



Mr. Mcebo Mkhathswa
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Date:
29 February 2024

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LRP01PLA000_0381/20240212

Dear Mr. Mkhathswa

LETHABO POWER STATION EMISSION MONTHLY REPORT FOR JANUARY 2024

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


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

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

Yours sincerely

Karabo Rakgolela
GENERAL MANAGER

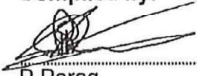
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Eskom Holdings SOC Ltd Reg No 2002/015527/30

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

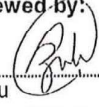
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 Report Date: **February-2024**
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Signatures:

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Verified by:

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Reviewed by:

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Date: 2024 02 27

Date: 2024 02 26


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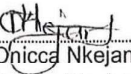
Date: 2024/02/27

Date: 2024-02-26

Date: 2024-02-28

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Date: 27-02-2024

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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 Jan-2024
	Coal	Tons	2 000 000	1 561 057
	Fuel Oil	Tons	1 700	953.570

Production Rates	Product / By-Product Name	Units	Maximum Production Capacity Permitted	Indicative Production Rate Jan-2024
	Energy	GWh	2 834.640	1 769.306
	Ash	Tons	770 000	587 894.142
	RE Ash	kg/MWh	Not Specified	332.274

Note: Maximum energy rate is as per the maximum capacity stated in the AEL: [3 810 MW] x 24 hrs x 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)	0.630
Ash Content	%	37.37 (Standard)	37.660

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

3. EMISSION LIMITS (mg/Nm³)

Associated Unit/Stack	PM	SO ₂	NOx
Unit 1	100	3500	1100
Unit 2	100	3500	1100
Unit 3	100	3500	1100
Unit 4	100	3500	1100
Unit 5	100	3500	1100
Unit 6	100	3500	1100

4. ABATEMENT TECHNOLOGY (%)

Associated Unit/Stack	Technology Type	Efficiency Jan-2024	Technology Type	SO ₃ Utilization Jan-2024
Unit 1	Electrostatic Precipitator (ESP)	99.82%	SO ₃	95.7%
Unit 2	Electrostatic Precipitator (ESP)	99.50%	SO ₃	90.4%
Unit 3	Electrostatic Precipitator (ESP)	99.67%	SO ₃	69.8%
Unit 4	Electrostatic Precipitator (ESP)	99.69%	SO ₃	91.8%
Unit 5	Electrostatic Precipitator (ESP)	99.76%	SO ₃	89.8%
Unit 6	Electrostatic Precipitator (ESP)	99.72%	SO ₃	95.2%

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	98.3	100.0	100.0
Unit 2	85.6	100.0	100.0
Unit 3	94.3	100.0	100.0
Unit 4	90.8	100.0	100.0
Unit 5	92.9	99.9	100.0
Unit 6	97.8	100.0	100.0

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

6. EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of January 2024

Associated Unit/Stack	PM (tons)	SO ₂ (tons)	NO _x (tons)
Unit 1	196.6	3 369	1 751
Unit 2	416.2	3 734	1 418
Unit 3	310.0	3 179	1 173
Unit 4	246.2	2 837	1 386
Unit 5	244.2	3643	1413
Unit 6	165.8	2 174	1 013
SUM	1 579.1	18 936	8 155

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

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average PM (mg/Nm ³)
Unit 1	21	10	0	0	10	107.9
Unit 2	17	10	0	0	10	248.9
Unit 3	12	9	0	10	19	185.8
Unit 4	11	4	0	8	12	168.6
Unit 5	20	11	0	0	11	117.3
Unit 6	8	13	0	0	13	130.3
SUM	89	57	0	18	75	

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

Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average SO ₂ (mg/Nm ³)
Unit 1	31	0	0	0	0	1 586.4
Unit 2	29	0	0	0	0	1 735.7
Unit 3	31	0	0	0	0	1 795.7
Unit 4	24	0	0	0	0	1 710.6
Unit 5	31	0	0	0	0	1 721.7
Unit 6	21	0	0	0	0	1 719.4
SUM	167	0	0	0	0	

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

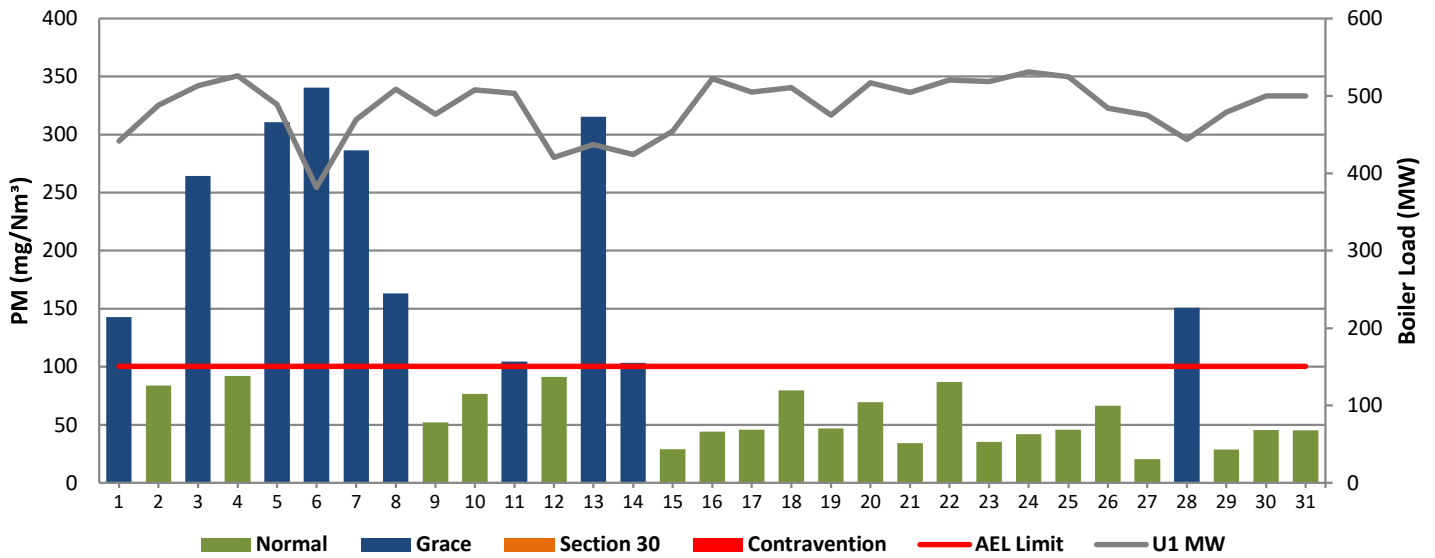
Associated Unit/Stack	Normal	Grace	Section 30	Contra-vention	Total Exceedance	Average NOx (mg/Nm ³)
Unit 1	31	0	0	0	0	820.4
Unit 2	29	0	0	0	0	642.0
Unit 3	31	0	0	0	0	659.8
Unit 4	24	0	0	0	0	815.9
Unit 5	31	0	0	0	0	668.3
Unit 6	21	0	0	0	0	790.7
SUM	167	0	0	0	0	

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

Table 6.5: Legend Description

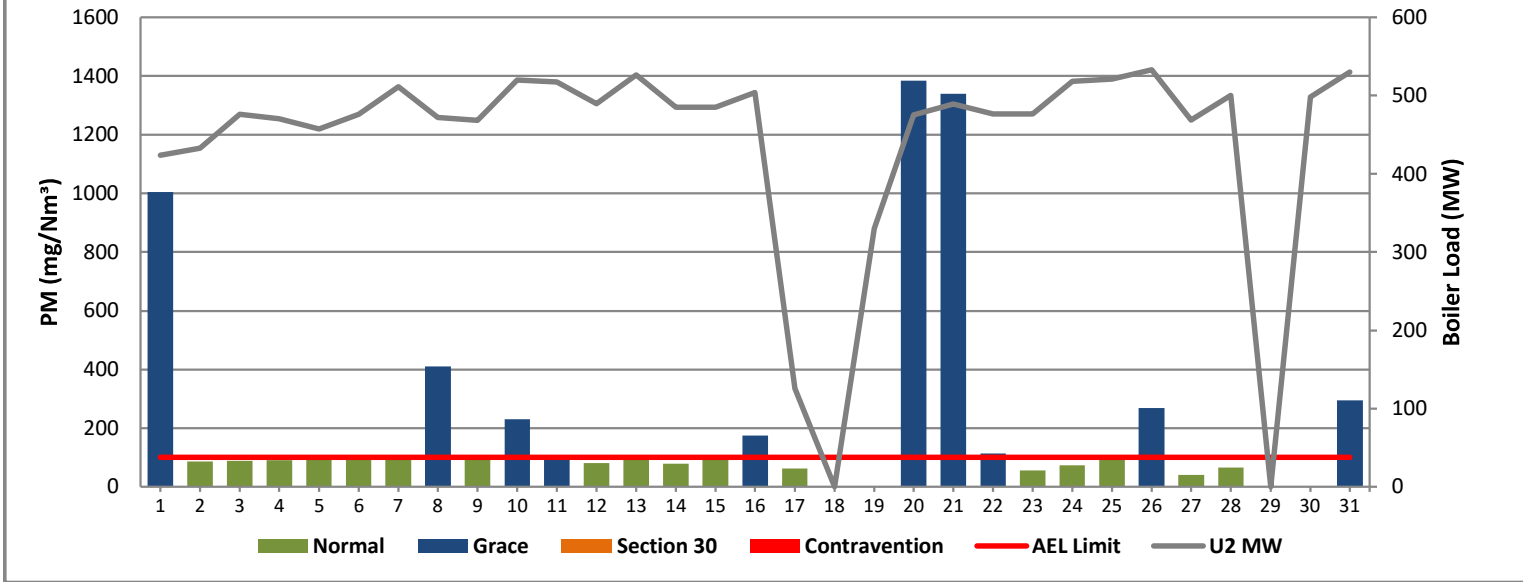
Condition	Colour	Description
Normal	GREEN	Emissions below Emission Limit Value (ELV)
Grace	BLUE	Emissions above the ELV during grace period
Section 30	ORANGE	Emissions above ELV during a NEMA S30 incident
Contra-vention	RED	Emissions above ELV but outside grace or S30 incident conditions

