

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 Feb-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 Feb-2020
	Energy	GWh	2864.736	1 227.35
	Ash	Tons	770 000	332 487.4
	RE Ash	kg/MWh	not specified	1.011

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 Feb-2020	Technology Type	Utilization Feb-2020
Unit 1	ESP + SO ₃	99.8%	SO ₃	100.0%
Unit 2	ESP + SO ₃	99.5%	SO ₃	Data no available due to defect
Unit 3	ESP + SO ₃	99.3%	SO ₃	Data no available due to defect
Unit 4	ESP + SO ₃	99.5%	SO ₃	99.7%
Unit 5	ESP + SO ₃	100.0%	SO ₃	Unit off
Unit 6	ESP + SO ₃	99.2%	SO ₃	99.2%

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	98.2	100.0	100.0	0.0	0.0
Unit 2	96.7	99.9	99.9	0.0	0.0
Unit 3	15.1	100.0	100.0	0.0	0.0
Unit 4	97.1	99.7	99.7	0.0	0.0
Unit 5					
Unit 6	100.0	100.0	100.0	0.0	68.1

6 EMISSION PERFORMANCE

Table 6 1 Monthly tonnages for the month of February 2020

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)	CO ₂ (tons)
Unit 1	88.2	1 909	877	
Unit 2	124.9	5 083	2 055	
Unit 3	339.3	1 411	401	
Unit 4	296.0	2 317	803	
Unit 5	Unit off	Unit off	Unit off	
Unit 6	392.7	2 815	1 033	
SUM	1 241.14	13 535	5 170	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance		Average PM (mg/Nm ³)	
Unit 1	11	4	0	0	4		110.5	
Unit 2	22	4	0	3	7		81.9	
Unit 3	0	4	0	21	25		258.3	
Unit 4	2	5	0	16	21		245.4	
Unit 5	Unit off	Unit off	Unit off	Unit off	Unit off	Unit off	Unit off	Unit off
Unit 6	0	2	0	25	27		360.8	
SUM	35	19	0	65	84			

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

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance		Average SO _x (mg/Nm ³)	
Unit 1	16	0	0	0	0		1 845.1	
Unit 2	30	0	0	0	0		2 640.6	
Unit 3	27	0	0	0	0		1 880.3	
Unit 4	25	0	0	0	0		2 238.8	
Unit 5	Unit off	Unit off	Unit off	Unit off	Unit off	Unit off	Unit off	Unit off
Unit 6	28	0	0	0	0		1 725.4	
SUM	98	0	0	0	0			

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

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance		Average NOx (mg/Nm ³)	
Unit 1	16	0	0	0	0		847.4	
Unit 2	30	0	0	0	0		1 063.0	
Unit 3	27	0	0	0	0		525.0	
Unit 4	25	0	0	0	0		786.5	
Unit 5	Unit off	Unit off	Unit off	Unit off	Unit off	Unit off	Unit off	Unit off
Unit 6	28	0	0	0	0		622.7	
SUM	98	0	0	0	0			

