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Date:
24 June 2024

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LRP01PLA000 _0405/20240606

Dear Mr. Mkhathshwa

LETHABO POWER STATION EMISSION MONTHLY REPORT FOR MAY 2024

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

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

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

Yours sincerely

Karabo Rakgolela
GENERAL MANAGER

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Report

Lethabo Power Station

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

Reference number: **LRP01PLA000 _0405/20240606**
Document Type: **Report**
Area of Applicability: **Environment**
Report Date: **June-2024**
Classification: **Controlled Disclosure**

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LETHABO POWER STATION MONTHLY EMISSIONS REPORT

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



1. RAW MATERIALS AND PRODUCTS

Raw Materials and Products	Raw Material Type	Units	Maximum Permitted Consumption Rate	Consumption Rate May 2024
	Coal	Tons	2 000 000	1 132 584
	Fuel Oil	Tons	1 700	307,850
Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Indicative Production Rate May-2024
	Energy	GWh	2 834,640	1 544,779
	Ash	Tons	770 000	424 605,640
	RE Ash	kg/MWh	Not Specified	274,865

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)	0,720
Ash Content	%	37.37 (Standard)	37,490

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 May-2024	Technology Type	SO ₃ Utilization May-2024
Unit 1	Electrostatic Precipitator (ESP)	99,91%	SO ₃	99,4%
Unit 2	Electrostatic Precipitator (ESP)	99,58%	SO ₃	99,9%
Unit 3	Electrostatic Precipitator (ESP)	99,77%	SO ₃	96,4%
Unit 4	Electrostatic Precipitator (ESP)	99,52%	SO ₃	99,9%
Unit 5	Electrostatic Precipitator (ESP)	99,65%	SO ₃	100,0%
Unit 6	Electrostatic Precipitator (ESP)	Unit Off-line	SO ₃	Off-line

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	98,9	100,0	100,0
Unit 2	93,0	100,0	100,0
Unit 3	97,4	100,0	100,0
Unit 4	91,9	98,8	98,8
Unit 5	95,5	98,4	98,4
Unit 6	Off	Off	Off

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 May 2024

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)
Unit 1	72,9	2 757	1 500
Unit 2	336,4	3 582	1 143
Unit 3	184,0	3 096	1 262
Unit 4	403,2	3 872	1 831
Unit 5	203,8	3106	1224
Unit 6	Off	Off	Off
SUM	1 200,3	16 412	6 961

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

Associated Unit/Stack	Normal	Grace	Section 30	Contra- ven- tion	Total Exceedance	Average PM (mg/Nm³)
Unit 1	22	2	0	0	2	48,5
Unit 2	16	15	0	0	15	178,0
Unit 3	20	10	0	2	12	126,3
Unit 4	18	13	0	2	15	192,4
Unit 5	13	10	0	0	10	126,7
Unit 6	Off	Off	Off	Off	Off	Off
SUM	89	50	0	4	54	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contra- ven- tion	Total Exceedance	Average SO ₂ (mg/Nm³)
Unit 1	25	0	0	0	0	1 770,7
Unit 2	31	0	0	0	0	1 875,6
Unit 3	31	0	0	0	0	1 906,4
Unit 4	31	0	0	0	0	1 798,5
Unit 5	23	0	0	0	0	1 937,4
Unit 6	Off	Off	Off	Off	Off	Off
SUM	141	0	0	0	0	

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

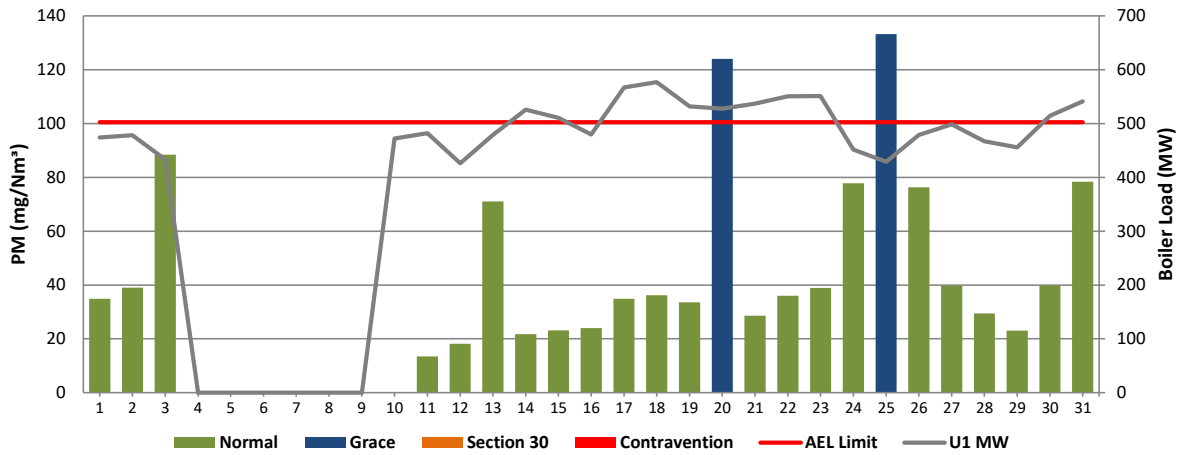
Associated Unit/Stack	Normal	Grace	Section 30	Contravention	Total Exceedance	Average NOx (mg/Nm³)
Unit 1	25	0	0	0	0	960,2
Unit 2	31	0	0	0	0	597,9
Unit 3	31	0	0	0	0	774,0
Unit 4	31	0	0	0	0	849,5
Unit 5	23	0	0	0	0	762,5
Unit 6	Off	Off	Off	Off	Off	Off
SUM	141	0	0	0	0	

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

Table 6.5: Legend Description

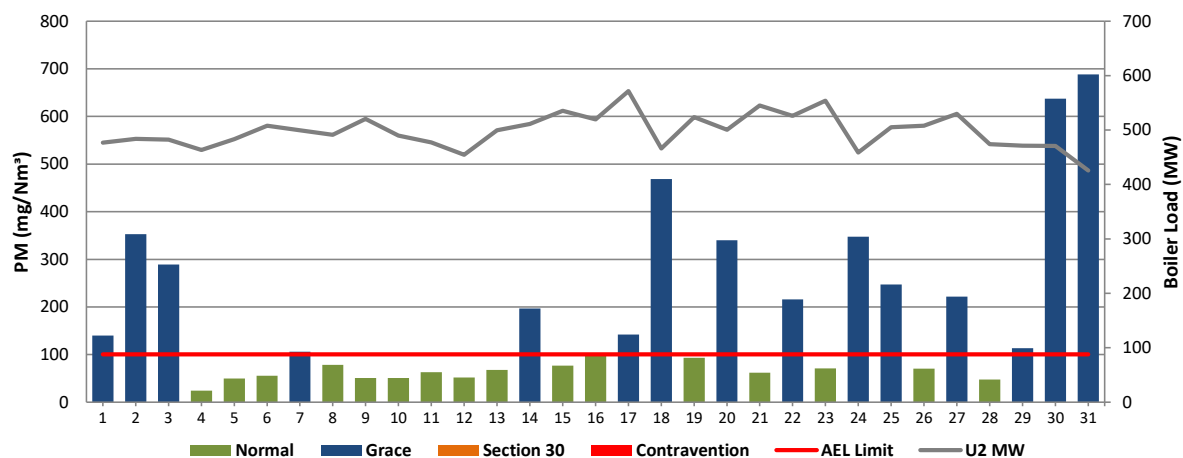
Condition	Colour	Description
Normal	GREEN	Emissions below Emission Limit Value (ELV)
Grace	BLUE	Emissions above the ELV during grace period
Section 30	ORANGE	Emissions above ELV during a NEMA S30 incident
Contravention	RED	Emissions above ELV but outside grace or S30 incident conditions

Figure 1: Lethabo Unit 1 PM Emissions - May 2024



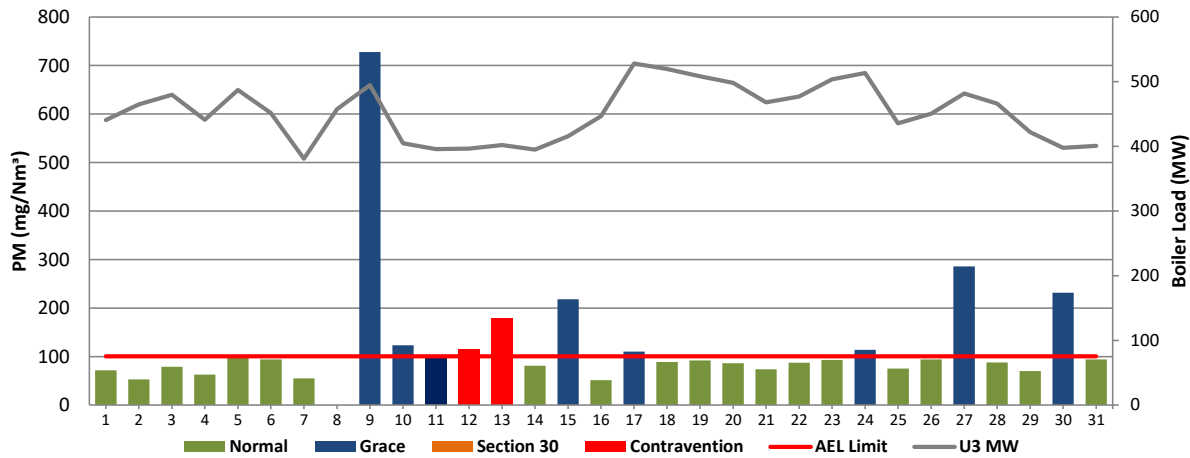
Reasons:	
Date	Description:
20-May	Manual Rapping was carried out
25-May	High hopper levels DHP issues

Figure 2: Lethabo Unit 2 PM Emissions - May 2024



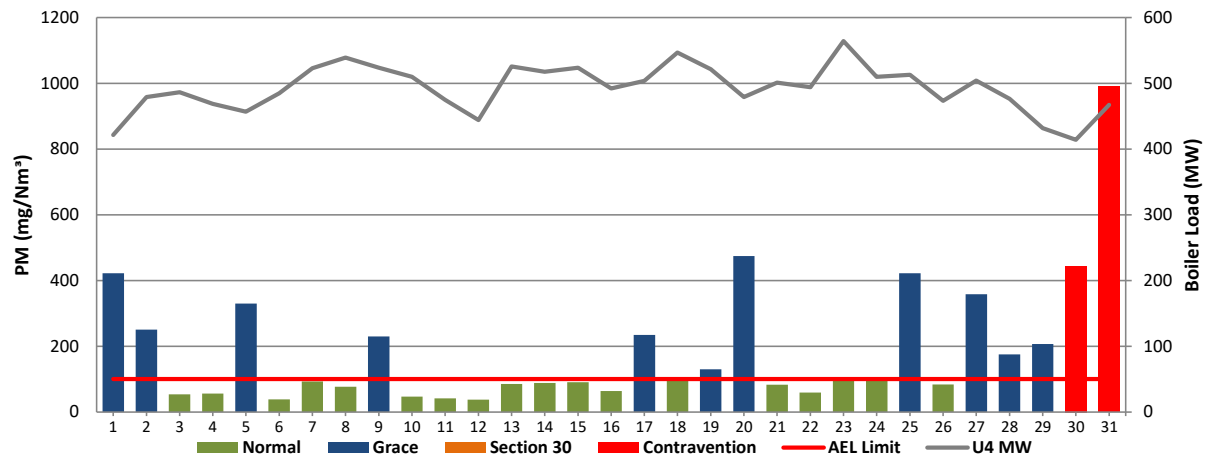
Reasons:	
Date	Description:
01-May	Poor ESP casing performance (LHO/LHI/RHI)
02-May	LHO ESP casing outage
03-May	LHO ESP Casing outage
07-May	DHP Issues
14-May	Manual rapping RHI casing poor performance
17-May	Poor Casing Performance
18-May	RHO casing Outage
20-May	RHI Casing Outage
22-May	Manual Rapping was done
24-May	LHO casing outage
25-May	High hopper level Poor casing performance Manual rapping carried out
27-May	Manual rapping carried out
29-May	Hig hopper levels DHP issues
30-May	High hopper level DHP issues Sulphur plant issues
31-May	High ash hopper levels Manual rapping carried out