Figure 1: Lethabo Unit 1 PM Emissions - January 2024



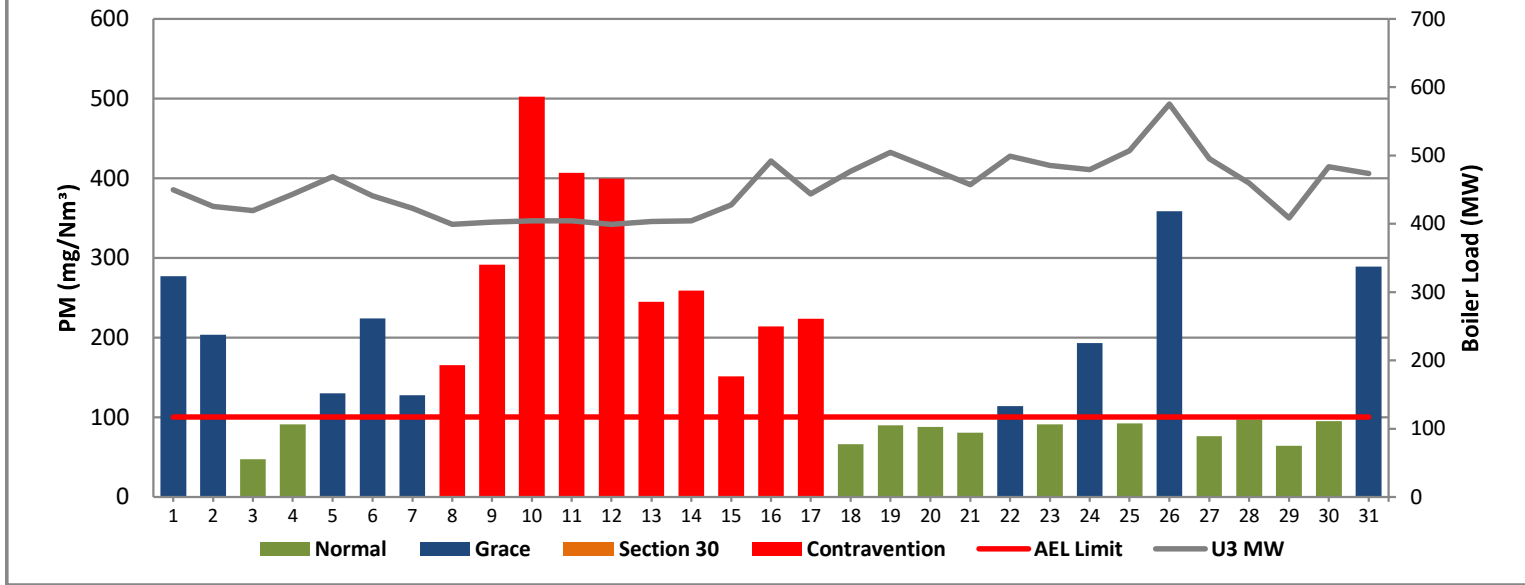
Reasons:	
Date	Description:
01-Jan	Dust Plant Challenges High Hopper Levels Poor ESP Performance
03-Jan	ESP Poor Performance Manual Rapping
05-Jan	ESP Poor Performance
06-Jan	Unit 1 Tripped (Boiler off) Unit 1 Synchronised @12:55
07-Jan	Unit Light Up
08-Jan	Unit Light Up
11-Jan	ESP Poor Performance
13-Jan	ESP Casing Outage
14-Jan	ESP Casing Outage
28-Jan	ESP Poor Performance 1 x High Hopper Level

Figure 2: Lethabo Unit 2 PM Emissions - January 2024



Reasons:	
Date	Description:
01-Jan	Dust Plant Challenges High Hopper Levels Poor ESP Performance
08-Jan	LHI Casings Outage
10-Jan	Manual Rapping
11-Jan	ESP Poor Performance
16-Jan	ESP Poor Performance
19-Jan	Unit Light Up
20-Jan	Unit Light Up
21-Jan	Unit Light Up
22-Jan	Unit Light Up
26-Jan	ESP Poor Performance 1x High Hopper Level Manual Rapping
29-Jan	Unit Shut Down for possible Boiler Tube Leak
30-Jan	SOL 11:25 30 January 2024, the unit needs to be below the limit from 11:24 on the 2nd of February 2024 and for the rest of that day remain below the limit including the following day
31-Jan	Unit Light Up

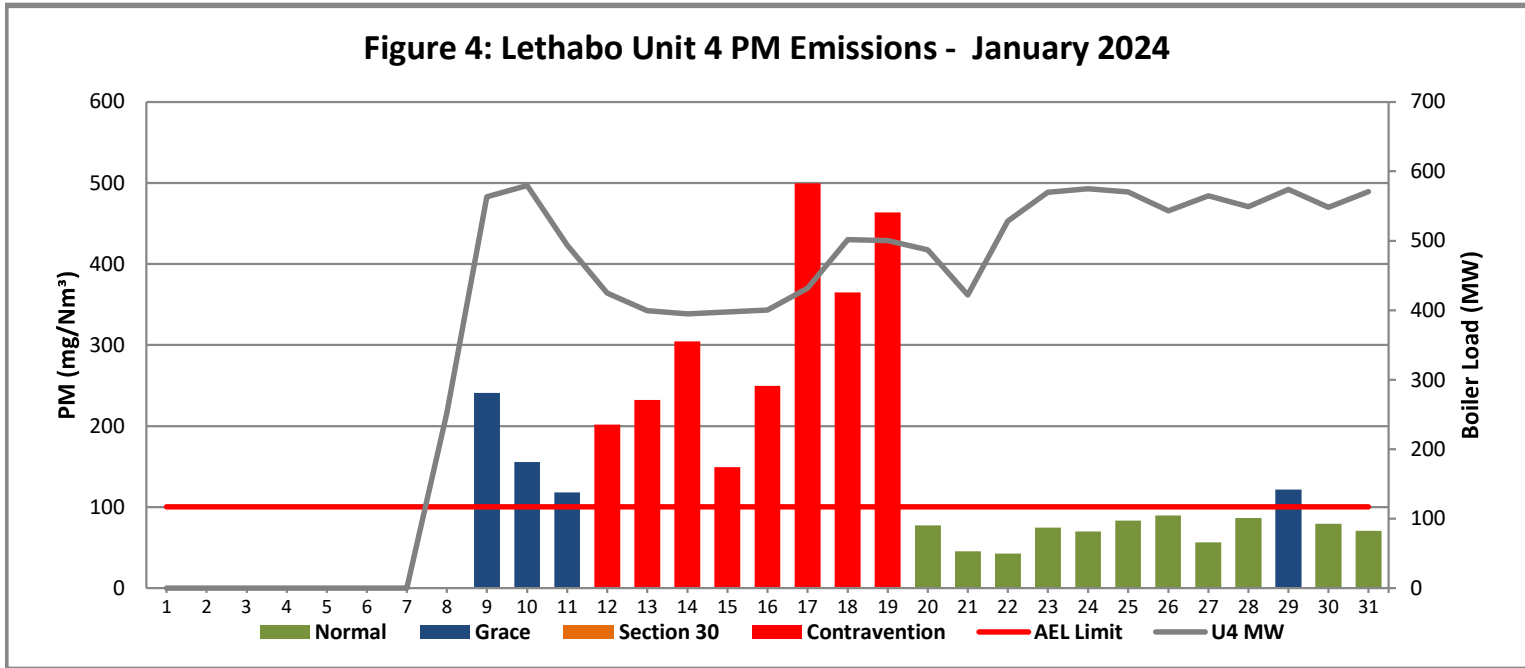
Figure 3: Lethabo Unit 3 PM Emissions - January 2024



Reasons:	
Date	Description:
01-Jan	Dust Plant Challenges High Hopper Levels Poor ESP Performance SO3 Plant Challenges Manual Rapping
02-Jan	Dust Plant Challenges High Hopper Levels Poor ESP Performance SO3 Plant Challenges
05-Jan	SO3 Plant Challenges ESP Poor Performance
06-Jan	SO3 Plant Challenges ESP Poor Performance
07-Jan	SO3 Plant Challenges ESP Poor Performance
08-Jan	SO3 Plant Challenges ESP Poor Performance SO3 Plant leak worsened posing a SHE risk. Decision made to shut down the SO3 plant off for cooling and repair Legal Contravention Incurred
09-Jan	ESP Poor Performance SO3 plant off for cooling and repair
10-Jan	ESP Poor Performance SO3 plant off for cooling and repair

