

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 Sep-2022
	Coal	Tons	550 000	328 918.80
	Fuel Oil	Tons	5 000	2 620.76
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Actual Production Sep-2022
	Energy	GWh	1600	598.04
	Ash	Tons	not specified	72 691
	RE PM	kg/MWh	not specified	0.287

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	19.56	23.08
Sulphur Content	%	< 2	0.90
Ash Content	%	25 to 35	22.10

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 Sep-2022
Unit 1	Fabric Filter Plant (FFP)	99.5%
Unit 2	Fabric Filter Plant (FFP)	99.42%
Unit 3	Fabric Filter Plant (FFP)	99.55%
Unit 4	Fabric Filter Plant (FFP)	99.58%
Unit 5	Fabric Filter Plant (FFP)	99.79%
Unit 6	Fabric Filter Plant (FFP)	99.85%
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	98.1	99.9	0.0	0.0
Stack 2	100.0	91.9	94.7	0.0	0.0
Stack 3	99.4	94.5	99.4	0.0	0.0
Stack 4	100.0	99.0	99.3	0.0	0.0

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

6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of September-2022

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)	CO ₂ (tons)
1	33.8	1 019	521	127 107
2	28.2	585	299	71 550
3	34.4	706	473	95 746
4	31.8	747	473	100 063
5	16.1	603	401	95 424
6	15.0	809	495	128 949
7	6.0	1 071	645	142 555
8	6.4	1 090	659	145 862
SUM	171.6	6 629	3 967	907 255

Table 6.2: Operating days in compliance to PM AEL Limit - September 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
Stack 1	27	0	0	0	0	59.6
Stack 2	25	3	0	0	3	70.2
Stack 3	28	0	0	0	0	24.3
Stack 4	28	0	0	0	0	8.7
SUM	108	3	0	0	3	

Table 6.3: Operating days in compliance to SOx AEL Limit - September 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm³)
Stack 1	28	0	0	0	0	1 508.4
Stack 2	30	0	0	0	0	1 477.4
Stack 3	28	0	0	0	0	1 178.4
Stack 4	28	0	0	0	0	1 429.2
SUM	114	0	0	0	0	

Table 6.4: Operating days in compliance to NOx AEL Limit - September 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
Stack 1	28	0	0	0	0	775.2
Stack 2	24	0	0	6	6	955.9
Stack 3	28	0	0	0	0	722.9
Stack 4	28	0	0	0	0	859.7
SUM	108	0	0	6	6	

