

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 Oct-2022
	Coal	Tons	550 000	253 455.00
	Fuel Oil	Tons	5 000	3 042.09
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Actual Production Oct-2022
	Energy	GWh	1600	504.40
	Ash	Tons	not specified	58 624
	RE PM	kg/MWh	not specified	0.324

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	19.56	22.79
Sulphur Content	%	< 2	0.90
Ash Content	%	25 to 35	23.13

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 Oct-2022
Unit 1	Fabric Filter Plant (FFP)	99.4%
Unit 2	Fabric Filter Plant (FFP)	99.58%
Unit 3	Fabric Filter Plant (FFP)	99.63%
Unit 4	Fabric Filter Plant (FFP)	99.59%
Unit 5	Fabric Filter Plant (FFP)	99.93%
Unit 6	Fabric Filter Plant (FFP)	99.96%
Unit 7	Fabric Filter Plant (FFP)	Unit Off-line
Unit 8	Fabric Filter Plant (FFP)	99.94%

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	97.3	97.3	0.0	0.0
Stack 2	100.0	98.3	98.3	0.0	0.0
Stack 3	100.0	98.9	97.5	0.0	0.0
Stack 4	100.0	98.1	98.5	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 October-2022

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)	CO ₂ (tons)
1	28.4	1 011	418	97 547
2	39.0	1 224	522	128 254
3	43.0	1 410	797	147 573
4	42.0	1 395	773	143 432
5	6.4	820	507	108 805
6	0.7	178	117	25 997
7	0.0	0	0	0
8	4.2	667	348	99 943
SUM	163.6	6 705	3 482	751 551

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
Stack 1	26	0	0	0	0	59.5
Stack 2	28	1	0	0	1	63.4
Stack 3	22	0	0	0	0	12.2
Stack 4	18	0	0	0	0	9.0
SUM	94	1	0	0	1	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm³)
Stack 1	27	0	0	0	0	1 792.0
Stack 2	31	0	0	0	0	1 962.0
Stack 3	24	0	0	0	0	1 430.6
Stack 4	20	0	0	0	0	1 289.1
SUM	102	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
Stack 1	27	0	0	0	0	765.5
Stack 2	13	0	0	18	18	1 095.8
Stack 3	23	0	0	1	1	872.5
Stack 4	20	0	0	0	0	671.0
SUM	83	0	0	19	19	