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 - February 2020

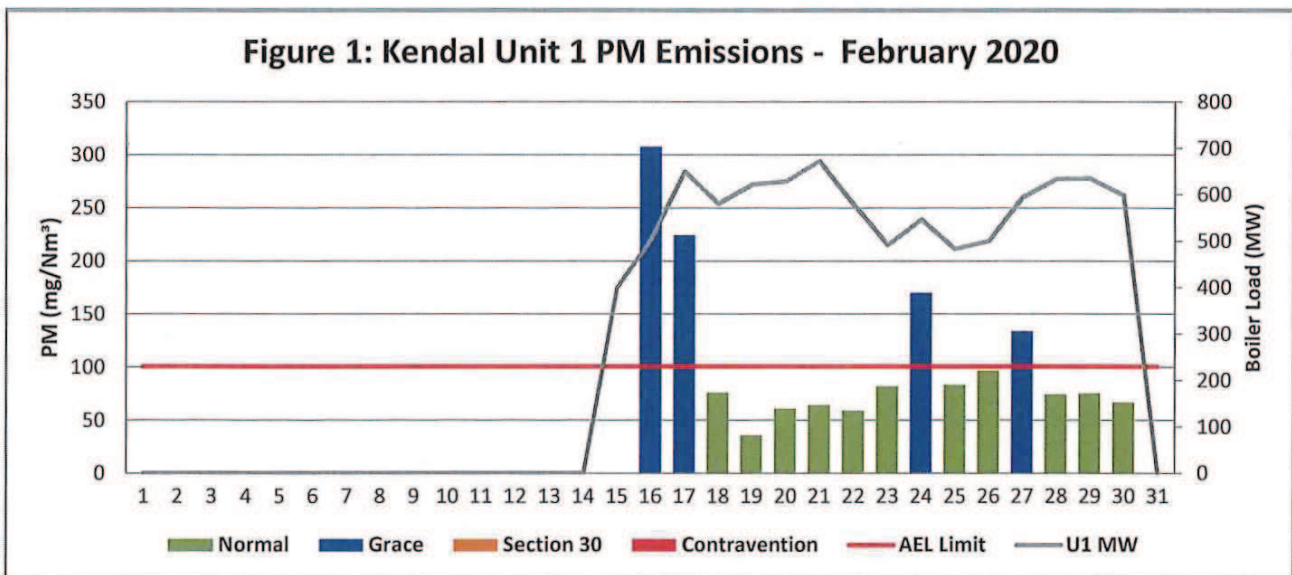


Figure 2: Kendal Unit 2 PM Emissions - February 2020

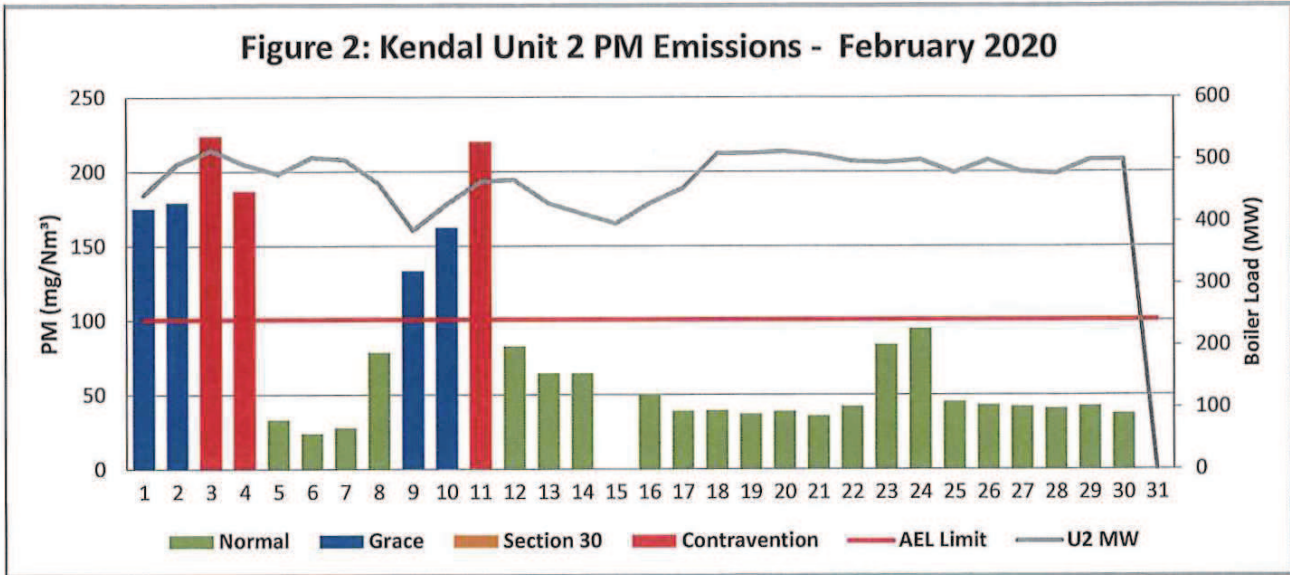


Figure 3: Kendal Unit 3 PM Emissions - February 2020

