



Mr. Mcebo Mkhathswa
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Date:
24 October 2024

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LRP01PLA000 _0421/20241010

Dear Mr. Mkhathswa

LETHABO POWER STATION EMISSION MONTHLY REPORT FOR SEPTEMBER 2024

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

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

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

Yours sincerely

Karabo Rakgolela
GENERAL MANAGER

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Eskom Holdings SOC Ltd Reg No 2002/015527/30



Report

Lethabo Power Station

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

Reference number: **LRP01PLA000 _0421/20241010**
Document Type: **Report**
Area of Applicability: **Environment**
Report Date: **October-2024**
Classification: **Controlled Disclosure**

Signatures:

Compiled by:


B Moletsane
System Engineer

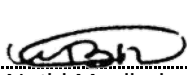
Date: 24/10/2024

Verified by :


W de Klerk
Senior Advisor

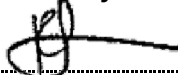
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Reviewed by:


Nathi Mazibuko
BPE Manager

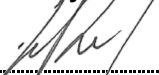
Date: 2024/10/24

Reviewed by:


C Govinden
PE Manager

Date: 2024/10/25

Reviewed by:


L Nel
C&I Manager

Date: 2024-10-28

Reviewed by:


M Hariram
Environmental Manager

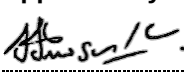
Date: 2024-10-28

Reviewed by:


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Date: 29/10/2024

Approved by:


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Technical Manager

Date: 2024/10/29

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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 Sep-2024
	Coal	Tons	2 000 000	1 080 445
	Fuel Oil	Tons	1 700	1414.740
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Indicative Production Rate Sep-2024
	Energy	GWh	2 743.200	1 541.165
	Ash	Tons	770 000	411 865.577
	RE Ash	kg/MWh	Not Specified	267.243

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)	0.690
Ash Content	%	37.37 (Standard)	38.120

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 Sep-2024	Technology Type	SO ₃ Utilization Sep-2024
Unit 1	Electrostatic Precipitator (ESP)	99.79%	SO ₃	100.0%
Unit 2	Electrostatic Precipitator (ESP)	99.66%	SO ₃	89.5%
Unit 3	Electrostatic Precipitator (ESP)	99.78%	SO ₃	99.3%
Unit 4	Electrostatic Precipitator (ESP)	99.64%	SO ₃	99.8%
Unit 5	Electrostatic Precipitator (ESP)	99.67%	SO ₃	99.6%
Unit 6	Electrostatic Precipitator (ESP)	99.90%	SO ₃	99.9%

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	98.1	100.0	100.0
Unit 2	94.4	100.0	99.7
Unit 3	100.0	100.0	100.0
Unit 4	98.4	100.0	100.0
Unit 5	96.2	100.0	100.0
Unit 6	99.6	100.0	100.0

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 September 2024

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)
Unit 1	158.6	2 089	1 261
Unit 2	225.7	2 957	1 090
Unit 3	35.4	559	245
Unit 4	203.7	3 246	1 540
Unit 5	269.5	3747	1452
Unit 6	76.6	3 054	1 441
SUM	969.5	15 652	7 030

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

Associated Unit/Stack	Normal	Grace	Section 30	Contraven tion	Total Exceedance	Average PM (mg/Nm³)
Unit 1	14	8	0	0	8	120.0
Unit 2	13	13	0	0	13	152.3
Unit 3	3	3	0	0	3	116.8
Unit 4	22	6	0	0	6	116.1
Unit 5	18	12	0	0	12	128.7
Unit 6	21	3	0	0	3	63.8
SUM	91	45	0	0	45	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contraven tion	Total Exceedance	Average SO ₂ (mg/Nm³)
Unit 1	22	0	0	0	0	1 542.4
Unit 2	28	0	0	0	0	1 945.4
Unit 3	6	0	0	0	0	1 724.0
Unit 4	29	0	0	0	0	1 772.7
Unit 5	30	0	0	0	0	1 785.2
Unit 6	28	0	0	0	0	1 908.9
SUM	143	0	0	0	0	

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

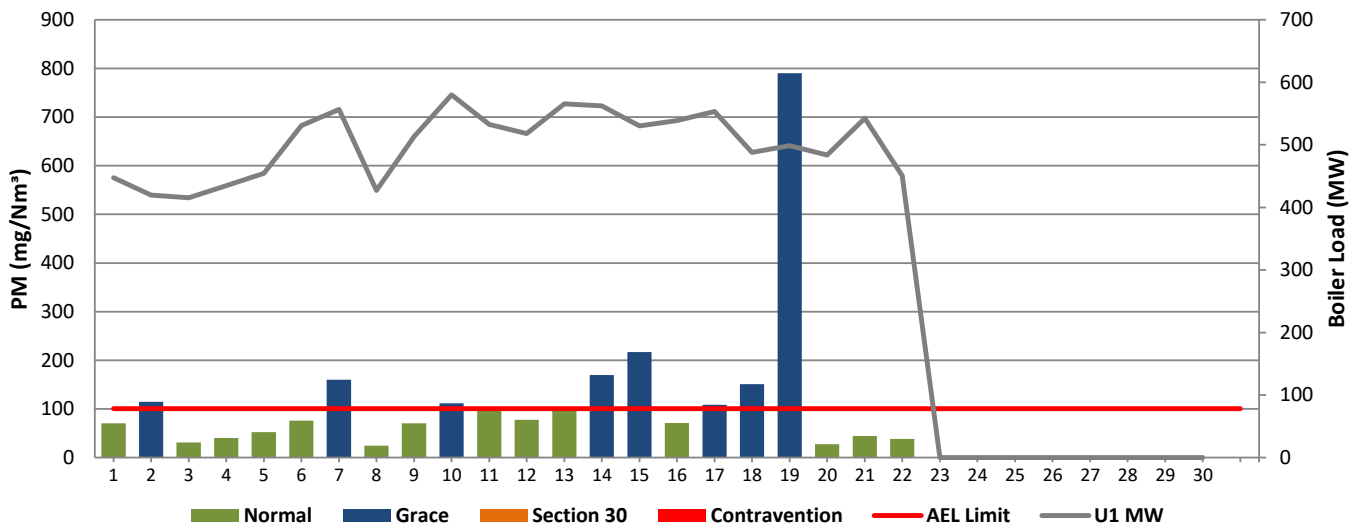
Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average NOx (mg/Nm³)
Unit 1	22	0	0	0	0	925.7
Unit 2	28	0	0	0	0	711.7
Unit 3	6	0	0	0	0	764.3
Unit 4	29	0	0	0	0	837.6
Unit 5	30	0	0	0	0	692.7
Unit 6	28	0	0	0	0	889.3
SUM	143	0	0	0	0	

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

Table 6.5: Legend Description

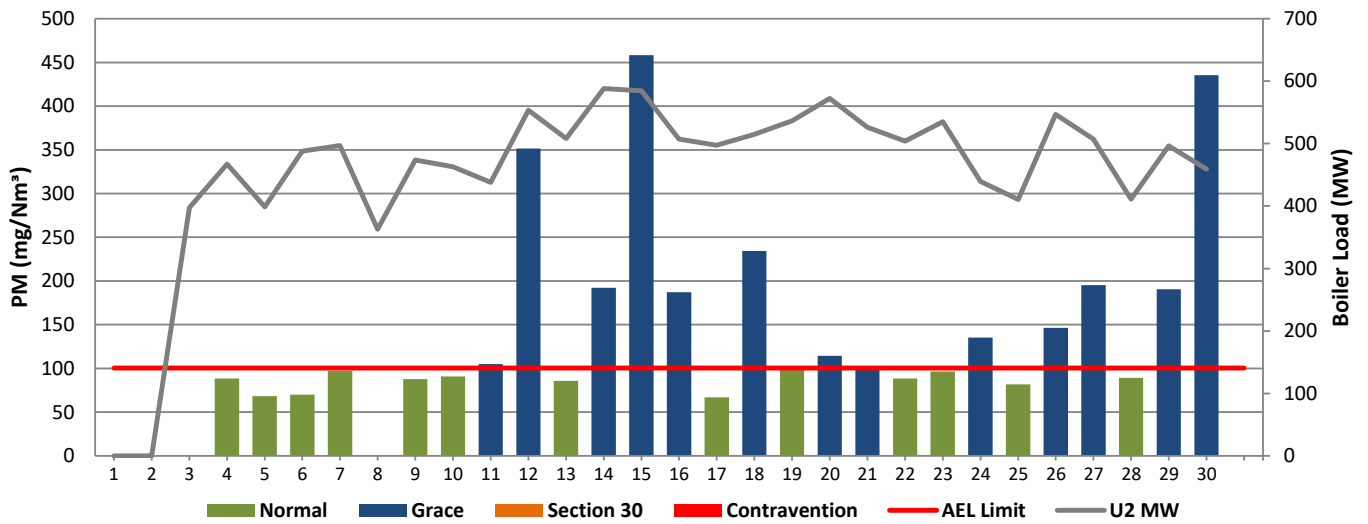
Condition	Colour	Description
Normal	GREEN	Emissions below Emission Limit Value (ELV)
Grace	BLUE	Emissions above the ELV during grace period
Section 30	ORANGE	Emissions above ELV during a NEMA S30 incident
Contra-vention	RED	Emissions above ELV but outside grace or S30 incident conditions

Figure 1: Lethabo Unit 1 PM Emissions - September 2024



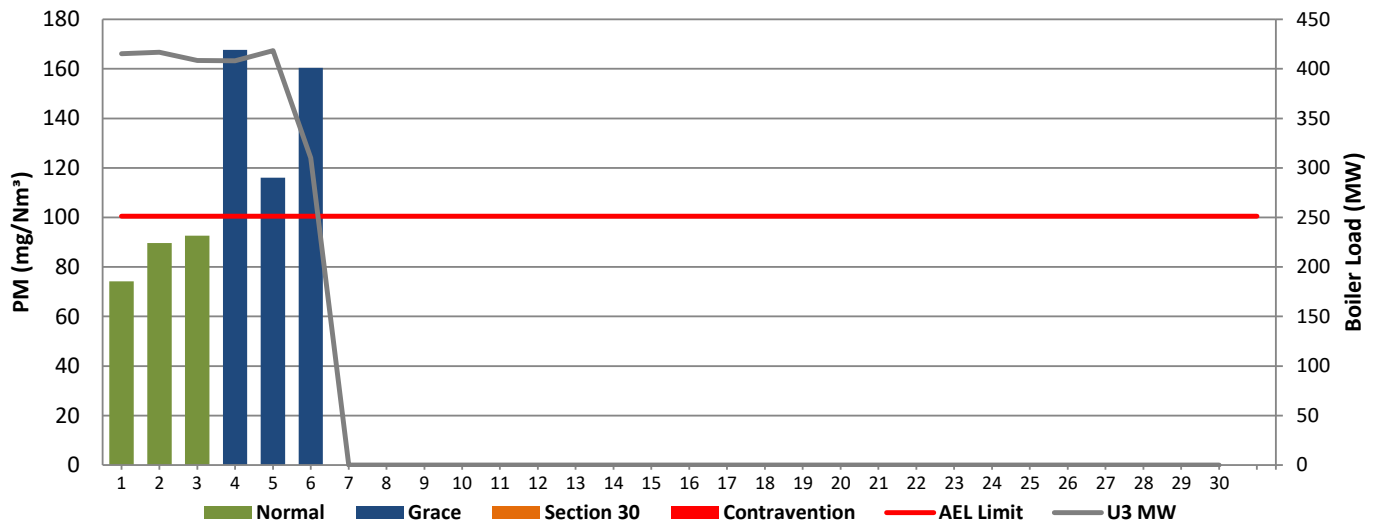
Reasons:	
Date	Description:
02-Sep	Manual rapping carried out.
07-Sep	ESP casing poor performance (LHO/LHI). Manual rapping carried out.
10-Sep	High hopper levels. Poor ESP casing performance. Manual rapping carried out.
14-Sep	ESP casings poor performance.
15-Sep	ESP casings poor performance. Manual rapping done.
17-Sep	High hopper levels Poor ESP casings performance.
18-Sep	Poor ESP casings performance.
19-Sep	Poor ESP casings performance. LHI Casing outage. Manual rapping done.

Figure 2: Lethabo Unit 2 PM Emissions - September 2024



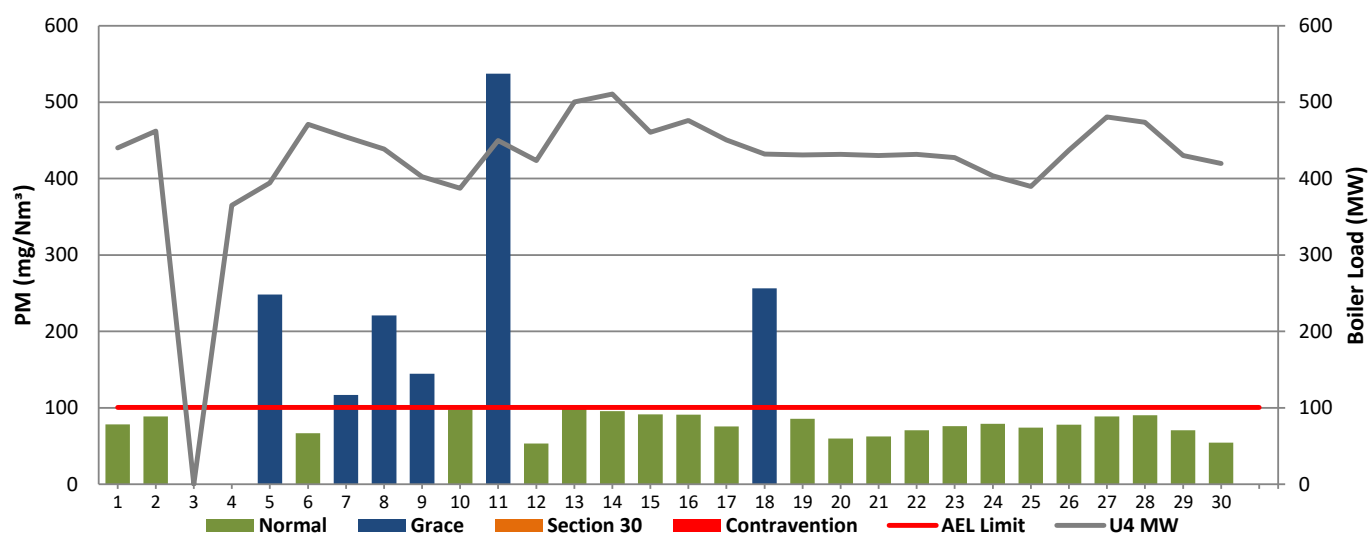
Reasons:	
Date	Description:
11-Sep	So3 plant issues. Poor ESP performance.
12-Sep	So3 plant tripped. ESP poor performance.
14-Sep	Poor ESP casing performance SO3 plant issues.
15-Sep	Manual rapping done. SO3 plant issues.
16-Sep	High hopper levels. SO3 plant issues.
18-Sep	Manual rapping done. Poor ESP casing performance.
20-Sep	SO3 plant tripped on comms fault. Poor ESP casing performance.
21-Sep	SO3 plant tripped on comms fault. Poor ESP casing performance.
24-Sep	Dust Handling Plant standing High hopper levels.
26-Sep	DHP issues. Poor ESP casing performance.
27-Sep	High hopper levels. DHP issues. Poor ESP casing performance.
29-Sep	High hopper levels. A-bucket replacement. Poor ESP casing performance.
30-Sep	DHP issues. High hopper levels. Poor ESP casing performance.