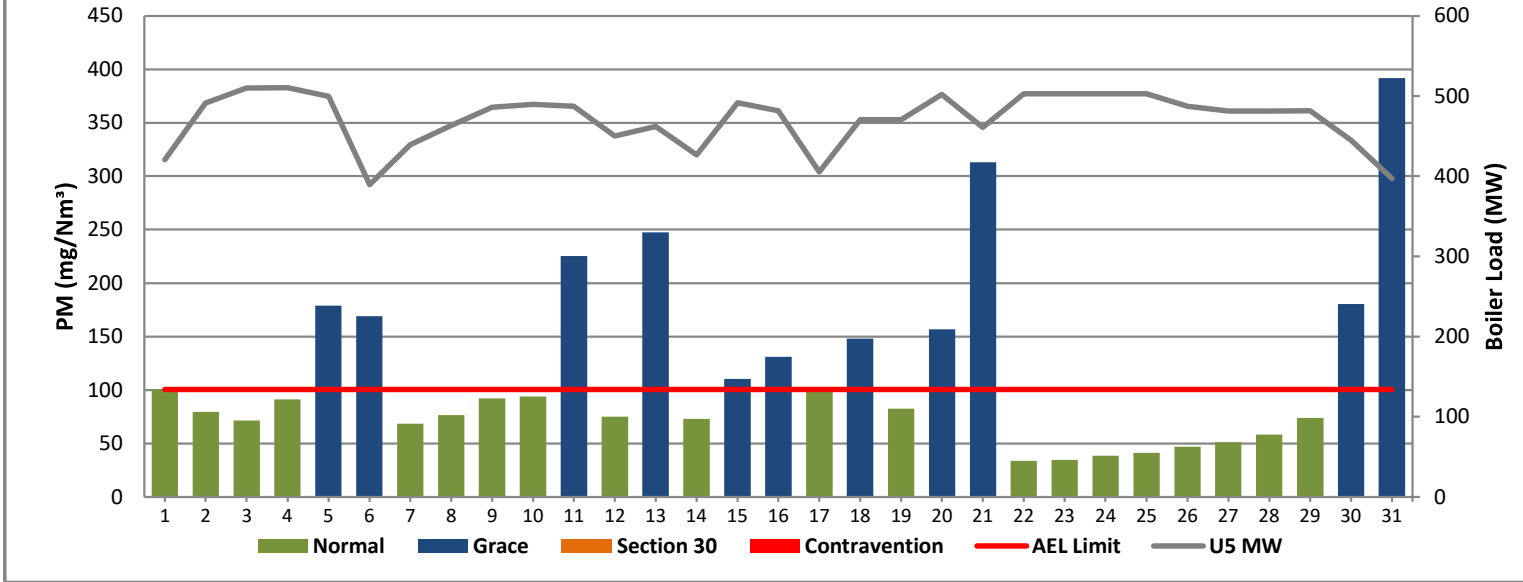
11-Jan	ESP Poor Performance SO3 plant off for cooling and repair
12-Jan	ESP Poor Performance SO3 plant off for cooling and repair
13-Jan	ESP Poor Performance SO3 plant off for cooling and repair
14-Jan	ESP Poor Performance SO3 plant off for cooling and repair
15-Jan	ESP Poor Performance SO3 plant off for cooling and repair
16-Jan	ESP Poor Performance SO3 plant off for cooling and repair
17-Jan	ESP Poor Performance SO3 plant off for cooling and repair
22-Jan	ESP Poor Performance SO3 plant in service but not on auto control
24-Jan	ESP Poor Performance and Manual Rapping
26-Jan	ESP Poor Performance Manual Rapping
31-Jan	ESP Poor Performance and Manual Rapping

Figure 4: Lethabo Unit 4 PM Emissions - January 2024



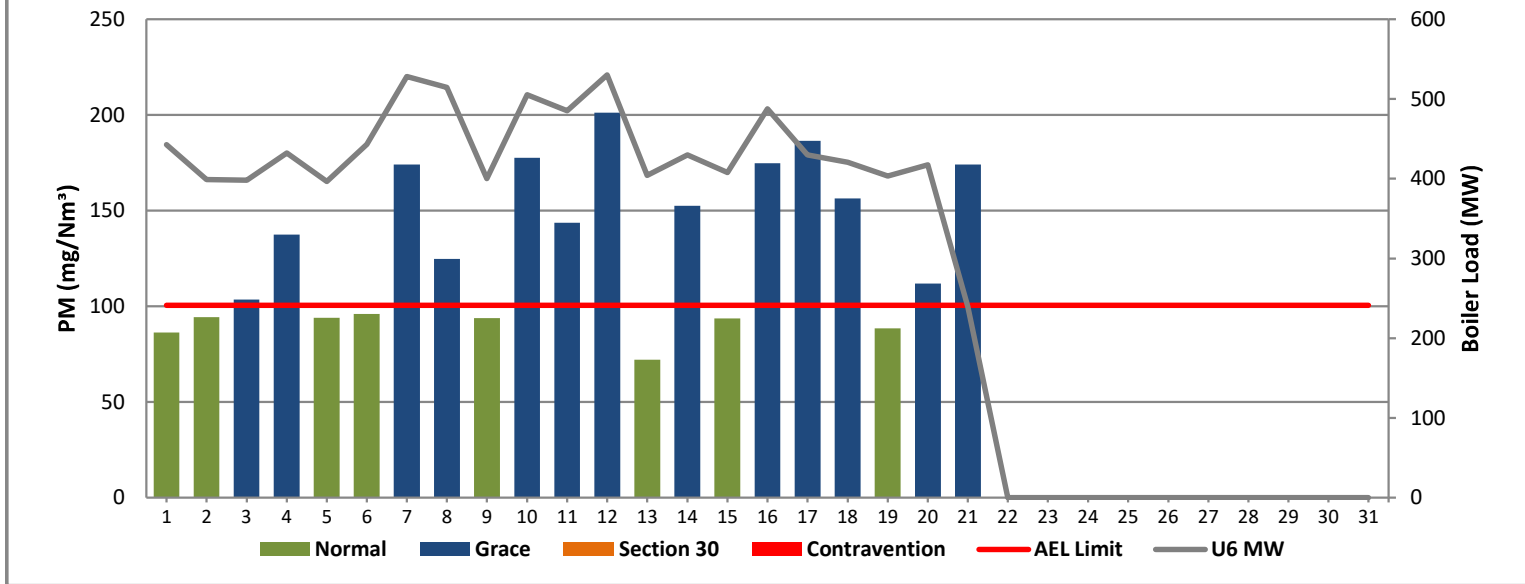
Reasons:	
Date	Description:
01-Jan	Unit Shut Down to wash casings and address emission related challenges
09-Jan	The unit synchronised on 2024/01/08 @ 16:44, the emissions need to be below the limit by 2024/01/11 @16:44 and remain below the limit until at least 2024/01/12 @ 23:59
10-Jan	Unit Light Up
11-Jan	Unit Light Up Struggled to get SO3 Plant In Service
12-Jan	Legal Contravention Incurred
13-Jan	Abatement Technology not performing, Root cause is being investigated, ESP optimization and Dust plant challenges
14-Jan	Abatement Technology not performing, Root cause is being investigated, ESP optimization and Dust plant challenges
15-Jan	Abatement Technology not performing, Root cause is being investigated, ESP optimization and Dust plant challenges
16-Jan	Abatement Technology not performing, Root cause is being investigated, ESP optimization and Dust plant challenges
17-Jan	Abatement Technology not performing, Root cause is being investigated, ESP optimization and Dust plant challenges
18-Jan	Abatement Technology not performing, Root cause is being investigated, ESP optimization and Dust plant challenges SO3 Plant not in service due to loss in steam supply
19-Jan	SO3 plant off due to no sulphur flow
29-Jan	Monitor Maxed out Early hours of the morning ESP Poor Performance

Figure 5: Lethabo Unit 5 PM Emissions - January 2024



Reasons:	
Date	Description:
05-Jan	ESP Manual Rapping
06-Jan	ESP Poor Performance
11-Jan	RHO casing outage
13-Jan	ESP Poor Performance and Manual Rapping
15-Jan	ESP Poor Performance LHI F3 Transformer Fire
16-Jan	ESP Poor Performance High Hopper Levels
18-Jan	ESP Poor Performance and Manual Rapping Sulphur flow lost due to loss in steam supply
20-Jan	LHO Casing Outage
21-Jan	RHI Casing Outage
30-Jan	ESP Poor Performance SO3 Plant off for repairs to the blower
31-Jan	ESP Poor Performance SO3 Plant off for repairs to the blower

Figure 6: Lethabo Unit 6 PM Emissions - January 2024



Reasons:	
Date	Description:
03-Jan	ESP Poor Performance
04-Jan	ESP Poor Performance
07-Jan	Manual Rapping
08-Jan	ESP Poor Performance
10-Jan	ESP Poor Performance and Manual Rapping
11-Jan	ESP Poor Performance
12-Jan	ESP Poor Performance and manual rapping
14-Jan	ESP poor Performance
16-Jan	ESP Poor Performance
17-Jan	ESP Poor Performance and Manual Rapping
18-Jan	ESP Poor Performance and Manual Rapping
20-Jan	ESP Poor Performance
21-Jan	ESP Poor Performance

