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Date  
24 April 2024

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**LRP01PLA000\_0394/20240409**

Dear Mr Mkhathshwa

**LETHABO POWER STATION EMISSION MONTHLY REPORT FOR MARCH 2024**

Please find attached Lethabo Power Station emission report for the month of March 2024

Also attached are the Ambient Air Quality Monitoring Report, Complaints Register and the Fugitive Dust Fallout Monitoring Report for March 2024

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

Yours sincerely

**Karabo Rakgolela**  
**GENERAL MANAGER**



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Eskom Holdings SOC Ltd Reg No 2002/015527/30



Report

Lethabo Power Station

Report name: **Lethabo Power Station  
March 2024  
Emission Report**

Reference number: **LRP01PLA000\_0394/20240409**  
Document Type: **Report**  
Area of Applicability: **Environment**  
Report Date: **April-2024**  
Classification: **Controlled Disclosure**

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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 Mar 2024
	Coal	Tons	2 000 000	753 818
	Fuel Oil	Tons	1 700	477.840

Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Indicative Production Rate Mar-2024
	Energy	GWh	2 834.640	1 501.745
	Ash	Tons	770 000	280 344.847
	RE Ash	kg/MWh	Not Specified	186.679

Note: Maximum energy rate is as per the maximum capacity stated in the AEL:  $[3\ 810\ MW] \times 24\ hrs \times days\ in\ Month / 1000$  to convert to GWh.

**2. ENERGY SOURCE CHARACTERISTICS**

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.656 (Standard)	0.660
Ash Content	%	37.37 (Standard)	37.190

Note: The "standard" is not necessary a limit, but merely a optimum indication, it will fluctuate as the coal quality changes. The Stipulated Range are the Station acceptance test values.

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

Associated Unit/Stack	PM	SO <sub>2</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. ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Mar-2024	Technology Type	SO <sub>3</sub> Utilization Mar-2024
Unit 1	Electrostatic Precipitator (ESP)	99.52%	SO <sub>3</sub>	99.3%
Unit 2	Electrostatic Precipitator (ESP)	99.61%	SO <sub>3</sub>	93.8%
Unit 3	Electrostatic Precipitator (ESP)	99.39%	SO <sub>3</sub>	84.9%
Unit 4	Electrostatic Precipitator (ESP)	99.56%	SO <sub>3</sub>	100.0%
Unit 5	Electrostatic Precipitator (ESP)	99.47%	SO <sub>3</sub>	100.0%
Unit 6	Electrostatic Precipitator (ESP)	Unit Off-line	SO <sub>3</sub>	Off-line

Note: ESP plant does not have bypass mode operation, hence plant 100% Utilised

### 5. MONITOR RELIABILITY (%)

Associated Unit/Stack	PM	SO <sub>2</sub>	NO
Unit 1	94.1	99.7	99.7
Unit 2	97.5	100.0	100.0
Unit 3	96.5	99.6	99.4
Unit 4	97.2	99.7	99.6
Unit 5	95.8	99.7	99.9
Unit 6	Off	Off	Off

Note: NO<sub>x</sub> emissions is measured as NO in PPM. Final NO<sub>x</sub> value is expressed as total NO<sub>2</sub>

6. EMISSION PERFORMANCE

Table 6 1 Monthly tonnages for the month of March 2024

Associated Unit/Stack	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>x</sub> (tons)
Unit 1	300 4	3 334	1 531
Unit 2	137 9	2 304	729
Unit 3	225 2	2 181	842
Unit 4	263 0	3 922	1 803
Unit 5	302 0	4171	1718
Unit 6	Off	Off	Off
SUM	1 228 5	15 911	6 622

Table 6 2 Operating days in compliance to PM AEL Limit - March 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average PM (mg/Nm <sup>3</sup> )
Unit 1	21	10	0	0	10	149 3
Unit 2	13	6	0	0	6	112 0
Unit 3	8	11	0	2	13	232 2
Unit 4	21	10	0	0	10	116 6
Unit 5	22	9	0	0	9	131 5
Unit 6	Off	Off	Off	Off	Off	Off
SUM	85	46	0	2	48	

Table 6 3 Operating days in compliance to SO<sub>2</sub> AEL Limit - March 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average SO <sub>2</sub> (mg/Nm <sup>3</sup> )
Unit 1	31	0	0	0	0	1 649 1
Unit 2	20	0	0	0	0	1 791 8
Unit 3	22	0	0	0	0	1 902 6
Unit 4	31	0	0	0	0	1 735 6
Unit 5	31	0	0	0	0	1 821 6
Unit 6	Off	Off	Off	Off	Off	Off
SUM	135	0	0	0	0	

Table 6.4: Operating days in compliance to NOx AEL Limit - March 2024

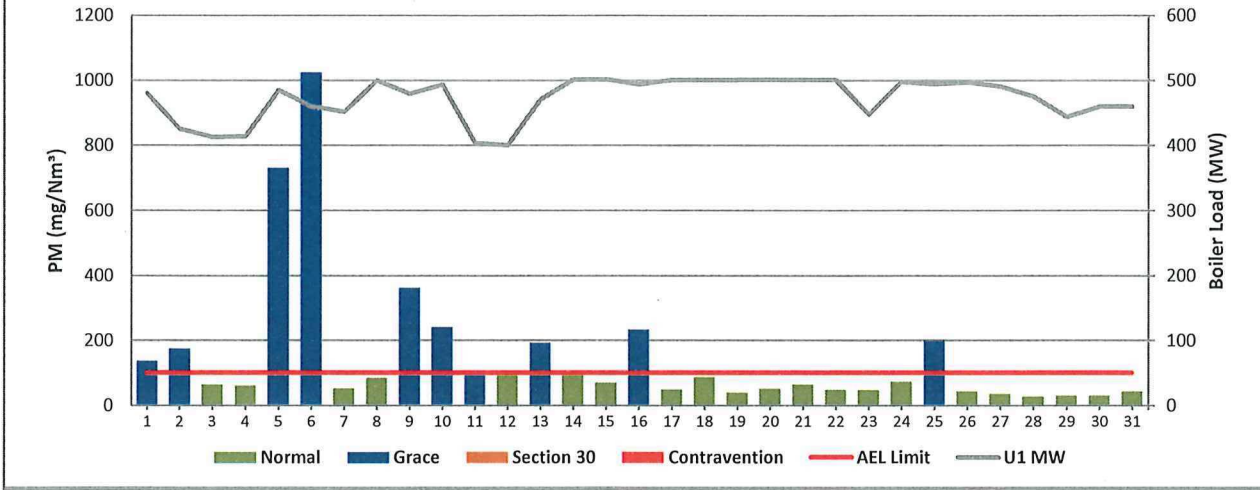
Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average NOx (mg/Nm³)
Unit 1	31	0	0	0	0	756.0
Unit 2	20	0	0	0	0	561.8
Unit 3	22	0	0	0	0	731.3
Unit 4	31	0	0	0	0	798.3
Unit 5	31	0	0	0	0	748.8
Unit 6	Off	Off	Off	Off	Off	Off
<b>SUM</b>	<b>135</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	

Note: NOx emissions is measured as NO in PPM. Final NOx value is expressed as total NO<sub>2</sub>

Table 6.5: Legend Description

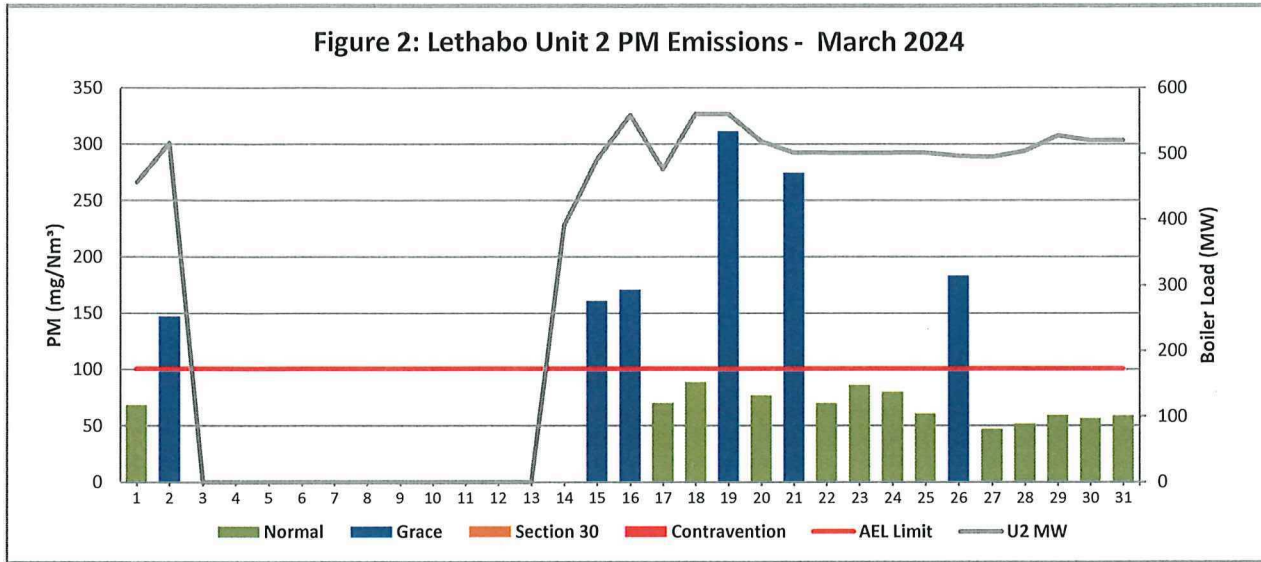
Condition	Colour	Description
Normal	GREEN	Emissions below Emission Limit Value (ELV)
Grace	BLUE	Emissions above the ELV during grace period
Section 30	ORANGE	Emissions above ELV during a NEMA S30 incident
Contra-vention	RED	Emissions above ELV but outside grace or S30 incident conditions

**Figure 1: Lethabo Unit 1 PM Emissions - March 2024**



Reasons:	
Date	Description:
01-Mar	RHI Casing Out
02-Mar	RHI Casing Outage and Poor ESP Performance
05-Mar	ESP Poor Performance and LHI Casing Outage
06-Mar	ESP Poor Performance and LHI Casing Outage
09-Mar	ESP Poor Performance and Attempted casing outages however, not successful due to not tight isolations
10-Mar	ESP Poor Performance
11-Mar	ESP Poor Performance Manual Rapping
13-Mar	ESP Poor Performance
16-Mar	LHO Casing Outage
25-Mar	ESP Poor Performance and Manual Rapping

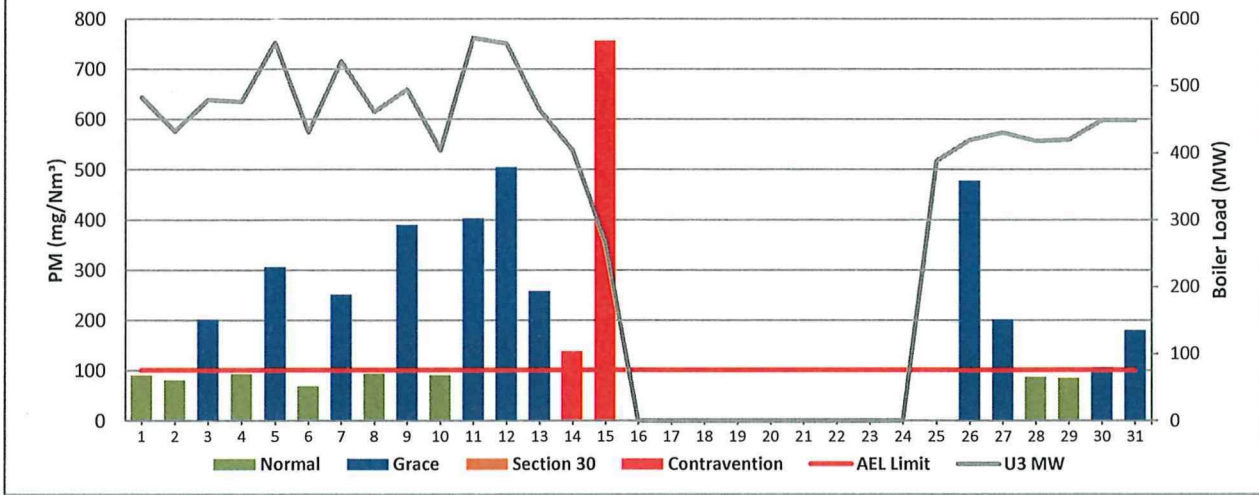
Figure 2: Lethabo Unit 2 PM Emissions - March 2024



