

KENDAL POWER STATION MONTHLY EMISSIONS REPORT

Atmospheric Emission License 17/4/AEL/MP312/11/15



1 RAW MATERIALS AND PRODUCTS

Raw Materials and Products	Raw Material Type	Units	Maximum Permitted Consumption Rate	Consumption Rate Jan-2020
	Coal	Tons	2 260 000	1 093 349
	Fuel Oil	Tons	5 000	2352.53

Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Jan-2020
	Energy	GWh	3062.304	1 620.25
	Ash	Tons	770 000	332 487.4
	RE Ash	kg/MWh	not specified	2.088

2 ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
CV Content	MJ/kg	16-24 (MJ/kg)	
Sulphur Content	%	0.7 TO >1 (%)	0.720
Ash Content	%	30 TO >40 (%)	30.410

3 EMISSION LIMITS (mg/Nm³)

Associated Unit/Stack	PM	SO _x	NO _x
Unit 1	100	3500	1100
Unit 2	100	3500	1100
Unit 3	100	3500	1100
Unit 4	100	3500	1100
Unit 5	100	3500	1100
Unit 6	100	3500	1100

4 ABATEMET TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Jan-2020	Technology Type	Utilization Jan-2020
Unit 1	ESP + SO ₃	99.0%	SO ₃	92.6%
Unit 2	ESP + SO ₃	99.5%	SO ₃	Data no available due to defect
Unit 3	ESP + SO ₃	99.2%	SO ₃	Data no available due to defect
Unit 4	ESP + SO ₃	98.6%	SO ₃	98.8%
Unit 5	ESP + SO ₃	96.3%	SO ₃	91.4%
Unit 6	ESP + SO ₃	99.0%	SO ₃	99.6%

Note: ESP 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
Unit 1	31.1	100.0	99.4	0.0	0.0
Unit 2	89.3	100.0	95.3	0.0	0.0
Unit 3	19.3	94.9	94.7	0.0	0.0
Unit 4	58.3	100.0	100.0	0.0	0.0
Unit 5	11.4	98.9	90.4	0.0	99.1
Unit 6	75.3	99.8	97.1	0.0	99.4

6 EMISSION PERFORMANCE

Table 6 1 Monthly tonnages for the month of January 2020

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)	CO ₂ (tons)
Unit 1	558.5	2,200	795	
Unit 2	126.3	4,275	1,594	
Unit 3	404.0	2,040	476	
Unit 4	821.7	2,259	729	
Unit 5	1,001.1	2,596	932	
Unit 6	471.8	2,875	972	
SUM	3,383.56	16,245	5,497	

Table 6 2 Operating days in compliance to PM AEL Limit - January 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average PM (mg/Nm ³)
Unit 1	0	2	0	29	31	294.5
Unit 2	5	4	0	12	16	179.7
Unit 3	0	6	0	21	27	257.7
Unit 4	0	2	0	29	31	413.5
Unit 5	0	4	0	14	18	1,305.0
Unit 6	0	4	0	24	28	348.4
SUM	5	22	0	129	151	

Table 6 3 Operating days in compliance to SO_x AEL Limit - January 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average SO _x (mg/Nm ³)
Unit 1	31	0	0	0	0	1,919.1
Unit 2	22	0	0	0	0	2,840.5
Unit 3	29	1	0	0	1	2,342.2
Unit 4	31	0	0	0	0	2,758.5
Unit 5	19	1	0	0	1	2,857.6
Unit 6	29	0	0	0	0	2,075.6
SUM	113	2	0	0	2	

Table 6.4: Operating days in compliance to NOx AEL Limit - January 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average NOx (mg/Nm³)
Unit 1	31	0	0	0	0	709.1
Unit 2	22	0	0	0	0	1 062.3
Unit 3	30	0	0	0	0	535.4
Unit 4	31	0	0	0	0	888.9
Unit 5	16	4	0	0	4	977.7
Unit 6	29	0	0	0	0	678.4
SUM	114	4	0	0	4	