Figure 3: Lethabo Unit 3 PM Emissions - May 2024



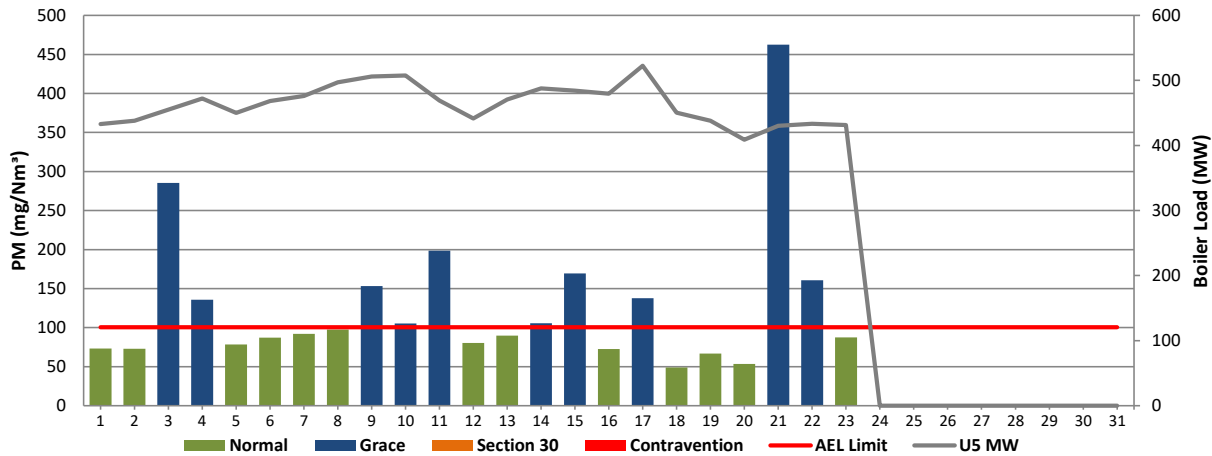
Reasons:	
Date	Description:
09-May	Manual rapping
10-May	RHI Casing poor performance So3 plant issues
11-May	Sulphur flow issues RHI casing poor performance
12-May	Manual rapping Poor casing performance
13-May	RHI casing outage
15-May	LHI casing outage No clean rapping
17-May	Poor Casing performance
24-May	RHI poor casing performance
27-May	Manual rapping carried out
30-May	Manual rapping carried out

Figure 4: Lethabo Unit 4 PM Emissions - May 2024



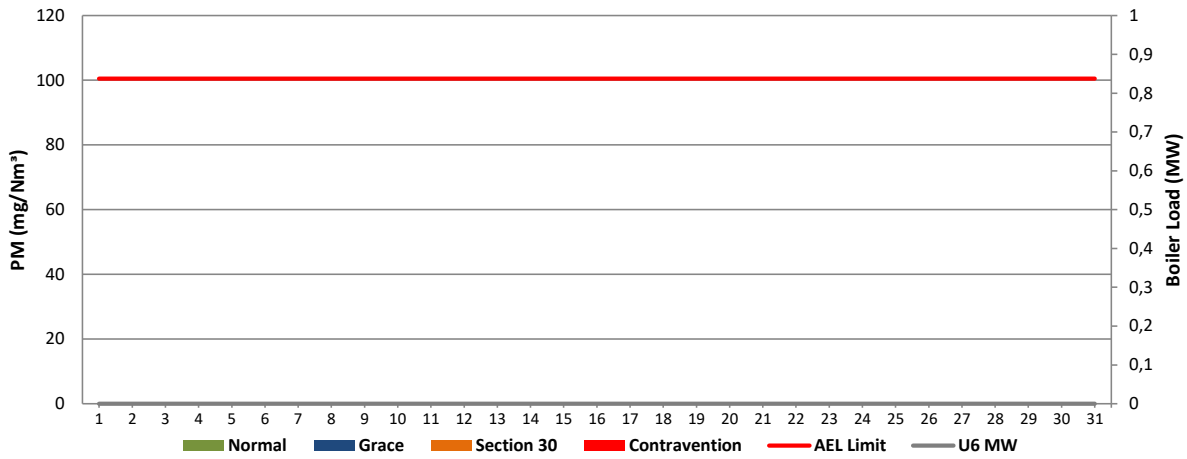
Reasons:	
Date	Description:
01-May	ESP RHO Casing outage
02-May	Manual rapping Poor ESP casing performance
05-May	LHO ESP casing outage Manual rapping
09-May	Manual rapping
17-May	Dust Plant Challenges
19-May	Manual Rapping was performed
20-May	LHI Casing Outage
25-May	LHO poor performance
27-May	Poor casing performance High hopper levels DHP issues
28-May	DHP issues High hopper levels Poor casing performance
29-May	High hopper levels DHP issues Clean rapping brought forward
30-May	RHO casing taken out High hopper levels
31-May	High ash hopper levels RHO Casing Outage

Figure 5: Lethabo Unit 5 PM Emissions - May 2024



Reasons:	
Date	Description:
03-May	DHP issues
04-May	Manual rapping
09-May	Manual rapping
10-May	LHI casing poor performance
11-May	High hopper level due to DHP issues LHI Casing outage
14-May	High hopper level due to DHP issues
15-May	Manual rapping High hopper levels Poor casing performance
17-May	Poor Casing performance
21-May	LHI Casing Outage
22-May	RHO Casing outage
23-May	Unit trip due to Gen Rotor

Figure 6: Lethabo Unit 6 PM Emissions - May 2024



Reasons:	
Date	Description:

Figure 7: Lethabo Unit 1 SO₂ Emissions - May 2024

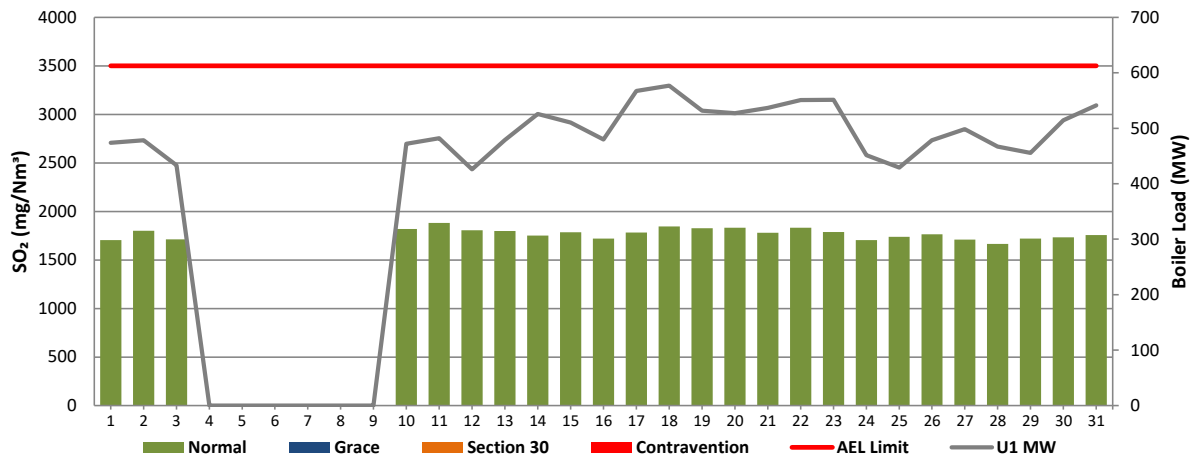


Figure 8: Lethabo Unit 2 SO₂ Emissions - May 2024

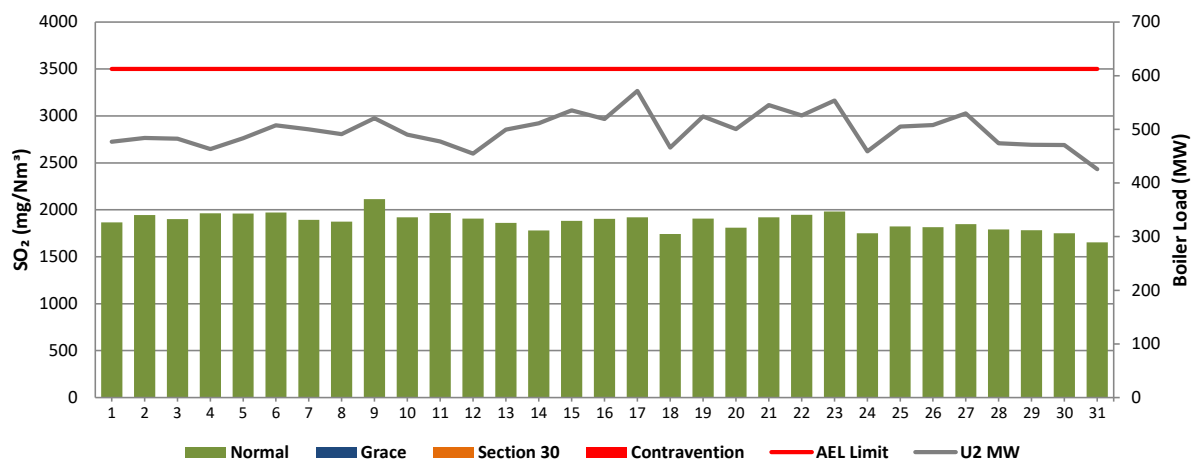


Figure 9: Lethabo Unit 3 SO₂ Emissions - May 2024

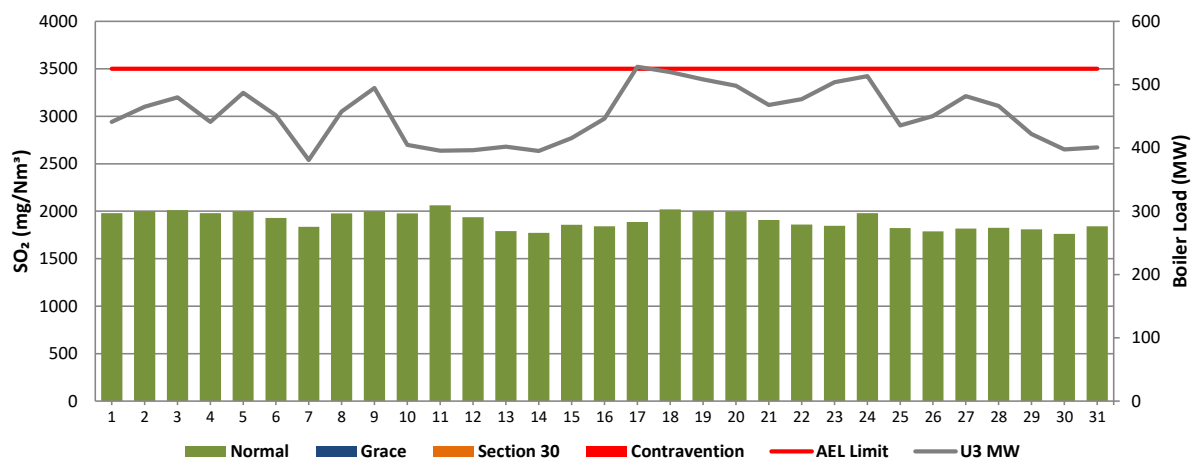


Figure 10: Lethabo Unit 4 SO₂ Emissions - May 2024

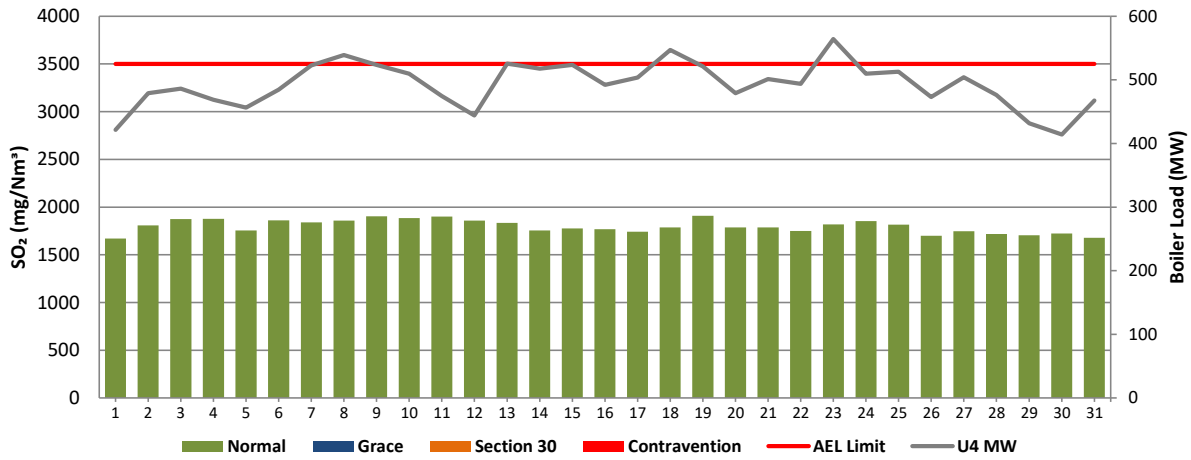


Figure 11: Lethabo Unit 5 SO₂ Emissions - May 2024

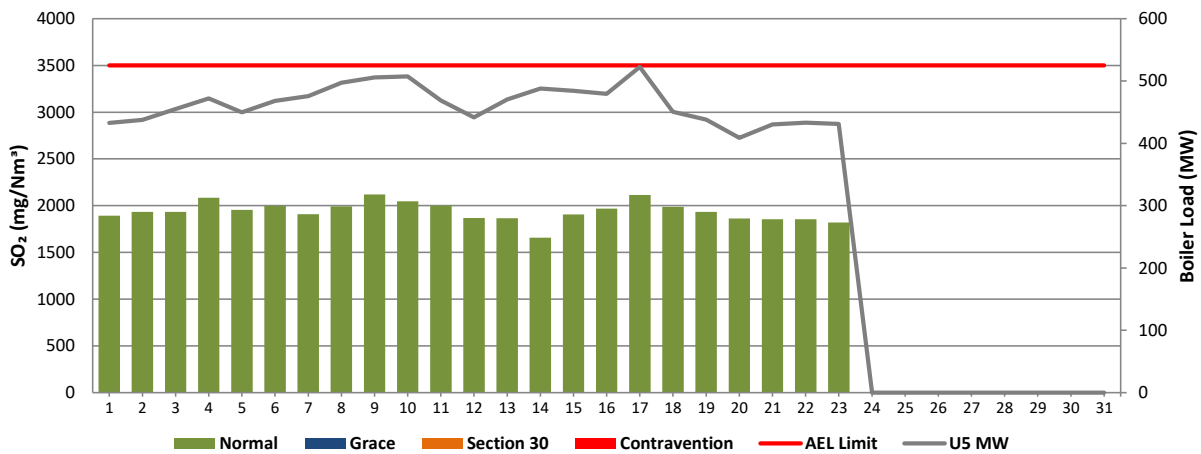


Figure 12: Lethabo Unit 6 SO₂ Emissions - May 2024

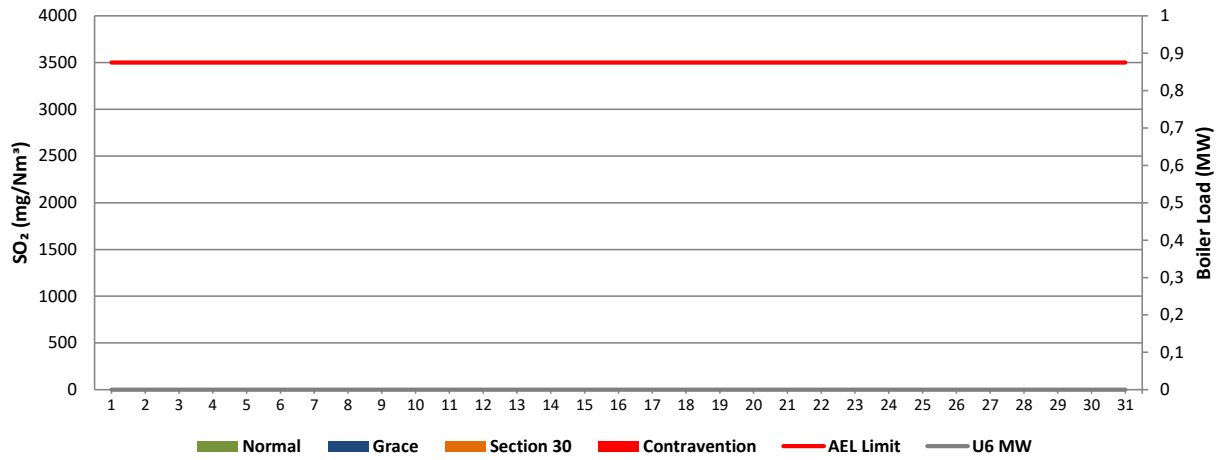


Figure 13: Lethabo Unit 1 NO_x Emissions - May 2024

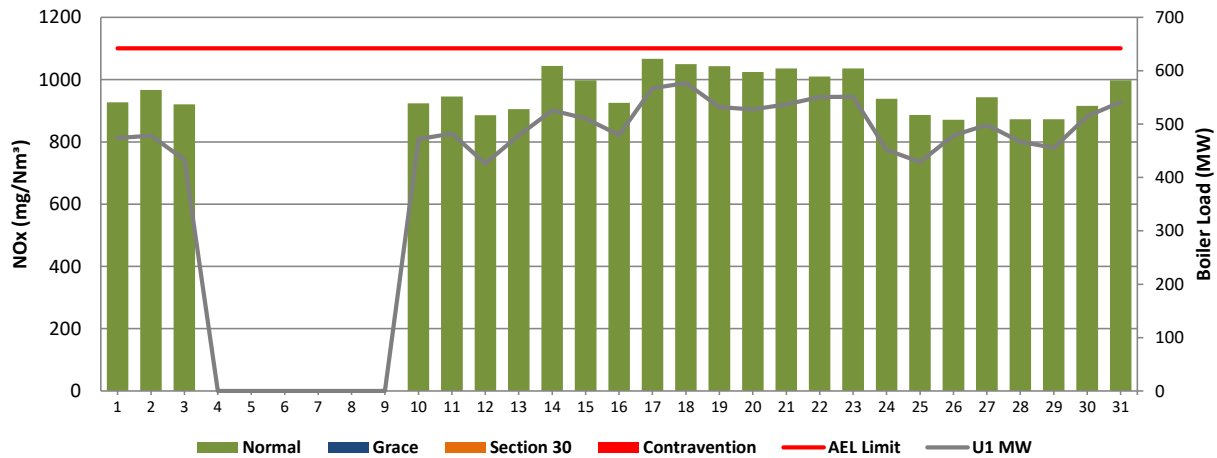


Figure 14: Lethabo Unit 2 NOx Emissions - May 2024

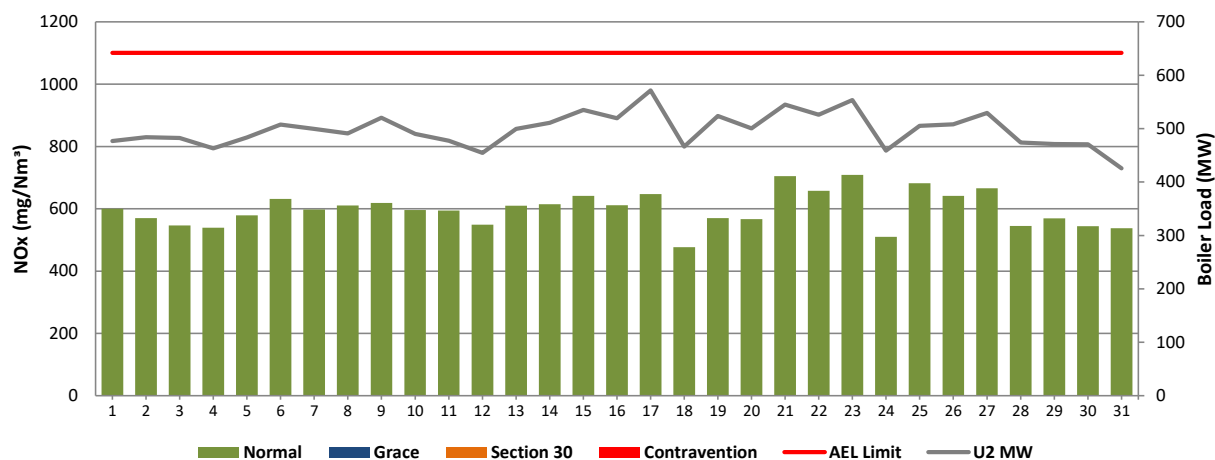


Figure 15: Lethabo Unit 3 NOx Emissions - May 2024

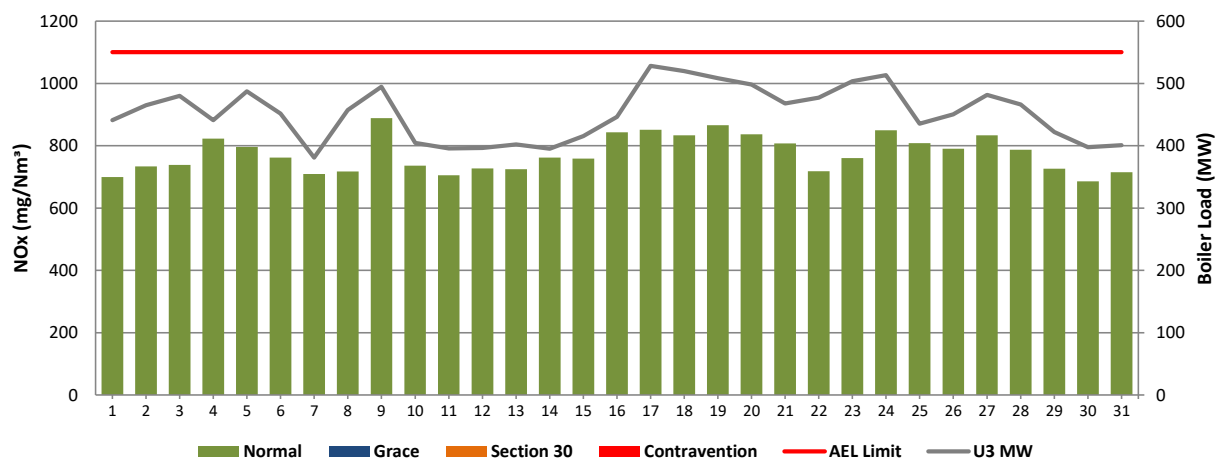


Figure 16: Lethabo Unit 4 NOx Emissions - May 2024

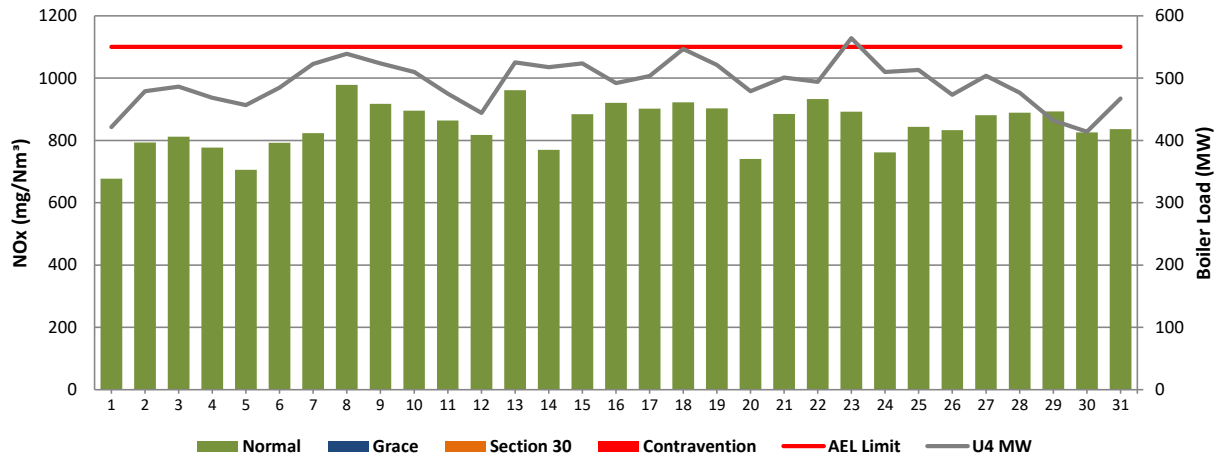


Figure 17: Lethabo Unit 5 NOx Emissions - May 2024

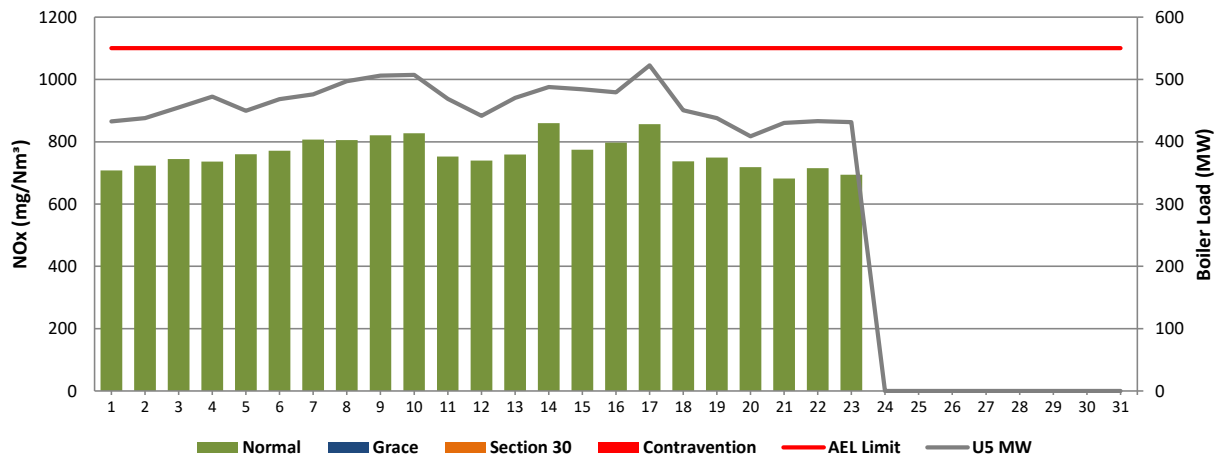
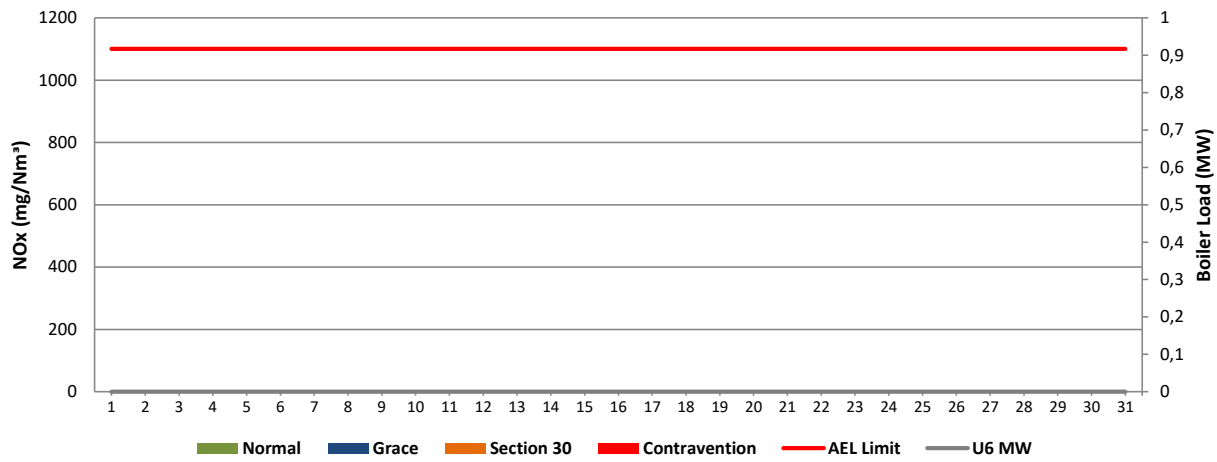


Figure 18: Lethabo Unit 6 NOx Emissions - May 2024



7 SHUT DOWN AND LIGHT UP INFORMATION

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

Unit No.1	Boiler tube leak repairs and Condenser washing							
Breaker Open (BO)	10:05 pm	2024/05/03						
Draught Group (DG) Shut Down (SD)	10:15 am	2024/05/04						
BO to DG SD (duration)	00:12:10	DD:HH:MM						
Fires in time	8:10 am	2024/05/10						
Synch. to Grid (or BC)	11:06 am	2024/05/10						
Fires in to BC (duration)	00:02:56	DD:HH:MM						
Emissions below limit from BC (end date)	12:00 am	2024/05/11						
Emissions below limit from BC (duration)	00:12:54	DD:HH:MM						

Unit No.2								
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.3	SSC standing.							
Breaker Open (BO)	1:01 pm	2024/05/07						
Draught Group (DG) Shut Down (SD)	DG did not trip or SD	DG did not trip or SD						
BO to DG SD (duration)	n/a	DD:HH:MM						
Fires in time	10:00 am	2024/05/08						
Synch. to Grid (or BC)	11:37 am	2024/05/08						
Fires in to BC (duration)	00:01:37	DD:HH:MM						
Emissions below limit from BC (end date)	4:00 am	2024/05/14						
Emissions below limit from BC (duration)	05:16:23	DD:HH:MM						

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	Water ingress into Exciter + Condenser washing and LP turbine last blade inspection							
Breaker Open (BO)	7:06 pm	2024/05/23						
Draught Group (DG) Shut Down (SD)	9:00 pm	2024/05/23						
BO to DG SD (duration)	00:01:54	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								