Reasons:	
Date	Description:
02-Mar	Unit Shut Down For Boiler Tube Leak
14-Mar	The unit synchronised on 2024/03/14 @ 06:29, therefore the emissions needs to be below the limit by 2024/03/17
15-Mar	Unit Light Up
16-Mar	Unit Light Up
19-Mar	ESP Poor Performance and Manual Rapping
21-Mar	RHI Casing Outage
26-Mar	ESP Poor Performance and Manaual Rapping

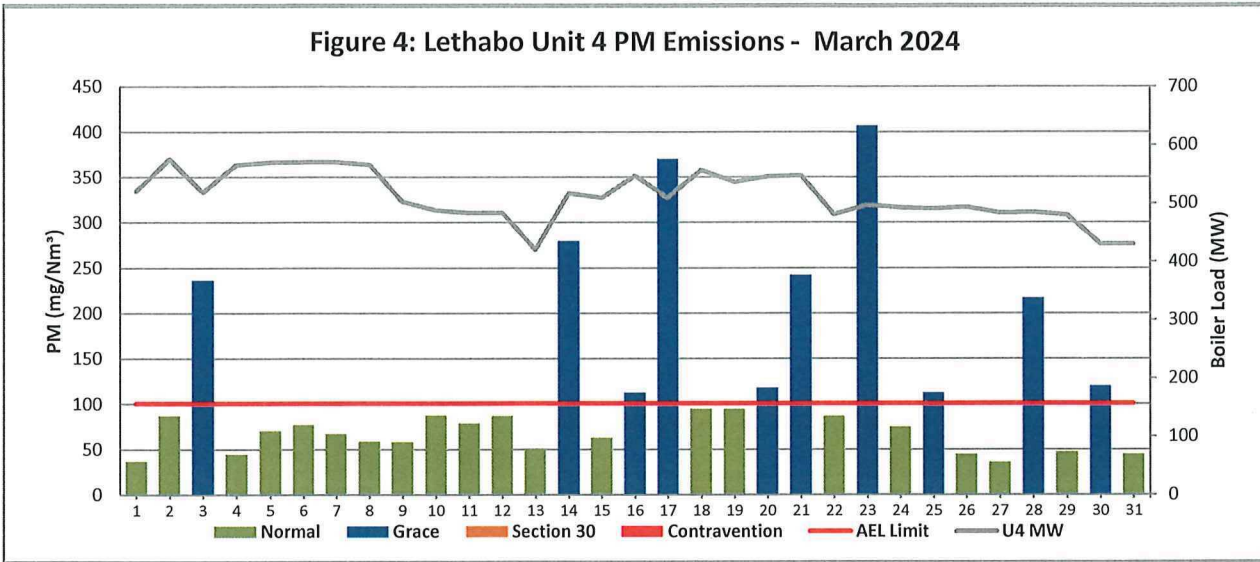


Figure 3: Lethabo Unit 3 PM Emissions - March 2024



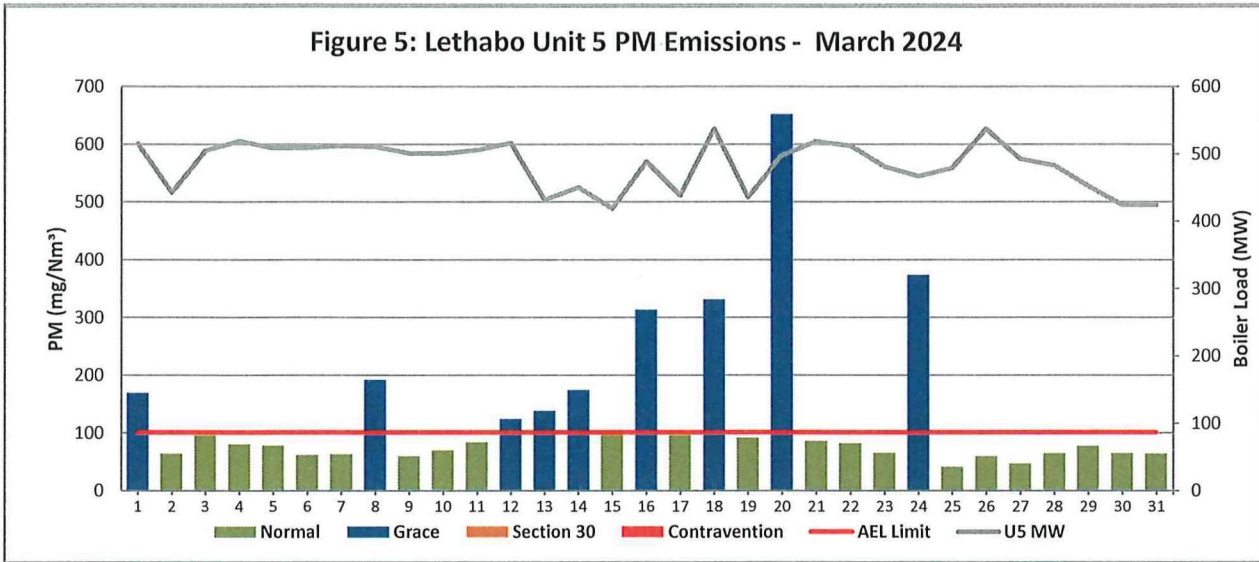
Reasons:	
Date	Description:
03-Mar	ESP Poor Performance and Manual Rapping
05-Mar	ESP Poor Performance SO3 Plant Challenges Manual Rapping
07-Mar	Correllation test at high load ESP Poor Performance SO3 Plant Challenges
11-Mar	ESP Poor Performance SO3 Plant Challenges
12-Mar	ESP Poor Performance Manual Rapping SO3 Plant Challenges
13-Mar	ESP Poor Performance Manual Rapping SO3 Plant Challenge
14-Mar	ESP Poor Performance SO3 plant severe leak, plant shut down for repairs Legal Contravention Incurred
15-Mar	Unit Shut Down for SO3 Plant Repairs
25-Mar	The unit synchronised on 2024/03/25 @ 01:36, therefore the emissions need to be below the limit by 2024/03/28 @ 01:36 and remain below the limit until at least 2024/03/29 @ 23:59
26-Mar	Unit Light Up
27-Mar	Unit Light Up
30-Mar	Unit 3 experienced high hopper levels.
31-Mar	Manual rapping carried out.

Figure 4: Lethabo Unit 4 PM Emissions - March 2024



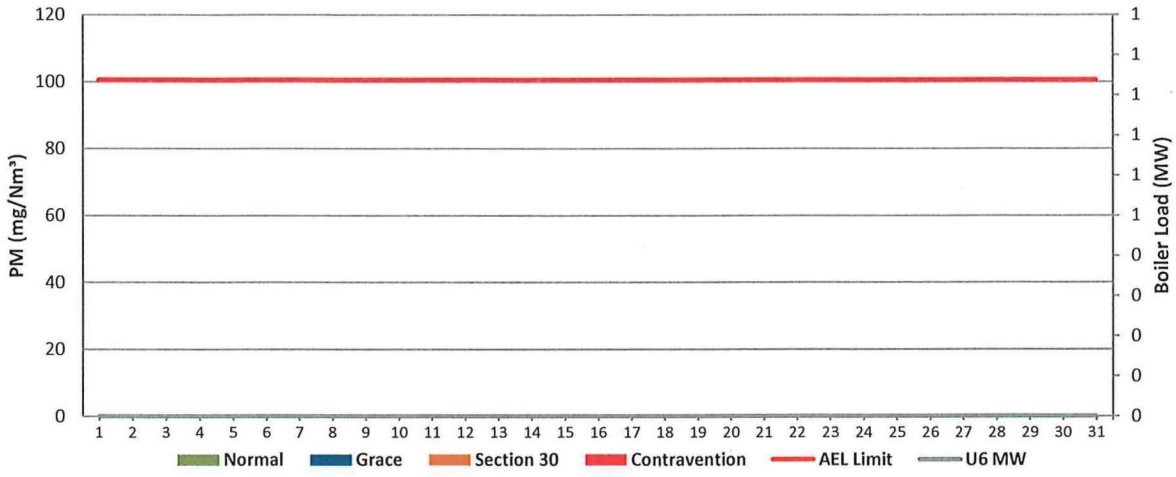
Reasons:	
Date	Description:
03-Mar	ESP Poor Performance and Manual Rapping
14-Mar	ESP Poor Performance and Manual Rapping
16-Mar	ESP Poor Performance
17-Mar	RHI Casing Outage
20-Mar	ESP Poor Performance
21-Mar	ESP Poor Performance
25-Mar	ESP Poor Performance High Hopper Levels Correlation Tests
28-Mar	ESP Poor Performance and Manual Rapping
30-Mar	LHO casing outage

Figure 5: Lethabo Unit 5 PM Emissions - March 2024



Reasons:	
Date	Description:
01-Mar	ESP Poor Performance and Unit Light Up
08-Mar	ESP Poor Performance and Manual Rapping
12-Mar	ESP Poor Performance
13-Mar	ESP Poor Performance Manual rapping was done partially as the operator forgot to start manual rapping on time.
14-Mar	ESP Poor Performance and Manual Rapping
16-Mar	ESP Poor Performance and Manual Rapping
18-Mar	ESP Poor Performance and Manual Rapping
20-Mar	LHI Casing Outage
24-Mar	RHO Casing Outage

Figure 6: Lethabo Unit 6 PM Emissions - March 2024



Reasons:	
Date	Description:

Figure 7: Lethabo Unit 1 SO<sub>2</sub> Emissions - March 2024

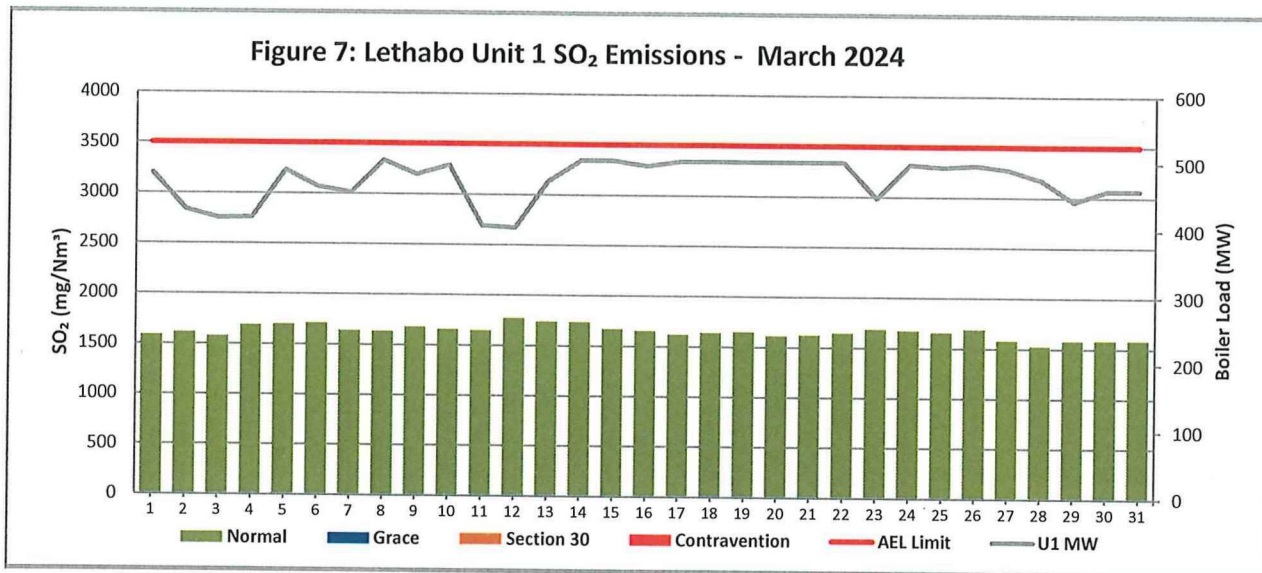


Figure 8: Lethabo Unit 2 SO<sub>2</sub> Emissions - March 2024

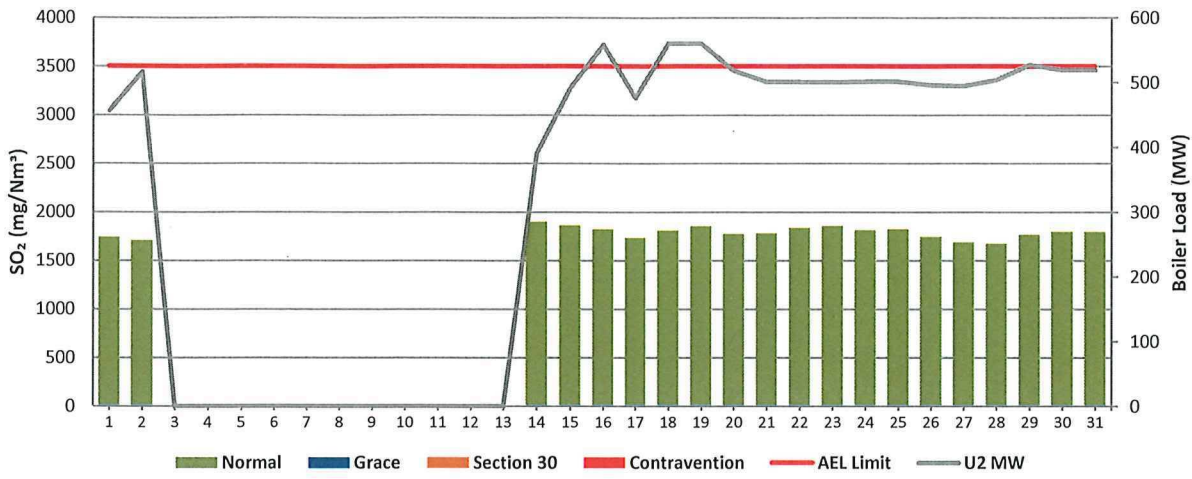


Figure 9: Lethabo Unit 3 SO<sub>2</sub> Emissions - March 2024

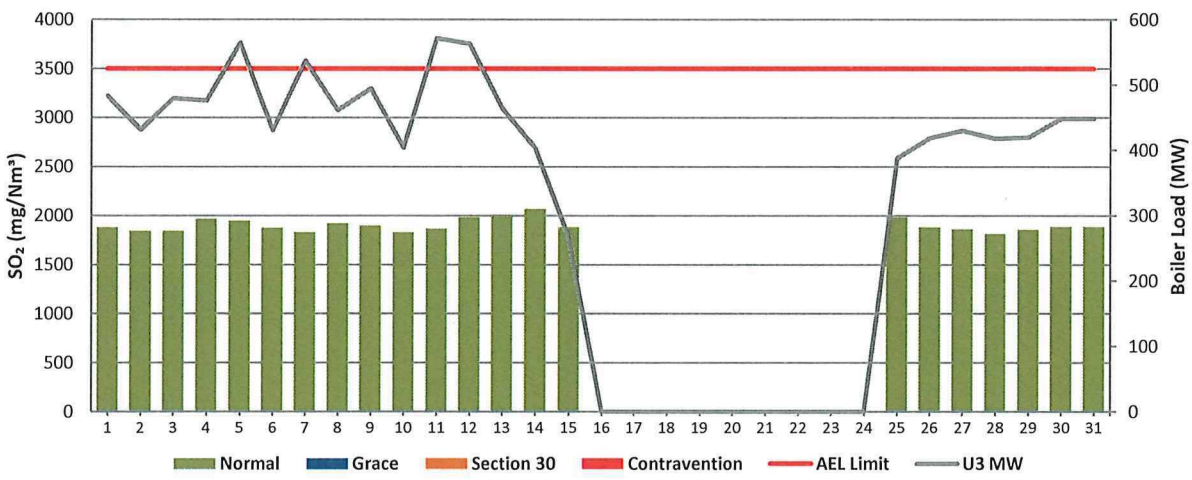


Figure 10: Lethabo Unit 4 SO<sub>2</sub> Emissions - March 2024

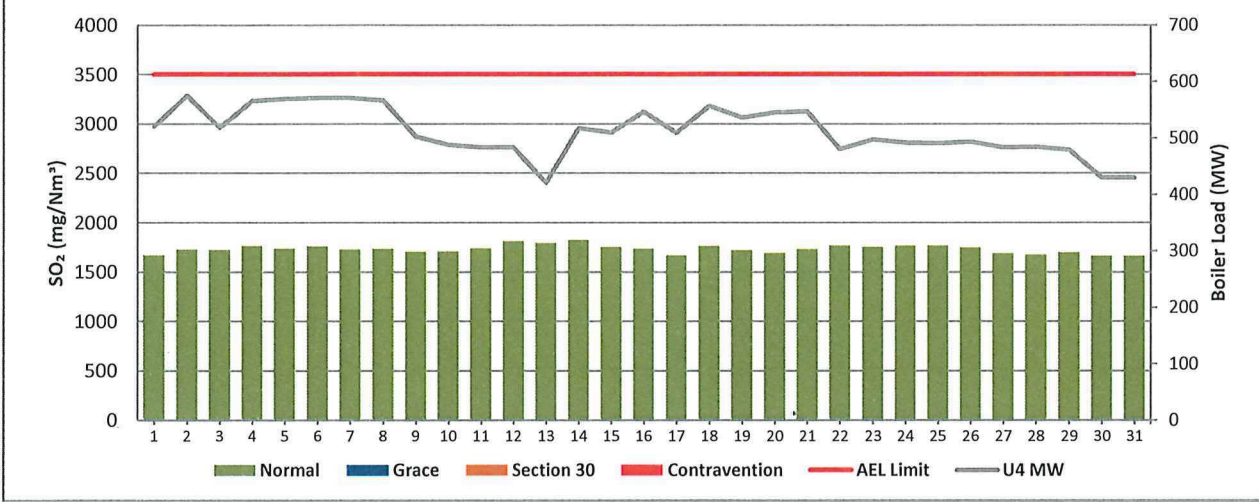


Figure 11: Lethabo Unit 5 SO<sub>2</sub> Emissions - March 2024

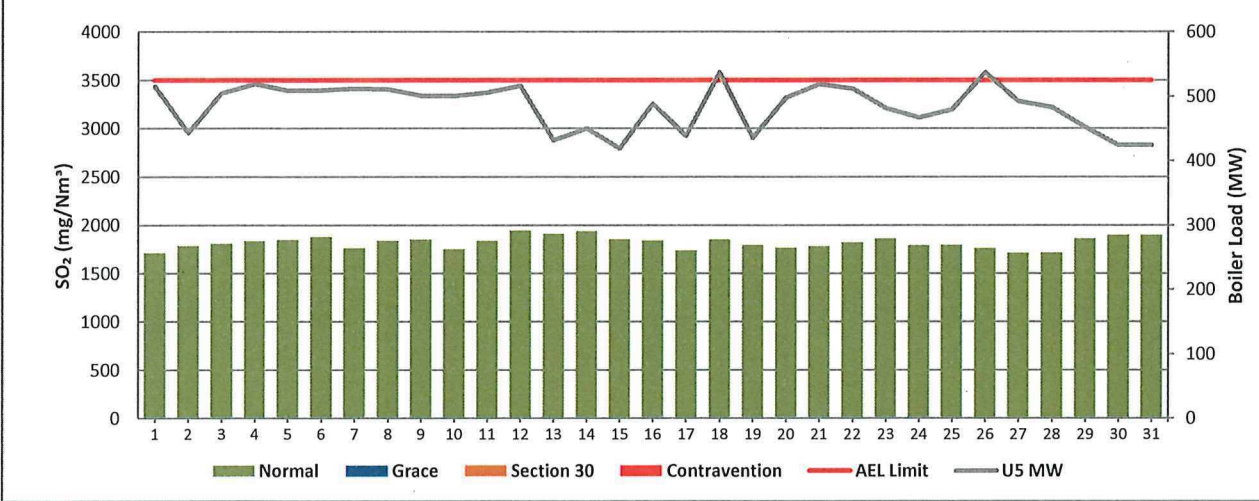


Figure 12: Lethabo Unit 6 SO<sub>2</sub> Emissions - March 2024

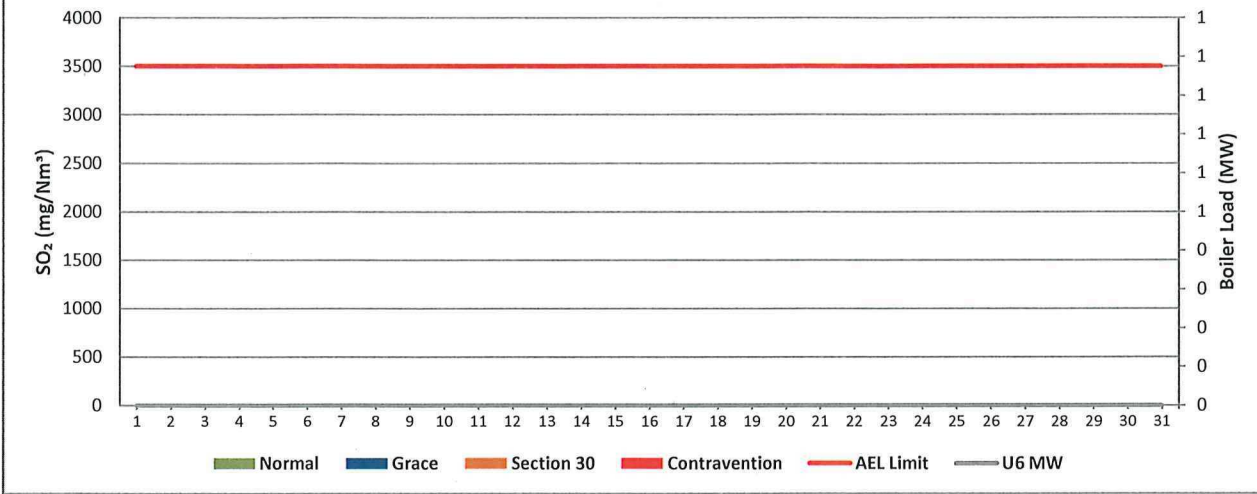


Figure 13: Lethabo Unit 1 NO<sub>x</sub> Emissions - March 2024

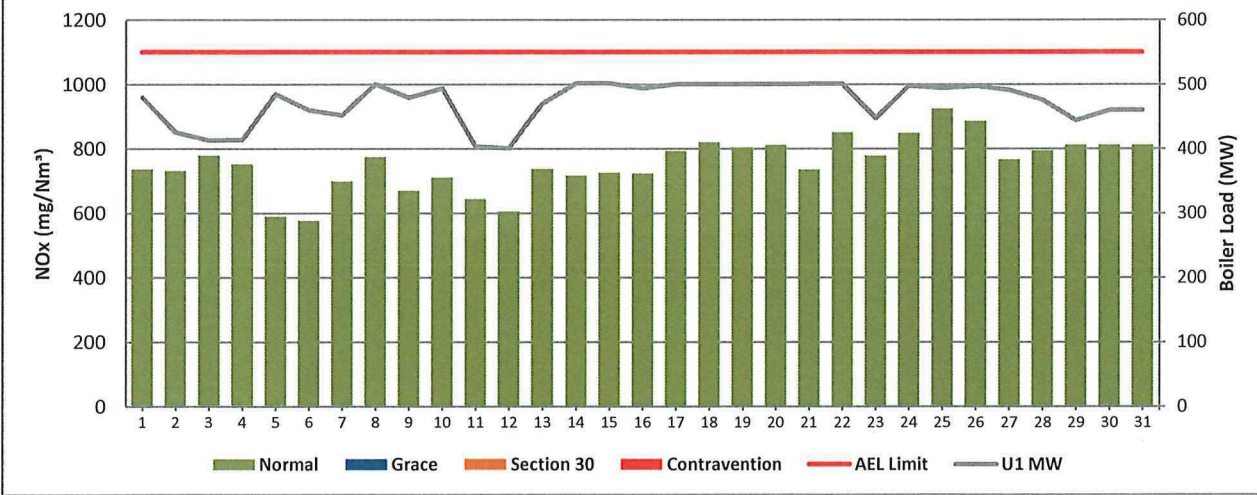




Figure 14: Lethabo Unit 2 NOx Emissions - March 2024

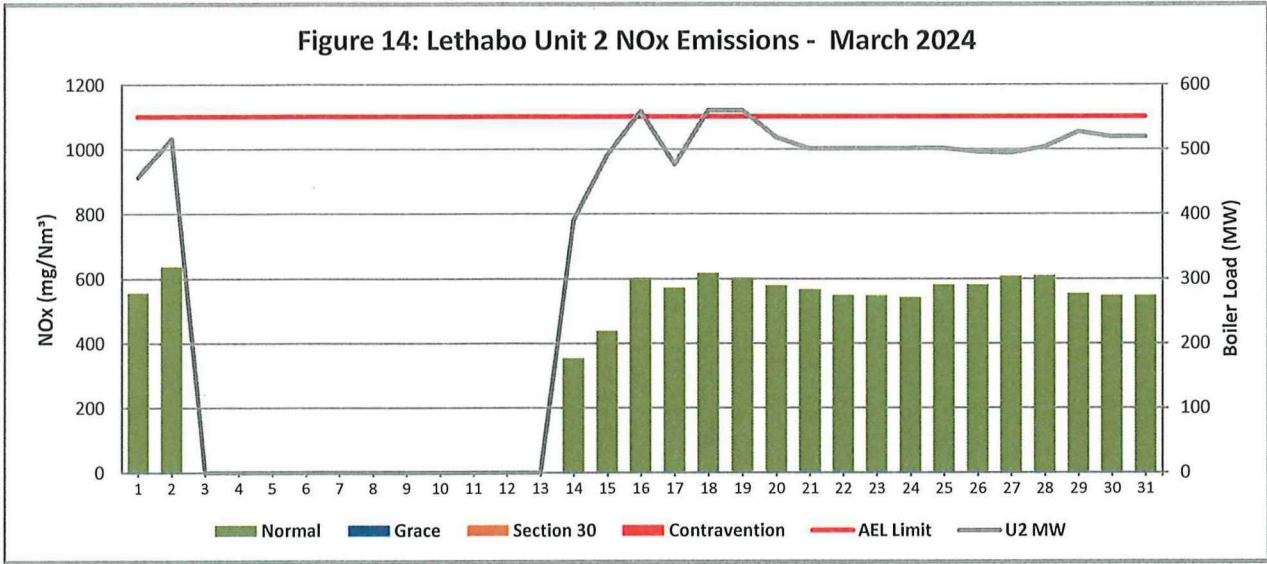


Figure 15: Lethabo Unit 3 NOx Emissions - March 2024

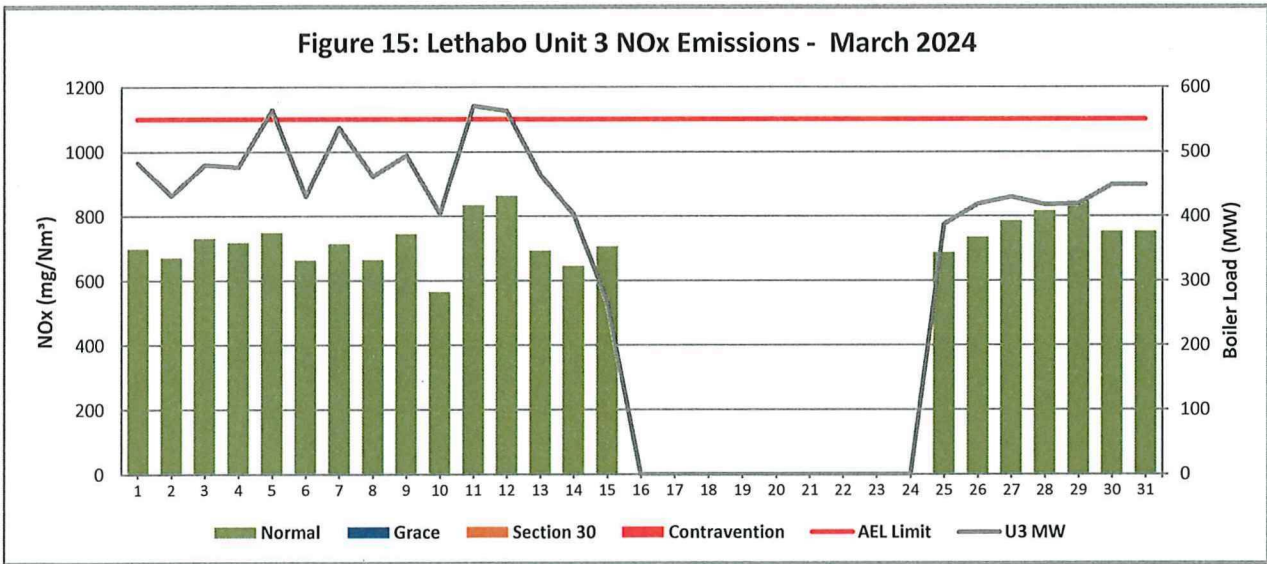


Figure 16: Lethabo Unit 4 NOx Emissions - March 2024

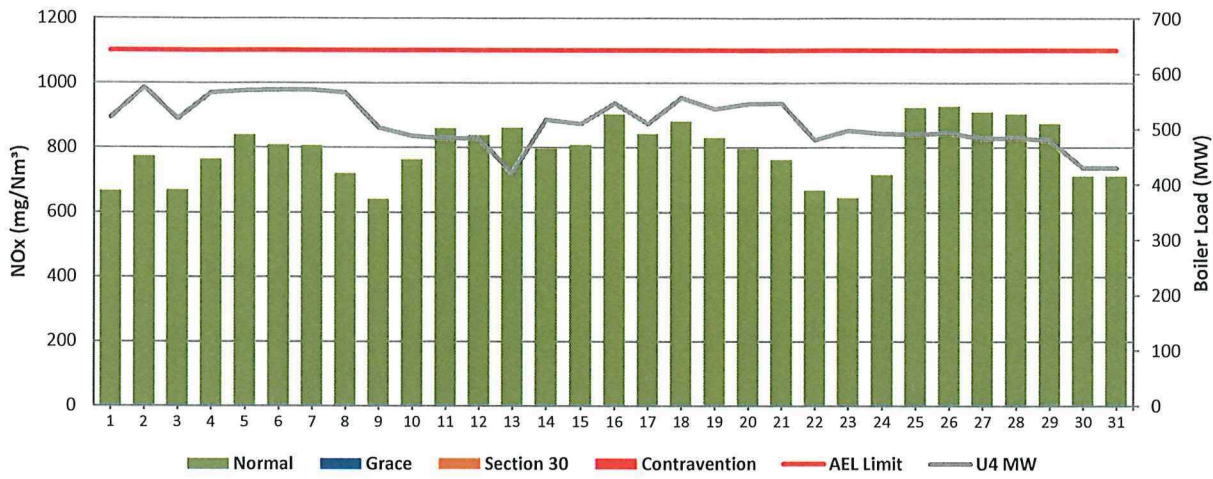


Figure 17: Lethabo Unit 5 NOx Emissions - March 2024

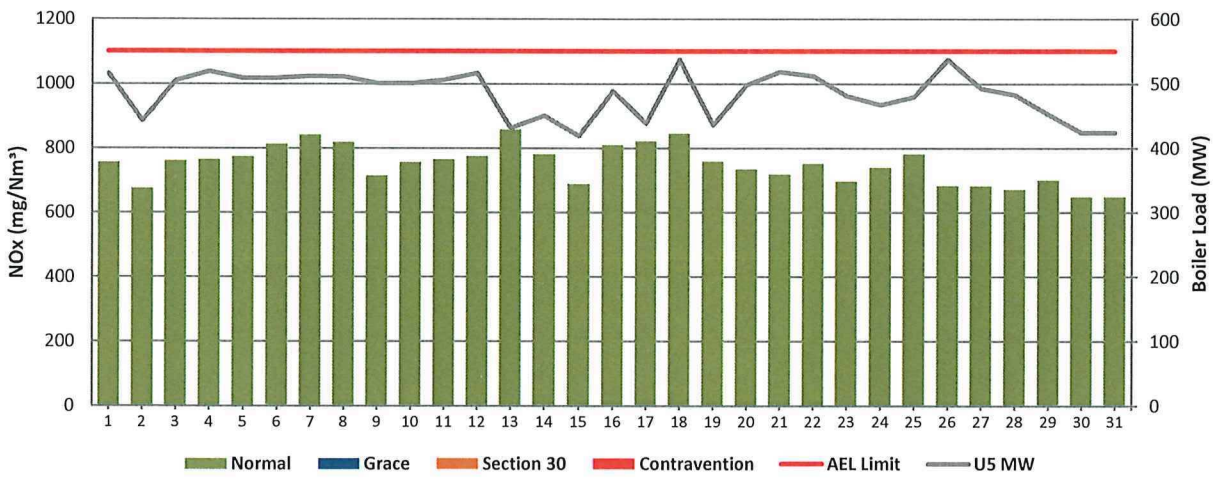
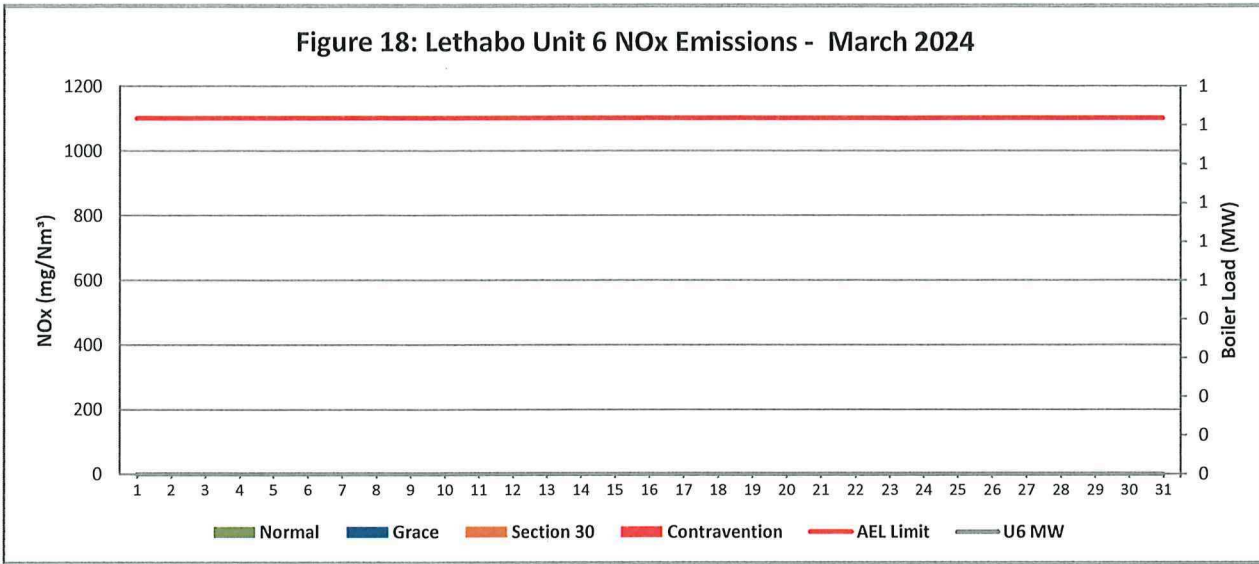


Figure 18: Lethabo Unit 6 NOx Emissions - March 2024



7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7 1 PM Start-up information for the month of March 2024

Unit No.1	LP 2 front bearing temp high						
Breaker Open (BO)	12 09 pm	2024/03/23					
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD					
BO to DG SD (duration)	n/a	DD HH MM		DD HH MM		DD HH MM	DD HH MM
Fires in time							
Synch. to Grid (or BC)							
Fires in to BC (duration)		DD HH MM		DD HH MM		DD HH MM	DD HH MM
Emissions below limit from BC (end date)							
