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Date:
24 February 2023

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Ref. LRP02PLA000 _0336/20220111

Dear Mr. Sibaya,

LETHABO POWER STATION EMISSION MONTHLY REPORT FOR DECEMBER 2022 RESUBMISSION

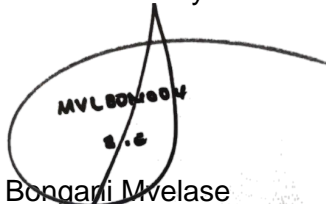
Please find attached revised emissions report for the month of December 2022 for Lethabo Power Station.

The resubmission is made due to the Unit 5 gaseous correlation curve that expired in July 2022 and the data was backfitted with a valid correlation curve which was implemented in December 2022. As such, the monthly reports for this period were revised. Additionally, a revised emissions reporting tool were used to improve the integrity of reported data.

Also attached are the Ambient Air Quality Monitoring Report, Complaints Register and the Fugitive dust Fallout Monitoring Report for December 2022.

For additional information please do not hesitate to contact us.

Yours sincerely



Bongani Mvelase
GENERAL MANAGER



Report

Lethabo Power Station

Report name: **Lethabo Power Station
December 2022
Emission Report**

Reference number: **LRP02PLA000_0336/20220111**
Document Type: **Report**
Area of Applicability: **Environment**
Report Date: **January-2023**
Classification: **Controlled Disclosure**

Signatures:

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System Engineer


Date: 2023/02/17
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Verified by :


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Environmental Officer

Date: 2023 02 20
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Reviewed by:

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BPE Manager

Date: 20/02/2023
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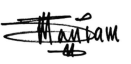
Date: 2023-02-21
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Reviewed by:


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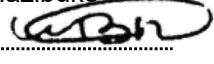
Date: 2023-02-21
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Engineering Manager

Date: 2023/02/23
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Approved by:

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Technical Plant Manager

Date: 2023/02/23
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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 Dec-2022
	Coal	Tons	2 000 000	1 275 768
	Fuel Oil	Tons	1 700	825.64
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Production Rate Dec-2022
	Energy	GWh	2834.64	1 734.68
	Ash	Tons	770 000	509 414.3
	RE Ash	kg/MWh	Not Specified	293.66

2. ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.656 (Standard)	0.640
Ash Content	%	37.37 (Standard)	39.930

*Please 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/Nm³)

Associated Unit/Stack	PM	SO ₂	NOx
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 Dec-2022	Technology Type	SO ₃ Utilization Dec-2022
Unit 1	<i>Electrostatic Precipitator (ESP)</i>	99.79%	SO ₃	85.1%
Unit 2	<i>Electrostatic Precipitator (ESP)</i>	99.73%	SO ₃	98.3%
Unit 3	<i>Electrostatic Precipitator (ESP)</i>	99.77%	SO ₃	99.9%
Unit 4	<i>Electrostatic Precipitator (ESP)</i>	<i>Unit Off-line</i>	SO ₃	<i>Off-line</i>
Unit 5	<i>Electrostatic Precipitator (ESP)</i>	99.65%	SO ₃	62.9%
Unit 6	<i>Electrostatic Precipitator (ESP)</i>	99.80%	SO ₃	100.0%

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

5. MONITOR RELIABILITY (%)

Associated Unit/Stack	PM	SO ₂	NO
Unit 1	99.1	100.0	100.0
Unit 2	93.8	100.0	100.0
Unit 3	98.7	100.0	100.0
Unit 4	OFF	OFF	OFF
Unit 5	68.0	100.0	99.9
Unit 6	98.7	99.9	100.0

Note: NOx emissions is measured as NO in PPM. Final NOx value is expressed as total NO₂

6. EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of December 2022

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)
Unit 1	159.1	2 292	1 196
Unit 2	234.2	2 988	1 189
Unit 3	214.0	3 272	1 525
Unit 4	0.0	0	0
Unit 5	336.2	4229	1612
Unit 6	208.7	3 648	1 527
SUM	1 152.3	16 430	7 049

Table 6.2: Operating days in compliance to PM AEL Limit - December 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average PM (mg/Nm ³)
Unit 1	13	8	0	0	8	119.1
Unit 2	16	13	0	0	13	141.3
Unit 3	17	12	0	0	12	120.8
Unit 4	0	0	0	0	0	
Unit 5	13	11	7	0	18	156.8
Unit 6	27	4	0	0	4	103.9
SUM	86	48	7	0	55	

Table 6.3: Operating days in compliance to SO₂ AEL Limit - December 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average SO ₂ (mg/Nm ³)
Unit 1	24	0	0	0	0	1 540.2
Unit 2	30	0	0	0	0	1 645.2
Unit 3	30	0	0	0	0	1 755.1
Unit 4	0	0	0	0	0	
Unit 5	31	0	0	0	0	1 857.4
Unit 6	31	0	0	0	0	1 785.1
SUM	146	0	0	0	0	

Table 6.4: Operating days in compliance to NOx AEL Limit - December 2022

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average NOx (mg/Nm³)
Unit 1	24	0	0	0	0	763.2
Unit 2	30	0	0	0	0	646.5
Unit 3	30	0	0	0	0	807.4
Unit 4	0	0	0	0	0	
Unit 5	31	0	0	0	0	703.7
Unit 6	31	0	0	0	0	746.2
SUM	146	0	0	0	0	

Note: NOx emissions is measured as NO in PPM. Final NOx value is expressed as total NO₂

