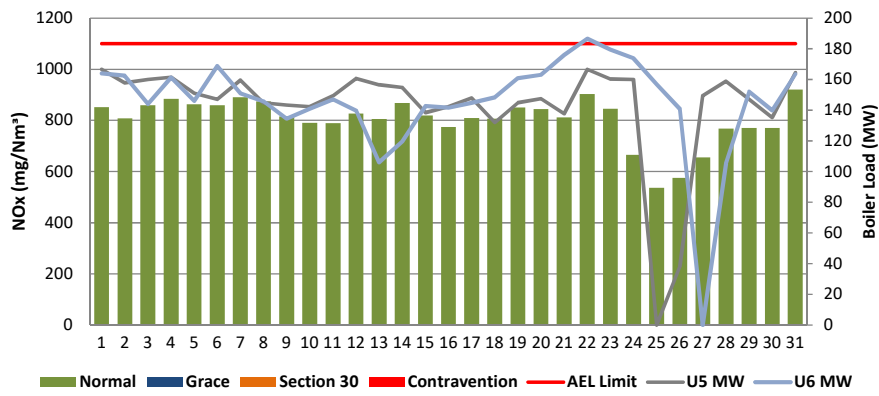
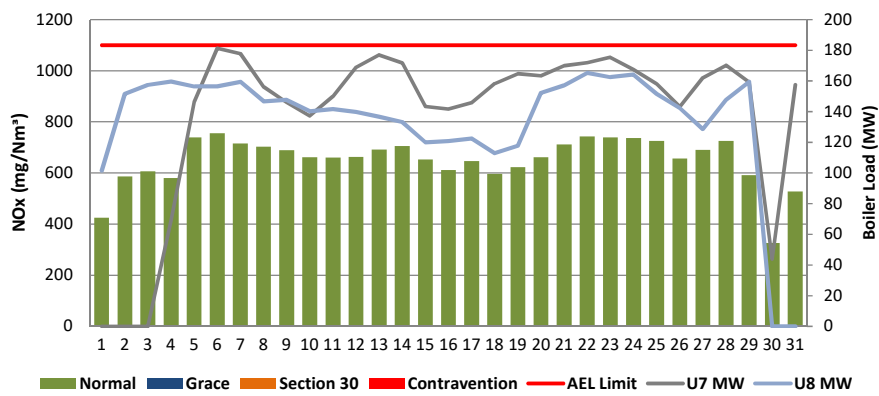


Figure 12: Camden Stack 4 NOx Emissions - December 2021



10 GENERAL / ABNORMALITIES

Unit 1:

None

Unit 2:

None

Unit 3:

None

Unit 4:

None

Unit 5:

None

Unit 6:

None

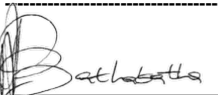
Unit 7:

None

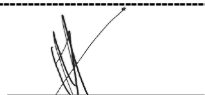
Unit 8:

None

Comments on Use of averages for O2 and CO2 from QAL2 tests as per previous months


Engineering Manager

21/01/2022
Date


Environmental Manager

21/01/2022
Date

Compiled by: Environmental Department & verified by Boiler Eng

Env. Practitioner & System Eng

For: Department of Environment, Forestry & Fisheries

Chief Air Pollution Control Officer

Copies: Eskom Environmental Management

D Herbst
B Mccourt

Gx Compliance Management
Gx Asset Management

R Rampiar
E Patel

Camden Power Station:

Engineering Manager
Operating Manager
Maintenance Manager
Production Managers
Boiler Engineering Manager
System Engineer
Environmental Manager
Environmental Officer
P&T and Process Engineering Manager