Figure 3: Lethabo Unit 3 PM Emissions - September 2024



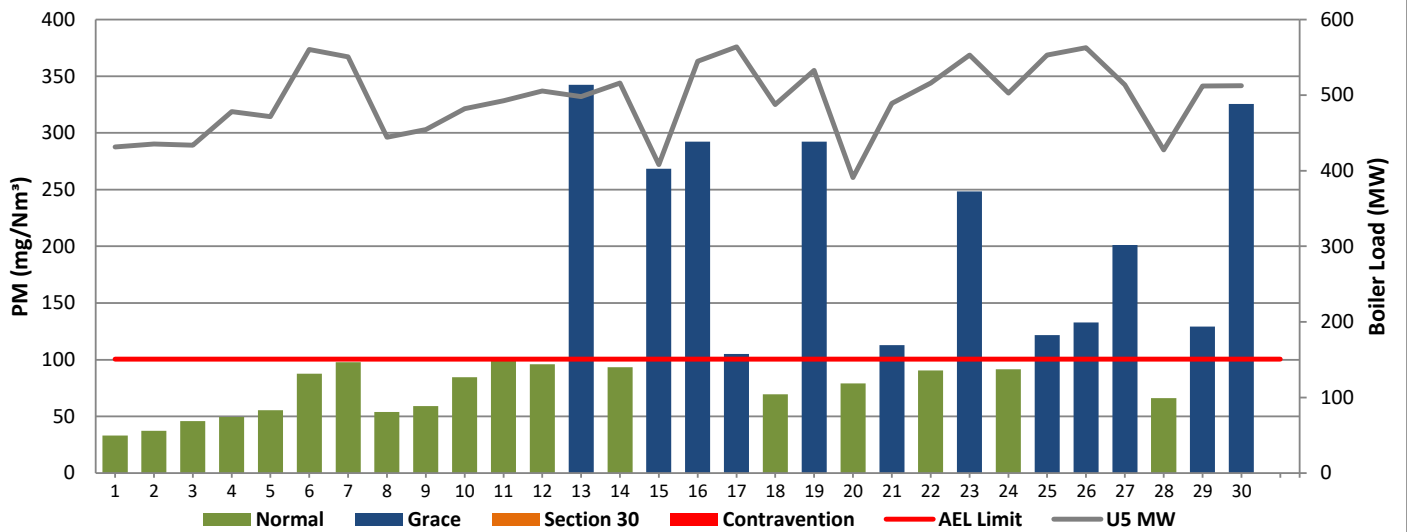
Reasons:	
Date	Description:
04-Sep	Manual rapping done. Poor ESP casing performance.
05-Sep	High hopper levels. Poor ESP casing performance.
06-Sep	Unit 3 off load for GO.

Figure 4: Lethabo Unit 4 PM Emissions - September 2024



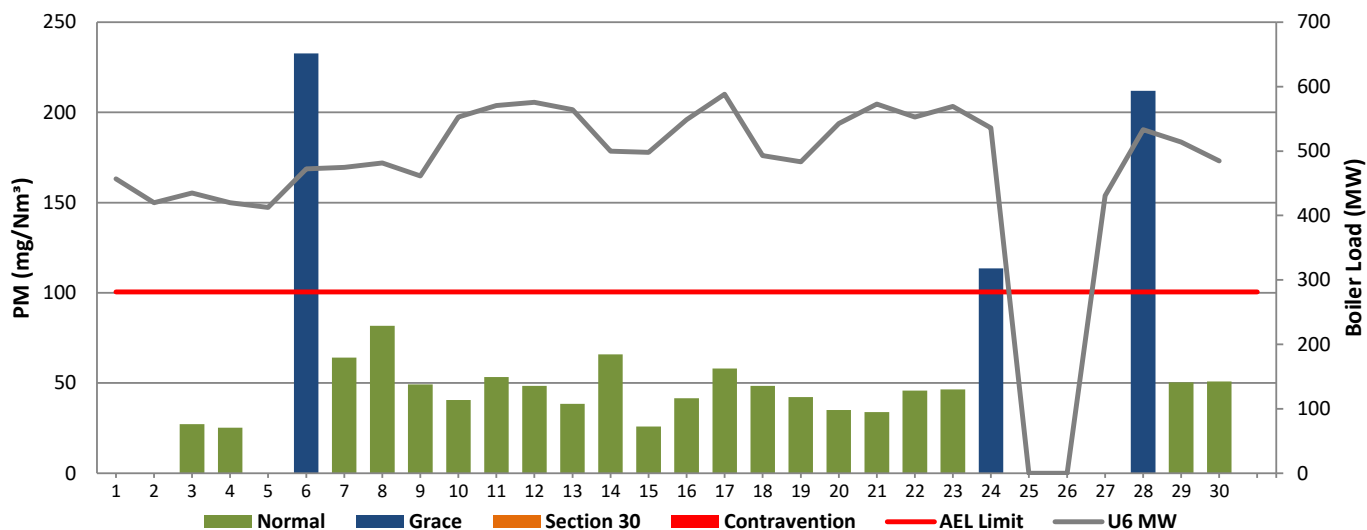
Reasons:	
Date	Description:
05-Sep	Unit 4 synchronised on 2024/09/04 @ 05:41, therefore the emissions need to be below the limit on 2024/09/07 @
07-Sep	Poor ESP casings performance.
08-Sep	Poor ESP casings performance. High hopper levels. Manual rapping done.
09-Sep	High hopper levels. Poor ESP casing performance. DHP issues.
11-Sep	High hopper levels. Manual rapping carried out. Poor ESP casings performance.
18-Sep	RHI Casing outage

Figure 5: Lethabo Unit 5 PM Emissions - September 2024



Reasons:	
Date	Description:
13-Sep	RHO casing outage
15-Sep	LHI casing outage
16-Sep	Manual rapping done. LHI casing poor performance.
17-Sep	Clean rapping brought forward 21h00 to 23h00. Poor ESP casing performance.
19-Sep	Manual rapping done. Poor ESP casings performance.
21-Sep	Poor ESP casing performance. Manual rapping done. Tripped Ash bucket conveyor.
23-Sep	Poor ESP casing performance. Manual rapping done.
25-Sep	Poor ESP casing performance.
26-Sep	Poor ESP casing performance.
27-Sep	Poor ESP casing performance.
29-Sep	Poor ESP casing performance.
30-Sep	Poor ESP casing performance. Manual rapping done. High hopper levels.

Figure 6: Lethabo Unit 6 PM Emissions - September 2024



Reasons:	
Date	Description:
06-Sep	Unit 6 synchronised on 2024/09/05 @ 10:27, therefore the emissions need to be below the limit on 2024/09/08 @
24-Sep	Unit shutdown for BTL repairs.
28-Sep	Unit 6 start up conditions.