Figure 7: Lethabo Unit 1 SO₂ Emissions - January 2024

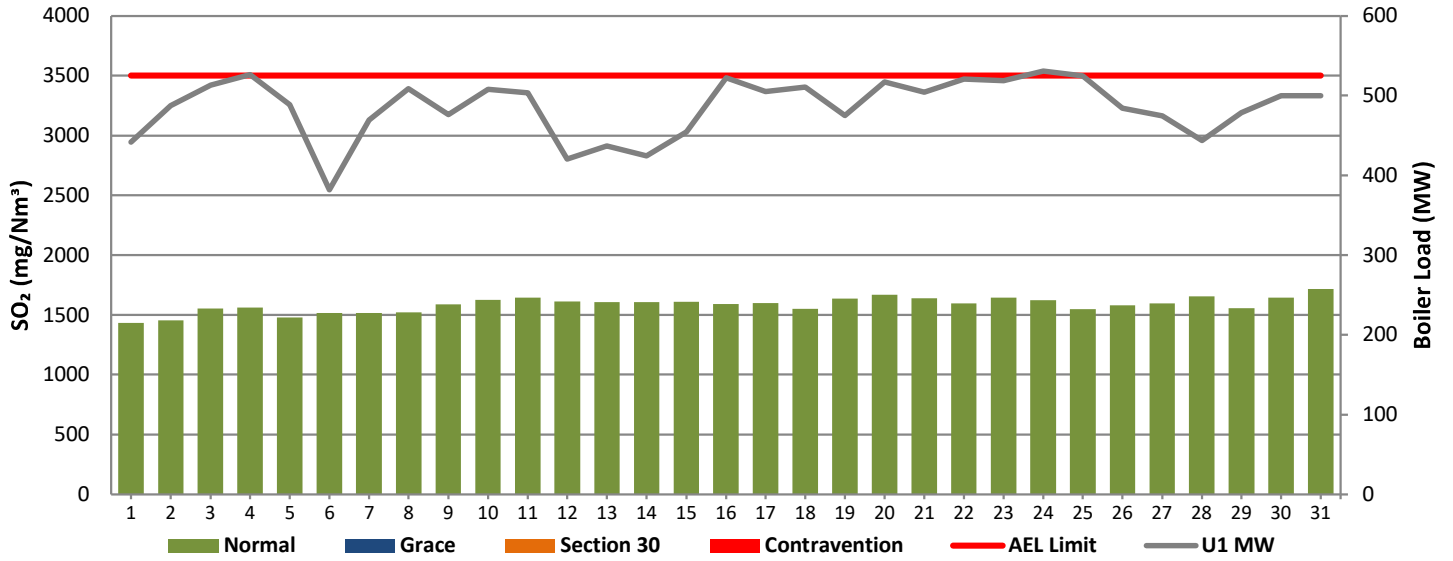


Figure 8: Lethabo Unit 2 SO₂ Emissions - January 2024

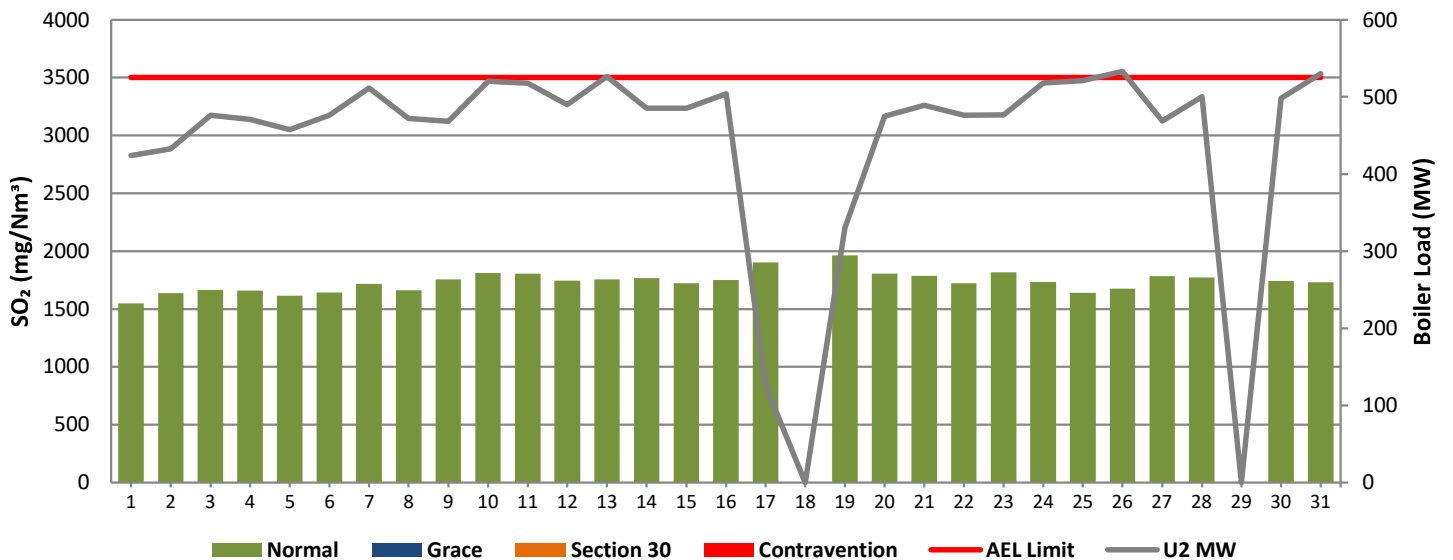


Figure 9: Lethabo Unit 3 SO₂ Emissions - January 2024



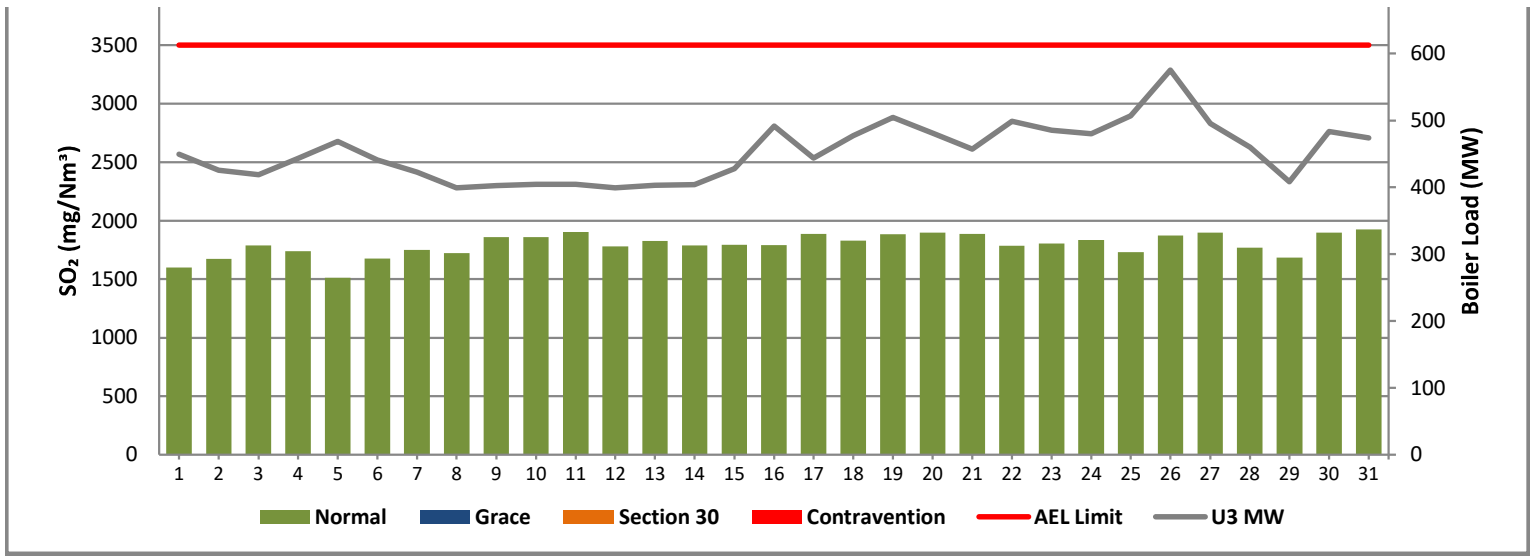


Figure 10: Lethabo Unit 4 SO₂ Emissions - January 2024

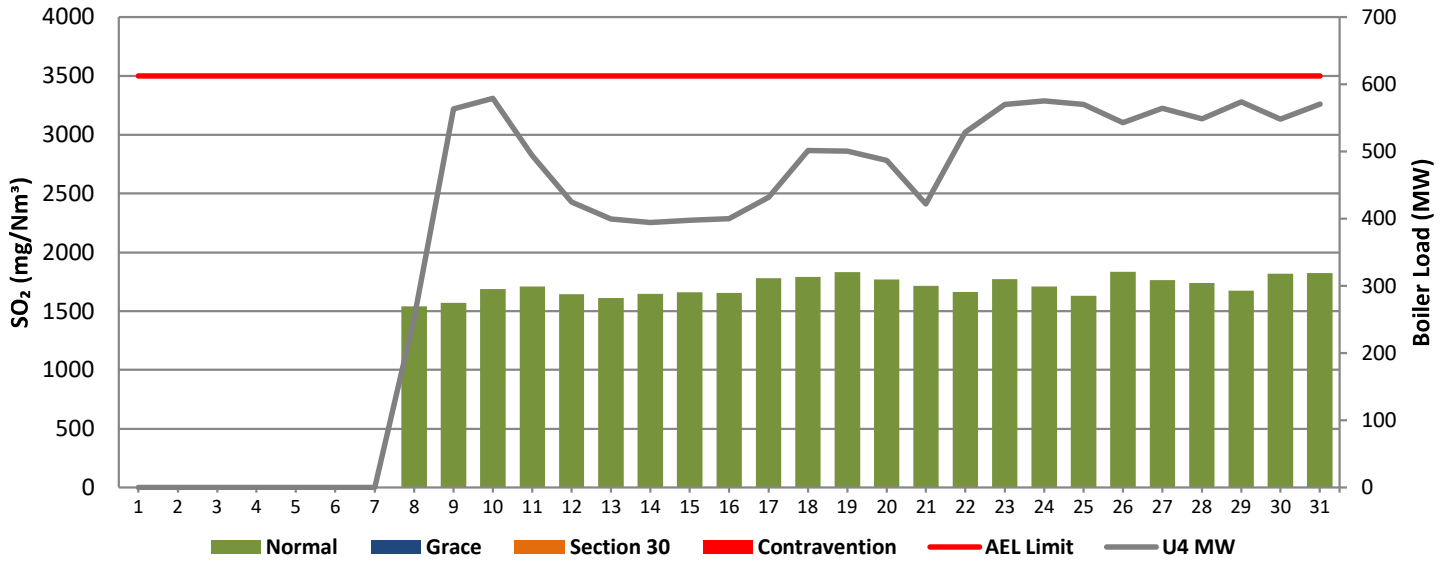


Figure 11: Lethabo Unit 5 SO₂ Emissions - January 2024

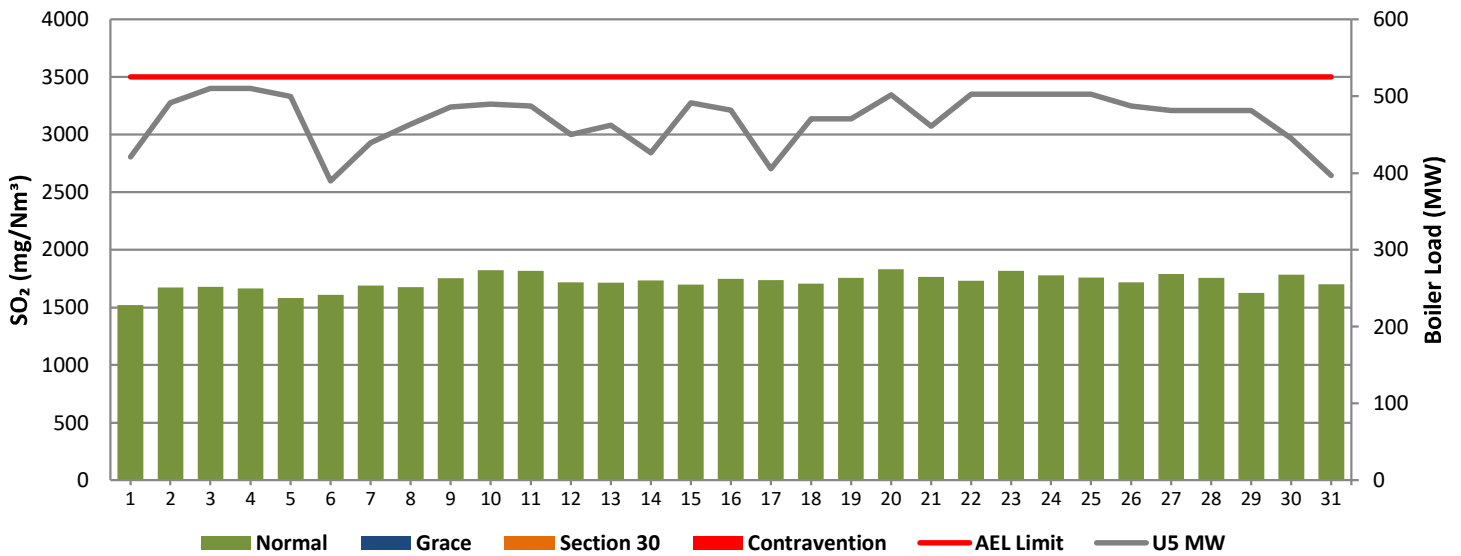