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)								

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

8. MAINTENANCE

Unit 1				
Beginning of				
Reason for Maintenance				
End (Time):				
Duration				

Unit 2				
Beginning of	2024/05/02 15:42:00	2024/05/18 00:14:00	2024/05/20 08:24:00	
Reason for Maintenance	AM: LHO Precip.	RHO Precip Casing repairs	RHI precip casing	
End (Time):	2024/05/03 19:51:00	2024/05/18 18:48:00	2024/05/20 23:48:00	
Duration	28:09:00	18:34:00	15:24:00	

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

Unit 4					
Beginning of	2024/05/01 00:00	2024/05/05 00:00	2024/05/20 00:03	2024/05/25 00:02	2024/05/31 00:00
Reason for Maintenance	RHI precip casing repairs	AM: LHO Precip. casing	LHI inner casing	Outer precip casing repairs	RHO precip casing.
End (Time):	2024/05/01 22:01	2024/05/05 22:23	2024/05/20 22:12	2024/05/25 02:51	2024/05/31 23:59
Duration	22:01:00	22:23:00	22:09:00	2:49:00	23:59:59

Unit 5				
Beginning of	2024/05/11 00:00			
Reason for Maintenance	AM: LHI precip casing repairs			
End (Time):	2024/05/11 18:20			
Duration				

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

9. GENERAL

Unit 2 Monitor Reliability

18/05/2024: PM Monitor Reliability low due to monitors maxing out.

30/05/2024: PM monitor reliability low due to monitor reading maxing out.

Unit 3 Monitor Reliability

09/05/2024: PM monitor reliability low due to monitor reading maxing out.

On the 08/05/2024 - 13/05/2024, unit 3 registered a non-compliance as the unit exceeded for greater than 72 hours due to SO3 plant issues; requiring the repairs of the SO3 plant sulphur flow meter and control valve. unit synchronised on 2024/05/08 @ 11:36 and the emissions needed to be below the limit from 2024/05/11 @ 11:36 until 2024/05/12 @ 23:59.

Unit 4 Monitor Reliability

27/05/2024 - 30/05/2024, unit 4 registered a non-compliance as the unit exceeded for greater than 72 hours due to ESP poor performance emanating from high hopper levels and Dust Handling Plant issues. Unit emissions needed to be below the limit on 30/05/2024 @23h59 until 31/05/2024 @23h59.

14/05/2024: PM Monitor Reliability low due to work carried out on electrical boards.

25/05/2024: PM Monitor Reliability low due to monitor reading maxing out.

30/05/2024: PM Monitor Reliability low due to monitor reading maxing out.

31/05/2024: PM Monitor Reliability low due to monitor reading maxing out.

Unit 5 Monitor Reliability

14/05/2024: PM Monitor Reliability low due to work carried out on electrical boards.

21/05/2024: PM Monitor Reliability low due to monitor reading maxing out.