Figure 7: Lethabo Unit 1 SO₂ Emissions - September 2024

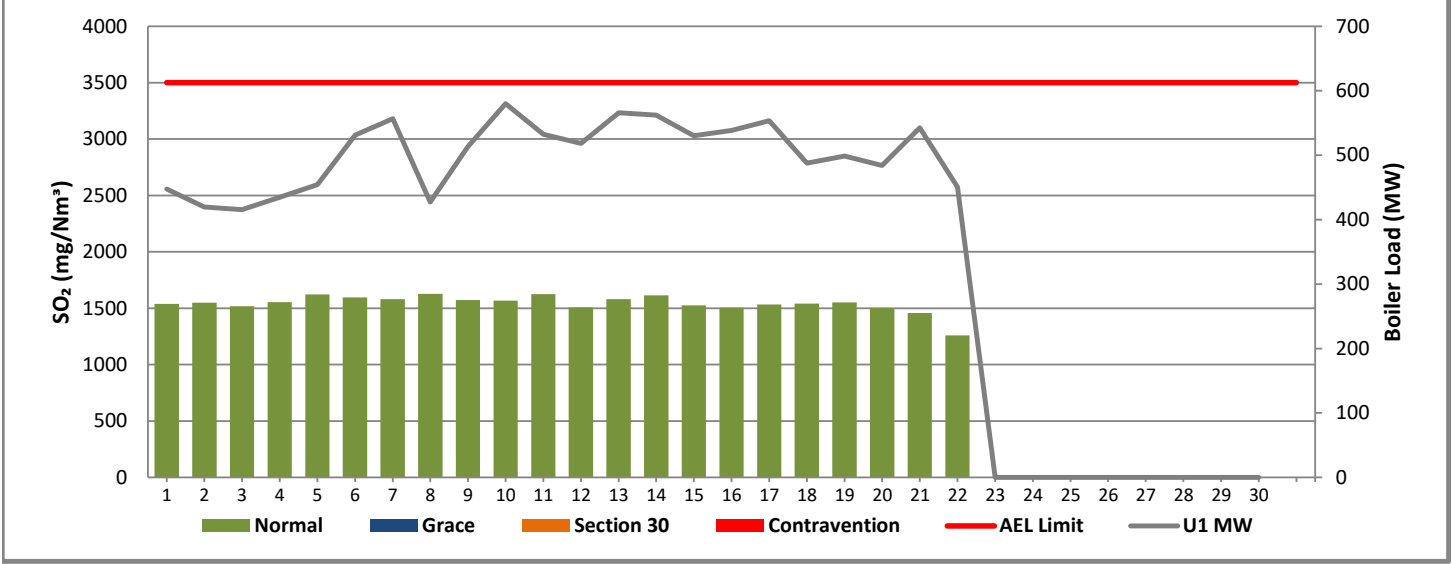


Figure 8: Lethabo Unit 2 SO₂ Emissions - September 2024

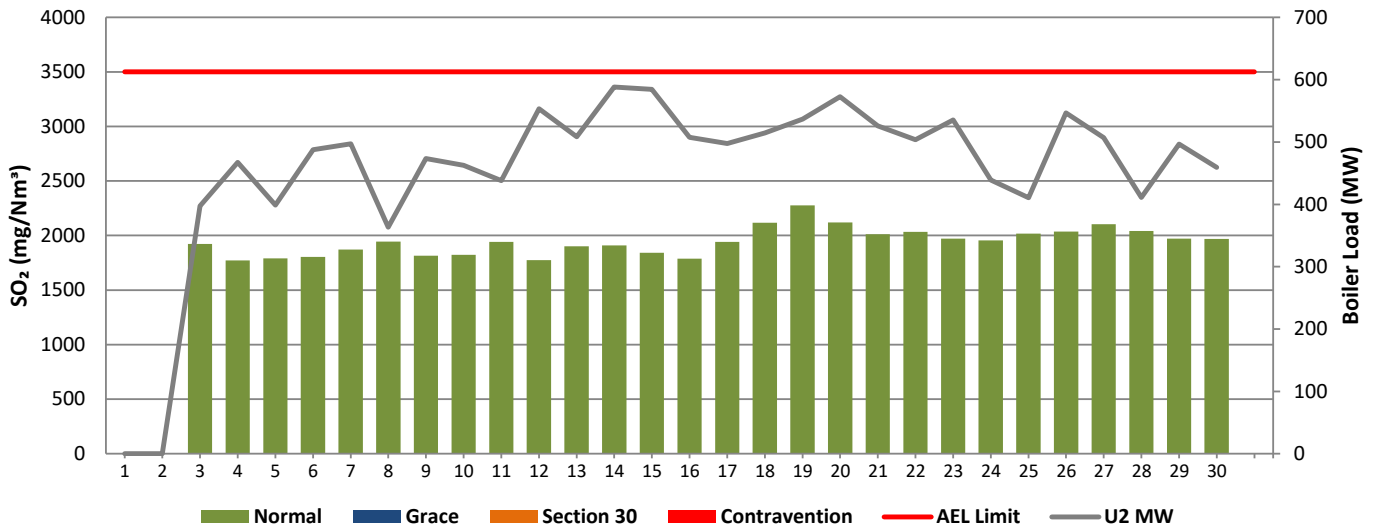


Figure 9: Lethabo Unit 3 SO₂ Emissions - September 2024

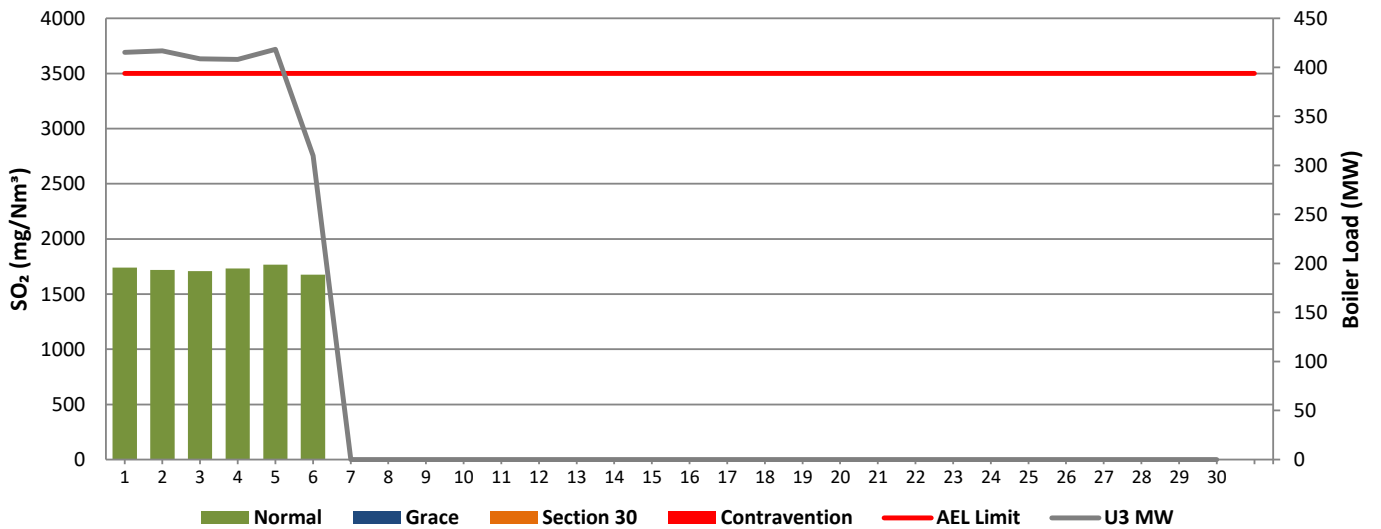


Figure 10: Lethabo Unit 4 SO₂ Emissions - September 2024

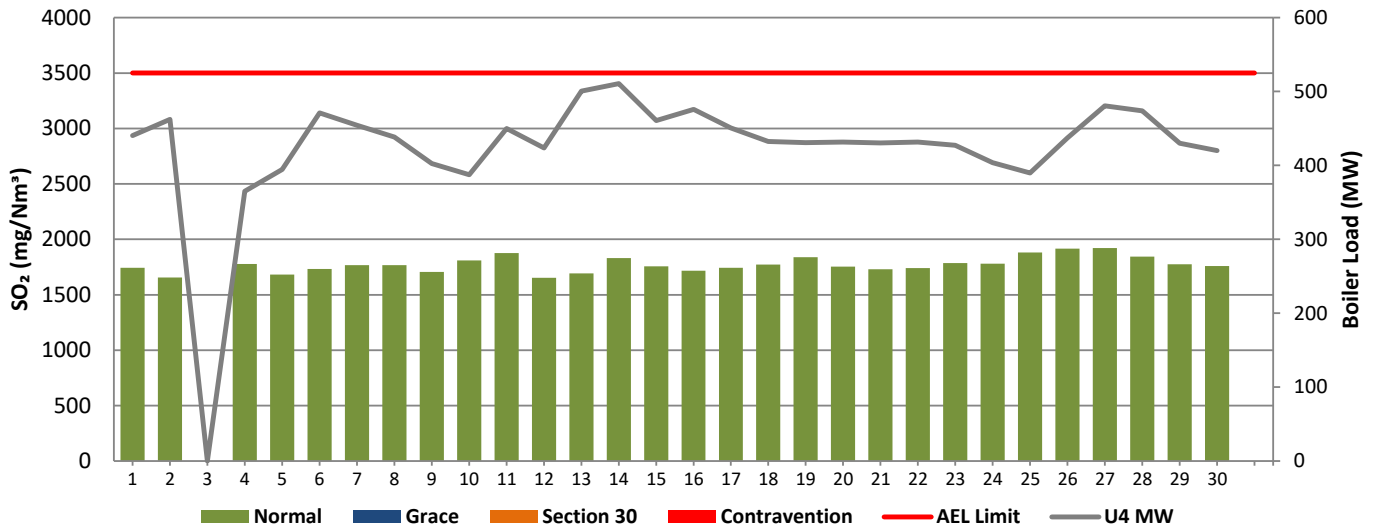


Figure 11: Lethabo Unit 5 SO₂ Emissions - September 2024

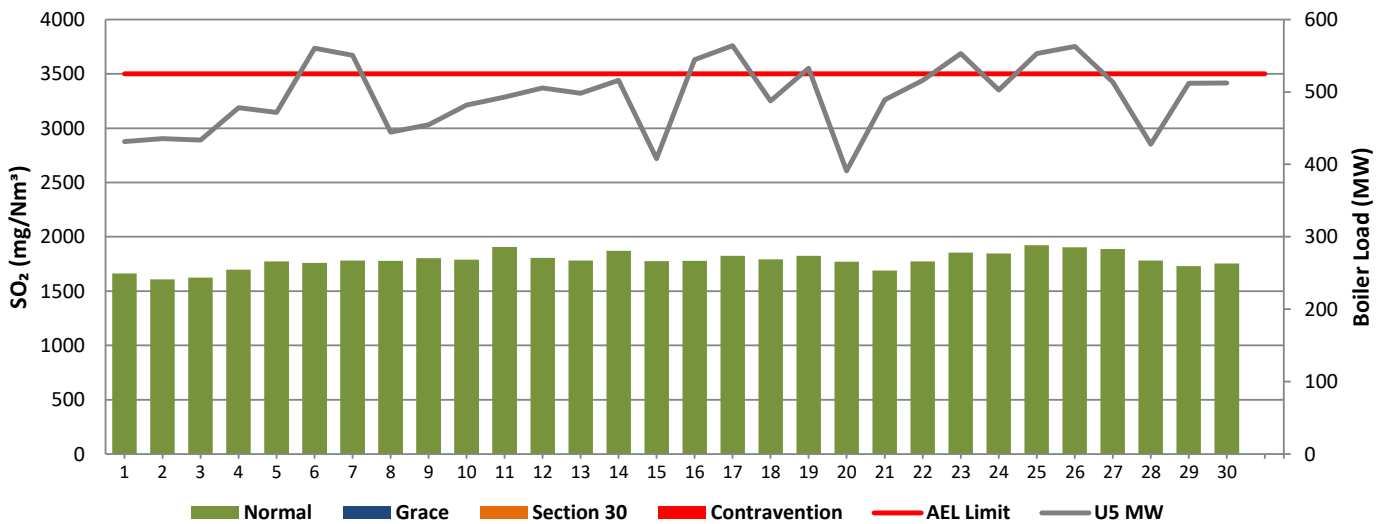


Figure 12: Lethabo Unit 6 SO₂ Emissions - September 2024

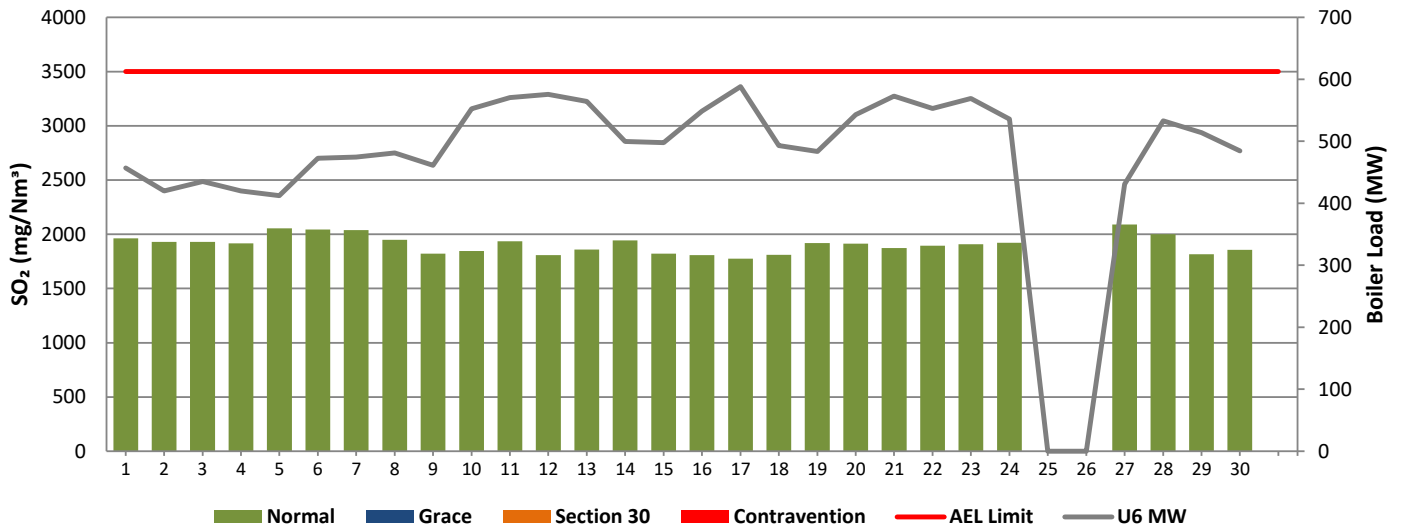


Figure 13: Lethabo Unit 1 NO_x Emissions - September 2024

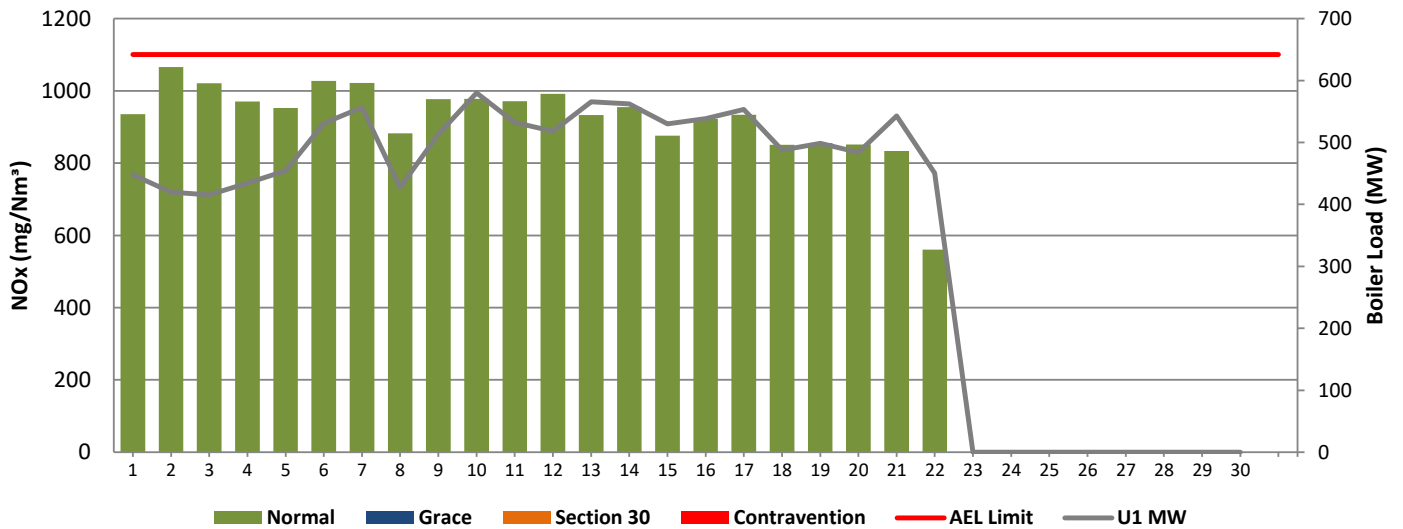


Figure 14: Lethabo Unit 2 NOx Emissions - September 2024

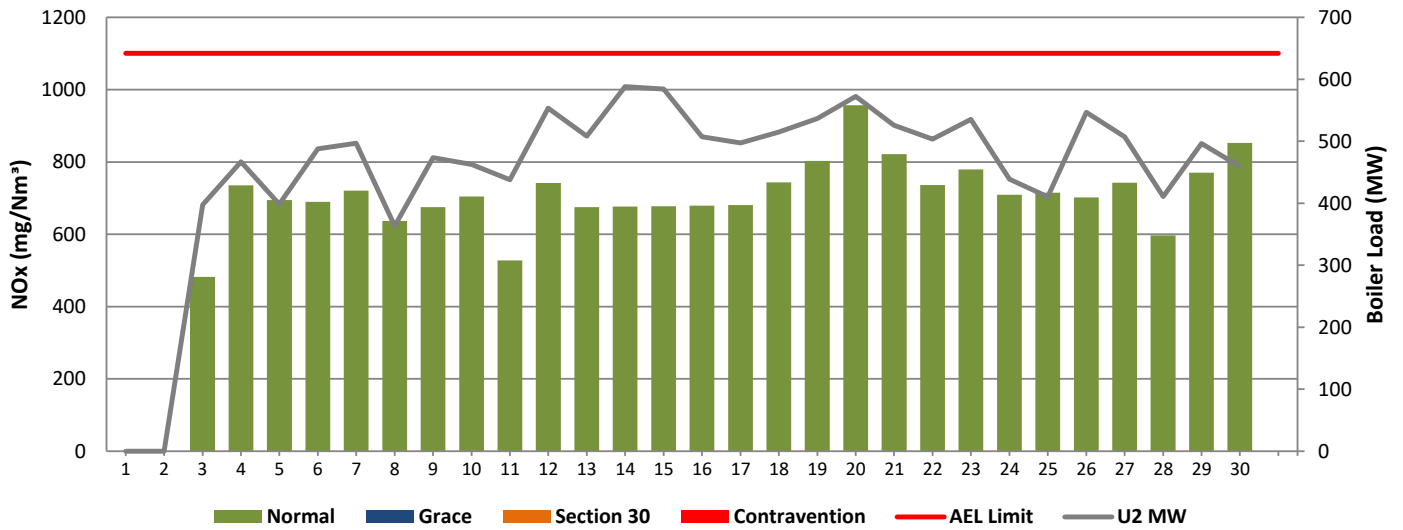


Figure 15: Lethabo Unit 3 NOx Emissions - September 2024

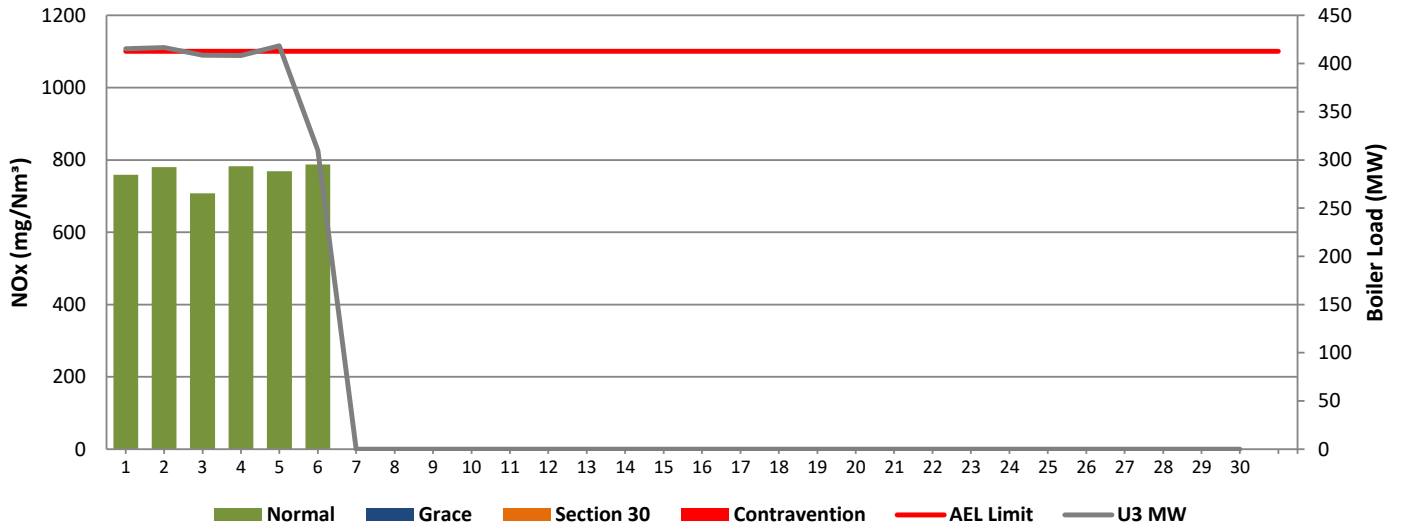


Figure 16: Lethabo Unit 4 NOx Emissions - September 2024

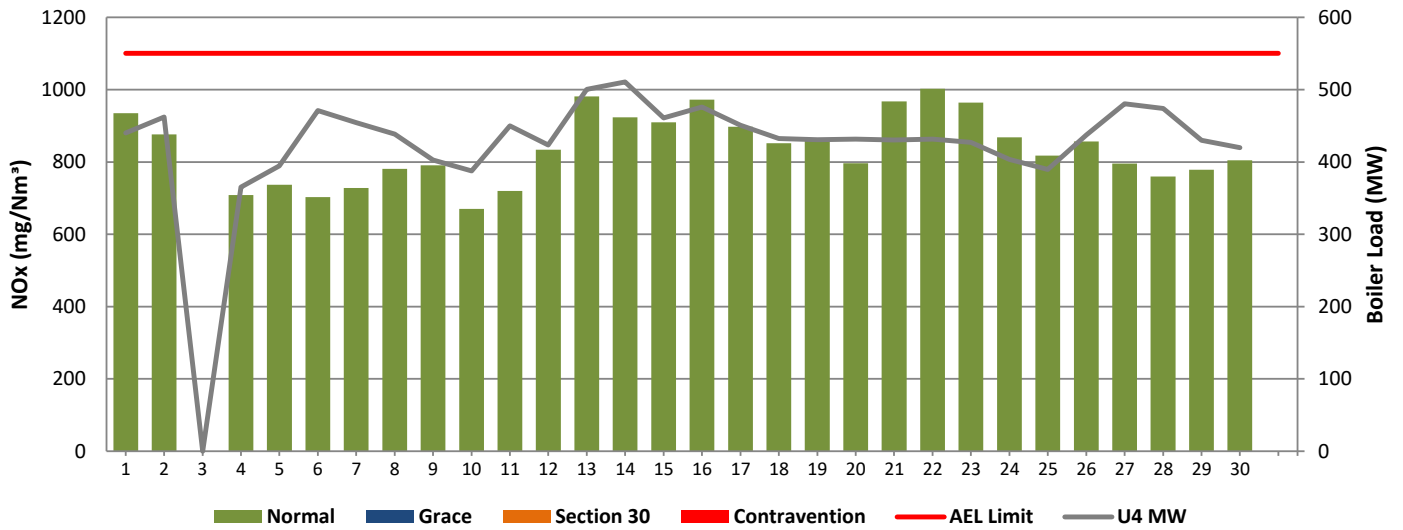


Figure 17: Lethabo Unit 5 NOx Emissions - September 2024

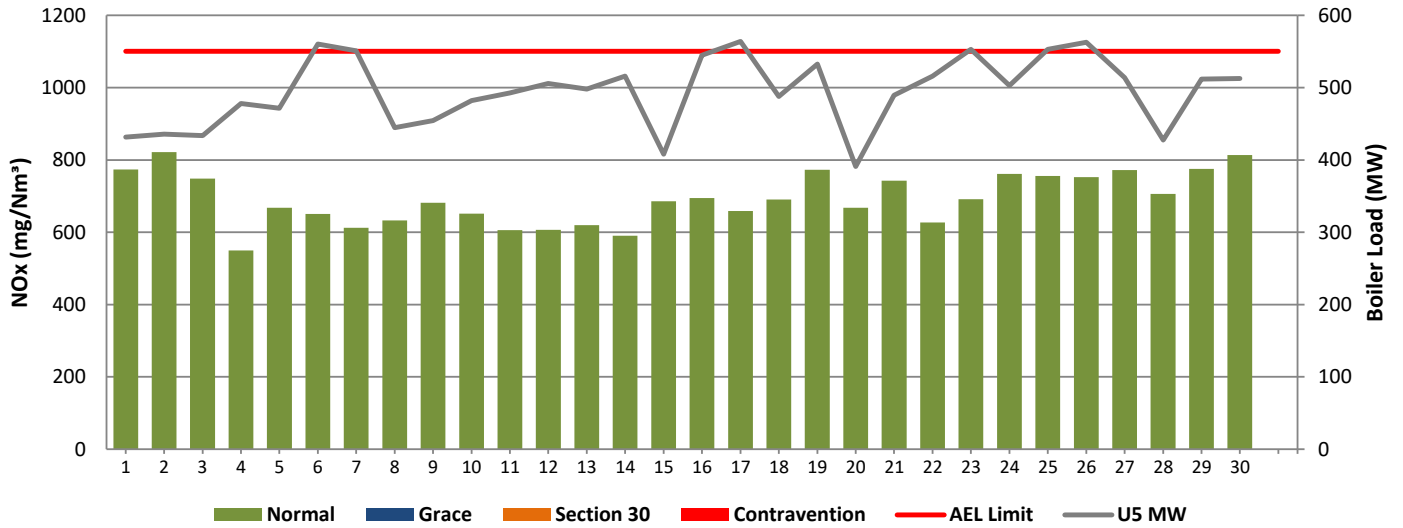
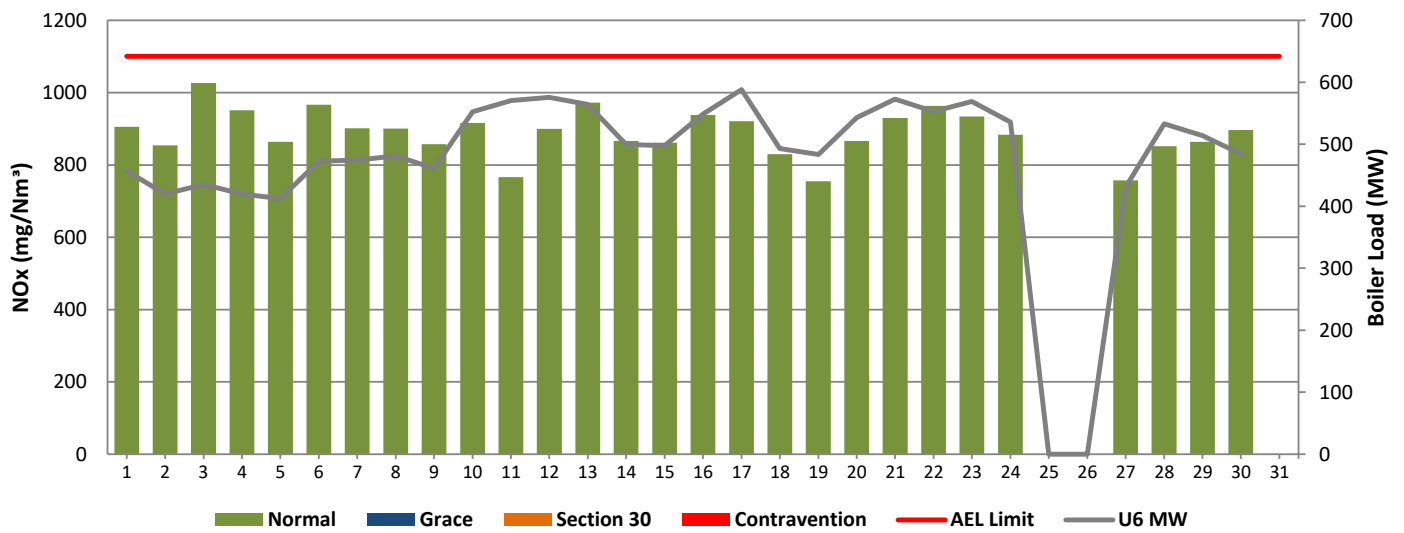


Figure 18: Lethabo Unit 6 NOx Emissions - September 2024



7 SHUT DOWN AND LIGHT UP INFORMATION

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

Unit No.1	Boiler tube leak							
Breaker Open (BO)	9:09 am	2024/09/22						
Draught Group (DG) Shut Down (SD)	8:56 pm	2024/09/22						
BO to DG SD (duration)	00:11:47	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	9:09 pm	2024/10/01						
Synch. to Grid (or BC)	11:50 pm	2024/10/01						
Fires in to BC (duration)	00:02:41	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	12:05 am	2024/10/03						
Emissions below limit from BC (duration)	01:00:15	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM

Unit No.2	SO3 plant repair		Boiler low drum level		Unit tripped on balck furnace.			
Breaker Open (BO)			8:26 pm	2024/09/07	3:00 am	2024/09/08		
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		
BO to DG SD (duration)		DD:HH:MM	n/a	DD:HH:MM	n/a	DD:HH:MM		
Fires in time	8:11 pm	2024/09/02	11:37 pm	2024/09/07	4:33 am	2024/09/08		
Synch. to Grid (or BC)	5:17 am	2024/09/03	1:03 am	2024/09/08	6:20 am	2024/09/08		
Fires in to BC (duration)	00:09:06	DD:HH:MM	00:01:26	DD:HH:MM	00:01:47	DD:HH:MM		
Emissions below limit from BC (end date)	7:00 am	2024/09/05	12:00 pm	2024/09/10	12:00 pm	2024/09/10		
Emissions below limit from BC (duration)	02:01:43	DD:HH:MM	02:10:57	DD:HH:MM	02:05:40	DD:HH:MM		

Unit No.3	IR ESP & S03 PLANT							
Breaker Open (BO)	2:40 am	2024/09/07						
Draught Group (DG) Shut Down (SD)	2:28 am	2024/09/08						
BO to DG SD (duration)	00:23:48							
Fires in time								
Synch. to Grid (or BC)								