Table 6.5: Legend Description

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

Figure 1: Kendal Unit 1 PM Emissions - January 2020

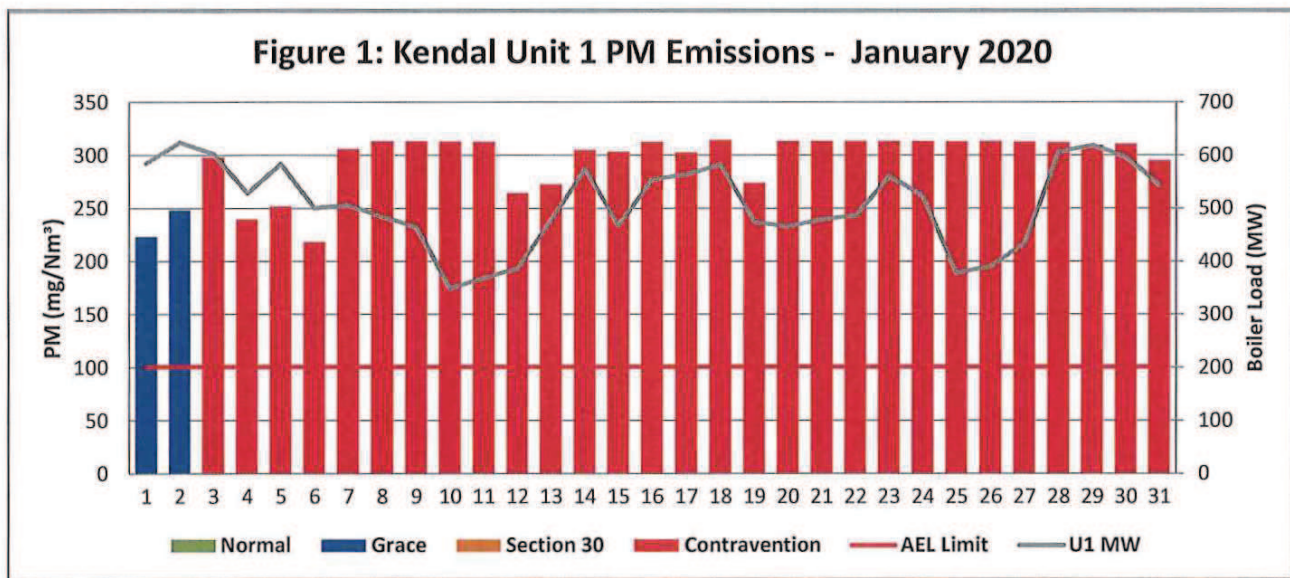


Figure 2: Kendal Unit 2 PM Emissions - January 2020

