



Mr. Mcebo Mkhathswa
Air Quality Officer
Fezile Dabi District Municipality
P.O Box 10
Sasolburg
1947

Date:
21 January 2025

Enquiries:
W de Klerk
Tel +27 16 457 5308

LRP01PLA000 _0432/20250113

Dear Mr. Mkhathswa

LETHABO POWER STATION EMISSION MONTHLY REPORT FOR DECEMBER 2024

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

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

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

Yours sincerely

Karabo Rakgolela
GENERAL MANAGER

Generation Division
Lethabo Power Station
Viljoensdrif / Deneysville Free State
Private Bag X415 Vereeniging 1930 SA
Tel +27 16 457 5111 www.eskom.co.za

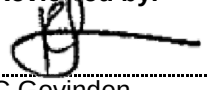
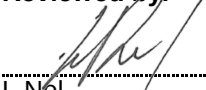
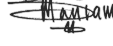
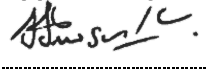
Eskom Holdings SOC Ltd Reg No 2002/015527/30

	Report	Lethabo Power Station
---	--------	-----------------------

Report name:	Lethabo Power Station December 2024 Emission Report	Reference number:	LRP01PLA000 _0432/20250113
		Document Type:	Report
		Area of Applicability:	Environment
		Report Date:	January-2025
		Classification:	Controlled Disclosure

Signatures:

Compiled by:  B Moletsane System Engineer	Verified by :  W de Klerk Senior Advisor	Reviewed by:  p.p Z. Vilakazi Nathi Mazibuko BPE Manager
Date: 21/01/2025	Date: 2025 01 21	Date: 21/01/2025

Reviewed by:  C Govinden PE Manager	Reviewed by:  L Nel C&I Manager	Reviewed by:  M Hariram Environmental Manager
Date: 2025/01/22	Date: 2025-01-23	Date: 2025-01-24
Reviewed by:  Thuli Njaha Engineering Manager	Approved by:  H Sewsunker Techincal Manager	
Date: 28/01/2025	Date: 2025/01/29	

CONTROLLED DISCLOSURE

When downloaded from the database, this document is uncontrolled and it is the responsibility of the user to ensure that it is the same as the authorised revision on the data base
 Copyright © 2008, Eskom Generation, Lethabo Power Station

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-2024
	Coal	Tons	2 000 000	969 224
	Fuel Oil	Tons	1 700	1290.580
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Indicative Production Rate Dec-2024
	Energy	GWh	2 834.640	1 441.317
	Ash	Tons	770 000	355 511.418
	RE Ash	kg/MWh	Not Specified	246.657

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

2. ENERGY SOURCE CHARACTERISTICS

Coal Characteristic	Units	Stipulated Range	Monthly Average Content
Sulphur Content	%	0.656 (Standard)	0.760
Ash Content	%	37.37 (Standard)	36.680

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	NO _x
Unit 1	100	3500	1100
Unit 2	100	3500	1100
Unit 3	100	3500	1100
Unit 4	100	3500	1100
Unit 5	100	3500	1100
Unit 6	100	3500	1100

4. ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Dec-2024	Technology Type	SO ₃ Utilization Dec-2024
Unit 1	Electrostatic Precipitator (ESP)	99.77%	SO ₃	52.8%
Unit 2	Electrostatic Precipitator (ESP)	99.72%	SO ₃	27.1%
Unit 3	Electrostatic Precipitator (ESP)	Unit Off-line	SO ₃	Off-line
Unit 4	Electrostatic Precipitator (ESP)	99.51%	SO ₃	77.3%
Unit 5	Electrostatic Precipitator (ESP)	99.69%	SO ₃	66.7%
Unit 6	Electrostatic Precipitator (ESP)	99.89%	SO ₃	60.9%

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	100.0	57.5	57.5
Unit 2	96.6	37.5	37.5
Unit 3	0.0	0.0	0.0
Unit 4	98.2	79.7	79.7
Unit 5	96.3	66.7	66.7
Unit 6	99.6	65.6	65.7

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

6. EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of December 2024

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)
Unit 1	167.5	2 807	1 257
Unit 2	119.5	1 792	694
Unit 3	0	0	0
Unit 4	209.5	2 507	1 212
Unit 5	224.6	3931	1373
Unit 6	94.1	3 597	1 643
SUM	815.2	14 634	6 177

Table 6.2: Operating days in compliance to PM AEL Limit - December 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contraven- tion	Total Exceedance	Average PM (mg/Nm³)
Unit 1	13	10	0	1	11	111.1
Unit 2	7	8	0	1	9	123.1
Unit 3	0	0	0	0	0	0.0
Unit 4	8	13	0	0	13	149.3
Unit 5	21	8	0	0	8	109.1
Unit 6	29	2	0	0	2	53.4
SUM	78	41	0	2	43	

Table 6.3: Operating days in compliance to SO₂ AEL Limit - December 2024

Associated Unit/Stack	Normal	Grace	Section 30	Contraven- tion	Total Exceedance	Average SO ₂ (mg/Nm³)
Unit 1	25	0	0	0	0	1 706.8
Unit 2	17	0	0	0	0	1 594.2
Unit 3	0	0	0	0	0	
Unit 4	23	0	0	0	0	1 586.3
Unit 5	29	0	0	0	0	1 941.1
Unit 6	31	0	0	0	0	1 862.8
SUM	125	0	0	0	0	

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

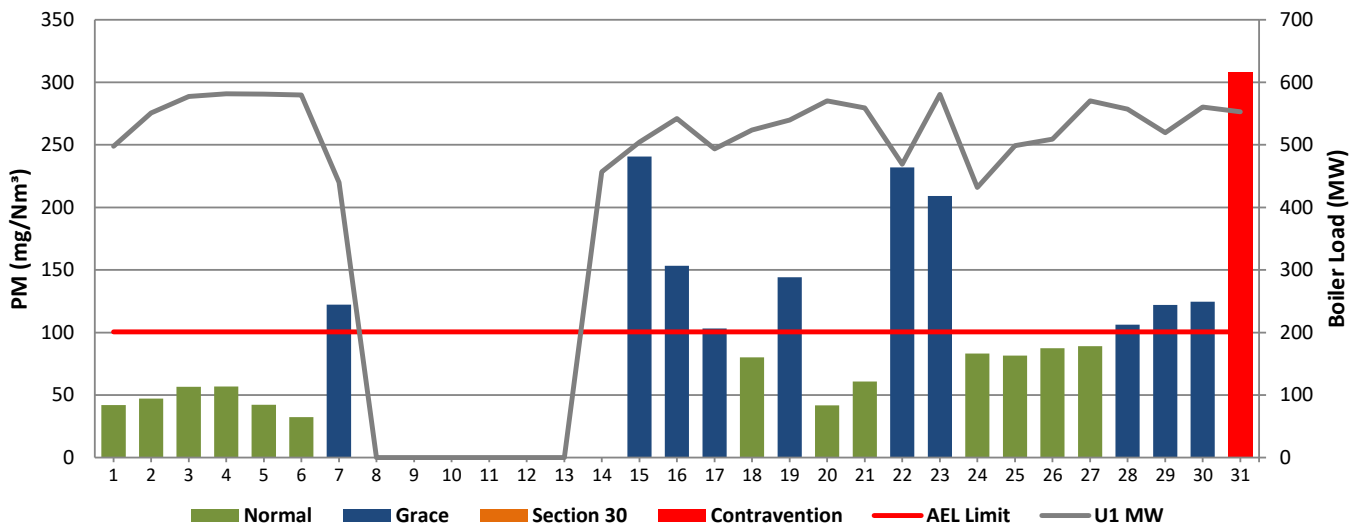
Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average NOx (mg/Nm³)
Unit 1	25	0	0	0	0	757.2
Unit 2	17	0	0	0	0	613.0
Unit 3	0	0	0	0	0	
Unit 4	23	0	0	0	0	746.1
Unit 5	29	0	0	0	0	679.5
Unit 6	31	0	0	0	0	849.7
SUM	125	0	0	0	0	

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

Table 6.5: Legend Description

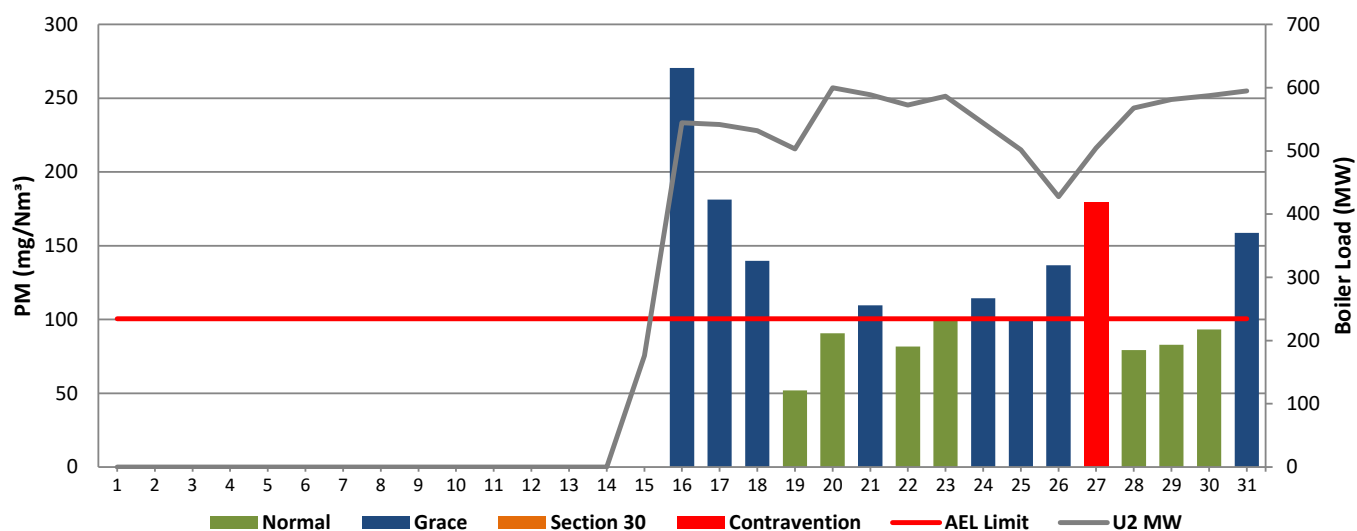
Condition	Colour	Description
Normal	GREEN	Emissions below Emission Limit Value (ELV)
Grace	BLUE	Emissions above the ELV during grace period
Section 30	ORANGE	Emissions above ELV during a NEMA S30 incident
Contra-vention	RED	Emissions above ELV but outside grace or S30 incident conditions

Figure 1: Lethabo Unit 1 PM Emissions - December 2024



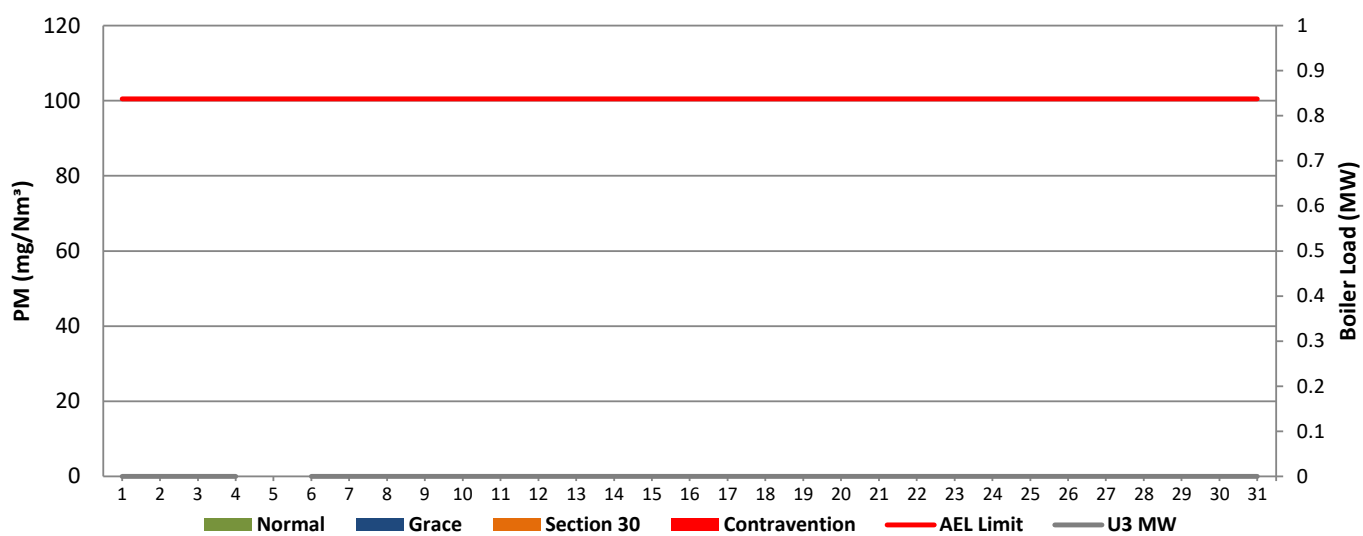
Reasons:	
Date	Description:
07-Dec	Unit 1 shut down.
15-Dec	Unit 1 start up conditions
16-Dec	Unit 1 start up conditions
17-Dec	Unit 1 start up conditions Dust plant issues.
19-Dec	Dust plant issues 4 x high hopper levels Manual rapping done. SO3 plant tripped.
22-Dec	SO3 plant tripped + Poor ESP casing performance.
23-Dec	SO3 plant tripped. Poor ESP casing performance. Manual rapping done.
28-Dec	High hopper levels.
29-Dec	SO3 plant sulphur flow lost.
30-Dec	SO3 plant sulphur flow lost + Manual rapping done.
31-Dec	SO3 plant sulphur flow lost.

