

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 Rate	Consumption Rate Jan-2021
	Coal	Tons	550 000	175 433.62
	Fuel Oil	Tons	5 000	1 737.67
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Jan-2021
	Energy	GWh	1600	273.19
	Ash	Tons	not specified	38 280
	RE PM	kg/MWh	not specified	0.035

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	19.56	22.70
Sulphur Content	%	< 2	0.90
Ash Content	%	25 to 35	21.82

3 EMISSION LIMITS (mg/Nm³)

Associated Unit/Stack	PM	SO _x	NO _x
Stack 1	50	3500	1100
Stack 2	50	3500	1100
Stack 3	50	3500	1100
Stack 4	50	3500	1100

4 ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Jan-2021
Unit 1	Fabric Filter Plant (FFP)	Unit Off-load
Unit 2	Fabric Filter Plant (FFP)	99.94%
Unit 3	Fabric Filter Plant (FFP)	99.98%
Unit 4	Fabric Filter Plant (FFP)	99.96%
Unit 5	Fabric Filter Plant (FFP)	Unit Off-line
Unit 6	Fabric Filter Plant (FFP)	Unit Off-line
Unit 7	Fabric Filter Plant (FFP)	99.99%
Unit 8	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 ₂	NO	CO ₂
Stack 1	99.9	97.6	99.7	96.2
Stack 2				
Stack 3	100.0	100.0	100.0	75.6
Stack 4	99.9	96.7	98.2	88.6

6 EMISSION PERFORMANCE

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

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)	CO ₂ (tons)
1	0.0	0	0	0
2	2.4	474	232	72 050
3	1.5	660	335	131 901
4	4.1	1 045	492	187 524
5	0.0	0	0	0
6	0.0	25	9	3 052
7	1.6	807	364	188 726
8	0.0	0	0	0
SUM	9.6	3 011	1 433	583 253

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average PM (mg/Nm³)
Stack 1	11	0	0	0	0	7.9
Stack 2	29	0	0	0	0	4.2
Stack 3	1	0	0	0	0	1.2
Stack 4	29	0	0	0	0	1.7
SUM	70	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average SOx (mg/Nm³)
Stack 1	12	0	0	0	0	1 484.0
Stack 2	30	0	0	0	0	1 023.6
Stack 3	1	0	0	0	0	1 368.9
Stack 4	30	0	0	0	0	798.5
SUM	73	0	0	0	0	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
Stack 1	12	0	0	0	0	730.6
Stack 2	30	0	0	0	0	484.7
Stack 3	1	0	0	0	0	505.7
Stack 4	30	0	0	0	0	360.2
SUM	73	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 - January 2021