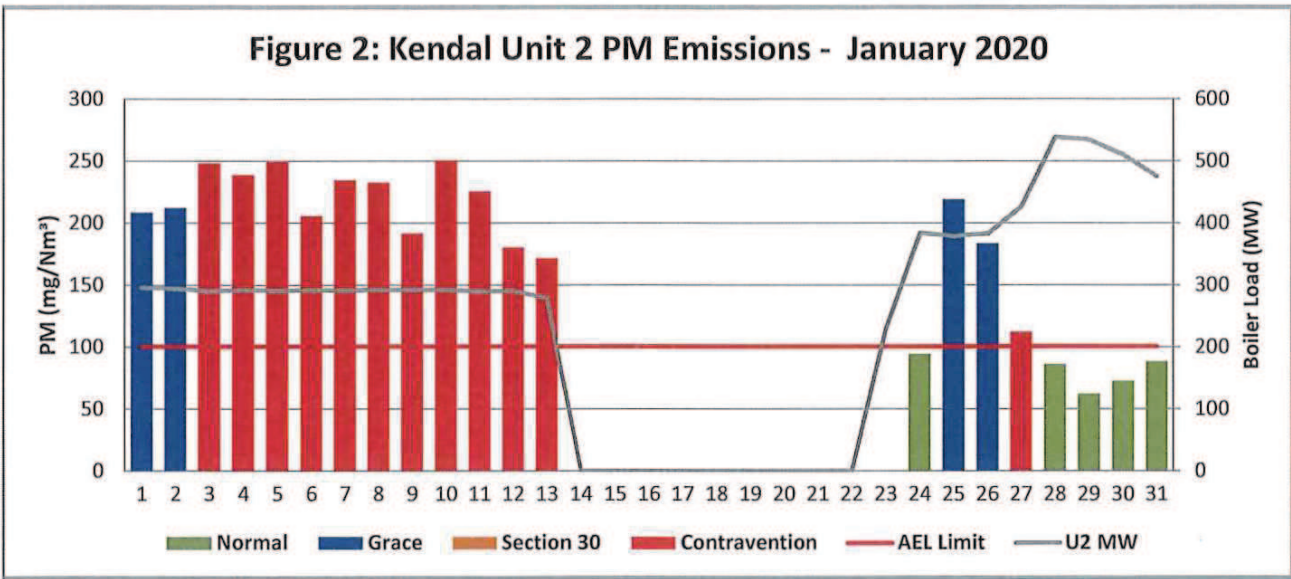


Figure 3: Kendal Unit 3 PM Emissions - January 2020

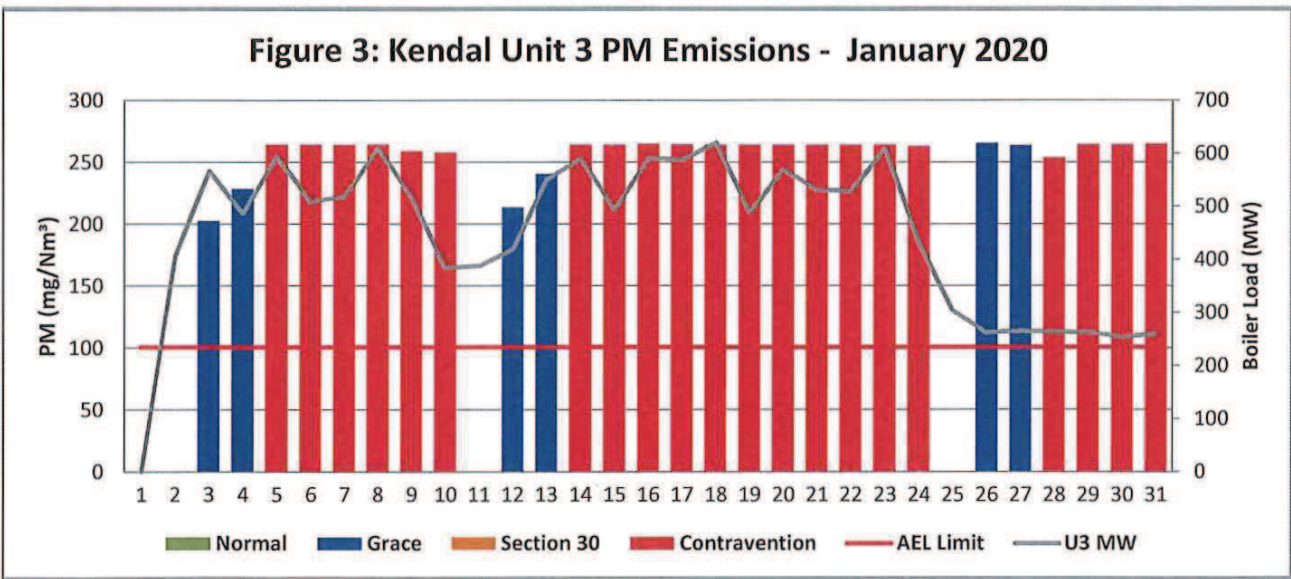


Figure 4: Kendal Unit 4 PM Emissions - January 2020

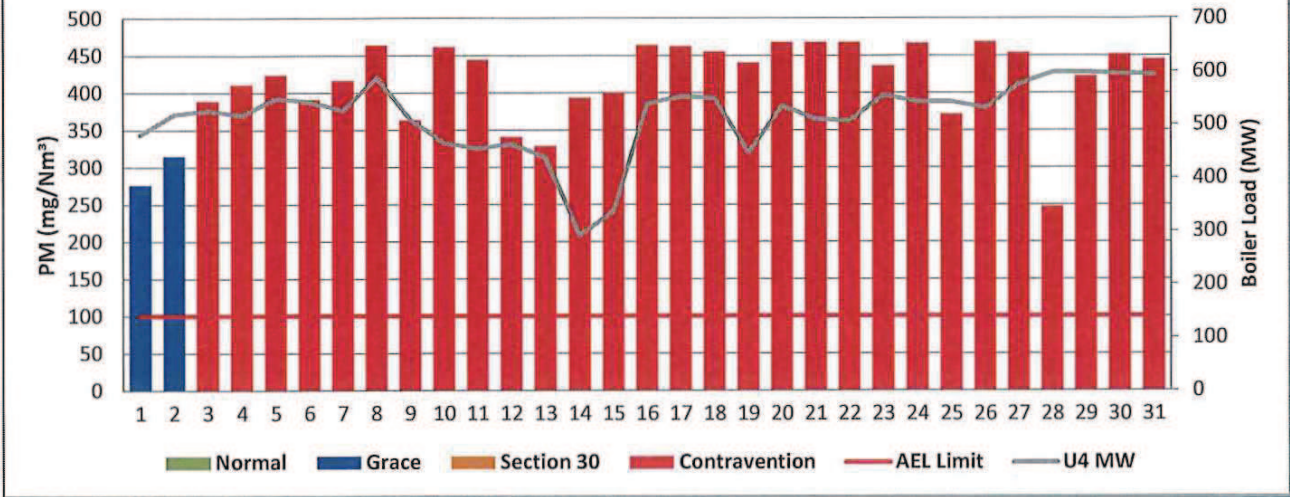


Figure 5: Kendal Unit 5 PM Emissions - January 2020