Figure 2: Lethabo Unit 2 PM Emissions - December 2024



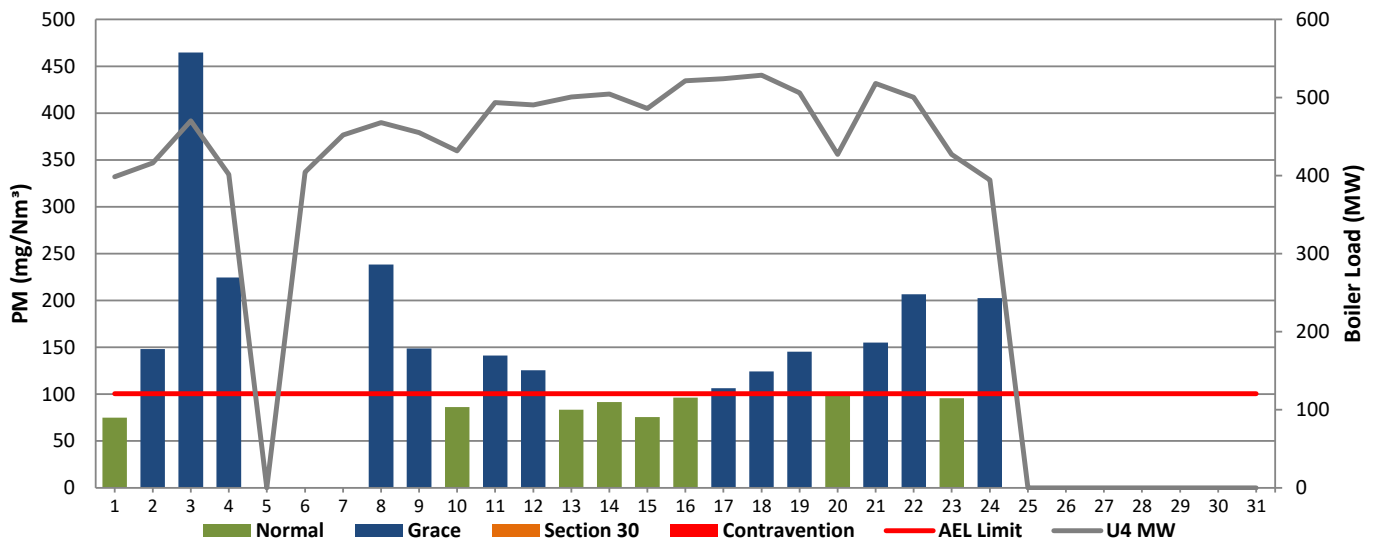
Reasons:	
Date	Description:
16-Dec	Unit 2 start up conditions.
17-Dec	Unit 2 start up conditions.
18-Dec	Manual rapping done
21-Dec	RHI Casing on PTW for fuse carrier locking mechanism.
24-Dec	RHI Casing poor performance.
25-Dec	RHI Casing poor performance.
26-Dec	RHI Casing poor performance. Manual rapping done.
27-Dec	RHI Casing outage.
31-Dec	SO3 plant sulphur flow issues. RHI ESP casing faulty.

Figure 3: Lethabo Unit 3 PM Emissions - December 2024



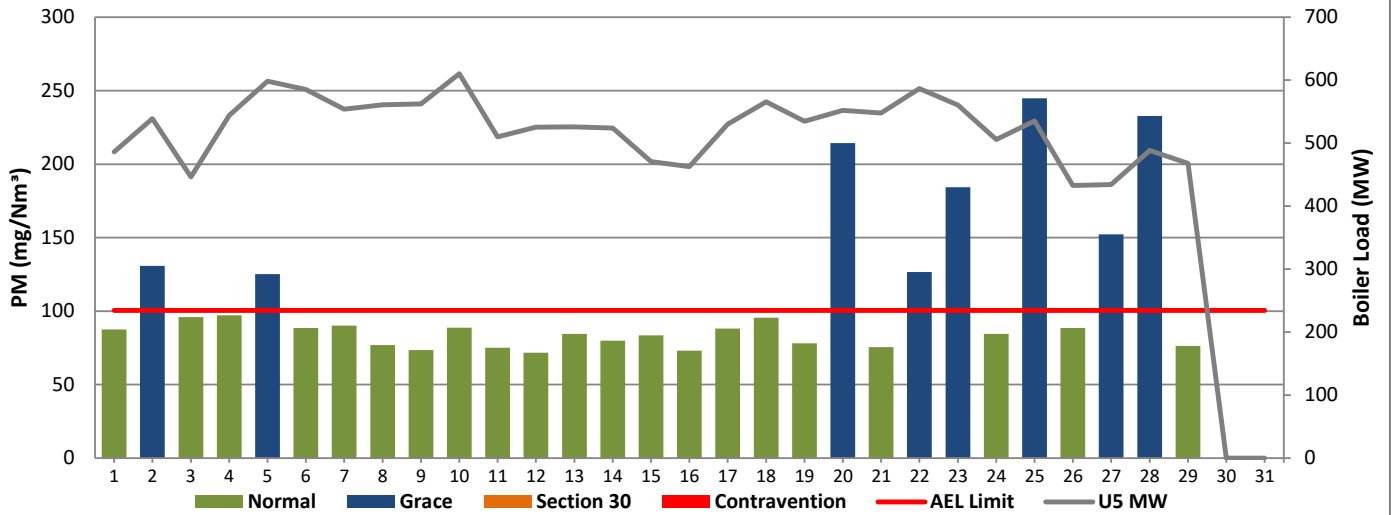
Reasons:	
Date	Description:

Figure 4: Lethabo Unit 4 PM Emissions - December 2024



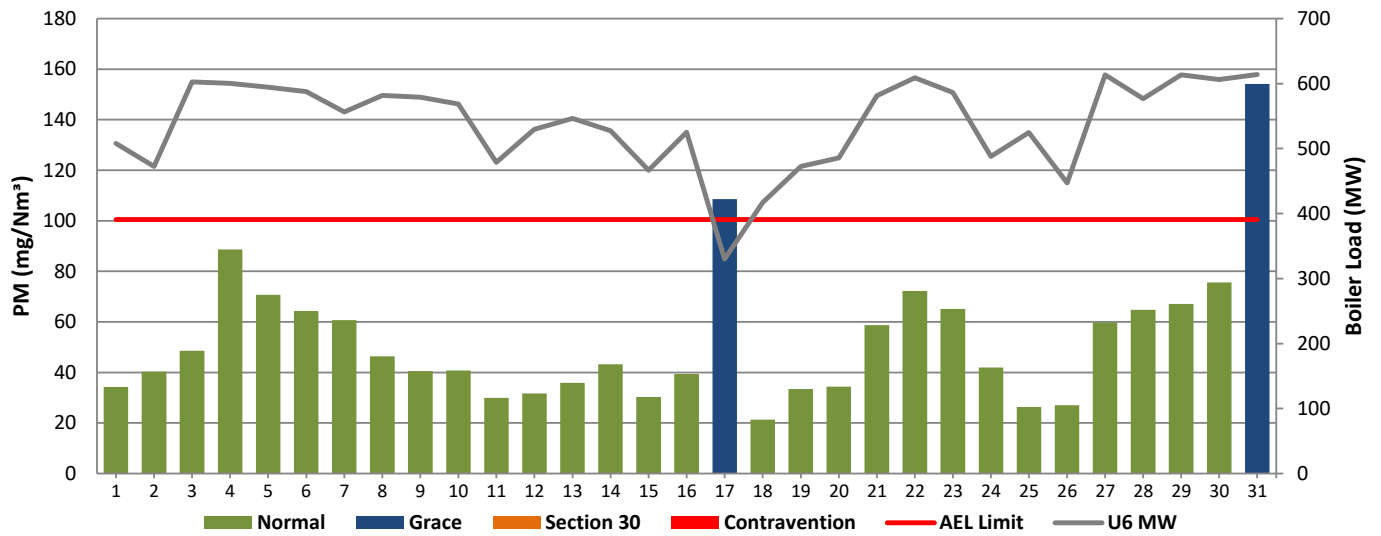
Reasons:	
Date	Description:
02-Dec	Poor Casing Performance
03-Dec	RHI Outage
04-Dec	Unit S/D
08-Dec	Light up conditions after Boiler trip.
09-Dec	Clean rapping brought forward.
11-Dec	Clean rapping brought forward.
12-Dec	RHI Casing poor performance.
17-Dec	Poor ESP casing performance.
18-Dec	Poor esp casing performance.
19-Dec	Poor ESP casing performance. High hopper levels.
21-Dec	ESP casing poor performance. Manual rapping done.
22-Dec	ESP casing poor performance. Manual rapping done.
24-Dec	ESP casing poor performance. Unit shut down for IN.

Figure 5: Lethabo Unit 5 PM Emissions - December 2024



Reasons:	
Date	Description:
02-Dec	Poor casing performance.
05-Dec	Clean rapping brought forward.
20-Dec	ESP casing poor performance. Manual rapping done.
22-Dec	ESP casing poor performance.
23-Dec	ESP casing poor performance. Manual rapping done.
25-Dec	ESP casing poor performance. Manual rapping done.
27-Dec	ESP casing poor performance.
28-Dec	Poor performance on RHI casing.

Figure 6: Lethabo Unit 6 PM Emissions - December 2024



Reasons:	
Date	Description:
17-Dec	Unit 6 tripped.
31-Dec	SO3 plant sulphur flow issues.