Fires in to BC (duration)								
Emissions below limit from BC (end date)								
Emissions below limit from BC (duration)								

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

Unit No.5	HP Exhaust							
Breaker Open (BO)	2:06 am	2024/09/20						
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD						
BO to DG SD (duration)	n/a							
Fires in time	4:46 am	2024/09/20						
Synch. to Grid (or BC)	9:03 am	2024/09/20						
Fires in to BC (duration)	00:04:17							
Emissions below limit from BC (end date)	12:00 am	2024/09/22						
Emissions below limit from BC (duration)	01:14:57							

Unit No.6	Main turbine Physical over speed test		Unit tripped due to EFP B tripped.		Stator coolant pump A tripped and Pump B failed to cut in		Boiler tube leak repairs + MSSV repairs + 20 kv breaker failing	
Breaker Open (BO)			7:31 pm	2024/09/01	5:03 pm	2024/09/18	9:02 pm	2024/09/24
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	11:18 am	2024/09/25
BO to DG SD (duration)			n/a	DD:HH:MM	n/a	DD:HH:MM	00:14:16	DD:HH:MM
Fires in time	3:31 am	2024/09/01	1:47 am	2024/09/02	6:40 pm	2024/09/18	2:12 pm	2024/09/27
Synch. to Grid (or BC)	4:58 am	2024/09/01	3:24 am	2024/09/02	8:32 pm	2024/09/18	5:15 pm	2024/09/27
Fires in to BC (duration)	00:01:27		00:01:37	DD:HH:MM	00:01:52	DD:HH:MM	00:03:03	DD:HH:MM
Emissions below limit from BC (end date)	12:00 am	2024/09/03	12:00 am	2024/09/03	2:00 pm	2024/09/19	12:00 am	2024/09/29
Emissions below limit from BC (duration)	01:19:02		00:20:36	DD:HH:MM	00:17:28	DD:HH:MM	01:06:45	DD:HH:MM

7.2: Point Source emissions released during start-up (fires-in) and Shut-down (SD) for the month of September 2024 in mg/Nm³

8. MAINTENANCE

Unit 1				
Beginning of	2024/09/19 01:07	2024/09/20 04:01		
Reason for Maintenance	LHI Precip casing repair	AM: LHO precip casing		
End (Time):	2024/09/19 22:51	2024/09/21 00:00		
Duration	21:44:00	19:59:00		

Unit 2				
Beginning of	2024/09/27 04:17:00			
Reason for Maintenance	RHI precip casing			
End (Time):	2024/09/27 08:50:00			
Duration	4:33:00			

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

Unit 4				
Beginning of	2024/09/11 00:37			
Reason for Maintenance	AM: RHO Precip casing			
End (Time):	2024/09/12 02:00			
Duration	25:23:00			

Unit 5				
Beginning of	2024/09/13 00:03	2024/09/13 08:00		
Reason for Maintenance	AM: RHO Precip. casing	RHO precip casing repairs.		
End (Time):	2024/09/13 08:00	2024/09/14 00:15		
Duration	7:57:00	16:15:00		

Unit 6				
Beginning of				
Reason for Maintenance				
End (Time):				
Duration				

9. GENERAL

Unit 1 Monitor Reliability

19/09/2024: PM monitor Reliability low due to monitor reading max out.

Unit 2 Monitor Reliability

15/09/2024: PM Monitor Reliability low due to monitor reading max out.