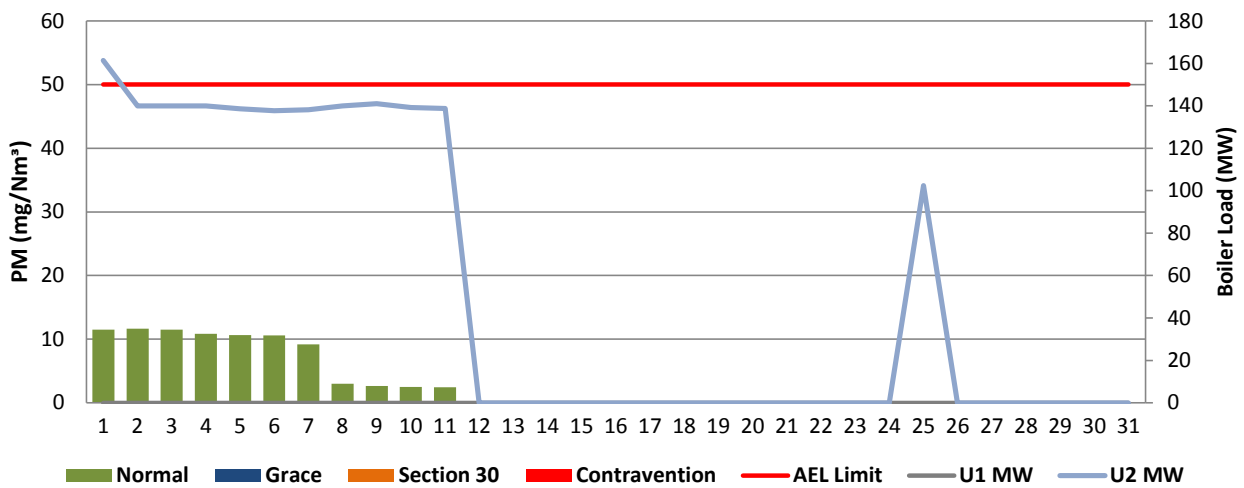


Figure 2: Camden Stack 2 PM Emissions - January 2021

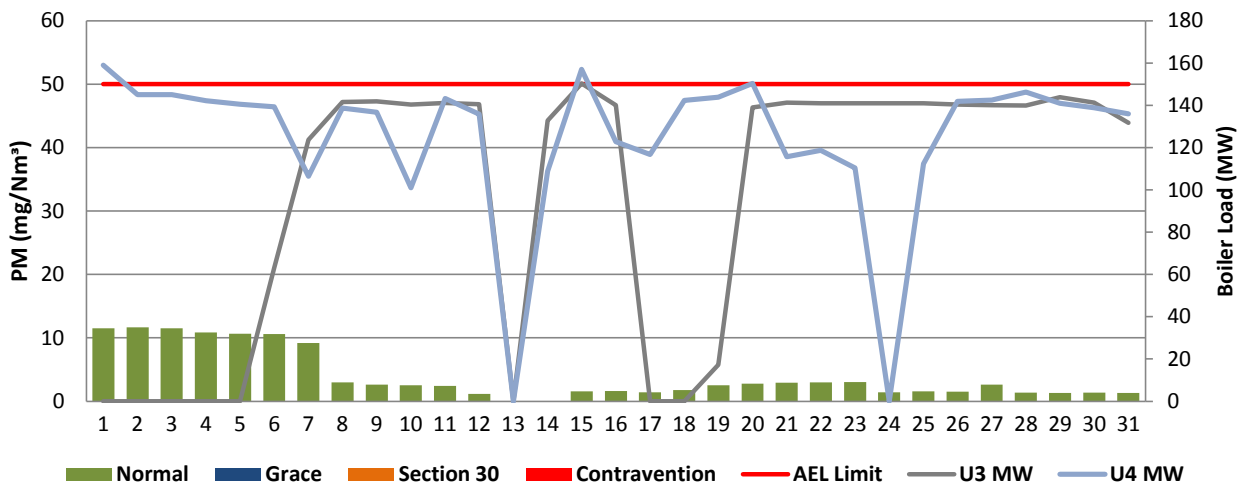


Figure 3: Camden Stack 3 PM Emissions - January 2021

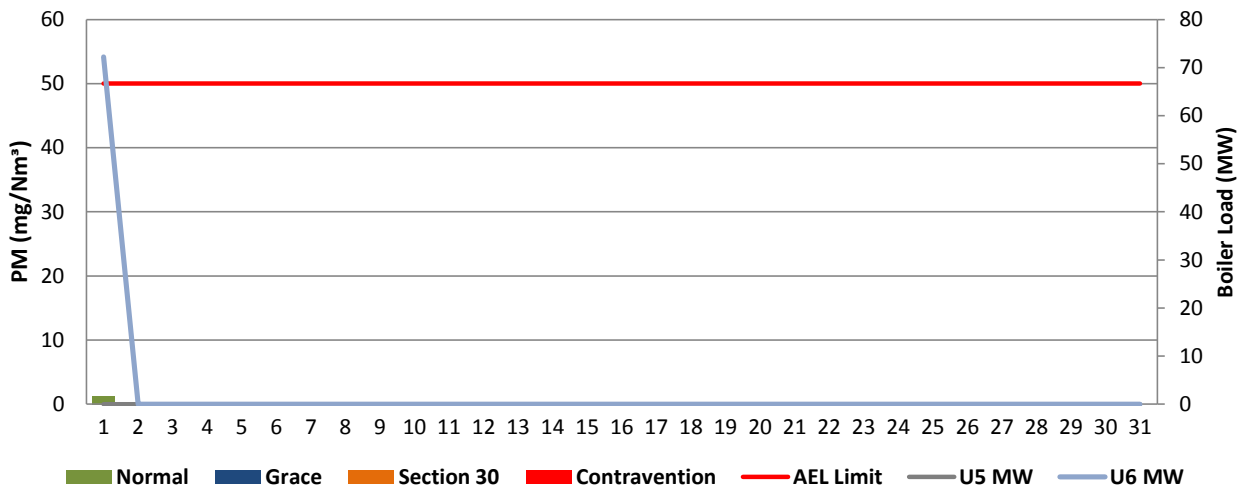


Figure 4: Camden Stack 4 PM Emissions - January 2021

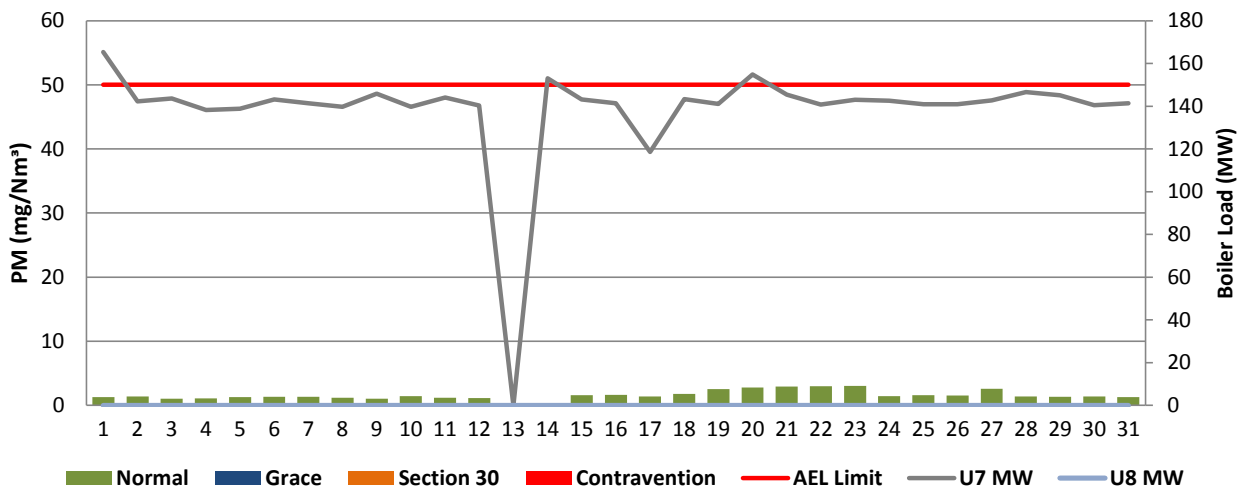