Figure 7: Lethabo Unit 1 SO₂ Emissions - December 2024

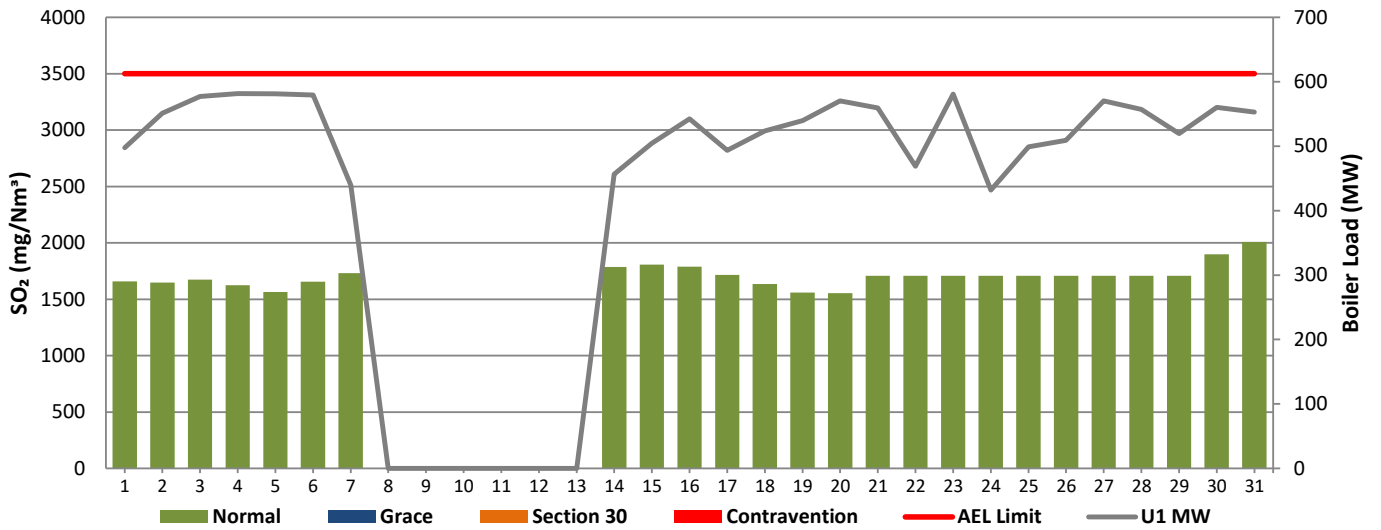


Figure 8: Lethabo Unit 2 SO₂ Emissions - December 2024

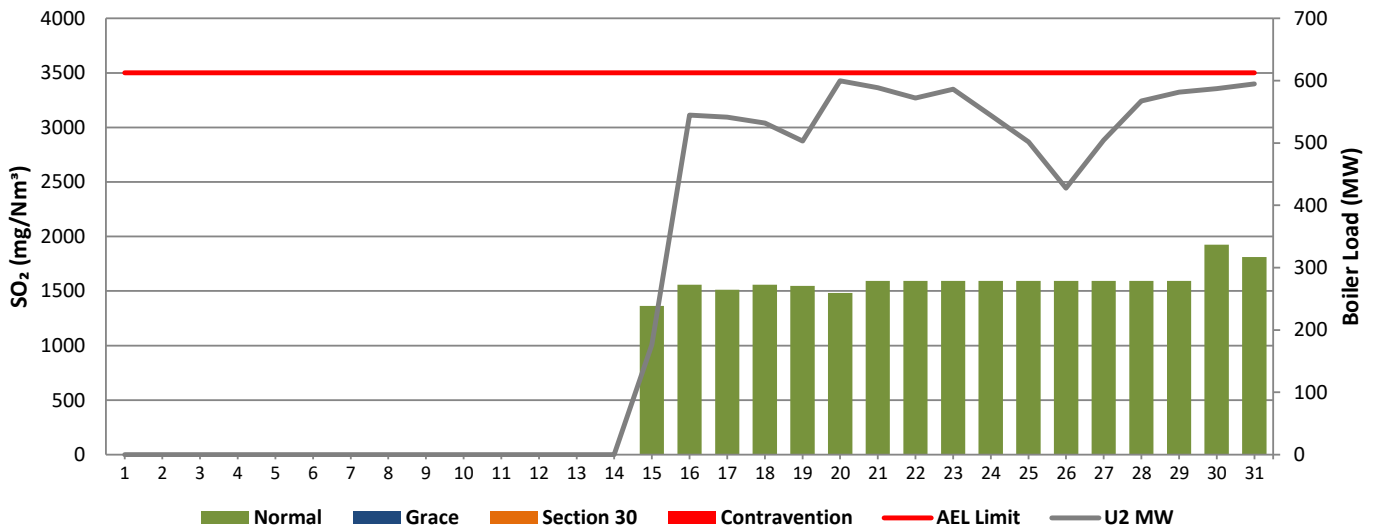


Figure 9: Lethabo Unit 3 SO₂ Emissions - December 2024

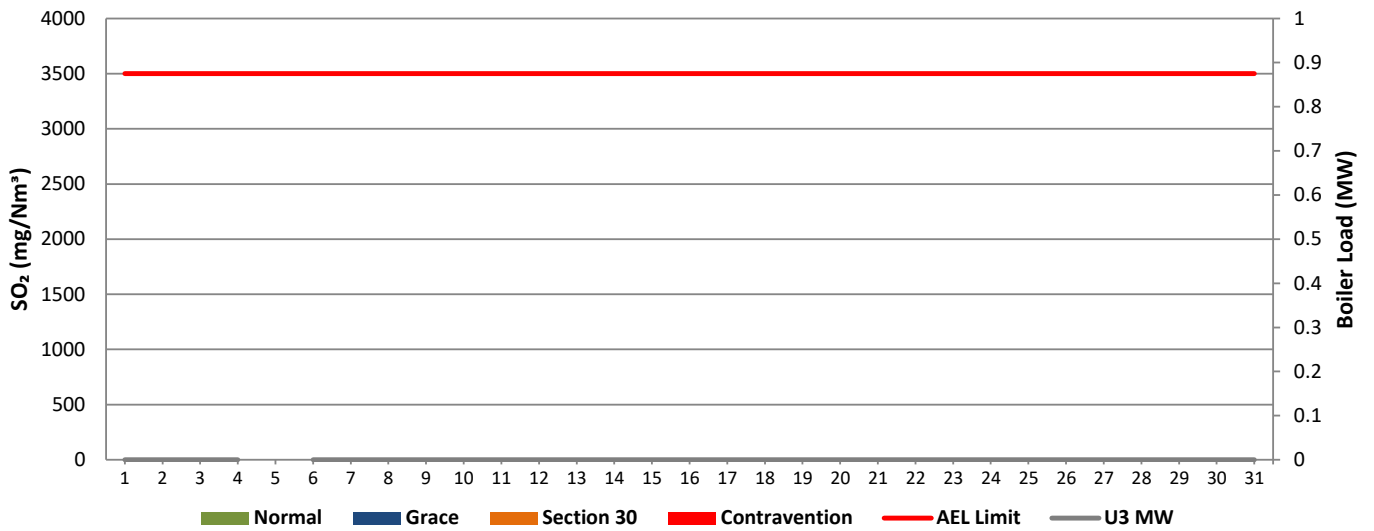


Figure 10: Lethabo Unit 4 SO₂ Emissions - December 2024

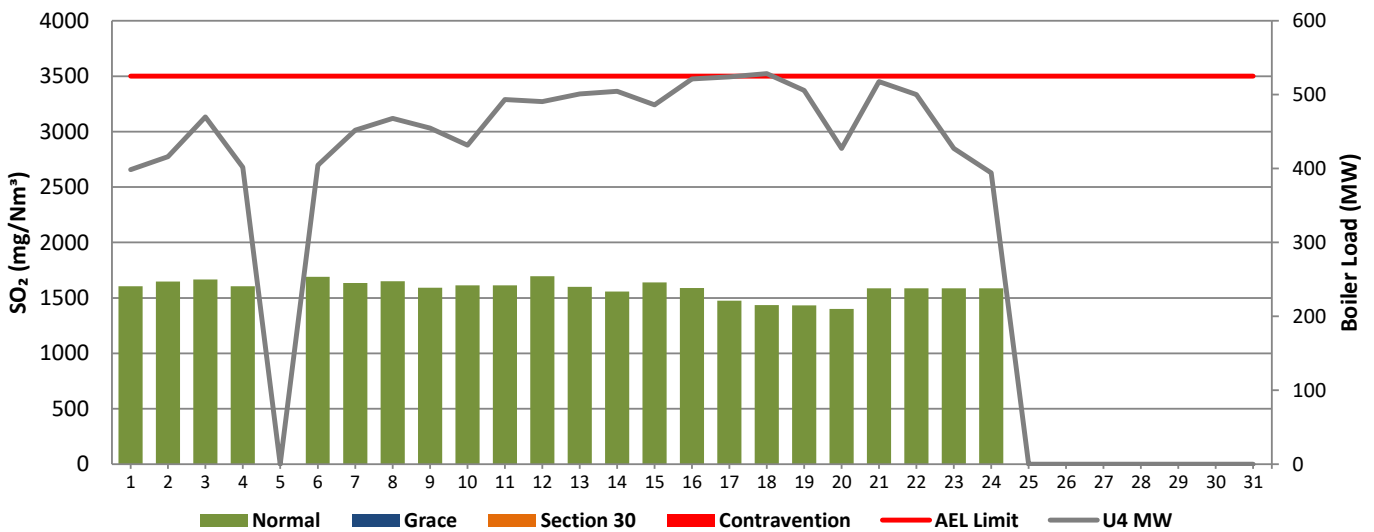


Figure 11: Lethabo Unit 5 SO₂ Emissions - December 2024

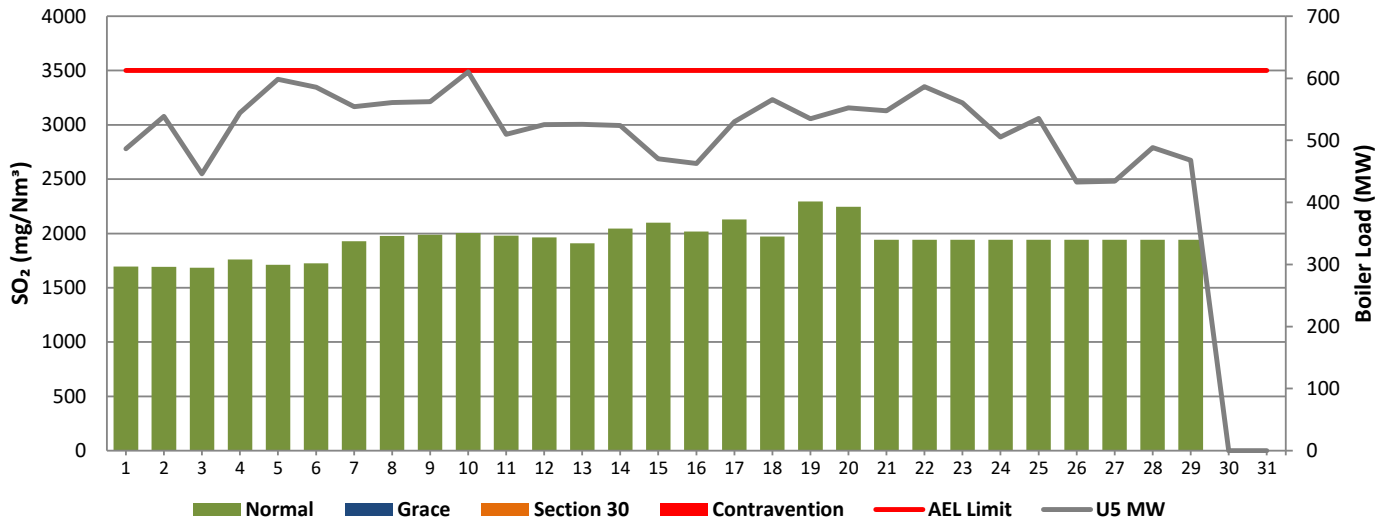


Figure 12: Lethabo Unit 6 SO₂ Emissions - December 2024