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 - December 2022

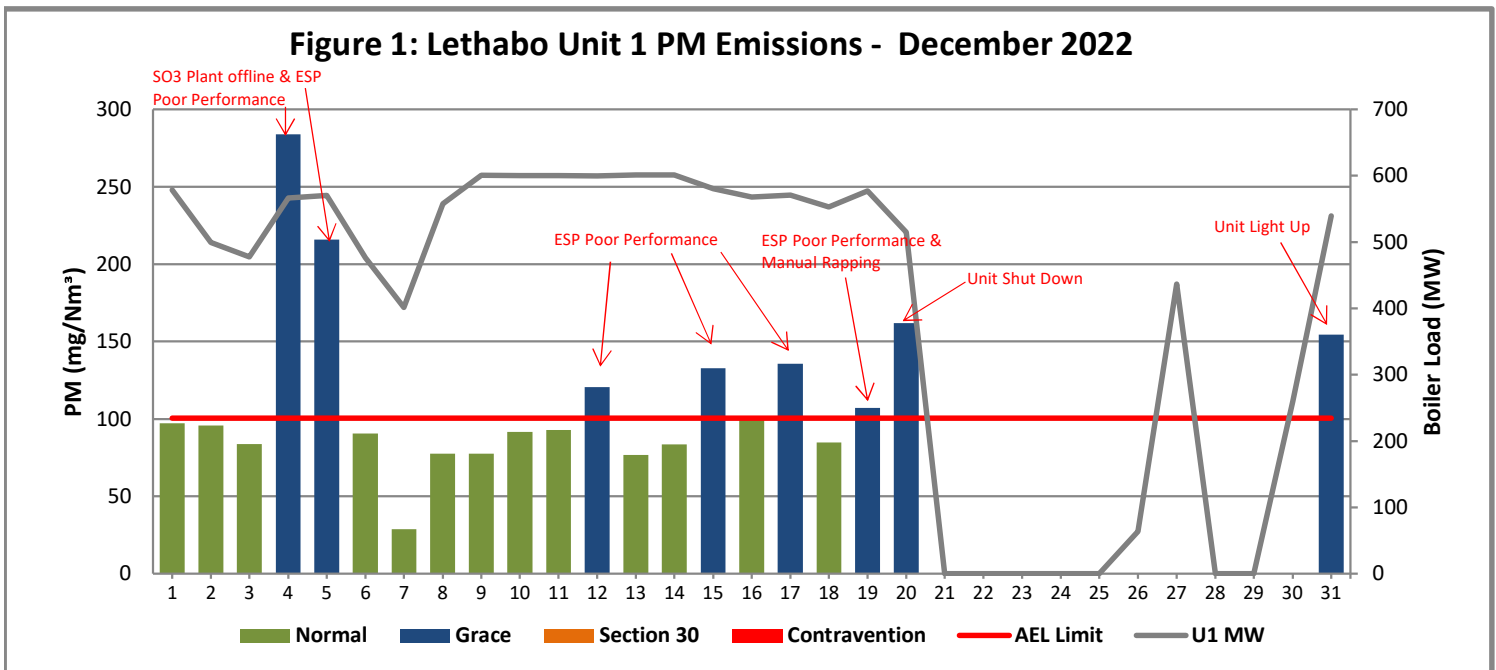


Figure 2: Lethabo Unit 2 PM Emissions - December 2022

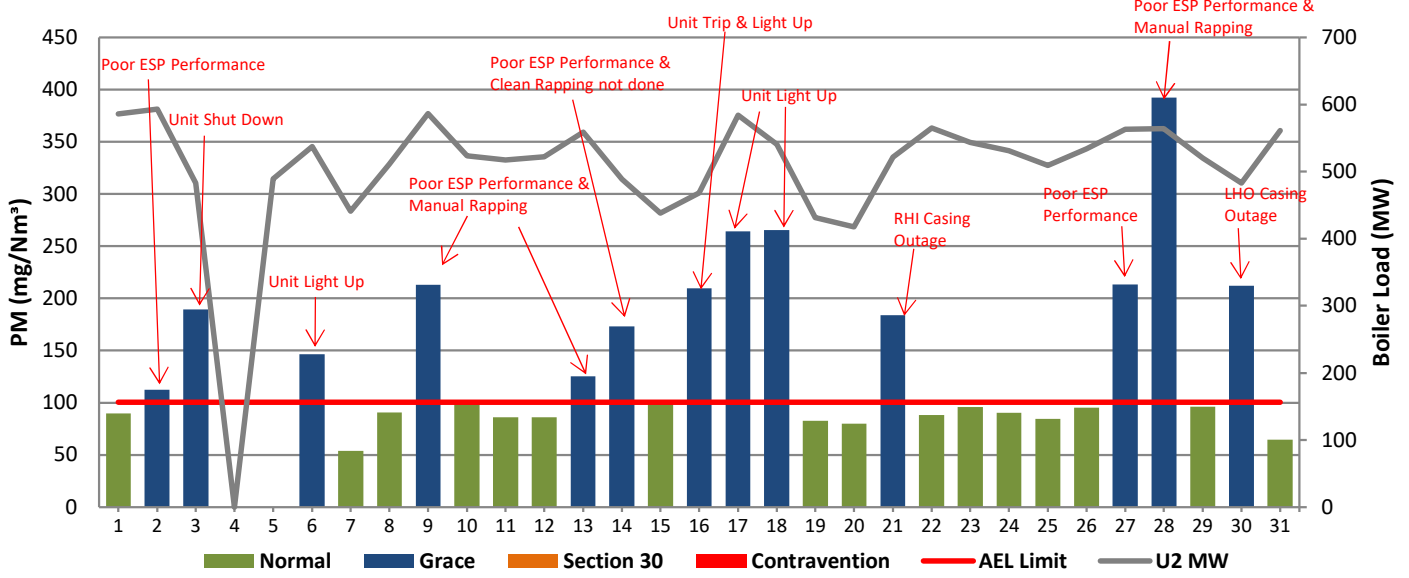


Figure 3: Lethabo Unit 3 PM Emissions - December 2022

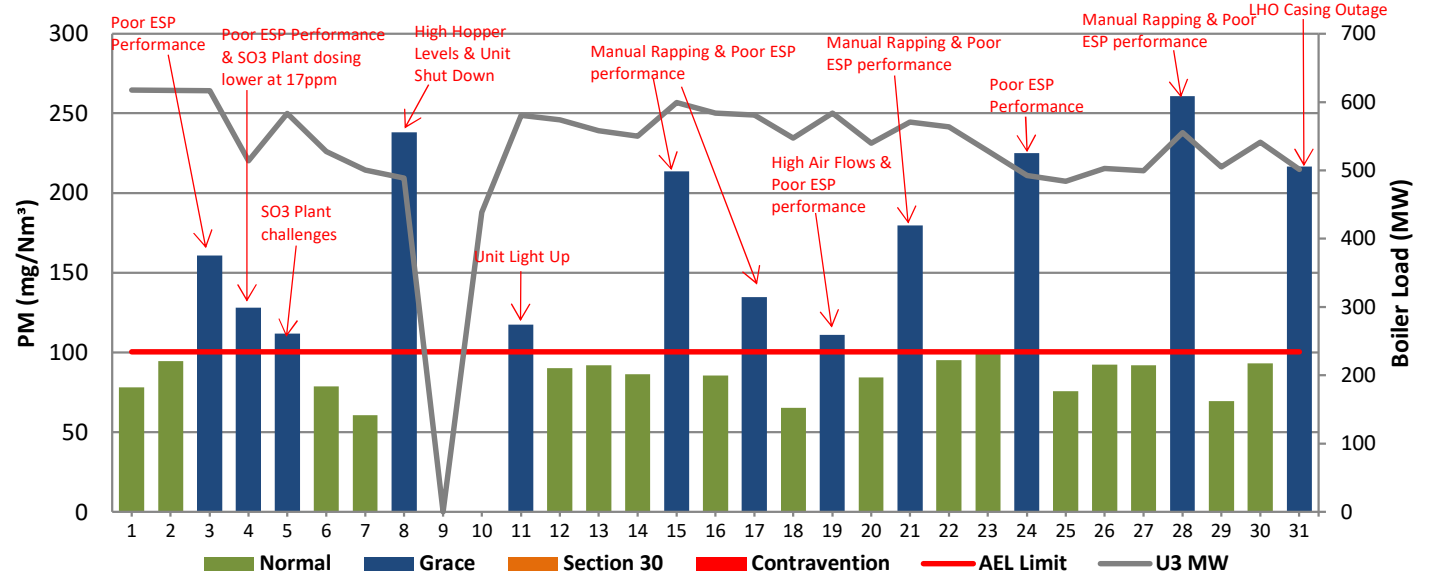


Figure 4: Lethabo Unit 4 PM Emissions - December 2022

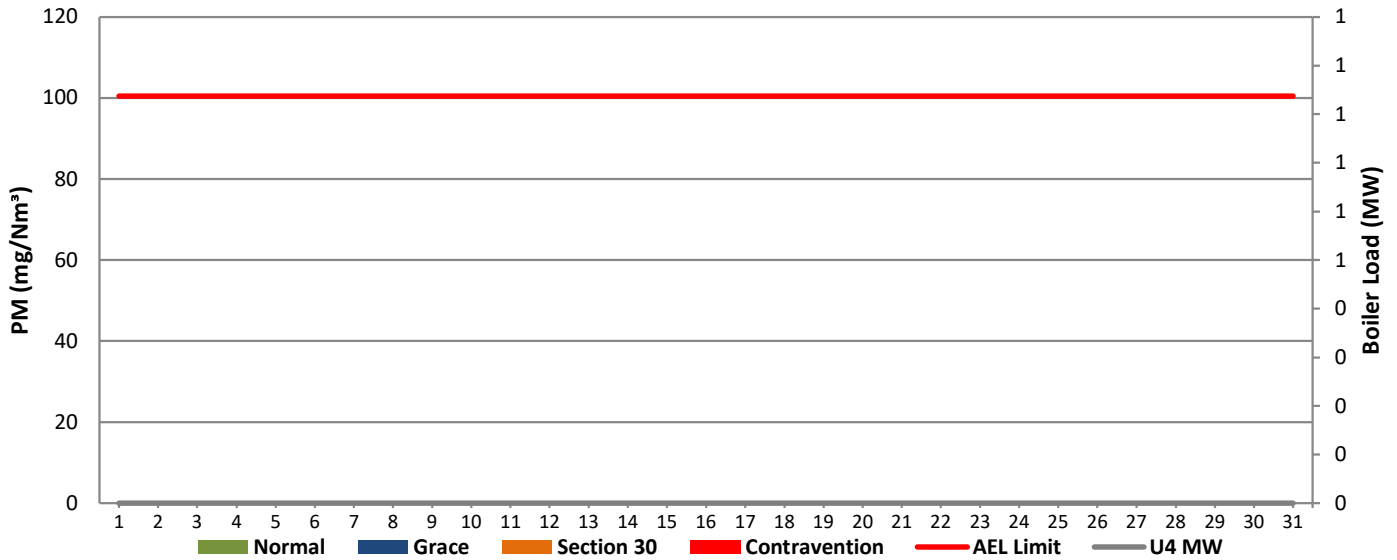
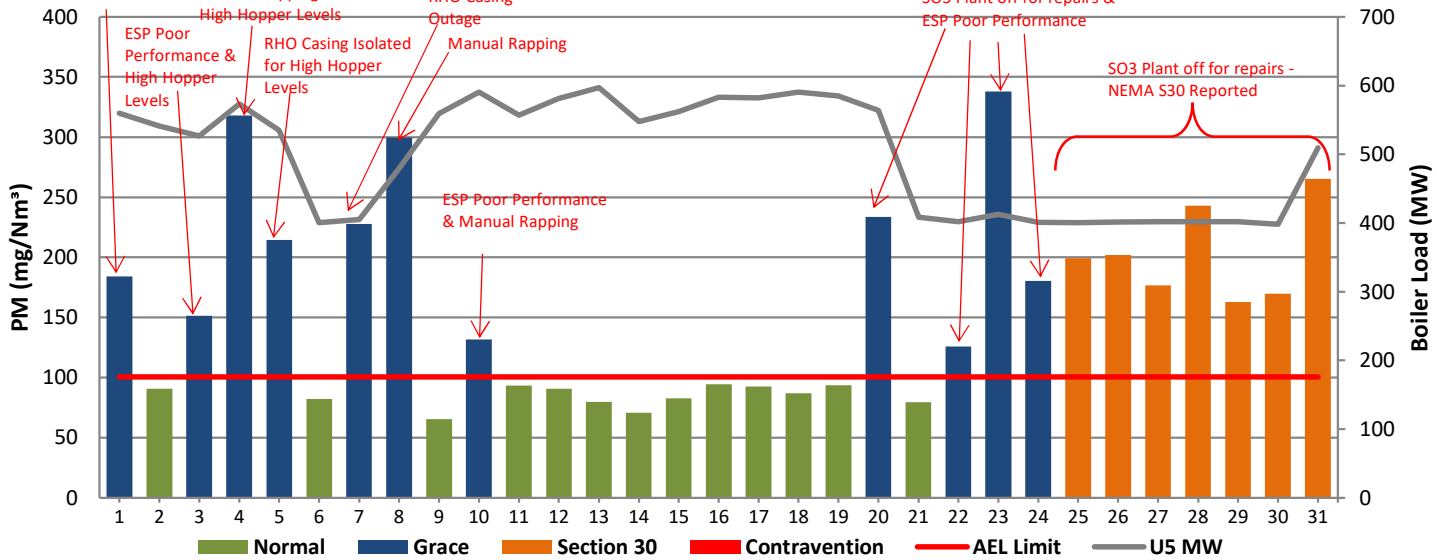


Figure 5: Lethabo Unit 5 PM Emissions - December 2022



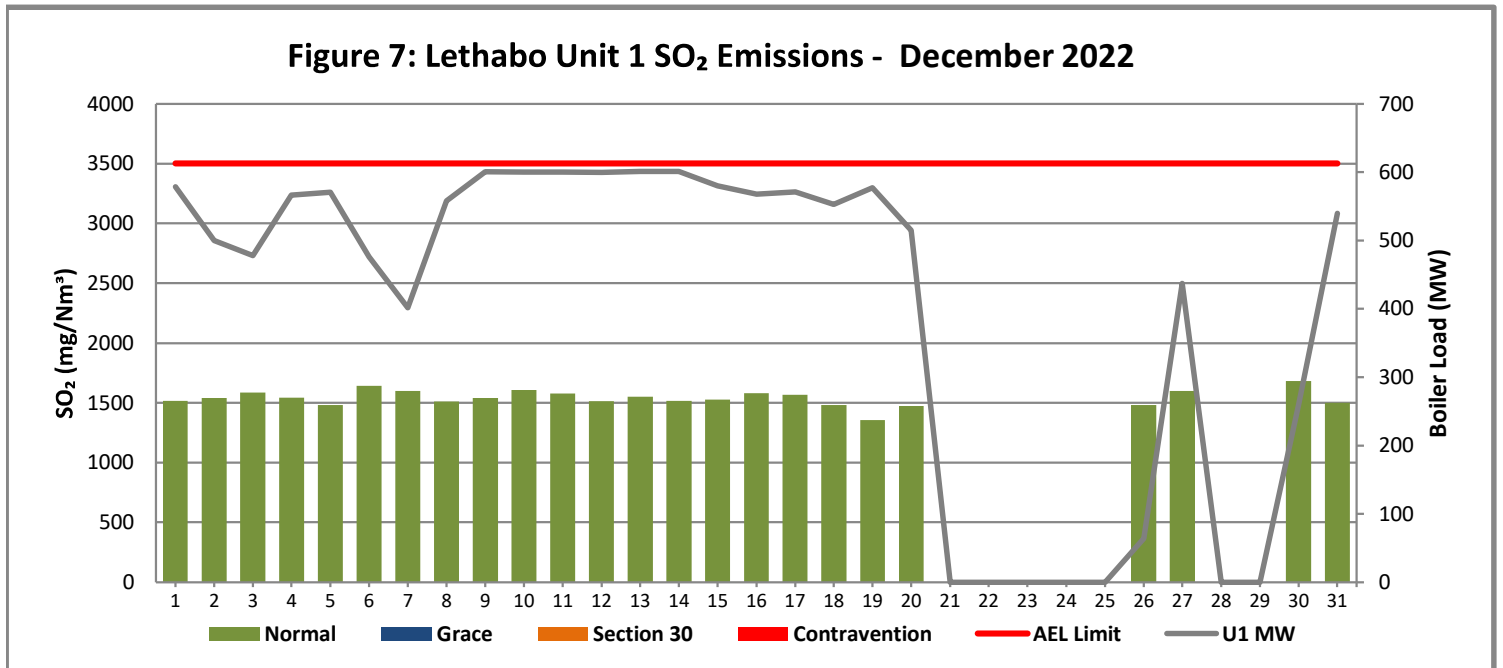
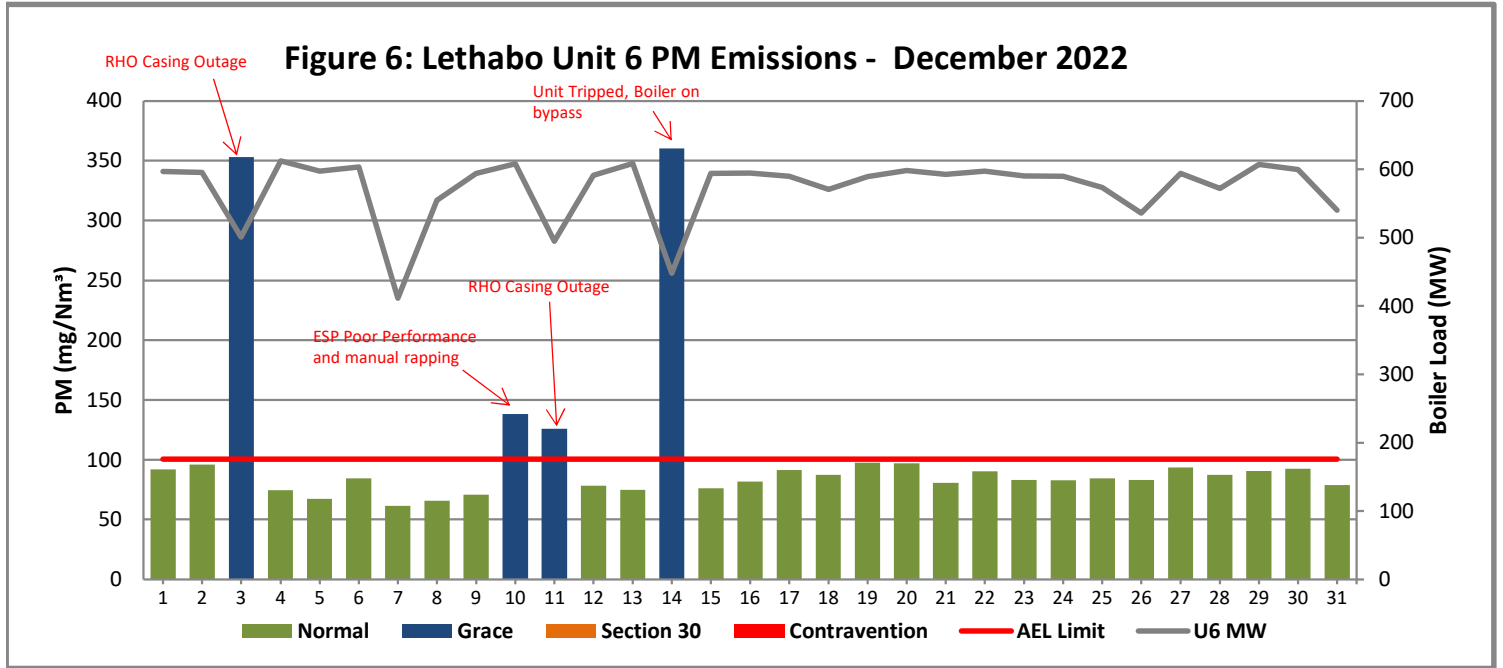