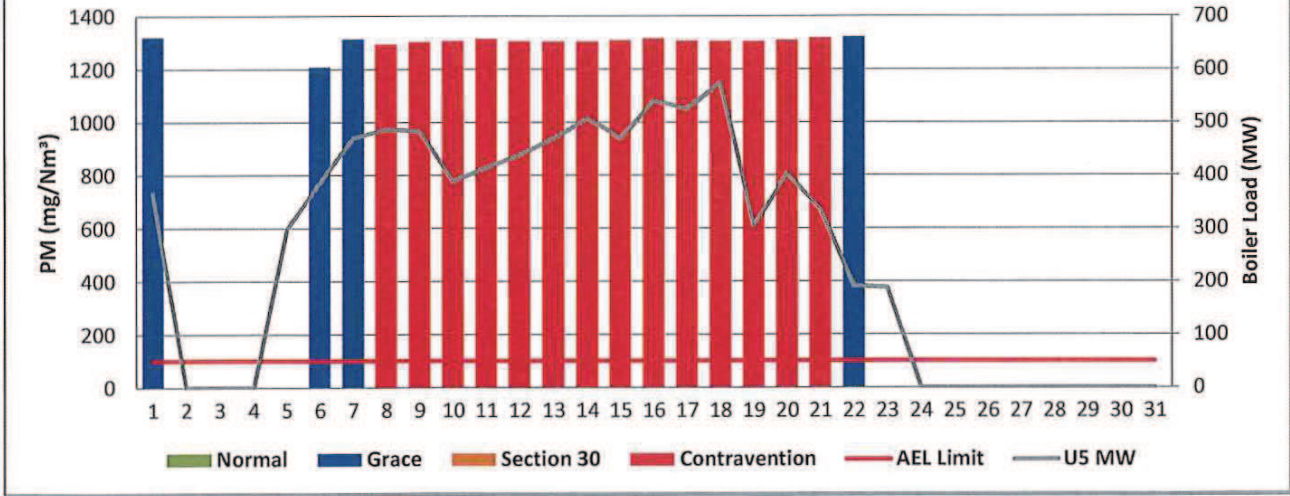


Figure 6: Kendal Unit 6 PM Emissions - January 2020

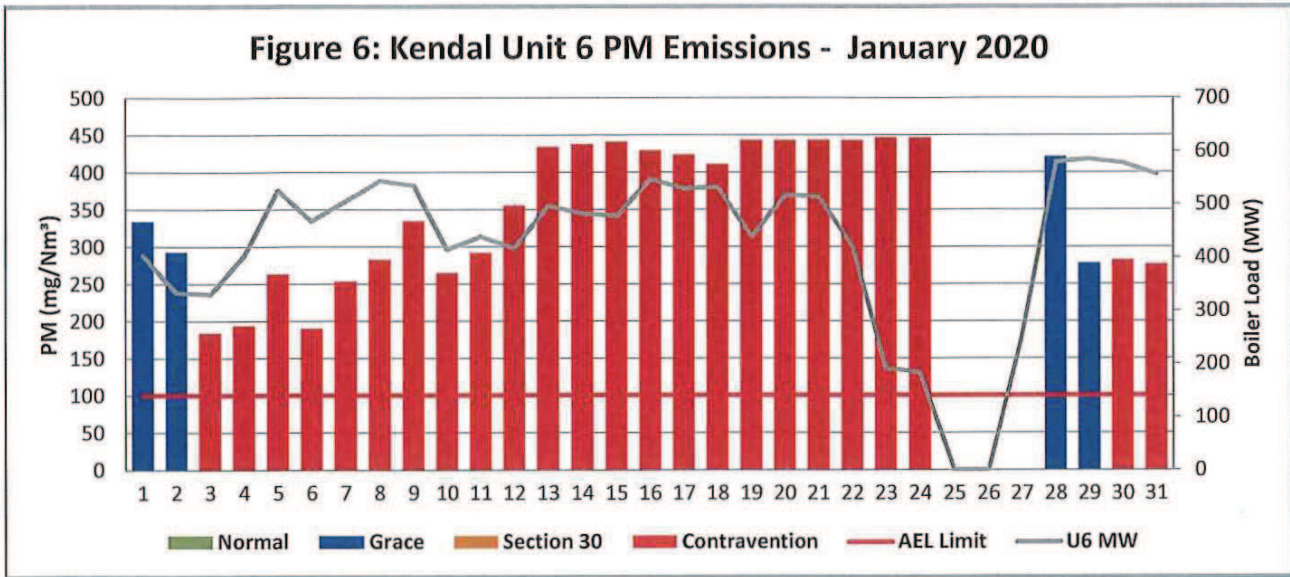


Figure 7: Kendal Unit 1 SOx Emissions - January 2020

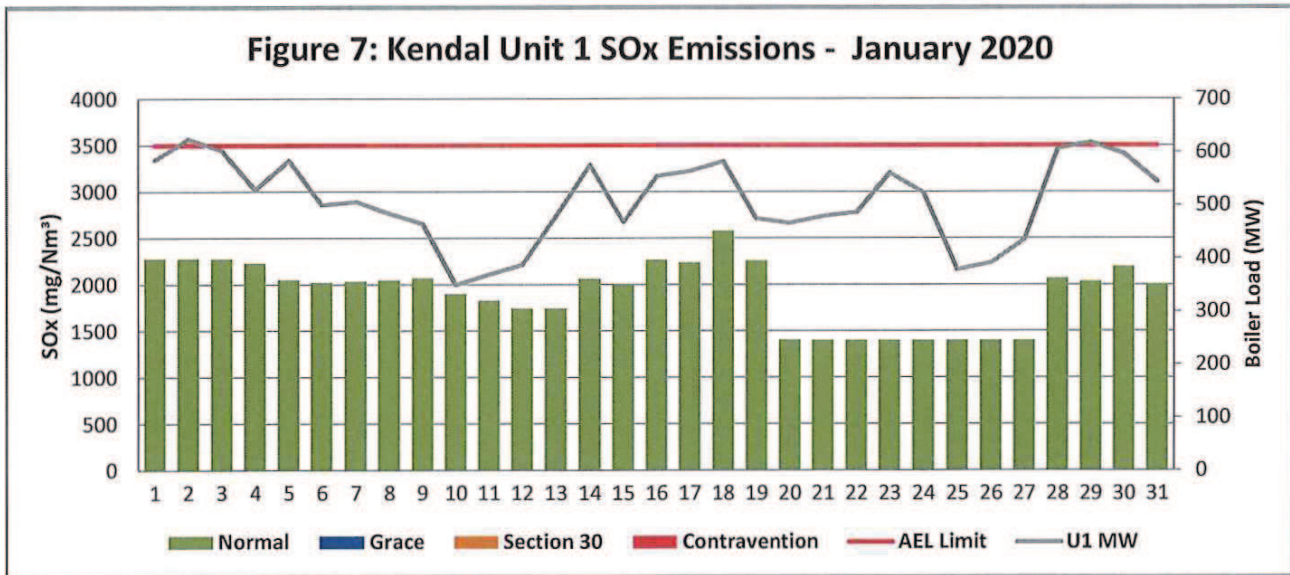


