

Mr. Chakane Sibaya  
Air Quality Officer  
Fezile Dabi District Municipality  
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Sasolburg  
1947

Date:  
04 December 2020

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Tel +27 16 457 5308

Ref: LRP03PLA000 \_0217/20201124

Dear Mr. Sibaya

**LETHABO POWER STATION EMISSION MONTHLY REPORT FOR OCTOBER 2020**

Please find attached Lethabo Power Station emission report for the month of October 2020.

Also attached ambient air quality monitoring report, complaints register and the fugitive dust fallout monitoring report for October 2020.

For any additional information please do not hesitate to contact us.

Yours sincerely




Karabo Rakgolela  
**GENERAL MANAGER**

	<b>Report</b>	<b>Lethabo Power Station</b>
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Report name:	<b>Lethabo Power Station October 2020 Emission Report</b>	Reference number:	<b>LRP03PLA000 _0217/20201124</b>
		Document Type:	<b>Report</b>
		Area of Applicability:	<b>Environment</b>
		Report Date:	<b>November 2020</b>
		Classification:	<b>Controlled Disclosure</b>

**Signatures:**


**Compiled by:**

  
.....  
P Parag  
**System Engineer**

**Verified by :**

  
.....  
W de Klerk  
**Environmental Officer**

**Reviewed by:**

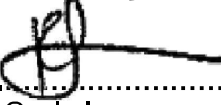
  
.....  
N Mazibuko  
**BPE Manager**

**Date:** 27/11/2020  
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**Date:** 2020-11-26  
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**Date:** 27/11/2020  
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**Reviewed by:**

  
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C Govinden  
**PE Manager**

**Reviewed by:**

  
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L Nel  
**C&I Manager**

**Reviewed by:**

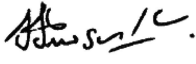
  
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M Hariram  
**Environmental Manager**

**Date:** 27/11/2020  
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**Date:** 2020-11-30  
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**Date:** 2020-12-03  
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**Approved by:**

  
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H Sewsunker  
**Engineering Manager**

**Date:** 2020/12/03  
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**LETHABO POWER STATION MONTHLY EMISSIONS REPORT**

Atmospheric Emission License FDDM-MET-2011-08-P1


**1. RAW MATERIALS AND PRODUCTS**

Raw Materials and Products	Raw Material Type	Units	Maximum Permitted Consumption Rate	Consumption Rate Oct-2020
	Coal	Tons	2 000 000	1 268 436
	Fuel Oil	Tons	1 700	240.37

Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Oct-2020
	Energy	GWh	2834.64	1 937.44
	Ash	Tons	770 000	474 141.4
	RE Ash	kg/MWh	not specified	244.73

**2. ENERGY SOURCE CHARACTERISTICS**

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.55 (Standard)	0.710
Ash Content	%	36.89 (Standard)	37.380

### 3. EMISSION LIMITS (mg/Nm<sup>3</sup>)

Associated Unit/Stack	PM	SO <sub>x</sub>	NO <sub>x</sub>
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 Oct-2020
Unit 1	Electrostatic Precipitator (ESP)	99.86%
Unit 2	Electrostatic Precipitator (ESP)	99.74%
Unit 3	Electrostatic Precipitator (ESP)	Unit Off-line
Unit 4	Electrostatic Precipitator (ESP)	99.88%
Unit 5	Electrostatic Precipitator (ESP)	99.83%
Unit 6	Electrostatic Precipitator (ESP)	99.85%

### 5. MONITOR RELIABILITY (%)

Associated Unit/Stack	PM	SO <sub>2</sub>	NO	CO <sub>2</sub>
Unit 1	98.0	99.9	100.0	99.7
Unit 2	99.2	99.9	99.6	99.9
Unit 3				
Unit 4	99.3	99.5	99.5	99.2
Unit 5	99.2	99.5	99.5	99.5
Unit 6	100.0	99.5	99.5	99.3

## 6. EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of October 2020

Associated Unit/Stack	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>x</sub> (tons)
Unit 1	130.2	3 669.0	1 595
Unit 2	214.3	4 401.9	1 850
Unit 3	0.0	0.0	0
Unit 4	105.0	4 260.1	2 139
Unit 5	142.6	3 582.4	1 750
Unit 6	123.9	3 795.8	1 710
<b>SUM</b>	<b>716.0</b>	<b>19 709.1</b>	<b>9 045.0</b>

Table 6.2: Operating days in compliance to PM AEL Limit - October 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
Unit 1	27	4	0	0	4	71.4
Unit 2	25	6	0	0	6	97.1
Unit 3	0	0	0	0	0	
Unit 4	31	0	0	0	0	46.0
Unit 5	29	2	0	0	2	77.9
Unit 6	31	0	0	0	0	64.1
<b>SUM</b>	<b>143</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>12</b>	

\* Please Note Conventions found in the month of October 2020 were due to new exceedances determined during the Back fitting of valid correlation factors (Please refer to General Notes)

Table 6.3: Operating days in compliance to SO<sub>x</sub> AEL Limit - October 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average SO <sub>x</sub> (mg/Nm <sup>3</sup> )
Unit 1	31	0	0	0	0	2 033.4
Unit 2	31	0	0	0	0	1 996.8
Unit 3	0	0	0	0	0	
Unit 4	31	0	0	0	0	1 881.0
Unit 5	31	0	0	0	0	1 954.3
Unit 6	31	0	0	0	0	1 978.5
<b>SUM</b>	<b>155</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

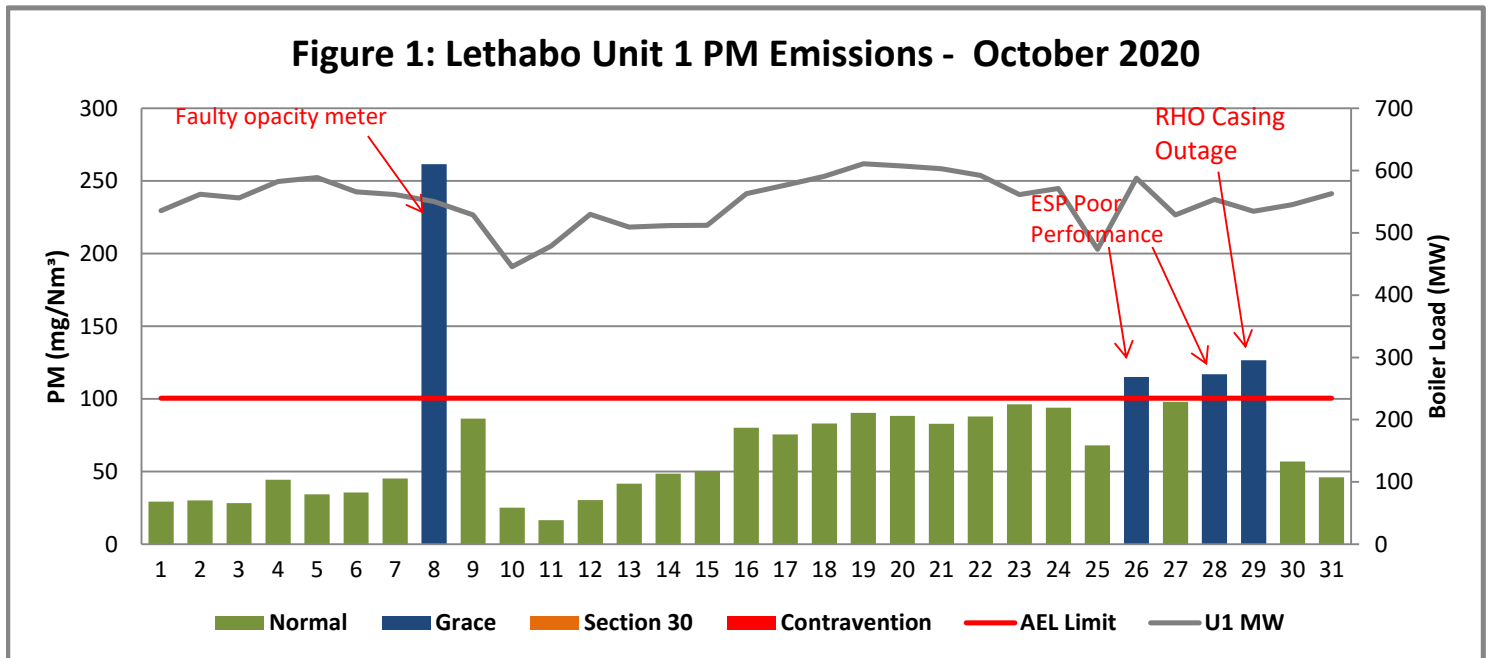
Table 6.4: Operating days in compliance to NOx AEL Limit - October 2020

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average NOx (mg/Nm <sup>3</sup> )
Unit 1	31	0	0	0	0	883.2
Unit 2	31	0	0	0	0	838.4
Unit 3	0	0	0	0	0	
Unit 4	31	0	0	0	0	943.3
Unit 5	31	0	0	0	0	955.2
Unit 6	31	0	0	0	0	890.5
<b>SUM</b>	<b>155</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