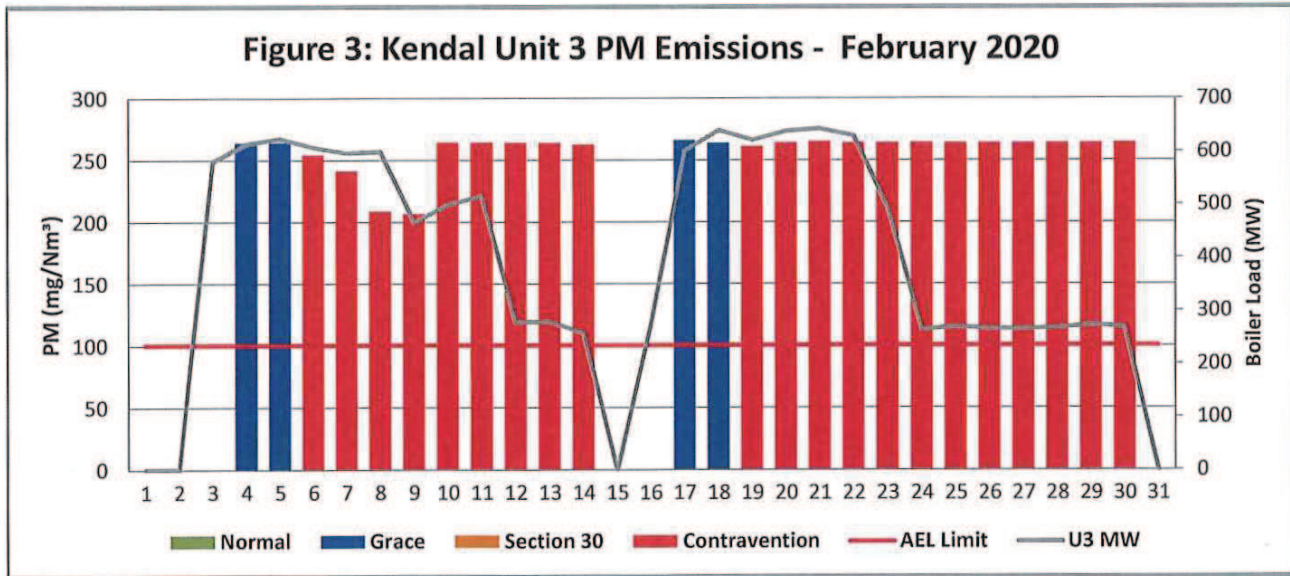


Figure 4: Kendal Unit 4 PM Emissions - February 2020

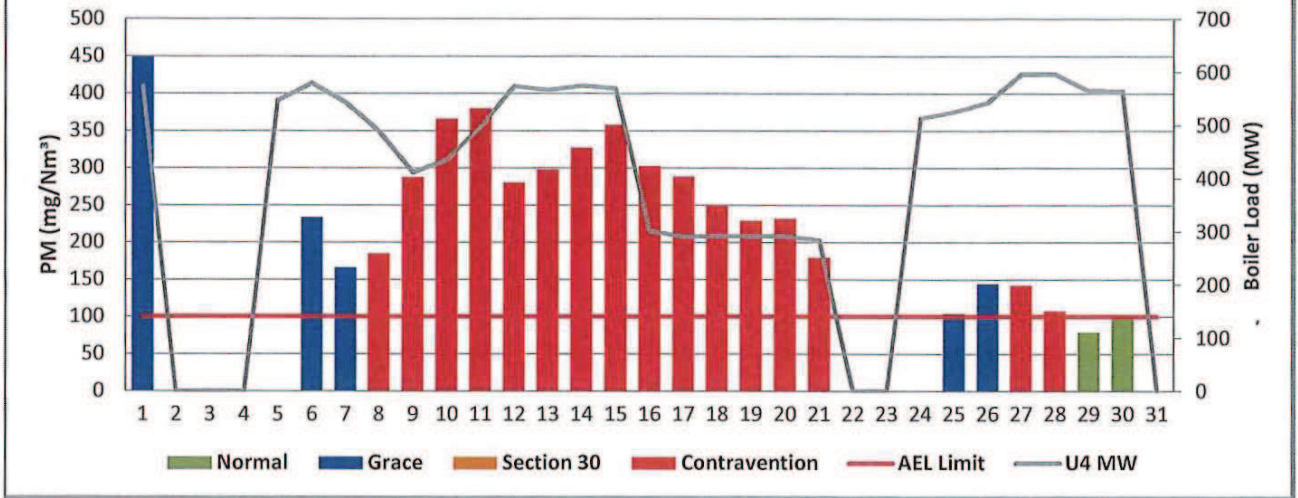


Figure 5: Kendal Unit 5 PM Emissions - February 2020

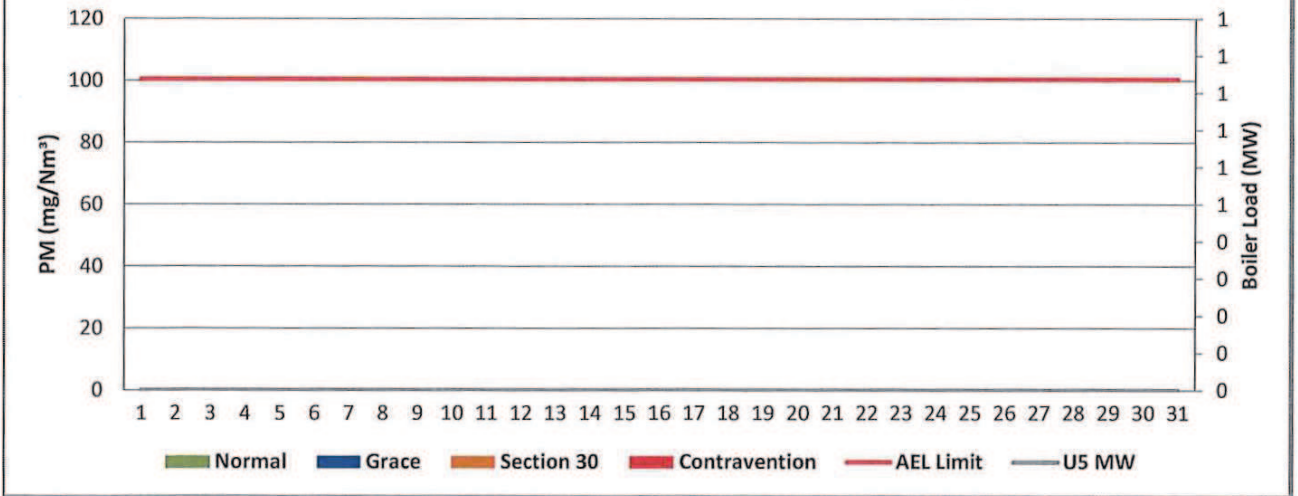