Figure 8: Lethabo Unit 2 SO₂ Emissions - December 2022

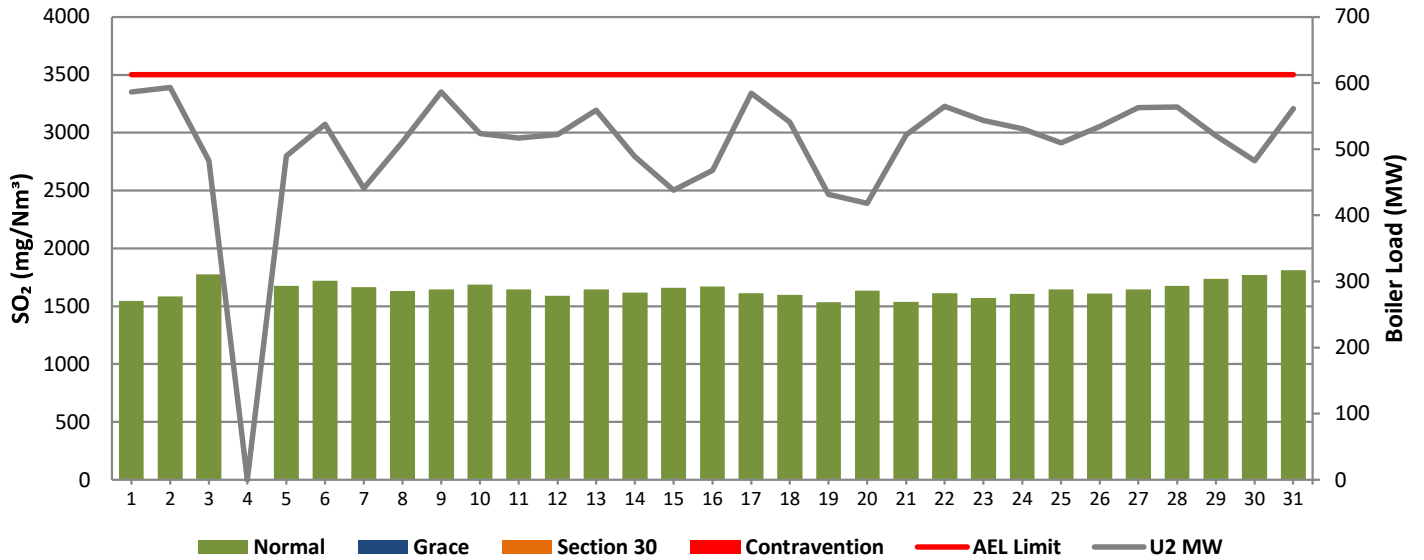


Figure 9: Lethabo Unit 3 SO₂ Emissions - December 2022

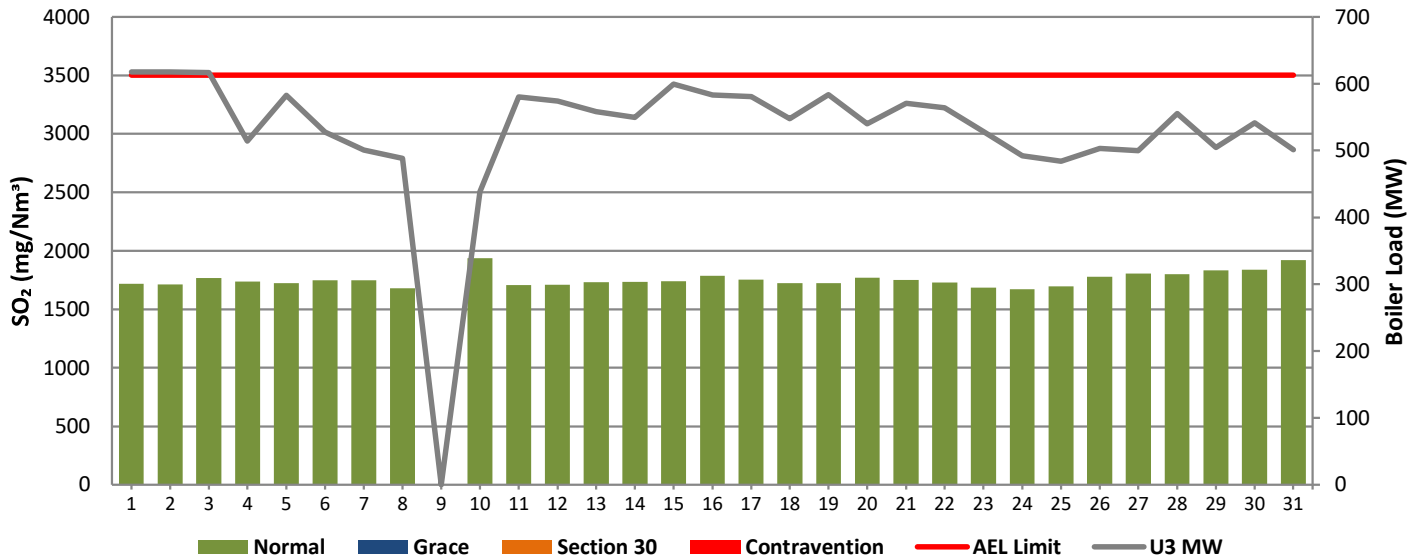


Figure 10: Lethabo Unit 4 SO₂ Emissions - December 2022

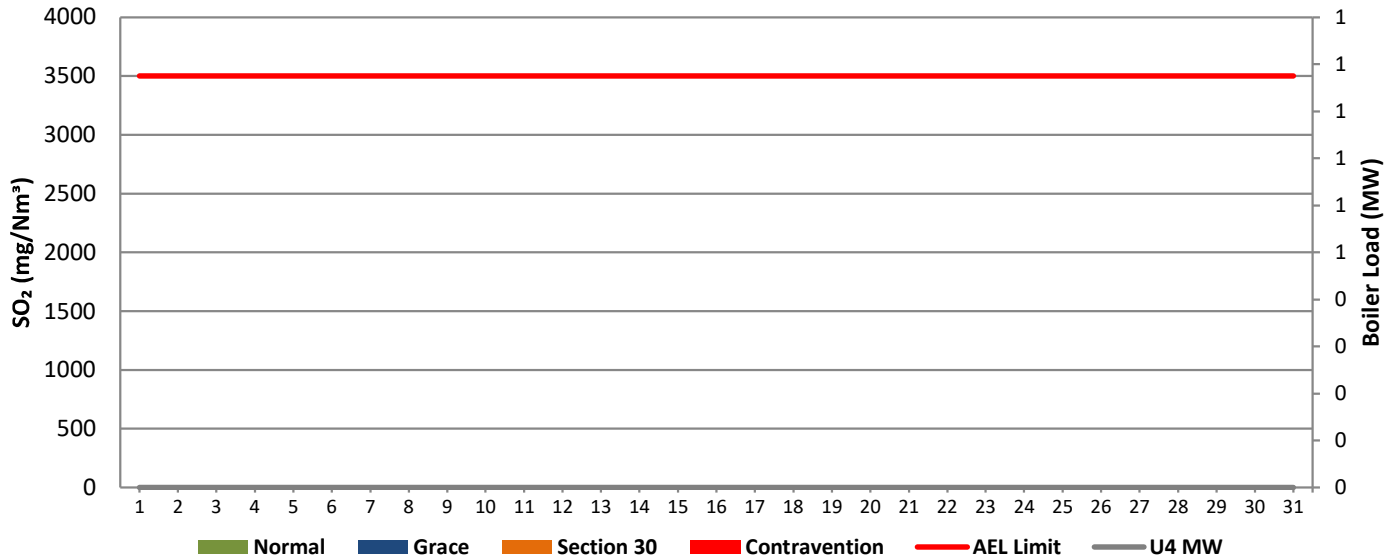


Figure 11: Lethabo Unit 5 SO₂ Emissions - December 2022

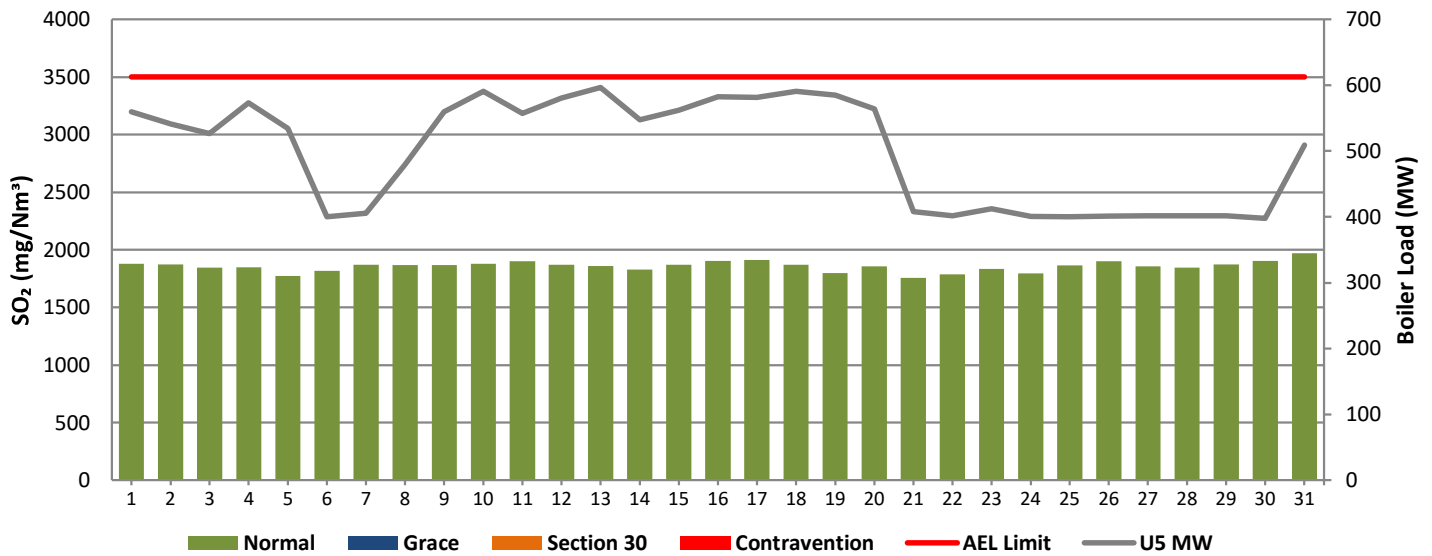


Figure 12: Lethabo Unit 6 SO₂ Emissions - December 2022

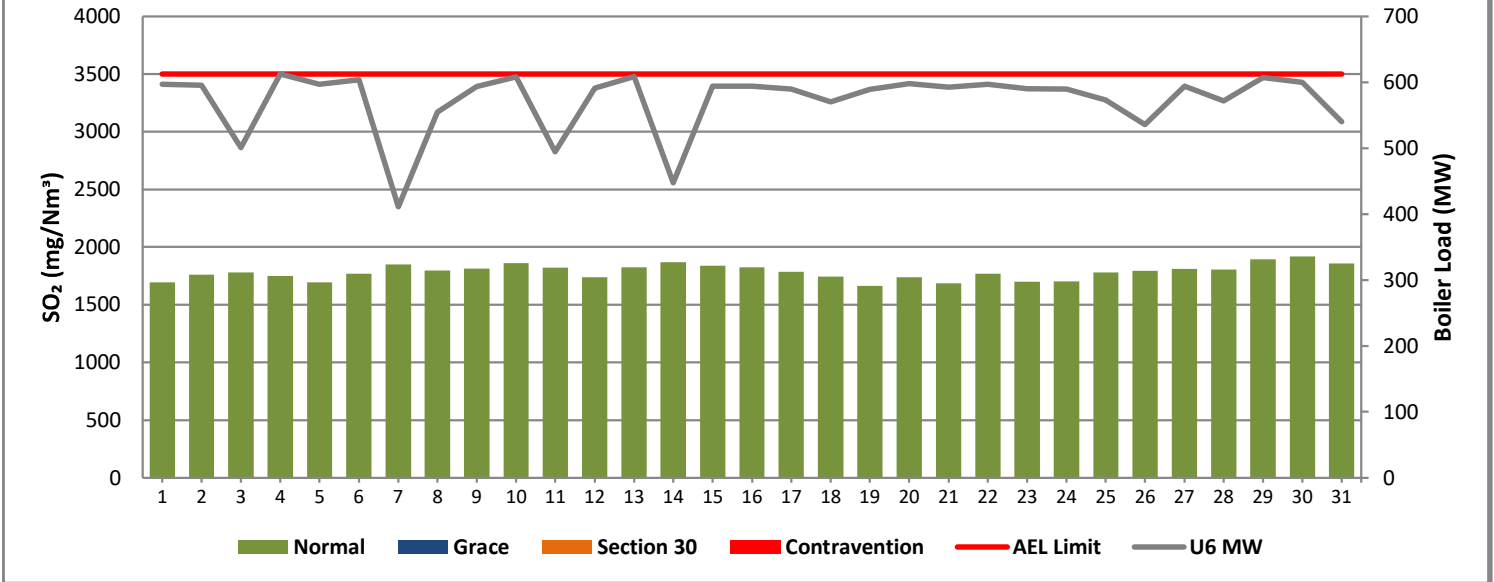


Figure 13: Lethabo Unit 1 NO_x Emissions - December 2022

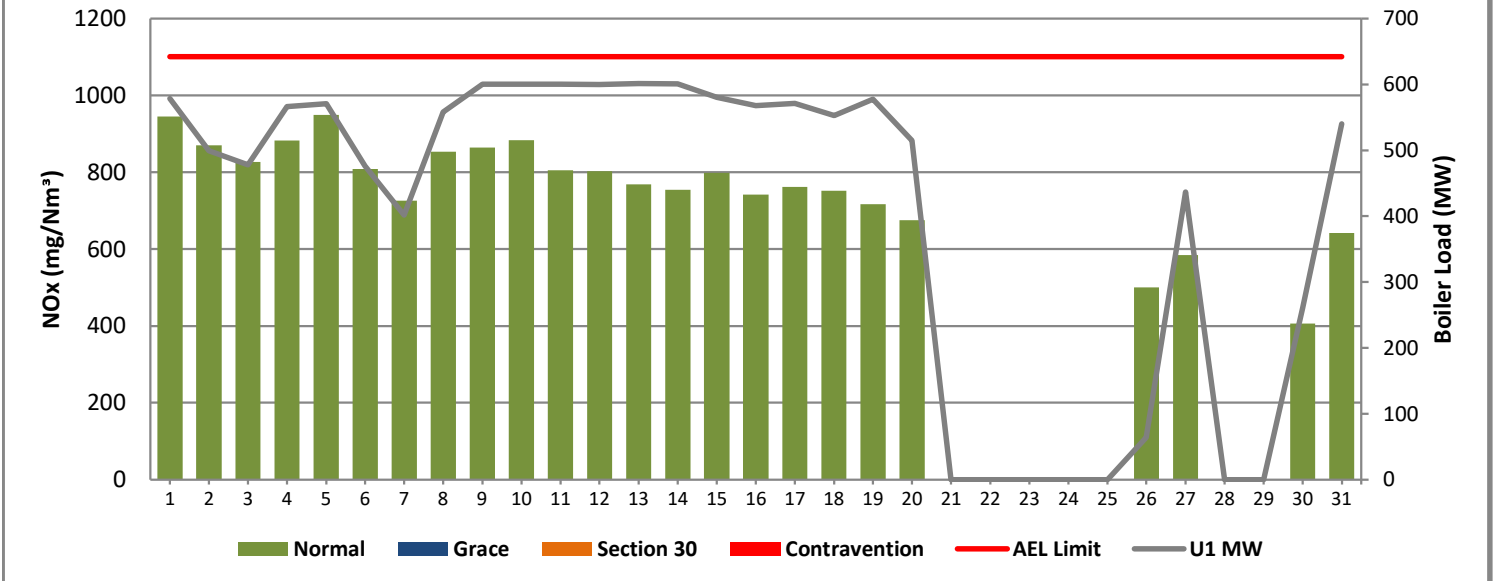


Figure 14: Lethabo Unit 2 NOx Emissions - December 2022

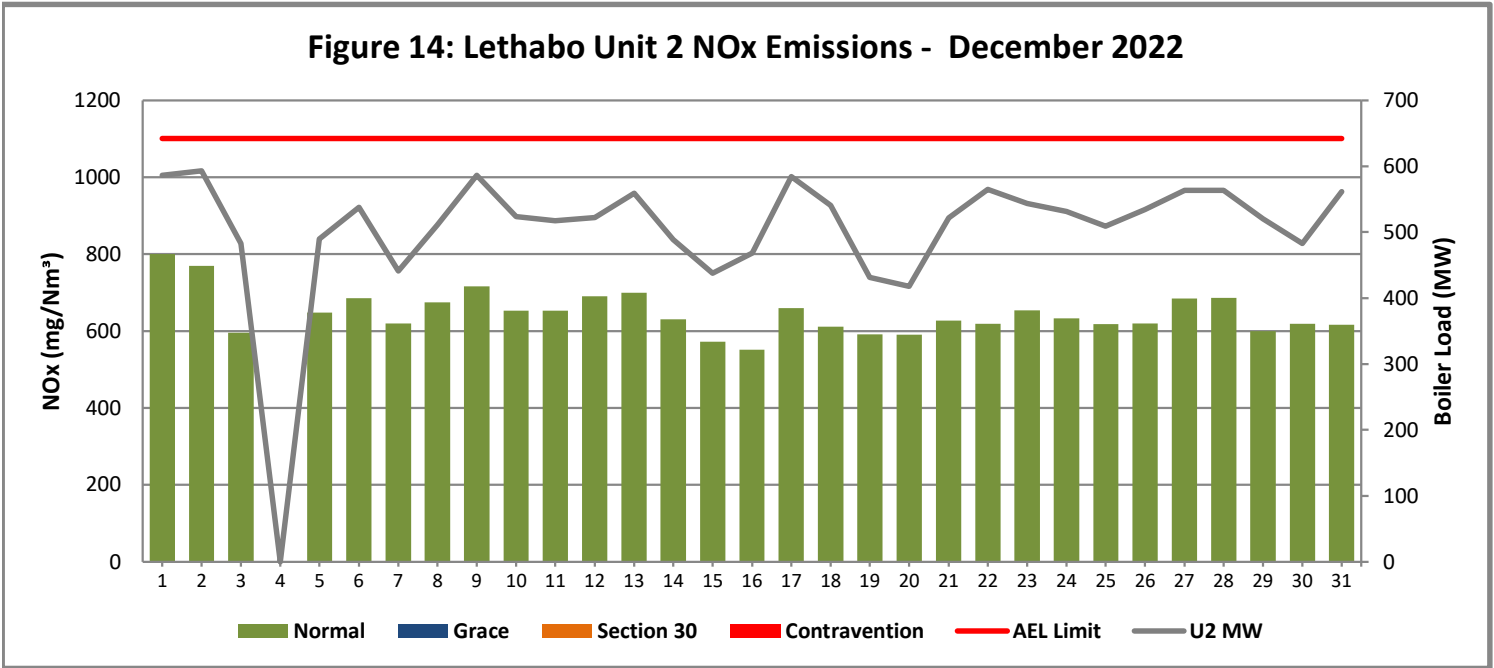


Figure 15: Lethabo Unit 3 NOx Emissions - December 2022

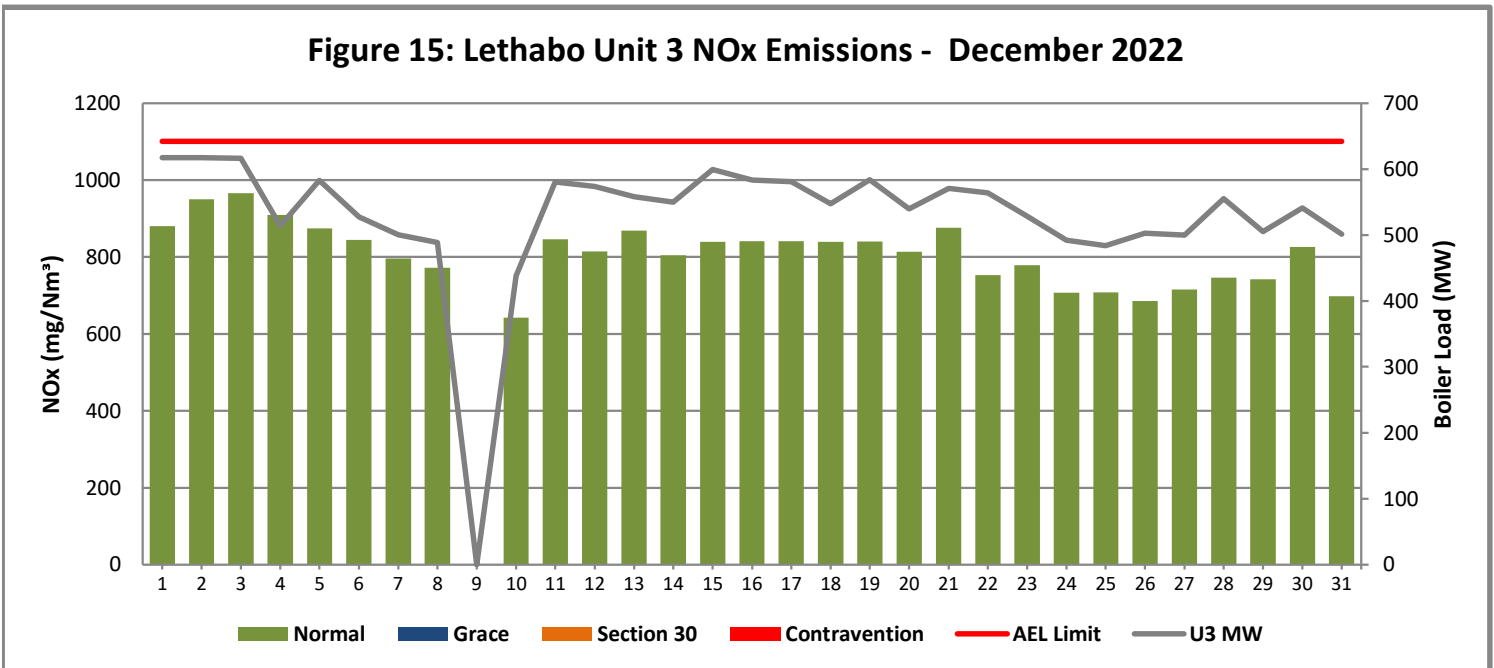


Figure 16: Lethabo Unit 4 NOx Emissions - December 2022

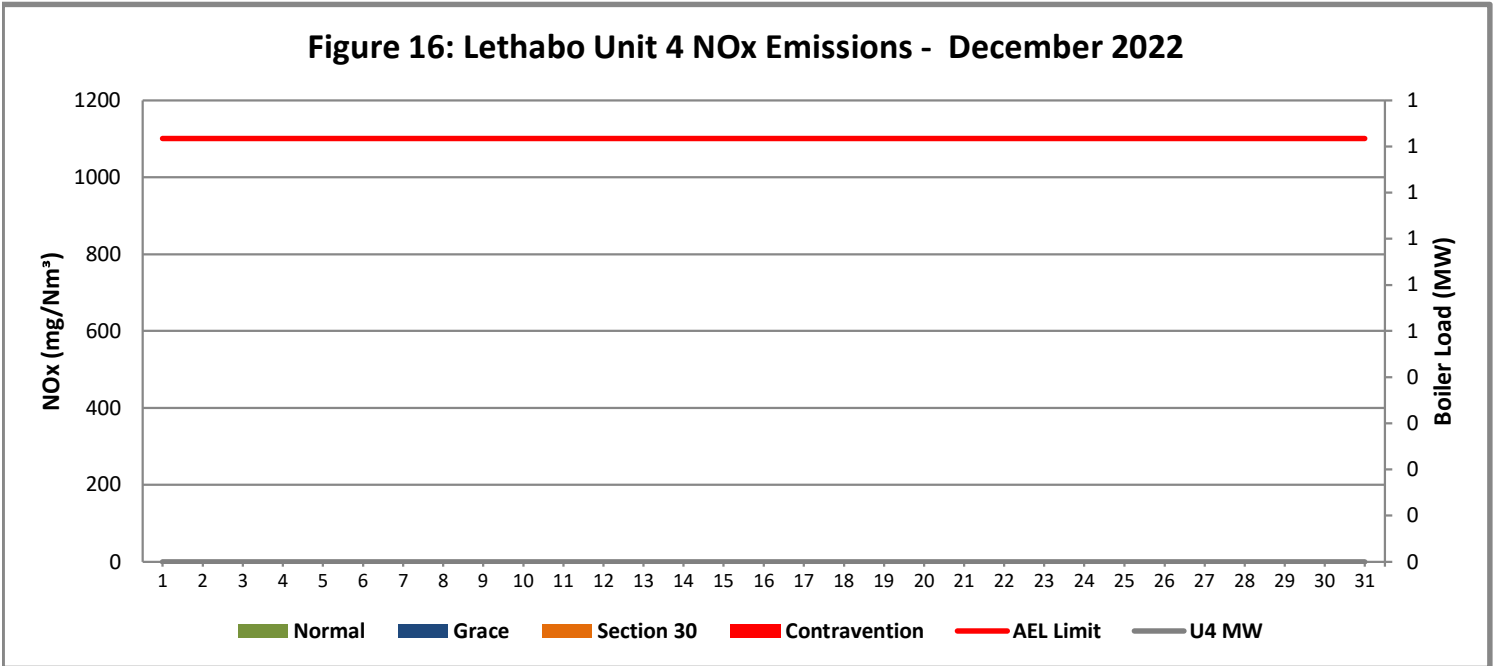


Figure 17: Lethabo Unit 5 NOx Emissions - December 2022

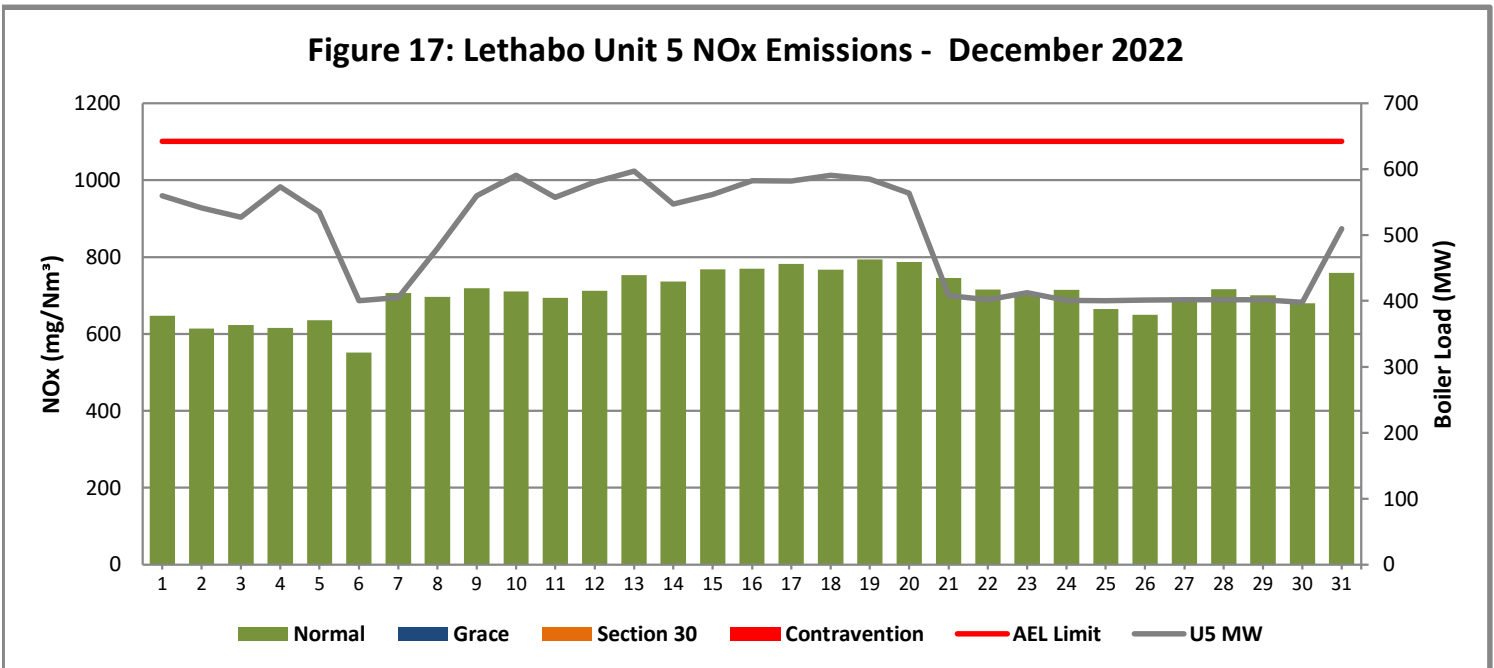
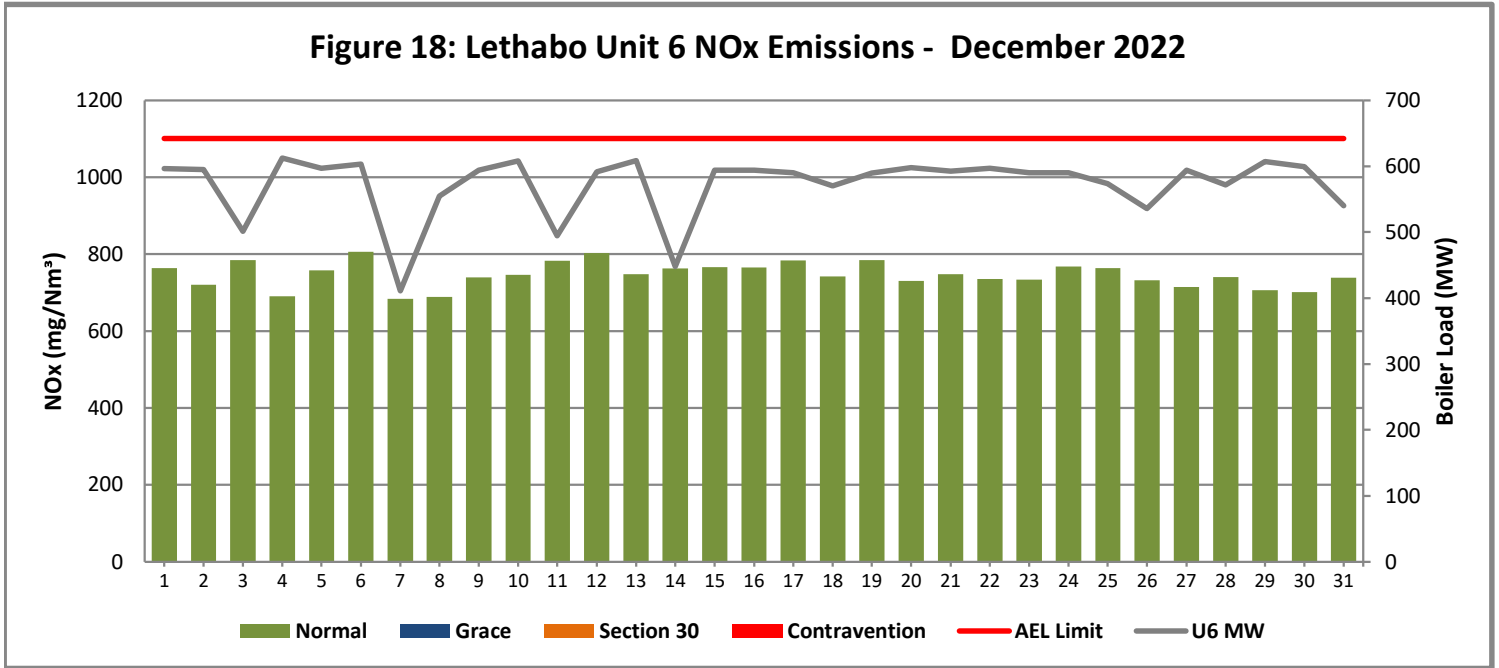


Figure 18: Lethabo Unit 6 NOx Emissions - December 2022



7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1: PM Start-up information for the month of December 2022

Unit No.1	<i>Precips casings washing</i>		<i>Boiler tube leak</i>					
Breaker Open (BO)	5:25 PM	2022/12/20	7:09 AM	2022/12/27				
Draught Group (DG) Shut Down (SD)	9:53 AM	2022/12/21	3:51 PM	2022/12/27				
BO to DG SD (duration)	00:16:28	DD:HH:MM	00:08:42	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	10:33 PM	2022/12/26	8:44 PM	2022/12/30				
Synch. to Grid (or BC)	11:47 PM	2022/12/26	9:55 PM	2022/12/30				
Fires in to BC (duration)	00:01:14	DD:HH:MM	00:01:11	DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	12:00 AM	2022/12/28	10:00 AM	2023/01/02				
Emissions below limit from BC (duration)	01:00:13	DD:HH:MM	02:12:05	DD:HH:MM		DD:HH:MM		DD:HH:MM

Unit No.2	<i>LH PA fan motor replacement.</i>		<i>Low drum level.</i>					
Breaker Open (BO)	2:00 AM	2022/12/03	7:45 AM	2022/12/16				
Draught Group (DG) Shut Down (SD)	10:33 PM	2022/12/04	<i>DG did not trip or SD</i>	<i>DG did not trip or SD</i>				