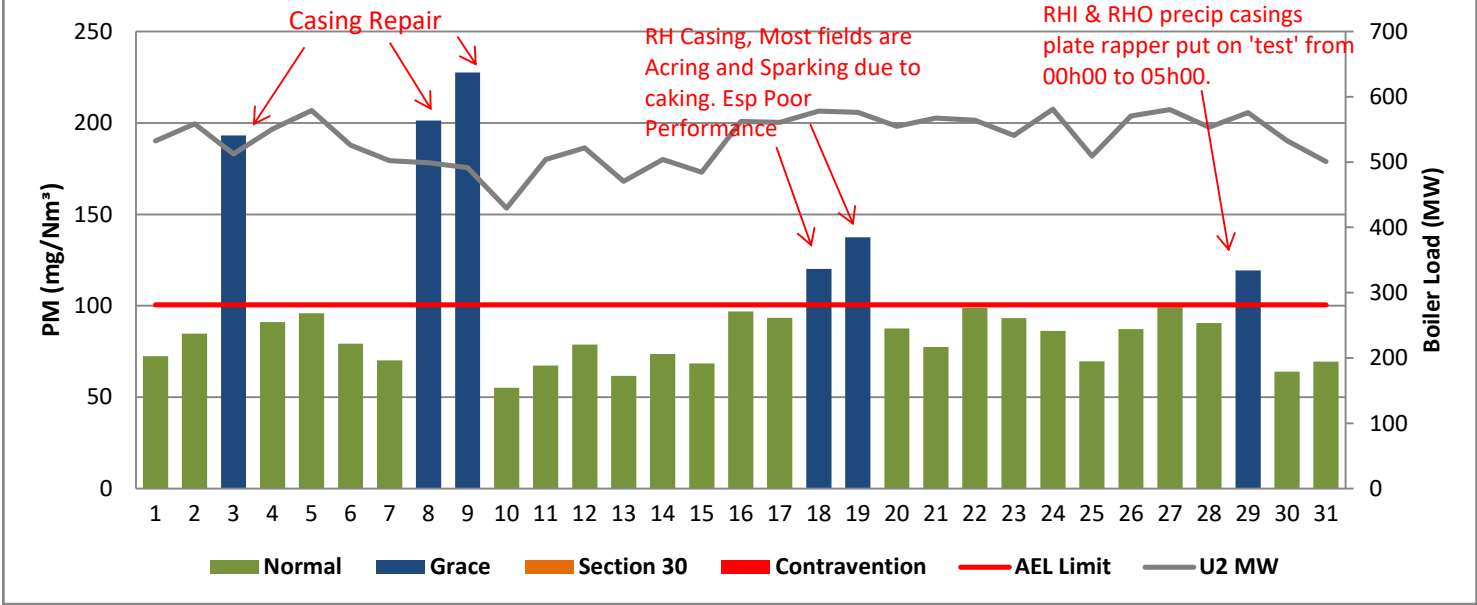
Table 6.5: Legend Description

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

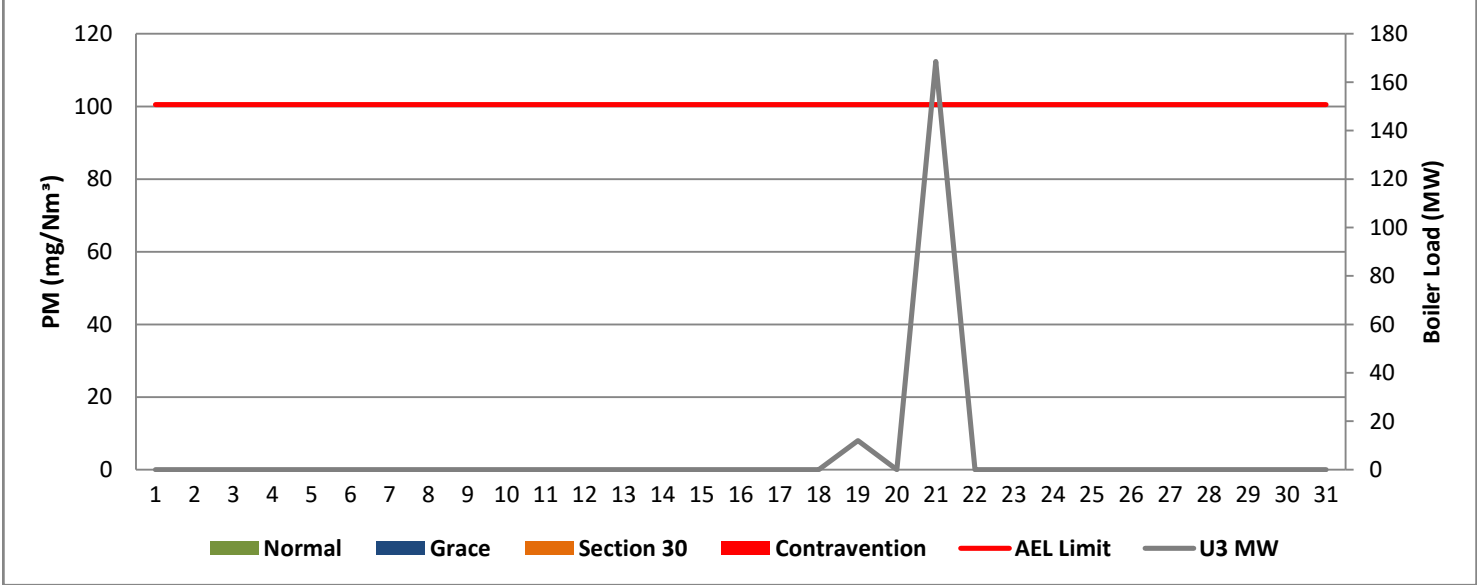
Figure 1: Lethabo Unit 1 PM Emissions - October 2020



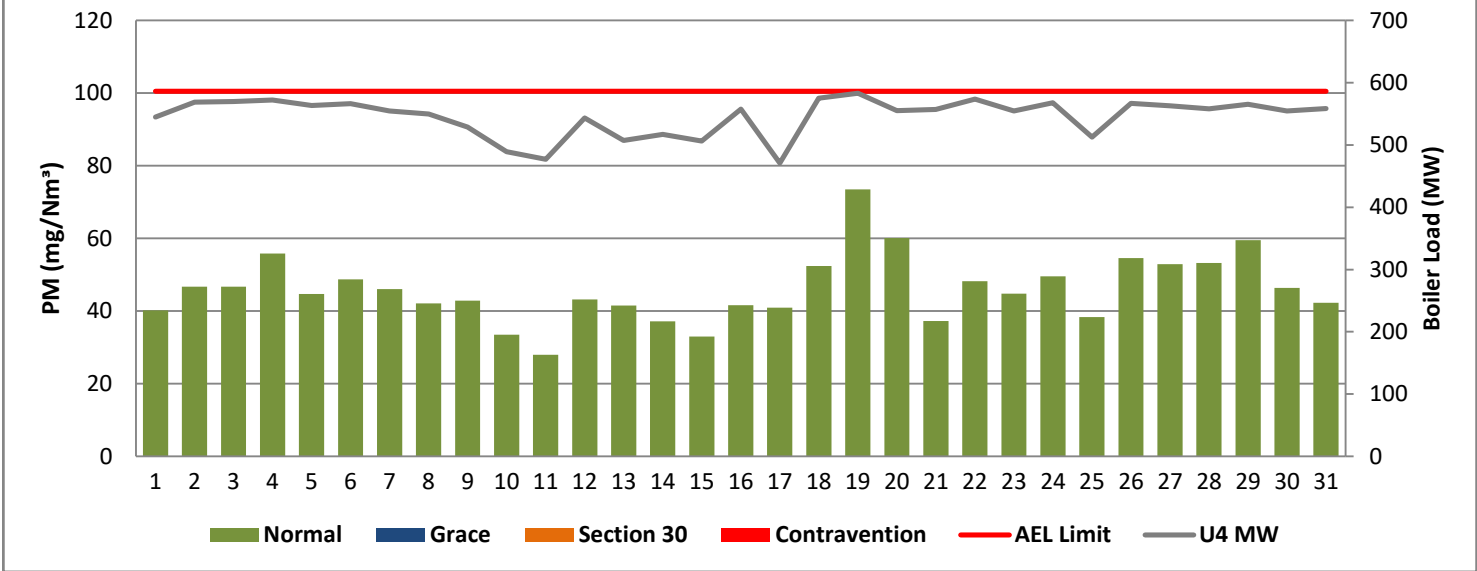
**Figure 2: Lethabo Unit 2 PM Emissions - October 2020**



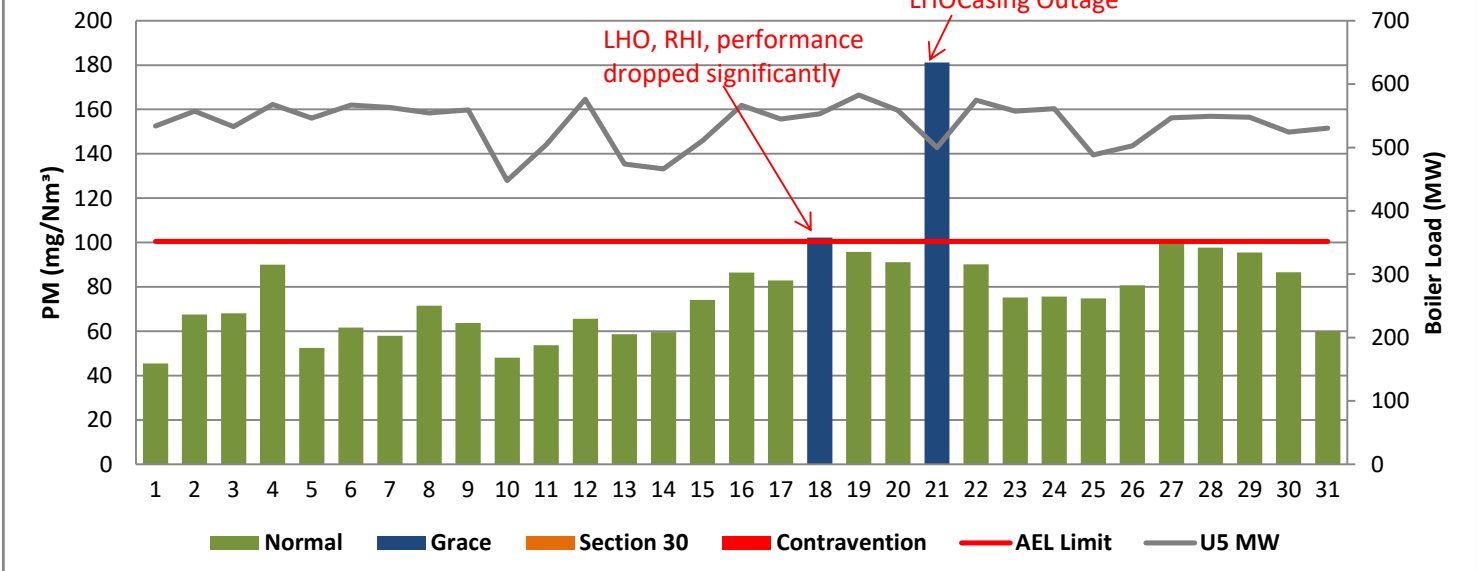
**Figure 3: Lethabo Unit 3 PM Emissions - October 2020**