Figure 8: Kendal Unit 2 SO_x Emissions - January 2020

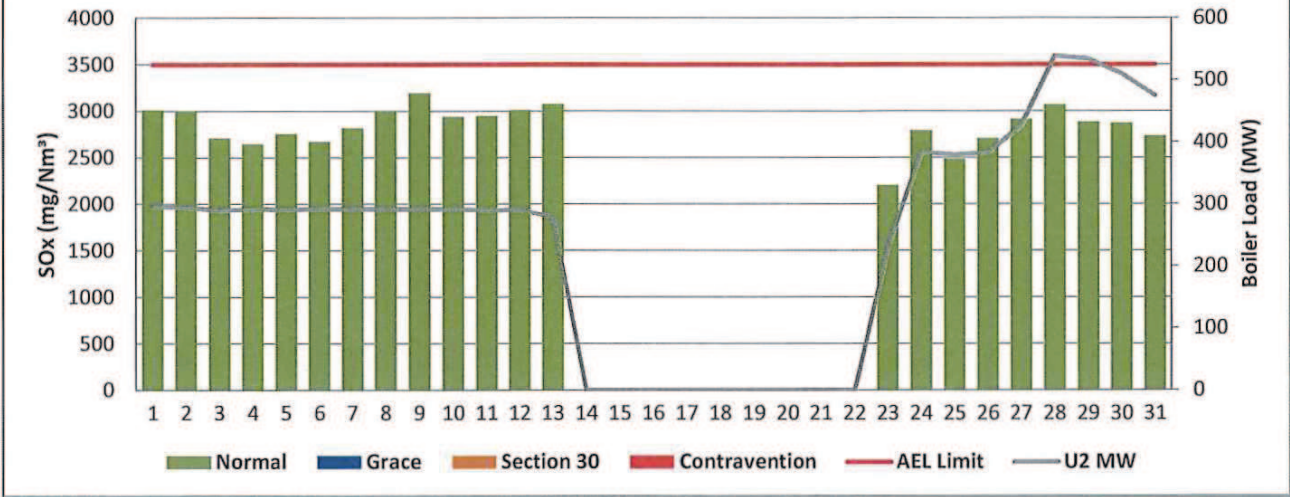


Figure 9: Kendal Unit 3 SO_x Emissions - January 2020

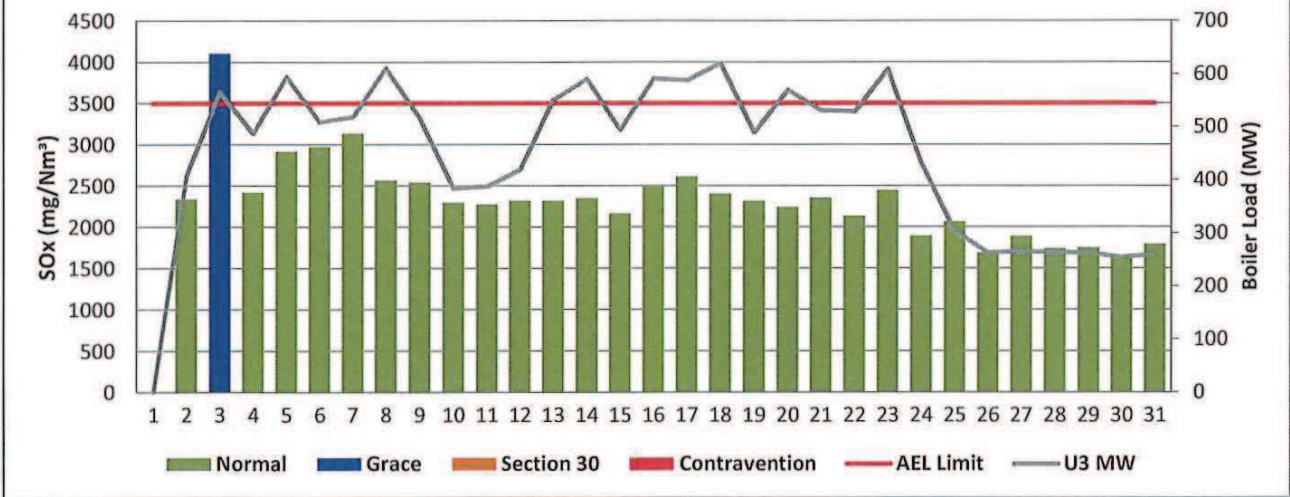


Figure 10: Kendal Unit 4 SOx Emissions - January 2020