BO to DG SD (duration)	01:20:33	DD:HH:MM	<i>n/a</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	7:43 AM	2022/12/05	11:29 AM	2022/12/16				
Synch. to Grid (or BC)	9:05 AM	2022/12/05	11:44 AM	2022/12/16				
Fires in to BC (duration)	00:01:22	DD:HH:MM	00:00:15	DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	3:00 AM	2022/12/08	12:00 AM	2022/12/19				
Emissions below limit from BC (duration)	02:17:55	DD:HH:MM	02:12:16	DD:HH:MM		DD:HH:MM		DD:HH:MM

Unit No.3	<i>Boiler tube leak.</i>						
Breaker Open (BO)	7:15 AM	2022/12/08					
Draught Group (DG) Shut Down (SD)	1:09 PM	2022/12/08					
BO to DG SD (duration)	00:05:54	DD:HH:MM		DD:HH:MM		DD:HH:MM	DD:HH:MM
Fires in time	3:51 PM	2022/12/10					
Synch. to Grid (or BC)	4:50 PM	2022/12/10					
Fires in to BC (duration)	00:00:59	DD:HH:MM		DD:HH:MM		DD:HH:MM	DD:HH:MM
Emissions below limit from BC (end date)	4:00 PM	2022/12/13					
Emissions below limit from BC (duration)	02:23:10	DD:HH:MM		DD:HH:MM		DD:HH:MM	DD:HH:MM

Unit No.4							
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	<i>Delta T's</i>						
Breaker Open (BO)	5:40 AM	2022/12/30					
Draught Group (DG) Shut Down (SD)	<i>DG did not trip or SD</i>	<i>DG did not trip or SD</i>					
BO to DG SD (duration)	<i>n/a</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM	DD:HH:MM
Fires in time	1:31 PM	2022/12/13					
Synch. to Grid (or BC)	12:55 PM	2022/12/30					
Fires in to BC (duration)	16:23:24	DD:HH:MM		DD:HH:MM		DD:HH:MM	DD:HH:MM
Emissions below limit from BC (end date)	8:00 PM	2023/01/03					
Emissions below limit from BC (duration)	04:07:05	DD:HH:MM		DD:HH:MM		DD:HH:MM	DD:HH:MM

Unit No.6	<i>Trip on Boiler Flame off protection</i>						
Breaker Open (BO)	5:05 AM	2022/12/14					
Draught Group (DG) Shut Down (SD)	<i>DG did not trip or SD</i>	<i>DG did not trip or SD</i>					
BO to DG SD (duration)	<i>n/a</i>	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

7.2: Point Source emissions released during start-up (fires-in) and Shut-down (SD) for the month of December 2022 in mg/Nm³

8. MAINTENANCE

Unit 1				
Beginning of	2022/12/27 02:47	2022/10/29 00:00		
Reason for Maintenance	LHO Casing Repairs	LHO Casing Repairs		