Figure 6: Kendal Unit 6 PM Emissions - February 2020

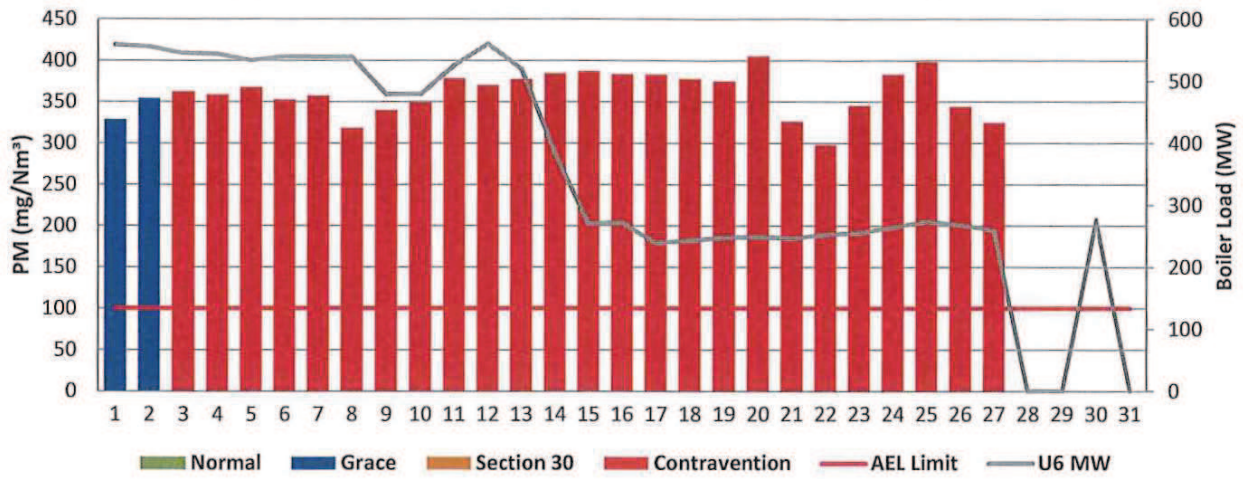


Figure 7: Kendal Unit 1 SOx Emissions - February 2020

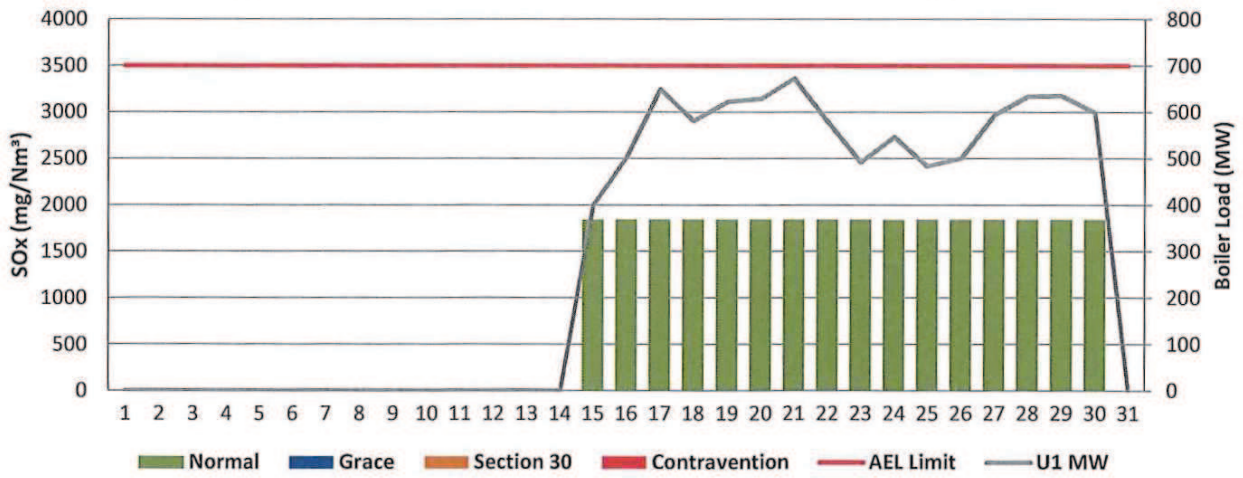


Figure 8: Kendal Unit 2 SOx Emissions - February 2020