Emissions below limit from BC (duration)		DD HH MM		DD HH MM		DD HH MM	DD HH MM

Unit No 2	Boiler tube leak repairs		0 00 00		0		
Breaker Open (BO)	9 17 pm	2024/03/02					
Draught Group (DG) Shut Down (SD)	7 30 pm	2024/03/13					
BO to DG SD (duration)	10 22 13	DD HH MM		DD HH MM		DD HH MM	DD HH MM
Fires in time	2 50 am	2024/03/14					
Synch to Grid (or BC)	6 29 am	2024/03/14					
Fires in to BC (duration)	00 03 39	DD HH MM		DD HH MM		DD HH MM	DD HH MM
Emissions below limit from BC (end date)	12 00 pm	2024/03/18					
Emissions below limit from BC (duration)	04 05 31	DD HH MM		DD HH MM		DD HH MM	DD HH MM

Unit No.3	Main turbine over speed test		S03 Plant leak repairs		FRF leak repairs			
Breaker Open (BO)	2 43 am	2024/03/09	1 09 am	2024/03/15	10 37 am	2024/03/27		
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD	8 34 am	2024/03/16	DG did not trip or SD	DG did not trip or SD		
BO to DG SD (duration)	n/a	DD HH MM	01 07 25	DD HH MM	n/a	DD HH MM		DD HH MM
Fires in time			1 00 am	2024/03/25	1 13 pm	2024/03/27		
Synch. to Grid (or BC)			1 36 am	2024/03/25	2 47 pm	2024/03/27		
Fires in to BC (duration)		DD HH MM	00 00 36	DD HH MM	00 01 34	DD HH MM		DD HH MM
Emissions below limit from BC (end date)			12 00 am	2024/03/29	12 00 am	2024/03/29		
Emissions below limit from BC (duration)		DD HH MM	03 22 24	DD HH MM	01 09 13	DD HH MM		DD HH MM

Unit No.4	0		0		0			
Breaker Open (BO)								
Draught Group (DG) Shut Down (SD)								
BO to DG SD (duration)		DD HH MM		DD HH MM		DD HH MM		DD HH MM
Fires in time								
Synch. to Grid (or BC)								
Fires in to BC (duration)		DD HH MM		DD HH MM		DD HH MM		DD HH MM
Emissions below limit from BC (end date)								
Emissions below limit from BC (duration)		DD HH MM		DD HH MM		DD HH MM		DD HH MM