End (Time):	2022/12/27 07:09	2022/10/29 16:42		
Duration	4:22:00	16:42:00		

Unit 2				
Beginning of	2022/12/21 00:43:00	2022/12/30 00:55:00		
Reason for Maintenance	RHI Casing Repairs	LHO Casing Repairs		
End (Time):	2022/12/21 18:57:00	2022/12/31 00:50:00		
Duration	18:14:00	23:55:00		

Unit 3				
Beginning of	2022/12/24 02:14:00	2022/12/31 01:00		
Reason for Maintenance	RHO Casing Repair	LHO Casing Repair		
End (Time):	2022/12/24 19:02:00	2022/12/31 23:59		
Duration	16:48:00	22:59:59		

Unit 4				
Beginning of				
Reason for Maintenance				
End (Time):				
Duration				

Unit 5				
Beginning of	2022/12/08 04:57			
Reason for Maintenance	RHO Casing Repair			
End (Time):	2022/12/09 00:00			
Duration	19:03:00			

Unit 6				
Beginning of	2022/12/03 01:06:00	2022/12/10 23:59		
Reason for Maintenance	RHO Casing Repair	RHI Casing Repair		
End (Time):	2022/12/03 23:47:00	2022/12/11 23:08		
Duration	22:41:00	23:09:00		

9. GENERAL

Unit 2 Monitor Reliability

09/12/2022: Monitor Reliability low (79.2%) due to monitors reading maximum

21/12/2022: Monitor Reliability Low (75.0%) due to monitors reading maximum

28/11/2022: Monitor Reliability low (79.2%) due to monitors reading maximum

Unit 5 Monitor Reliability

05/12/2022: Monitor Reliability low (62.5%) due to Monitors reading Max and greater than 10% variability between Output 1 and 2

07/12/2022 to 08/12/2022: Monitor Reliability low (29.2% & 12.5%) due to Monitors reading Max and greater than 10% variability between Output 1 and 2

10/12/2022: Monitor Reliability low (79.2%) due to Monitors reading Max and greater than 10% variability between Output 1 and 2

20/12/2022: Monitor Reliability low (50.0%) due to Monitors reading Max

22/11/2022- 29/12/2022: Monitor Reliability low (70.8%, nil, 16.7%, nil, nil, 29.2%, 4.2% and 75.0%) due to Monitors reading Max and greater than 10% variability between Output 1 and 2

31/12/2022 to 02/01/2023: Monitor Reliability low (nil, nil, 12.5%) Due to monitors reading maximum and light up activities

Unit 1:

The SO3 Plant reliability was 85.12%. The Plant was offline on 04/12/2023 - 05/12/2022 for sulphur supply leak repairs.