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 - October 2022

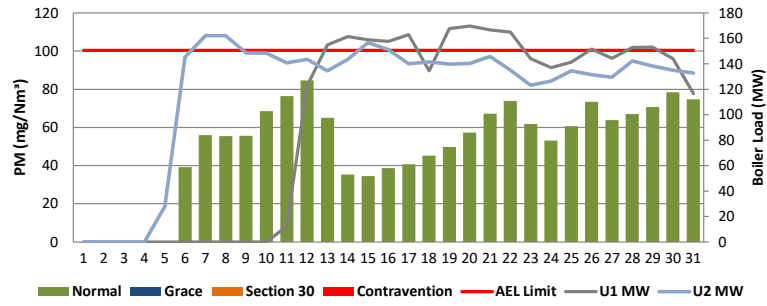


Figure 2: Camden Stack 2 PM Emissions - October 2022

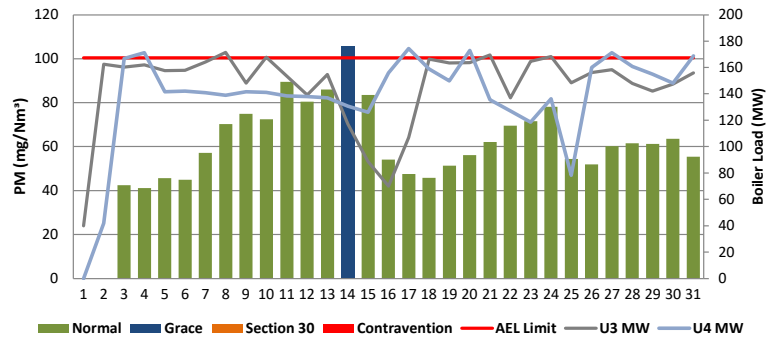


Figure 3: Camden Stack 3 PM Emissions - October 2022

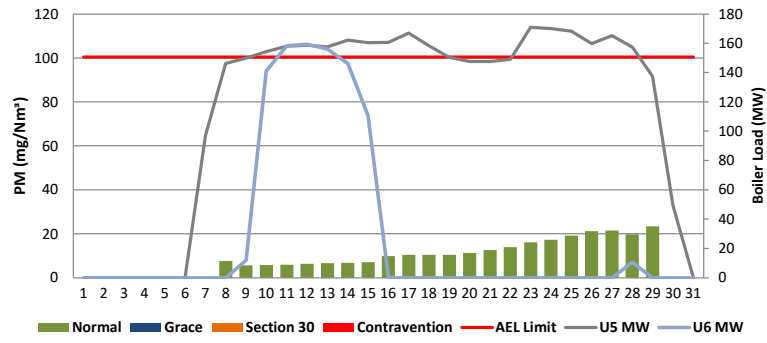


Figure 4: Camden Stack 4 PM Emissions - October 2022

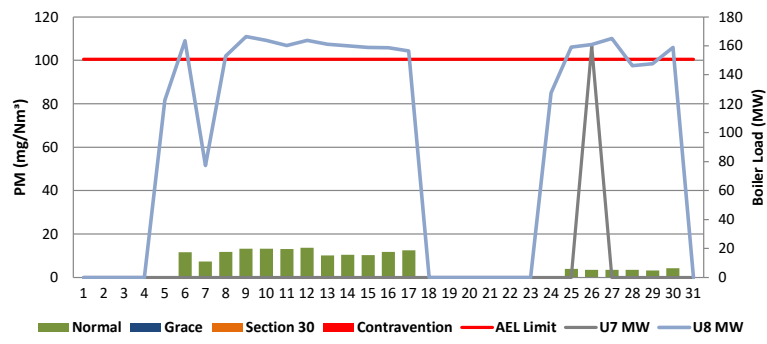


Figure 5: Camden Stack 1 SOx Emissions - October 2022

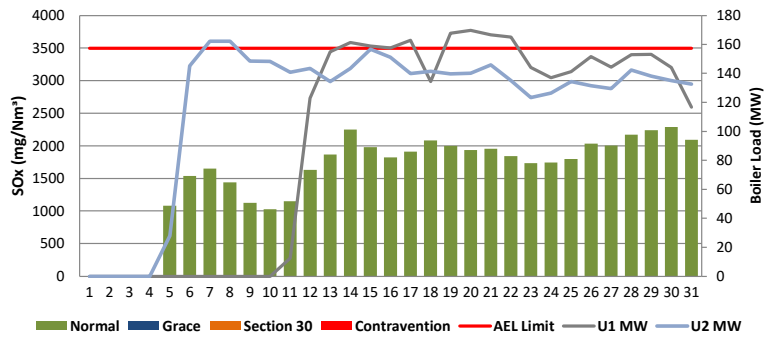


Figure 6: Camden Stack 2 SOx Emissions - October 2022

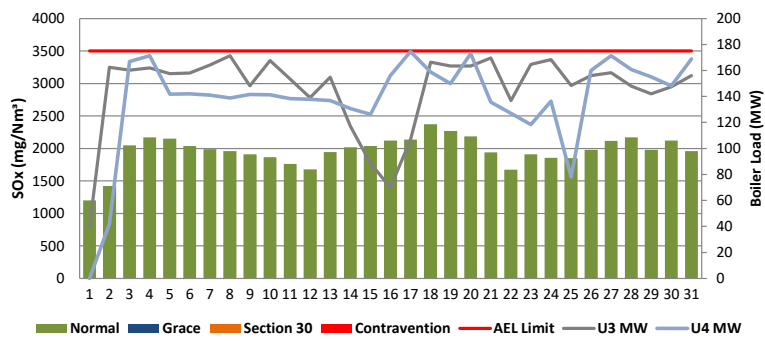


Figure 7: Camden Stack 3 SOx Emissions - October 2022

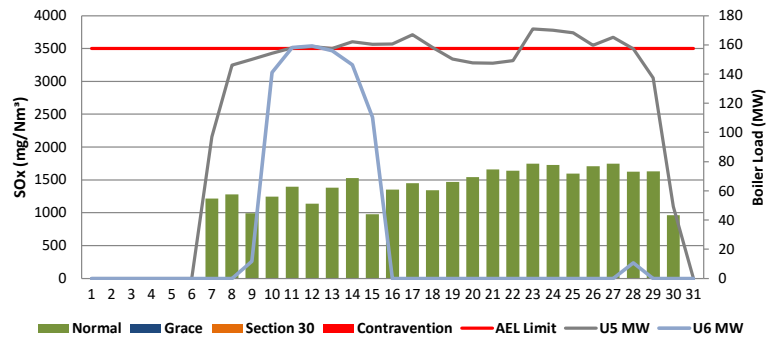


Figure 8: Camden Stack 4 SOx Emissions - October 2022

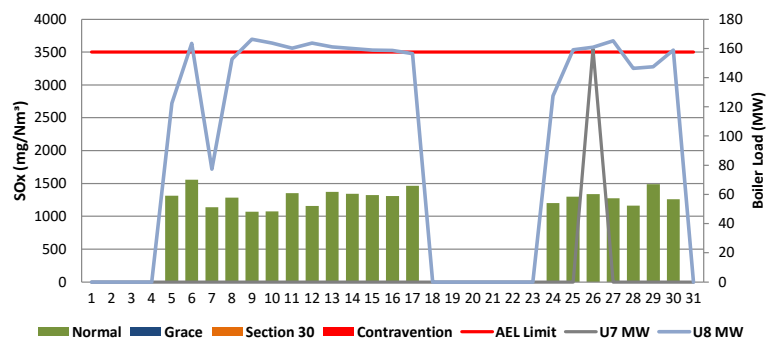


Figure 9: Camden Stack 1 NOx Emissions - October 2022

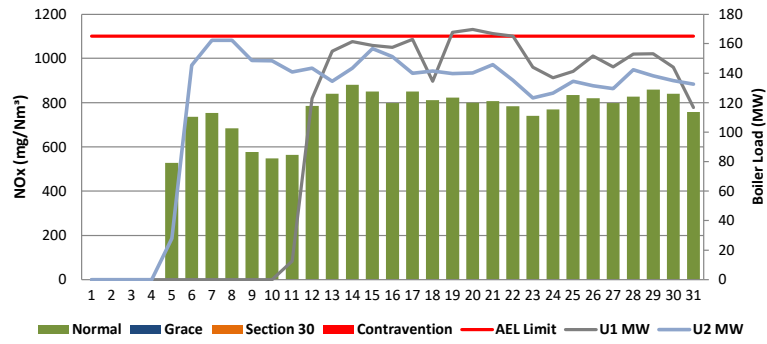