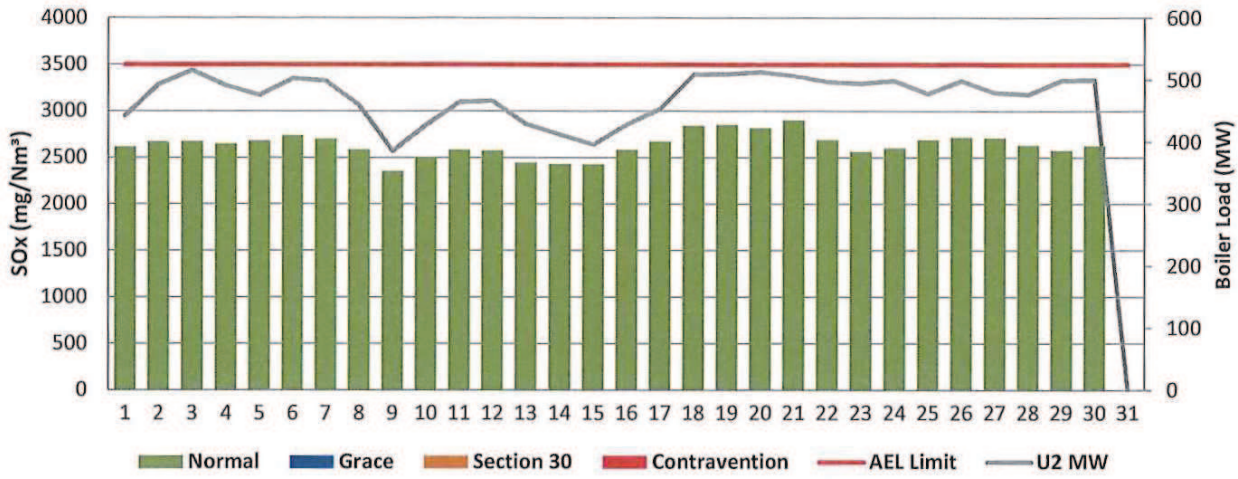


Figure 9: Kendal Unit 3 SOx Emissions - February 2020

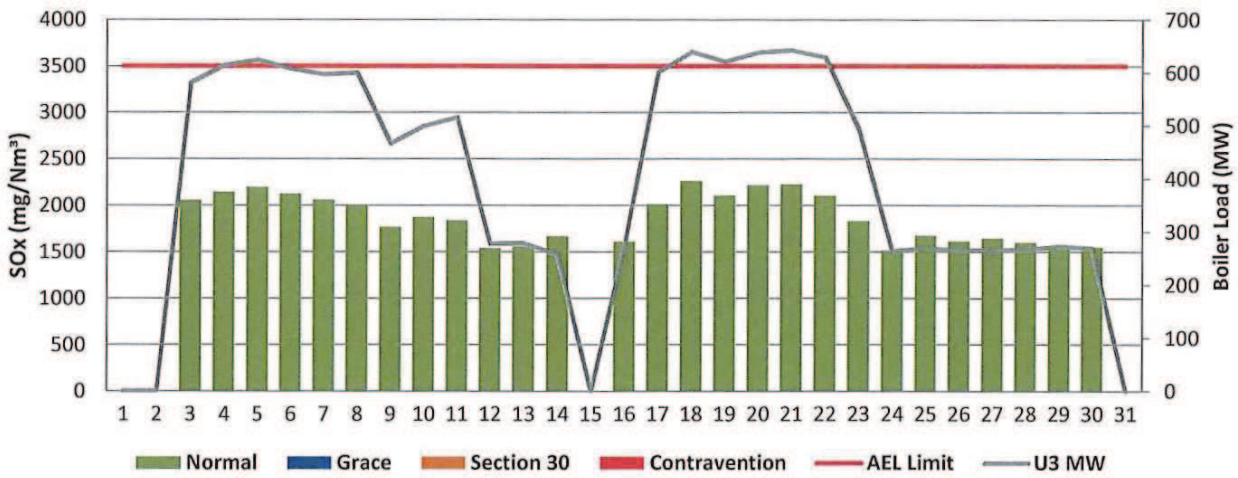


Figure 10: Kendal Unit 4 SOx Emissions - February 2020

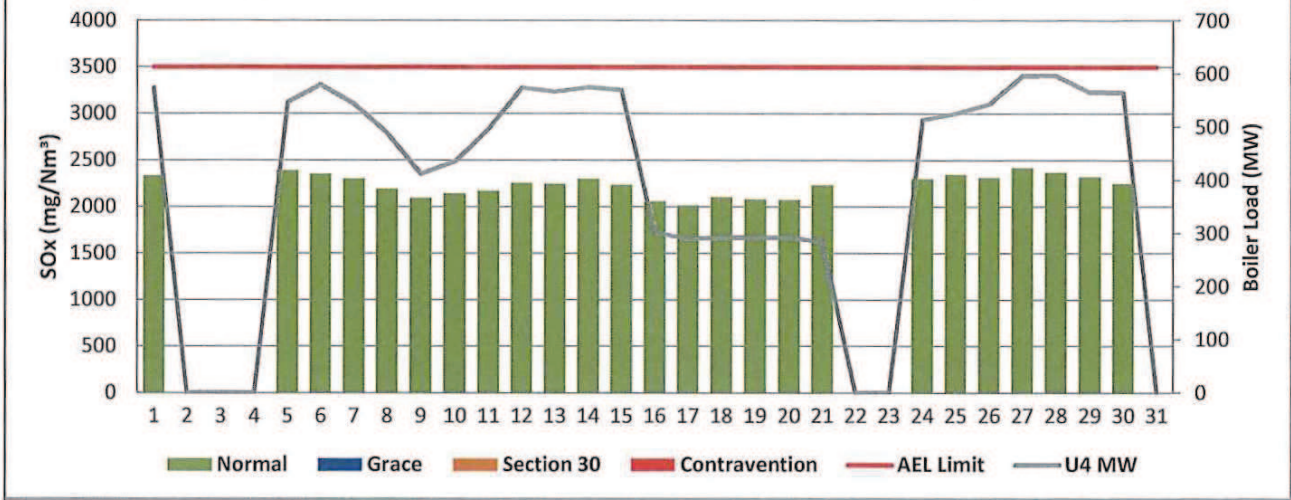