Figure 12: Lethabo Unit 6 SO₂ Emissions - January 2024

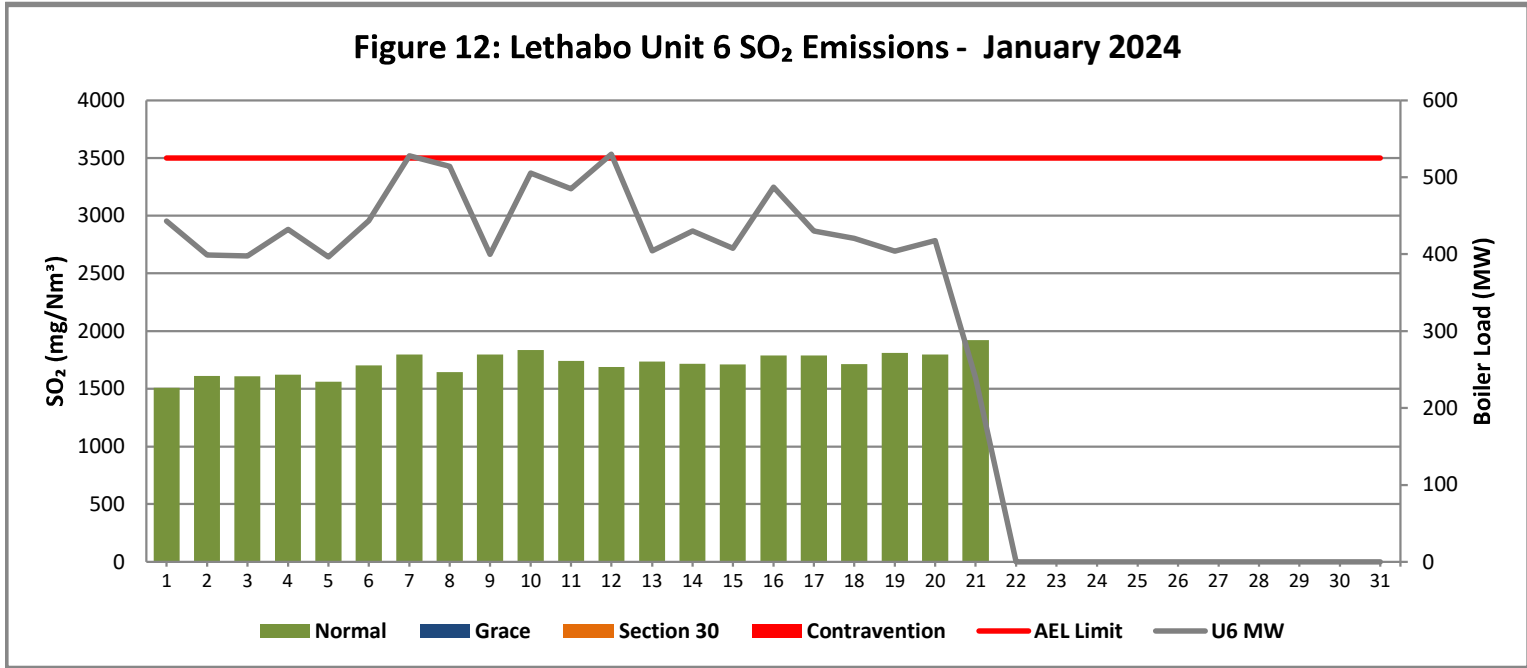


Figure 13: Lethabo Unit 1 NO_x Emissions - January 2024

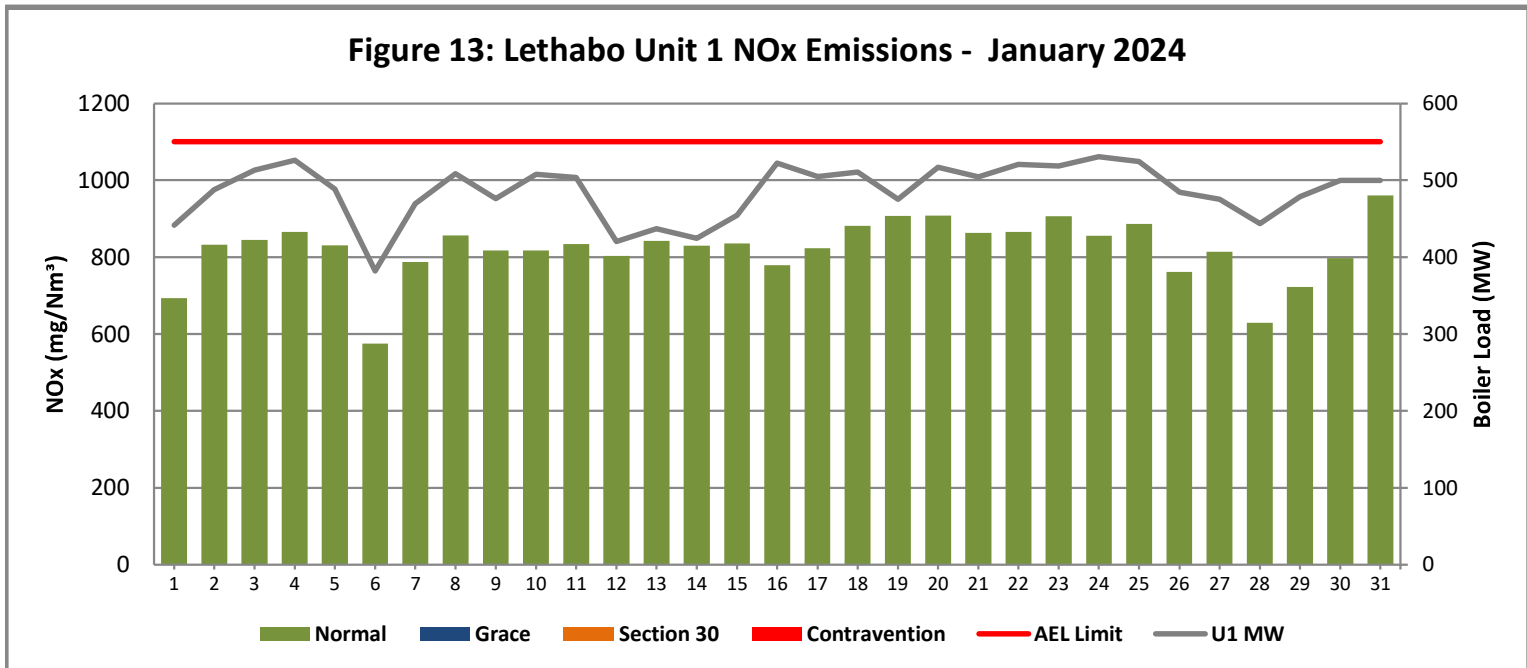


Figure 14: Lethabo Unit 2 NOx Emissions - January 2024

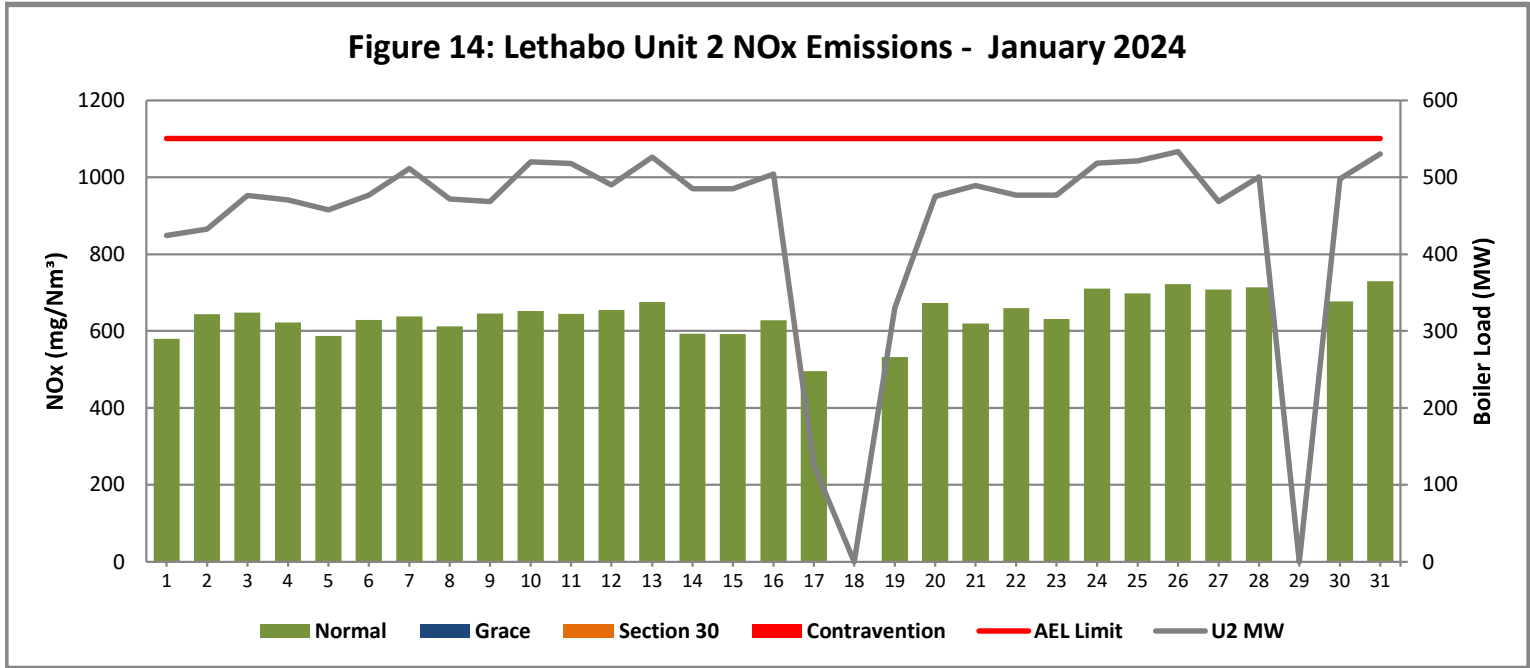


Figure 15: Lethabo Unit 3 NOx Emissions - January 2024

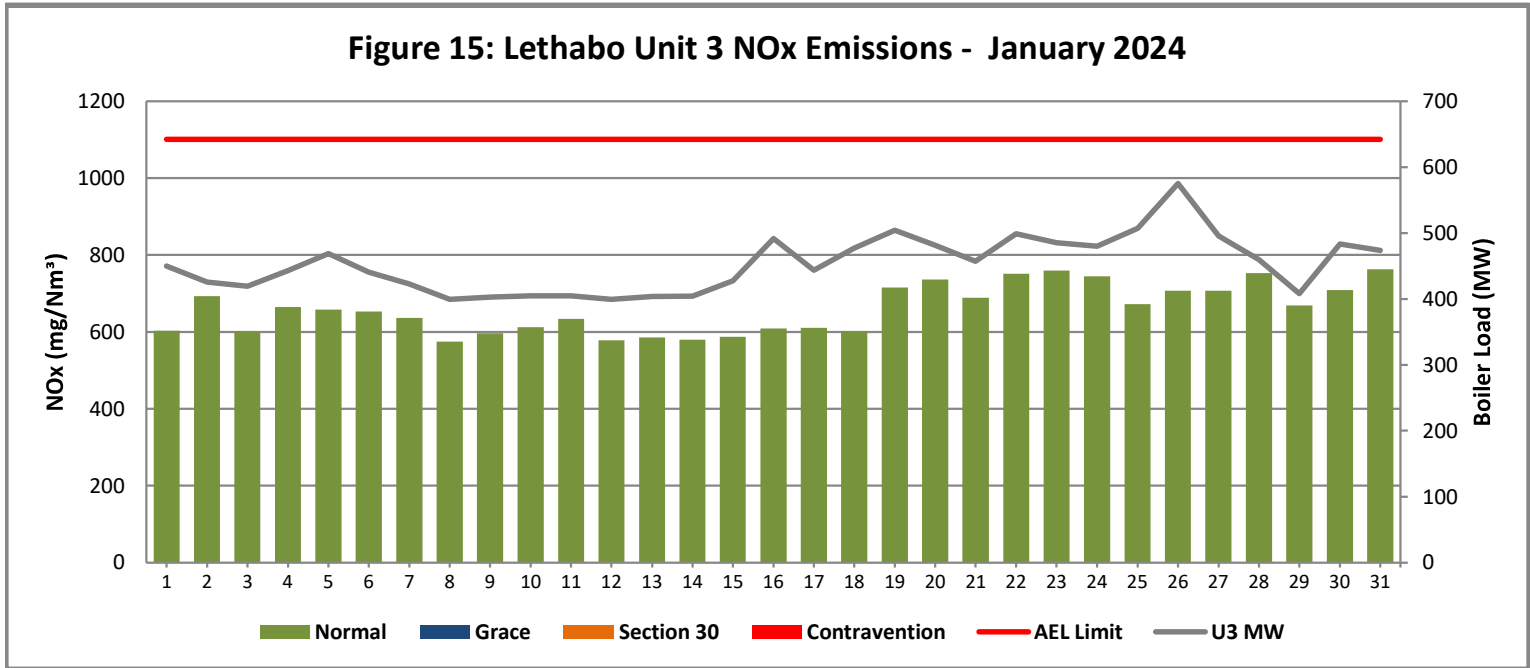


Figure 16: Lethabo Unit 4 NOx Emissions - January 2024

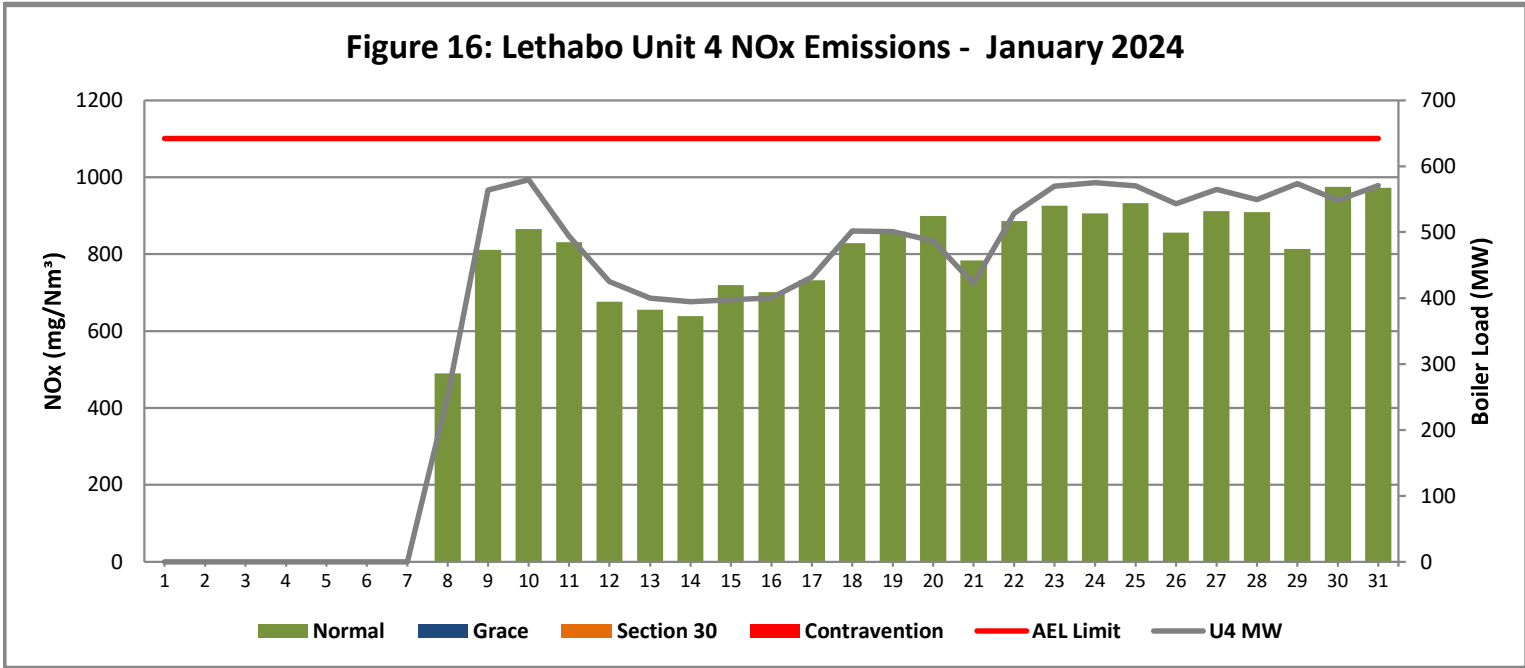


Figure 17: Lethabo Unit 5 NOx Emissions - January 2024