Unit 5:

The daily emissions average limit was exceeded from the 22nd December at 23h59 to the 02nd January 2023 at 23h59, and the emission's exceedance for the period mentioned in the report was caused by various defects, challenges faced and plant cooling periods to work under safe conditions on the SO3- Plant which rendered the abatement technology unavailable during this period. Even though Lethabo Management took measures to safeguard the environment by taking maximum load losses and made various attempts to improve Electrostatic Precipitator Plant performance, the upset conditions prevailed, hence the exceedance. After all interventions the emissions' defects were repaired and the emissions normalised on the 03rd January 2023 at 23h59.

Please note, the Unit had tripped on the 30/12/2022. However the SO3- Plant issue were not resolved and could not meet the 72 hour light up conditions. This was taken as part of the same reported NEMA Section 30 incident as the root cause was still being addressed.

Unit 6:

Unit 6 tripped on 14/12/2022, the boiler remained on bypass operation during this time. A value of 150MW was inserted into the load for unit 6 during this time so as to not discount the reporting hours during this time.

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.
5	20/12/2022	02/01/2022	Leaking steam on sulphur supply line and damage combustion chamber skin casing.	Repairs to the steam line, defective casing and various other defects found.	28/12/2022	05/01/2023			NEMA S30 Incident

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
Jan-22	0.37	OFF	0.52	0.46	0.47	0.36	0.44
Feb-22	0.47	1.06	0.62	0.44	0.38	0.59	0.56
Mar-22	0.73	0.90	0.66	0.58	0.33	0.43	0.57
Apr-22	0.60	0.61	0.53	0.45	OFF	0.37	0.51
May-22	0.55	0.59	0.33	0.19	OFF	0.44	0.45
Jun-22	0.55	0.63	0.37	0.77	OFF	0.48	0.56
Jul-22	0.38	0.44	0.42	0.58	0.11	0.37	0.43
Aug-22	0.29	0.46	0.50	0.71	0.27	0.32	0.43
Sep-22	0.40	0.24	0.31	0.79	0.32	0.40	0.41
Oct-22	0.52	0.39	0.44	0.40	0.45	0.44	0.44
Nov-22	0.60	0.38	0.33	0.58	0.58	0.56	0.51
Dec-22	0.57	0.66	0.57	OFF	0.92	0.49	0.64

ADDENDUM TO MONTHLY EMISSIONS REPORT

12. DAILY EMISSIONS FIGURES

Final Dust Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
01-Dec	97	90	78	OFF	184	92	100
02-Dec	96	112	95	OFF	91	96	100
03-Dec	84	189	161	OFF	151	353	100
04-Dec	284	OFF	128	OFF	318	75	100
05-Dec	216	OFF	112	OFF	214	67	100
06-Dec	91	156	79	OFF	82	84	100
07-Dec	29	54	61	OFF	228	61	100
08-Dec	78	91	238	OFF	300	66	100
09-Dec	78	213	OFF	OFF	65	71	100
10-Dec	92	99	OFF	OFF	132	138	100
11-Dec	93	86	91	OFF	93	126	100
12-Dec	121	86	90	OFF	91	78	100
13-Dec	77	125	92	OFF	80	75	100
14-Dec	83	173	86	OFF	71	360	100
15-Dec	133	100	214	OFF	83	76	100
16-Dec	100	170	85	OFF	94	82	100
17-Dec	136	306	135	OFF	92	91	100
18-Dec	85	266	65	OFF	87	88	100
19-Dec	107	82	111	OFF	94	97	100
20-Dec	162	80	84	OFF	234	97	100
21-Dec	OFF	184	180	OFF	80	81	100
22-Dec	OFF	88	95	OFF	126	90	100
23-Dec	OFF	96	99	OFF	338	83	100
24-Dec	OFF	90	225	OFF	180	83	100
25-Dec	OFF	85	76	OFF	199	84	100
26-Dec	OFF	95	92	OFF	202	83	100
27-Dec	OFF	213	92	OFF	177	94	100
28-Dec	OFF	392	261	OFF	243	87	100
29-Dec	OFF	96	70	OFF	163	91	100
30-Dec	OFF	212	93	OFF	84	92	100
31-Dec	262	64	217	OFF	286	79	100

ADDENDUM TO MONTHLY EMISSIONS REPORT

Final SOx Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
01-Dec	1516	1547	1716	OFF	1876	1695	3500
02-Dec	1538	1582	1710	OFF	1874	1763	3500
03-Dec	1586	1777	1767	OFF	1844	1782	3500
04-Dec	1543	OFF	1738	OFF	1848	1749	3500
05-Dec	1482	1677	1724	OFF	1773	1694	3500
06-Dec	1641	1719	1747	OFF	1818	1769	3500
07-Dec	1600	1662	1748	OFF	1870	1850	3500
08-Dec	1511	1631	1679	OFF	1865	1796	3500
09-Dec	1539	1646	OFF	OFF	1866	1813	3500
10-Dec	1606	1687	1936	OFF	1878	1861	3500
11-Dec	1577	1646	1706	OFF	1901	1821	3500
12-Dec	1514	1592	1708	OFF	1872	1739	3500
13-Dec	1552	1645	1734	OFF	1859	1824	3500
14-Dec	1516	1618	1734	OFF	1828	1869	3500
15-Dec	1526	1657	1741	OFF	1868	1841	3500
16-Dec	1580	1672	1787	OFF	1905	1824	3500
17-Dec	1568	1612	1754	OFF	1913	1785	3500
18-Dec	1483	1598	1723	OFF	1872	1743	3500
19-Dec	1355	1534	1722	OFF	1798	1666	3500
20-Dec	1471	1633	1771	OFF	1855	1737	3500
21-Dec	OFF	1538	1751	OFF	1755	1686	3500
22-Dec	OFF	1612	1731	OFF	1789	1769	3500
23-Dec	OFF	1569	1685	OFF	1834	1699	3500
24-Dec	OFF	1606	1671	OFF	1797	1703	3500
25-Dec	OFF	1645	1696	OFF	1865	1781	3500
26-Dec	1481	1609	1777	OFF	1903	1795	3500
27-Dec	1599	1644	1804	OFF	1857	1810	3500
28-Dec	OFF	1677	1799	OFF	1844	1805	3500
29-Dec	OFF	1737	1833	OFF	1874	1894	3500
30-Dec	1681	1771	1840	OFF	1904	1917	3500
31-Dec	1500	1812	1921	OFF	1971	1859	3500

ADDENDUM TO MONTHLY EMISSIONS REPORT

Final NOx Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
01-Dec	945	800	881	OFF	648	763	1100
02-Dec	870	769	951	OFF	614	720	1100
03-Dec	826	596	966	OFF	623	785	1100
04-Dec	883	OFF	909	OFF	616	690	1100
05-Dec	949	649	875	OFF	635	758	1100
06-Dec	808	686	845	OFF	551	807	1100
07-Dec	726	620	796	OFF	706	684	1100
08-Dec	853	675	772	OFF	696	689	1100
09-Dec	864	716	OFF	OFF	718	740	1100
10-Dec	883	654	642	OFF	710	746	1100
11-Dec	805	654	846	OFF	694	783	1100
12-Dec	803	691	815	OFF	712	802	1100
13-Dec	768	699	869	OFF	753	747	1100
14-Dec	755	631	805	OFF	736	763	1100
15-Dec	798	573	839	OFF	768	766	1100
16-Dec	741	551	842	OFF	769	766	1100
17-Dec	762	660	841	OFF	782	784	1100
18-Dec	752	612	839	OFF	767	742	1100
19-Dec	717	592	841	OFF	793	785	1100
20-Dec	675	591	813	OFF	787	731	1100
21-Dec	OFF	628	877	OFF	746	748	1100
22-Dec	OFF	618	753	OFF	715	735	1100
23-Dec	OFF	654	779	OFF	702	734	1100
24-Dec	OFF	633	708	OFF	714	768	1100
25-Dec	OFF	618	708	OFF	665	764	1100
26-Dec	500	620	686	OFF	649	732	1100
27-Dec	584	685	716	OFF	689	715	1100
28-Dec	OFF	686	746	OFF	716	740	1100
29-Dec	OFF	600	743	OFF	700	706	1100
30-Dec	407	619	826	OFF	679	702	1100
31-Dec	642	616	698	OFF	758	739	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
Jan-22	98.50%	1.9	OFF	OFF	99.32%	0.8	100.00%	0.0	100.00%	0.0	100.00%	0.0
Feb-22	100.00%	0.0	100.00%	0.0	100.00%	0.0	100.00%	0.0	100.00%	0.0	98.54%	1.6
Mar-22	98.73%	1.6	98.70%	1.6	100.00%	0.0	100.00%	0.0	100.00%	0.0	100.00%	0.0
Apr-22	100.00%	0.0	98.63%	1.6	100.00%	0.0	98.46%	1.9	OFF	OFF	100.00%	0.0
May-22	98.73%	1.6	98.13%	2.3	100.00%	0.0	100.00%	0.0	OFF	OFF	100.00%	0.0
Jun-22	98.33%	2.0	99.05%	1.1	100.00%	0.0	100.00%	0.0	OFF	OFF	97.53%	3.0
Jul-22	99.37%	0.8	98.80%	1.5	100.00%	0.0	97.23%	3.4	100.00%	0.0	100.00%	0.0
Aug-22	99.42%	0.7	98.67%	1.6	100.00%	0.0	99.32%	0.8	100.00%	0.0	100.00%	0.0
Sep-22	98.86%	1.4	100.00%	0.0	100.00%	0.0	99.27%	0.9	98.44%	1.9	99.20%	1.0
Oct-22	98.80%	1.5	98.86%	1.4	100.00%	0.0	100.00%	0.0	99.24%	0.9	100.00%	0.0
Nov-22	99.29%	0.9	100.00%	0.0	100.00%	0.0	100.00%	0.0	98.86%	1.4	98.56%	1.7
Dec-22	99.29%	0.9	98.58%	1.8	98.66%	1.7	OFF	OFF	99.36%	0.8	98.46%	1.9

SO₃ 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
Jan-22	95.79%	1.3	OFF	OFF	83.10%	5.2	100.00%	0.0	100.00%	0.0	100.00%	0.0
Feb-22	99.40%	0.2	85.42%	4.1	97.47%	0.7	100.00%	0.0	100.00%	0.0	97.17%	0.8
Mar-22	87.77%	3.8	100.00%	0.0	100.00%	0.0	87.23%	4.0	100.00%	0.0	100.00%	0.0
Apr-22	99.72%	0.1	100.00%	0.0	95.69%	1.3	98.33%	0.5	OFF	OFF	100.00%	0.0
May-22	98.66%	0.4	100.00%	0.0	97.45%	0.8	98.92%	0.3	OFF	OFF	96.51%	1.1
Jun-22	97.78%	0.7	96.25%	1.1	98.19%	0.5	46.67%	16.0	OFF	OFF	98.06%	0.6
Jul-22	100.00%	0.0	100.00%	0.0	100.00%	0.0	100.00%	0.0	86.67%	4.0	98.61%	0.4
Aug-22	98.52%	0.5	100.00%	0.0	96.51%	1.1	65.19%	10.8	99.33%	0.2	100.00%	0.0
Sep-22	100.00%	0.0	99.58%	0.1	100.00%	0.0	94.27%	1.7	97.92%	0.6	100.00%	0.0
Oct-22	89.39%	3.3	100.00%	0.0	82.41%	5.5	99.73%	0.1	79.69%	6.3	100.00%	0.0
Nov-22	100.00%	0.0	100.00%	0.0	97.21%	0.8	88.86%	3.3	100.00%	0.0	100.00%	0.0
Dec-22	85.12%	4.6	98.28%	0.5	99.88%	0.0	OFF	OFF	62.90%	11.5	100.00%	0.0