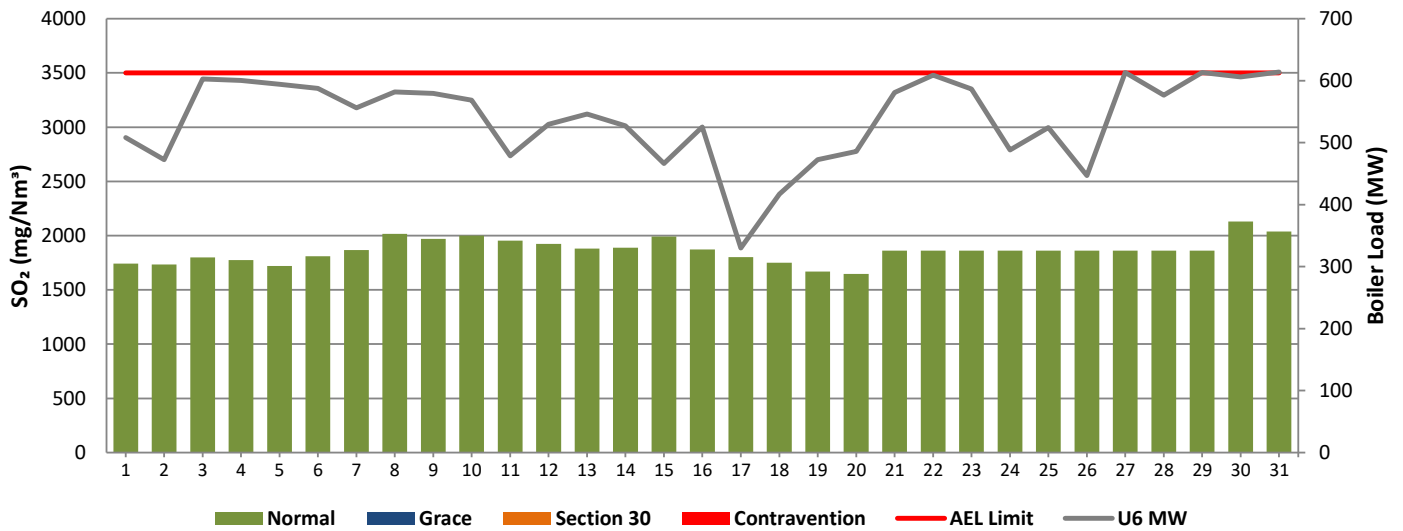


Figure 13: Lethabo Unit 1 NOx Emissions - December 2024

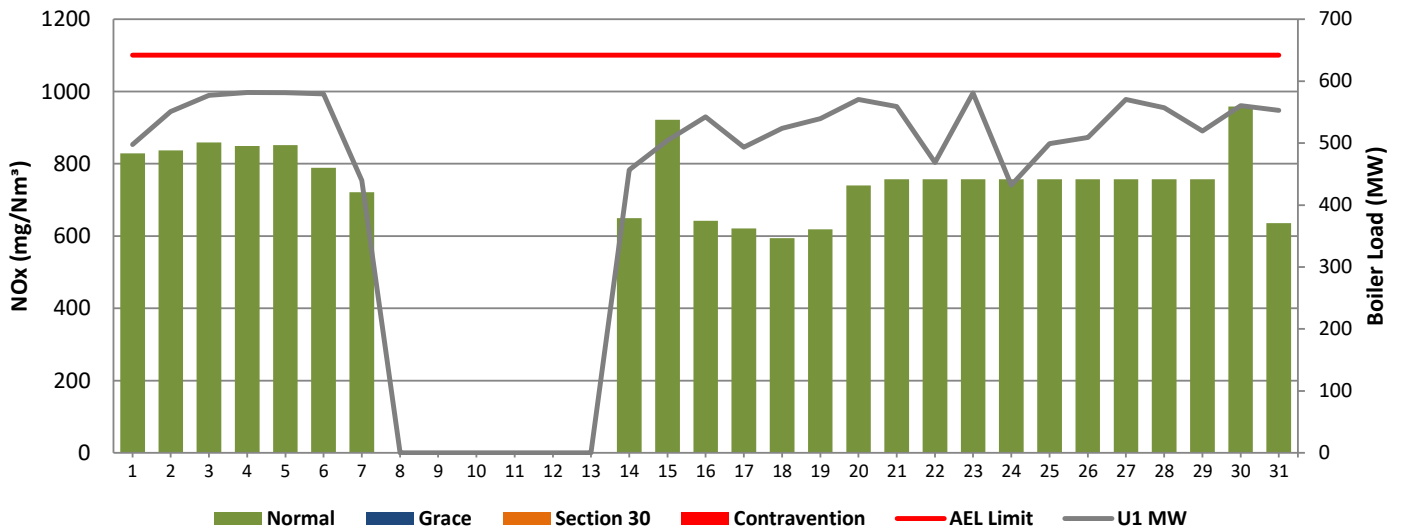


Figure 14: Lethabo Unit 2 NOx Emissions - December 2024

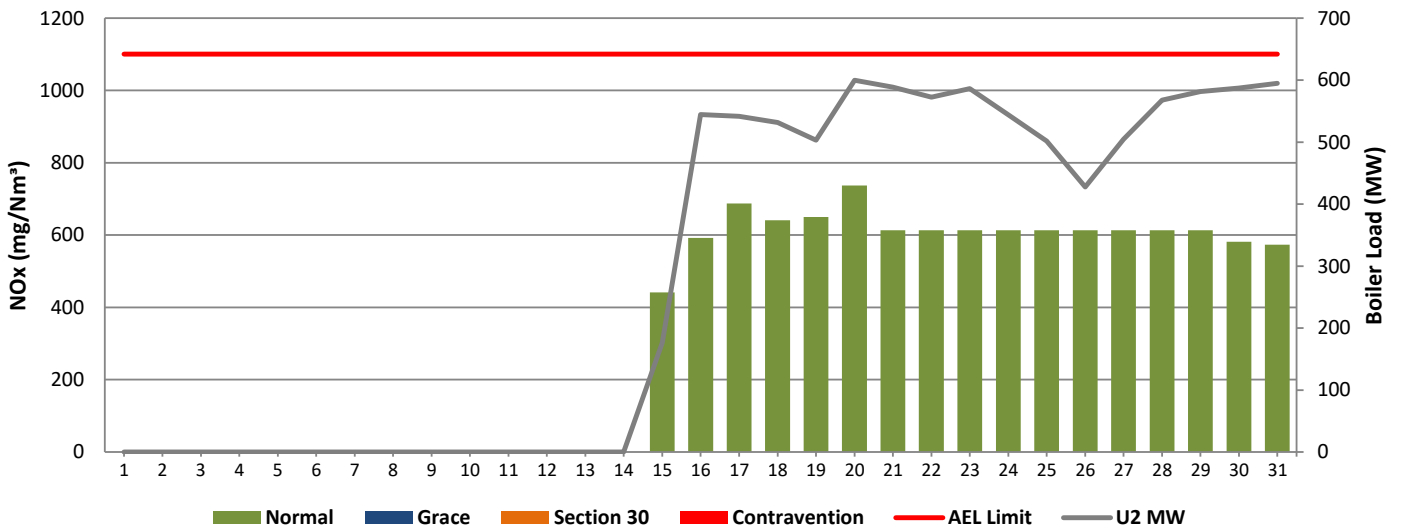


Figure 15: Lethabo Unit 3 NOx Emissions - December 2024

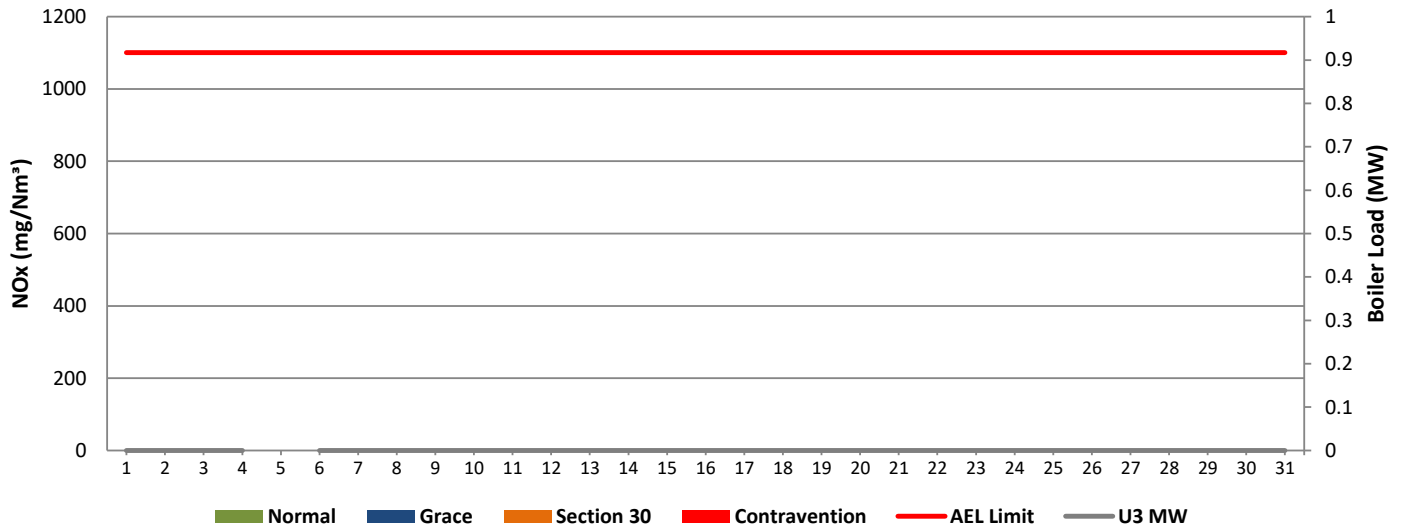


Figure 16: Lethabo Unit 4 NOx Emissions - December 2024

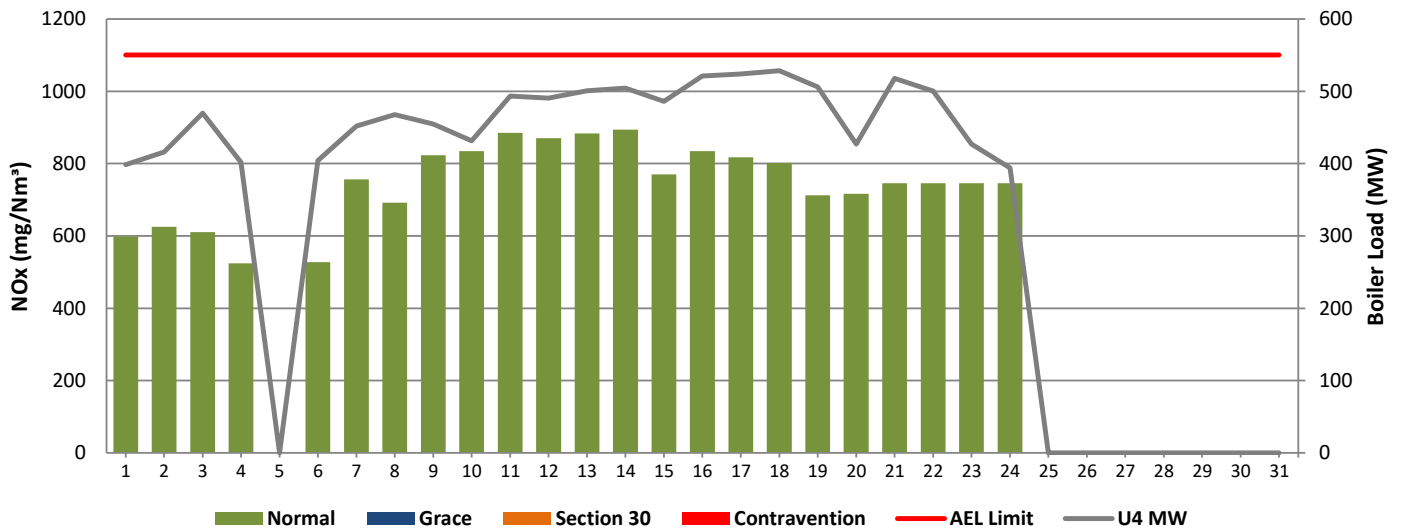


Figure 17: Lethabo Unit 5 NOx Emissions - December 2024

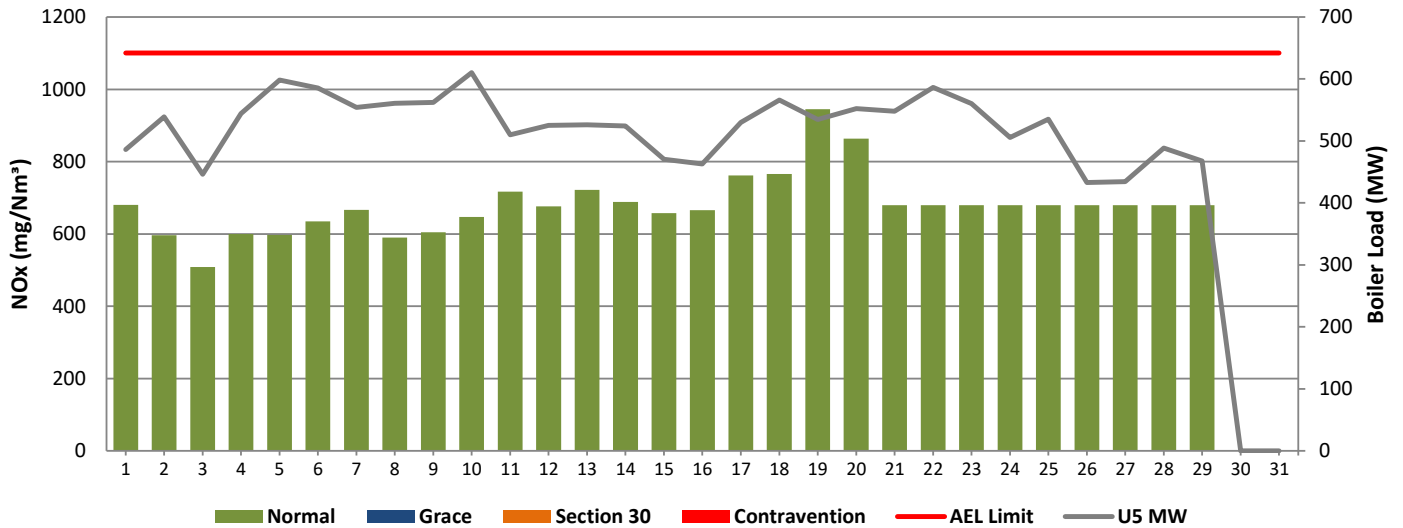
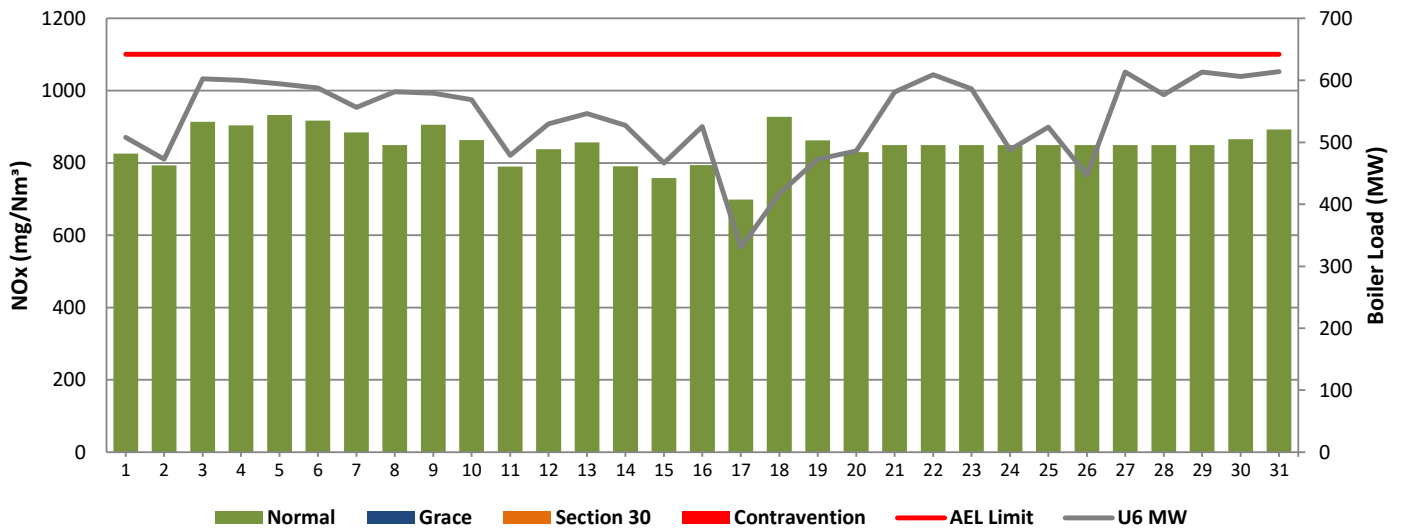