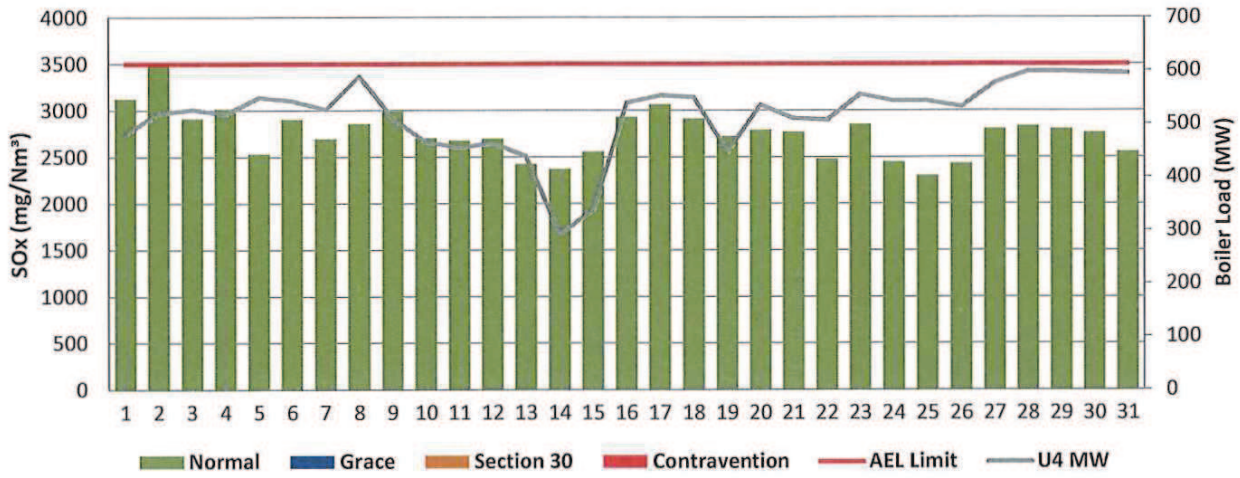


Figure 11: Kendal Unit 5 SOx Emissions - January 2020

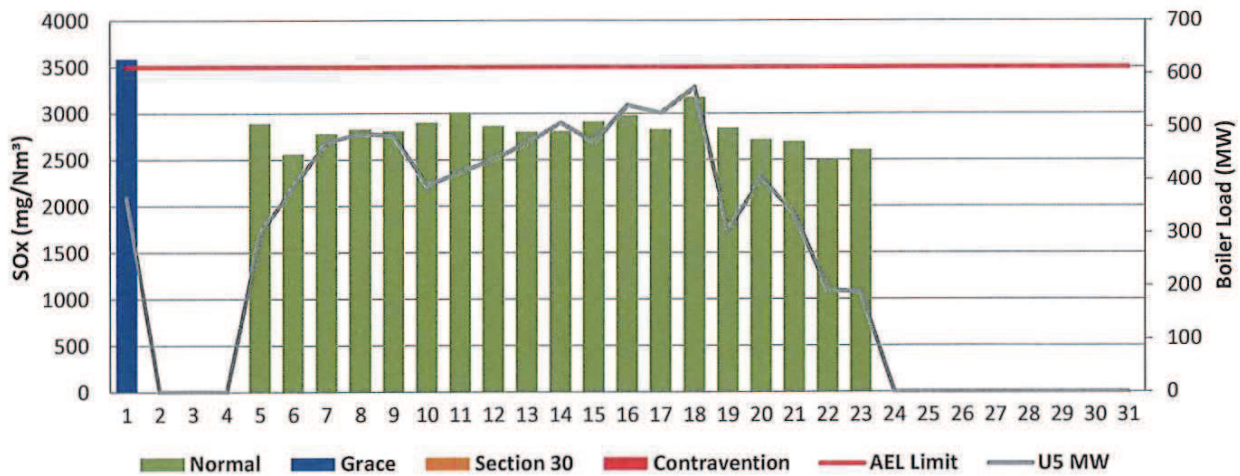


Figure 12: Kendal Unit 6 SOx Emissions - January 2020

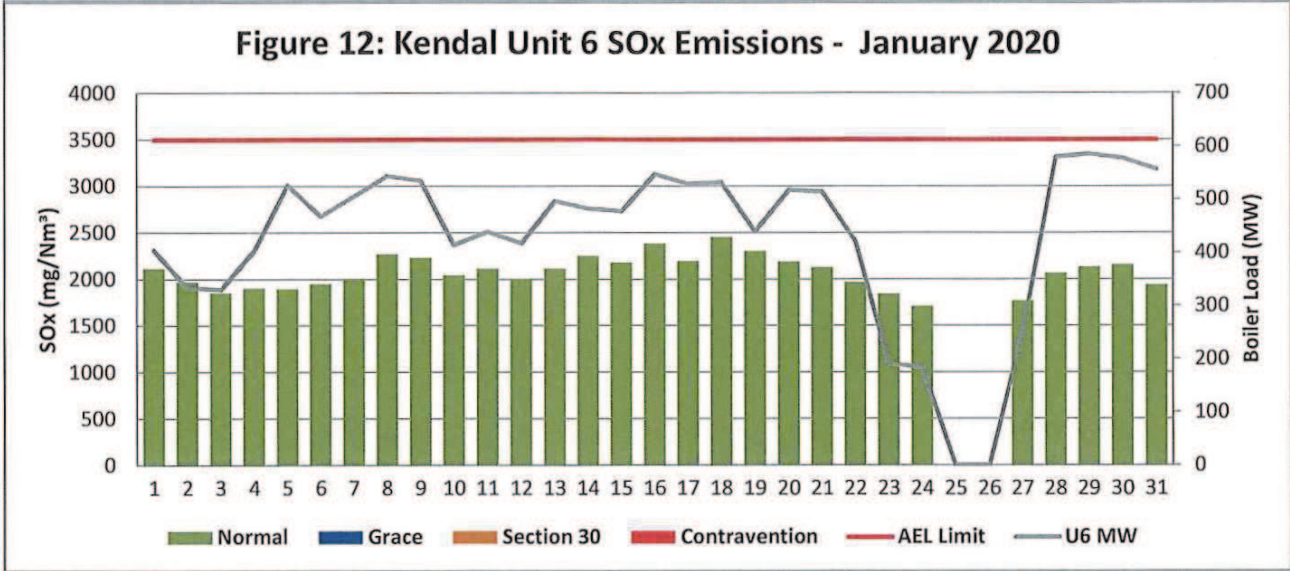


Figure 13: Kendal Unit 1 NOx Emissions - January 2020