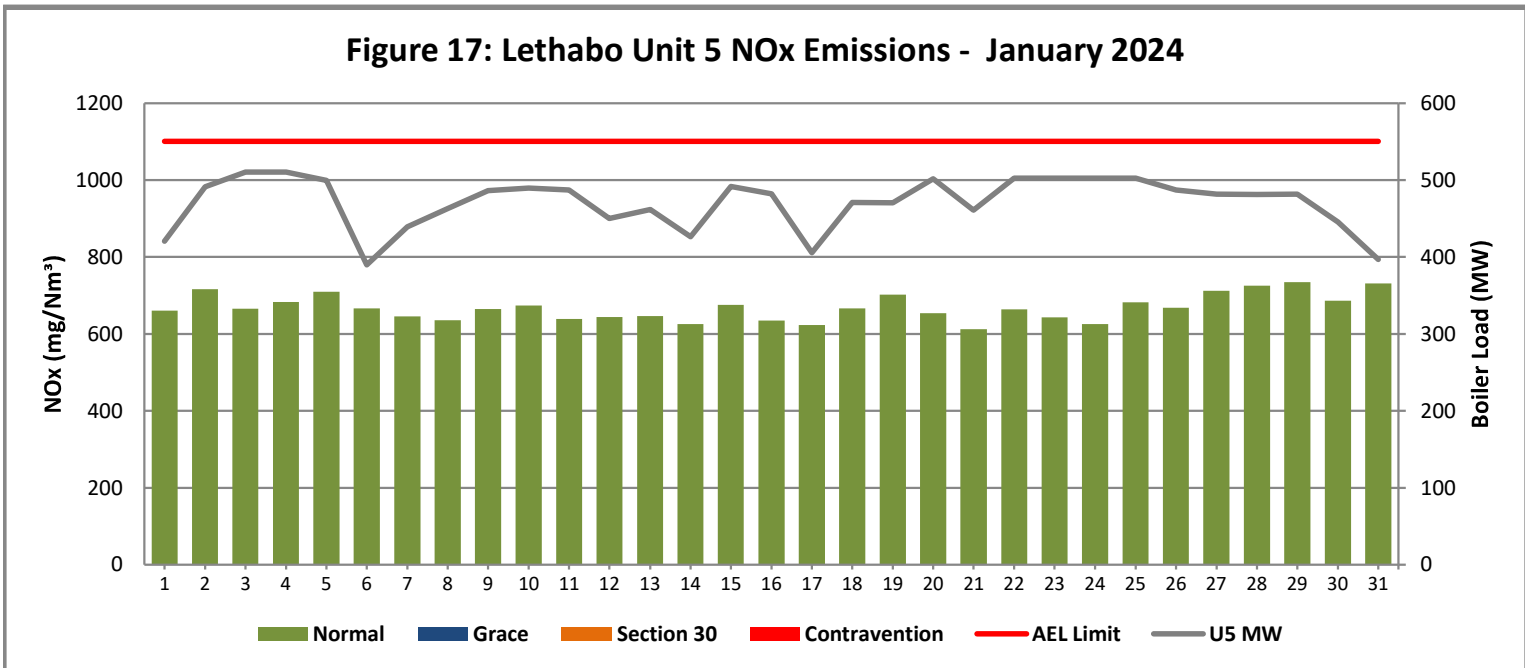
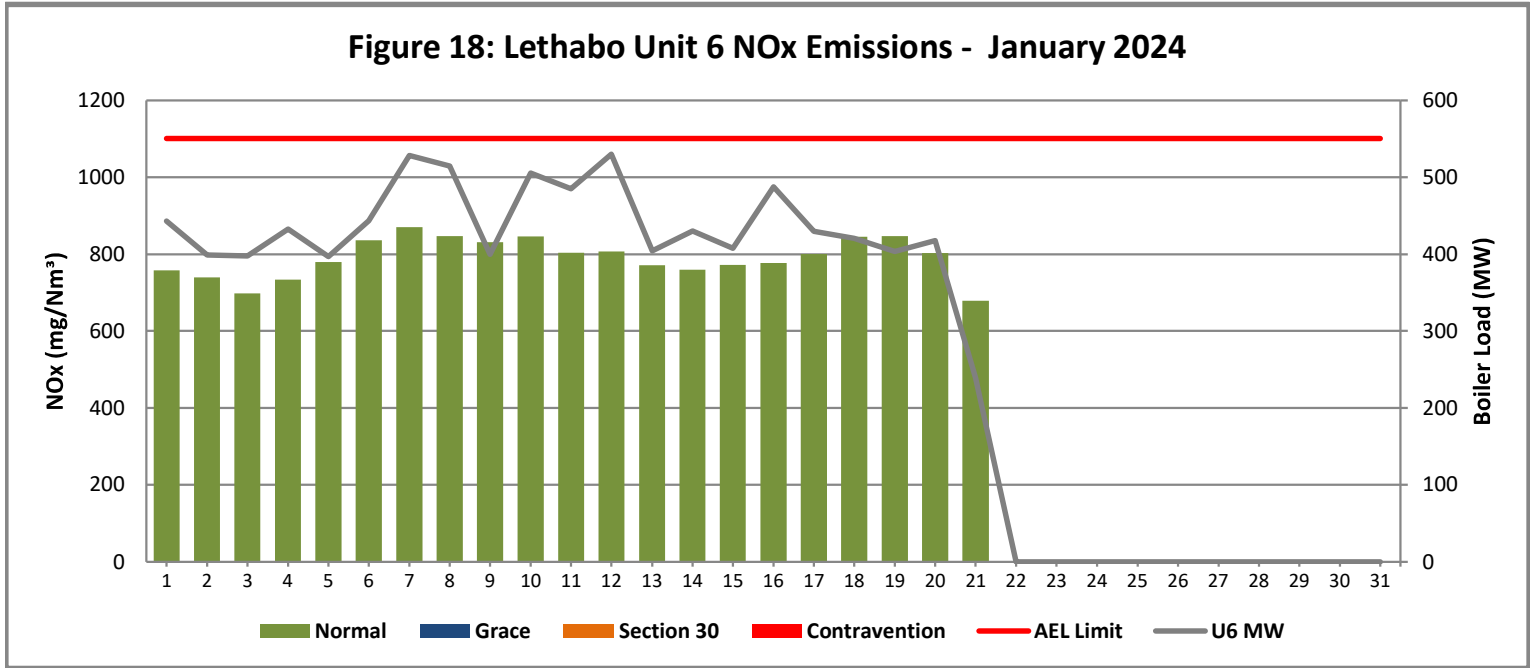


Figure 18: Lethabo Unit 6 NOx Emissions - January 2024



7 SHUT DOWN AND LIGHT UP INFORMATION

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

Unit No.1	<i>low drum level due to EFP A tripped</i>		<i>Unit tripped due A-EFP trip</i>					
Breaker Open (BO)	5:30 AM	2024/01/06	9:41 AM	2024/01/26				
Draught Group (DG) Shut Down (SD)	<i>DG did not trip or SD</i>	<i>DG did not trip or SD</i>	<i>DG did not trip or SD</i>	<i>DG did not trip or SD</i>				
BO to DG SD (duration)	<i>n/a</i>	DD:HH:MM	<i>n/a</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	10:00 AM	2024/01/06	12:04 PM	2024/01/26				
Synch. to Grid (or BC)	12:54 PM	2024/01/06	1:32 PM	2024/01/26				
Fires in to BC (duration)	00:02:53	DD:HH:MM	00:01:28	DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	3:00 AM	2024/01/10	3:00 AM	2024/01/27				
Emissions below limit from BC (duration)	03:14:06	DD:HH:MM	00:13:28	DD:HH:MM		DD:HH:MM		DD:HH:MM