Figure 18: Lethabo Unit 6 NOx Emissions - December 2024



7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1: PM Start-up information for the month of December 2024

Unit No.1	<i>Boiler safety valves repairs + LP turbine 1 rear bearing temperature high.</i>							
Breaker Open (BO)	3:24 am	2024/12/07						
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)	n/a	DD:HH:MM						
Fires in time	10:45 am	2024/12/10						
Synch. to Grid (or BC)	8:22 pm	2024/12/14						
Fires in to BC (duration)	04:09:37	DD:HH:MM						
Emissions below limit from BC (end date)	not > limit	not > limit						
Emissions below limit from BC (duration)	n/a	DD:HH:MM						

Unit No.2	<i>AM: generator rotor down to earth fault.</i>							
Breaker Open (BO)								
Draught Group (DG) Shut Down (SD)								
BO to DG SD (duration)		DD:HH:MM						
Fires in time	6:43 am	2024/12/14						
Synch. to Grid (or BC)	11:29 pm	2024/12/15						
Fires in to BC (duration)	01:16:46	DD:HH:MM						
Emissions below limit from BC (end date)	4:00 am	2024/12/20						
Emissions below limit from BC (duration)	04:04:31	DD:HH:MM						

Unit No.3	IR ESP & S03 PLANT							
Breaker Open (BO)								
Draught Group (DG) Shut Down (SD)								
BO to DG SD (duration)		DD:HH:MM						
Fires in time								
Synch. to Grid (or BC)								
Fires in to BC (duration)		DD:HH:MM						
Emissions below limit from BC (end date)								
Emissions below limit from BC (duration)		DD:HH:MM						

Unit No.4	Boiler tube leak.		Unit tripped on black furnace.		LP turbine blades inspection.			
Breaker Open (BO)	8:43 am	2024/12/04	5:40 am	2024/12/07	12:01 pm	2024/12/24		
Draught Group (DG) Shut Down (SD)	9:05 pm	2024/12/04	DG did not trip or SD	DG did not trip or SD	9:10 am	2024/12/25		
BO to DG SD (duration)	00:12:22	DD:HH:MM	n/a	DD:HH:MM	00:21:09	DD:HH:MM		
Fires in time	11:45 am	2024/12/06	9:37 am	2024/12/07				
Synch. to Grid (or BC)	4:10 pm	2024/12/06	10:51 am	2024/12/07				
Fires in to BC (duration)	00:04:25	DD:HH:MM	00:01:14	DD:HH:MM		DD:HH:MM		
Emissions below limit from BC (end date)	12:00 am	2024/12/10	12:00 am	2024/12/10				
Emissions below limit from BC (duration)	03:07:50	DD:HH:MM	02:13:09	DD:HH:MM		DD:HH:MM		

Unit No.5	Boiler tube leak repairs.							
Breaker Open (BO)	7:31 am	2024/12/29						
Draught Group (DG) Shut Down (SD)	9:20 pm	2024/12/29						
BO to DG SD (duration)	00:13:49	DD:HH:MM						
Fires in time								
Synch. to Grid (or BC)								
Fires in to BC (duration)		DD:HH:MM						
Emissions below limit from BC (end date)								
Emissions below limit from BC (duration)		DD:HH:MM						

Unit No.6	Unit tripped on drum level low.		Lost EFP A, taking out two mills, unit tripped on low drum level.		Tripped on vacuum.			
Breaker Open (BO)	1:58 pm	2024/12/07	12:53 pm	2024/12/17	6:55 pm	2024/12/24		
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD	DG did not trip or SD		
BO to DG SD (duration)	n/a	DD:HH:MM	n/a	DD:HH:MM	n/a	DD:HH:MM		
Fires in time	3:27 pm	2024/12/07	3:00 pm	2024/12/17				
Synch. to Grid (or BC)	5:29 pm	2024/12/07	7:57 pm	2024/12/17				
Fires in to BC (duration)	00:02:02	DD:HH:MM	00:04:57	DD:HH:MM		DD:HH:MM		
Emissions below limit from BC (end date)	1:00 am	2024/12/09	1:00 pm	2024/12/17				
Emissions below limit from BC (duration)	01:07:31	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 2024 in mg/Nm³

8. MAINTENANCE

Unit 1				
Beginning of	2024/12/29 00:00			
Reason for Maintenance	RHO precip casing repairs.			
End (Time):	2024/12/29 18:14			
Duration	18:14:00			

Unit 2				
Beginning of	2024/12/27 01:25:00			
Reason for Maintenance	RH Inner precip casing repairs.			
End (Time):	2024/12/28 00:09:00			
Duration	22:44:00			

Unit 3				
Beginning of				
Reason for Maintenance				
End (Time):				
Duration				

Unit 4				
Beginning of	2024/12/03 00:00	2024/12/03 08:16	2024/12/03 16:51	2024/12/03 17:18
Reason for Maintenance	AM: RHI Precip casing repairs.	RH Inner precip casing repairs.	RH Inner precip casing repairs.	RH Inner precip casing repairs.
End (Time):	2024/12/03 08:16	2024/12/03 16:51	2024/12/03 17:18	2024/12/04 00:19
Duration	8:16:00	8:35:00	0:27:00	7:01:00

Unit 4				
Beginning of	2024/12/04 00:19			
Reason for Maintenance	RHI casing repairs.			
End (Time):	2024/12/04 01:28			
Duration	1:09:00			

Unit 5				
Beginning of	2024/12/28 00:26:00			
Reason for Maintenance	RH Inner precip casing repairs.			
End (Time):	2024/12/28 22:14:00			
Duration	21:48:00			

9. GENERAL

Unit 1:

On the 31/12/2024, unit 1 registered a non-compliance as the unit continued to exceed for greater than 72 hours due to the loss of sulphur flow to supply the SO3 plant. The exceedance was reported to the licencing authority on 02/01/2025.

Unit 2:

On the 27/12/2024, unit 2 registered a non-compliance as the unit continued to exceed for greater than 72 hours due to ESP casing poor performance. The incident was reported to the licencing authority on 09/01/2025, when the preliminary month-end report for December 2024 was generated and it was realised that this incident was a non-compliance. The daily monitoring tool used by the operators did not indicate this as a non-compliance, however the official emissions reporting tool used draws the data from a different server, thus indicating a 0.4 mg discrepancy which resulted in the incident being a non-compliance.

Unit 5 Monitor Reliability

23/12/2024: PM monitor Reliability low due to monitor max out.

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.

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-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
Apr-24	0.27	0.66	0.55	0.69	0.68	OFF	0.58
May-24	0.25	0.91	0.56	1.10	0.81	OFF	0.75
Jun-24	0.30	1.03	0.45	0.68	0.54	OFF	0.60
Jul-24	0.43	2.04	0.55	0.75	0.68	1.28	0.87
Aug-24	0.48	0.91	0.69	0.47	0.53	0.18	0.54
Sep-24	0.61	0.70	0.69	0.67	0.76	0.24	0.60
Oct-24	0.34	0.62	OFF	0.61	0.78	0.33	0.57
Nov-24	0.42	0.50	OFF	0.90	0.75	0.26	0.56
Dec-24	0.56	0.57	OFF	0.88	0.63	0.24	0.54

ADDENDUM TO MONTHLY EMISSIONS REPORT

12. DAILY EMISSIONS FIGURES

Final Dust Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
01-Dec	42	OFF	OFF	75	88	34	100
02-Dec	47	OFF	OFF	148	131	40	100
03-Dec	57	OFF	OFF	465	96	49	100
04-Dec	57	OFF	OFF	224	97	89	100
05-Dec	42	OFF	OFF	OFF	125	71	100
06-Dec	32	OFF	OFF	OFF	88	64	100
07-Dec	122	OFF	OFF	OFF	90	61	100
08-Dec	OFF	OFF	OFF	238	77	46	100
09-Dec	OFF	OFF	OFF	149	73	41	100
10-Dec	OFF	OFF	OFF	86	89	41	100
11-Dec	OFF	OFF	OFF	141	75	30	100
12-Dec	OFF	OFF	OFF	126	72	32	100
13-Dec	OFF	OFF	OFF	84	85	36	100
14-Dec	OFF	OFF	OFF	92	80	43	100
15-Dec	241	OFF	OFF	76	84	30	100
16-Dec	153	270	OFF	96	73	39	100
17-Dec	103	181	OFF	106	88	109	100
18-Dec	80	140	OFF	124	95	21	100
19-Dec	144	52	OFF	145	78	33	100
20-Dec	42	91	OFF	100	214	34	100
21-Dec	61	110	OFF	155	75	59	100
22-Dec	232	82	OFF	207	127	72	100
23-Dec	209	100	OFF	96	184	65	100
24-Dec	83	114	OFF	203	84	42	100
25-Dec	82	101	OFF	OFF	245	26	100
26-Dec	87	137	OFF	OFF	89	27	100
27-Dec	89	179	OFF	OFF	152	60	100
28-Dec	106	79	OFF	OFF	233	65	100
29-Dec	122	83	OFF	OFF	76	67	100
30-Dec	125	93	OFF	OFF	OFF	76	100
31-Dec	308	159	OFF	OFF	OFF	154	100

ADDENDUM TO MONTHLY EMISSIONS REPORT

Final SOx Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
0	1657	OFF	OFF	1605	1696	1741	3500
02-Dec	1649	OFF	OFF	1648	1694	1734	3500
03-Dec	1675	OFF	OFF	1666	1683	1800	3500
04-Dec	1625	OFF	OFF	1604	1759	1775	3500
05-Dec	1565	OFF	OFF	OFF	1713	1721	3500
06-Dec	1656	OFF	OFF	1689	1724	1809	3500
07-Dec	1731	OFF	OFF	1635	1929	1866	3500
08-Dec	OFF	OFF	OFF	1651	1976	2017	3500
09-Dec	OFF	OFF	OFF	1592	1987	1969	3500
10-Dec	OFF	OFF	OFF	1613	2005	2001	3500
11-Dec	OFF	OFF	OFF	1613	1981	1954	3500
12-Dec	OFF	OFF	OFF	1695	1964	1923	3500
0	OFF	OFF	OFF	1600	1910	1882	3500
14-Dec	1787	OFF	OFF	1558	2045	1890	3500
15-Dec	1808	1364	OFF	1641	2098	1991	3500
16-Dec	1788	1557	OFF	1588	2018	1873	3500
17-Dec	1715	1511	OFF	1476	2128	1801	3500
18-Dec	1634	1557	OFF	1435	1972	1750	3500
19-Dec	1558	1548	OFF	1431	2295	1670	3500
20-Dec	1555	1481	OFF	1400	2244	1647	3500
21-Dec	1707	1594	OFF	1586	1941	1863	3500
22-Dec	1707	1594	OFF	1586	1941	1863	3500
00-Jan	00-Jan	00-Jan	00-Jan	0	1941	0	3500
24-Dec	1707	1594	OFF	1586	1941	1863	3500
25-Dec	1707	1594	OFF	OFF	1941	1863	3500
26-Dec	1707	1594	OFF	OFF	1941	1863	3500
27-Dec	1707	1594	OFF	OFF	1941	1863	3500
28-Dec	1707	1594	OFF	OFF	1941	1863	3500
29-Dec	1707	1594	OFF	OFF	1941	1863	3500
30-Dec	1899	1925	OFF	OFF	OFF	2129	3500
31-Dec	2008	1812	OFF	OFF	OFF	2039	3500