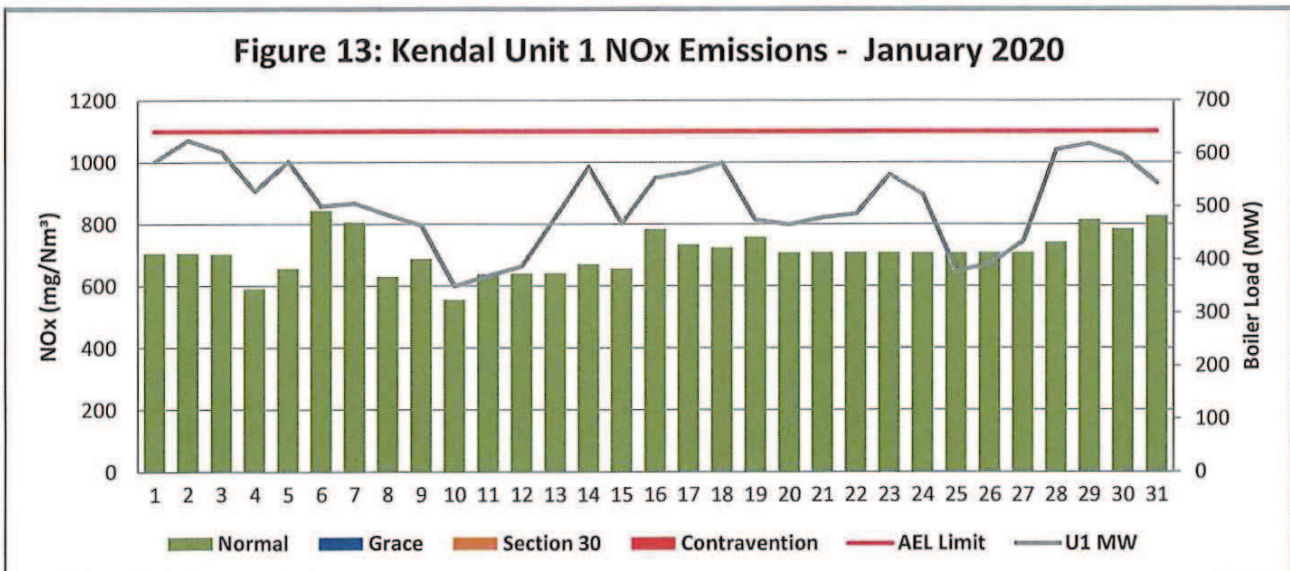


Figure 14: Kendal Unit 2 NOx Emissions - January 2020

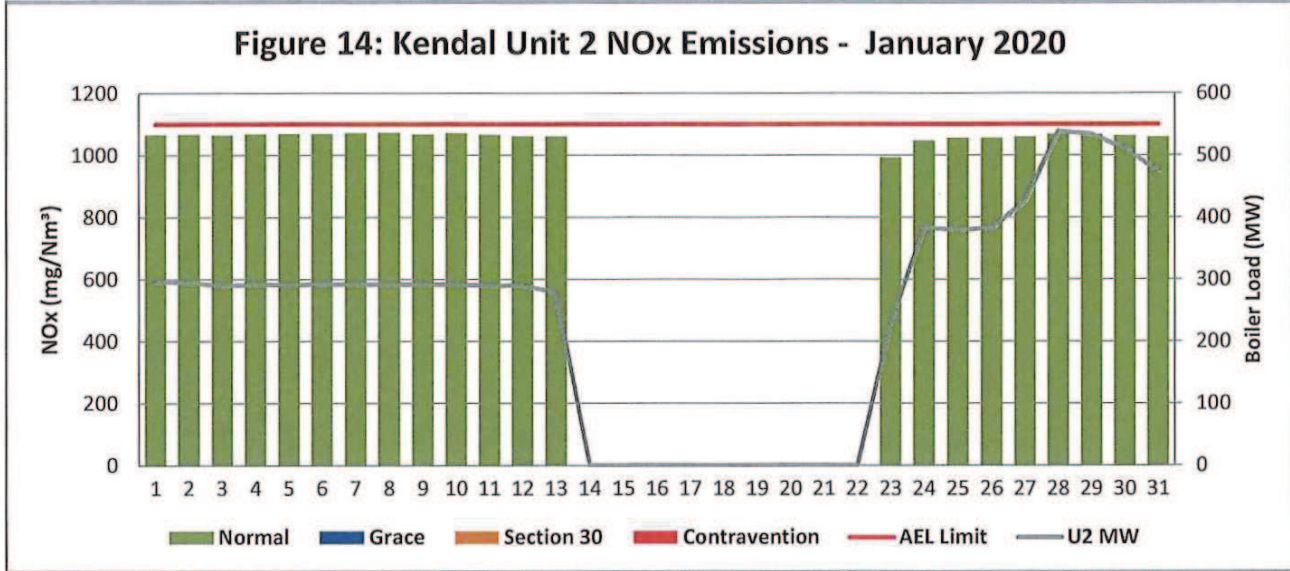


Figure 15: Kendal Unit 3 NOx Emissions - January 2020

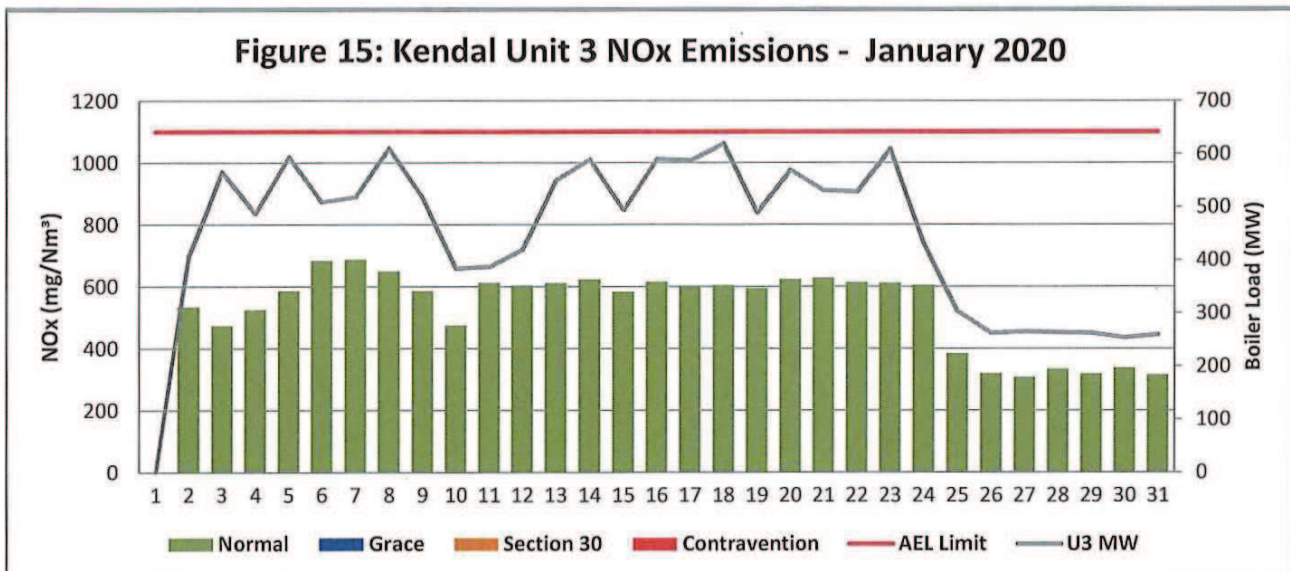