**Figure 4: Lethabo Unit 4 PM Emissions - October 2020**

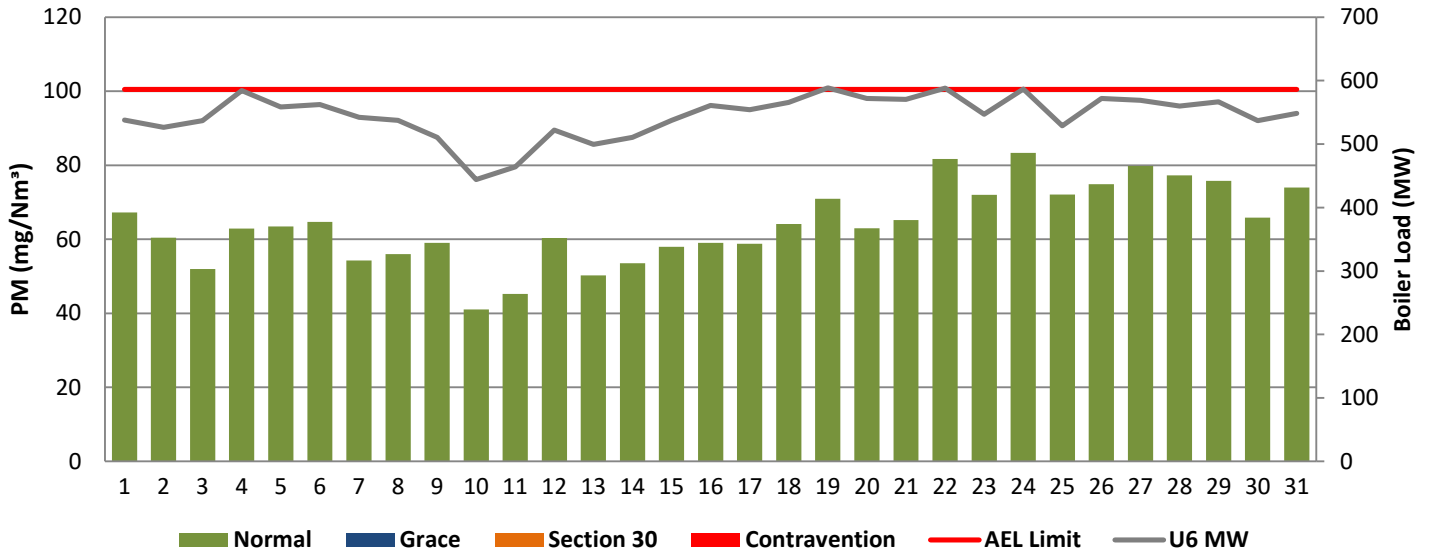


**Figure 5: Lethabo Unit 5 PM Emissions - October 2020**



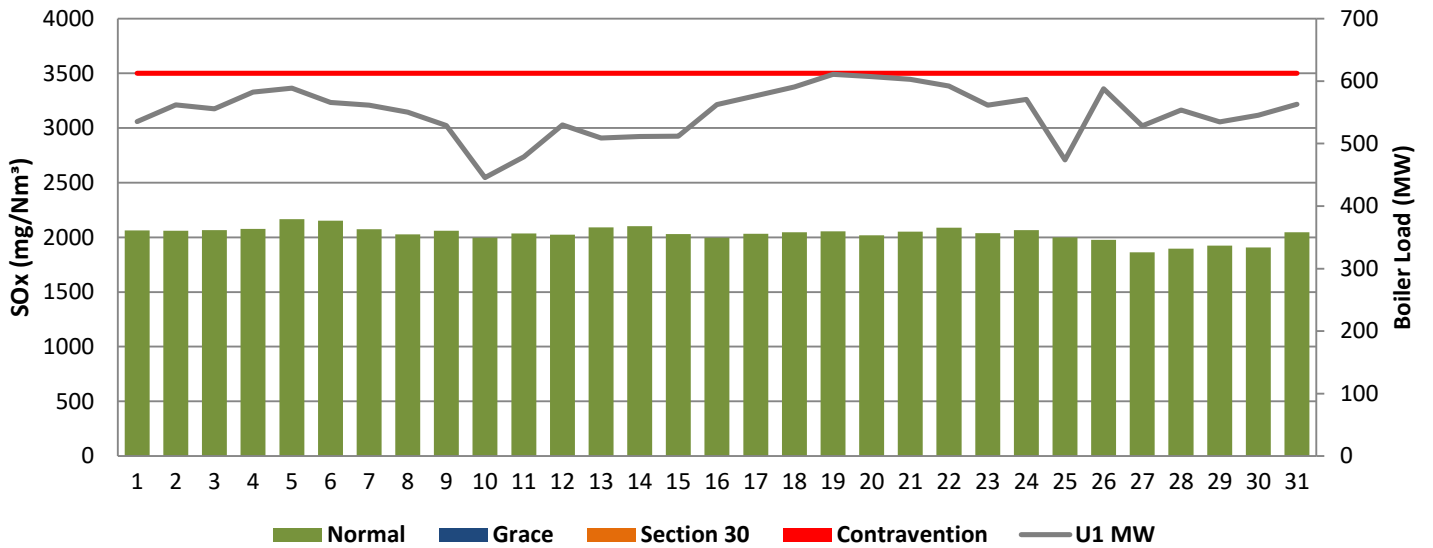


**Figure 6: Lethabo Unit 6 PM Emissions - October 2020**



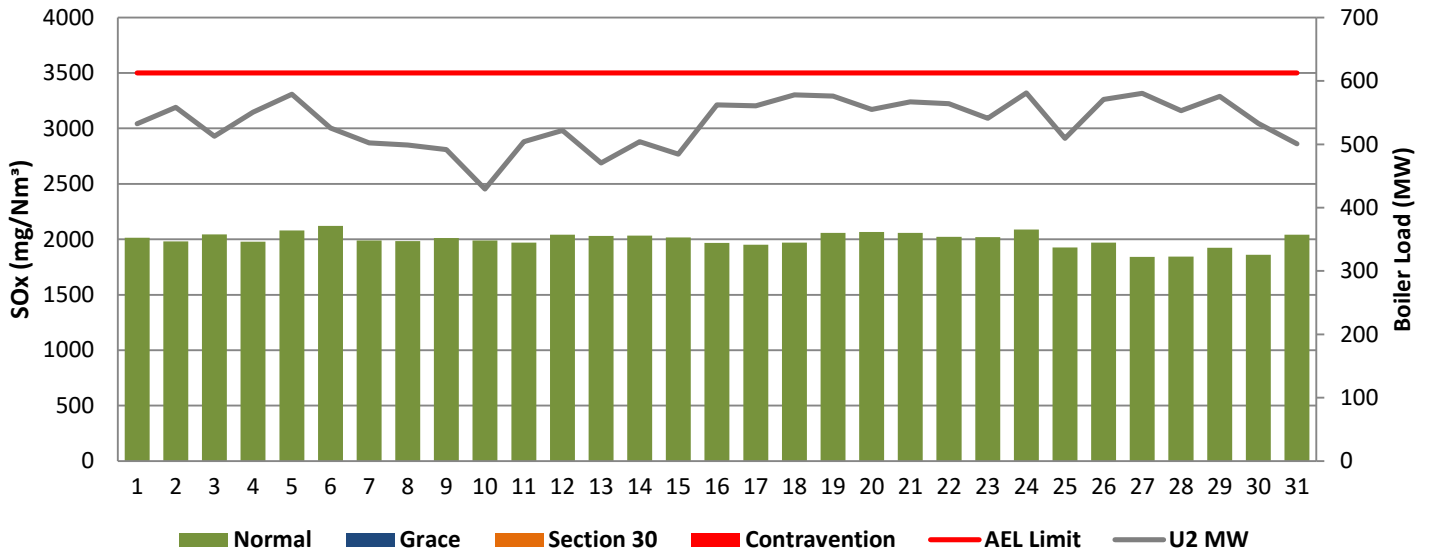
■ Normal   
 ■ Grace   
 ■ Section 30   
 ■ Contravention   
 — AEL Limit   
 — U6 MW