Unit 4 & 5 Gaseous Monitor Reliability

14/05/2024: Gas Monitor Reliability low due to monitors offline for a number of hours (no power to the monitors).

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.

31/05/2024: PM monitor reliability low due to monitor reading maxing out.

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 Acknowledg-ment	Date DEA Acceptable	Comments / Reference No.
3	2024/05/11	2024/05/13	Investigation in process	Return SO3 plant to service.	11-May	Due date 2024/06/24			SO3 plant off service
4	2024/05/30	2024/06+/01	Investigation in process	Address casing defects	30-May	Due date 2024/07/03			Poor casing performance

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
Jun-23	0,13	0,64	0,47	0,30	0,46	0,30	0,36
Jul-23	0,21	0,27	0,42	0,27	0,25	0,32	0,30
Aug-23	0,21	0,60	0,63	0,42	0,42	0,50	0,46
Sep-23	0,26	0,28	0,46	0,41	0,33	0,51	0,37
Oct-23	0,26	0,48	0,63	0,43	0,39	0,42	0,43
Nov-23	0,83	1,31	0,94	0,67	0,59	0,75	0,87
Dec-23	0,53	0,87	0,88	1,25	0,93	0,71	0,85
Jan-24	0,53	0,98	0,85	0,87	0,75	0,78	0,79
Feb-24	0,55	0,81	0,89	0,63	0,48	OFF	0,68
Mar-24	0,86	0,58	0,97	0,69	0,84	OFF	0,79
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

ADDENDUM TO MONTHLY EMISSIONS REPORT

12. DAILY EMISSIONS FIGURES

Final Dust Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
01-May	35	140	72	422	73	OFF	100
02-May	39	353	53	251	73	OFF	100
03-May	88	289	79	54	285	OFF	100
04-May	OFF	24	63	56	136	OFF	100
05-May	OFF	50	98	330	79	OFF	100
06-May	OFF	56	94	39	87	OFF	100
07-May	OFF	106	55	93	92	OFF	100
08-May	OFF	78	OFF	77	98	OFF	100
09-May	OFF	51	728	230	153	OFF	100
10-May	OFF	51	123	47	105	OFF	100
11-May	13	63	101	41	199	OFF	100
12-May	18	52	114	38	80	OFF	100
13-May	71	68	179	86	90	OFF	100
14-May	22	197	81	89	106	OFF	100
15-May	23	77	218	91	169	OFF	100
16-May	24	98	51	64	72	OFF	100
17-May	35	142	110	235	138	OFF	100
18-May	36	468	89	95	49	OFF	100
19-May	34	93	92	130	67	OFF	100
20-May	124	340	86	475	53	OFF	100
21-May	29	62	74	83	462	OFF	100
22-May	36	216	87	60	161	OFF	100
23-May	39	71	93	100	88	OFF	100
24-May	78	348	114	98	OFF	OFF	100
25-May	133	247	75	422	OFF	OFF	100
26-May	76	70	94	84	OFF	OFF	100
27-May	40	222	286	358	OFF	OFF	100
28-May	29	47	88	175	OFF	OFF	100
29-May	23	113	70	207	OFF	OFF	100
30-May	40	638	232	444	OFF	OFF	100
31-May	78	688	94	990	OFF	OFF	100

ADDENDUM TO MONTHLY EMISSIONS REPORT

Final SOx Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
01-May	1704	1867	1978	1671	1893	OFF	3500
02-May	1802	1944	2000	1807	1934	OFF	3500
03-May	1714	1900	2011	1874	1933	OFF	3500
04-May	OFF	1963	1979	1876	2085	OFF	3500
05-May	OFF	1961	1997	1756	1954	OFF	3500
06-May	OFF	1971	1929	1861	1997	OFF	3500
07-May	OFF	1892	1837	1840	1908	OFF	3500
08-May	OFF	1876	1976	1859	1993	OFF	3500
09-May	OFF	2114	1999	1902	2119	OFF	3500
10-May	1819	1919	1978	1886	2047	OFF	3500
11-May	1882	1967	2063	1901	2000	OFF	3500
12-May	1806	1906	1938	1859	1868	OFF	3500
13-May	1798	1860	1789	1836	1866	OFF	3500
14-May	1752	1781	1771	1756	1658	OFF	3500
15-May	1785	1883	1857	1776	1905	OFF	3500
16-May	1720	1905	1842	1767	1969	OFF	3500
17-May	1782	1920	1887	1742	2113	OFF	3500
18-May	1847	1741	2020	1788	1987	OFF	3500
19-May	1828	1906	2003	1909	1934	OFF	3500
20-May	1834	1810	1993	1787	1864	OFF	3500
21-May	1779	1919	1907	1788	1856	OFF	3500
22-May	1831	1946	1859	1749	1856	OFF	3500
23-May	1787	1981	1847	1820	1820	OFF	3500
24-May	1704	1749	1979	1853	OFF	OFF	3500
25-May	1738	1823	1821	1816	OFF	OFF	3500
26-May	1766	1816	1787	1701	OFF	OFF	3500
27-May	1711	1848	1816	1748	OFF	OFF	3500
28-May	1666	1790	1826	1718	OFF	OFF	3500
29-May	1721	1783	1809	1705	OFF	OFF	3500
30-May	1734	1752	1761	1722	OFF	OFF	3500
31-May	1758	1652	1842	1679	OFF	OFF	3500

ADDENDUM TO MONTHLY EMISSIONS REPORT

Final NOx Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
01-May	927	600	699	677	708	OFF	1100
02-May	967	570	734	794	724	OFF	1100
03-May	920	547	739	812	745	OFF	1100
04-May	OFF	539	823	778	736	OFF	1100
05-May	OFF	579	796	706	760	OFF	1100
06-May	OFF	632	762	793	771	OFF	1100
07-May	OFF	598	710	824	807	OFF	1100
08-May	OFF	611	717	978	805	OFF	1100
09-May	OFF	618	888	917	820	OFF	1100
10-May	924	596	736	896	827	OFF	1100
11-May	946	594	705	864	753	OFF	1100
12-May	886	549	727	818	740	OFF	1100
13-May	905	610	724	961	759	OFF	1100
14-May	1044	615	762	770	860	OFF	1100
15-May	997	642	758	884	775	OFF	1100
16-May	925	611	843	921	797	OFF	1100
17-May	1066	647	851	902	856	OFF	1100
18-May	1049	477	833	922	737	OFF	1100
19-May	1043	570	866	903	749	OFF	1100
20-May	1024	567	837	740	718	OFF	1100
21-May	1036	704	808	885	682	OFF	1100
22-May	1010	658	718	933	715	OFF	1100
23-May	1036	709	761	893	694	OFF	1100
24-May	939	510	850	761	OFF	OFF	1100
25-May	886	682	808	844	OFF	OFF	1100
26-May	871	641	790	833	OFF	OFF	1100
27-May	943	666	833	881	OFF	OFF	1100
28-May	872	545	787	889	OFF	OFF	1100
29-May	873	569	726	894	OFF	OFF	1100
30-May	916	544	686	826	OFF	OFF	1100
31-May	998	537	715	836	OFF	OFF	1100

ADDENDUM TO MONTHLY EMISSIONS REPORT

13. AVAILABILITY

ESP utilisation

Availability												
Month	Unit 1	Days Affected	Unit 2	Days Affected	Unit 3	Days Affected	Unit 4	Days Affected	Unit 5	Days Affected	Unit 6	Days Affected
Jun-23	100,00%	0,0	100,00%	0,0	99,41%	0,7	98,31%	2,0	98,52%	1,8	100,00%	0,0
Jul-23	100,00%	0,0	100,00%	0,0	99,19%	1,0	100,00%	0,0	100,00%	0,0	99,22%	1,0
Aug-23	100,00%	0,0	100,00%	0,0	98,46%	1,9	100,00%	0,0	99,23%	1,0	99,12%	1,1
Sep-23	99,17%	1,0	100,00%	0,0	98,51%	1,8	100,00%	0,0	98,34%	2,0	99,17%	1,0
Oct-23	99,98%	0,0	96,81%	4,0	98,31%	2,1	100,00%	0,0	99,34%	0,8	99,30%	0,9
Nov-23	97,53%	2,96	97,57%	2,92	99,17%	1,00	100,00%	0,00	100,00%	0,00	99,71%	0,35
Dec-23	100,00%	0,0	97,95%	2,5	100,00%	0,0	98,62%	1,7	98,03%	2,4	97,91%	2,6
Jan-24	97,90%	2,6	98,73%	1,6	100,00%	0,0	100,00%	0,0	99,32%	0,8	100,00%	0,0
Feb-24	100,00%	0,0	99,34%	0,8	98,42%	1,8	99,89%	0,1	100,00%	0,0	Off-line	Off-line
Mar-24	100,00%	0,0	99,19%	1,0	100,00%	0,0	97,53%	3,1	99,19%	1,0	100,00%	0,00%
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%

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

ADDENDUM TO MONTHLY EMISSIONS REPORT

Particulate Emission Monitors

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

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
Jun-23	99,70%	99,85%	99,58%	100,00%	99,71%	100,00%	100,00%	100,00%	100,00%	100,00%	99,86%	100,00%
Jul-23	98,39%	98,39%	98,08%	97,95%	98,12%	98,39%	98,39%	98,25%	97,92%	97,92%	98,25%	98,39%
Aug-23	100,00%	100,00%	99,83%	99,83%	100,00%	100,00%	99,86%	100,00%	100,00%	100,00%	100,00%	100,00%
Sep-23	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	99,85%	99,85%
Oct-23	99,46%	99,46%	99,33%	99,46%	99,19%	99,19%	99,46%	99,46%	99,33%	99,46%	99,40%	99,40%
Nov-23	100,00%	100,00%	99,72%	99,86%	99,86%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	99,73%
Dec-23	100,00%	100,00%	100,00%	100,00%	100,00%	98,95%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%
Jan-24	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	99,87%	100,00%	100,00%	100,00%
Feb-24	98,08%	98,08%	99,78%	98,95%	98,28%	98,28%	97,83%	97,83%	97,73%	97,73%	OFF	OFF
Mar-24	99,73%	99,73%	100,00%	100,00%	99,62%	99,43%	99,73%	99,60%	99,73%	99,87%	OFF	OFF
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