ADDENDUM TO MONTHLY EMISSIONS REPORT

Particulate Emission Monitors

Availability						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Jan-22	98.66%	OFF	99.19%	99.87%	99.70%	100.00%
Feb-22	98.28%	95.56%	99.67%	100.00%	99.85%	99.40%
Mar-22	94.33%	95.83%	95.56%	99.67%	98.38%	98.79%
Apr-22	96.20%	94.58%	98.99%	99.57%	OFF	100.00%
May-22	97.32%	99.06%	99.65%	99.72%	OFF	100.00%
Jun-22	90.56%	97.50%	97.33%	98.56%	OFF	98.71%
Jul-22	98.92%	98.79%	100.00%	91.10%	100.00%	97.54%
Aug-22	99.85%	96.77%	100.00%	96.24%	98.61%	100.00%
Sep-22	98.69%	100.00%	92.89%	96.01%	99.31%	99.17%
Oct-22	96.61%	97.27%	99.38%	100.00%	95.14%	98.66%
Nov-22	94.72%	95.66%	97.08%	98.85%	98.92%	97.64%
Dec-22	99.09%	93.78%	98.73%	OFF	68.01%	98.66%

Gaseous Emission Monitors

Availability												
	Unit 1		Unit 2		Unit 3		Unit 4		Unit 5		Unit 6	
Month	SO _x	NO _x	SO _x	NO _x	SO _x	NO _x	SO _x	NO _x	SO _x	NO _x	SO _x	NO _x
Jan-22	99.87%	100.00%	0.00%	0.00%	99.87%	100.00%	99.87%	100.00%	99.72%	100.00%	99.48%	99.48%
Feb-22	100.00%	100.00%	100.00%	100.00%	99.85%	100.00%	99.40%	99.40%	99.26%	99.40%	99.55%	99.55%
Mar-22	98.30%	98.30%	98.92%	99.06%	99.06%	99.33%	99.84%	100.00%	98.88%	98.88%	98.79%	98.66%
Apr-22	99.31%	99.31%	99.58%	99.86%	100.00%	99.86%	99.44%	99.86%	OFF	OFF	100.00%	100.00%
May-22	99.71%	99.86%	99.60%	99.60%	99.83%	99.83%	90.93%	91.16%	OFF	OFF	99.83%	99.83%
Jun-22	99.86%	99.86%	99.86%	99.86%	100.00%	100.00%	98.92%	99.07%	OFF	OFF	98.89%	99.17%
Jul-22	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.87%	100.00%	100.00%	100.00%	98.99%	98.85%
Aug-22	100.00%	100.00%	100.00%	100.00%	99.83%	99.83%	99.87%	99.73%	99.70%	99.57%	99.60%	99.73%
Sep-22	100.00%	100.00%	100.00%	100.00%	99.62%	100.00%	93.83%	93.83%	94.86%	94.86%	94.86%	94.86%
Oct-22	98.95%	78.72%	99.87%	100.00%	99.86%	99.86%	100.00%	100.00%	99.86%	99.86%	99.87%	99.87%
Nov-22	99.86%	99.86%	99.72%	99.86%	99.81%	99.81%	100.00%	100.00%	99.72%	99.72%	99.44%	99.44%
Dec-22	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	OFF	OFF	100.00%	99.87%	99.87%	100.00%

Oxygen Monitor Availability						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Jan-22	100.00%	OFF	99.87%	98.25%	99.17%	99.22%
Feb-22	100.00%	100.00%	98.74%	99.55%	99.40%	99.55%
Mar-22	98.30%	98.92%	99.19%	99.84%	98.88%	98.52%
Apr-22	99.13%	100.00%	100.00%	81.67%	OFF	99.72%
May-22	100.00%	99.73%	99.83%	99.75%	OFF	99.83%
Jun-22	99.72%	97.22%	99.52%	98.77%	OFF	98.75%
Jul-22	99.87%	99.87%	99.46%	99.87%	100.00%	98.99%
Aug-22	99.73%	99.60%	99.67%	99.73%	99.40%	99.60%
Sep-22	99.72%	99.71%	99.62%	93.67%	94.72%	94.44%
Oct-22	99.27%	99.87%	99.57%	99.73%	99.72%	99.60%
Nov-22	99.72%	99.72%	99.62%	98.82%	99.44%	99.58%
Dec-22	99.65%	99.72%	99.72%	OFF	99.87%	99.87%

ADDENDUM TO MONTHLY EMISSIONS REPORT

14. EFFICIENCY

ESP Efficiency (%)						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Jan-22	99.845%	OFF	99.765%	99.807%	99.788%	99.834%
Feb-22	99.825%	99.561%	99.743%	99.823%	99.839%	99.745%
Mar-22	99.725%	99.623%	99.726%	99.768%	99.862%	99.816%
Apr-22	99.778%	99.748%	99.786%	99.822%	OFF	99.842%
May-22	99.672%	99.488%	99.880%	99.961%	OFF	99.844%
Jun-22	99.769%	99.712%	99.833%	99.657%	OFF	99.778%
Jul-22	99.850%	99.800%	99.818%	99.753%	99.955%	99.832%
Aug-22	99.878%	99.780%	99.768%	99.680%	99.872%	99.846%
Sep-22	99.836%	99.888%	99.868%	99.666%	99.863%	99.815%
Oct-22	99.779%	99.814%	99.807%	99.826%	99.803%	99.796%
Nov-22	99.767%	99.829%	99.861%	99.771%	99.757%	99.763%
Dec-22	99.791%	99.729%	99.774%	OFF	99.646%	99.804%

15. REMARKS

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
1	218	Manual rapping of precips.	2022/12/01 00:00:00	2022/12/01 00:05:00
1	100	High stack emissions	2022/12/01 10:42:00	2022/12/01 16:01:00
1	100	High stack emissions	2022/12/02 09:31:00	2022/12/02 11:08:00
1	199	High stack emissions	2022/12/02 11:08:00	2022/12/02 17:07:00
1	200	High stack emissions.	2022/12/02 19:15:00	2022/12/02 20:39:00
1	220	High stack emissions.	2022/12/02 20:39:00	2022/12/03 00:08:00
1	200	Emmision test	2022/12/03 00:08:00	2022/12/03 07:16:00
1	197	High stack emissions.	2022/12/03 11:45:00	2022/12/03 17:32:00
1	200	High stack emissions.	2022/12/04 00:24:00	2022/12/04 00:37:00
1	223	High stack emissions.	2022/12/04 00:37:00	2022/12/04 03:36:00
1	100	High stack emissions.	2022/12/04 03:36:00	2022/12/04 05:12:00
1	99	High stack emissions	2022/12/05 09:54:00	2022/12/05 16:58:00
1	98	High stack emissions.	2022/12/06 09:32:00	2022/12/06 14:15:00
1	150	High stack emissions.	2022/12/06 14:15:00	2022/12/06 18:07:00
1	199	EF: High stack emissions	2022/12/06 20:26:00	2022/12/07 05:00:00
1	198	AM: FAB levels high	2022/12/07 05:00:00	2022/12/08 05:31:00
1	48	High stack emissions.	2022/12/15 16:52:00	2022/12/16 03:02:00
1	48	High stack emissions.	2022/12/16 12:18:00	2022/12/16 16:35:00
1	100	High stack emissions.	2022/12/16 21:24:00	2022/12/17 00:23:00
1	98	High stack emissions	2022/12/17 13:56:00	2022/12/17 17:09:00
1	100	High stack emissions.	2022/12/17 20:33:00	2022/12/18 04:05:00
1	99	High stack emissions	2022/12/18 09:30:00	2022/12/18 16:25:00
1	90	Manual rapping	2022/12/19 20:51:00	2022/12/20 04:44:00
1	593	Precips casings washing	2022/12/20 17:16:00	2022/12/26 23:47:00
1	113	LHO precip casing repairs.	2022/12/27 02:47:00	2022/12/27 07:09:00
1	593	Boiler tube leak	2022/12/27 07:09:00	2022/12/30 21:55:00
2	593	LH PA fan motor replacement.	2022/12/03 01:51:00	2022/12/05 09:05:00
2	139	AM: FAB levels high	2022/12/07 05:00:00	2022/12/08 04:47:00
2	98	High stac emissions.	2022/12/08 11:29:00	2022/12/08 23:56:00
2	195	High stack emissions	2022/12/10 10:49:00	2022/12/10 12:03:00
2	150	High stack emissions	2022/12/10 12:03:00	2022/12/10 15:57:00
2	179	EF:High stack emissions	2022/12/10 19:14:00	2022/12/10 20:30:00
2	200	EF:High stack emissions	2022/12/10 20:30:00	2022/12/10 22:37:00
2	237	EF: High stack emissions	2022/12/10 22:37:00	2022/12/11 00:41:00
2	100	EF: High stack emissions	2022/12/11 02:50:00	2022/12/11 04:46:00
2	97	EF: High stack emissions	2022/12/11 12:39:00	2022/12/11 17:29:00
2	98	High stack emissions.	2022/12/11 19:24:00	2022/12/12 00:07:00
2	99	High stack emissions.	2022/12/12 19:28:00	2022/12/13 00:25:00
2	98	EF: De-energizing rapping	2022/12/13 20:10:00	2022/12/14 04:52:00
2	99	High stack emissions.	2022/12/14 10:56:00	2022/12/14 12:19:00
2	151	High stack emissions.	2022/12/14 12:19:00	2022/12/14 15:25:00
2	107	EF: High stack emissions	2022/12/14 15:25:00	2022/12/14 16:49:00
2	197	High stack emissions	2022/12/14 18:46:00	2022/12/15 05:37:00
2	61	High stack emissions.	2022/12/15 05:37:00	2022/12/15 06:02:00
2	148	High stack emissions.	2022/12/15 15:19:00	2022/12/15 19:33:00
2	200	High stack emissions.	2022/12/15 19:33:00	2022/12/15 19:56:00
2	158	High stack emissions.	2022/12/15 19:56:00	2022/12/16 04:31:00
2	593	Low drum level.	2022/12/16 07:36:00	2022/12/16 11:44:00
2	100	High stack emissions	2022/12/17 20:36:00	2022/12/18 00:28:00
2	100	High stack emissions	2022/12/18 09:15:00	2022/12/18 09:52:00
2	152	High stack emissions	2022/12/18 09:52:00	2022/12/18 16:35:00
2	81	High emissions.	2022/12/19 05:49:00	2022/12/19 07:45:00
2	151	EF: High stack emissions	2022/12/19 07:45:00	2022/12/19 11:45:00
2	181	High stack emissions.	2022/12/19 11:45:00	2022/12/20 16:52:00
2	98	High stack emissions.	2022/12/20 16:52:00	2022/12/20 17:40:00