**Figure 7: Lethabo Unit 1 SOx Emissions - October 2020**

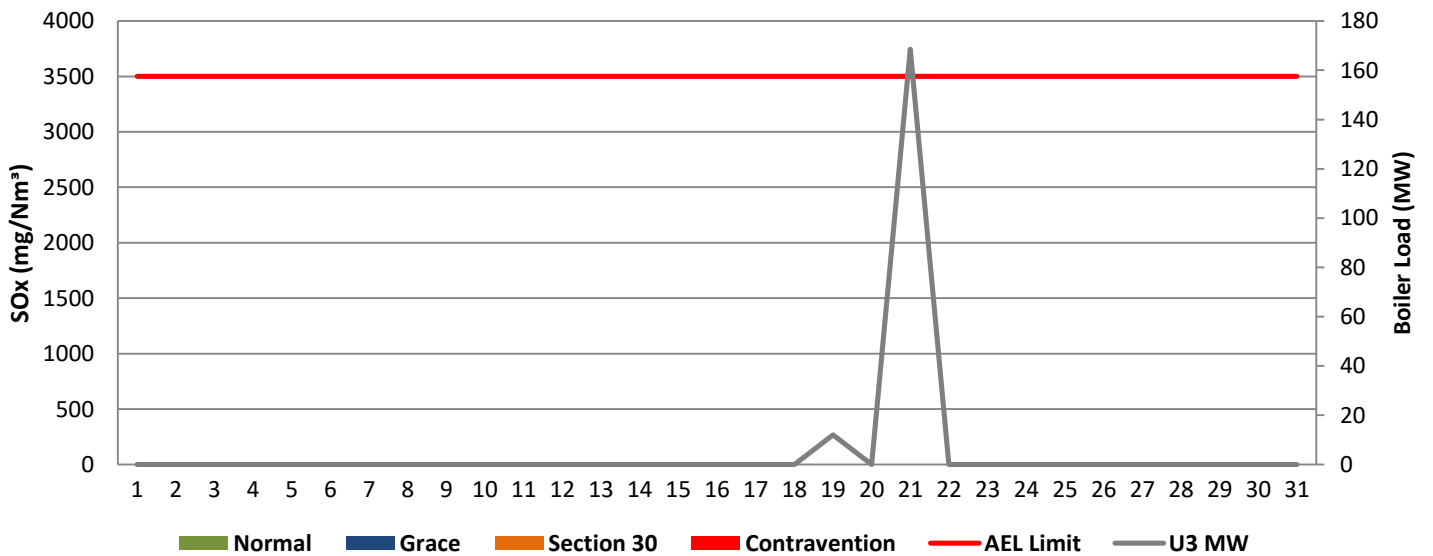


■ Normal   
 ■ Grace   
 ■ Section 30   
 ■ Contravention   
 — U1 MW

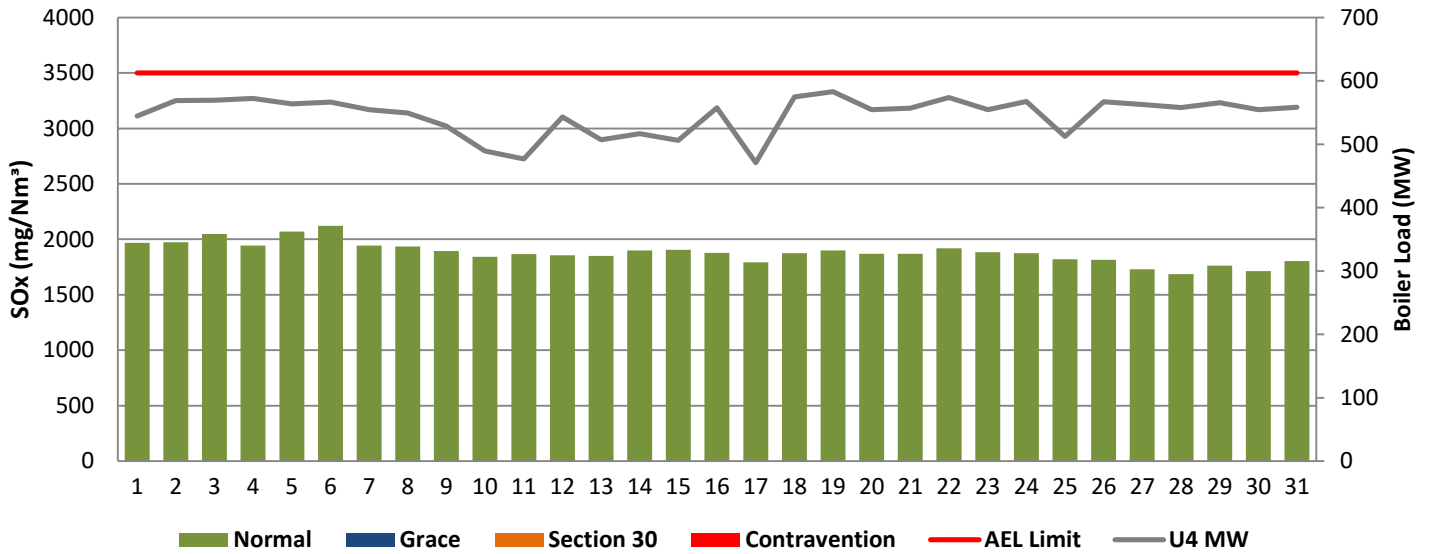
**Figure 8: Lethabo Unit 2 SOx Emissions - October 2020**



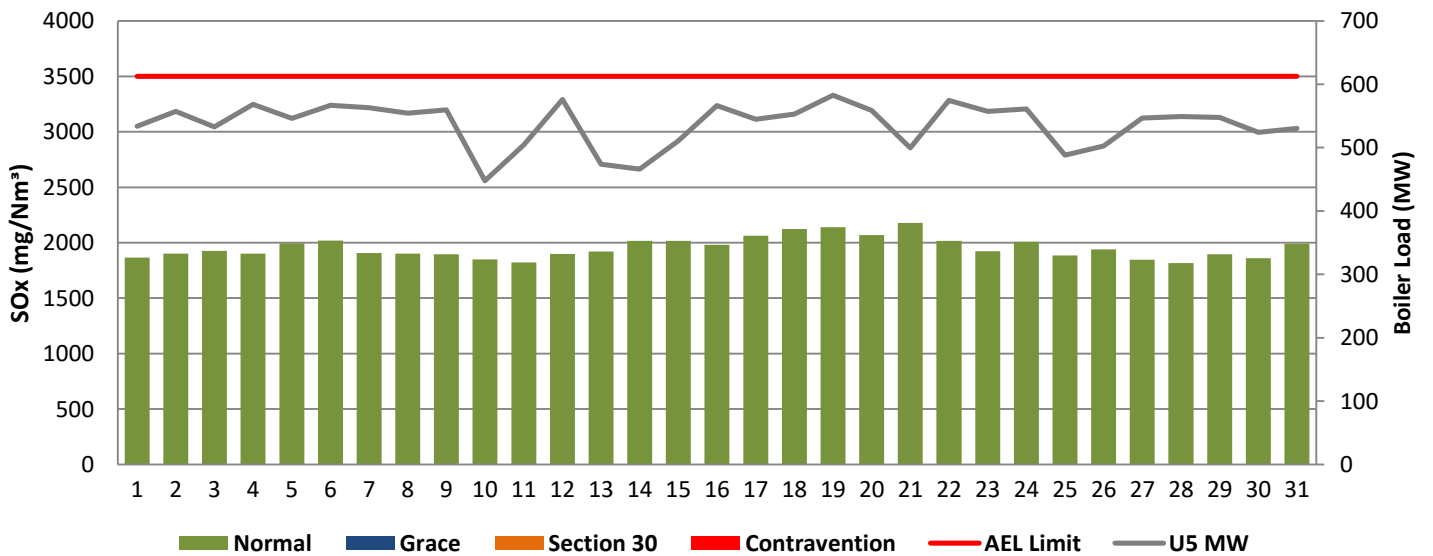
**Figure 9: Lethabo Unit 3 SOx Emissions - October 2020**



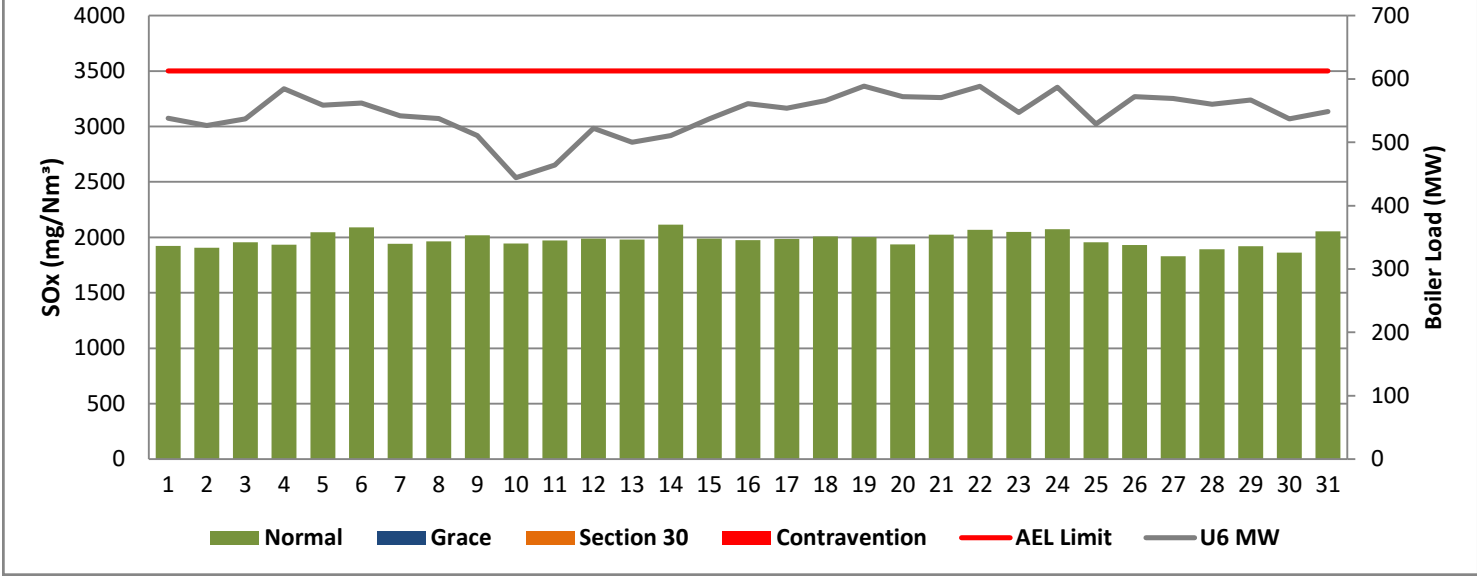
**Figure 10: Lethabo Unit 4 SOx Emissions - October 2020**



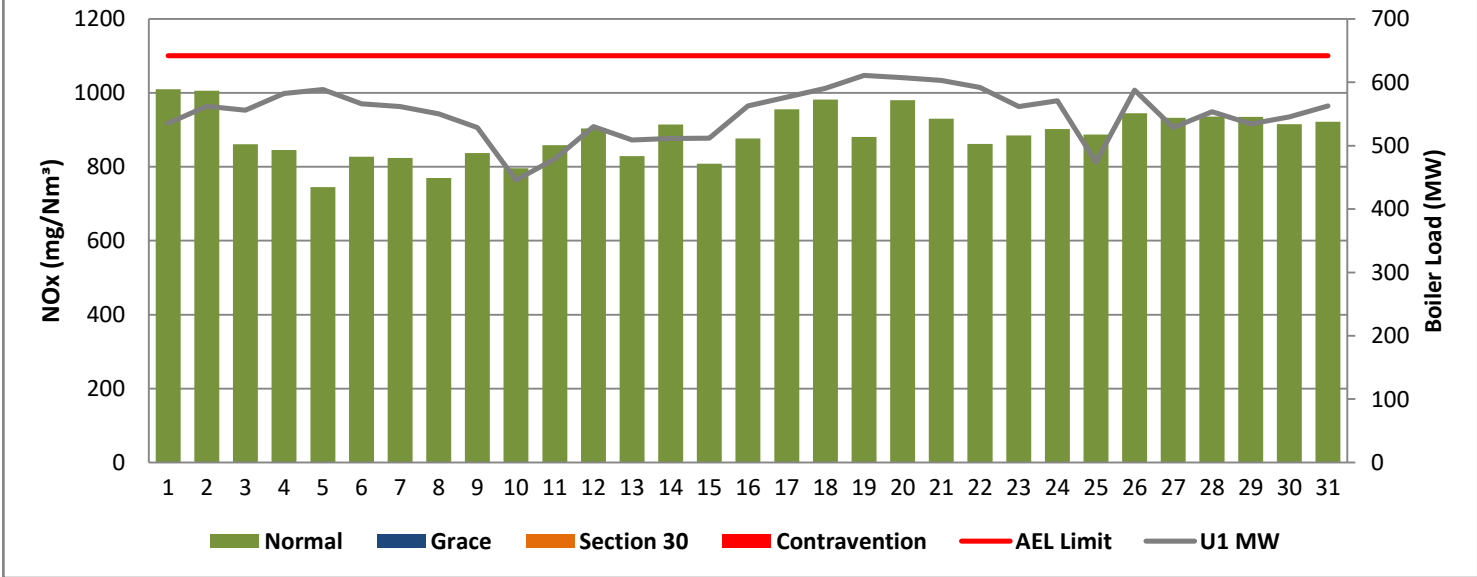
**Figure 11: Lethabo Unit 5 SOx Emissions - October 2020**