Figure 10: Camden Stack 2 NOx Emissions - October 2022

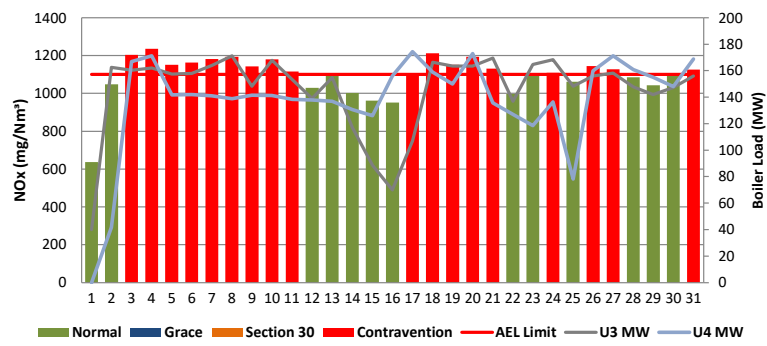


Figure 11: Camden Stack 3 NOx Emissions - October 2022

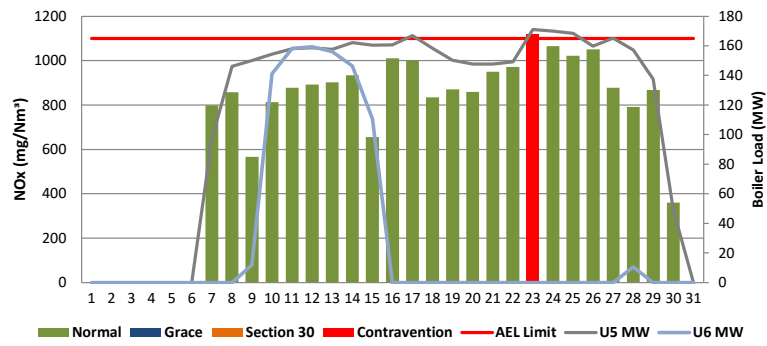
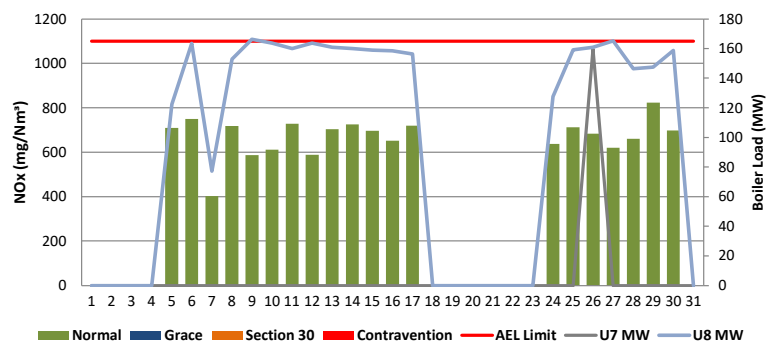


Figure 12: Camden Stack 4 NOx Emissions - October 2022



10 GENERAL / ABNORMALITIES

Unit 1:

None

Unit 2:

None

Unit 3:

None

Unit 4:

None

Unit 5:

None

Unit 6:

None

Unit 7:

None

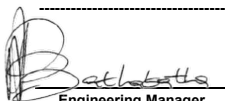
Unit 8:

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 October 2022, Camden is still investigating and will provide feedback as soon as the investigation is finalised.

Stack 3 flagged high Nox reading for the 23rd October 2022, Camden is still investigating and will provide feedback as soon as the investigation is finalised.


Engineering Manager

23/11/2022
Date


Environmental Manager

23/11/2022
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