Unit No 5	0	0	0				
Breaker Open (BO)							
Draught Group (DG) Shut Down (SD)							
BO to DG SD (duration)		DD HH MM		DD HH MM		DD HH MM	
Fires in time							
Synch. to Grid (or BC)							
Fires in to BC (duration)		DD HH MM		DD HH MM		DD HH MM	
Emissions below limit from BC (end date)							
Emissions below limit from BC (duration)		DD HH MM		DD HH MM		DD HH MM	

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

7.2 Point Source emissions released during start-up (fires-in) and Shut-down (SD) for the month of March 2024 in mg/Nm<sup>3</sup>

8. MAINTENANCE

<b>Unit 1</b>				
<b>Beginning of</b>				
<b>Reason for Maintenance</b>				
<b>End (Time):</b>				
<b>Duration</b>				

<b>Unit 2</b>				
<b>Beginning of</b>	2024/03/21 00 00 00			
<b>Reason for Maintenance</b>	RHI casing repairs			
<b>End (Time):</b>	2024/03/22 00 00 00			
<b>Duration</b>	24 00 00			

<b>Unit 3</b>				
<b>Beginning of</b>				
<b>Reason for Maintenance</b>				
<b>End (Time):</b>				
<b>Duration</b>	0 00 00	0 00 00	0 00 00	

<b>Unit 4</b>				
<b>Beginning of</b>	2024/03/17 00 13	2024/03/23 00 01	2024/03/23 01 02	2024/03/30 00 00
<b>Reason for Maintenance</b>	RHI precip casing repair	LHI precip Casing repairs	LHI precip Casing repairs	Outer precip casing repa
<b>End (Time):</b>	2024/03/18 00 13	2024/03/23 01 02	2024/03/24 00 35	2024/03/31 00 57
<b>Duration</b>	24 00 00	1 01 00	23 33 00	24 57 00

<b>Unit 5</b>				
<b>Beginning of</b>	2024/03/20 00 11	2024/03/20 01 49		
<b>Reason for Maintenance</b>	LH Inner precip casing	LH Inner precip casing		
<b>End (Time):</b>	2024/03/20 01 49	2024/03/21 00 10		
<b>Duration</b>	1 38 00	22 21 00	0 00 00	0 00 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 Monitor Reliability**

05/03/2024 & 06/03/2024 PM Monitor Reliability low due Monitors maxing out

21/03/2024 PM monitor reliability low due to monitor failure in the morning and re-established in the afternoon

### **Unit 2 Monitor Reliability**

21/03/2024 PM Monitor Reliability low due to monitors reading maxing out

### **Unit 4 Monitor Reliability**

14/03/2024 PM Monitor Reliability low due to monitors reading maxing out

### **Unit 5 Monitor Reliability**

20/03/2024 PM monitor reliability low due to monitors reading maxing out

### **Unit 3 Legal Contravention**

11/03/2024 - 15/03/2024 unit 3 registered a non-compliance as the unit exceeded for greater than 72 hours due to SO3 plant defects experienced in the combustion chamber as a result of steam leaking on the sulphur injection supply nozzle, quenching the burner temperatures

### **CO2 and Velocity Monitors Low Reliability Units 1-6**

Due to correction of bad data as per internal emission data integrity review actions in 2021 and 2022 Bad Velocity data and Bad CO2 data were corrected/removed as per the review actions and findings



**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
3	2024/03/11	2024/03/15	SO3 Plant leak	Leak repairs					Legal Contravention reported and under investigation

**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
Apr-23	OFF	0.29	0.61	0.35	0.70	OFF	0.51
May-23	OFF	0.48	0.46	0.32	0.64	0.41	0.47
Jun-23	0.13	0.64	0.47	0.30	0.46	0.30	0.36
Jul-23	0.21	0.27	0.42	0.27	0.25	0.32	0.30
Aug-23	0.21	0.60	0.63	0.42	0.42	0.50	0.46
Sep-23	0.26	0.28	0.46	0.41	0.33	0.51	0.37
Oct-23	0.26	0.48	0.63	0.43	0.39	0.42	0.43
Nov-23	0.83	1.31	0.94	0.67	0.59	0.75	0.87
Dec-23	0.53	0.87	0.88	1.25	0.93	0.71	0.85
Jan-24	0.53	0.98	0.85	0.87	0.75	0.78	0.79
Feb-24	0.55	0.81	0.89	0.63	0.48	OFF	0.68
Mar-24	0.86	0.58	0.97	0.69	0.84	OFF	0.79

ADDENDUM TO MONTHLY EMISSIONS REPORT

12. DAILY EMISSIONS FIGURES

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

Date	U1	U2	U3	U4	U5	U6	Limit
01-Mar	139	69	91	37	170	OFF	100
02-Mar	177	147	81	88	64	OFF	100
03-Mar	65	OFF	202	237	96	OFF	100
04-Mar	62	OFF	94	45	81	OFF	100
05-Mar	732	OFF	307	71	79	OFF	100
06-Mar	1026	OFF	69	77	62	OFF	100
07-Mar	53	OFF	251	67	64	OFF	100
08-Mar	86	OFF	94	59	193	OFF	100
09-Mar	363	OFF	391	58	60	OFF	100
10-Mar	242	OFF	91	88	70	OFF	100
11-Mar	109	OFF	403	79	84	OFF	100
12-Mar	95	OFF	506	87	125	OFF	100
13-Mar	194	OFF	259	50	139	OFF	100
14-Mar	96	OFF	139	280	175	OFF	100
15-Mar	71	161	757	63	98	OFF	100
16-Mar	235	171	OFF	113	314	OFF	100
17-Mar	50	70	OFF	370	96	OFF	100
18-Mar	88	89	OFF	95	332	OFF	100
19-Mar	40	312	OFF	95	92	OFF	100
20-Mar	52	77	OFF	118	653	OFF	100
21-Mar	65	275	OFF	242	86	OFF	100
22-Mar	50	70	OFF	87	82	OFF	100
23-Mar	48	86	OFF	407	66	OFF	100
24-Mar	74	80	OFF	75	374	OFF	100
25-Mar	199	61	OFF	113	42	OFF	100
26-Mar	44	184	478	45	60	OFF	100
27-Mar	36	47	202	36	47	OFF	100
28-Mar	29	52	87	217	65	OFF	100
29-Mar	32	60	85	47	78	OFF	100
30-Mar	31	57	106	120	65	OFF	100
31-Mar	44	59	181	45	64	OFF	100

ADDENDUM TO MONTHLY EMISSIONS REPORT

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

Date	U1	U2	U3	U4	U5	U6	Limit
01-Mar	1587	1742	1879	1672	1713	OFF	3500
02-Mar	1616	1710	1846	1732	1787	OFF	3500
03-Mar	1580	OFF	1844	1728	1809	OFF	3500
04-Mar	1689	OFF	1970	1766	1834	OFF	3500
05-Mar	1701	OFF	1950	1738	1847	OFF	3500
06-Mar	1711	OFF	1877	1763	1881	OFF	3500
07-Mar	1638	OFF	1830	1730	1761	OFF	3500
08-Mar	1637	OFF	1922	1736	1838	OFF	3500
09-Mar	1679	OFF	1900	1708	1852	OFF	3500
10-Mar	1657	OFF	1830	1710	1752	OFF	3500
11-Mar	1648	OFF	1868	1744	1841	OFF	3500
12-Mar	1774	OFF	1985	1816	1946	OFF	3500
13-Mar	1741	OFF	2000	1796	1912	OFF	3500
14-Mar	1738	1905	2071	1828	1939	OFF	3500
15-Mar	1670	1867	1883	1757	1857	OFF	3500
16-Mar	1654	1826	OFF	1741	1843	OFF	3500
17-Mar	1621	1739	OFF	1672	1739	OFF	3500
18-Mar	1639	1816	OFF	1764	1850	OFF	3500
19-Mar	1651	1859	OFF	1725	1796	OFF	3500
20-Mar	1614	1778	OFF	1693	1765	OFF	3500
21-Mar	1624	1782	OFF	1733	1782	OFF	3500
22-Mar	1644	1842	OFF	1770	1820	OFF	3500
23-Mar	1687	1861	OFF	1757	1861	OFF	3500
24-Mar	1675	1817	OFF	1769	1792	OFF	3500
25-Mar	1658	1828	1988	1769	1795	OFF	3500
26-Mar	1687	1749	1882	1750	1762	OFF	3500
27-Mar	1583	1692	1866	1691	1713	OFF	3500
28-Mar	1527	1679	1817	1679	1717	OFF	3500
29-Mar	1583	1772	1859	1701	1860	OFF	3500
30-Mar	1585	1803	1889	1666	1898	OFF	3500
31-Mar	1623	1770	1902	1696	1905	OFF	3500

ADDENDUM TO MONTHLY EMISSIONS REPORT

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

Date	U1	U2	U3	U4	U5	U6	Limit
01-Mar	737	557	700	668	756	OFF	1100
02-Mar	733	639	672	774	675	OFF	1100
03-Mar	780	OFF	731	670	761	OFF	1100
04-Mar	753	OFF	720	765	766	OFF	1100
05-Mar	590	OFF	749	841	774	OFF	1100
06-Mar	577	OFF	663	809	814	OFF	1100
07-Mar	699	OFF	714	808	842	OFF	1100
08-Mar	775	OFF	665	721	819	OFF	1100
09-Mar	670	OFF	746	641	715	OFF	1100
10-Mar	711	OFF	566	764	757	OFF	1100
11-Mar	645	OFF	835	860	766	OFF	1100
12-Mar	606	OFF	865	839	776	OFF	1100
13-Mar	738	OFF	693	862	858	OFF	1100
14-Mar	718	355	646	797	781	OFF	1100
15-Mar	727	440	707	809	689	OFF	1100
16-Mar	724	599	OFF	904	811	OFF	1100
17-Mar	794	572	OFF	843	823	OFF	1100
18-Mar	820	619	OFF	882	846	OFF	1100
19-Mar	805	601	OFF	831	759	OFF	1100
20-Mar	813	579	OFF	798	736	OFF	1100
21-Mar	736	567	OFF	764	720	OFF	1100
22-Mar	851	550	OFF	669	752	OFF	1100
23-Mar	778	549	OFF	645	697	OFF	1100
24-Mar	850	542	OFF	717	740	OFF	1100
25-Mar	926	582	688	925	782	OFF	1100
26-Mar	886	581	735	928	684	OFF	1100
27-Mar	767	609	786	911	683	OFF	1100
28-Mar	795	611	818	905	672	OFF	1100
29-Mar	812	554	847	875	700	OFF	1100
30-Mar	813	549	754	713	649	OFF	1100
31-Mar	808	583	788	809	608	OFF	1100

**ADDENDUM TO MONTHLY EMISSIONS REPORT**

**13. AVAILABILITY**

**ESP utilisation**

Availability												
Month	Unit 1	Days Affected	Unit 2	Days Affected	Unit 3	Days Affected	Unit 4	Days Affected	Unit 5	Days Affected	Unit 6	Days Affected
Apr-23	OFF	OFF	100 00%	0 0	97 91%	2 5	100 00%	0 0	99 24%	0 9	OFF	OFF
May-23	OFF	OFF	98 56%	1 8	99 36%	0 8	100 00%	0 0	96 91%	3 8	100 00%	0 0
Jun-23	100 00%	0 0	100 00%	0 0	99 41%	0 7	98 31%	2 0	98 52%	1 8	100 00%	0 0
Jul-23	100 00%	0 0	100 00%	0 0	99 19%	1 0	100 00%	0 0	100 00%	0 0	99 22%	1 0
Aug-23	100 00%	0 0	100 00%	0 0	98 46%	1 9	100 00%	0 0	99 23%	1 0	99 12%	1 1
Sep-23	99 17%	1 0	100 00%	0 0	98 51%	1 8	100 00%	0 0	98 34%	2 0	99 17%	1 0
Oct-23	99 98%	0 0	96 81%	4 0	98 31%	2 1	100 00%	0 0	99 34%	0 8	99 30%	0 9
Nov-23	97 53%	2 96	97 57%	2 92	99 17%	1 00	100 00%	0 00	100 00%	0 00	99.71%	0 35
Dec-23	100 00%	0 0	97 95%	2 5	100 00%	0 0	98 62%	1 7	98 03%	2 4	97 91%	2 6
Jan-24	97 90%	2 6	98 73%	1 6	100 00%	0 0	100 00%	0 0	99 32%	0 8	100 00%	0 0
Feb-24	100 00%	0 0	99 34%	0 8	98 42%	1 8	99 89%	0 1	100 00%	0 0	Off-line	Off-line
Mar-24	100 00%	0 0	99 19%	1 0	100 00%	0 0	97 53%	3 1	99 19%	1 0	100 00%	0 00%