30/09/2024: PM monitor reliability low due to monitor reading maxing out

Unit 5 Monitor Reliability

30/09/2024: PM monitor reliability low due to monitor reading maxing 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
Oct-23	0.26	0.48	0.63	0.43	0.39	0.42	0.43
Nov-23	0.83	1.31	0.94	0.67	0.59	0.75	0.87
Dec-23	0.53	0.87	0.88	1.25	0.93	0.71	0.85
Jan-24	0.53	0.98	0.85	0.87	0.75	0.78	0.79
Feb-24	0.55	0.81	0.89	0.63	0.48	OFF	0.68
Mar-24	0.86	0.58	0.97	0.69	0.84	OFF	0.79
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

ADDENDUM TO MONTHLY EMISSIONS REPORT

12. DAILY EMISSIONS FIGURES

Final Dust Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
31-Aug	31	OFF	113	49	216	11	100
01-Sep	71	OFF	74	78	33	OFF	100
02-Sep	115	OFF	90	89	37	OFF	100
03-Sep	31	OFF	93	OFF	46	27	100
04-Sep	40	89	168	OFF	50	25	100
05-Sep	52	68	116	248	55	OFF	100
06-Sep	76	70	160	67	88	233	100
07-Sep	160	97	OFF	117	98	64	100
08-Sep	24	OFF	OFF	221	54	82	100
09-Sep	70	88	OFF	145	59	49	100
10-Sep	111	91	OFF	98	84	41	100
11-Sep	100	105	OFF	537	99	53	100
12-Sep	78	351	OFF	53	96	48	100
13-Sep	96	86	OFF	99	342	39	100
14-Sep	170	192	OFF	96	93	66	100
15-Sep	217	458	OFF	91	268	26	100
16-Sep	71	187	OFF	91	292	42	100
17-Sep	108	67	OFF	75	105	58	100
18-Sep	151	234	OFF	256	69	48	100
19-Sep	790	99	OFF	86	292	42	100
20-Sep	27	115	OFF	60	79	35	100
21-Sep	45	103	OFF	62	113	34	100
22-Sep	38	89	OFF	70	90	46	100
23-Sep	OFF	97	OFF	76	248	46	100
24-Sep	OFF	135	OFF	79	92	114	100
25-Sep	OFF	82	OFF	74	122	OFF	100
26-Sep	OFF	146	OFF	78	133	OFF	100
27-Sep	OFF	195	OFF	89	201	OFF	100
28-Sep	OFF	89	OFF	90	66	212	100
29-Sep	OFF	191	OFF	71	129	50	100
30-Sep	OFF	435	OFF	54	325	51	100

ADDENDUM TO MONTHLY EMISSIONS REPORT

Final SOx Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
31-Aug	1563	OFF	1766	1745	1703	1947	3500
01-Sep	1539	OFF	1740	1743	1661	1964	3500
02-Sep	1548	OFF	1719	1655	1609	1929	3500
03-Sep	1517	1923	1709	OFF	1626	1930	3500
04-Sep	1554	1772	1732	1777	1698	1918	3500
05-Sep	1623	1791	1768	1681	1773	2055	3500
06-Sep	1597	1803	1676	1733	1760	2043	3500
07-Sep	1581	1872	OFF	1766	1781	2038	3500
08-Sep	1628	1943	OFF	1768	1780	1950	3500
09-Sep	1572	1813	OFF	1706	1803	1820	3500
10-Sep	1568	1824	OFF	1808	1791	1847	3500
11-Sep	1625	1942	OFF	1876	1906	1935	3500
12-Sep	1508	1775	OFF	1652	1807	1807	3500
13-Sep	1581	1902	OFF	1692	1781	1860	3500
14-Sep	1616	1909	OFF	1831	1871	1944	3500
15-Sep	1526	1842	OFF	1757	1777	1822	3500
16-Sep	1506	1787	OFF	1716	1778	1807	3500
17-Sep	1534	1941	OFF	1744	1825	1776	3500
18-Sep	1542	2118	OFF	1773	1792	1811	3500
19-Sep	1551	2276	OFF	1838	1824	1919	3500
20-Sep	1501	2121	OFF	1753	1771	1913	3500
21-Sep	1458	2012	OFF	1731	1689	1872	3500
22-Sep	1259	2033	OFF	1742	1774	1894	3500
23-Sep	OFF	1972	OFF	1785	1854	1909	3500
24-Sep	OFF	1956	OFF	1781	1847	1921	3500
25-Sep	OFF	2018	OFF	1882	1924	OFF	3500
26-Sep	OFF	2037	OFF	1916	1902	OFF	3500
27-Sep	OFF	2104	OFF	1921	1886	2091	3500
28-Sep	OFF	2042	OFF	1845	1781	2001	3500
29-Sep	OFF	1973	OFF	1776	1731	1817	3500
30-Sep	OFF	1970	OFF	1758	1753	1856	3500

ADDENDUM TO MONTHLY EMISSIONS REPORT

Final NOx Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
31-Aug	879	OFF	757	909	651	913	1100
01-Sep	935	OFF	759	935	774	905	1100
02-Sep	1066	OFF	780	876	822	854	1100
03-Sep	1021	482	708	OFF	748	1027	1100
04-Sep	970	735	783	708	550	951	1100
05-Sep	952	695	768	737	667	864	1100
06-Sep	1027	690	788	703	651	967	1100
07-Sep	1022	721	OFF	728	612	902	1100
08-Sep	883	636	OFF	781	632	900	1100
09-Sep	977	675	OFF	791	681	857	1100
10-Sep	978	705	OFF	670	652	916	1100
11-Sep	971	527	OFF	720	606	766	1100
12-Sep	991	742	OFF	834	607	900	1100
13-Sep	933	675	OFF	981	620	973	1100
14-Sep	955	676	OFF	924	590	866	1100
15-Sep	876	677	OFF	909	686	861	1100
16-Sep	922	679	OFF	972	695	938	1100
17-Sep	934	681	OFF	897	659	921	1100
18-Sep	851	744	OFF	851	691	830	1100
19-Sep	855	803	OFF	858	773	755	1100
20-Sep	852	957	OFF	797	668	867	1100
21-Sep	833	822	OFF	968	743	930	1100
22-Sep	561	736	OFF	1003	627	963	1100
23-Sep	OFF	779	OFF	964	691	934	1100
24-Sep	OFF	709	OFF	868	761	883	1100
25-Sep	OFF	715	OFF	818	756	OFF	1100
26-Sep	OFF	702	OFF	857	752	OFF	1100
27-Sep	OFF	743	OFF	796	772	757	1100
28-Sep	OFF	597	OFF	760	706	852	1100
29-Sep	OFF	770	OFF	778	775	864	1100
30-Sep	OFF	852	OFF	805	813	897	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
Oct-23	99.98%	0.0	96.81%	4.0	98.31%	2.1	100.00%	0.0	99.34%	0.8	99.30%	0.9
Nov-23	97.53%	2.96	97.57%	2.92	99.17%	1.00	100.00%	0.00	100.00%	0.00	99.71%	0.35
Dec-23	100.00%	0.0	97.95%	2.5	100.00%	0.0	98.62%	1.7	98.03%	2.4	97.91%	2.6
Jan-24	97.90%	2.6	98.73%	1.6	100.00%	0.0	100.00%	0.0	99.32%	0.8	100.00%	0.0
Feb-24	100.00%	0.0	99.34%	0.8	98.42%	1.8	99.89%	0.1	100.00%	0.0	Off-line	Off-line
Mar-24	100.00%	0.0	99.19%	1.0	100.00%	0.0	97.53%	3.1	99.19%	1.0	100.00%	0.00%
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

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
Oct-23	99.73%	0.1	100.00%	0.0	96.91%	1.0	100.00%	0.0	100.00%	0.0	97.27%	0.8
Nov-23	95.14%	1.5	94.17%	1.8	83.89%	4.8	86.14%	4.2	89.17%	3.3	94.62%	1.6
Dec-23	92.47%	2.3	97.67%	0.7	81.25%	5.8	84.48%	4.8	93.82%	1.9	85.62%	4.5
Jan-24	95.73%	1.3	90.43%	3.0	69.76%	9.4	91.80%	2.5	89.78%	3.2	95.24%	1.5
Feb-24	99.92%	0.0	87.56%	3.6	98.85%	0.3	95.65%	1.3	88.10%	3.5	Off-line	Off-line
Mar-24	99.33%	0.21	93.76%	1.94	84.86%	4.69	100.00%	0.00	100.00%	0.00	Off-line	Off-line
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%	2.45%

ADDENDUM TO MONTHLY EMISSIONS REPORT

Particulate Emission Monitors

Availability						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Oct-23	100.00%	96.51%	99.33%	99.73%	98.66%	99.69%
Nov-23	92.92%	86.39%	94.86%	98.60%	97.64%	96.16%
Dec-23	98.12%	92.68%	95.74%	90.32%	95.03%	97.85%
Jan-24	98.28%	85.65%	94.35%	90.76%	92.88%	97.82%
Feb-24	96.67%	93.82%	93.39%	96.10%	98.81%	OFF
Mar-24	94.09%	97.49%	96.46%	97.18%	95.83%	OFF
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%

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
Oct-23	99.46%	99.46%	99.33%	99.46%	99.19%	99.19%	99.46%	99.46%	99.33%	99.46%	99.40%	99.40%
Nov-23	100.00%	100.00%	99.72%	99.86%	99.86%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.73%
Dec-23	100.00%	100.00%	100.00%	100.00%	100.00%	98.95%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Jan-24	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.87%	100.00%	100.00%	100.00%
Feb-24	98.08%	98.08%	99.78%	98.95%	98.28%	98.28%	97.83%	97.83%	97.73%	97.73%	OFF	OFF
Mar-24	99.73%	99.73%	100.00%	100.00%	99.62%	99.43%	99.73%	99.60%	99.73%	99.87%	OFF	OFF
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%

Oxygen Monitor Availability						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Oct-23	99.33%	99.06%	99.19%	99.33%	100.00%	99.40%
Nov-23	99.86%	99.72%	99.86%	100.00%	100.00%	99.58%
Dec-23	100.00%	99.83%	99.81%	99.72%	100.00%	99.46%
Jan-24	99.87%	99.86%	100.00%	100.00%	100.00%	98.10%
Feb-24	97.92%	99.78%	97.84%	97.67%	97.54%	OFF
Mar-24	99.73%	100.00%	99.24%	99.87%	99.87%	OFF
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%

ADDENDUM TO MONTHLY EMISSIONS REPORT

14. EFFICIENCY

ESP Efficiency (%)						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Oct-23	99.908%	99.804%	99.749%	99.830%	99.849%	99.829%
Nov-23	99.715%	99.499%	99.652%	99.764%	99.775%	99.705%
Dec-23	99.776%	99.585%	99.592%	99.414%	99.576%	99.667%
Jan-24	99.833%	99.641%	99.694%	99.692%	99.737%	99.721%
Feb-24	99.834%	99.719%	99.697%	99.788%	99.835%	Unit Off-line
Mar-24	99.519%	99.614%	99.393%	99.559%	99.474%	Unit Off-line
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%
Feb-24	99.789%	99.660%	99.775%	99.644%	99.675%	99.896%

15. REMARKS

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
1	218	B mill both feeders not available, C mill only one feeder running.	2024/09/01 20:18:00	2024/09/01 20:25:00
1	186	B mill both feeders not available, C mill only one feeder running.	2024/09/01 20:25:00	2024/09/02 04:30:00
1	170	B mill both feeders not available	2024/09/02 04:30:00	2024/09/04 17:23:00
1	48	Spinning Reserve	2024/09/02 07:29:00	2024/09/02 09:13:00
1	50	Spinning Reserve	2024/09/02 20:24:00	2024/09/03 06:32:00
1	42	Spinning Reserve	2024/09/03 23:55:00	2024/09/04 04:26:00
1	219	Spinning Reserve	2024/09/04 21:25:00	2024/09/05 04:20:00
1	120	Spinning Reserve	2024/09/06 06:01:00	2024/09/06 07:39:00
1	218	High stack emissions	2024/09/08 00:29:00	2024/09/08 04:33:00
1	68	Coal quality	2024/09/11 08:15:00	2024/09/11 17:12:00
1	38	Coal quality	2024/09/11 17:12:00	2024/09/12 01:04:00
1	88	Coal quality	2024/09/12 01:04:00	2024/09/12 02:39:00
1	88	AM:B,C&F Mills running with one feeder each.	2024/09/12 02:39:00	2024/09/12 08:46:00
1	138	AM:B,C&F Mills running one feeder each	2024/09/12 08:46:00	2024/09/12 10:21:00
1	70	AM:B&C Mills running one feeder each	2024/09/12 10:21:00	2024/09/12 10:39:00
1	54	AM:B&C Mills running one feeder each	2024/09/12 10:39:00	2024/09/12 12:30:00
1	118	AM:B&C Mills defective	2024/09/12 12:30:00	2024/09/12 17:05:00
1	48	EF's not coping	2024/09/12 17:05:00	2024/09/13 11:30:00
1	169	AM: T13A Conveyor repairs.	2024/09/12 21:43:00	2024/09/13 02:18:00
1	18	condenser high vacuum	2024/09/13 11:30:00	2024/09/13 11:57:00
1	28	Condenser high vacuum	2024/09/13 11:57:00	2024/09/21 16:36:00
1	190	Manual rapping	2024/09/15 20:15:00	2024/09/15 23:00:00
1	190	High stack emissions.	2024/09/17 20:50:00	2024/09/18 01:15:00
1	190	Low Coal Silo levels	2024/09/18 01:15:00	2024/09/18 06:21:00
1	90	Coal constraints	2024/09/18 06:21:00	2024/09/18 09:02:00
1	90	EF:High stack emissions.	2024/09/18 12:18:00	2024/09/18 16:40:00
1	90	LHI Precip casing repair	2024/09/19 01:07:00	2024/09/19 22:51:00
1	90	Manual rapping	2024/09/19 22:51:00	2024/09/20 00:20:00
1	189	EF: High stack emissions	2024/09/20 00:20:00	2024/09/20 04:01:00
1	90	AM: LHO precip casing repairs	2024/09/20 04:01:00	2024/09/21 00:00:00
1	90	Spinning Reserve	2024/09/21 00:00:00	2024/09/21 00:11:00
1	28	ID Fans not coping	2024/09/21 16:36:00	2024/09/22 09:09:00
1	184	Boiler tube leak	2024/09/22 07:31:00	2024/09/22 09:09:00
1	593	Boiler tube leak	2024/09/22 09:09:00	2024/09/30 23:59:59
2	593	SO3 plant repair	2024/09/01 00:00:00	2024/09/02 12:00:00
2	0	Cold Reserve	2024/09/02 12:00:00	2024/09/03 05:17:00
2	297	System Generated Ramp Event for Event id : 1969476	2024/09/03 05:17:00	2024/09/03 08:17:00
2	230	Spinning Reserve	2024/09/03 08:17:00	2024/09/03 09:41:00
2	254	Spinning Reserve	2024/09/03 09:41:00	2024/09/03 11:09:00
2	244	Spinning Reserve	2024/09/03 11:09:00	2024/09/03 15:57:00
2	227	A&F mills not available.	2024/09/03 15:57:00	2024/09/03 18:16:00
2	97	A&D mills coal hang-ups + B-mill in service with one feeder	2024/09/03 18:16:00	2024/09/03 23:45:00
2	114	Manual rapping	2024/09/03 20:38:00	2024/09/03 23:45:00
2	118	T9B Coal conveyor defective	2024/09/03 23:45:00	2024/09/04 04:02:00
2	94	Spinning Reserve	2024/09/03 23:45:00	2024/09/04 03:20:00
2	39	ID Fans not coping	2024/09/04 04:02:00	2024/09/04 18:09:00
2	170	Spinning Reserve	2024/09/04 07:56:00	2024/09/04 16:57:00
2	28	HP contrl v/v 2 and IP control v/v 1 closed.	2024/09/04 18:09:00	2024/09/06 11:54:00
2	89	Spinning Reserve	2024/09/04 19:32:00	2024/09/05 01:05:00
2	185	Spinning Reserve	2024/09/05 01:05:00	2024/09/05 04:30:00