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

ADDENDUM TO MONTHLY EMISSIONS REPORT

14. EFFICIENCY

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

15. REMARKS

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
1	118	Poor vacuum	2024/05/01 00:00:00	2024/05/01 00:00:00
1	51	Spinning Reserve	2024/05/01 00:00:00	2024/05/01 00:00:00
1	50	Spinning Reserve	2024/05/01 21:28:00	2024/05/01 21:28:00
1	97	Spinning Reserve	2024/05/02 22:27:00	2024/05/02 22:27:00
1	48	Spinning Reserve	2024/05/03 08:03:00	2024/05/03 08:03:00
1	82	Spinning Reserve	2024/05/03 08:22:00	2024/05/03 08:22:00
1	593	Boiler tube leak repairs and Condenser washing	2024/05/03 22:05:00	2024/05/03 22:05:00
1	297	System Generated Ramp Event for Event id : 1928720	2024/05/10 11:06:00	2024/05/10 11:06:00
1	140	Spinning Reserve	2024/05/10 14:06:00	2024/05/10 14:06:00
1	138	F-mill lube pumps defective	2024/05/10 17:00:00	2024/05/10 17:00:00
1	18	EF: ID fans not coping.	2024/05/12 16:55:00	2024/05/12 16:55:00
1	240	Spinning Reserve	2024/05/12 22:23:00	2024/05/12 22:23:00
1	118	Spinning Reserve	2024/05/14 08:14:00	2024/05/14 08:14:00
1	214	Spinning Reserve	2024/05/15 01:33:00	2024/05/15 01:33:00
1	115	Boiler pressure high	2024/05/15 15:28:00	2024/05/15 15:28:00
1	53	Spinning Reserve	2024/05/16 00:48:00	2024/05/16 00:48:00
1	118	Boiler pressure high	2024/05/16 04:13:00	2024/05/16 04:13:00
1	100	Spinning Reserve	2024/05/16 07:09:00	2024/05/16 07:09:00
1	218	Spinning Reserve	2024/05/16 13:34:00	2024/05/16 13:34:00
1	118	Spinning Reserve	2024/05/16 15:11:00	2024/05/16 15:11:00
1	21	Spinning Reserve	2024/05/16 15:58:00	2024/05/16 15:58:00
1	38	Boiler reheater steam temp high.	2024/05/17 10:06:00	2024/05/17 10:06:00
1	117	Spinning Reserve	2024/05/20 10:11:00	2024/05/20 10:11:00
1	118	Spinning Reserve	2024/05/21 23:43:00	2024/05/21 23:43:00
1	117	Spinning Reserve	2024/05/22 23:49:00	2024/05/22 23:49:00
1	117	Spinning Reserve	2024/05/23 02:48:00	2024/05/23 02:48:00
1	116	EF: High NOX	2024/05/23 04:06:00	2024/05/23 04:06:00
1	68	NOX Levels high	2024/05/23 09:01:00	2024/05/23 09:01:00
1	216	Dust plant standing	2024/05/24 06:34:00	2024/05/24 06:34:00
1	115	EF: Dust plant standing-High hopper levels	2024/05/25 15:59:00	2024/05/25 15:59:00
1	215	High hoppers level	2024/05/25 20:06:00	2024/05/25 20:06:00
1	118	High hopper levels	2024/05/26 08:26:00	2024/05/26 08:26:00
1	218	high ash hoppers.	2024/05/27 20:24:00	2024/05/27 20:24:00
1	217	Spinning Reserve	2024/05/28 09:35:00	2024/05/28 09:35:00
1	220	Spinning Reserve	2024/05/31 01:38:00	2024/05/31 01:38:00
2	18	PA flow at max	2024/05/01 00:00:00	2024/05/01 00:00:00
2	170	Spinning Reserve	2024/05/01 00:00:00	2024/05/01 00:00:00
2	99	Spinning Reserve	2024/05/01 21:32:00	2024/05/01 21:32:00
2	98	Spinning Reserve	2024/05/02 06:46:00	2024/05/02 06:46:00
2	99	AM: LHO Precip.	2024/05/02 15:42:00	2024/05/02 15:42:00
2	60	Spinning Reserve	2024/05/02 22:19:00	2024/05/02 22:19:00
2	78	Spinning Reserve	2024/05/03 08:06:00	2024/05/03 08:06:00
2	99	Spinning Reserve	2024/05/03 19:51:00	2024/05/03 19:51:00
2	113	Spinning Reserve	2024/05/03 23:23:00	2024/05/03 23:23:00
2	181	Spinning Reserve	2024/05/04 00:27:00	2024/05/04 00:27:00
2	118	Spinning Reserve	2024/05/04 15:31:00	2024/05/04 15:31:00
2	165	Spinning Reserve	2024/05/04 20:03:00	2024/05/04 20:03:00
2	133	Spinning Reserve	2024/05/04 22:49:00	2024/05/04 22:49:00
2	168	Spinning Reserve	2024/05/05 01:45:00	2024/05/05 01:45:00
2	168	Spinning Reserve	2024/05/05 02:09:00	2024/05/05 02:09:00

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
2	118	D&F mills not available	2024/05/05 17:02:00	2024/05/05 17:02:00
2	113	Spinning Reserve	2024/05/05 22:23:00	2024/05/05 22:23:00
2	164	Spinning Reserve	2024/05/06 00:15:00	2024/05/06 00:15:00
2	118	Spinning Reserve	2024/05/06 04:50:00	2024/05/06 04:50:00
2	168	Spinning Reserve	2024/05/06 07:42:00	2024/05/06 07:42:00
2	186	Spinning Reserve	2024/05/06 07:46:00	2024/05/06 07:46:00
2	118	Spinning Reserve	2024/05/06 14:36:00	2024/05/06 14:36:00
2	114	Spinning Reserve	2024/05/06 23:44:00	2024/05/06 23:44:00
2	183	Spinning Reserve	2024/05/07 00:23:00	2024/05/07 00:23:00
2	118	Spinning Reserve	2024/05/07 03:12:00	2024/05/07 03:12:00
2	168	C & F mill faulty	2024/05/07 04:30:00	2024/05/07 04:30:00
2	118	F mills jacking oil pump faulty	2024/05/07 05:02:00	2024/05/07 05:02:00
2	209	Spinning Reserve	2024/05/07 07:50:00	2024/05/07 07:50:00
2	116	Spinning Reserve	2024/05/07 15:18:00	2024/05/07 15:18:00
2	112	Spinning Reserve	2024/05/07 21:13:00	2024/05/07 21:13:00
2	118	PF leak repairs on F row oil burners	2024/05/08 00:00:00	2024/05/08 00:00:00
2	48	Spinning Reserve	2024/05/08 01:18:00	2024/05/08 01:18:00
2	128	Spinning Reserve	2024/05/08 14:51:00	2024/05/08 14:51:00
2	122	Spinning Reserve	2024/05/08 23:32:00	2024/05/08 23:32:00
2	115	Spinning Reserve	2024/05/09 07:26:00	2024/05/09 07:26:00
2	190	Spinning Reserve	2024/05/09 09:22:00	2024/05/09 09:22:00
2	118	Spinning Reserve	2024/05/09 14:03:00	2024/05/09 14:03:00
2	109	Spinning Reserve	2024/05/10 07:21:00	2024/05/10 07:21:00
2	181	Spinning Reserve	2024/05/10 10:59:00	2024/05/10 10:59:00
2	118	Spinning Reserve	2024/05/10 13:29:00	2024/05/10 13:29:00
2	118	F-mill short feeder conveyor belt burned	2024/05/10 17:00:00	2024/05/10 17:00:00
2	59	Spinning Reserve	2024/05/10 19:39:00	2024/05/10 19:39:00
2	70	Spinning Reserve	2024/05/10 20:00:00	2024/05/10 20:00:00
2	50	Spinning Reserve	2024/05/11 04:59:00	2024/05/11 04:59:00
2	186	Spinning Reserve	2024/05/11 21:37:00	2024/05/11 21:37:00
2	118	Spinning Reserve	2024/05/12 16:04:00	2024/05/12 16:04:00
2	116	Spinning Reserve	2024/05/12 19:02:00	2024/05/12 19:02:00
2	186	Spinning Reserve	2024/05/12 20:47:00	2024/05/12 20:47:00
2	111	F-mill NDE trunion problems.	2024/05/13 05:05:00	2024/05/13 05:05:00
2	71	Spinning Reserve	2024/05/13 07:06:00	2024/05/13 07:06:00
2	183	Spinning Reserve	2024/05/13 12:56:00	2024/05/13 12:56:00
2	118	Spinning Reserve	2024/05/13 14:36:00	2024/05/13 14:36:00
2	40	Spinning Reserve	2024/05/13 16:53:00	2024/05/13 16:53:00
2	128	Spinning Reserve	2024/05/13 23:17:00	2024/05/13 23:17:00
2	118	Spinning Reserve	2024/05/13 23:24:00	2024/05/13 23:24:00
2	118	D&F mills not available.	2024/05/14 16:22:00	2024/05/14 16:22:00
2	165	Spinning Reserve	2024/05/14 19:40:00	2024/05/14 19:40:00
2	118	Spinning Reserve	2024/05/15 03:40:00	2024/05/15 03:40:00
2	109	Spinning Reserve	2024/05/15 10:00:00	2024/05/15 10:00:00
2	118	B-mill bunker not getting coal.	2024/05/16 16:43:00	2024/05/16 16:43:00
2	190	AM: High stack emissions.	2024/05/16 20:54:00	2024/05/16 20:54:00
2	118	Spinning Reserve	2024/05/17 09:26:00	2024/05/17 09:26:00
2	115	RHO Precip Casing repairs	2024/05/18 00:14:00	2024/05/18 00:14:00
2	49	High furnace pressure.	2024/05/18 02:13:00	2024/05/18 02:13:00
2	132	Spinning Reserve	2024/05/18 18:49:00	2024/05/18 18:49:00
2	182	Spinning Reserve	2024/05/18 23:55:00	2024/05/18 23:55:00
2	118	Spinning Reserve	2024/05/19 01:28:00	2024/05/19 01:28:00
2	46	Spinning Reserve	2024/05/19 09:10:00	2024/05/19 09:10:00
2	118	Emissions.	2024/05/19 10:20:00	2024/05/19 10:20:00
2	74	High stack emissions.	2024/05/19 17:31:00	2024/05/19 17:31:00
2	108	Spinning Reserve	2024/05/19 23:13:00	2024/05/19 23:13:00
2	116	RHI precip casing	2024/05/20 08:24:00	2024/05/20 08:24:00
2	63	Spinning Reserve	2024/05/20 23:12:00	2024/05/20 23:12:00
2	178	Spinning Reserve	2024/05/20 23:48:00	2024/05/20 23:48:00