**SO<sub>3</sub> plant utilisation**

Availability												
Month	Unit 1	Days Affected	Unit 2	Days Affected	Unit 3	Days Affected	Unit 4	Days Affected	Unit 5	Days Affected	Unit 6	Days Affected
Apr-23	OFF	OFF	99 66%	0 1	100 00%	0 0	98 93%	0 3	94 58%	1 6	OFF	OFF
May-23	OFF	OFF	100 00%	0 0	99 89%	0 0	99 33%	0 2	100 00%	0 0	90 67%	2 9
Jun-23	85 96%	4 2	81 82%	5 5	96 56%	1 0	97 86%	0 6	86 81%	4 0	97 50%	0 8
Jul-23	97 98%	0 6	97 83%	0 7	100 00%	0 0	97 85%	0 7	99 67%	0 1	100 00%	0 0
Aug-23	99 33%	0 2	95 61%	1 4	100 00%	0 0	97 47%	0 8	100 00%	0 0	100 00%	0 0
Sep-23	100 00%	0 0	98 19%	0 5	98 75%	0 4	99 72%	0 1	99 58%	0 1	95 83%	1 3
Oct-23	99 73%	0 1	100 00%	0 0	96 91%	1 0	100 00%	0 0	100 00%	0 0	97 27%	0 8
Nov-23	95 14%	1 5	94 17%	1 8	83 89%	4 8	86 14%	4 2	89 17%	3 3	94 62%	1 6
Dec-23	92 47%	2 3	97 67%	0 7	81 25%	5 8	84 48%	4 8	93 82%	1 9	85 62%	4 5
Jan-24	95 73%	1 3	90 43%	3 0	69 76%	9 4	91 80%	2 5	89 78%	3 2	95 24%	1 5
Feb-24	99 92%	0 0	87 56%	3 6	98 85%	0 3	95 65%	1 3	88 10%	3 5	Off-line	Off-line
Mar-24	99 33%	0 21	93 76%	1 94	84 86%	4 69	100 00%	0 00	100 00%	0 00	Off-line	Off-line

**ADDENDUM TO MONTHLY EMISSIONS REPORT**

**Particulate Emission Monitors**

Availability						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Apr-23	OFF	99 43%	98 61%	99 57%	94 31%	OFF
May-23	OFF	97 07%	99 85%	99 46%	95 56%	99 50%
Jun-23	99 23%	95 11%	99 19%	98 33%	99 03%	99 86%
Jul-23	98 92%	100 00%	99 60%	99 73%	98 33%	99 87%
Aug-23	99 73%	92 28%	99 22%	98 85%	97 85%	98 79%
Sep-23	99 44%	98 61%	98 89%	99 03%	97 99%	97 98%
Oct-23	100 00%	96 51%	99 33%	99 73%	98 66%	99 69%
Nov-23	92 92%	86 39%	94 86%	98 60%	97 64%	96 16%
Dec-23	98 12%	92 68%	95 74%	90 32%	95 03%	97 85%
Jan-24	98 28%	85 65%	94 35%	90 76%	92 88%	97 82%
Feb-24	96 67%	93 82%	93 39%	96 10%	98 81%	OFF
Mar-24	94 09%	97 49%	96 46%	97 18%	95 83%	OFF

Gaseous Emission Monitors

Availability												
Month	Unit 1		Unit 2		Unit 3		Unit 4		Unit 5		Unit 6	
	SO <sub>x</sub>	NO <sub>x</sub>	SO <sub>x</sub>	NO <sub>x</sub>	SO <sub>x</sub>	NO <sub>x</sub>	SO <sub>x</sub>	NO <sub>x</sub>	SO <sub>x</sub>	NO <sub>x</sub>	SO <sub>x</sub>	NO <sub>x</sub>
Apr-23	OFF	OFF	100 00%	100 00%	99 86%	99 86%	99 95%	99 95%	100 00%	100 00%	OFF	OFF
May-23	OFF	OFF	100 00%	100 00%	100 00%	100 00%	99 60%	99 87%	99 73%	99 87%	99 52%	99 68%
Jun-23	99 70%	99 85%	99 58%	100 00%	99 71%	100 00%	100 00%	100 00%	100 00%	100 00%	99 86%	100 00%
Jul-23	98 39%	98 39%	98 08%	97 95%	98 12%	98 39%	98 39%	98 25%	97 92%	97 92%	98 25%	98 39%
Aug-23	100 00%	100 00%	99 83%	99 83%	100 00%	100 00%	99 86%	100 00%	100 00%	100 00%	100 00%	100 00%
Sep-23	100 00%	100 00%	100 00%	100 00%	100 00%	100 00%	100 00%	100 00%	100 00%	100 00%	99 85%	99 85%
Oct-23	99 46%	99 46%	99 33%	99 46%	99 19%	99 19%	99 46%	99 46%	99 33%	99 46%	99 40%	99 40%
Nov-23	100 00%	100 00%	99 72%	99 86%	99 86%	100 00%	100 00%	100 00%	100 00%	100 00%	100 00%	99 73%
Dec-23	100 00%	100 00%	100 00%	100 00%	100 00%	98 95%	100 00%	100 00%	100 00%	100 00%	100 00%	100 00%
Jan-24	100 00%	100 00%	100 00%	100 00%	100 00%	100 00%	100 00%	100 00%	99 87%	100 00%	100 00%	100 00%
Feb-24	98 08%	98 08%	99 78%	98 95%	98 28%	98 28%	97 83%	97 83%	97 73%	97 73%	OFF	OFF
Mar-24	99 73%	99 73%	100 00%	100 00%	99 62%	99 43%	99 73%	99 60%	99 73%	99 87%	OFF	OFF

Oxygen Monitor Availability						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Apr-23	OFF	99 83%	99 86%	99 83%	99 86%	OFF
May-23	OFF	100 00%	100 00%	100 00%	100 00%	99 84%
Jun-23	100 00%	99 55%	99 86%	99 68%	100 00%	100 00%
Jul-23	98 12%	97 76%	98 12%	98 25%	100 00%	97 72%
Aug-23	100 00%	99 83%	99 87%	99 72%	100 00%	99 60%
Sep-23	100 00%	100 00%	100 00%	100 00%	100 00%	100 00%
Oct-23	99 33%	99 06%	99 19%	99 33%	100 00%	99 40%
Nov-23	99 86%	99 72%	99 86%	100 00%	100 00%	99 58%
Dec-23	100 00%	99 83%	99 81%	99 72%	100 00%	99 46%
Jan-24	99 87%	99 86%	100 00%	100 00%	100 00%	98 10%
Feb-24	97 92%	99 78%	97 84%	97 67%	97 54%	OFF
Mar-24	99 73%	100 00%	99 24%	99 87%	99 87%	OFF

ADDENDUM TO MONTHLY EMISSIONS REPORT

14. EFFICIENCY

ESP Efficiency (%)						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Apr-23	OFF	99 893%	99 731%	99 854%	99 712%	OFF
May-23	OFF	99 812%	99 803%	99 868%	99 731%	99 822%
Jun-23	99 948%	99 718%	99 787%	99 864%	99 796%	99 858%
Jul-23	99 904%	99 864%	99 793%	99 869%	99 880%	99 837%
Aug-23	99 912%	99 715%	99 715%	99 816%	99 818%	99 770%
Sep-23	99 895%	99 867%	99 793%	99 825%	99 860%	99 766%
Oct-23	99 908%	99 804%	99 749%	99 830%	99 849%	99 829%
Nov-23	99 715%	99 499%	99 652%	99 764%	99 775%	99 705%
Dec-23	99 776%	99 585%	99 592%	99 414%	99 576%	99 667%
Jan-24	99 833%	99 641%	99 694%	99 692%	99 737%	99 721%
Feb-24	99 834%	99 719%	99 697%	99 788%	99 835%	Unit Off-line
Mar-24	99 519%	99 614%	99 393%	99 559%	99 474%	Unit Off-line

15 REMARKS

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
1	68	ID fan not coping	2024/03/01 00 00 00	2024/03/01 00 00 00
1	50	EF Poor vacuum	2024/03/01 00 00 00	2024/03/01 00 00 00
1	20	F mill PF leak	2024/03/01 00 00 00	2024/03/01 00 00 00
1	78	EF High stack emissions	2024/03/02 00 54 00	2024/03/02 00 54 00
1	99	High stack emissions	2024/03/02 23 57 00	2024/03/02 23 57 00
1	50	High stack emissions	2024/03/03 17 53 00	2024/03/03 17 53 00
1	100	AM A Bucket elevator repairs	2024/03/04 04 03 00	2024/03/04 04 03 00
1	100	EF High stack emissions	2024/03/05 02 25 00	2024/03/05 02 25 00
1	108	EF ID fans not coping	2024/03/05 04 48 00	2024/03/05 04 48 00
1	68	AM ID Fans not coping	2024/03/05 07 10 00	2024/03/05 07 10 00
1	40	Furnace pressure high	2024/03/06 00 21 00	2024/03/06 00 21 00
1	60	High stack emissions	2024/03/06 23 54 00	2024/03/06 23 54 00
1	50	AM High stack emissions	2024/03/07 06 52 00	2024/03/07 06 52 00
1	40	Spinning Reserve	2024/03/09 02 39 00	2024/03/09 02 39 00
1	20	Furnace pressure high	2024/03/09 06 24 00	2024/03/09 06 24 00
1	80	Spinning Reserve	2024/03/10 01 35 00	2024/03/10 01 35 00
1	98	High stack emissions	2024/03/11 00 36 00	2024/03/11 00 36 00
1	78	Poor condensor vacuum	2024/03/13 08 12 00	2024/03/13 08 12 00
1	40	EF High stack emissions	2024/03/13 10 44 00	2024/03/13 10 44 00
1	30	Correlation tests	2024/03/13 12 28 00	2024/03/13 12 28 00
1	38	high furnace pressure	2024/03/13 16 31 00	2024/03/13 16 31 00
1	42	ID fans not coping	2024/03/16 01 10 00	2024/03/16 01 10 00
1	593	LP 2 front bearing temp high	2024/03/23 12 09 00	2024/03/23 12 09 00
1	297	System Generated Ramp Event for Event id 1914664	2024/03/23 15 05 00	2024/03/23 15 05 00
1	78	Poor vacuum	2024/03/23 16 35 00	2024/03/23 16 35 00
1	58	furnace pressure high	2024/03/23 16 35 00	2024/03/23 16 35 00
1	40	furnace pressure high	2024/03/23 16 38 00	2024/03/23 16 38 00
1	49	Spinning Reserve	2024/03/24 01 01 00	2024/03/24 01 01 00
1	49	Spinning Reserve	2024/03/25 00 39 00	2024/03/25 00 39 00
1	72	Spinning Reserve	2024/03/26 03 10 00	2024/03/26 03 10 00
1	87	Spinning Reserve	2024/03/27 01 05 00	2024/03/27 01 05 00
1	95	Spinning Reserve	2024/03/28 00 16 00	2024/03/28 00 16 00
1	91	Spinning Reserve	2024/03/28 19 28 00	2024/03/28 19 28 00
1	100	Spinning Reserve	2024/03/29 09 50 00	2024/03/29 09 50 00
1	100	Spinning Reserve	2024/03/30 12 27 00	2024/03/30 12 27 00
1	100	Spinning Reserve	2024/03/31 09 42 00	2024/03/31 09 42 00
2	20	PA Flows high	2024/03/01 00 00 00	2024/03/01 00 00 00
2	175	EF High stack emissions	2024/03/01 00 00 00	2024/03/01 00 00 00
2	143	EF High stack emissions	2024/03/01 09 09 00	2024/03/01 09 09 00
2	100	High stack emissions	2024/03/01 15 55 00	2024/03/01 15 55 00
2	96	EF High stack emissions	2024/03/02 08 38 00	2024/03/02 08 38 00
2	593	Boiler tube leak repairs	2024/03/02 21 17 00	2024/03/02 21 17 00
2	297	System Generated Ramp Event for Event id 1908105	2024/03/14 06 29 00	2024/03/14 06 29 00
2	216	Spray water v/v's defective	2024/03/14 09 29 00	2024/03/14 09 29 00
2	206	Spray water v/v's defective	2024/03/14 22 24 00	2024/03/14 22 24 00
2	57	Spray water Valve defective	2024/03/15 12 17 00	2024/03/15 12 17 00
2	155	High stack emissions	2024/03/16 23 52 00	2024/03/16 23 52 00
2	109	EF High stack emissions	2024/03/17 09 46 00	2024/03/17 09 46 00
2	60	EF High stack emissions	2024/03/17 11 05 00	2024/03/17 11 05 00
2	60	Correlation test	2024/03/20 00 31 00	2024/03/20 00 31 00