Figure 5: Camden Stack 1 SOx Emissions - January 2021

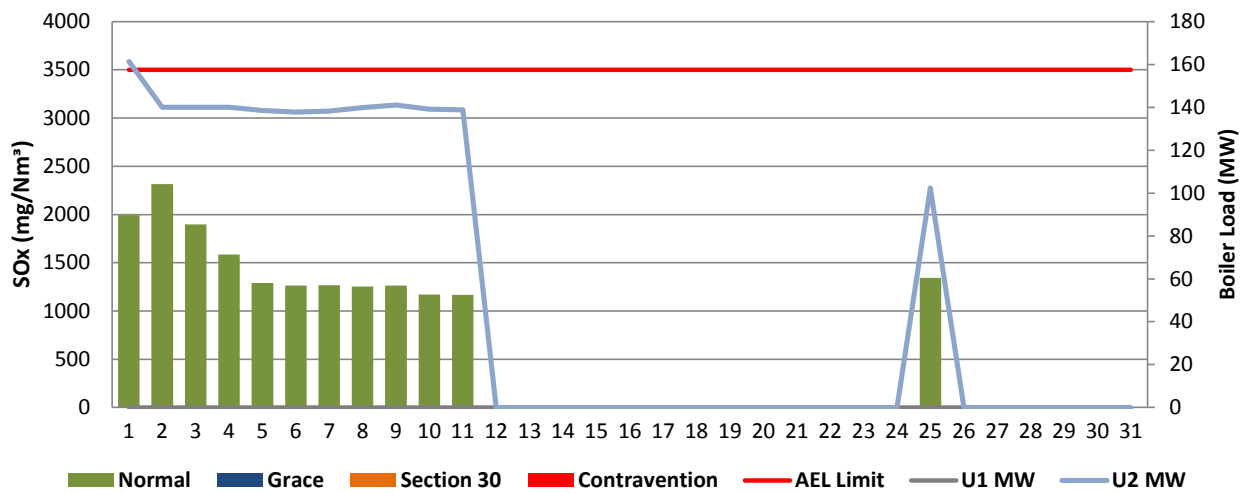


Figure 6: Camden Stack 2 SOx Emissions - January 2021

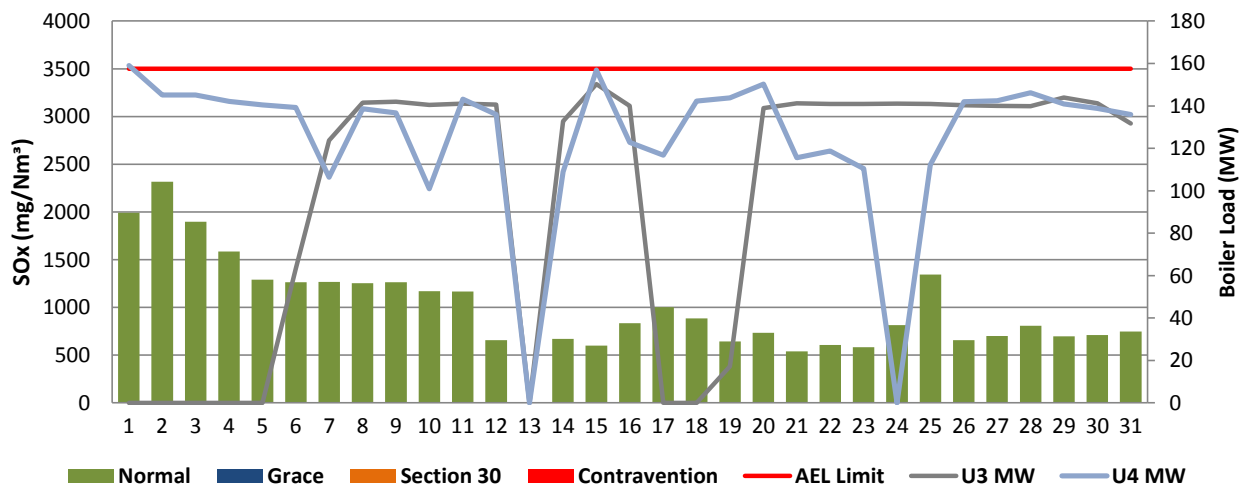


Figure 7: Camden Stack 3 SOx Emissions - January 2021

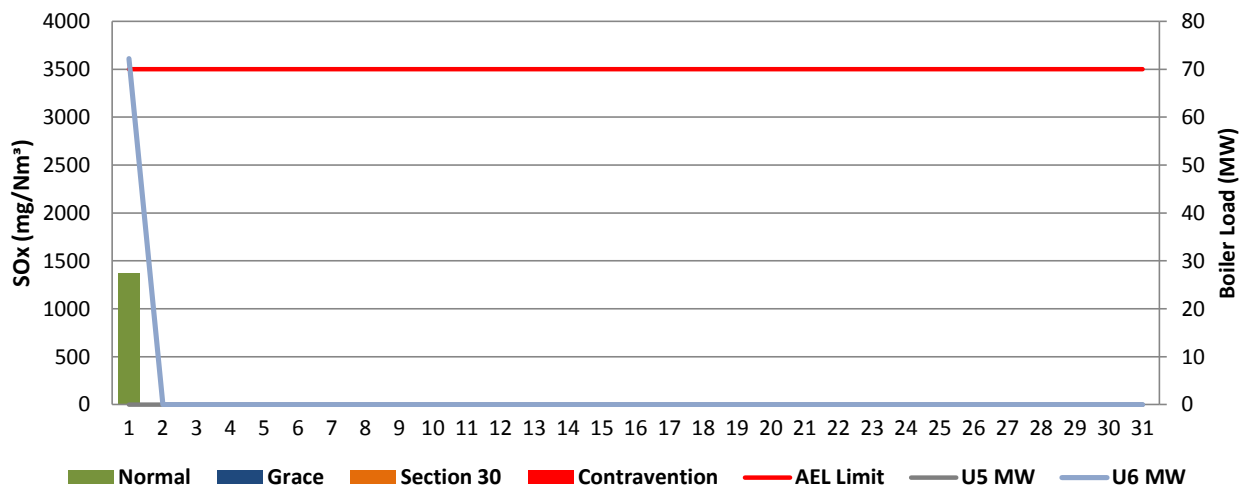


Figure 8: Camden Stack 4 SOx Emissions - January 2021