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
2	114	Spinning Reserve	2024/05/21 23:40:00	2024/05/21 23:40:00
2	116	Spinning Reserve	2024/05/22 02:55:00	2024/05/22 02:55:00
2	163	Spinning Reserve	2024/05/22 10:39:00	2024/05/22 10:39:00
2	115	AM: B mill ball loading hopper repairs.	2024/05/22 22:56:00	2024/05/22 22:56:00
2	115	Spinning Reserve	2024/05/23 08:11:00	2024/05/23 08:11:00
2	9	Spinning Reserve	2024/05/23 15:53:00	2024/05/23 15:53:00
2	46	Spinning Reserve	2024/05/23 22:07:00	2024/05/23 22:07:00
2	115	AM: 12WX12 Hopper no 3 that is leaking (LHO)	2024/05/24 00:08:00	2024/05/24 00:08:00
2	51	PA flow max	2024/05/24 07:26:00	2024/05/24 07:26:00
2	175	Spinning Reserve	2024/05/25 14:06:00	2024/05/25 14:06:00
2	115	Spinning Reserve	2024/05/25 15:42:00	2024/05/25 15:42:00
2	176	Spinning Reserve	2024/05/25 23:19:00	2024/05/25 23:19:00
2	116	F mill short feeder on fire	2024/05/26 04:35:00	2024/05/26 04:35:00
2	121	F Mill PF isol S085 nut stripped & F Mill short feeder burnt	2024/05/27 05:43:00	2024/05/27 05:43:00
2	118	SI for high stack emissions.	2024/05/28 04:27:00	2024/05/28 04:27:00
2	15	C-mill feeder problematic.	2024/05/28 04:27:00	2024/05/28 04:27:00
2	48	Spinning Reserve	2024/05/28 10:23:00	2024/05/28 10:23:00
2	118	AM: Dust plant problems.	2024/05/28 16:41:00	2024/05/28 16:41:00
2	34	Spinning Reserve	2024/05/28 21:25:00	2024/05/28 21:25:00
2	52	Spinning Reserve	2024/05/29 19:23:00	2024/05/29 19:23:00
2	120	AM: Dust plant problems	2024/05/30 06:28:00	2024/05/30 06:28:00
2	18	Spinning Reserve	2024/05/30 06:55:00	2024/05/30 06:55:00
2	182	AM: High ash hopper levels.	2024/05/30 12:48:00	2024/05/30 12:48:00
2	132	AM: High ash hopper levels.	2024/05/30 16:48:00	2024/05/30 16:48:00
2	216	AM:High dust hopper levels	2024/05/31 08:48:00	2024/05/31 08:48:00
2	237	AM:High dust hopper levels	2024/05/31 16:33:00	2024/05/31 16:33:00
3	58	AM: ID Fans not coping.	2024/05/01 00:00:00	2024/05/01 00:00:00
3	160	Spinning Reserve	2024/05/01 00:00:00	2024/05/01 00:00:00
3	59	Spinning Reserve	2024/05/01 21:26:00	2024/05/01 21:26:00
3	162	Spinning Reserve	2024/05/01 23:55:00	2024/05/01 23:55:00
3	58	Spinning Reserve	2024/05/02 06:46:00	2024/05/02 06:46:00
3	130	Spinning Reserve	2024/05/02 11:55:00	2024/05/02 11:55:00
3	60	Spinning Reserve	2024/05/02 16:26:00	2024/05/02 16:26:00
3	58	AM: C mill program fails.	2024/05/02 17:15:00	2024/05/02 17:15:00
3	158	Spinning Reserve	2024/05/03 03:20:00	2024/05/03 03:20:00
3	81	Spinning Reserve	2024/05/03 03:48:00	2024/05/03 03:48:00
3	160	Spinning Reserve	2024/05/03 08:22:00	2024/05/03 08:22:00
3	58	Spinning Reserve	2024/05/03 16:17:00	2024/05/03 16:17:00
3	64	No 5th mill available	2024/05/03 17:24:00	2024/05/03 17:24:00
3	58	Spinning Reserve	2024/05/03 23:29:00	2024/05/03 23:29:00
3	110	Spinning Reserve	2024/05/03 23:58:00	2024/05/03 23:58:00
3	160	Spinning Reserve	2024/05/04 00:31:00	2024/05/04 00:31:00
3	93	Spinning Reserve	2024/05/04 15:44:00	2024/05/04 15:44:00
3	60	Spinning Reserve	2024/05/04 16:16:00	2024/05/04 16:16:00
3	60	B Mill on 4000hrs servcie & A Mill off load for PF leak	2024/05/04 17:09:00	2024/05/04 17:09:00
3	58	Spinning Reserve	2024/05/04 19:14:00	2024/05/04 19:14:00
3	60	Spinning Reserve	2024/05/04 21:58:00	2024/05/04 21:58:00
3	170	SSC sprocket broken	2024/05/06 18:46:00	2024/05/06 18:46:00
3	593	SSC standing.	2024/05/07 13:01:00	2024/05/07 13:01:00
3	296	System Generated Ramp Event for Event id : 1930056	2024/05/08 11:37:00	2024/05/08 11:37:00
3	259	A MILL NDE JOP PRESSURE LOW & B MILL ON 4000HRS SERVICE	2024/05/08 14:37:00	2024/05/08 14:37:00
3	118	A-Mill NDE jacking oil pump pressure low	2024/05/08 15:02:00	2024/05/08 15:02:00
3	220	Spinning Reserve	2024/05/09 09:31:00	2024/05/09 09:31:00
3	213	High stack emissions	2024/05/10 00:08:00	2024/05/10 00:08:00
3	238	Emissions.	2024/05/11 19:18:00	2024/05/11 19:18:00
3	268	Emissions.	2024/05/11 22:35:00	2024/05/11 22:35:00
3	120	EF: High stack emissions	2024/05/12 00:19:00	2024/05/12 00:19:00
3	218	EF: High stack emissions	2024/05/12 00:45:00	2024/05/12 00:45:00
3	238	EF: High stack emissions	2024/05/12 15:59:00	2024/05/12 15:59:00

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
3	216	EF: High stack emissions.	2024/05/12 18:15:00	2024/05/12 18:15:00
3	136	High stack emissions	2024/05/14 10:58:00	2024/05/14 10:58:00
3	80	Spinning Reserve	2024/05/14 11:22:00	2024/05/14 11:22:00
3	236	High stack emissions.	2024/05/14 16:16:00	2024/05/14 16:16:00
3	220	EF: High stack emissions	2024/05/15 00:27:00	2024/05/15 00:27:00
3	128	AM: D-Mill bad PF leak and F-Mill 4000hr service	2024/05/16 03:47:00	2024/05/16 03:47:00
3	87	Spinning Reserve	2024/05/16 08:59:00	2024/05/16 08:59:00
3	68	ID Fans not coping	2024/05/16 18:52:00	2024/05/16 18:52:00
3	131	B Mill on 4000HR service/C Mill long feeder on fire	2024/05/16 19:22:00	2024/05/16 19:22:00
3	58	AM: ID Fans not coping.	2024/05/17 05:28:00	2024/05/17 05:28:00
3	57	Spinning Reserve	2024/05/17 09:21:00	2024/05/17 09:21:00
3	69	Spinning Reserve	2024/05/18 06:07:00	2024/05/18 06:07:00
3	85	AM: C-mill program faulty	2024/05/18 07:42:00	2024/05/18 07:42:00
3	55	AM: C-mill program faulty	2024/05/18 08:17:00	2024/05/18 08:17:00
3	22	AM: C-mill program faulty	2024/05/18 08:43:00	2024/05/18 08:43:00
3	158	Spinning Reserve	2024/05/19 00:23:00	2024/05/19 00:23:00
3	57	Spinning Reserve	2024/05/19 09:23:00	2024/05/19 09:23:00
3	102	Spinning Reserve	2024/05/19 23:14:00	2024/05/19 23:14:00
3	154	Spinning Reserve	2024/05/19 23:32:00	2024/05/19 23:32:00
3	57	Spinning Reserve	2024/05/20 10:18:00	2024/05/20 10:18:00
3	157	EF: High stack emissions	2024/05/20 21:00:00	2024/05/20 21:00:00
3	159	Spinning Reserve	2024/05/21 00:09:00	2024/05/21 00:09:00
3	60	Spinning Reserve	2024/05/21 05:24:00	2024/05/21 05:24:00
3	160	Spinning Reserve	2024/05/21 11:27:00	2024/05/21 11:27:00
3	59	AM: C mill feeders problems	2024/05/21 19:51:00	2024/05/21 19:51:00
3	34	EF: Boiler critical pressure unstable	2024/05/21 20:34:00	2024/05/21 20:34:00
3	67	Spinning Reserve	2024/05/22 00:30:00	2024/05/22 00:30:00
3	60	Spinning Reserve	2024/05/22 08:52:00	2024/05/22 08:52:00
3	159	Spinning Reserve	2024/05/22 09:26:00	2024/05/22 09:26:00
3	80	A and C mills defective	2024/05/22 16:02:00	2024/05/22 16:02:00
3	60	AM: Critical Pressure erratic.	2024/05/22 19:40:00	2024/05/22 19:40:00
3	38	AM: Critical Pressure erratic.	2024/05/22 21:21:00	2024/05/22 21:21:00
3	60	Spinning Reserve	2024/05/23 08:11:00	2024/05/23 08:11:00
3	61	F mill long feeder blocked	2024/05/23 17:39:00	2024/05/23 17:39:00
3	99	AM: A mill bypass damper faulty.	2024/05/23 19:15:00	2024/05/23 19:15:00
3	60	AM: High stack emissions.	2024/05/23 20:33:00	2024/05/23 20:33:00
3	110	EF: High stack emissions	2024/05/23 21:45:00	2024/05/23 21:45:00
3	59	AM: High stack emissions.	2024/05/24 02:23:00	2024/05/24 02:23:00
3	158	Spinning Reserve	2024/05/24 10:38:00	2024/05/24 10:38:00
3	162	Spinning Reserve	2024/05/24 23:47:00	2024/05/24 23:47:00
3	60	Spinning Reserve	2024/05/25 02:26:00	2024/05/25 02:26:00
3	154	Spinning Reserve	2024/05/25 10:07:00	2024/05/25 10:07:00
3	150	EF: High stack emissions	2024/05/25 15:46:00	2024/05/25 15:46:00
3	160	EF:High stack emissions	2024/05/26 19:44:00	2024/05/26 19:44:00
3	160	for manual rapping.	2024/05/27 20:16:00	2024/05/27 20:16:00
3	60	EF: High stack emissions	2024/05/28 12:56:00	2024/05/28 12:56:00
3	158	EF: High stack emissions	2024/05/28 15:03:00	2024/05/28 15:03:00
3	99	EF: High stack emissions	2024/05/28 17:46:00	2024/05/28 17:46:00
3	60	High stack emissions.	2024/05/28 18:51:00	2024/05/28 18:51:00
3	101	Spinning Reserve	2024/05/30 01:02:00	2024/05/30 01:02:00
3	160	Emissions.	2024/05/30 06:27:00	2024/05/30 06:27:00
4	119	RHI precip casing repairs	2024/05/01 00:00:00	2024/05/01 00:00:00
4	98	Spinning Reserve	2024/05/01 00:00:00	2024/05/01 00:00:00
4	97	Spinning Reserve	2024/05/01 21:35:00	2024/05/01 21:35:00
4	216	Spinning Reserve	2024/05/01 22:01:00	2024/05/01 22:01:00
4	116	Spinning Reserve	2024/05/02 06:59:00	2024/05/02 06:59:00
4	218	Spinning Reserve	2024/05/03 08:16:00	2024/05/03 08:16:00
4	143	Spinning Reserve	2024/05/04 21:50:00	2024/05/04 21:50:00
4	118	AM: LHO Precip. casing repairs.	2024/05/05 00:00:00	2024/05/05 00:00:00