2	136	B Mill and E mill long feeder defective	2024/09/05 04:30:00	2024/09/05 05:01:00
2	105	B Mill defective	2024/09/05 05:01:00	2024/09/05 16:10:00
2	83	Spinning Reserve	2024/09/05 07:14:00	2024/09/05 07:56:00
2	105	Spinning Reserve	2024/09/05 07:56:00	2024/09/05 16:10:00
2	260	B,E&F Mills not available.	2024/09/05 16:10:00	2024/09/05 17:16:00
2	197	B,E&F Mills not available	2024/09/05 17:16:00	2024/09/05 23:22:00
2	42	Spinning Reserve	2024/09/05 21:16:00	2024/09/05 23:22:00
2	138	B&E Mills defective	2024/09/05 23:22:00	2024/09/06 04:26:00
2	50	Spinning Reserve	2024/09/05 23:58:00	2024/09/06 01:38:00
2	89	B&E Mills defective	2024/09/06 04:26:00	2024/09/06 11:54:00
2	118	AM: E&F mills not available	2024/09/06 11:54:00	2024/09/07 20:26:00
2	593	Boiler low drum level	2024/09/07 20:26:00	2024/09/08 01:03:00
2	297	System Generated Ramp Event for Event id : 1975144	2024/09/08 01:03:00	2024/09/08 02:33:00
2	331	AM: B, E & F mills not available	2024/09/08 02:33:00	2024/09/08 02:35:00
2	317	AM: B, E & F mills not available	2024/09/08 02:35:00	2024/09/08 02:55:00
2	297	AM: B, E & F mills not available	2024/09/08 02:55:00	2024/09/08 03:00:00
2	593	Unit tripped on balck furnace.	2024/09/08 03:00:00	2024/09/08 06:20:00
2	297	System Generated Ramp Event for Event id : 1975247	2024/09/08 06:20:00	2024/09/08 07:50:00
2	274	AM: B, E & F mills not available	2024/09/08 07:50:00	2024/09/08 08:33:00
2	267	AM: B, E & F mills not available	2024/09/08 08:33:00	2024/09/08 16:59:00
2	118	AM: E mill feeder belt replacement F mill gearbox lub oil pump faulty.	2024/09/08 16:59:00	2024/09/09 05:33:00
2	99	Spinning Reserve	2024/09/08 20:31:00	2024/09/09 05:33:00
2	121	AM: E mill feeder belt replacement F mill gearbox lub oil pump faulty.	2024/09/09 05:33:00	2024/09/10 16:58:00
2	93	High stack emissions	2024/09/10 10:59:00	2024/09/10 16:58:00
2	118	AM: E mill feeder belt replacement F mill gearbox lub oil pump faulty	2024/09/10 16:58:00	2024/09/12 00:00:00
2	97	AM: High stack emissions.	2024/09/10 19:49:00	2024/09/10 23:13:00
2	45	AM:B&C Mills running one feeder each	2024/09/11 03:03:00	2024/09/11 04:17:00
2	20	AM:B&C Mills running one feeder each	2024/09/11 04:17:00	2024/09/11 07:39:00
2	90	AM:B&C Mills running one feeder each	2024/09/11 07:39:00	2024/09/11 08:37:00
2	79	AM:B&C Mills running one feeder each	2024/09/11 08:37:00	2024/09/11 16:16:00
2	46	AM:B&C Mills running one feeder each	2024/09/11 16:16:00	2024/09/12 00:58:00
2	50	AM: High stack emissions.	2024/09/11 19:39:00	2024/09/11 23:52:00
2	54	AM: E mill feeder belt replacement	2024/09/12 01:33:00	2024/09/12 01:46:00
2	28	AM:B&C Mills running one feeder each	2024/09/12 01:46:00	2024/09/12 01:56:00
2	38	AM: A+F Mills one feeder o/c.	2024/09/12 02:19:00	2024/09/13 11:33:00
2	174	AM: Precip. manual rapping.	2024/09/12 22:15:00	2024/09/13 03:56:00
2	70	A,B&F mills in service with one feeder.	2024/09/13 11:33:00	2024/09/14 04:13:00
2	108	Boiler unstable	2024/09/13 14:22:00	2024/09/13 15:43:00
2	48	Boiler unstable	2024/09/13 15:43:00	2024/09/13 17:49:00
2	40	EF:High stack emissions	2024/09/13 17:49:00	2024/09/14 00:13:00
2	27	ID Fans not coping	2024/09/14 04:13:00	2024/09/14 08:50:00
2	9	ID fans not coping.	2024/09/14 08:50:00	2024/09/16 04:18:00
2	206	Manual rapping	2024/09/15 22:28:00	2024/09/16 00:43:00
2	205	Spinning Reserve	2024/09/16 00:43:00	2024/09/16 04:18:00
2	15	ID fans not coping	2024/09/16 04:18:00	2024/09/16 17:55:00
2	100	Spinning Reserve	2024/09/16 07:51:00	2024/09/16 09:18:00
2	198	Spinning Reserve	2024/09/16 09:18:00	2024/09/16 14:18:00
2	100	Spinning Reserve	2024/09/16 14:18:00	2024/09/16 17:55:00
2	18	ID fans not coping	2024/09/16 17:55:00	2024/09/30 23:59:59
2	96	Spinning Reserve	2024/09/16 23:29:00	2024/09/17 01:00:00
2	48	Spinning Reserve	2024/09/17 01:00:00	2024/09/17 01:58:00
2	195	EF: High stack emissions	2024/09/17 01:59:00	2024/09/17 09:18:00
2	147	High stack emissions.	2024/09/17 09:18:00	2024/09/17 12:25:00
2	100	High stack emissions	2024/09/17 12:25:00	2024/09/17 16:43:00
2	192	Low Coal silo levels	2024/09/18 02:09:00	2024/09/18 06:05:00
2	96	Low Coal Silo levels	2024/09/18 06:05:00	2024/09/18 06:15:00
2	84	Coal constraints	2024/09/18 06:15:00	2024/09/18 08:57:00
2	50	Spinning Reserve	2024/09/18 08:57:00	2024/09/18 11:37:00
2	97	High stack emissions	2024/09/18 14:16:00	2024/09/18 16:01:00
2	193	Manual rapping	2024/09/18 20:12:00	2024/09/18 23:38:00
2	95	Spinning Reserve	2024/09/19 02:44:00	2024/09/19 04:03:00
2	100	High stack emissions	2024/09/19 10:25:00	2024/09/19 12:56:00
2	150	High stack emissions.	2024/09/19 12:56:00	2024/09/19 17:09:00
2	50	High stack emissions	2024/09/19 17:09:00	2024/09/19 22:10:00
2	147	EF: High stack emissions	2024/09/19 22:10:00	2024/09/20 01:05:00
2	193	High stack emissions.	2024/09/20 01:05:00	2024/09/20 04:35:00

2	99	Spinning Reserve	2024/09/21 02:15:00	2024/09/21 04:33:00
2	96	Spinning Reserve	2024/09/21 05:19:00	2024/09/21 06:15:00
2	38	Spinning Reserve	2024/09/21 08:03:00	2024/09/21 11:36:00
2	99	Spinning Reserve	2024/09/21 11:36:00	2024/09/21 13:18:00
2	96	EF:High stack emissions	2024/09/21 13:18:00	2024/09/21 16:49:00
2	195	EF: High stack emissions	2024/09/21 19:50:00	2024/09/22 00:06:00
2	195	Spinning Reserve	2024/09/22 00:06:00	2024/09/22 01:03:00
2	102	Spinning Reserve	2024/09/22 01:03:00	2024/09/22 03:21:00
2	99	Spinning Reserve	2024/09/22 08:12:00	2024/09/22 19:31:00
2	197	Dust plant standing	2024/09/24 04:50:00	2024/09/25 18:29:00
2	220	Coal constraints	2024/09/25 18:29:00	2024/09/26 01:08:00
2	98	Coal bunker levels low.	2024/09/26 01:08:00	2024/09/26 02:00:00
2	96	Spinning Reserve	2024/09/26 02:00:00	2024/09/26 02:11:00
2	92	EF: High stack emissions	2024/09/26 10:36:00	2024/09/26 16:56:00
2	95	RHI precip casing	2024/09/27 04:17:00	2024/09/27 08:50:00
2	187	EF: High stack emissions	2024/09/27 08:50:00	2024/09/27 16:48:00
2	180	EF: High stack emissions	2024/09/28 00:02:00	2024/09/28 00:22:00
2	199	EF: High stack emissions	2024/09/28 00:23:00	2024/09/28 17:25:00
2	147	EF: High stack emissions	2024/09/28 17:25:00	2024/09/28 21:03:00
2	200	High stack emissions	2024/09/28 21:03:00	2024/09/29 04:47:00
2	199	Spinning Reserve	2024/09/29 04:47:00	2024/09/29 06:28:00
2	98	Spinning Reserve	2024/09/29 06:28:00	2024/09/29 08:14:00
2	199	Spinning Reserve	2024/09/30 01:10:00	2024/09/30 04:19:00
2	100	Spinning Reserve	2024/09/30 04:19:00	2024/09/30 05:04:00
2	94	2 A BUCKET REPLACEMENT	2024/09/30 07:28:00	2024/09/30 15:10:00
2	196	AM: A Bucket elevator repairs.	2024/09/30 15:10:00	2024/09/30 23:59:59
3	58	EF: ID fans not coping	2024/09/01 00:00:00	2024/09/06 06:09:00
3	60	AM: Poor main condenser vacuum.	2024/09/01 00:00:00	2024/09/06 06:09:00
3	20	AM: D&F mill in service with one feeder each.	2024/09/01 00:00:00	2024/09/01 01:21:00
3	112	B-mill motor NDE bearing temp high	2024/09/01 00:00:00	2024/09/01 01:21:00
3	100	B-mill motor NDE bearing temp high	2024/09/01 01:21:00	2024/09/01 05:00:00
3	95	B-mill motor NDE bearing temp high	2024/09/01 05:00:00	2024/09/01 17:36:00
3	48	AM: A Mill bypass dmpr stuck &B mill pinion & F mill one feeder in service.	2024/09/01 17:36:00	2024/09/02 05:57:00
3	48	Spinning Reserve	2024/09/02 01:54:00	2024/09/02 04:24:00
3	9	Spinning Reserve	2024/09/02 04:24:00	2024/09/02 05:57:00
3	50	A Mill bypass dmpr stuck &B mill pinion & F mill one feeder in service.	2024/09/02 05:57:00	2024/09/02 23:40:00
3	46	Spinning Reserve	2024/09/02 07:33:00	2024/09/02 17:09:00
3	50	EF:High stack emissions	2024/09/02 19:34:00	2024/09/02 23:40:00
3	100	EF:High stack emissions	2024/09/02 23:40:00	2024/09/03 05:01:00
3	52	Boiler pressure	2024/09/03 05:01:00	2024/09/03 17:04:00
3	50	Spinning Reserve	2024/09/03 05:01:00	2024/09/03 06:38:00
3	46	Spinning Reserve	2024/09/03 08:02:00	2024/09/03 17:04:00
3	53	Boiler pressure	2024/09/03 17:04:00	2024/09/06 06:09:00
3	49	EF:High stack emissions	2024/09/03 19:53:00	2024/09/04 00:00:00
3	47	Spinning Reserve	2024/09/04 00:00:00	2024/09/04 04:29:00
3	47	Spinning Reserve	2024/09/04 06:56:00	2024/09/04 17:00:00
3	17	A&B mills not available	2024/09/04 17:00:00	2024/09/06 06:09:00
3	30	Manual rapping	2024/09/04 20:26:00	2024/09/04 23:45:00
3	30	Spinning Reserve	2024/09/04 23:45:00	2024/09/05 04:40:00
3	26	Spinning Reserve	2024/09/05 07:09:00	2024/09/06 06:09:00
3	0	Cold Reserve	2024/09/06 06:09:00	2024/09/08 23:59:00
3	593	IR ESP & S03 PLANT	2024/09/08 23:59:00	2024/09/30 23:59:59
4	118	AM: C&E mills not available	2024/09/01 00:00:00	2024/09/02 00:51:00
4	98	Spinning Reserve	2024/09/01 00:50:00	2024/09/01 07:40:00
4	70	Spinning Reserve	2024/09/01 07:40:00	2024/09/01 16:41:00
4	24	AM: A mill long feeder O/C	2024/09/01 16:42:00	2024/09/02 04:03:00
4	117	A-mill both trunnion seal seal PF leak repairs.	2024/09/02 04:03:00	2024/09/02 22:57:00
4	0	Cold Reserve	2024/09/02 22:57:00	2024/09/04 05:41:00
4	296	System Generated Ramp Event for Event id : 1973149	2024/09/04 05:41:00	2024/09/04 08:11:00
4	457	A,B,C,F mills not available.	2024/09/04 08:41:00	2024/09/04 10:49:00
4	272	A,C,F mills not available.	2024/09/04 10:49:00	2024/09/04 13:54:00
4	58	A&F mills not available	2024/09/04 13:54:00	2024/09/04 14:55:00
4	178	D-mill on fire + A mill on PTW for Trunnion Seal change, Pipe unblocking.	2024/09/04 14:55:00	2024/09/05 04:41:00
4	24	Spinning Reserve	2024/09/05 00:56:00	2024/09/05 04:41:00
4	180	D-mill on fire + A mill on PTW for Trunnion Seal change, Pipe unblocking	2024/09/05 04:41:00	2024/09/06 01:43:00
4	39	Spinning Reserve	2024/09/05 07:06:00	2024/09/05 15:53:00