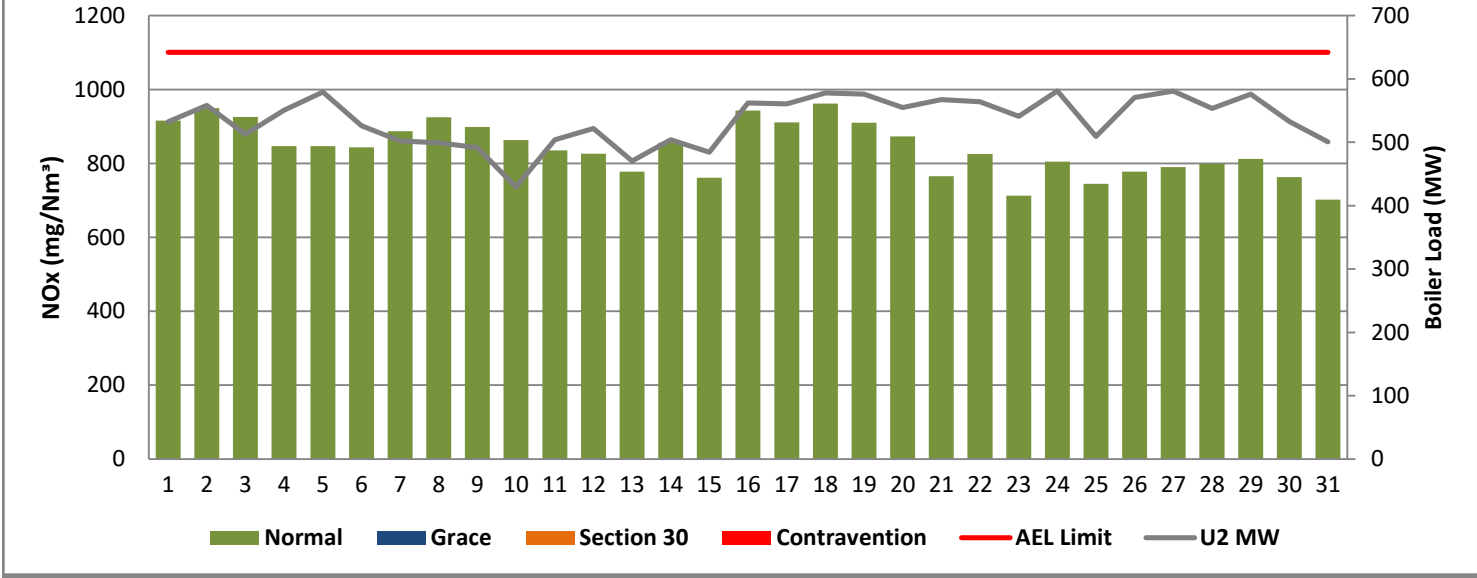
**Figure 12: Lethabo Unit 6 SOx Emissions - October 2020**



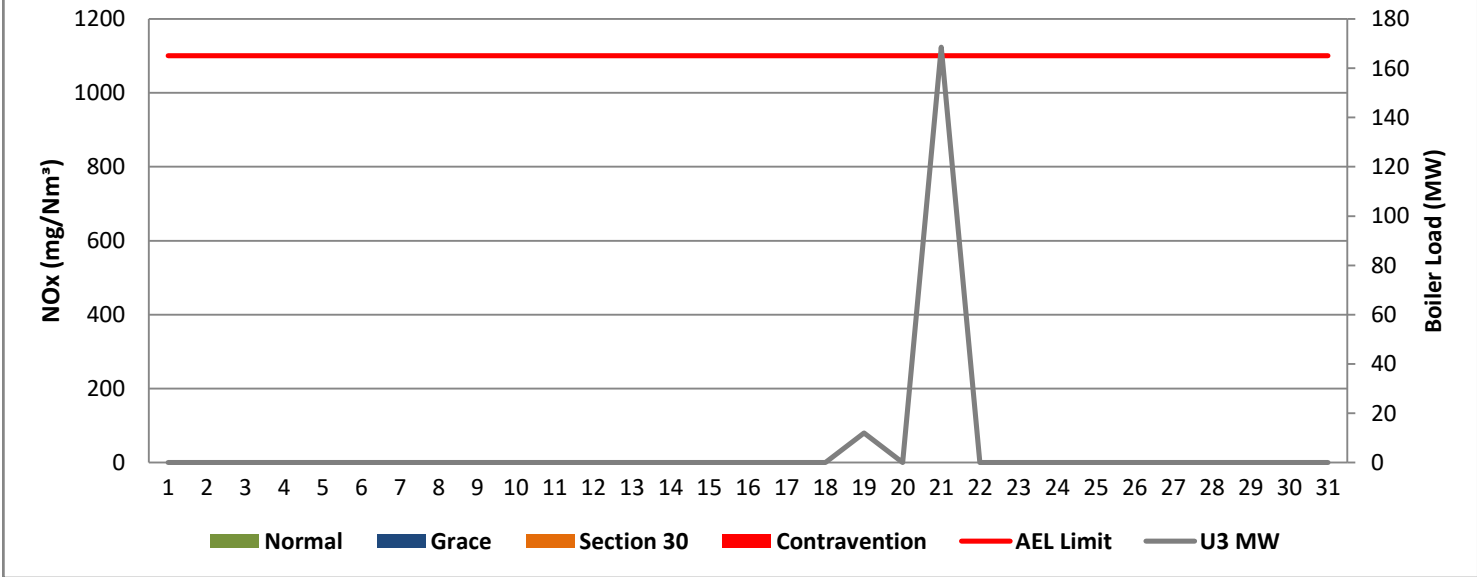
**Figure 13: Lethabo Unit 1 NOx Emissions - October 2020**



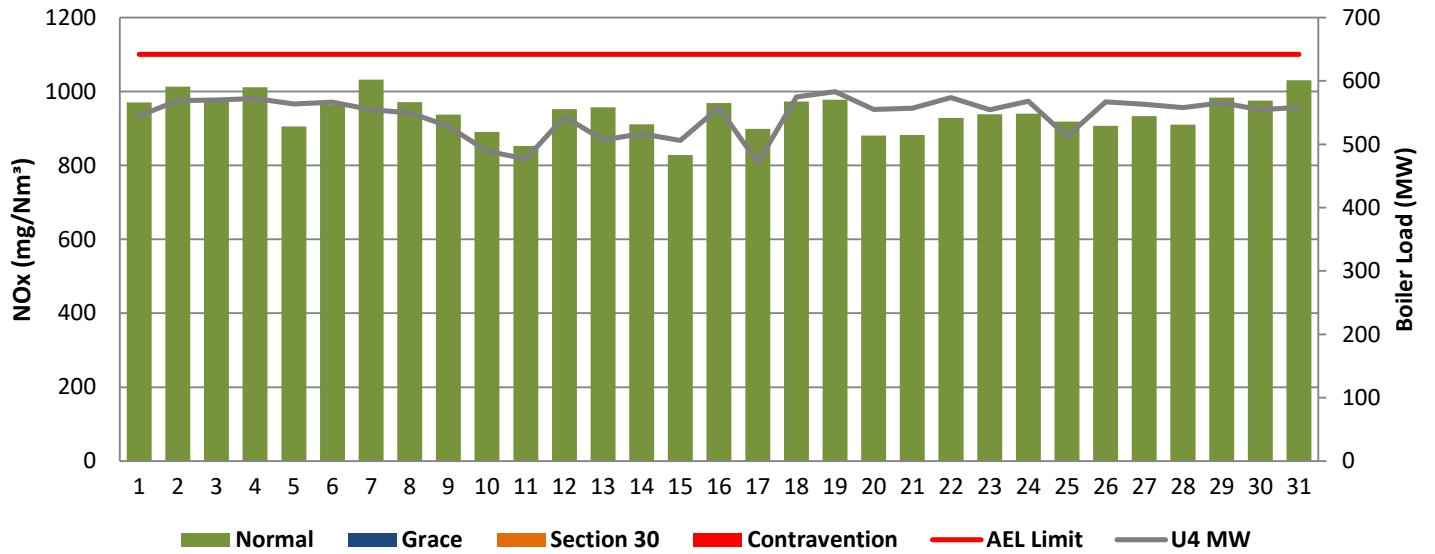
**Figure 14: Lethabo Unit 2 NOx Emissions - October 2020**



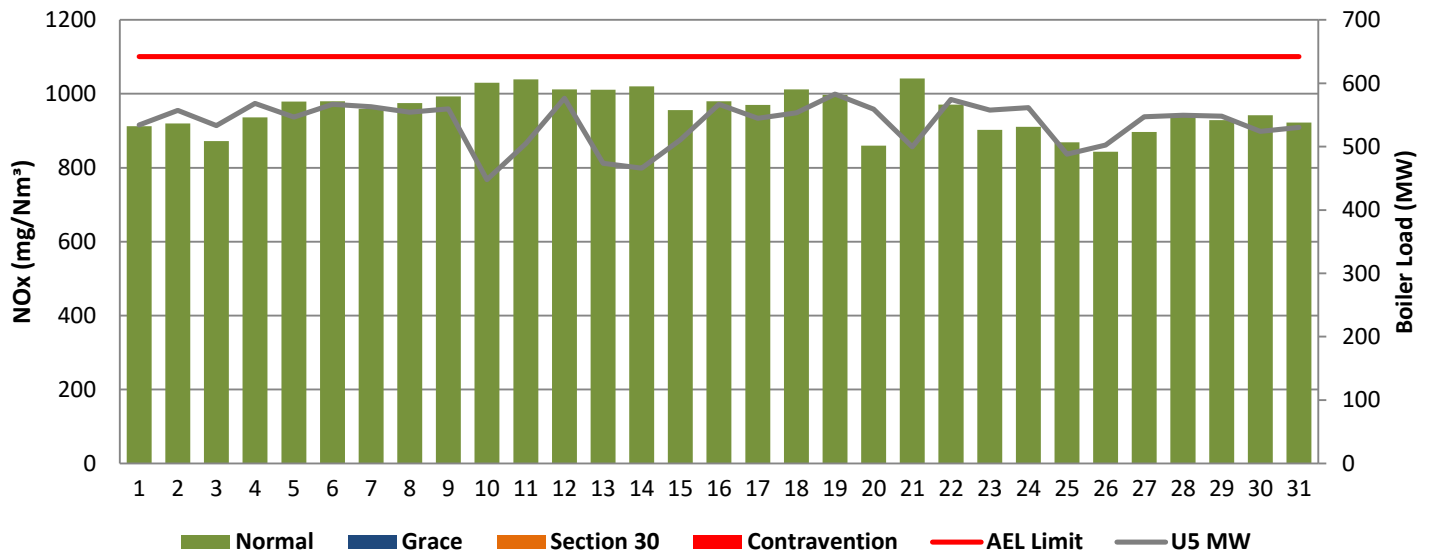
**Figure 15: Lethabo Unit 3 NOx Emissions - October 2020**