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
4	220	Spinning Reserve	2024/05/06 23:19:00	2024/05/06 23:19:00
4	186	Spinning Reserve	2024/05/06 23:47:00	2024/05/06 23:47:00
4	118	Spinning Reserve	2024/05/07 03:12:00	2024/05/07 03:12:00
4	119	Spinning Reserve	2024/05/07 10:50:00	2024/05/07 10:50:00
4	118	Spinning Reserve	2024/05/09 09:01:00	2024/05/09 09:01:00
4	199	Spinning Reserve	2024/05/09 09:23:00	2024/05/09 09:23:00
4	118	Poor vacuum.	2024/05/09 16:31:00	2024/05/09 16:31:00
4	118	F-mill PF isolating damper defective	2024/05/10 17:04:00	2024/05/10 17:04:00
4	18	F-mill PF isolating damper defective	2024/05/10 17:30:00	2024/05/10 17:30:00
4	218	Spinning Reserve	2024/05/10 20:44:00	2024/05/10 20:44:00
4	18	HP control v/v fully open(Sliding pressure)	2024/05/11 08:09:00	2024/05/11 08:09:00
4	213	Spinning Reserve	2024/05/12 20:20:00	2024/05/12 20:20:00
4	120	E-mill damper problems.	2024/05/13 04:48:00	2024/05/13 04:48:00
4	116	EF: High stack emissions	2024/05/15 19:48:00	2024/05/15 19:48:00
4	216	Spinning Reserve	2024/05/16 09:20:00	2024/05/16 09:20:00
4	118	EFP B gear temp high	2024/05/16 16:28:00	2024/05/16 16:28:00
4	217	Dust plant standing	2024/05/17 03:09:00	2024/05/17 03:09:00
4	118	Dust plant standing	2024/05/17 04:52:00	2024/05/17 04:52:00
4	99	Spinning Reserve	2024/05/17 09:48:00	2024/05/17 09:48:00
4	115	Emissions.	2024/05/18 17:40:00	2024/05/18 17:40:00
4	87	Spinning Reserve	2024/05/19 00:09:00	2024/05/19 00:09:00
4	123	EF: High stack emissions	2024/05/19 01:27:00	2024/05/19 01:27:00
4	118	LHI inner casing	2024/05/20 00:03:00	2024/05/20 00:03:00
4	84	Spinning Reserve	2024/05/20 00:03:00	2024/05/20 00:03:00
4	116	EF:High stack emissions	2024/05/21 17:38:00	2024/05/21 17:38:00
4	117	AM: B Mill ball loading hopper repairs	2024/05/22 00:00:00	2024/05/22 00:00:00
4	81	Spinning Reserve	2024/05/22 02:41:00	2024/05/22 02:41:00
4	25	Spinning Reserve	2024/05/22 03:12:00	2024/05/22 03:12:00
4	118	AM: Mill B PF ISol damper S075 faulty	2024/05/22 05:00:00	2024/05/22 05:00:00
4	25	AM: Mill A L/H feeder off due to speed drops	2024/05/22 05:00:00	2024/05/22 05:00:00
4	21	A Mill long feeder off due to speed drops	2024/05/22 18:32:00	2024/05/22 18:32:00
4	96	Spinning reserve	2024/05/23 10:36:00	2024/05/23 10:36:00
4	76	Spinning Reserve	2024/05/23 22:07:00	2024/05/23 22:07:00
4	117	AM; MCW 6A ACV repairs	2024/05/24 00:16:00	2024/05/24 00:16:00
4	55	EF: High Boiler pressure.	2024/05/24 01:29:00	2024/05/24 01:29:00
4	48	EF:High stack emissions	2024/05/24 16:28:00	2024/05/24 16:28:00
4	118	High stack emissions.	2024/05/24 17:43:00	2024/05/24 17:43:00
4	214	EF:High stack emissions	2024/05/24 18:51:00	2024/05/24 18:51:00
4	118	RH Outer precip casing repairs	2024/05/25 00:02:00	2024/05/25 00:02:00
4	216	EF:High stack emissions	2024/05/26 19:50:00	2024/05/26 19:50:00
4	218	EF: Manual rapping	2024/05/27 20:52:00	2024/05/27 20:52:00
4	220	Spinning Reserve	2024/05/28 12:03:00	2024/05/28 12:03:00
4	161	AM: Oil burners problems	2024/05/28 16:43:00	2024/05/28 16:43:00
4	123	Oil burners problems	2024/05/28 17:59:00	2024/05/28 17:59:00
4	220	Spinning Reserve	2024/05/30 00:22:00	2024/05/30 00:22:00
4	218	Emissions.	2024/05/30 06:02:00	2024/05/30 06:02:00
4	268	EF: High stack emissions.	2024/05/30 08:49:00	2024/05/30 08:49:00
4	203	EF: High stack emissions	2024/05/30 14:50:00	2024/05/30 14:50:00
4	197	EF: High stack emissions	2024/05/30 15:08:00	2024/05/30 15:08:00
4	118	EF: High stack emissions	2024/05/30 16:46:00	2024/05/30 16:46:00
4	145	AM: High stack emissions.	2024/05/30 17:49:00	2024/05/30 17:49:00
4	35	Spinning Reserve	2024/05/30 22:49:00	2024/05/30 22:49:00
4	118	RHO precip casing.	2024/05/31 00:00:00	2024/05/31 00:00:00
4	62	Spinning Reserve	2024/05/31 00:00:00	2024/05/31 00:00:00
4	20	EF: Boiler critical pressure in negative	2024/05/31 03:17:00	2024/05/31 03:17:00
4	25	Spinning Reserve	2024/05/31 11:58:00	2024/05/31 11:58:00
4	23	AM: E mill long feeder tripped	2024/05/31 18:10:00	2024/05/31 18:10:00
5	58	ID fans not coping.	2024/05/01 00:00:00	2024/05/01 00:00:00
5	156	Spinning Reserve	2024/05/02 00:37:00	2024/05/02 00:37:00

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
5	60	F-mill seal air fan burnt	2024/05/02 05:21:00	2024/05/02 05:21:00
5	97	Spinning Reserve	2024/05/03 09:03:00	2024/05/03 09:03:00
5	60	E Mill on ptw for grith gear change	2024/05/03 16:45:00	2024/05/03 16:45:00
5	110	Spinning Reserve	2024/05/07 22:25:00	2024/05/07 22:25:00
5	110	C mill ball loading hopper repairs	2024/05/08 00:00:00	2024/05/08 00:00:00
5	48	Spinning Reserve	2024/05/08 01:18:00	2024/05/08 01:18:00
5	60	Poor vacuum.	2024/05/08 15:32:00	2024/05/08 15:32:00
5	58	Spinning Reserve	2024/05/09 09:43:00	2024/05/09 09:43:00
5	57	Poor vacuum.	2024/05/09 16:14:00	2024/05/09 16:14:00
5	57	Spinning Reserve	2024/05/10 20:48:00	2024/05/10 20:48:00
5	57	AM: LHI precip casing repairs	2024/05/11 00:00:00	2024/05/11 00:00:00
5	78	ID fans not coping.	2024/05/11 05:09:00	2024/05/11 05:09:00
5	58	EF: ID fans not coping and High vacuum	2024/05/11 18:20:00	2024/05/11 18:20:00
5	90	Spinning Reserve	2024/05/11 21:33:00	2024/05/11 21:33:00
5	60	Spinning Reserve	2024/05/11 21:53:00	2024/05/11 21:53:00
5	159	EF: High stack emissions	2024/05/12 10:13:00	2024/05/12 10:13:00
5	19	B&D mills each running with one feeder	2024/05/14 06:15:00	2024/05/14 06:15:00
5	157	Spinning Reserve	2024/05/14 19:57:00	2024/05/14 19:57:00
5	60	Spinning Reserve	2024/05/15 00:31:00	2024/05/15 00:31:00
5	75	Spinning Reserve	2024/05/15 09:10:00	2024/05/15 09:10:00
5	157	AM: manual rapping	2024/05/15 20:09:00	2024/05/15 20:09:00
5	60	AM: Main CW pump 5B motor filter cleaning	2024/05/16 00:02:00	2024/05/16 00:02:00
5	60	AM: B&E mills not available	2024/05/16 04:57:00	2024/05/16 04:57:00
5	47	Spinning Reserve	2024/05/16 08:20:00	2024/05/16 08:20:00
5	160	Spinning Reserve	2024/05/16 09:26:00	2024/05/16 09:26:00
5	62	A Mill 4000hrs service	2024/05/18 00:50:00	2024/05/18 00:50:00
5	110	A Mill 4000hrs service	2024/05/18 08:12:00	2024/05/18 08:12:00
5	60	C-mill PF leak repairs	2024/05/20 12:38:00	2024/05/20 12:38:00
5	75	A Mill 4000hrs service	2024/05/21 15:59:00	2024/05/21 15:59:00
5	60	A Mill 4000hrs service	2024/05/21 16:34:00	2024/05/21 16:34:00
5	110	A Mill 4000hrs service	2024/05/21 18:27:00	2024/05/21 18:27:00
5	48	Spinning Reserve	2024/05/22 00:27:00	2024/05/22 00:27:00
5	48	Spinning Reserve	2024/05/22 08:54:00	2024/05/22 08:54:00
5	49	Spinning reserve	2024/05/23 10:35:00	2024/05/23 10:35:00
5	593	Water ingress into Exciter	2024/05/23 19:06:00	2024/05/23 19:06:00
5	593	Condenser washing and LP turbine last blade inspection	2024/05/24 13:15:00	2024/05/24 13:15:00
6	593	Outage	2024/05/01 00:00:00	2024/05/01 00:00:00

PM Exceedances		
U1.	Manual Rapping was carried out	20-May
U1.	High hopper levels DHP issues	25-May
U2.	Poor ESP casing performance (LHO/LHI/RHI)	01-May
U2.	LHO ESP casing outage	02-May
U2.	LHO ESP Casing outage	03-May
U2.	DHP Issues High ash hopper levels	07-May
U2.	Manual rapping RHI casing poor performance	14-May
U2.	Poor Casing Performance	17-May
U2.	RHO casing Outage	18-May
U2.	RHI Casing Outage	20-May
U2.	Manual Rapping was done	22-May
U2.	LHO casing outage	24-May
U2.	High hopper level Poor casing performance Manual rapping carried out	25-May
U2.	Manual rapping carried out	27-May
U2.	Hig hopper levels DHP issues	29-May
U2.	High hopper level DHP issues Sulphur plant issues	30-May
U2.	High ash hopper levels Manual rapping carried out	31-May
U3.	Manual rapping	09-May
U3.	RHI Casing poor performance So3 plant issues	10-May
U3.	Sulphur flow issues RHI casing poor performance	11-May
U3.	Manual rapping Poor casing performance	12-May

U3.	RHI casing outage	13-May
U3.	LHI casing outage No clean rapping	15-May
U3.	Poor Casing performance	17-May

U3.		
U3.	Manual rapping carried out	27-May
U3.	Manual rapping carried out	30-May
U4.	ESP RHO Casing outage	01-May
U4.	Manual rapping Poor ESP casing performance	02-May
U4.	LHO ESP casing outage Manual rapping	05-May
U4.	Manual rapping	09-May
U4.	Dust Plant Challenges	17-May
U4.	Manual Rapping was performed	19-May
U4.	LHI Casing Outage	20-May
U4.	LHO poor performance	25-May
U4.	Poor casing performance High hopper levels DHP issues	27-May
U4.	DHP issues High hopper levels Poor casing performance	28-May
U4.	High hopper levels DHP issues Clean rapping brought forward	29-May
U4.	RHO casing taken out High hopper levels	30-May
U4.	High ash hopper levels RHO Casing Outage	31-May
U5.	DHP issues	03-May
U5.	Manual rapping	04-May
U5.	Manual rapping	09-May
U5.	LHI casing poor performance	10-May
U5.	High hopper level due to DHP issues LHI Casing outage	11-May

U5.		
U5.	Manual rapping High hopper levels Poor casing performance	15-May
U5.	Poor Casing performance	17-May
U5.	LHI Casing Outage	21-May
U5.	RHO Casing outage	22-May
U5.	Unit trip due to Gen Rotor	23-May