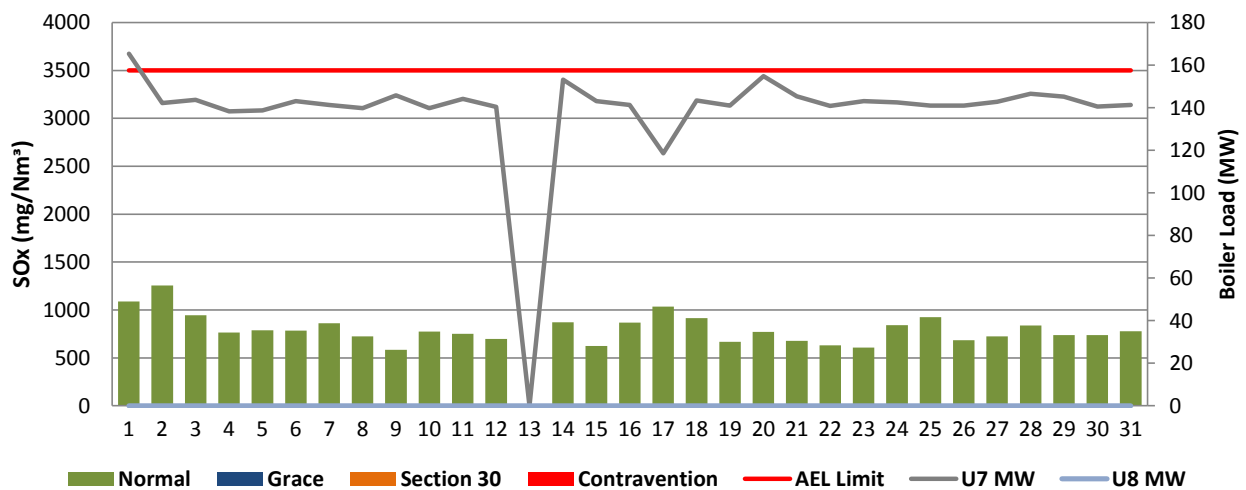


Figure 9: Camden Stack 1 NOx Emissions - January 2021

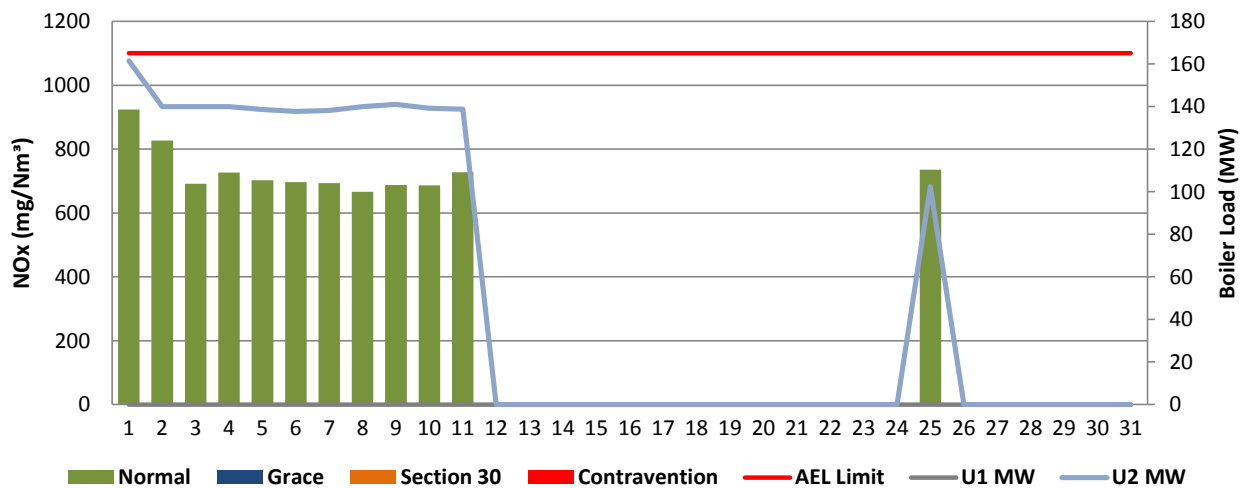


Figure 10: Camden Stack 2 NOx Emissions - January 2021

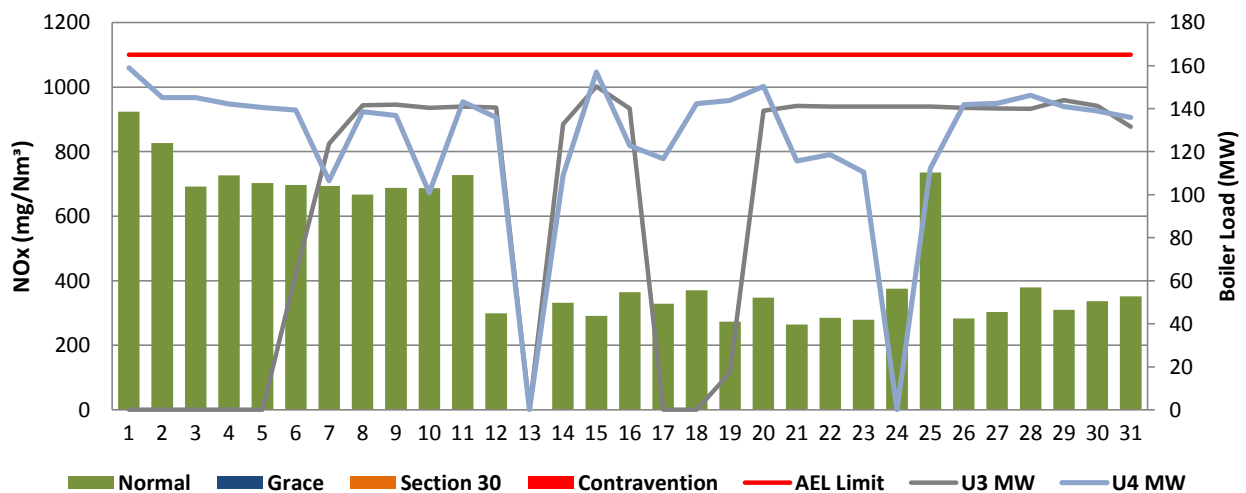


Figure 11: Camden Stack 3 NOx Emissions - January 2021

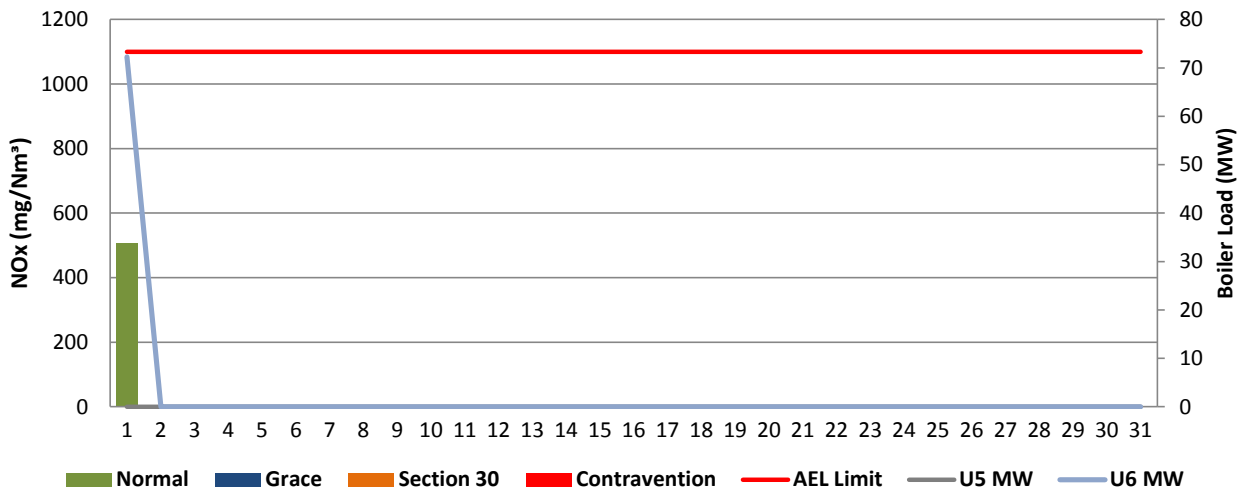