ADDENDUM TO MONTHLY EMISSIONS REPORT

Final NOx Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
01-Dec	829	OFF	OFF	599	680	826	1100
02-Dec	837	OFF	OFF	625	597	793	1100
03-Dec	859	OFF	OFF	610	508	914	1100
04-Dec	849	OFF	OFF	525	600	904	1100
05-Dec	852	OFF	OFF	OFF	597	933	1100
06-Dec	789	OFF	OFF	527	634	917	1100
07-Dec	721	OFF	OFF	756	666	885	1100
08-Dec	OFF	OFF	OFF	692	590	850	1100
09-Dec	OFF	OFF	OFF	823	605	905	1100
10-Dec	OFF	OFF	OFF	835	647	864	1100
11-Dec	OFF	OFF	OFF	885	717	790	1100
12-Dec	OFF	OFF	OFF	870	676	838	1100
13-Dec	OFF	OFF	OFF	883	721	857	1100
14-Dec	649	OFF	OFF	894	688	791	1100
15-Dec	921	442	OFF	770	658	758	1100
16-Dec	642	592	OFF	834	666	794	1100
17-Dec	621	688	OFF	817	762	699	1100
18-Dec	594	641	OFF	802	766	927	1100
19-Dec	618	650	OFF	712	945	862	1100
20-Dec	740	737	OFF	716	864	830	1100
21-Dec	757	613	OFF	746	679	850	1100
22-Dec	757	613	OFF	746	679	850	1100
23-Dec	757	613	OFF	746	679	850	1100
24-Dec	757	613	OFF	746	679	850	1100
25-Dec	757	613	OFF	OFF	679	850	1100
26-Dec	757	613	OFF	OFF	679	850	1100
27-Dec	757	613	OFF	OFF	679	850	1100
28-Dec	757	613	OFF	OFF	679	850	1100
29-Dec	757	613	OFF	OFF	679	850	1100
30-Dec	959	581	OFF	OFF	OFF	866	1100
31-Dec	636	573	OFF	OFF	OFF	893	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-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%
Apr-24	100.00%	0.0	100.00%	0.0	100.00%	0.0	99.89%	0.1	97.43%	3.1	100.00%	0.00%
May-24	100.00%	0.0	97.91%	2.6	100.00%	0.0	97.67%	2.9	99.38%	0.8	100.00%	0.00%
Jun-24	100.00%	0.00	99.17%	1.00	98.09%	2.29	98.32%	2.01	100.00%	0.00	100.00%	0.00
Jul-24	100.00%	0.0	100.00%	0.0	100.00%	0.0	100.00%	0.0	100.00%	0.0	100.00%	0.00%
Aug-24	98.59%	1.8	100.00%	0.0	99.21%	1.0	100.00%	0.0	99.84%	0.2	100.00%	0.00%
Sep-24	98.55%	1.74	99.84%	0.19	100.00%	0.00	99.12%	1.06	99.16%	1.01	100.00%	0.00
Oct-24	99.19%	1.0	100.00%	0.0	100.00%	0.0	100.00%	0.0	97.67%	2.9	100.00%	0.00%
Nov-24	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Dec-24	99.39%	0.76	99.24%	0.95	100.00%	0.00	99.18%	1.01	99.96%	0.05	99.27%	0.91

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-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
Apr-24	99.46%	0.2	93.92%	1.8	99.58%	0.1	100.00%	0.0	100.00%	0.0	Off-line	Off-line
May-24	99.45%	0.2	99.87%	0.0	96.37%	1.1	99.87%	0.0	100.00%	0.0	Off-line	Off-line
Jun-24	97.08%	0.88	69.03%	9.29	100.00%	0.00	99.34%	0.20	99.77%	0.07	Off-line	Off-line
Jul-24	98.30%	0.5	41.43%	18.2	99.73%	0.1	99.58%	0.1	98.39%	0.5	53.66%	14.37
Aug-24	99.46%	0.2	91.70%	2.6	100.00%	0.0	97.98%	0.6	99.59%	0.1	96.68%	1.03
Sep-24	100.00%	0.0	89.45%	3.2	99.33%	0.2	99.84%	0.0	99.58%	0.1	99.92%	0.02
Oct-24	99.85%	0.0	95.65%	1.3	Off-line	Off-line	98.92%	0.3	93.82%	1.9	99.59%	0.13
Nov-24	99.99%	0.0	96.60%	1.0	Off-line	Off-line	99.17%	0.3	97.46%	0.8	99.21%	0.24
Dec-24	52.80%	14.6	27.08%	22.6	Off-line	Off-line	77.33%	7.0	66.67%	10.3	60.94%	12.11

ADDENDUM TO MONTHLY EMISSIONS REPORT

Particulate Emission Monitors

Availability						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
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
Apr-24	99.68%	92.71%	97.22%	94.03%	98.06%	OFF
May-24	98.93%	93.01%	97.45%	91.88%	95.47%	OFF
Jun-24	98%	87%	97%	97%	99%	OFF
Jul-24	90.95%	73.05%	97.04%	95.37%	98.85%	61.98%
Aug-24	95.70%	91.44%	99.38%	99.60%	98.95%	99.58%
Sep-24	98.11%	94.42%	100.00%	98.42%	96.20%	99.64%
Oct-24	99.65%	94.32%	OFF	98.75%	96.51%	98.18%
Nov-24	99.43%	99.40%	OFF	99.31%	94.41%	98.54%
Dec-24	100.00%	96.61%	OFF	98.22%	96.26%	99.60%

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-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
Apr-24	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	OFF	OFF
May-24	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	98.79%	98.79%	98.37%	98.37%	OFF	OFF
Jun-24	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	OFF	OFF
Jul-24	99.75%	99.89%	100.00%	100.00%	100.00%	100.00%	99.46%	99.73%	100.00%	100.00%	73.40%	70.78%
Aug-24	99.87%	100.00%	99.80%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Sep-24	100.00%	100.00%	100.00%	99.68%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Oct-24	99.85%	100.00%	99.58%	99.72%	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	99.65%	99.65%
Nov-24	100.00%	100.00%	100.00%	100.00%	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	99.86%	100.00%
Dec-24	57.50%	57.50%	37.50%	37.50%	0.00%	0.00%	79.71%	79.71%	66.67%	66.67%	65.65%	65.73%

Oxygen Monitor Availability						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
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
Apr-24	100.00%	100.00%	99.86%	100.00%	100.00%	OFF
May-24	99.97%	100.00%	99.98%	98.79%	98.31%	OFF
Jun-24	100.00%	100.00%	100.00%	99.55%	36.78%	OFF
Jul-24	99.89%	100.00%	100.00%	100.00%	99.84%	50.17%
Aug-24	99.87%	99.80%	99.87%	99.87%	100.00%	99.48%
Sep-24	100.00%	99.90%	100.00%	99.86%	99.72%	99.70%
Oct-24	99.23%	99.55%	0.00%	99.87%	94.89%	99.28%
Nov-24	100.00%	100.00%	0.00%	99.86%	84.89%	99.15%
Dec-24	57.50%	37.50%	0.00%	79.71%	66.67%	65.73%

ADDENDUM TO MONTHLY EMISSIONS REPORT

14. EFFICIENCY

ESP Efficiency (%)						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
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
Apr-24	99.901%	99.698%	99.774%	99.704%	99.714%	Unit Off-line
May-24	99.906%	99.582%	99.771%	99.525%	99.654%	Unit Off-line
Jun-24	99.89%	99.55%	99.82%	99.62%	99.75%	Unit Off-line
Jul-24	99.848%	99.125%	99.796%	99.588%	99.735%	99.450%
Aug-24	99.845%	99.625%	99.749%	99.755%	99.769%	99.907%
Sep-24	99.789%	99.660%	99.775%	99.644%	99.675%	99.896%
Oct-24	99.866%	99.716%	Unit Off-line	99.669%	99.637%	99.856%
Nov-24	99.838%	99.782%	Unit Off-line	99.515%	99.662%	99.888%
Dec-24	99.773%	99.722%	Unit Off-line	99.513%	99.695%	99.891%

15. REMARKS

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
1	18	ID fans not coping due to ducting damaged.	2024/12/01 00:00:00	2024/12/07 03:24:00
1	593	Boiler safety valves repairs	2024/12/07 03:24:00	2024/12/10 03:23:00
1	593	LP turbine 1 rear bearing temperature high.	2024/12/10 03:23:00	2024/12/14 20:22:00
1	297	System Generated Ramp Event for Event id : 2006842	2024/12/14 20:22:00	2024/12/14 23:22:00
1	18	ID fans not coping due to ducting damaged.	2024/12/14 23:22:00	2024/12/31 23:59:59
1	100	Spinning Reserve	2024/12/15 18:19:00	2024/12/15 19:29:00
1	100	D Mill defective	2024/12/16 06:31:00	2024/12/16 09:09:00
1	199	High stack emissions	2024/12/17 01:12:00	2024/12/17 11:00:00
1	99	High Stack emissions	2024/12/17 22:12:00	2024/12/18 11:15:00
1	50	High stack emissions.	2024/12/18 11:15:00	2024/12/19 05:03:00
1	47	B long feeder faulty	2024/12/19 07:56:00	2024/12/19 08:56:00
1	200	Manual rapping.	2024/12/19 20:46:00	2024/12/20 02:17:00
1	101	High stack emissions	2024/12/20 02:17:00	2024/12/20 04:01:00
1	190	RH PA fan mechanical oil pump damaged	2024/12/21 22:54:00	2024/12/22 01:44:00
1	320	RH PA fan mechanical oil pump damaged	2024/12/22 01:44:00	2024/12/22 10:56:00
1	200	EF:High stack emissions	2024/12/24 00:45:00	2024/12/24 05:03:00
1	100	EF:High stack emissions	2024/12/24 06:31:00	2024/12/24 07:47:00
1	200	Spinning Reserve	2024/12/24 07:47:00	2024/12/24 07:58:00
1	100	High stack emissions.	2024/12/24 15:20:00	2024/12/24 19:47:00
1	200	EF:High stack emissions	2024/12/24 19:47:00	2024/12/25 05:07:00
1	100	EF:High stack emissions	2024/12/25 05:07:00	2024/12/25 17:22:00
1	180	Spinning Reserve	2024/12/26 12:14:00	2024/12/26 12:27:00
1	193	Spinning Reserve	2024/12/26 12:27:00	2024/12/26 18:32:00
1	100	RHO precip casing repairs	2024/12/29 00:00:00	2024/12/29 18:14:00
1	191	EF: Manual rapping.	2024/12/30 23:04:00	2024/12/31 03:55:00
1	197	AM: High stack emissions due to no Suphur flow.	2024/12/31 23:42:00	2024/12/31 23:59:59
2	593	AM: generator rotor down to earth fault	2024/12/01 00:00:00	2024/12/15 23:29:00
2	297	System Generated Ramp Event for Event id : 1999455	2024/12/15 23:29:00	2024/12/16 02:29:00
2	25	ID fans not coping.	2024/12/16 02:29:00	2024/12/16 03:06:00
2	90	HP heater bank B.	2024/12/16 02:29:00	2024/12/16 03:06:00
2	35	ID fans not coping.	2024/12/16 03:06:00	2024/12/16 03:46:00
2	20	ID fans not coping.	2024/12/16 03:46:00	2024/12/19 14:36:00
2	38	HP heater bank B.	2024/12/16 04:13:00	2024/12/17 17:33:00
2	55	Spinning Reserve	2024/12/16 17:10:00	2024/12/16 19:32:00
2	64	HP heater bank A defective.	2024/12/17 17:33:00	2024/12/17 19:44:00
2	91	HP heater bank A defective.	2024/12/17 19:44:00	2024/12/18 06:39:00
2	43	Both EFP's running.	2024/12/18 06:39:00	2024/12/19 14:36:00
2	24	HP heater bank A defective.	2024/12/18 23:35:00	2024/12/19 14:36:00
2	128	High stack emissions	2024/12/18 23:35:00	2024/12/19 12:12:00
2	45	High stack emissions	2024/12/19 12:12:00	2024/12/19 12:41:00
2	23	High stack emissions.	2024/12/19 12:41:00	2024/12/19 14:36:00
2	18	HP heater bank A	2024/12/19 14:36:00	2024/12/24 00:07:00
2	197	High stack emissions	2024/12/22 00:00:00	2024/12/22 04:58:00
2	44	EF:High stack emissions	2024/12/23 19:35:00	2024/12/23 19:42:00
2	50	EF:High stack emissions	2024/12/23 19:42:00	2024/12/24 00:07:00
2	20	HP heater bank A	2024/12/24 00:07:00	2024/12/24 00:52:00
2	18	HP heater bank A	2024/12/24 00:52:00	2024/12/29 02:06:00
2	96	Spinning Reserve	2024/12/24 02:40:00	2024/12/24 03:04:00
2	99	Spinning Reserve	2024/12/24 06:57:00	2024/12/24 08:14:00
2	186	Spinning Reserve	2024/12/24 08:14:00	2024/12/24 13:40:00