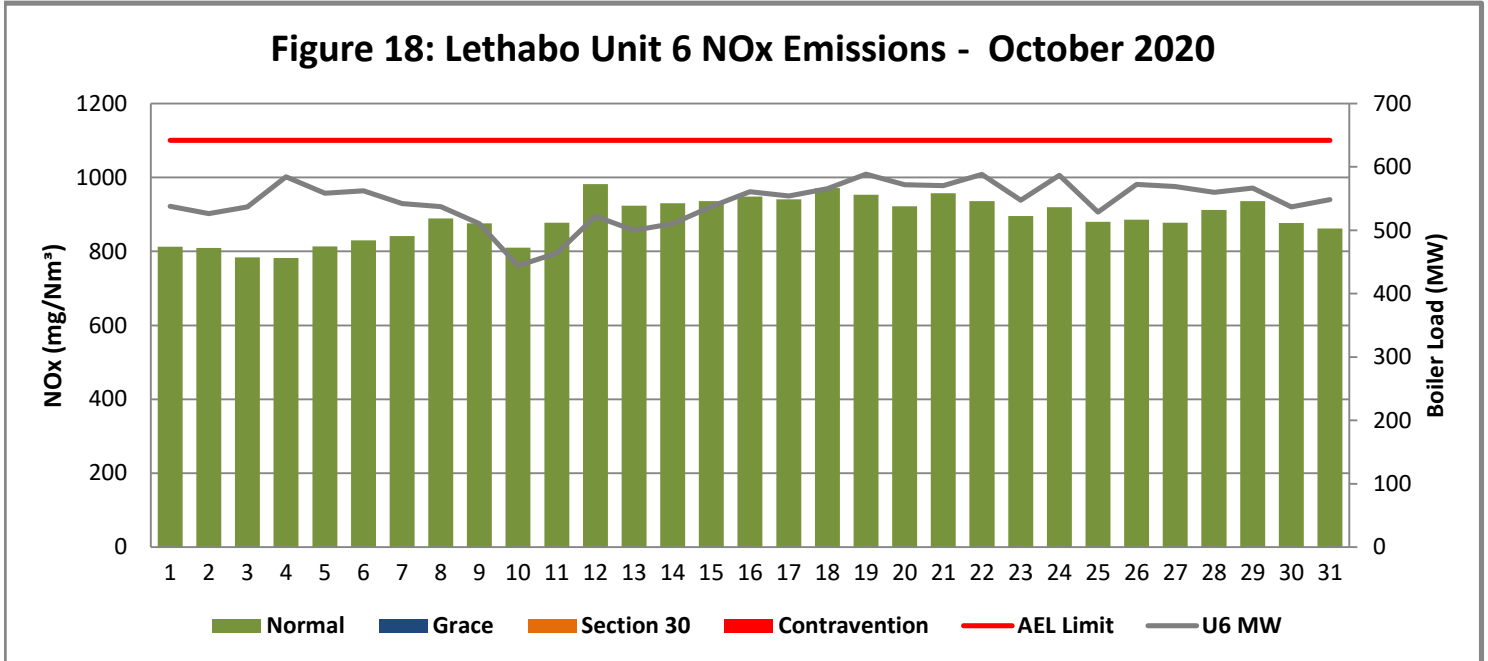
**Figure 16: Lethabo Unit 4 NOx Emissions - October 2020**



**Figure 17: Lethabo Unit 5 NOx Emissions - October 2020**



**Figure 18: Lethabo Unit 6 NOx Emissions - October 2020**



**7. SHUT DOWN AND LIGHT UP INFORMATION**

Table 7.1: PM Start-up information for the month of October 2020

Unit No.1							
Breaker Open (BO)							
Draught Group (DG) Shut Down (SD)							
BO to DG SD (duration)		DD:HH:MM					
Fires in time							
Synch. to Grid (or BC)							
Fires in to BC (duration)		DD:HH:MM					
Emissions below limit from BC (end date)							
Emissions below limit from BC (duration)		DD:HH:MM					

<b>Unit No.2</b>								
<b>Breaker Open (BO)</b>								
<b>Draught Group (DG) Shut Down (SD)</b>								
<b>BO to DG SD (duration)</b>		DD:HH:MM		DD:HH:MM				
<b>Fires in time</b>								
<b>Synch. to Grid (or BC)</b>								
<b>Fires in to BC (duration)</b>		DD:HH:MM		DD:HH:MM				
<b>Emissions below limit from BC (end date)</b>								
<b>Emissions below limit from BC (duration)</b>		DD:HH:MM		DD:HH:MM				

<b>Unit No.3</b>								
<b>Breaker Open (BO)</b>								
<b>Draught Group (DG) Shut Down (SD)</b>								
<b>BO to DG SD (duration)</b>								
<b>Fires in time</b>								
<b>Synch. to Grid (or BC)</b>								
<b>Fires in to BC (duration)</b>								
<b>Emissions below limit from BC (end date)</b>								
<b>Emissions below limit from BC (duration)</b>								



<b>Unit No.4</b>								
<b>Breaker Open (BO)</b>								
<b>Draught Group (DG) Shut Down (SD)</b>								
<b>BO to DG SD (duration)</b>								
<b>Fires in time</b>								
<b>Synch. to Grid (or BC)</b>								
<b>Fires in to BC (duration)</b>								
<b>Emissions below limit from BC (end date)</b>								
<b>Emissions below limit from BC (duration)</b>								

<b>Unit No.5</b>								
<b>Breaker Open (BO)</b>								
<b>Draught Group (DG) Shut Down (SD)</b>								
<b>BO to DG SD (duration)</b>								
<b>Fires in time</b>								
<b>Synch. to Grid (or BC)</b>								
<b>Fires in to BC (duration)</b>								
<b>Emissions below limit from BC (end date)</b>								
<b>Emissions below limit from BC (duration)</b>								

<b>Unit No.6</b>								
<b>Breaker Open (BO)</b>								
<b>Draught Group (DG) Shut Down (SD)</b>								
<b>BO to DG SD (duration)</b>		DD:HH:MM						
<b>Fires in time</b>								
<b>Synch. to Grid (or BC)</b>								
<b>Fires in to BC (duration)</b>		DD:HH:MM						
<b>Emissions below limit from BC (end date)</b>								
<b>Emissions below limit from BC (duration)</b>		DD:HH:MM						

7.2: Point Source emissions released during start-up (fires-in) and Shut-down (SD) for the month of October 2020 in mg/Nm<sup>3</sup>

**8. MAINTENANCE**

<b>Unit 1</b>				
<b>Beginning of</b>	2020/10/29 00:06:00			
<b>Reason for Maintenance</b>	RHO precip casing repairs.			
<b>End (Time):</b>	2020/10/29 16:11:00			
<b>Duration</b>	16:05:00			

<b>Unit 2</b>				
<b>Beginning of</b>	2020/10/03 00:16:00			
<b>Reason for Maintenance</b>	RHI precip casing repairs			
<b>End (Time):</b>	2020/10/03 15:57:00			
<b>Duration</b>	15:41:00			

<b>Unit 3</b>				
<b>Beginning of</b>				
<b>Reason for Maintenance</b>				
<b>End (Time):</b>				
<b>Duration</b>				

<b>Unit 4</b>				
<b>Beginning of</b>				
<b>Reason for Maintenance</b>				
<b>End (Time):</b>				
<b>Duration</b>				

<b>Unit 5</b>				
<b>Beginning of</b>	2020/10/20 23:50			
<b>Reason for Maintenance</b>	RHI precip casing repairs			
<b>End (Time):</b>	2020/10/21 16:54			
<b>Duration</b>	17:04:00			

<b>Unit 6</b>				
<b>Beginning of</b>				
<b>Reason for Maintenance</b>				
<b>End (Time):</b>				
<b>Duration</b>				

## 9. GENERAL

### Unit 1-6: Back Fitting of Valid Correlated Data:

Correlation Tests have been redone and implemented. Back Fitting was required based on correlation validity and implementation for the 2020 calendar year. Based on the back fitting exercise new exceedance in some cases would be added and some existing exceedances would be removed. This was the case for both Gaseous and Particulate matter emissions.

It is also noted that if the number of new exceedance days add up to greater than the allowable grace periods, it will be reported as contraventions. These would not have been reported and investigated as Section 30 incidents as the events were not known to the station at the time

### Note on the use of average values:

It is noted that, where it was required to utilize averages, it is the view of the station to take it as monitor unavailability (even if the monitor was reading and available, but the data was not reliable). This would ultimately adversely affect the percentage availability of the various monitors for that period.

**ADDENDUM TO MONTHLY EMISSIONS REPORT**

**10. S30 INCIDENT OR LEGAL CONTRAVENTION REGISTER**

To be completed in the case of a S30 incident or a legal contravention:

Unit no	Incident Start Date	Incident End Date	Incident Cause	Remedial action	S30 initial notification sent	Date S30 investigation report sent	Date DEA Acknowledgment	Date DEA Acceptable	Comments / Reference No.