Figure 11: Kendal Unit 5 SOx Emissions - February 2020

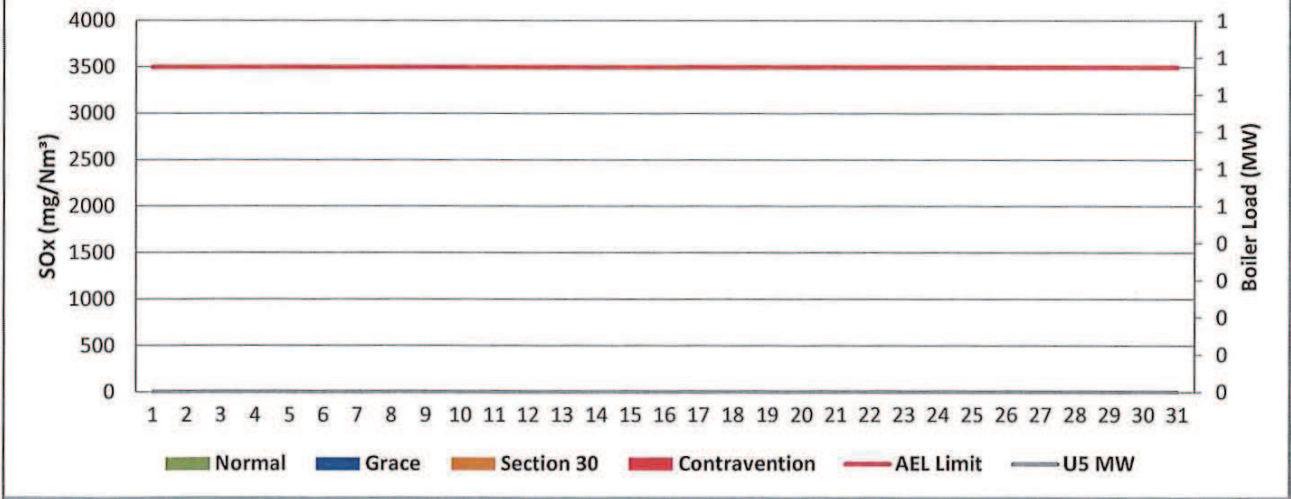


Figure 12: Kendal Unit 6 SOx Emissions - February 2020

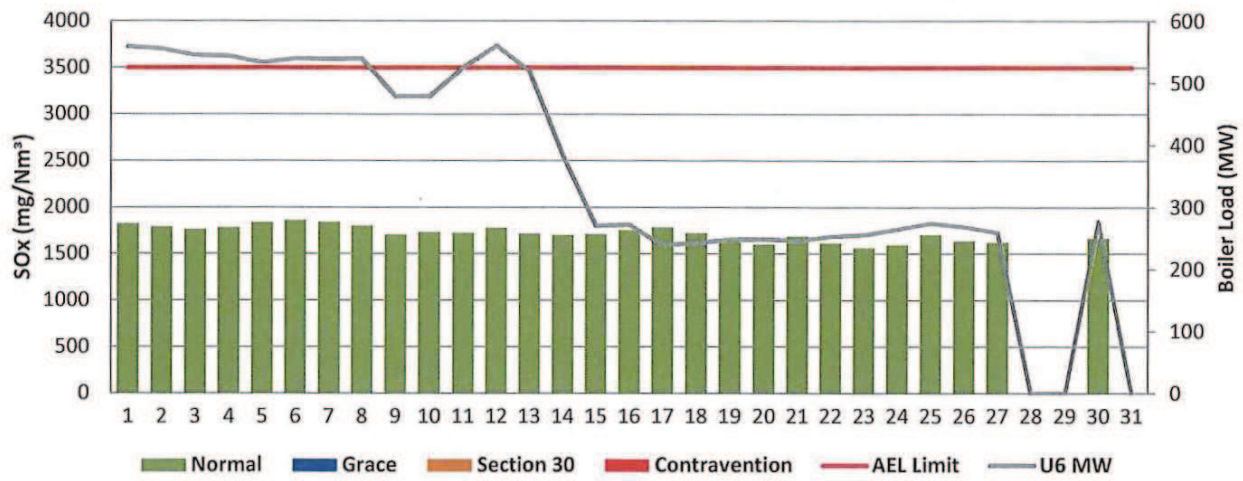


Figure 13: Kendal Unit 1 NOx Emissions - February 2020