Figure 16: Kendal Unit 4 NOx Emissions - January 2020

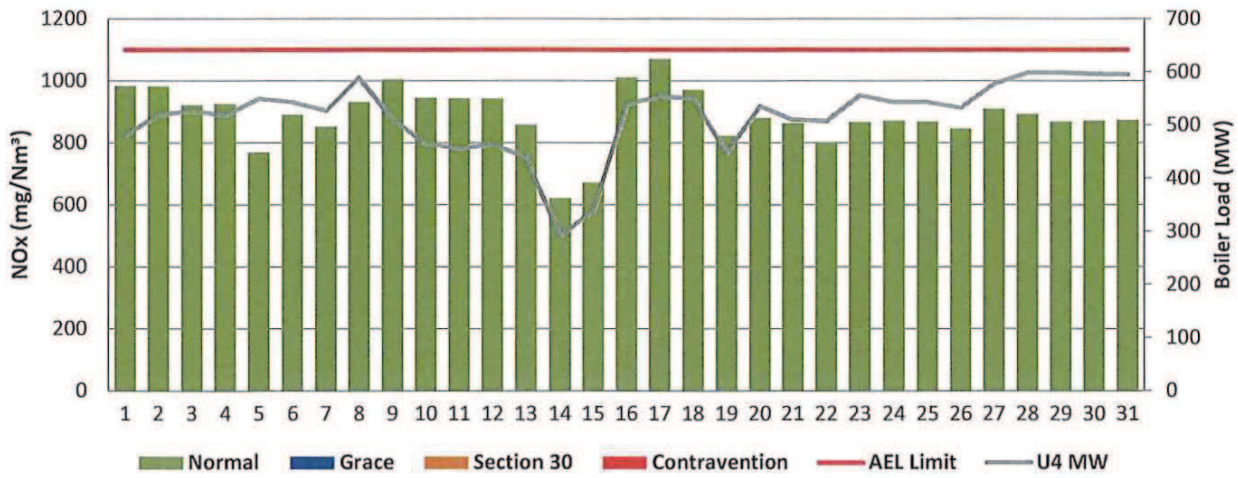


Figure 17: Kendal Unit 5 NOx Emissions - January 2020

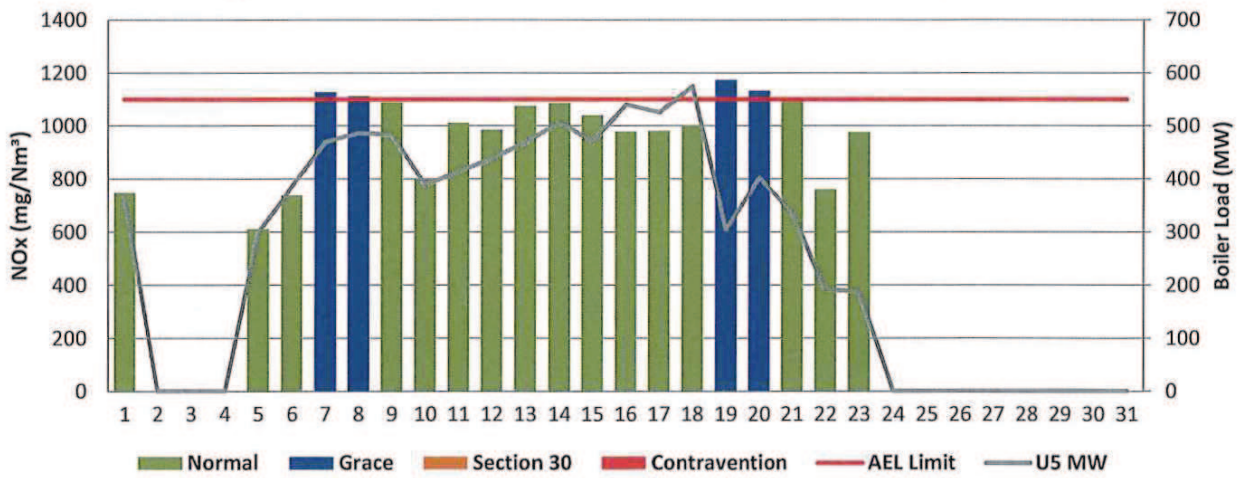


Figure 18: Kendal Unit 6 NOx Emissions - January 2020