4	90	RH secondary air heater.	2024/09/05 15:53:00	2024/09/05 21:02:00
4	31	Spinning Reserve	2024/09/05 22:11:00	2024/09/06 01:35:00
4	142	A&D Mills defective	2024/09/06 01:43:00	2024/09/08 04:56:00
4	35	AM: Feeders o/c on mill F L/H & C R/H.	2024/09/07 14:01:00	2024/09/08 04:56:00
4	142	A&D Mills defective	2024/09/08 04:56:00	2024/09/08 17:59:00
4	68	Spinning Reserve	2024/09/08 05:09:00	2024/09/08 05:41:00
4	74	Spinning Reserve	2024/09/08 09:08:00	2024/09/08 16:29:00
4	26	Spinning Reserve	2024/09/08 16:29:00	2024/09/08 17:59:00
4	38	AM: C mill short feeder O/C	2024/09/08 17:59:00	2024/09/11 00:37:00
4	73	Spinning Reserve	2024/09/08 19:08:00	2024/09/08 20:28:00
4	161	Spinning Reserve	2024/09/08 20:28:00	2024/09/09 02:18:00
4	162	High stack emissions.	2024/09/09 02:18:00	2024/09/09 09:47:00
4	188	High stack emissions	2024/09/09 09:47:00	2024/09/11 00:37:00
4	118	AM: RHO Precip casing repairs.	2024/09/11 00:37:00	2024/09/12 02:00:00
4	50	AM: ID Fans not coping.	2024/09/11 04:30:00	2024/09/13 01:35:00
4	30	High PA flow	2024/09/11 17:45:00	2024/09/12 02:00:00
4	146	C mill Feeder not available	2024/09/12 02:00:00	2024/09/12 22:08:00
4	48	AM: Mill C feeder o/c.	2024/09/12 22:08:00	2024/09/13 01:35:00
4	69	AM: PA Flow's max.	2024/09/12 22:08:00	2024/09/13 01:35:00
4	50	AM: Poor condenser vacuum.	2024/09/13 01:35:00	2024/09/13 12:29:00
4	18	AM Mill C short feeder o/c.	2024/09/13 01:35:00	2024/09/16 00:05:00
4	58	Poor condenser vacuum.	2024/09/13 12:29:00	2024/09/13 13:51:00
4	97	Poor condenser vacuum.	2024/09/13 13:51:00	2024/09/14 00:51:00
4	76	Boiler tube leak	2024/09/13 18:53:00	2024/09/13 19:57:00
4	97	EF:High stack emissions	2024/09/13 19:57:00	2024/09/14 00:51:00
4	48	Poor vacuum	2024/09/14 00:51:00	2024/09/14 10:26:00
4	100	Poor condenser vacuum	2024/09/14 10:26:00	2024/09/14 11:31:00
4	58	Poor condenser vacuum	2024/09/14 11:31:00	2024/09/15 00:57:00
4	64	D-mill PF leak repairs.	2024/09/14 13:31:00	2024/09/15 00:57:00
4	28	Boiler pressure	2024/09/14 19:12:00	2024/09/15 00:57:00
4	32	Poor condenser vacuum	2024/09/15 00:57:00	2024/09/16 00:05:00
4	116	A Mill PF leak	2024/09/15 03:28:00	2024/09/15 10:04:00
4	118	A Mill PF leak	2024/09/15 10:04:00	2024/09/15 21:39:00
4	116	EF:High stack emissions	2024/09/15 21:39:00	2024/09/16 00:05:00
4	118	A Mill service	2024/09/16 00:05:00	2024/09/30 23:59:59
4	92	Spinning Reserve	2024/09/16 00:40:00	2024/09/16 06:05:00
4	47	A-mill motor bearing side glass repairs	2024/09/16 15:39:00	2024/09/16 18:11:00
4	22	C feeder not available.	2024/09/17 02:47:00	2024/09/17 03:10:00
4	30	C feeder not available.	2024/09/17 03:10:00	2024/09/17 03:27:00
4	58	C feeder not available.	2024/09/17 03:27:00	2024/09/17 03:50:00
4	40	C feeder not available.	2024/09/17 03:50:00	2024/09/21 00:06:00
4	26	Hp heater bank A faulty.	2024/09/17 07:54:00	2024/09/18 06:58:00
4	24	Low Coal Silo levels	2024/09/18 01:30:00	2024/09/18 06:58:00
4	20	Hp heater bank A faulty.	2024/09/18 06:58:00	2024/09/21 00:06:00
4	120	AM: C mill short feeder faulty/ High PA flow	2024/09/21 01:14:00	2024/09/21 01:29:00
4	74	AM: C mill short feeder faulty/ High PA flow	2024/09/21 01:29:00	2024/09/24 16:51:00
4	11	AM: Fifth mill unavailable and C mill short feeder O/C	2024/09/24 16:51:00	2024/09/24 18:11:00
4	118	AM: Mill C o/c.	2024/09/24 16:51:00	2024/09/24 17:28:00
4	29	AM: Fifth mill unavailable and C mill short feeder O/C	2024/09/24 18:11:00	2024/09/24 21:09:00
4	118	AM: Mill C O/C	2024/09/24 18:11:00	2024/09/25 12:07:00
4	34	Fifth mill unavailable and C mill short feeder O/C	2024/09/24 21:09:00	2024/09/25 12:07:00
4	10	AM: Fifth mill unavailable and C mill short feeder O/C	2024/09/25 12:07:00	2024/09/26 06:58:00
4	57	AM: HP Controls fly.	2024/09/25 12:07:00	2024/09/26 06:58:00
4	60	AM: C mill short feeder O/C	2024/09/26 06:58:00	2024/09/27 09:19:00
4	60	Spinning Reserve	2024/09/28 01:42:00	2024/09/28 05:30:00
4	52	Spinning Reserve	2024/09/28 05:30:00	2024/09/28 06:21:00
4	60	AM: Fifth mill unavailable and C mill short feeder O/C	2024/09/28 16:53:00	2024/09/30 23:59:59
4	29	Spinning Reserve	2024/09/29 00:04:00	2024/09/29 06:42:00
4	12	Spinning Reserve	2024/09/30 00:01:00	2024/09/30 00:48:00
4	36	Spinning Reserve	2024/09/30 00:48:00	2024/09/30 05:15:00
4	34	AM: Dust plant standing.	2024/09/30 06:54:00	2024/09/30 15:31:00
5	48	AM:C mill long feeders O/C	2024/09/01 00:00:00	2024/09/03 18:28:00
5	40	Spinning Reserve	2024/09/01 00:00:00	2024/09/01 00:37:00
5	70	Spinning Reserve	2024/09/01 00:37:00	2024/09/01 01:06:00
5	168	Spinning Reserve	2024/09/01 01:06:00	2024/09/01 17:11:00
5	85	AM: B mill liner bolt PF leak repairs.	2024/09/01 17:11:00	2024/09/03 06:34:00

5	79	Spinning Reserve	2024/09/01 23:50:00	2024/09/02 04:19:00
5	82	Spinning Reserve	2024/09/02 07:39:00	2024/09/02 17:13:00
5	82	Spinning Reserve	2024/09/02 23:38:00	2024/09/03 06:34:00
5	87	AM: B mill liner bolt PF leak repairs.	2024/09/03 06:34:00	2024/09/03 08:00:00
5	169	Spinning Reserve	2024/09/03 08:00:00	2024/09/03 18:28:00
5	38	AM:C mill long feeder defective.	2024/09/03 18:28:00	2024/09/03 18:32:00
5	28	AM:C mill long feeder defective	2024/09/03 18:32:00	2024/09/04 04:38:00
5	188	Spinning Reserve	2024/09/03 21:22:00	2024/09/04 04:38:00
5	26	AM:C mill long feeder defective	2024/09/04 04:38:00	2024/09/07 05:07:00
5	172	Spinning Reserve	2024/09/05 01:06:00	2024/09/05 02:37:00
5	190	Spinning Reserve	2024/09/05 09:59:00	2024/09/05 16:46:00
5	84	Spinning Reserve	2024/09/05 16:46:00	2024/09/05 17:42:00
5	90	Spinning Reserve	2024/09/07 00:28:00	2024/09/07 05:07:00
5	18	AM:C mill long feeder defective	2024/09/07 05:07:00	2024/09/08 00:00:00
5	98	High stack emissions	2024/09/07 20:05:00	2024/09/07 22:06:00
5	198	High stack emissions	2024/09/07 22:06:00	2024/09/07 23:45:00
5	70	High stack emissions	2024/09/07 23:45:00	2024/09/08 00:34:00
5	100	Spinning Reserve	2024/09/07 23:45:00	2024/09/08 00:00:00
5	118	C mill Long feeder repairs	2024/09/08 00:00:00	2024/09/09 06:00:00
5	98	Spinning Reserve	2024/09/08 00:34:00	2024/09/08 03:41:00
5	118	C mill long feeder repairs	2024/09/09 06:00:00	2024/09/10 15:09:00
5	138	C mill long feeder repairs	2024/09/10 15:09:00	2024/09/11 01:00:00
5	118	C mill long feeder repairs	2024/09/11 01:00:00	2024/09/11 05:06:00
5	43	C & F mills 1 feeder available	2024/09/11 05:06:00	2024/09/12 11:00:00
5	75	HP heaters unavailable	2024/09/11 08:56:00	2024/09/12 11:00:00
5	96	AM: High stack emissions.	2024/09/11 19:46:00	2024/09/12 01:31:00
5	20	AM: High stack emissions	2024/09/12 01:31:00	2024/09/12 01:53:00
5	88	HP Heaters unavailable	2024/09/12 11:00:00	2024/09/13 00:03:00
5	47	AM: High stack emissions.	2024/09/12 22:26:00	2024/09/13 00:03:00
5	116	AM: RHO Precip. casing repairs.	2024/09/13 00:03:00	2024/09/13 08:00:00
5	88	HP Heaters unavailable	2024/09/13 08:00:00	2024/09/14 23:55:00
5	30	RHO precip casing repairs.	2024/09/13 08:00:00	2024/09/14 00:15:00
5	28	High stack emissions.	2024/09/14 15:46:00	2024/09/14 20:11:00
5	80	EF:High stack emissions	2024/09/14 20:11:00	2024/09/14 23:55:00
5	215	T12E Splice repairs	2024/09/14 23:55:00	2024/09/15 23:17:00
5	116	E Mill defective	2024/09/15 23:17:00	2024/09/16 04:17:00
5	46	Spinning Reserve	2024/09/16 00:02:00	2024/09/16 00:31:00
5	99	Spinning Reserve	2024/09/16 00:31:00	2024/09/16 04:17:00
5	103	Spinning Reserve	2024/09/16 08:36:00	2024/09/16 11:00:00
5	18	E-mill long feeder defective.	2024/09/16 13:22:00	2024/09/19 07:17:00
5	99	Spinning Reserve	2024/09/16 23:25:00	2024/09/17 01:04:00
5	98	High stack emissions.	2024/09/17 20:37:00	2024/09/18 01:53:00
5	198	Low Coal Silo level	2024/09/18 01:53:00	2024/09/18 06:21:00
5	150	Coal constraints	2024/09/18 06:21:00	2024/09/18 06:36:00
5	119	Coal constraints	2024/09/18 06:36:00	2024/09/18 08:47:00
5	100	Spinning Reserve	2024/09/18 08:47:00	2024/09/18 12:08:00
5	97	EF:High stack emissions.	2024/09/18 12:08:00	2024/09/18 17:15:00
5	97	High stack emissions.	2024/09/18 19:13:00	2024/09/19 05:38:00
5	48	E-mill long feeder and B-mill short feeder defective.	2024/09/19 07:17:00	2024/09/20 02:06:00
5	120	Manual rapping	2024/09/19 20:20:00	2024/09/20 00:09:00
5	118	AM: E mill off due to both feeders not available and B mill short feeder faulty	2024/09/20 00:09:00	2024/09/20 02:06:00
5	593	HP Exhaust	2024/09/20 02:06:00	2024/09/20 09:03:00
5	297	System Generated Ramp Event for Event id : 1979857	2024/09/20 09:03:00	2024/09/20 10:33:00
5	316	A,B&E Mills defective	2024/09/20 10:33:00	2024/09/20 10:49:00
5	264	A,B&E Mills defective	2024/09/20 10:49:00	2024/09/20 10:53:00
5	235	A,B&E Mills defective	2024/09/20 10:53:00	2024/09/20 11:24:00
5	248	A,B&E Mills defective	2024/09/20 11:24:00	2024/09/20 15:50:00
5	215	A,B&E Mills defective	2024/09/20 15:50:00	2024/09/20 16:20:00
5	176	A,B&E Mills defective	2024/09/20 16:20:00	2024/09/21 12:54:00
5	132	A&B Mills defective	2024/09/21 12:54:00	2024/09/21 15:16:00
5	45	B&C Mills running one feeder each	2024/09/21 15:16:00	2024/09/22 06:03:00
5	92	Spinning Reserve	2024/09/21 23:44:00	2024/09/22 04:57:00
5	47	Spinning Reserve	2024/09/22 04:57:00	2024/09/22 06:03:00
5	18	AM: B mill short feeder conveyor belt replacement.	2024/09/22 06:03:00	2024/09/23 13:39:00
5	91	Spinning Reserve	2024/09/22 08:18:00	2024/09/22 19:40:00
5	18	ID Fans not coping	2024/09/23 16:31:00	2024/09/25 16:13:00