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 - September 2022

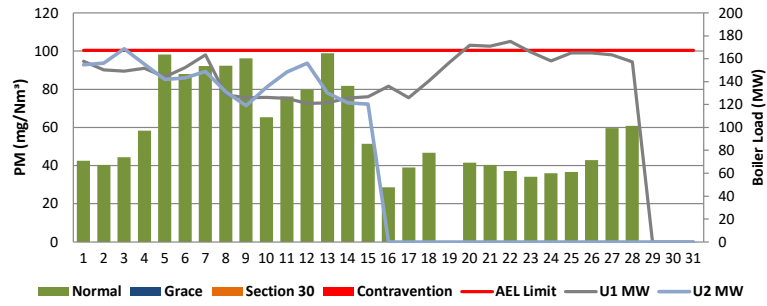


Figure 2: Camden Stack 2 PM Emissions - September 2022

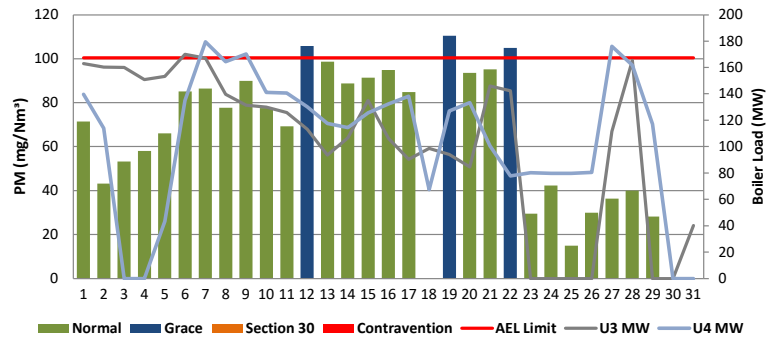


Figure 3: Camden Stack 3 PM Emissions - September 2022

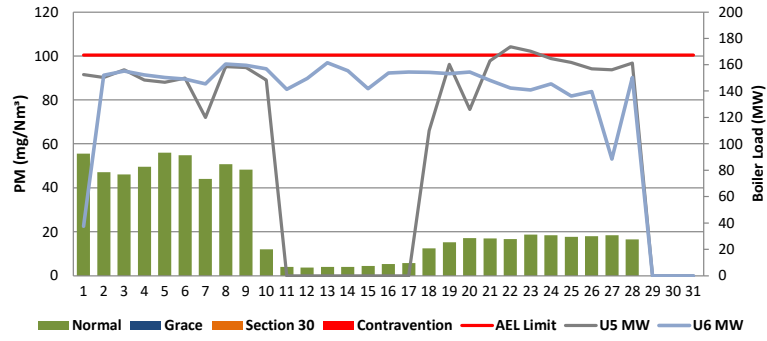


Figure 4: Camden Stack 4 PM Emissions - September 2022

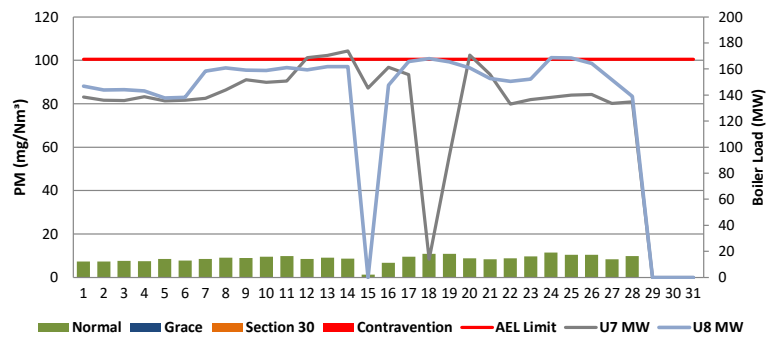


Figure 5: Camden Stack 1 SOx Emissions - September 2022

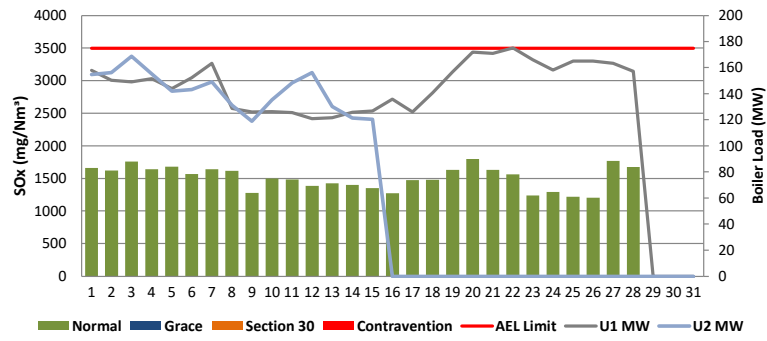


Figure 6: Camden Stack 2 SOx Emissions - September 2022

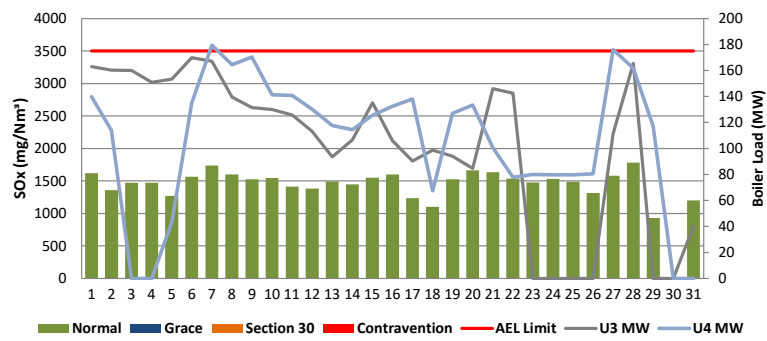


Figure 7: Camden Stack 3 SOx Emissions - September 2022

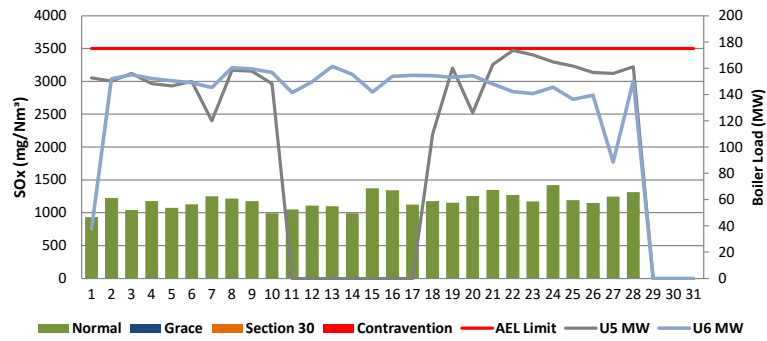


Figure 8: Camden Stack 4 SOx Emissions - September 2022