2	100	Spinning Reserve	2024/12/24 13:40:00	2024/12/24 15:19:00
2	88	Spinning Reserve	2024/12/25 08:57:00	2024/12/25 15:10:00
2	85	EF: High stack emissions	2024/12/25 15:10:00	2024/12/25 15:52:00
2	105	EF: High stack emissions	2024/12/25 15:52:00	2024/12/25 16:49:00
2	146	EF: High stack emissions	2024/12/25 16:49:00	2024/12/25 18:52:00
2	197	EF:High stack emissions	2024/12/25 18:52:00	2024/12/26 17:07:00
2	215	EF: High stack emissions	2024/12/26 17:07:00	2024/12/26 20:25:00
2	200	Spinning Reserve	2024/12/26 23:24:00	2024/12/27 00:29:00
2	100	Spinning Reserve	2024/12/27 00:29:00	2024/12/27 01:25:00
2	100	RH Inner precip casing repairs	2024/12/27 01:25:00	2024/12/28 00:09:00
2	83	Spinning Reserve	2024/12/28 20:48:00	2024/12/28 22:11:00
2	187	Spinning Reserve	2024/12/28 22:11:00	2024/12/29 02:06:00
2	23	HP heater bank A defective.	2024/12/29 02:06:00	2024/12/29 16:57:00
2	37	HP heater bank A defective.	2024/12/29 16:57:00	2024/12/30 14:06:00
2	23	ID fans not coping.	2024/12/30 14:06:00	2024/12/31 23:59:59
3	593	IR ESP & S03 PLANT	2024/12/01 00:00:00	2024/12/31 23:59:59
4	68	ID Fans not coping due to ducting damaged	2024/12/01 00:00:00	2024/12/04 01:28:00
4	150	EF:High stack emissions	2024/12/01 00:00:00	2024/12/02 09:45:00
4	153	Spinning Reserve	2024/12/02 09:45:00	2024/12/02 14:25:00
4	97	B short feeder running empty.	2024/12/02 14:25:00	2024/12/02 15:03:00
4	110	B short feeder running empty.	2024/12/02 15:03:00	2024/12/02 16:59:00
4	136	B short feeder running empty.	2024/12/02 16:59:00	2024/12/02 19:16:00
4	101	B short feeder running empty.	2024/12/02 19:16:00	2024/12/03 00:00:00
4	50	AM: RHI Precip casing rpairs.	2024/12/03 00:00:00	2024/12/03 08:16:00
4	51	B mill short feeder O/C	2024/12/03 00:00:00	2024/12/03 06:41:00
4	78	B Mill feeder defective	2024/12/03 06:41:00	2024/12/03 07:12:00
4	50	B Mill feeder defective	2024/12/03 07:12:00	2024/12/03 07:57:00
4	63	B Mill feeder defective	2024/12/03 07:57:00	2024/12/03 08:16:00
4	60	RH Inner precip casing repairs	2024/12/03 08:16:00	2024/12/03 16:51:00
4	10	B Mill feeder defective	2024/12/03 11:13:00	2024/12/03 16:51:00
4	70	RH Inner precip casing repairs	2024/12/03 16:51:00	2024/12/03 17:18:00
4	76	RH Inner precip casing repairs	2024/12/03 17:18:00	2024/12/04 00:19:00
4	76	RHI casing repairs	2024/12/04 00:19:00	2024/12/04 01:28:00
4	58	ID Fans not coping due to ducting damaged	2024/12/04 01:28:00	2024/12/04 08:43:00
4	31	High furnace pressure	2024/12/04 01:34:00	2024/12/04 01:42:00
4	60	High furnace pressure	2024/12/04 01:42:00	2024/12/04 02:43:00
4	160	Suspected boiler tube leak.	2024/12/04 02:43:00	2024/12/04 08:43:00
4	593	Boiler tube leak	2024/12/04 08:43:00	2024/12/06 16:10:00
4	297	System Generated Ramp Event for Event id : 2005718	2024/12/06 16:10:00	2024/12/06 19:10:00
4	244	D,E&F Mills feeders defective	2024/12/06 19:10:00	2024/12/06 19:51:00
4	219	D,E&F Mills feeders defective	2024/12/06 19:51:00	2024/12/06 20:13:00
4	119	D,E&F Mills feeders defective	2024/12/06 20:13:00	2024/12/06 20:16:00
4	138	D,E&F Mills feeders defective	2024/12/06 20:16:00	2024/12/07 05:40:00
4	593	Unit tripped on black furnace	2024/12/07 05:40:00	2024/12/07 10:51:00
4	297	System Generated Ramp Event for Event id : 2006884	2024/12/07 10:51:00	2024/12/07 12:21:00
4	268	A Mill PA rating damper flow faulty,D Mills choked & E-mill faulty.	2024/12/07 12:21:00	2024/12/07 12:34:00
4	234	A Mill PA rating damper flow faulty & D-Mill choked & E-mill faulty	2024/12/07 12:34:00	2024/12/07 12:45:00
4	138	A Mill PA rating damper flow faulty & D Mill choked	2024/12/07 12:45:00	2024/12/07 13:16:00
4	117	A Mill PA rating damper flow faulty & D Mill choked	2024/12/07 13:16:00	2024/12/07 18:06:00
4	134	A Mill PA rating damper flow faulty & D Mill choked	2024/12/07 18:06:00	2024/12/07 18:42:00
4	170	A Mill PA rating damper flow faulty & D Mills choked	2024/12/07 18:42:00	2024/12/08 10:35:00
4	114	Superheater outlet safety valve A passing	2024/12/08 10:35:00	2024/12/09 15:11:00
4	56	A-mill PF leak repairs.	2024/12/08 15:18:00	2024/12/08 18:17:00
4	24	A;B & E Mill in service with one feeder each	2024/12/08 18:17:00	2024/12/09 11:14:00
4	80	Spinning Reserve	2024/12/09 07:42:00	2024/12/09 10:58:00
4	40	Spinning Reserve	2024/12/09 10:58:00	2024/12/09 11:29:00
4	29	A;B & E Mill in service with one feeder each	2024/12/09 11:14:00	2024/12/09 14:44:00
4	49	Spinning Reserve	2024/12/09 11:29:00	2024/12/09 11:47:00
4	16	Spinning Reserve	2024/12/09 11:47:00	2024/12/09 14:44:00
4	93	Superheater outlet safety valve A passing	2024/12/09 15:11:00	2024/12/11 04:57:00
4	117	Manual rapping	2024/12/09 20:14:00	2024/12/09 20:30:00
4	125	Manual rapping	2024/12/09 20:30:00	2024/12/10 04:00:00
4	125	EF: High stack emissions	2024/12/10 04:00:00	2024/12/10 09:53:00
4	76	EF: High stack emissions	2024/12/10 09:53:00	2024/12/11 04:57:00
4	118	Superheater outlet safety valve A passing	2024/12/11 04:57:00	2024/12/12 23:39:00
4	69	Super-heater safety v/v passing.	2024/12/12 23:39:00	2024/12/24 12:01:00

4	50	AM: E mill grease alarm sustaining.	2024/12/13 19:24:00	2024/12/14 11:04:00
4	10	C mill long feeder tripped.	2024/12/13 20:50:00	2024/12/13 21:16:00
4	20	C mill long feeder tripped.	2024/12/13 21:16:00	2024/12/13 21:29:00
4	14	AM: ID Fans not coping.	2024/12/14 11:35:00	2024/12/21 05:13:00
4	57	Spinning Reserve	2024/12/15 21:47:00	2024/12/15 21:54:00
4	65	Spinning Reserve	2024/12/15 21:54:00	2024/12/15 22:57:00
4	135	Spinning Reserve	2024/12/15 22:57:00	2024/12/16 00:01:00
4	38	Spinning Reserve	2024/12/16 00:01:00	2024/12/16 02:34:00
4	35	Spinning Reserve	2024/12/16 21:20:00	2024/12/17 05:28:00
4	135	Manual rapping	2024/12/19 21:18:00	2024/12/19 23:02:00
4	135	High stack emissions	2024/12/19 23:02:00	2024/12/20 10:46:00
4	85	EF: High stack emissions	2024/12/20 10:46:00	2024/12/20 12:21:00
4	55	EF: High stack emissions	2024/12/20 12:21:00	2024/12/20 14:04:00
4	35	EF: High stack emissions	2024/12/20 14:04:00	2024/12/20 17:11:00
4	55	EF: High stack emissions	2024/12/20 17:11:00	2024/12/20 18:38:00
4	135	High stack emissions	2024/12/20 18:38:00	2024/12/21 01:13:00
4	35	High stack emissions	2024/12/21 01:13:00	2024/12/21 05:13:00
4	22	ID fans not coping	2024/12/21 05:13:00	2024/12/21 12:54:00
4	27	AM: High stack emissions.	2024/12/21 10:44:00	2024/12/21 12:54:00
4	18	ID fans not coping	2024/12/21 12:54:00	2024/12/22 09:11:00
4	131	High stack emissions	2024/12/22 00:35:00	2024/12/22 05:20:00
4	10	Spinning Reserve	2024/12/22 08:14:00	2024/12/22 09:11:00
4	21	EF: ID fans not coping due to ducting damage	2024/12/22 09:11:00	2024/12/22 09:37:00
4	25	EF: ID fans not coping due to ducting damage	2024/12/22 09:37:00	2024/12/22 14:30:00
4	29	EF: ID fans not coping due to ducting damage	2024/12/22 14:30:00	2024/12/24 12:01:00
4	120	Manual raping	2024/12/23 00:35:00	2024/12/23 08:30:00
4	120	EF: High stack emissions	2024/12/23 08:30:00	2024/12/23 14:16:00
4	70	AM: High stack emissions.	2024/12/23 14:16:00	2024/12/23 14:21:00
4	44	EF: High stack emissions	2024/12/23 16:52:00	2024/12/23 17:05:00
4	71	EF: High stack emissions	2024/12/23 17:05:00	2024/12/24 00:36:00
4	120	Spinning Reserve	2024/12/24 07:38:00	2024/12/24 08:18:00
4	593	LP turbine blades inspection	2024/12/24 12:01:00	2024/12/31 23:59:59
5	218	AM: Clean precip. rapping.	2024/12/03 00:52:00	2024/12/03 04:38:00
5	168	EF:High stack emissions	2024/12/03 07:48:00	2024/12/03 08:00:00
5	218	EF:High stack emissions	2024/12/03 08:00:00	2024/12/03 16:31:00
5	116	EF:High stack emissions	2024/12/03 16:31:00	2024/12/03 17:36:00
5	296	LH Draught group tripped due to ID fan DE motor bearing spiked.	2024/12/03 18:27:00	2024/12/03 18:58:00
5	333	AM: LH Draught group tripped due to ID fan DE motor bearing spiked.	2024/12/03 18:58:00	2024/12/03 21:37:00
5	118	EF:High stack emissions	2024/12/04 12:16:00	2024/12/05 00:10:00
5	218	Coal constrains due to T7E torn.	2024/12/11 10:58:00	2024/12/11 18:24:00
5	218	Coal preservation due to silo 5 unavailability.	2024/12/11 21:14:00	2024/12/12 06:52:00
5	18	C mill short feeder tripped.	2024/12/12 06:52:00	2024/12/12 07:30:00
5	18	ID fans not coping.	2024/12/12 08:43:00	2024/12/16 16:01:00
5	199	Coal preservation	2024/12/12 21:32:00	2024/12/13 05:02:00
5	199	Coal preservation due to silo 5 unavailability	2024/12/13 22:28:00	2024/12/14 04:50:00
5	162	coal preservation for unit 5	2024/12/14 04:50:00	2024/12/14 05:00:00
5	120	coal preservation for unit 5	2024/12/14 05:00:00	2024/12/14 05:38:00
5	194	Coal preservation due to silo 5 unavailability	2024/12/14 21:42:00	2024/12/15 05:08:00
5	95	Spinning Reserve	2024/12/15 05:53:00	2024/12/15 08:57:00
5	194	Spinning Reserve	2024/12/15 08:57:00	2024/12/15 12:00:00
5	118	Spinning Reserve	2024/12/15 12:00:00	2024/12/15 12:27:00
5	100	Spinning Reserve	2024/12/15 12:27:00	2024/12/15 21:28:00
5	194	Coal preservation due to silo 5 unavailability	2024/12/15 21:28:00	2024/12/16 04:52:00
5	200	SSC Standing - sprocket broken	2024/12/16 07:20:00	2024/12/16 16:01:00
5	19	ID fans not coping	2024/12/16 16:01:00	2024/12/20 04:32:00
5	99	Spinning Reserve	2024/12/16 17:26:00	2024/12/16 19:41:00
5	199	Coal preservation due to silo 5 unavailabilit	2024/12/16 21:44:00	2024/12/17 04:57:00
5	177	feed v/v faulty	2024/12/17 04:57:00	2024/12/17 05:28:00
5	98	feed v/v faulty	2024/12/17 05:28:00	2024/12/17 11:52:00
5	17	feed v/v faulty	2024/12/17 11:52:00	2024/12/18 12:59:00
5	200	coal preservation due to silo 5 unavailability	2024/12/18 22:41:00	2024/12/19 04:42:00
5	200	Coal preservation due to silo 5 unavailability	2024/12/19 22:15:00	2024/12/20 04:30:00
5	18	ID fans not coping	2024/12/20 05:03:00	2024/12/29 07:31:00
5	200	High stack emissions	2024/12/21 00:16:00	2024/12/21 04:47:00
5	200	Coal preservation due to silo 5 unavailable	2024/12/23 22:52:00	2024/12/24 04:24:00
5	115	Spinning Reserve	2024/12/24 04:24:00	2024/12/24 04:59:00