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
2	58	High stack emissions	2024/03/20 11 35 00	2024/03/20 11 35 00
2	60	Correlation test	2024/03/20 21 00 00	2024/03/20 21 00 00
2	60	RHI casing repairs	2024/03/21 00 00 00	2024/03/21 00 00 00
2	60	B Mill service	2024/03/22 00 00 00	2024/03/22 00 00 00
2	73	Spinning Reserve	2024/03/26 03 04 00	2024/03/26 03 04 00
2	73	Spinning Reserve	2024/03/27 00 45 00	2024/03/27 00 45 00
2	60	Spinning Reserve	2024/03/29 00 22 00	2024/03/29 00 22 00
2	60	Spinning Reserve	2024/03/29 08 39 00	2024/03/29 08 39 00
2	61	Spinning Reserve	2024/03/30 19 37 00	2024/03/30 19 37 00
2	61	Spinning Reserve	2024/03/31 02 22 00	2024/03/31 02 22 00
3	38	ID fans not coping due to internal fault	2024/03/01 00 00 00	2024/03/01 00 00 00
3	158	AM SSC de-watering slope repairs	2024/03/01 00 00 00	2024/03/01 00 00 00
3	80	EF High stack emissions	2024/03/01 05 40 00	2024/03/01 05 40 00
3	179	SSC Slope repairs	2024/03/02 00 00 00	2024/03/02 00 00 00
3	90	AM High stack emissions	2024/03/02 04 36 00	2024/03/02 04 36 00
3	130	AM High stack emissions	2024/03/02 11 41 00	2024/03/02 11 41 00
3	178	AM High stack emissions	2024/03/02 13 27 00	2024/03/02 13 27 00
3	178	Spinning Reserve	2024/03/03 01 30 00	2024/03/03 01 30 00
3	91	D&F Mills NDE jacking oil pump presure low	2024/03/03 04 28 00	2024/03/03 04 28 00
3	80	D&F Mills NDE jacking oil pump presure low	2024/03/03 11 47 00	2024/03/03 11 47 00
3	46	Spinning Reserve	2024/03/03 23 56 00	2024/03/03 23 56 00
3	100	Spinning Reserve	2024/03/04 00 07 00	2024/03/04 00 07 00
3	11	Spinning Reserve	2024/03/04 03 44 00	2024/03/04 03 44 00
3	70	D&F Mills NDE jacking oil pump presure low	2024/03/04 06 42 00	2024/03/04 06 42 00
3	57	High stack emissions	2024/03/04 15 29 00	2024/03/04 15 29 00
3	105	EF High stack emissions	2024/03/04 21 56 00	2024/03/04 21 56 00
3	80	AM F mill oil burners problem	2024/03/05 00 24 00	2024/03/05 00 24 00
3	179	High stack emissions	2024/03/06 00 40 00	2024/03/06 00 40 00
3	80	EF High stack emissions	2024/03/06 17 57 00	2024/03/06 17 57 00
3	78	AM Correlation test	2024/03/07 11 01 00	2024/03/07 11 01 00
3	177	High stack emissions	2024/03/08 01 28 00	2024/03/08 01 28 00
3	80	High stack emissions	2024/03/08 04 36 00	2024/03/08 04 36 00
3	130	Hghh stack emissions	2024/03/08 16 46 00	2024/03/08 16 46 00
3	178	Highh stack emissions	2024/03/08 17 46 00	2024/03/08 17 46 00
3	593	Main turbine over speed test	2024/03/09 02 43 00	2024/03/09 02 43 00
3	297	System Generated Ramp Event for Event id 1910353	2024/03/09 03 47 00	2024/03/09 03 47 00
3	38	ID fans not coping	2024/03/09 06 12 00	2024/03/09 06 12 00
3	78	EF High stack emissions	2024/03/10 00 55 00	2024/03/10 00 55 00
3	177	EF High stack emissions	2024/03/10 01 57 00	2024/03/10 01 57 00
3	202	EF High stack emissions	2024/03/10 14 18 00	2024/03/10 14 18 00
3	80	EF High stack emissions	2024/03/11 01 00 00	2024/03/11 01 00 00
3	80	Bunker levels low	2024/03/12 18 22 00	2024/03/12 18 22 00
3	30	Bunker levels low	2024/03/12 21 13 00	2024/03/12 21 13 00
3	78	Coal bunker levels low	2024/03/12 21 47 00	2024/03/12 21 47 00
3	79	High stack emissions	2024/03/12 23 18 00	2024/03/12 23 18 00
3	150	High stack emissions	2024/03/13 00 30 00	2024/03/13 00 30 00
3	178	High stack emissions	2024/03/13 01 35 00	2024/03/13 01 35 00
3	76	Manual rapping	2024/03/13 21 04 00	2024/03/13 21 04 00
3	180	High stack emissions	2024/03/14 00 38 00	2024/03/14 00 38 00
3	593	S03 Plant leak repairs	2024/03/15 01 09 00	2024/03/15 01 09 00
3	593	System Generated Slip Event linked to PCLF Event 1912206	2024/03/20 01 07 00	2024/03/20 01 07 00
3	297	System Generated Ramp Event for Event id 1912206	2024/03/25 01 36 00	2024/03/25 01 36 00
3	270	A,D&E mills not available	2024/03/25 04 36 00	2024/03/25 04 36 00
3	228	A,D,E mills not available	2024/03/25 06 27 00	2024/03/25 06 27 00
3	168	A-mill running with 1 feeder & D,E mills not available	2024/03/25 09 14 00	2024/03/25 09 14 00
3	168	AM High hoppers levels	2024/03/25 13 00 00	2024/03/25 13 00 00
3	218	AM Hi hopper levels	2024/03/25 14 52 00	2024/03/25 14 52 00
3	118	A+E mills not available	2024/03/26 18 13 00	2024/03/26 18 13 00
3	29	EF Boiler pressure	2024/03/26 18 13 00	2024/03/26 18 13 00



UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
3	68	Spinning Reserve	2024/03/26 23 12 00	2024/03/26 23 12 00
3	21	Spinning Reserve	2024/03/27 00 32 00	2024/03/27 00 32 00
3	118	AM D mill seal air fan faulty & E mill on PTW for 4000hr service	2024/03/27 00 55 00	2024/03/27 00 55 00
3	70	Spinning Reserve	2024/03/27 01 29 00	2024/03/27 01 29 00
3	30	EF Boiler pressure high	2024/03/27 03 31 00	2024/03/27 03 31 00
3	20	EF High Boiler pressure	2024/03/27 04 17 00	2024/03/27 04 17 00
3	81	EF High stack emissions	2024/03/27 08 24 00	2024/03/27 08 24 00
3	593	FRF leak repairs	2024/03/27 10 37 00	2024/03/27 10 37 00
3	297	System Generated Ramp Event for Event id 1915855	2024/03/27 14 47 00	2024/03/27 14 47 00
3	118	AM D+E mills not available	2024/03/27 16 17 00	2024/03/27 16 17 00
3	100	EF High stack emissions	2024/03/27 16 17 00	2024/03/27 16 17 00
3	52	EF High stack emissions	2024/03/27 17 05 00	2024/03/27 17 05 00
3	20	EF Boiler pressure low	2024/03/27 20 09 00	2024/03/27 20 09 00
3	79	EF High stack emissions	2024/03/28 00 16 00	2024/03/28 00 16 00
3	99	EF High stack emissions	2024/03/28 08 50 00	2024/03/28 08 50 00
3	30	AM C-mill feeder problems	2024/03/28 10 32 00	2024/03/28 10 32 00
3	70	Spinning Reserve	2024/03/28 12 40 00	2024/03/28 12 40 00
3	70	Spinning Reserve	2024/03/28 20 13 00	2024/03/28 20 13 00
3	70	Spinning Reserve	2024/03/29 08 39 00	2024/03/29 08 39 00
3	118	High stack emissions	2024/03/29 21 51 00	2024/03/29 21 51 00
3	70	Spinning Reserve	2024/03/30 01 50 00	2024/03/30 01 50 00
3	170	Spinning Reserve	2024/03/30 11 03 00	2024/03/30 11 03 00
3	218	High stack emissions	2024/03/30 17 36 00	2024/03/30 17 36 00
3	138	A&E Mills unavailable	2024/03/31 03 14 00	2024/03/31 03 14 00
3	38	ID fan not coping	2024/03/31 05 10 00	2024/03/31 05 10 00
3	100	Spinning Reserve	2024/03/31 10 50 00	2024/03/31 10 50 00
3	180	Spinning Reserve	2024/03/31 18 34 00	2024/03/31 18 34 00
3	80	Spinning Reserve	2024/03/31 22 35 00	2024/03/31 22 35 00
4	38	ID fans not coping	2024/03/01 00 00 00	2024/03/01 00 00 00
4	30	Mill load line test	2024/03/01 00 00 00	2024/03/01 00 00 00
4	180	Dust plant standing	2024/03/01 09 38 00	2024/03/01 09 38 00
4	80	D mill feeder blocked	2024/03/01 16 04 00	2024/03/01 16 04 00
4	73	Spinning Reserve	2024/03/02 23 12 00	2024/03/02 23 12 00
4	73	Spinning Reserve	2024/03/03 05 32 00	2024/03/03 05 32 00
4	48	ID fans not coping	2024/03/03 18 44 00	2024/03/03 18 44 00
4	61	Spinning Reserve	2024/03/03 20 42 00	2024/03/03 20 42 00
4	64	Spinning Reserve	2024/03/04 11 36 00	2024/03/04 11 36 00
4	10	Spinning Reserve	2024/03/04 13 17 00	2024/03/04 13 17 00
4	69	D-mill feeders defective	2024/03/08 22 28 00	2024/03/08 22 28 00
4	76	D-mill NDE by-pass damper faulty	2024/03/09 03 36 00	2024/03/09 03 36 00
4	19	B-mill long feeder defective	2024/03/09 17 03 00	2024/03/09 17 03 00
4	27	Spinning Reserve	2024/03/10 03 27 00	2024/03/10 03 27 00
4	75	B Mill control wires damaged	2024/03/10 16 45 00	2024/03/10 16 45 00
4	50	Spinning Reserve	2024/03/11 01 54 00	2024/03/11 01 54 00
4	80	B Mill control wires damaged	2024/03/11 03 10 00	2024/03/11 03 10 00
4	70	A-JPC misalignment switch cable damaged & B-JPC on PTW	2024/03/11 22 28 00	2024/03/11 22 28 00
4	20	EF Boiler pressure	2024/03/12 08 23 00	2024/03/12 08 23 00
4	72	B Mill control wires damaged	2024/03/12 15 38 00	2024/03/12 15 38 00
4	40	EF ID fans not coping	2024/03/12 16 13 00	2024/03/12 16 13 00
4	74	E-mill tripped on grease system alarm	2024/03/12 21 01 00	2024/03/12 21 01 00
4	104	SSC standing	2024/03/13 04 30 00	2024/03/13 04 30 00
4	82	SSC standing	2024/03/13 04 59 00	2024/03/13 04 59 00
4	154	SSC standing	2024/03/13 08 50 00	2024/03/13 08 50 00
4	128	SSC high hoppers	2024/03/13 17 30 00	2024/03/13 17 30 00
4	92	D-mill DE trunnion lube oil pump faulty	2024/03/13 23 16 00	2024/03/13 23 16 00
4	43	EF Id fans not coping	2024/03/14 08 47 00	2024/03/14 08 47 00
4	38	B-mill PA flow low	2024/03/14 11 35 00	2024/03/14 11 35 00
4	37	Manual rapping	2024/03/14 20 28 00	2024/03/14 20 28 00
4	38	High stack emissions	2024/03/14 23 27 00	2024/03/14 23 27 00