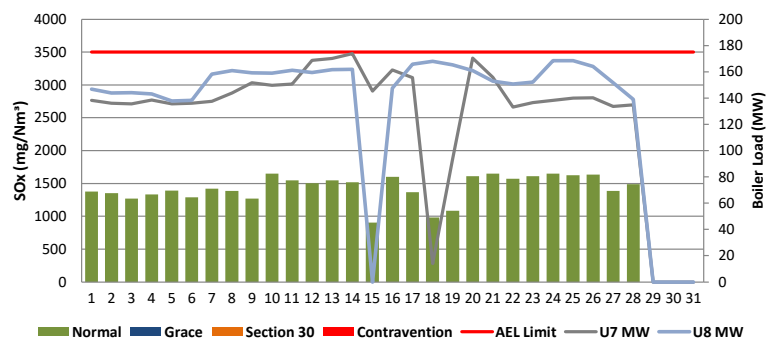


Figure 9: Camden Stack 1 NOx Emissions - September 2022

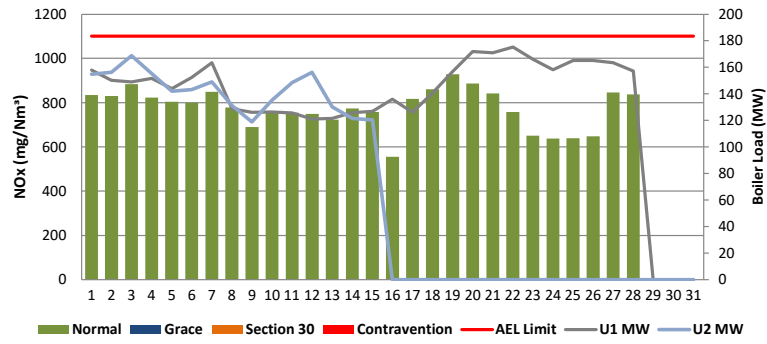


Figure 10: Camden Stack 2 NOx Emissions - September 2022

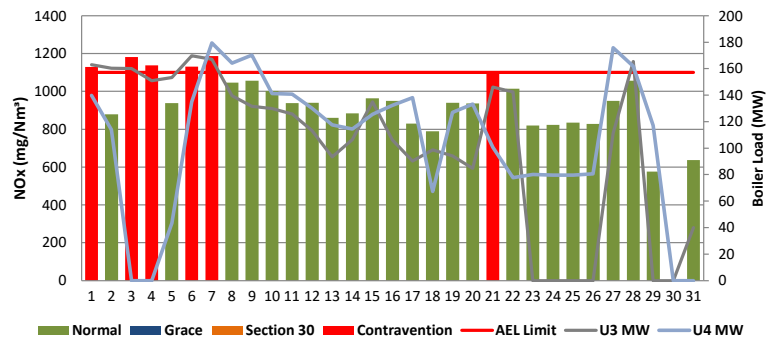


Figure 11: Camden Stack 3 NOx Emissions - September 2022

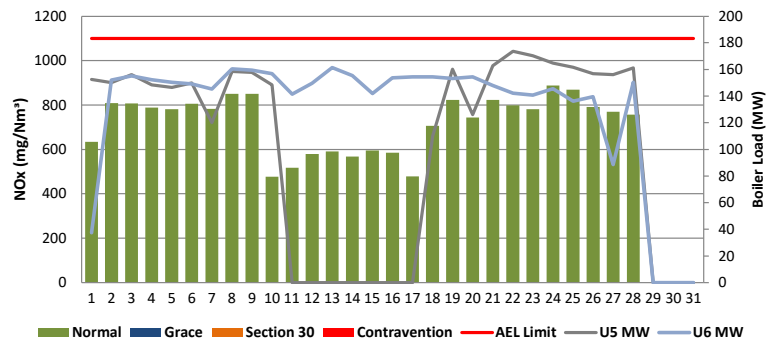
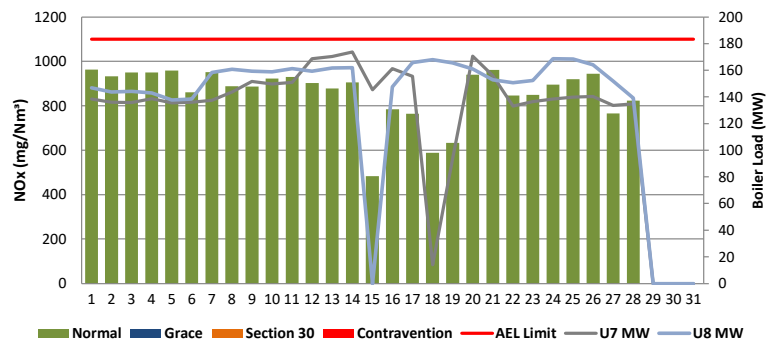


Figure 12: Camden Stack 4 NOx Emissions - September 2022



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

Stack 2 experienced high Nox reading for the month of September 2022, Camden is still investigating and will provide feedback as soon as the investigation is finalised.

	<u>19/10/2022</u>		<u>19/10/2022</u>
Engineering Manager	Date	Environmental Manager	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