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
2	181	High stack emissions.	2022/12/20 17:40:00	2022/12/21 00:43:00
2	100	RHI precip casing repairs.	2022/12/21 00:43:00	2022/12/21 18:57:00
2	96	High stack emissions.	2022/12/23 12:07:00	2022/12/23 17:12:00
2	100	High stack emissions.	2022/12/23 19:44:00	2022/12/23 21:17:00
2	147	High stack emissions.	2022/12/23 21:17:00	2022/12/23 22:29:00
2	179	High stack emissions.	2022/12/23 22:29:00	2022/12/24 02:29:00
2	50	High stack emissions.	2022/12/24 10:30:00	2022/12/24 17:00:00
2	149	High stack emissions.	2022/12/24 19:34:00	2022/12/25 02:24:00
2	95	high stack emissions	2022/12/25 11:24:00	2022/12/25 14:30:00
2	150	high stack emissions	2022/12/25 14:30:00	2022/12/25 22:13:00
2	97	EF: De-energized rapping	2022/12/26 01:00:00	2022/12/26 02:28:00
2	51	High stack emissions.	2022/12/26 22:43:00	2022/12/27 00:02:00
2	147	EF: High stack emissions	2022/12/27 10:17:00	2022/12/27 16:00:00
2	99	Clean rapping	2022/12/28 01:00:00	2022/12/28 04:50:00
2	71	AM: Manuall rapping	2022/12/28 21:44:00	2022/12/29 05:07:00
2	114	High stack emissions.	2022/12/29 09:15:00	2022/12/29 17:07:00
2	100	AM: LHO precip casing repairs	2022/12/30 00:55:00	2022/12/31 00:50:00
3	118	High stack emissions.	2022/12/04 03:23:00	2022/12/04 06:25:00
3	115	High stack emissions.	2022/12/04 11:22:00	2022/12/04 16:48:00
3	165	High stack emissions.	2022/12/04 19:32:00	2022/12/04 20:11:00
3	218	High stack emissions.	2022/12/04 20:11:00	2022/12/04 21:42:00
3	237	High stack emissions.	2022/12/04 21:42:00	2022/12/05 00:58:00
3	112	High stack emissions	2022/12/05 13:41:00	2022/12/05 17:00:00
3	215	Dust plant standing	2022/12/05 22:46:00	2022/12/06 04:21:00
3	118	AM: Dust plant standing	2022/12/06 04:21:00	2022/12/06 05:13:00
3	164	High stack emissions.	2022/12/06 14:10:00	2022/12/06 17:50:00
3	115	EF: High stack emissions	2022/12/06 19:51:00	2022/12/07 00:00:00
3	48	High Fly Ash Bunker levels	2022/12/07 00:31:00	2022/12/07 04:58:00
3	167	FAB level high	2022/12/07 04:58:00	2022/12/07 16:32:00
3	96	Clean rapping.	2022/12/08 00:59:00	2022/12/08 04:54:00
3	593	Boiler tube leak.	2022/12/08 07:07:00	2022/12/10 16:50:00
3	98	High stack emissions.	2022/12/12 19:27:00	2022/12/13 00:16:00
3	100	High stack emissions.	2022/12/13 11:15:00	2022/12/13 17:00:00
3	98	EF: High stack emissions	2022/12/13 19:55:00	2022/12/14 00:13:00
3	113	EF: High stack emissions	2022/12/14 12:48:00	2022/12/14 16:46:00
3	115	EF: High stack emissions	2022/12/14 20:18:00	2022/12/15 00:11:00
3	115	Manual rapping as per Specific instruction.	2022/12/15 20:17:00	2022/12/16 00:29:00
3	66	High stack emissions.	2022/12/16 13:50:00	2022/12/16 16:12:00
3	97	High stack emissions.	2022/12/16 20:02:00	2022/12/17 00:40:00
3	116	High stack emissions	2022/12/17 13:51:00	2022/12/17 17:13:00
3	101	High stack emissions	2022/12/18 09:14:00	2022/12/18 16:10:00
3	98	High stack emissions.	2022/12/19 12:25:00	2022/12/19 16:39:00
3	201	manual rapping.	2022/12/20 00:25:00	2022/12/20 03:19:00
3	97	High stack emissions.	2022/12/20 10:09:00	2022/12/20 16:54:00
3	28	High stack emissions.	2022/12/20 16:54:00	2022/12/20 18:08:00
3	47	high stack emissions.	2022/12/20 18:08:00	2022/12/21 00:45:00
3	197	manual rapping.	2022/12/21 20:43:00	2022/12/22 05:03:00
3	51	High stack emissions	2022/12/22 22:06:00	2022/12/23 00:08:00
3	100	Manual rapping.	2022/12/23 01:03:00	2022/12/23 02:00:00
3	100	High stack emissions.	2022/12/23 08:55:00	2022/12/23 17:04:00
3	201	High stack emissions.	2022/12/23 19:47:00	2022/12/24 02:14:00
3	101	RHO Precip Casing repairs	2022/12/24 02:14:00	2022/12/24 19:02:00
3	200	High stack emissions.	2022/12/25 00:18:00	2022/12/25 05:19:00
3	118	high stack emissions	2022/12/25 10:23:00	2022/12/25 14:38:00
3	168	high stack emissions	2022/12/25 14:38:00	2022/12/25 20:03:00
3	118	EF: De-energized rapping	2022/12/26 01:00:00	2022/12/26 02:28:00
3	118	High stack emissions	2022/12/26 14:23:00	2022/12/26 17:14:00
3	118	High stack emissions.	2022/12/26 19:46:00	2022/12/26 20:27:00

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
3	168	High stack emissions.	2022/12/26 20:27:00	2022/12/26 21:08:00
3	218	High stack emissions.	2022/12/26 21:08:00	2022/12/27 00:42:00
3	100	for clean rapping.	2022/12/27 00:42:00	2022/12/27 05:01:00
3	168	EF: High stack emissions	2022/12/27 10:18:00	2022/12/27 11:35:00
3	218	EF: High stack emissions	2022/12/27 11:35:00	2022/12/27 18:11:00
3	118	EF: High stack emissions	2022/12/27 18:11:00	2022/12/28 06:05:00
3	218	rapping	2022/12/28 20:54:00	2022/12/29 06:19:00
3	118	High stack emissions.	2022/12/29 09:16:00	2022/12/29 20:24:00
3	200	high stack emissions.	2022/12/30 10:06:00	2022/12/30 16:11:00
3	100	high stack emissions.	2022/12/30 16:11:00	2022/12/30 16:57:00
3	118	AM: LHO Precip casing repairs	2022/12/31 01:00:00	2022/12/31 23:59:59
4	593	Unit shut down due to IR.	2022/12/01 00:00:00	2022/12/31 23:59:59
5	89	high stack emissions	2022/12/01 11:22:00	2022/12/01 15:57:00
5	87	EF:Manual rapping	2022/12/01 19:58:00	2022/12/02 00:29:00
5	188	EF: High stack emissions	2022/12/02 00:29:00	2022/12/02 04:30:00
5	87	High stack emissions.	2022/12/02 20:24:00	2022/12/03 00:44:00
5	189	High stack emissions.	2022/12/03 00:44:00	2022/12/03 05:11:00
5	87	High stack emissions	2022/12/03 11:04:00	2022/12/03 16:48:00
5	90	High stack emissions.	2022/12/04 00:13:00	2022/12/04 04:53:00
5	86	High stack emissions	2022/12/05 09:49:00	2022/12/05 23:08:00
5	197	High stack emissions	2022/12/05 23:08:00	2022/12/06 00:00:00
5	190	Emissions test	2022/12/06 00:00:00	2022/12/06 05:00:00
5	190	EF: High stack emissions	2022/12/06 05:00:00	2022/12/07 04:41:00
5	100	Fly ash bunker level high	2022/12/07 04:41:00	2022/12/08 04:57:00
5	90	RHO precip casing repairs.	2022/12/08 04:57:00	2022/12/09 00:00:00
5	87	EF: High stack emissions	2022/12/11 12:40:00	2022/12/11 17:14:00
5	89	High stack emissions.	2022/12/11 19:30:00	2022/12/12 00:07:00
5	87	FAB levels high.	2022/12/15 14:18:00	2022/12/15 16:43:00
5	46	High stack emissions.	2022/12/16 19:46:00	2022/12/17 00:10:00
5	48	High stack emissions.	2022/12/17 19:57:00	2022/12/18 00:13:00
5	189	Manual rapping	2022/12/20 20:48:00	2022/12/21 00:19:00
5	187	SO3 plant leak repairs.	2022/12/21 01:02:00	2022/12/23 16:53:00
5	105	SO3 plant leak repairs	2022/12/23 16:53:00	2022/12/23 20:08:00
5	190	SO3 plant leak repairs	2022/12/23 20:08:00	2022/12/30 05:33:00
5	593	Delta T's	2022/12/30 05:33:00	2022/12/30 12:55:00
6	71	High stack emissions.	2022/12/02 20:15:00	2022/12/03 01:06:00
6	118	RHO Precip Casing repairs.	2022/12/03 01:06:00	2022/12/03 23:47:00
6	121	FAB level high	2022/12/07 01:33:00	2022/12/07 02:12:00
6	216	FAB levels high	2022/12/07 02:12:00	2022/12/08 05:01:00
6	118	AM: RHI precip casing repairs	2022/12/10 23:59:00	2022/12/11 23:08:00
6	593	tripped due to Boiler Flame off protection	2022/12/14 04:56:00	2022/12/14 09:37:00
6	118	FAB levels high.	2022/12/15 14:18:00	2022/12/15 16:45:00
6	68	High stack emissions.	2022/12/19 20:10:00	2022/12/20 00:07:00
6	68	High stack emissions.	2022/12/20 19:35:00	2022/12/20 21:17:00
6	118	High stack emissions.	2022/12/20 21:17:00	2022/12/21 02:41:00
6	118	manual rapping	2022/12/22 00:58:00	2022/12/22 02:03:00
6	118	Manual rapping.	2022/12/23 01:03:00	2022/12/23 01:55:00
6	58	EF: High stack emissions	2022/12/27 12:31:00	2022/12/27 17:55:00
6	118	FAB 3 level high	2022/12/31 02:16:00	2022/12/31 15:57:00

PM Exceedances		
U1.	SO3 Plant offline for supply leak and ESP Poor performance	04-Dec
U1.	SO3 Plant offline for supply leak and ESP Poor performance	05-Dec
U1.	ESP poor performance	12-Dec
U1.	ESP Poor Performance	15-Dec
U1.	ESP Poor Performance	17-Dec
U1.	Manual Rapping and Poor ESP Performance	19-Dec
U1.	Unit Shut Down Due to Boiler Tube Leak and Planned Casing Washing	20-Dec
U1.	Unit Light Up	31-Dec
U2.	Poor ESP Performance	02-Dec
U2.	Unit Shut Down for PA fan replacement	03-Dec
U2.	The unit was synchronised on 2022/12/05 @ 09:05, the emissions should be below the limit by 2022/12/08 @ 09:05 and remain below the limit until 2022/12/09 @ 23:59	05-Dec
U2.	Unit Light up	06-Dec
U2.	ESP Poor Performance and Manual Rapping	09-Dec
U2.	ESP poor performance and manual rapping	13-Dec
U2.	ESP poor performance and clean rapping not done	14-Dec
U2.	Unit synchronised on 2022/12/16 @ 11:46, emissions to be below the limit today, 2022/12/19 @ 11:46 and remain below the limit until 2022/12/20 @ 23:59	16-Dec
U2.	Unit Light Up	17-Dec
U2.	Unit Light Up	18-Dec
U2.	RHI Casing	21-Dec
U2.	ESP Poor Performance	27-Dec
U2.	ESP Poor Performance and Manual Rapping	28-Dec
U2.	LHO Casing Outage	30-Dec
U3.	ESP Poor Performance	03-Dec
U3.	ESP Poor Performance and SO3 plant dosing at 17ppm	04-Dec
U3.	SO3 plant challenges were experienced yesterday and progress was made since the VSD was replaced on the plant	05-Dec
U3.	High Hopper Levels	08-Dec
U3.	Manual Rapping and poor esp performance	15-Dec
U3.	Manual Rapping and Poor ESP Performance	17-Dec
U3.	High Air flows and Poor ESP performance	19-Dec
U3.	Manual Rapping and Poor ESP Performance	21-Dec
U3.	ESP Poor Performance and Manual rapping	28-Dec
U3.	LHO Casing Outage	31-Dec

PM Exceedances Continued		
U5.	Esp Poor Performance and Manual rapping	01-Dec
U5.	ESP Poor Performance and high hopper levels	03-Dec
U5.	Manual Rapping & High Hopper Levels	04-Dec
U5.	RHO Casing isolated for high hopper levels	05-Dec
U5.	RHO casing maintenance was performed last night	07-Dec
U5.	Manual Rapping	08-Dec
U5.	ESP poor Performance and Manual rapping	10-Dec
U5.	SO3 Plant Offline for Burner nozzle leak repairs	20-Dec
U5.	SO3 Plant Offline for Burner nozzle leak repairs	22-Dec
U5.	SO3 Plant offline	23-Dec
U5.	SO3 plant offline	24-Dec
	SO3 plant offline	
U5.	NEMA S30 Reported	25-Dec
U5.	SO3 plant offline	26-Dec
U5.	SO3 plant offline	27-Dec
	SO3 plant offline	
U5.	Manual Rapping	28-Dec
U5.	SO3 plant offline	29-Dec
U5.	Unit tripped	30-Dec
	Unit Light Up	
	SO3 Plant offline for repairs	
U5.	Still under Section 30	31-Dec
U6.	RHO fields switched off for casing outage	03-Dec
U6.	ESP poor performance and Manual rapping	10-Dec
U6.	RHI Casing Outage	11-Dec