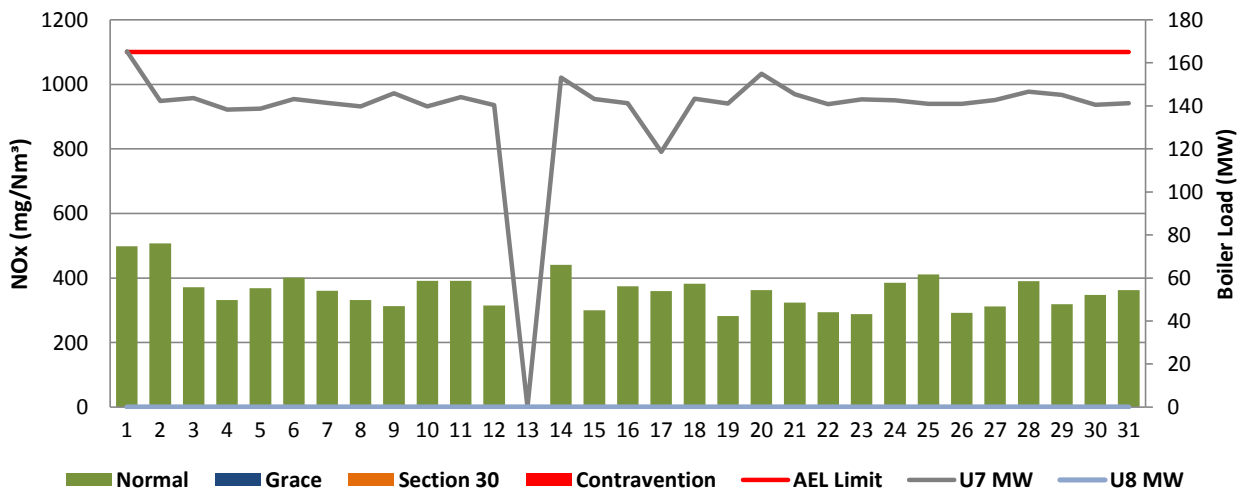


Figure 12: Camden Stack 4 NOx Emissions - January 2021



10 GENERAL / ABNORMALITIES

Unit 1:

The unit was off-load for the month.

Unit 2:

None

Unit 3:

None

Unit 4:

None

Unit 5:

The unit was off-load for the month.

Unit 6:

The unit was off-load for the month.

Unit 7:

None

Unit 8:

The unit was off-load for the month.

Stack 2 repairs have been completed. Correlation Tests have been completed on all stacks. Final reports are still awaited for implementation hence Stack 2 still utilises readings of the worst performing stack and not from the installed monitor as previously reported. An O2 analyzer malfunction was experienced on the 25th Jan 2021 which lead to inaccurate O2 readings on Stack 1. The supplier was called to site to conduct calibrations and filter changes on the analyzer. Please see attached notification letter from C&I.

	25/02/2021		25.02.2021
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

Compliance Management
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