5	97	Manual rapping.	2024/09/23 21:22:00	2024/09/24 01:24:00
5	198	High stack emissions	2024/09/24 01:24:00	2024/09/24 04:54:00
5	98	High stack emissions	2024/09/24 04:54:00	2024/09/24 05:24:00
5	98	AM: High stack emissions.	2024/09/24 08:43:00	2024/09/25 06:27:00
5	95	AM: High stack emissions.	2024/09/25 11:32:00	2024/09/25 16:13:00
5	28	AM ID Fans not coping due to ducting wear	2024/09/25 16:13:00	2024/09/30 23:59:59
5	88	EF: High stack emissions	2024/09/26 10:43:00	2024/09/26 17:22:00
5	88	EF: High stack emissions	2024/09/27 08:58:00	2024/09/27 09:53:00
5	200	EF: High stack emissions	2024/09/27 09:53:00	2024/09/27 16:18:00
5	110	HP turbine control v/v 1 & IP turbine control v/v 1&4 closed	2024/09/27 16:18:00	2024/09/27 16:41:00
5	90	HP turbine control v/v 1 & IP turbine control v/v 1&4 closed	2024/09/27 16:41:00	2024/09/27 19:01:00
5	187	manual wrapping	2024/09/27 22:36:00	2024/09/28 00:00:00
5	190	EF: High stack emissions	2024/09/28 00:00:00	2024/09/28 17:19:00
5	138	EF: High stack emissions	2024/09/28 17:19:00	2024/09/28 18:14:00
5	88	EF: High stack emissions	2024/09/28 18:14:00	2024/09/29 03:27:00
5	92	Spinning Reserve	2024/09/29 00:15:00	2024/09/29 03:27:00
5	90	Spinning Reserve	2024/09/29 03:27:00	2024/09/29 05:09:00
5	190	Spinning Reserve	2024/09/29 05:09:00	2024/09/29 06:29:00
5	90	Spinning Reserve	2024/09/29 06:29:00	2024/09/29 07:31:00
5	89	Spinning Reserve	2024/09/29 22:56:00	2024/09/30 05:30:00
5	183	EF: Manual rapping	2024/09/30 20:44:00	2024/09/30 23:59:59
6	593	Main turbine Physical over speed test	2024/09/01 00:00:00	2024/09/01 04:58:00
6	297	System Generated Ramp Event for Event id : 1972379	2024/09/01 04:58:00	2024/09/01 06:28:00
6	116	F Mill commissioning & C Mill PA isolating damper	2024/09/01 06:28:00	2024/09/01 07:00:00
6	118	Spinning Reserve	2024/09/01 07:00:00	2024/09/01 07:06:00
6	100	Spinning Reserve	2024/09/01 07:06:00	2024/09/01 07:40:00
6	70	Spinning Reserve	2024/09/01 07:40:00	2024/09/01 08:10:00
6	10	Spinning Reserve	2024/09/01 08:10:00	2024/09/01 09:01:00
6	115	Spinning Reserve	2024/09/01 09:01:00	2024/09/01 13:48:00
6	215	Spinning Reserve	2024/09/01 13:48:00	2024/09/01 16:58:00
6	122	Spinning Reserve	2024/09/01 16:58:00	2024/09/01 18:23:00
6	121	AM: D mill DE jacking oil pump faulty.	2024/09/01 18:23:00	2024/09/01 19:31:00
6	593	Unit tripped due to EFP B tripped.	2024/09/01 19:31:00	2024/09/02 03:24:00
6	297	System Generated Ramp Event for Event id : 1972674	2024/09/02 03:24:00	2024/09/02 04:54:00
6	316	AM: EFP B tripped- gearbox inspection & repairs	2024/09/02 04:54:00	2024/09/02 04:59:00
6	304	AM: EFP B tripped- gearbox inspection & repairs	2024/09/02 04:59:00	2024/09/02 09:08:00
6	249	AM: (Mills) A-jacking oil pump faulty, E-PF isolating damper faulty and F-O/C	2024/09/02 09:08:00	2024/09/02 11:01:00
6	220	AM: E mill PF isolating damper faulty & F mill not available.	2024/09/02 11:01:00	2024/09/02 12:36:00
6	120	AM: E&F mill not available	2024/09/02 12:36:00	2024/09/02 13:20:00
6	118	AM: E&F mill not available.	2024/09/02 13:20:00	2024/09/04 17:30:00
6	99	Spinning Reserve	2024/09/03 07:58:00	2024/09/03 15:27:00
6	48	Spinning Reserve	2024/09/03 15:27:00	2024/09/03 16:55:00
6	70	Spinning Reserve	2024/09/03 16:55:00	2024/09/03 17:51:00
6	98	BFPT front bearing temp high	2024/09/03 17:51:00	2024/09/04 15:58:00
6	69	CEP B not coping.	2024/09/04 17:30:00	2024/09/04 19:03:00
6	116	CEP B not coping	2024/09/04 19:03:00	2024/09/04 21:10:00
6	0	Cold Reserve	2024/09/04 21:10:00	2024/09/05 10:27:00
6	296	System Generated Ramp Event for Event id : 1973865	2024/09/05 10:27:00	2024/09/05 12:57:00
6	218	Spinning Reserve	2024/09/05 12:57:00	2024/09/05 16:39:00
6	118	Spinning Reserve	2024/09/05 16:39:00	2024/09/05 17:57:00
6	118	C&F mills not available.	2024/09/05 17:57:00	2024/09/07 10:44:00
6	96	Spinning Reserve	2024/09/05 20:01:00	2024/09/06 03:10:00
6	99	Manual rapping	2024/09/06 21:04:00	2024/09/07 05:38:00
6	50	AM: ID Fans not coping.	2024/09/07 10:44:00	2024/09/07 19:26:00
6	162	AM: SSC standing	2024/09/07 11:37:00	2024/09/07 15:24:00
6	65	AM: Mill D JOP press. low.	2024/09/07 15:24:00	2024/09/07 19:26:00
6	58	AM: ID Fans not coping.	2024/09/07 19:26:00	2024/09/09 16:43:00
6	60	Spinning Reserve	2024/09/08 00:51:00	2024/09/08 03:52:00
6	60	Spinning Reserve	2024/09/08 05:02:00	2024/09/08 09:01:00
6	157	Spinning Reserve	2024/09/08 09:01:00	2024/09/08 10:42:00
6	74	Spinning Reserve	2024/09/08 10:42:00	2024/09/08 11:12:00
6	83	Spinning Reserve	2024/09/08 11:12:00	2024/09/08 12:14:00
6	72	Spinning Reserve	2024/09/08 12:14:00	2024/09/08 21:08:00
6	160	Spinning Reserve	2024/09/08 21:08:00	2024/09/09 05:30:00
6	60	Spinning Reserve	2024/09/09 05:30:00	2024/09/09 07:51:00
6	160	Spinning Reserve	2024/09/09 07:51:00	2024/09/09 15:05:00

6	60	Spinning Reserve	2024/09/09 15:05:00	2024/09/09 16:25:00
6	59	Oil burners not available.	2024/09/09 16:25:00	2024/09/09 16:46:00
6	71	HP heaters banks faulty	2024/09/09 16:43:00	2024/09/09 19:05:00
6	68	HP heaters banks faulty	2024/09/09 19:05:00	2024/09/10 09:06:00
6	60	ID fan not coping	2024/09/10 11:00:00	2024/09/11 07:38:00
6	38	HP Heater banks faulty	2024/09/11 07:38:00	2024/09/13 08:32:00
6	10	HP Heater banks faulty	2024/09/13 08:32:00	2024/09/16 10:44:00
6	108	EFP B bearings temps high	2024/09/13 16:53:00	2024/09/16 10:44:00
6	20	B-mill in service with one feeder.	2024/09/16 10:44:00	2024/09/16 12:30:00
6	19	HP heater bank B faulty	2024/09/16 12:30:00	2024/09/16 15:24:00
6	28	HP heater bank B faulty.	2024/09/16 15:24:00	2024/09/17 10:05:00
6	90	Spinning Reserve	2024/09/16 23:13:00	2024/09/17 00:08:00
6	10	ID fans not coping	2024/09/17 10:31:00	2024/09/17 22:00:00
6	68	Boiler Main steam stop v/v passing	2024/09/17 22:00:00	2024/09/18 15:49:00
6	40	Coal constraints	2024/09/18 04:55:00	2024/09/18 08:57:00
6	50	Spinning Reserve	2024/09/18 09:05:00	2024/09/18 11:19:00
6	38	Boiler Main steam stop v/v passing	2024/09/18 15:49:00	2024/09/18 17:03:00
6	593	Stator coolant pump A tripped and Pump B failed to cut in	2024/09/18 17:03:00	2024/09/18 20:32:00
6	297	System Generated Ramp Event for Event id : 1979355	2024/09/18 20:32:00	2024/09/18 22:02:00
6	297	LH PA fan lub oil pump motor burned.	2024/09/18 22:02:00	2024/09/19 02:22:00
6	68	AM: Boiler Main steam stop v/v passing	2024/09/19 02:22:00	2024/09/20 10:44:00
6	64	Spinning Reserve	2024/09/19 02:22:00	2024/09/19 02:28:00
6	50	Spinning Reserve	2024/09/19 02:28:00	2024/09/19 04:00:00
6	50	A mill not available.	2024/09/19 04:00:00	2024/09/20 10:38:00
6	39	AM:Boiler Main steam stop v/v passing	2024/09/20 10:44:00	2024/09/24 16:52:00
6	80	Spinning Reserve	2024/09/21 05:11:00	2024/09/21 06:05:00
6	179	Spinning Reserve	2024/09/21 23:53:00	2024/09/22 00:59:00
6	80	Spinning Reserve	2024/09/22 00:59:00	2024/09/22 06:00:00
6	79	Spinning Reserve	2024/09/22 23:37:00	2024/09/23 02:54:00
6	218	Boiler tube leak	2024/09/24 16:52:00	2024/09/24 21:02:00
6	593	Boiler tube leak repairs	2024/09/24 21:02:00	2024/09/26 05:09:00
6	593	MSSV repairs	2024/09/26 05:09:00	2024/09/27 13:08:00
6	593	20 kv breaker failing	2024/09/27 13:08:00	2024/09/27 17:15:00
6	296	System Generated Ramp Event for Event id : 1981568 First Outage	2024/09/27 17:15:00	2024/09/27 19:45:00
6	298	System Generated Ramp Event for Event id : 1982021	2024/09/27 19:45:00	2024/09/27 20:15:00
6	170	high Feed flow	2024/09/27 20:15:00	2024/09/27 20:48:00
6	120	High feed flow	2024/09/27 20:48:00	2024/09/27 21:12:00
6	95	High feed flow	2024/09/27 21:12:00	2024/09/27 23:25:00
6	8	High feed flow	2024/09/27 23:25:00	2024/09/28 00:27:00
6	18	High feed flow	2024/09/28 00:27:00	2024/09/28 01:28:00
6	172	High feed flow	2024/09/28 01:28:00	2024/09/28 04:28:00
6	118	High feed flow	2024/09/28 04:28:00	2024/09/28 04:52:00
6	78	high Feed flow	2024/09/28 04:52:00	2024/09/28 05:45:00
6	116	high Feed flow	2024/09/28 05:45:00	2024/09/28 12:40:00
6	70	AM: Feed flow transmitter faulty	2024/09/28 12:40:00	2024/09/28 15:35:00
6	58	AM: Boiler safety v/v lifting	2024/09/28 17:16:00	2024/09/29 09:30:00
6	110	Spinning Reserve	2024/09/29 00:26:00	2024/09/29 03:56:00
6	60	Spinning Reserve	2024/09/29 03:56:00	2024/09/29 05:18:00
6	73	Spinning Reserve	2024/09/29 05:18:00	2024/09/29 08:56:00
6	38	AM:Safety v/v lifting.	2024/09/29 09:30:00	2024/09/29 10:40:00
6	28	AM: Safety v/v lifting.	2024/09/29 10:40:00	2024/09/29 22:37:00
6	58	AM: Boiler safety v/v lifting	2024/09/29 22:37:00	2024/09/30 18:30:00
6	30	Spinning Reserve	2024/09/30 00:07:00	2024/09/30 01:41:00
6	158	Spinning Reserve	2024/09/30 01:41:00	2024/09/30 04:41:00
6	72	Spinning Reserve	2024/09/30 04:41:00	2024/09/30 05:35:00
6	180	AM: EFP B Tripped.	2024/09/30 09:25:00	2024/09/30 10:20:00
6	160	Spinning Reserve	2024/09/30 10:20:00	2024/09/30 17:04:00
6	121	Spinning Reserve	2024/09/30 17:04:00	2024/09/30 18:30:00
6	28	AM: Safety v/v lifting.	2024/09/30 18:30:00	2024/09/30 23:59:59

PM Exceedances		
U1.	Manual rapping carried out.	02-Sep
U1.	ESP casing poor performance (LHO/LHI). Manual rapping carried out.	07-Sep
U1.	High hopper levels. Poor ESP casing performance. Manual rapping carried out.	10-Sep
U1.	ESP casings poor performance.	14-Sep
U1.	ESP casings poor performance. Manual rapping done.	15-Sep
U1.	High hopper levels Poor ESP casings performance.	17-Sep
U1.	Poor ESP casings performance.	18-Sep
U1.	Poor ESP casings performance. LHI Casing outage. Manual rapping done.	19-Sep
U2.	So3 plant issues. Poor ESP performance.	11-Sep
U2.	So3 plant tripped. ESP poor performance.	12-Sep
U2.	Poor ESP casing performance SO3 plant issues.	14-Sep
U2.	Manual rapping done. SO3 plant issues. High hopper levels. Poor ESP casing performance.	15-Sep
U2.	High hopper levels. SO3 plant issues.	16-Sep
U2.	Manual rapping done. Poor ESP casing performance.	18-Sep
U2.	SO3 plant tripped on comms fault. Poor ESP casing performance.	20-Sep
U2.	SO3 plant tripped on comms fault. Poor ESP casing performance.	21-Sep
U2.	Dust Handling Plant standing	24-Sep
U2.	High hopper levels. DHP issues. Poor ESP casing performance.	26-Sep
U2.	High hopper levels. DHP issues. Poor ESP casing performance.	27-Sep
U2.	High hopper levels. A-bucket replacement. Poor ESP casing performance.	29-Sep
U2.	DHP issues. High hopper levels. Poor ESP casing performance.	30-Sep
U3.	Manual rapping done. Poor ESP casing performance.	04-Sep
U3.	High hopper levels. Poor ESP casing performance.	05-Sep
U3.	Unit 3 off load for GO.	06-Sep

PM Exceedances		
U4.	Unit 4 synchronised on 2024/09/04 @ 05:41, therefore the emissions need to be below the limit on 2024/09/07 @ 05:41 and remain below the limit until 2024/09/08 @ 23:59	05-Sep
U4.	Poor ESP casings performance.	07-Sep
U4.	Poor ESP casings performance. High hopper levels. Manual rapping done.	08-Sep
U4.	High hopper levels. Poor ESP casing performance. DHP issues.	09-Sep
U4.	High hopper levels. Manual rapping carried out. Poor ESP casings performance.	11-Sep
U4.	RHI Casing outage	18-Sep
U5.	RHO casing outage	13-Sep
U5.	LHI casing outage	15-Sep
U5.	Manual rapping done. LHI casing poor performance.	16-Sep
U5.	Clean rapping brought forward 21h00 to 23h00. Poor ESP casing performance.	17-Sep
U5.	Manual rapping done. Poor ESP casings performance.	19-Sep
U5.	Poor ESP casing performance. Manual rapping done. Tripped Ash bucket conveyor.	21-Sep
U5.	Poor ESP casing performance. Manual rapping done.	23-Sep
U5.	Poor ESP casing performance.	25-Sep
U5.	Poor ESP casing performance.	26-Sep
U5.	Poor ESP casing performance.	27-Sep
U5.	Poor ESP casing performance.	29-Sep
U5.	Poor ESP casing performance. Manual rapping done. High hopper levels.	30-Sep
U6.	Unit 6 synchronised on 2024/09/05 @ 10:27, therefore the emissions need to be below the limit on 2024/09/08 @ 10:27 and remain below the limit until 2024/09/09 @ 23:59	06-Sep
U6.	Unit shutdown for BTL repairs.	24-Sep
U6.	Unit 6 start up conditions.	28-Sep