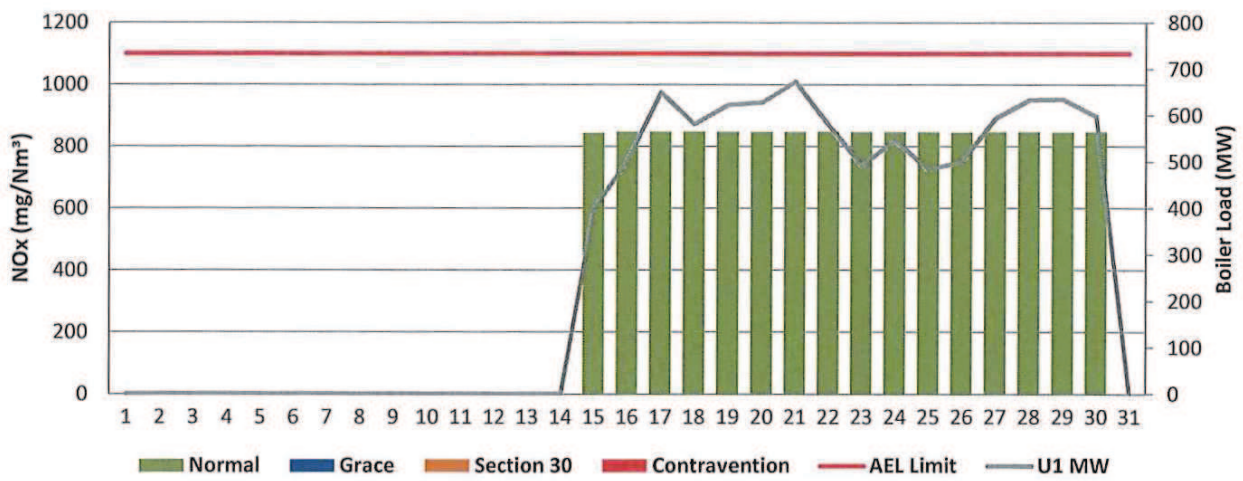


Figure 14: Kendal Unit 2 NOx Emissions - February 2020

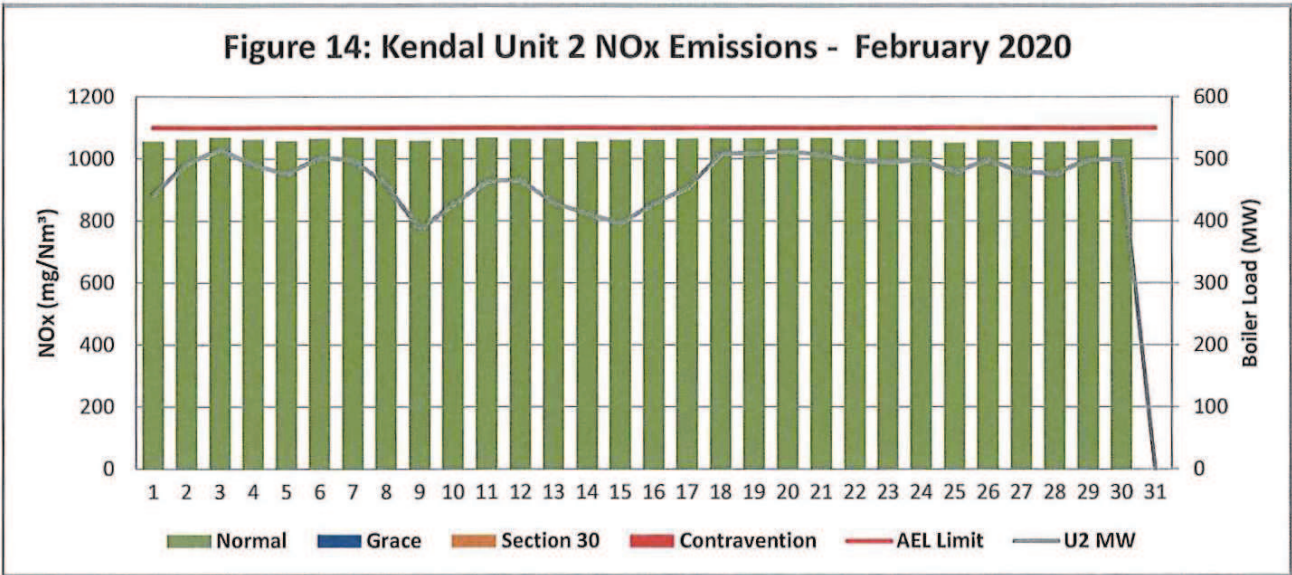


Figure 15: Kendal Unit 3 NOx Emissions - February 2020

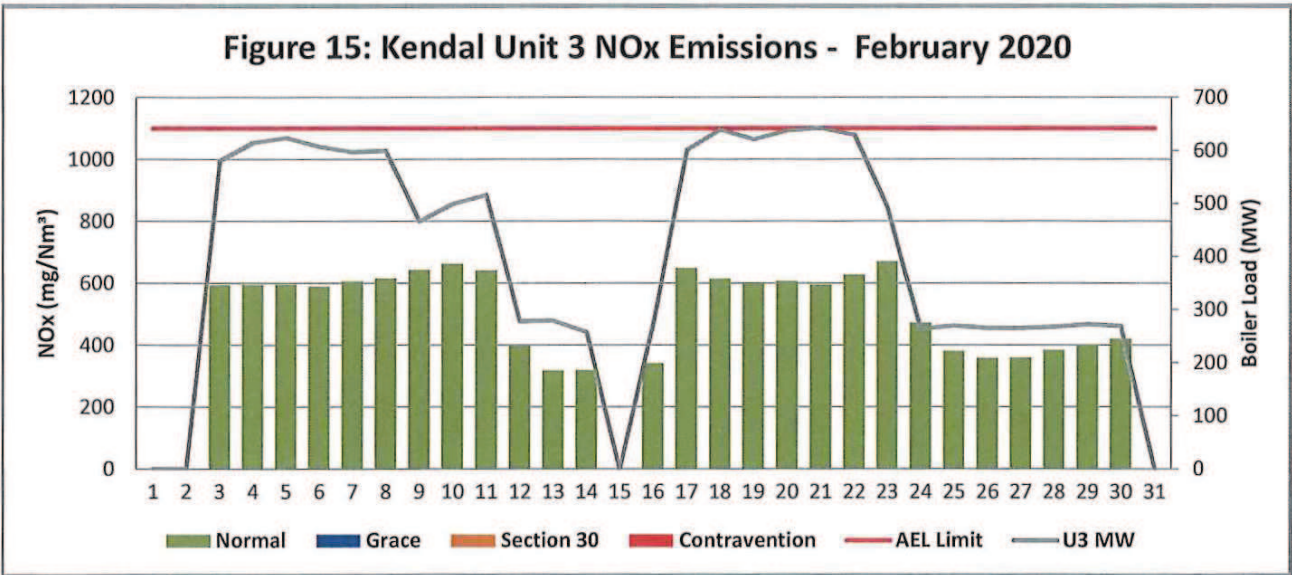