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
4	38	AM A mill PA flow low and E mill not available	2024/03/15 16 36 00	2024/03/15 16 36 00
4	58	EF ID fans not coping	2024/03/16 12 50 00	2024/03/16 12 50 00
4	50	RHI precip casing repair	2024/03/17 00 13 00	2024/03/17 00 13 00
4	54	High stack emissions	2024/03/18 21 33 00	2024/03/18 21 33 00
4	56	High stack emissions	2024/03/19 19 34 00	2024/03/19 19 34 00
4	55	EF High stack emissions	2024/03/21 13 25 00	2024/03/21 13 25 00
4	64	EF ID Fans not coping	2024/03/21 20 18 00	2024/03/21 20 18 00
4	58	EF ID Fans not coping	2024/03/21 23 00 00	2024/03/21 23 00 00
4	110	04wx12 Transfer conveyer broken	2024/03/22 02 42 00	2024/03/22 02 42 00
4	56	EF High stack emissions	2024/03/22 11 40 00	2024/03/22 11 40 00
4	107	High stack emissions	2024/03/22 12 32 00	2024/03/22 12 32 00
4	133	High stack emissions	2024/03/22 18 32 00	2024/03/22 18 32 00
4	67	High stack emissions	2024/03/23 00 01 00	2024/03/23 00 01 00
4	60	LHI precip Casing repairs	2024/03/23 00 01 00	2024/03/23 00 01 00
4	62	LHI precip Casing repairs	2024/03/23 01 02 00	2024/03/23 01 02 00
4	60	Spinning Reserve	2024/03/24 01 08 00	2024/03/24 01 08 00
4	160	Dust plant standing	2024/03/24 11 47 00	2024/03/24 11 47 00
4	158	High hopper levels	2024/03/24 20 03 00	2024/03/24 20 03 00
4	63	High hopper levels	2024/03/25 03 43 00	2024/03/25 03 43 00
4	54	AM D+E mills PF leaks	2024/03/25 16 00 00	2024/03/25 16 00 00
4	46	Spinning Reserve	2024/03/26 03 06 00	2024/03/26 03 06 00
4	60	AM D+E mills PF leaks	2024/03/26 04 07 00	2024/03/26 04 07 00
4	80	Spinning Reserve	2024/03/26 23 10 00	2024/03/26 23 10 00
4	80	MCW 5A sump cleaning	2024/03/27 00 00 00	2024/03/27 00 00 00
4	51	MCW pump 4A & 5B sump cleaning	2024/03/27 23 10 00	2024/03/27 23 10 00
4	30	Boiler pressure	2024/03/28 00 40 00	2024/03/28 00 40 00
4	50	Spinning Reserve	2024/03/28 20 07 00	2024/03/28 20 07 00
4	50	MCW pump 4B sump cleaning	2024/03/28 23 59 00	2024/03/28 23 59 00
4	60	Oil burners problems	2024/03/29 04 35 00	2024/03/29 04 35 00
4	40	EF ID fans not coping	2024/03/29 05 56 00	2024/03/29 05 56 00
4	90	Spinning Reserve	2024/03/29 08 54 00	2024/03/29 08 54 00
4	190	Spinning Reserve	2024/03/29 11 54 00	2024/03/29 11 54 00
4	90	Spinning Reserve	2024/03/29 17 03 00	2024/03/29 17 03 00
4	78	LH Outer precip casing repairs	2024/03/30 00 00 00	2024/03/30 00 00 00
4	85	Spinning Reserve	2024/03/30 00 40 00	2024/03/30 00 40 00
4	15	Spinning Reserve	2024/03/30 07 18 00	2024/03/30 07 18 00
4	85	Spinning Reserve	2024/03/30 19 17 00	2024/03/30 19 17 00
4	100	Spinning Reserve	2024/03/31 12 04 00	2024/03/31 12 04 00
4	78	Spinning Reserve	2024/03/31 17 34 00	2024/03/31 17 34 00
5	78	PA Flows high	2024/03/01 00 00 00	2024/03/01 00 00 00
5	39	EF High stack emissions	2024/03/01 00 00 00	2024/03/01 00 00 00
5	40	spray waters	2024/03/01 14 23 00	2024/03/01 14 23 00
5	40	spray waters repairs	2024/03/01 17 15 00	2024/03/01 17 15 00
5	97	A Mill ball loading hopper and DE&NDE liner bolts	2024/03/01 23 32 00	2024/03/01 23 32 00
5	50	A Mill ball loading hopper and DE&NDE liner bolts	2024/03/02 04 57 00	2024/03/02 04 57 00
5	60	A Mill ball loading hopper and DE&NDE liner bolts	2024/03/02 05 14 00	2024/03/02 05 14 00
5	38	Spinning Reserve	2024/03/02 23 11 00	2024/03/02 23 11 00
5	38	Spinning Reserve	2024/03/03 05 29 00	2024/03/03 05 29 00
5	40	High stack emissions	2024/03/03 19 24 00	2024/03/03 19 24 00
5	27	Poor vacuum	2024/03/04 15 02 00	2024/03/04 15 02 00
5	62	D-mill bunker empty	2024/03/05 20 45 00	2024/03/05 20 45 00
5	23	F-mill ball loading hopper repairs	2024/03/06 01 05 00	2024/03/06 01 05 00
5	91	ID Fan not coping	2024/03/08 21 52 00	2024/03/08 21 52 00
5	78	Poor vacuum	2024/03/12 09 20 00	2024/03/12 09 20 00
5	40	Lost both feeders on D-mill	2024/03/12 09 47 00	2024/03/12 09 47 00
5	100	E-mill tripped on grease system fault	2024/03/12 20 08 00	2024/03/12 20 08 00
5	40	E-mill tripped on grease system fault	2024/03/12 22 31 00	2024/03/12 22 31 00
5	90	E-mill choked	2024/03/13 02 50 00	2024/03/13 02 50 00
5	30	High stack emissions	2024/03/13 04 30 00	2024/03/13 04 30 00

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
5	30	AM A+D feeder problems	2024/03/13 14 24 00	2024/03/13 14 24 00
5	20	High stack emissions	2024/03/14 02 52 00	2024/03/14 02 52 00
5	137	EF High stack emissions	2024/03/14 09 00 00	2024/03/14 09 00 00
5	50	Emissions	2024/03/14 15 27 00	2024/03/14 15 27 00
5	38	Manual rapping	2024/03/14 21 37 00	2024/03/14 21 37 00
5	38	High stack emissions	2024/03/15 00 55 00	2024/03/15 00 55 00
5	139	High stack emissions	2024/03/15 04 13 00	2024/03/15 04 13 00
5	40	High stack emissions	2024/03/16 04 39 00	2024/03/16 04 39 00
5	39	Main Gerator transformer temperature high	2024/03/16 16 28 00	2024/03/16 16 28 00
5	38	EF High stack emissions	2024/03/17 08 46 00	2024/03/17 08 46 00
5	139	EF High stack emissions	2024/03/17 09 26 00	2024/03/17 09 26 00
5	159	EF High stack emissions	2024/03/17 15 06 00	2024/03/17 15 06 00
5	40	High stack emissions	2024/03/19 02 24 00	2024/03/19 02 24 00
5	159	EF High stack emissions	2024/03/19 08 50 00	2024/03/19 08 50 00
5	60	LH Inner precip casing repairs	2024/03/20 00 11 00	2024/03/20 00 11 00
5	39	LH Inner precip casing repairs	2024/03/20 01 49 00	2024/03/20 01 49 00
5	39	AM B mill feeders tripped	2024/03/21 06 58 00	2024/03/21 06 58 00
5	50	EF PA flows maximum	2024/03/21 07 42 00	2024/03/21 07 42 00
5	38	EF High stack emissions	2024/03/21 13 12 00	2024/03/21 13 12 00
5	40	Spinning Reserve	2024/03/22 02 47 00	2024/03/22 02 47 00
5	39	High stack emissions	2024/03/22 16 09 00	2024/03/22 16 09 00
5	20	PA Flows high	2024/03/22 18 59 00	2024/03/22 18 59 00
5	40	AM B+C mills on PTW	2024/03/23 05 00 00	2024/03/23 05 00 00
5	59	Spinning Reserve	2024/03/24 01 03 00	2024/03/24 01 03 00
5	75	Spinning Reserve	2024/03/25 00 37 00	2024/03/25 00 37 00
5	58	C-mill seal air fan high vibration	2024/03/25 05 19 00	2024/03/25 05 19 00
5	40	Spinning Reserve	2024/03/26 03 01 00	2024/03/26 03 01 00
5	40	Spinning Reserve	2024/03/26 23 06 00	2024/03/26 23 06 00
5	136	MCW 5A sump cleaning	2024/03/27 00 02 00	2024/03/27 00 02 00
5	38	Spinning Reserve	2024/03/27 05 32 00	2024/03/27 05 32 00
5	138	MCW pump 4A & 5B sump cleaning	2024/03/27 23 11 00	2024/03/27 23 11 00
5	62	AM Oil burner problems	2024/03/28 04 24 00	2024/03/28 04 24 00
5	137	Spinning Reserve	2024/03/28 20 18 00	2024/03/28 20 18 00
5	138	MCW pump 4B sump cleaning	2024/03/28 23 59 00	2024/03/28 23 59 00
5	68	Oil burners problems	2024/03/29 04 26 00	2024/03/29 04 26 00
5	37	Spinning Reserve	2024/03/29 08 40 00	2024/03/29 08 40 00
5	138	Spinning Reserve	2024/03/29 10 40 00	2024/03/29 10 40 00
5	60	Spinning Reserve	2024/03/29 17 10 00	2024/03/29 17 10 00
5	140	Spinning Reserve	2024/03/29 21 20 00	2024/03/29 21 20 00
5	90	Spinning Reserve	2024/03/30 17 13 00	2024/03/30 17 13 00
5	40	Spinning Reserve	2024/03/30 19 18 00	2024/03/30 19 18 00
5	140	Spinning Reserve	2024/03/30 22 26 00	2024/03/30 22 26 00
5	140	AM T11E Motor replacement	2024/03/31 00 00 00	2024/03/31 00 00 00
5	140	Spinning Reserve	2024/03/31 11 55 00	2024/03/31 11 55 00
5	65	Spinning Reserve	2024/03/31 18 28 00	2024/03/31 18 28 00
5	20	Spinning Reserve	2024/03/31 21 31 00	2024/03/31 21 31 00
6	593	Outage	2024/03/01 00 00 00	2024/03/01 00 00 00

PM Exceedances		
U1	RHI Casing Out	01-Mar
U1	RHI Casing Outage and Poor ESP Performance	02-Mar
U1.	ESP Poor Performance and LHI Casing Outage	05-Mar
U1	ESP Poor Performance and LHI Casing Outage	06-Mar
U1.	ESP Poor Performance and Attempted casing outages however, not successful due to not tight isolations	09-Mar
U1	ESP Poor Performance	10-Mar
U1	ESP Poor Performance Manual Rapping	11-Mar
U1	ESP Poor Performance	13-Mar
U1	LHO Casing Outage	16-Mar
U1.	ESP Poor Performance and Manual Rapping	25-Mar
U2	Unit Shut Down For Boiler Tube Leak	02-Mar
U2	The unit synchronised on 2024/03/14 @ 06 29, therefore the emissions needs to be below the limit by 2024/03/17 @ 06 29 and remain below the limit until at least 2024/03/18 @23 59	14-Mar
U2.	Unit Light Up	15-Mar
U2.	Unit Light Up	16-Mar
U2	ESP Poor Performance and Manual Rapping	19-Mar
U2	RHI Casing Outage	21-Mar
U2	ESP Poor Performance and Manual Rapping	26-Mar
U3.	ESP Poor Performance and Manual Rapping	03-Mar
U3	ESP Poor Performance SO3 Plant Challenges Manual Rapping	05-Mar
U3	Correllation test at high load ESP Poor Performance SO3 Plant Challenges	07-Mar
U3	ESP Poor Performance SO3 Plant Challenges	11-Mar
U3	ESP Poor Performance Manual Rapping SO3 Plant Challenges	12-Mar

U3.	ESP Poor Performance Manual Rapping SO3 Plant Challenge	13-Mar
U3	ESP Poor Performance SO3 plant severe leak, plant shut down for repairs Legal Contravention Incurred	14-Mar
<b>PM Exceedances</b>		
U3.	Unit Shut Down for SO3 Plant Repairs	15-Mar
U3	• The unit synchronised on 2024/03/25 @ 01 36, therefore the emissions need to be below the limit by 2024/03/28 @ 01 36 and remain below the limit until at least 2024/03/29 @ 23 59	25-Mar
U3.	Unit Light Up	26-Mar
U3	Unit Light Up	27-Mar
U3.	Unit 3 experienced high hopper levels	30-Mar
U3	Manual rapping carried out	31-Mar
U4.	ESP Poor Performance and Manual Rapping	03-Mar
U4	ESP Poor Performance and Manual Rapping	14-Mar
U4	ESP Poor Performance	16-Mar
U4	RHI Casing Outage	17-Mar
U4.	ESP Poor Performance	20-Mar
U4	ESP Poor Performance	21-Mar
U4	ESP Poor Performance High Hopper Levels Correlation Tests	25-Mar
U4	ESP Poor Performance and Manual Rapping	28-Mar
U4.	LHO casing outage	30-Mar
U5	ESP Poor Performance and Unit Light Up	01-Mar
U5	ESP Poor Performance and Manual Rapping	08-Mar
U5	ESP Poor Performance	12-Mar
U5	ESP Poor Performance Manual rapping was done partially as the operator forgot to start manual rapping on time	13-Mar
U5	ESP Poor Performance and Manual Rapping	14-Mar
U5	ESP Poor Performance and Manual Rapping	16-Mar
U5	ESP Poor Performance and Manual Rapping	18-Mar

U5	LHI Casing Outage	20-Mar
U5	RHO Casing Outage	24-Mar