**11. PARTICULATE EMISSIONS**

**EMISSION RATE (ACTUAL EMISSION/MWh GENERATED - kg/MWh)**

MONTH	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	UNIT 6	STATION
NOV '19	0.31	0.47	0.37	OFF	OFF	0.59	0.43
DEC '19	0.58	0.48	0.51	OFF	OFF	0.77	0.59
JAN '20	0.42	0.52	0.62	0.25	OFF	0.73	0.49
FEB '20	0.56	0.46	0.67	0.29	0.27	OFF	0.47
MAR '20	0.37	0.58	0.72	0.26	0.33	OFF	0.45
APR '20	0.54	0.36	0.69	0.21	0.18	0.64	0.41
MAY '20	0.83	0.34	0.54	0.20	0.20	0.42	0.38
JUN '20	0.23	0.26	0.29	0.18	0.20	0.48	0.27
JUL '20	0.40	0.49	0.36	0.22	0.21	0.45	0.35
AUG '20	0.31	0.30	0.49	0.26	0.35	0.43	0.35
SEP '20	0.24	0.43	OFF	0.25	0.18	0.32	0.28
OCT '20	0.32	0.54	OFF	0.26	0.36	0.31	0.35

**ADDENDUM TO MONTHLY EMISSIONS REPORT**

**12. DAILY EMISSIONS FIGURES**

**Final Dust Concentration (mg/Nm<sup>3</sup>)**

<b>Date</b>	<b>U1</b>	<b>U2</b>	<b>U3</b>	<b>U4</b>	<b>U5</b>	<b>U6</b>	<b>Limit</b>
<b>02-Oct</b>	30.2	84.7	OFF	46.7	67.5	60.5	100
<b>03-Oct</b>	28.3	193.1	OFF	46.7	68.1	51.9	100
<b>04-Oct</b>	44.4	91.0	OFF	55.8	90.0	62.9	100
<b>05-Oct</b>	34.4	95.9	OFF	44.7	52.5	63.5	100
<b>06-Oct</b>	35.6	79.2	OFF	48.7	61.7	64.7	100
<b>07-Oct</b>	45.3	70.1	OFF	46.0	57.9	54.3	100
<b>08-Oct</b>	261.6	201.3	OFF	42.1	71.5	56.0	100
<b>09-Oct</b>	86.3	227.6	OFF	42.9	63.7	59.0	100
<b>10-Oct</b>	25.1	55.2	OFF	33.5	48.1	41.0	100
<b>11-Oct</b>	16.6	67.3	OFF	27.9	53.6	45.2	100
<b>12-Oct</b>	30.3	78.8	OFF	43.2	65.7	60.3	100
<b>13-Oct</b>	41.7	61.6	OFF	41.5	58.7	50.3	100
<b>14-Oct</b>	48.6	73.5	OFF	37.2	59.6	53.5	100
<b>15-Oct</b>	50.4	68.5	OFF	33.0	74.1	58.0	100
<b>16-Oct</b>	80.2	96.8	OFF	41.6	86.5	59.0	100
<b>17-Oct</b>	75.6	93.3	OFF	41.0	82.9	58.8	100
<b>18-Oct</b>	83.0	120.2	OFF	52.4	102.2	64.1	100
<b>19-Oct</b>	90.5	137.5	OFF	73.5	95.7	70.9	100
<b>20-Oct</b>	88.2	87.6	OFF	60.1	91.2	63.0	100
<b>21-Oct</b>	82.8	77.5	OFF	37.2	181.1	65.2	100
<b>22-Oct</b>	87.9	98.8	OFF	48.2	90.1	81.7	100
<b>23-Oct</b>	96.2	93.2	OFF	44.8	75.2	72.0	100
<b>24-Oct</b>	94.0	86.3	OFF	49.5	75.7	83.3	100
<b>25-Oct</b>	68.0	69.7	OFF	38.3	74.7	72.1	100
<b>26-Oct</b>	115.1	87.3	OFF	54.6	80.8	74.9	100
<b>27-Oct</b>	97.9	99.1	OFF	52.9	99.4	79.8	100
<b>28-Oct</b>	117.0	90.6	OFF	53.2	97.7	77.3	100
<b>29-Oct</b>	126.6	119.4	OFF	59.5	95.5	75.8	100
<b>30-Oct</b>	56.9	64.0	OFF	46.4	86.6	65.9	100
<b>31-Oct</b>	46.0	69.4	OFF	42.2	59.8	74.0	100

**ADDENDUM TO MONTHLY EMISSIONS REPORT**

**Final SOx Concentration (mg/Nm<sup>3</sup>)**

<b>Date</b>	<b>U1</b>	<b>U2</b>	<b>U3</b>	<b>U4</b>	<b>U5</b>	<b>U6</b>	<b>Limit</b>
<b>02-Oct</b>	2061	1981	OFF	1973	1901	1907	3500
<b>03-Oct</b>	2065	2045	OFF	2049	1928	1956	3500
<b>04-Oct</b>	2076	1978	OFF	1945	1902	1934	3500
<b>05-Oct</b>	2165	2080	OFF	2070	1996	2047	3500
<b>06-Oct</b>	2151	2122	OFF	2121	2018	2091	3500
<b>07-Oct</b>	2075	1990	OFF	1943	1908	1941	3500
<b>08-Oct</b>	2028	1984	OFF	1936	1901	1964	3500
<b>09-Oct</b>	2061	2011	OFF	1894	1895	2017	3500
<b>10-Oct</b>	1997	1990	OFF	1841	1850	1944	3500
<b>11-Oct</b>	2037	1970	OFF	1866	1822	1973	3500
<b>12-Oct</b>	2025	2042	OFF	1857	1898	1989	3500
<b>13-Oct</b>	2090	2029	OFF	1851	1921	1981	3500
<b>14-Oct</b>	2101	2034	OFF	1900	2016	2114	3500
<b>15-Oct</b>	2030	2016	OFF	1904	2018	1989	3500
<b>16-Oct</b>	1997	1968	OFF	1877	1982	1974	3500
<b>17-Oct</b>	2033	1952	OFF	1793	2063	1985	3500
<b>18-Oct</b>	2047	1970	OFF	1875	2123	2008	3500
<b>19-Oct</b>	2056	2058	OFF	1899	2139	2003	3500
<b>20-Oct</b>	2020	2065	OFF	1870	2069	1937	3500
<b>21-Oct</b>	2052	2059	OFF	1870	2178	2024	3500
<b>22-Oct</b>	2087	2021	OFF	1919	2017	2067	3500
<b>23-Oct</b>	2039	2020	OFF	1883	1924	2049	3500
<b>24-Oct</b>	2065	2089	OFF	1875	2010	2073	3500
<b>25-Oct</b>	2000	1926	OFF	1820	1886	1955	3500
<b>26-Oct</b>	1978	1970	OFF	1816	1939	1930	3500
<b>27-Oct</b>	1862	1841	OFF	1729	1848	1829	3500
<b>28-Oct</b>	1897	1845	OFF	1686	1818	1892	3500
<b>29-Oct</b>	1926	1924	OFF	1762	1895	1919	3500
<b>30-Oct</b>	1907	1861	OFF	1713	1859	1862	3500
<b>31-Oct</b>	2046	2041	OFF	1805	1992	2055	3500

**ADDENDUM TO MONTHLY EMISSIONS REPORT**

**Final NOx Concentration (mg/Nm<sup>3</sup>)**

<b>Date</b>	<b>U1</b>	<b>U2</b>	<b>U3</b>	<b>U4</b>	<b>U5</b>	<b>U6</b>	<b>Limit</b>
<b>02-Oct</b>	824	887	OFF	1032	959	842	1100
<b>03-Oct</b>	861	926	OFF	977	872	784	1100
<b>04-Oct</b>	845	847	OFF	1012	936	783	1100
<b>05-Oct</b>	745	847	OFF	906	979	814	1100
<b>06-Oct</b>	827	844	OFF	965	979	830	1100
<b>07-Oct</b>	824	887	OFF	1032	959	842	1100
<b>08-Oct</b>	770	925	OFF	971	974	889	1100
<b>09-Oct</b>	837	899	OFF	937	993	876	1100
<b>10-Oct</b>	796	863	OFF	891	1030	810	1100
<b>11-Oct</b>	858	835	OFF	853	1038	878	1100
<b>12-Oct</b>	903	826	OFF	953	1012	982	1100
<b>13-Oct</b>	829	778	OFF	957	1011	923	1100
<b>14-Oct</b>	915	856	OFF	911	1020	930	1100
<b>15-Oct</b>	808	761	OFF	828	955	936	1100
<b>16-Oct</b>	877	943	OFF	968	980	949	1100
<b>17-Oct</b>	955	911	OFF	899	970	941	1100
<b>18-Oct</b>	982	962	OFF	973	1012	972	1100
<b>19-Oct</b>	880	910	OFF	978	997	953	1100
<b>20-Oct</b>	980	873	OFF	880	860	922	1100
<b>21-Oct</b>	930	765	OFF	883	1041	957	1100
<b>22-Oct</b>	862	826	OFF	928	971	936	1100
<b>23-Oct</b>	885	713	OFF	939	903	896	1100
<b>24-Oct</b>	902	805	OFF	940	911	919	1100
<b>25-Oct</b>	887	745	OFF	919	869	880	1100
<b>26-Oct</b>	945	777	OFF	907	843	886	1100
<b>27-Oct</b>	933	790	OFF	934	897	878	1100
<b>28-Oct</b>	936	799	OFF	911	938	912	1100
<b>29-Oct</b>	935	812	OFF	983	929	936	1100
<b>30-Oct</b>	915	763	OFF	976	942	876	1100
<b>31-Oct</b>	922	702	OFF	1030	922	862	1100







**ADDENDUM TO MONTHLY EMISSIONS REPORT**

<b>Oxygen Monitor Availability</b>						
	<b>Unit 1</b>	<b>Unit 2</b>	<b>Unit 3</b>	<b>Unit 4</b>	<b>Unit 5</b>	<b>Unit 6</b>
<b>Nov-19</b>	98.75%	100.00%	99.79%	OFF	OFF	99.81%
<b>Dec-19</b>	99.19%	98.94%	99.10%	OFF	OFF	100.00%
<b>Jan-20</b>	99.64%	99.19%	100.00%	82.95%	OFF	99.20%
<b>Feb-20</b>	99.84%	99.07%	98.85%	0.00%	67.86%	0.00%
<b>Mar-20</b>	100.00%	99.80%	97.24%	0.00%	99.19%	OFF
<b>Apr-20</b>	51.08%	100.00%	97.35%	0.00%	0.00%	0.00%
<b>May-20</b>	89.69%	100.00%	100.00%	0.00%	0.00%	13.33%
<b>Jun-20</b>	99.31%	99.92%	99.33%	98.85%	0.00%	100.00%
<b>Jul-20</b>	99.87%	99.30%	99.87%	99.02%	48.39%	99.87%
<b>Aug-20</b>	99.86%	99.92%	99.85%	100.00%	100.00%	96.67%
<b>Sep-20</b>	99.68%	99.86%	OFF	100.00%	100.00%	98.97%
<b>Oct-20</b>	99.73%	99.87%	OFF	99.33%	99.33%	99.46%