Figure 16: Kendal Unit 4 NOx Emissions - February 2020

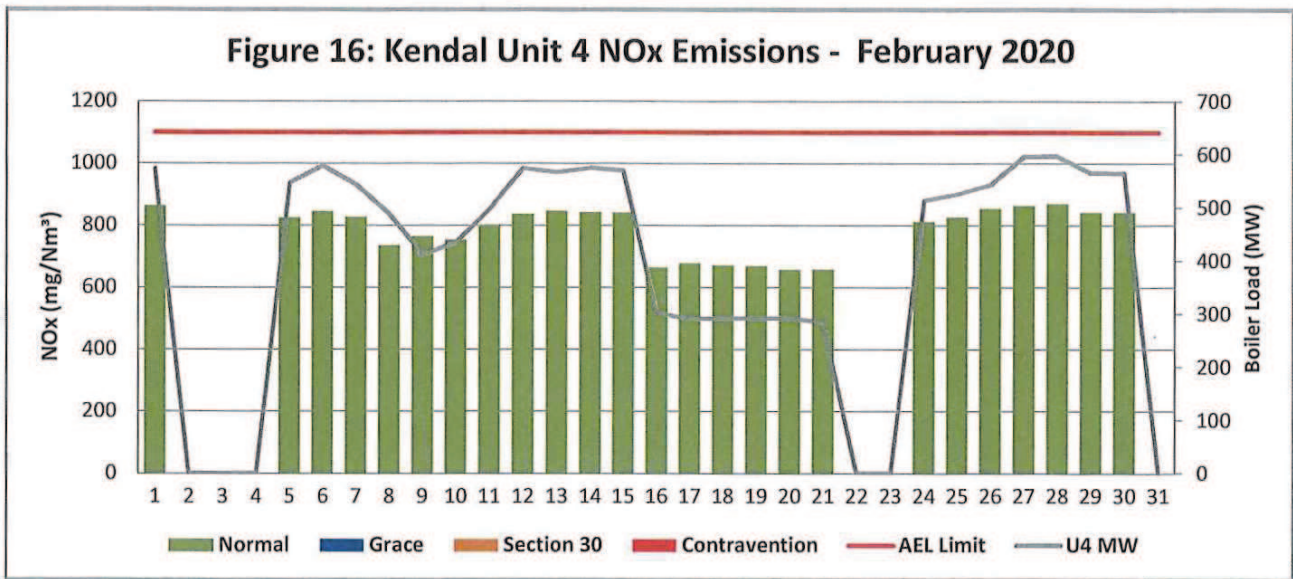


Figure 17: Kendal Unit 5 NOx Emissions - February 2020

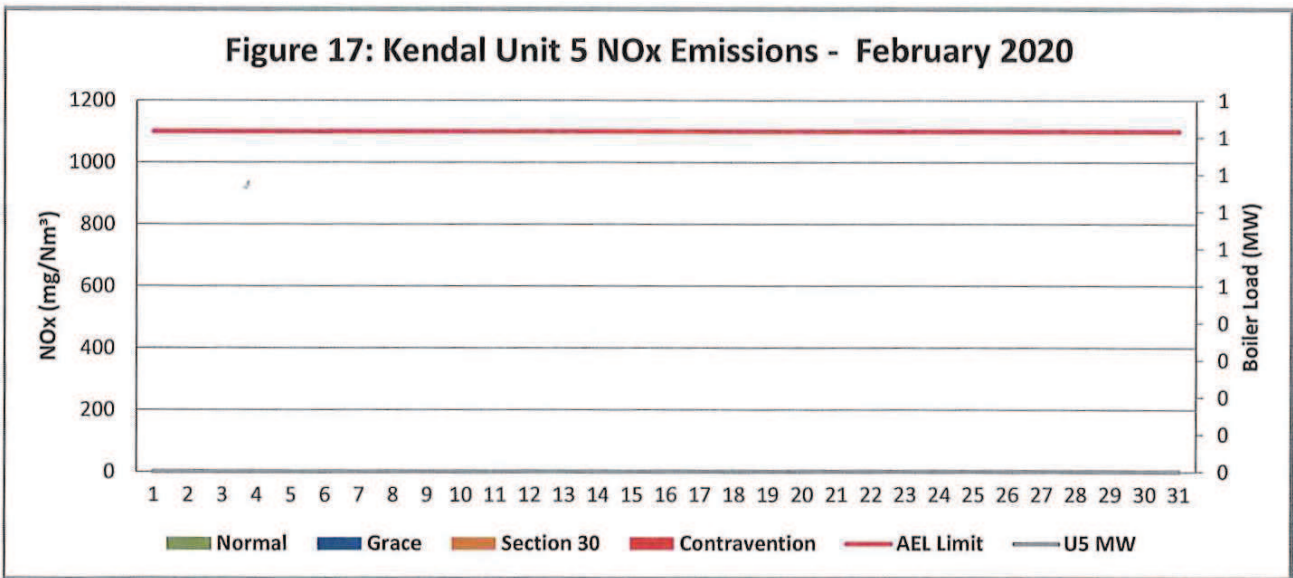


Figure 18: Kendal Unit 6 NOx Emissions - February 2020