5	200	Spinning Reserve	2024/12/24 07:24:00	2024/12/24 12:23:00
5	100	Spinning Reserve	2024/12/25 09:20:00	2024/12/25 15:26:00
5	100	Spinning Reserve	2024/12/25 20:00:00	2024/12/25 21:00:00
5	200	Coal preservation due to silo 5 unavailable	2024/12/25 21:00:00	2024/12/26 05:00:00
5	200	Spinning Reserve	2024/12/26 05:00:00	2024/12/26 17:55:00
5	100	Spinning Reserve	2024/12/26 17:55:00	2024/12/26 19:38:00
5	100	Spinning Reserve	2024/12/26 20:51:00	2024/12/26 23:21:00
5	200	Spinning Reserve	2024/12/26 23:21:00	2024/12/27 00:27:00
5	100	Spinning Reserve	2024/12/27 00:27:00	2024/12/27 00:37:00
5	200	High stack emissions.	2024/12/27 06:44:00	2024/12/28 00:26:00
5	100	RH Inner precip casing repairs	2024/12/28 00:26:00	2024/12/28 22:14:00
5	135	Spinning Reserve	2024/12/29 05:10:00	2024/12/29 07:31:00
5	593	Boiler tube leak repairs	2024/12/29 07:31:00	2024/12/31 23:59:59
6	524	U6: Turbine remote trip and Overspeed PM	2024/12/01 23:12:00	2024/12/02 03:29:00
6	368	U6: Turbine remote trip and Overspeed PM	2024/12/02 03:29:00	2024/12/02 04:35:00
6	33	Spinning Reserve	2024/12/06 20:50:00	2024/12/06 22:10:00
6	593	Unit tripped on drum level low	2024/12/07 13:58:00	2024/12/07 17:29:00
6	297	System Generated Ramp Event for Event id : 2006999	2024/12/07 17:29:00	2024/12/07 18:59:00
6	115	E Mill short feeders gearbox leaking	2024/12/07 18:59:00	2024/12/07 20:14:00
6	31	E Mill short feeders gearbox leaking	2024/12/07 20:14:00	2024/12/08 13:00:00
6	18	HP heater bank B faulty	2024/12/08 13:00:00	2024/12/09 03:42:00
6	23	HP heater bank B faulty	2024/12/09 03:42:00	2024/12/12 05:53:00
6	48	A&B mills in service with one feeder each.	2024/12/10 19:24:00	2024/12/10 21:11:00
6	95	A&B mills in service with one feeder each and C-mill coal bunker level low.	2024/12/10 21:11:00	2024/12/10 23:06:00
6	45	C Mill long FDR no coal & A Mill short feeder faulty.	2024/12/10 23:06:00	2024/12/11 07:26:00
6	50	C mill bunkers empty	2024/12/11 06:25:00	2024/12/11 07:26:00
6	47	C Mill long FDR no coal.	2024/12/11 07:26:00	2024/12/11 10:45:00
6	48	A mill long feeder on PTW and short feeder bunker empty.	2024/12/11 08:20:00	2024/12/11 10:45:00
6	195	Coal constrains due to T7E torn.	2024/12/11 10:45:00	2024/12/11 18:30:00
6	195	Coal preservation due to silo 5 unavailability	2024/12/11 21:42:00	2024/12/12 05:52:00
6	24	HP heater bank B faulty	2024/12/12 05:53:00	2024/12/14 05:23:00
6	194	Coal preservation	2024/12/12 21:56:00	2024/12/13 04:55:00
6	194	Coal preservation due to silo 5 unavailability	2024/12/13 23:00:00	2024/12/14 05:23:00
6	25	HP heater bank B faulty	2024/12/14 05:23:00	2024/12/15 05:05:00
6	193	Coal preservation due to silo 5 unavailability	2024/12/14 21:37:00	2024/12/15 05:05:00
6	28	HP heater bank B faulty	2024/12/15 05:05:00	2024/12/17 12:53:00
6	90	Spinning Reserve	2024/12/15 05:52:00	2024/12/15 17:35:00
6	220	AM: EFP A mechanical seal temp. high.	2024/12/15 17:35:00	2024/12/15 20:06:00
6	189	Coal preservation due to silo 5 unavailability	2024/12/15 21:27:00	2024/12/16 04:41:00
6	91	Spinning Reserve	2024/12/16 17:13:00	2024/12/16 19:34:00
6	190	Coal preservation due to silo 5 unavailabilit	2024/12/16 21:30:00	2024/12/17 05:00:00
6	100	A EFP repairs.	2024/12/17 01:45:00	2024/12/17 05:00:00
6	300	A EFP repairs	2024/12/17 05:00:00	2024/12/17 09:15:00
6	248	A EFP repairs	2024/12/17 09:15:00	2024/12/17 11:18:00
6	593	Lost EFP A, taking out two mills, unit tripped on low drum level.	2024/12/17 12:53:00	2024/12/17 19:57:00
6	297	System Generated Ramp Event for Event id : 2010170	2024/12/17 19:57:00	2024/12/17 21:27:00
6	494	mills not available	2024/12/17 21:27:00	2024/12/17 22:30:00
6	240	No 4th mill available	2024/12/17 22:30:00	2024/12/18 00:02:00
6	139	No 4th mill available	2024/12/18 00:02:00	2024/12/18 07:44:00
6	28	HP heater bank B faulty	2024/12/18 07:44:00	2024/12/19 14:18:00
6	190	B&C mill not available.	2024/12/18 07:44:00	2024/12/19 06:33:00
6	310	AM: EFP A failed.	2024/12/19 10:35:00	2024/12/19 10:50:00
6	240	AM: EFP A failed.	2024/12/19 10:50:00	2024/12/19 11:03:00
6	289	AM: EFP A failed.	2024/12/19 11:03:00	2024/12/19 11:39:00
6	209	AM: EFP A failed.	2024/12/19 11:39:00	2024/12/19 11:55:00
6	150	AM: EFP A failed.	2024/12/19 11:55:00	2024/12/19 12:37:00
6	110	AM: EFP A failed.	2024/12/19 12:37:00	2024/12/19 13:16:00
6	136	C mill seal air fan motor tripped.	2024/12/19 14:04:00	2024/12/19 14:18:00
6	116	C-mill not available due to seal air fan motor faulty	2024/12/19 14:18:00	2024/12/19 22:33:00
6	218	Coal preservation due to silo 5 unavailability	2024/12/19 22:33:00	2024/12/20 04:13:00
6	118	C-mill not available due to mill program faulty.	2024/12/20 04:13:00	2024/12/20 05:39:00
6	116	C-mill not available due to seal air fan motor faulty	2024/12/20 05:52:00	2024/12/21 05:57:00
6	52	Boiler pressure unstable.	2024/12/21 00:33:00	2024/12/21 05:39:00
6	20	C-mill in service with one feeder	2024/12/21 05:57:00	2024/12/21 06:31:00
6	215	Coal preservation due to silo 5 unavailable	2024/12/23 22:46:00	2024/12/24 04:26:00
6	118	Spinning Reserve	2024/12/24 04:26:00	2024/12/24 04:41:00

6	28	Spinning Reserve	2024/12/24 04:41:00	2024/12/24 04:49:00
6	67	Spinning Reserve	2024/12/24 04:49:00	2024/12/24 05:15:00
6	118	Spinning Reserve	2024/12/24 05:58:00	2024/12/24 07:13:00
6	218	Spinning Reserve	2024/12/24 07:13:00	2024/12/24 12:29:00
6	118	Spinning Reserve	2024/12/24 12:29:00	2024/12/24 15:05:00
6	18	ID fans not coping due to ducting damaged.	2024/12/24 15:57:00	2024/12/24 18:55:00
6	593	Tripped on vacuum	2024/12/24 18:55:00	2024/12/24 21:28:00
6	297	System Generated Ramp Event for Event id : 2012150	2024/12/24 21:28:00	2024/12/24 22:58:00
6	218	Spinning Reserve	2024/12/25 08:36:00	2024/12/25 11:19:00
6	118	Spinning Reserve	2024/12/25 11:19:00	2024/12/25 15:45:00
6	68	Spinning Reserve	2024/12/25 19:56:00	2024/12/25 20:19:00
6	118	Spinning Reserve	2024/12/25 20:19:00	2024/12/25 21:05:00
6	218	Coal preservation due to silo 5 unavailable	2024/12/25 21:05:00	2024/12/26 05:00:00
6	218	Spinning Reserve	2024/12/26 05:00:00	2024/12/26 18:23:00
6	118	Spinning Reserve	2024/12/26 18:48:00	2024/12/26 19:38:00
6	218	Spinning Reserve	2024/12/26 23:24:00	2024/12/27 00:24:00
6	118	Spinning Reserve	2024/12/27 00:24:00	2024/12/27 01:43:00
6	118	Spinning Reserve	2024/12/28 20:20:00	2024/12/28 21:39:00
6	218	Spinning Reserve	2024/12/28 21:39:00	2024/12/29 02:00:00
6	54	Suspecting tube leak.	2024/12/30 20:38:00	2024/12/31 00:42:00

PM Exceedances		
U1.	Unit 1 shut down.	07-Dec
U1.	Unit 1 start up conditions	15-Dec
U1.	Unit 1 start up conditions	16-Dec
U1.	Unit 1 start up conditions Dust plant issues.	17-Dec
U1.	Dust plant issues 4 x high hopper levels Manual rapping done. SO3 plant tripped.	19-Dec
U1.	SO3 plant tripped. Poor ESP casing performance.	22-Dec
U1.	SO3 plant tripped. Poor ESP casing performance. Manual rapping done.	23-Dec
U1.	High hopper levels.	28-Dec
U1.	SO3 plant sulphur flow lost.	29-Dec
U1.	SO3 plant sulphur flow lost + Manual rapping done.	30-Dec
U1.	SO3 plant sulphur flow lost.	31-Dec
U2.	Unit 2 start up conditions.	16-Dec
U2.	Unit 2 start up conditions.	17-Dec
U2.	Manual rapping done Unit 2 start up conditions.	18-Dec
U2.	RHI Casing on PTW for fuse carrier locking mechanism. Manual rapping done.	21-Dec
U2.	RHI Casing poor performance.	24-Dec
U2.	RHI Casing poor performance.	25-Dec
U2.	RHI Casing poor performance. Manual rapping done.	26-Dec
U2.	RHI Casing outage.	27-Dec
U2.	SO3 plant sulphur flow issues. RHI ESP casing faulty.	31-Dec
U4.	Poor Casing Performance	02-Dec
U4.	RHI Outage	03-Dec
U4.	Unit S/D	04-Dec
U4.	Light up conditions after Boiler trip.	08-Dec

PM Exceedances		
U4.	Clean rapping brought forward. RHI Casing poor performance.	09-Dec
U4.	Clean rapping brought forward. RHI casing poor performance.	11-Dec
U4.	RHI Casing poor performance. Manual rapping done.	12-Dec
U4.	Poor ESP casing performance.	17-Dec
U4.	Poor esp casing performance.	18-Dec
U4.	Poor ESP casing performance. High hopper levels. Clean rapping brought forward.	19-Dec
U4.	ESP casing poor performance. Manual rapping done.	21-Dec
U4.	ESP casing poor performance. Manual rapping done.	22-Dec
U4.	ESP casing poor performance. Unit shut down for IN.	24-Dec
U5.	Poor casing performance.	02-Dec
U5.	Clean rapping brought forward.	05-Dec
U5.	ESP casing poor performance. Manual rapping done.	20-Dec
U5.	ESP casing poor performance.	22-Dec
U5.	ESP casing poor performance. Manual rapping done.	23-Dec
U5.	ESP casing poor performance. Manual rapping done	25-Dec

PM Exceedances		
U5.	ESP casing poor performance.	27-Dec
U5.	Poor performance on RHI casing.	28-Dec
U6.	Unit 6 tripped.	17-Dec
U6.	SO3 plant sulphur flow issues.	31-Dec