**14. EFFICIENCY**

<b>ESP Efficiency (%)</b>						
	<b>Unit 1</b>	<b>Unit 2</b>	<b>Unit 3</b>	<b>Unit 4</b>	<b>Unit 5</b>	<b>Unit 6</b>
<b>Nov-19</b>	99.868%	99.785%	99.833%	OFF	OFF	99.729%
<b>Dec-19</b>	99.767%	99.787%	99.782%	OFF	OFF	99.654%
<b>Jan-20</b>	99.825%	99.768%	99.727%	99.086%	OFF	99.662%
<b>Feb-20</b>	99.998%	99.999%	99.997%	99.999%	99.998%	OFF
<b>Mar-20</b>	99.851%	99.749%	99.698%	99.892%	99.851%	OFF
<b>Apr-20</b>	99.777%	99.838%	99.695%	99.909%	99.914%	99.707%
<b>May-20</b>	99.652%	99.847%	99.757%	99.912%	99.909%	99.805%
<b>Jun-20</b>	99.907%	99.883%	99.874%	99.922%	99.913%	99.783%
<b>Jul-20</b>	99.835%	99.777%	99.837%	99.905%	99.903%	99.788%
<b>Aug-20</b>	99.875%	99.872%	99.791%	99.892%	99.845%	99.809%
<b>Sep-20</b>	99.892%	99.793%	OFF	99.882%	99.913%	99.848%
<b>Oct-20</b>	99.860%	99.742%	OFF	99.876%	99.828%	99.850%

**ADDENDUM TO MONTHLY EMISSIONS REPORT**

**15. REMARKS**

<b>UNIT</b>	<b>MWLOSS</b>	<b>REASON</b>	<b>ACTUALSTARTDATE</b>	<b>ACTUALENDDATE</b>
1	118	AM: High stack emissions.	2020/10/27 20:24:00	2020/10/27 22:27:00
1	217	AM: High stack emissions.	2020/10/27 22:27:00	2020/10/28 02:09:00
1	117	RHO precip casing repairs.	2020/10/29 00:06:00	2020/10/29 16:11:00
2	118	RHI precip casing repairs	2020/10/03 00:16:00	2020/10/03 15:57:00
2	17	AM: Furnace pressure high	2020/10/19 10:57:00	2020/10/19 13:38:00
2	48	EF: High stack emissions	2020/10/19 12:39:00	2020/10/19 13:38:00
2	49	AM: High stack emissions.	2020/10/27 20:20:00	2020/10/27 22:27:00
2	89	AM: High stack emissions.	2020/10/27 22:27:00	2020/10/28 02:09:00
2	190	AM: Casing test	2020/10/31 00:00:00	2020/10/31 04:55:00
2	275	AM: L/H draught group trip	2020/10/31 20:10:00	2020/10/31 20:32:00
2	314	AM: L/H draught group trip	2020/10/31 20:32:00	2020/10/31 20:49:00
2	343	AM: L/H draught group trip	2020/10/31 20:49:00	2020/10/31 22:04:00
3	593	G/O	2020/10/01 00:00:00	2020/10/31 23:59:59
4	298	SSC power pack shaft seal and speed probes replacement.	2020/10/17 00:25:00	2020/10/17 05:19:00
4	98	AM: Dust plant standing due to 04WX22 chain broken	2020/10/19 16:21:00	2020/10/19 16:58:00
5	118	AM: RHI precip casing repairs	2020/10/20 23:50:00	2020/10/21 16:54:00
5	30	High stack emissions.	2020/10/22 14:51:00	2020/10/23 05:44:00
6	324	LH sec air heater pump A replacement.	2020/10/02 22:26:00	2020/10/03 00:32:00

PM Exceedances		
U1.	Emissions went maximum 1020 mg/sm3 amd stay there. Suspect that monitor tripped around 4am. C&I Rectified by 08:45am	08-Oct
U1.	Unit exceeded due to RHO casing very poor performance.	26-Oct
U1.	RHO casing very poor performance. LHO: F1,2&7 Poor Performance; F3 Arcing and Sparking; F4 Off LHI: F3 Arcing and Sparking; F4 Off; F5 to be reprogrammed RHI: F7 off RHO: F1&5 off; F4 poor performance; F6&7 Sparking and Arcing;	28-Oct
U1.	RHO Casing Outage	29-Oct
U1.	Power trip over the weekend affected the monitors. Data was deleted for the following periods Particulates: Unit 1: 2020-10-31 19:54 to 2020-11-02 12:06 Unit 2: 2020-10-31 19:54 to 2020-11-02 12:06 Unit 3: Off load Unit 4: 2020-10-31 19:54 to 2020-11-01 17:20 Unit 5: 2020-10-31 19:54 to 2020-11-01 17:20 Unit 6: Not affected Gasses: Unit 1: Not affected Unit 2: Not affected Unit 3: Not affected Unit 4: 2020-10-31 19:54 to 2020-11-02 10:18 Unit 5: 2020-10-31 19:54 to 2020-11-02 10:18 Unit 6: 2020-10-31 19:54 to 2020-11-02 10:18	31-Oct
U2.	LHO: F1&5 POOR PERFORMANCE; F2 OFF LHI: F4 POOR PERFORMING; F2,5 & 7 OFF RHI:F2&4 POOR PERFORMANCE RHO: F3&4 POOR PERFORMANCE	01-Oct
U2.	RHI Casing Repair	03-Oct
U2.	RHO ESP Casing outage.	08-Oct
U2.	LHO ESP Casing outage.	09-Oct
U2.	RH Casing, Most casings are Acing and Sparking due to caking. LHI: F1 Arcing and Sparking; F3 performing poorly RHI: F3 Arcing and Sparking; F2 performing poorly RHO: F4 performing poorly	18-Oct

U2.	<p>RH Casing, Most field are Arcing and Sparking due to caking.</p> <p>LHI: F1 Arcing and Sparking; F3 performing poorly  RHI: F3 Arcing and Sparking; F2 performing poorly  RHO: F4 performing poorly</p>	19-Oct
U2.	<p>RHI &amp; RHO precip casings plate rapper put on 'test' from 00h00 to 05h00 and back to auto.</p> <p>LHI: F3&amp;7 Poorly Performing; F1 Arcing and Sparking; F5 Tripping on Undervoltage  RHI: F1,2,7 Poorly Performing; F3 Arcing and Sparking  RHO: F4,3&amp;2 Poorly Performing; F1 Tripping on undervoltage and poorly performing</p>	29-Oct
U2.	<p>Power trip over the weekend affected the monitors. Data was deleted for the following periods</p> <p>Particulates:</p> <p>Unit 1: 2020-10-31 19:54 to 2020-11-02 12:06  Unit 2: 2020-10-31 19:54 to 2020-11-02 12:06  Unit 3: Off load  Unit 4: 2020-10-31 19:54 to 2020-11-01 17:20  Unit 5: 2020-10-31 19:54 to 2020-11-01 17:20  Unit 6: Not affected</p> <p>Gasses:</p> <p>Unit 1: Not affected  Unit 2: Not affected  Unit 3: Not affected  Unit 4: 2020-10-31 19:54 to 2020-11-02 10:18  Unit 5: 2020-10-31 19:54 to 2020-11-02 10:18  Unit 6: 2020-10-31 19:54 to 2020-11-02 10:18</p>	31-Oct
U4.	<p>Power trip over the weekend affected the monitors. Data was deleted for the following periods</p> <p>Particulates:</p> <p>Unit 1: 2020-10-31 19:54 to 2020-11-02 12:06  Unit 2: 2020-10-31 19:54 to 2020-11-02 12:06  Unit 3: Off load  Unit 4: 2020-10-31 19:54 to 2020-11-01 17:20  Unit 5: 2020-10-31 19:54 to 2020-11-01 17:20  Unit 6: Not affected</p> <p>Gasses:</p> <p>Unit 1: Not affected  Unit 2: Not affected  Unit 3: Not affected  Unit 4: 2020-10-31 19:54 to 2020-11-02 10:18  Unit 5: 2020-10-31 19:54 to 2020-11-02 10:18  Unit 6: 2020-10-31 19:54 to 2020-11-02 10:18</p>	31-Oct
U5.	<ul style="list-style-type: none"> <li>• SO3 plant work was completed, not dosing as yet.</li> </ul> <p>C&amp;I Maint to calibrate the Sulphur flow meter,  BPE also indicated that there are still outstanding defects on the ESPs</p>	01-Oct

U5.	LHO, RHI, performance dropped significantly LHO: F4 off, F2 Performing poorly, F3 Arcing and Sparking. LHI: F3 Arcing and sparking, F4 Excessive Sparking, F7 off (rebulding circuit), F6 IP limit. RHI: F4, F3, F7 arcing and Sparking; F2,F1 Undervoltage Trip RHO: F1,F2, F5 performing poorly.	18-Oct
U5.	LHO Precip Casing Outage	21-Oct
U5.	Power trip over the weekend affected the monitors. Data was deleted for the following periods Particulates: Unit 1: 2020-10-31 19:54 to 2020-11-02 12:06 Unit 2: 2020-10-31 19:54 to 2020-11-02 12:06 Unit 3: Off load Unit 4: 2020-10-31 19:54 to 2020-11-01 17:20 Unit 5: 2020-10-31 19:54 to 2020-11-01 17:20 Unit 6: Not affected  Gasses:  Unit 1: Not affected Unit 2: Not affected Unit 3: Not affected Unit 4: 2020-10-31 19:54 to 2020-11-02 10:18 Unit 5: 2020-10-31 19:54 to 2020-11-02 10:18 Unit 6: 2020-10-31 19:54 to 2020-11-02 10:18	31-Oct
U6.	Power trip over the weekend affected the monitors. Data was deleted for the following periods Particulates: Unit 1: 2020-10-31 19:54 to 2020-11-02 12:06 Unit 2: 2020-10-31 19:54 to 2020-11-02 12:06 Unit 3: Off load Unit 4: 2020-10-31 19:54 to 2020-11-01 17:20 Unit 5: 2020-10-31 19:54 to 2020-11-01 17:20 Unit 6: Not affected  Gasses:  Unit 1: Not affected Unit 2: Not affected Unit 3: Not affected Unit 4: 2020-10-31 19:54 to 2020-11-02 10:18 Unit 5: 2020-10-31 19:54 to 2020-11-02 10:18 Unit 6: 2020-10-31 19:54 to 2020-11-02 10:18	31-Oct
<b>NOX Exceedances</b>		
<b>SOX Exceedances</b>		