Unit No.2	<i>Spraywater valves water leak repairs.</i>		<i>Boiler tube other</i>					
Breaker Open (BO)	12:09 AM	2024/01/17	3:34 PM	2024/01/28				
Draught Group (DG) Shut Down (SD)	8:07 PM	2024/01/17	5:03 AM	2024/01/29				
BO to DG SD (duration)	00:19:58	DD:HH:MM	00:13:29	DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time	7:27 PM	2024/01/19	7:07 AM	2024/01/30				
Synch. to Grid (or BC)	8:44 PM	2024/01/19	11:26 AM	2024/01/30				
Fires in to BC (duration)	00:01:17	DD:HH:MM	00:04:19	DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)	5:00 AM	2024/01/24	<i>not > limit</i>	<i>not > limit</i>				
Emissions below limit from BC (duration)	04:08:16	DD:HH:MM	<i>n/a</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM

Unit No.3	<i>Unit 3 tripped on differential expansion</i>						
Breaker Open (BO)	6:43 PM	2024/01/12					
Draught Group (DG) Shut Down (SD)	<i>DG did not trip or SD</i>	<i>DG did not trip or SD</i>					
BO to DG SD (duration)	<i>n/a</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM	DD:HH:MM
Fires in time							
Synch. to Grid (or BC)							
Fires in to BC (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM	DD:HH:MM
Emissions below limit from BC (end date)							
Emissions below limit from BC (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM	DD:HH:MM

Unit No.4	<i>High stack emissions.</i>						
Breaker Open (BO)							
Draught Group (DG) Shut Down (SD)							
BO to DG SD (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM	DD:HH:MM
Fires in time	3:23 PM	2024/01/08					
Synch. to Grid (or BC)	4:43 PM	2024/01/08					
Fires in to BC (duration)	00:01:20	DD:HH:MM		DD:HH:MM		DD:HH:MM	DD:HH:MM
Emissions below limit from BC (end date)	6:00 AM	2024/01/21					
Emissions below limit from BC (duration)	12:13:17	DD:HH:MM		DD:HH:MM		DD:HH:MM	DD:HH:MM

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

Unit No.6	<i>Outage GO</i>							
Breaker Open (BO)	<i>1:35 AM</i>	<i>2024/01/21</i>						
Draught Group (DG) Shut Down (SD)	<i>10:02 PM</i>	<i>2024/01/21</i>						
BO to DG SD (duration)	<i>00:20:27</i>	DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Fires in time								
Synch. to Grid (or BC)								
Fires in to BC (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM
Emissions below limit from BC (end date)								
Emissions below limit from BC (duration)		DD:HH:MM		DD:HH:MM		DD:HH:MM		DD:HH:MM

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

8. MAINTENANCE

Unit 1				
Beginning of	2024/01/13 05:18	2024/01/14 04:17	2024/01/28 04:09	
Reason for Maintenance	LHI Casing	LHO Casing	RHO Casing	
End (Time):	2024/01/14 04:17	2024/01/14 23:59	2024/01/29 00:02	
Duration	22:59:00	19:42:00	19:53:00	

Unit 2				
Beginning of	2024/01/20 06:00:00			
Reason for Maintenance	RHO Casing			
End (Time):	2024/01/21 19:43:00			
Duration	37:43:00			

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

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

Unit 5				
Beginning of	2024/01/10 23:50			
Reason for Maintenance	RHO Casing			
End (Time):	2024/01/11 20:03			
Duration	20:13:00			

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

9. GENERAL

Unit 2 Monitor Reliability

01/01/2024; 08/01/2024; 10/01/2024; 16/01/2024; 20/01/2024; 21/01/2024 : PM Monitor Reliability low due to monitors reading maximum.

Unit 3 Monitor Reliability

01/01/2024; 11/01/2024; 14/01/2024; 26/01/2024: PM Monitor Reliability low due to monitors reading maximum.

Unit 4 Monitor Reliability

13/01/2024; 17/01/2024; 29/01/2024: PM Monitor Reliability low due to monitors reading maximum.

Unit 5 Monitor Reliability

16/01/2024; 21/01/2024; 29/01/2024; 31/01/2024: PM Monitor Reliability low due to monitors reading maximum.

Unit 1:

The Unit exceeded 05/01/2024, the unit tripped (boiler off) on 06/01/2024 and exceeded 07/01/2024 and 08/01/2024. This was NOT a non-compliance due to the trip.

Unit 3:

On the 08/01/2024 - 17/01/2024, Unit 3 registered a non-compliance as the unit exceeded for greater than 72 hours due to SO3 plant leak, requiring the shutdown of the SO3 plant for safety reasons. The emission's exceedance for the period mentioned in the report was caused by the unavailability of the SO3 Plant resulting in failure to remain below limit after the 72 hours grace period. The root cause will be determined with the investigation.

Unit 4:

On the 12/01/2024 - 19/01/2024, Unit 4 registered a non-compliance as the unit exceeded for greater than 72 hours light up conditions due to SO3 Plant not being in service and abatement system not reliably reducing emissions and dust plant challenges. The emission's exceedance for the period mentioned in the report was caused by late return of SO3 Plant, poor performance of the casings and resulting in failure to remain below limit after the 72 hours grace period. The root cause is to be determined with the investigation.

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	Initial notification to Authorities	Date investigation report sent	Date DEA Acknowledgment	Date DEA Acceptable	Comments / Reference No.
3	2024/01/08	2024/01/17	SO3 plant leak, requiring the shutdown of the SO3 plant for safety reasons	SO3 plant shut down for extensive repairs	2023/01/11				Legal Contravention is still under Investigation
4	2024/01/12	2024/01/19	Light up conditions and SO3 Plant issues ESP poor performance	SO3 Plant restored; production losses taken; ESP defects and optimisation were addressed; Dust plant challenges addressed; Root cause to be determined with investigation					Legal Contravention is still under Investigation

11. PARTICULATE EMISSIONS

EMISSION RATE (ACTUAL EMISSION/MWh GENERATED - kg/MWh)

MONTH	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	UNIT 6	STATION
Feb-23	0.51	0.48	0.53	OFF	0.83	0.63	0.59
Mar-23	0.51	0.37	0.52	0.54	0.63	0.39	0.50
Apr-23	OFF	0.29	0.61	0.35	0.86	OFF	0.56
May-23	OFF	0.48	0.46	0.32	0.79	0.41	0.50
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	0.27	0.67	0.68	0.44	0.37	0.42	0.47
Nov-23	0.88	1.81	1.01	0.70	0.55	0.75	0.97
Dec-23	0.56	1.20	0.95	1.24	0.85	0.71	0.90
Jan-24	0.55	1.35	0.92	0.88	0.70	0.78	0.86

ADDENDUM TO MONTHLY EMISSIONS REPORT

12. DAILY EMISSIONS FIGURES

Final Dust Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
01-Jan	143	1005	277	OFF	100	86	100
02-Jan	84	87	204	OFF	80	94	100
03-Jan	264	89	48	OFF	72	104	100
04-Jan	92	91	91	OFF	91	137	100
05-Jan	311	96	130	OFF	179	94	100
06-Jan	341	94	224	OFF	169	96	100
07-Jan	286	97	128	OFF	69	174	100
08-Jan	163	410	166	OFF	76	125	100
09-Jan	52	92	292	241	92	94	100
10-Jan	77	230	503	156	94	178	100
11-Jan	104	105	407	118	225	144	100
12-Jan	91	81	400	202	75	201	100
13-Jan	315	93	245	232	247	72	100
14-Jan	104	80	259	304	73	153	100
15-Jan	29	100	151	149	110	94	100
16-Jan	44	175	214	250	131	175	100
17-Jan	46	62	224	499	100	186	100
18-Jan	80	OFF	66	365	148	156	100
19-Jan	47	OFF	90	463	82	88	100
20-Jan	69	1384	88	78	157	112	100
21-Jan	34	1340	81	46	313	174	100
22-Jan	87	114	114	43	34	OFF	100
23-Jan	35	56	91	75	35	OFF	100
24-Jan	42	74	193	70	39	OFF	100
25-Jan	46	97	93	83	41	OFF	100
26-Jan	67	268	359	90	47	OFF	100
27-Jan	21	41	76	57	51	OFF	100
28-Jan	151	66	97	86	58	OFF	100
29-Jan	29	OFF	64	122	74	OFF	100
30-Jan	46	OFF	95	79	180	OFF	100
31-Jan	45	294	289	70	392	OFF	100

ADDENDUM TO MONTHLY EMISSIONS REPORT

Final SOx Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
01-Jan	1434	1549	1602	OFF	1521	1508	3500
02-Jan	1454	1637	1674	OFF	1675	1611	3500
03-Jan	1553	1666	1789	OFF	1680	1609	3500
04-Jan	1562	1658	1739	OFF	1665	1623	3500
05-Jan	1478	1613	1515	OFF	1582	1560	3500
06-Jan	1515	1644	1676	OFF	1609	1705	3500
07-Jan	1516	1715	1749	OFF	1691	1800	3500
08-Jan	1522	1663	1723	1543	1678	1644	3500
09-Jan	1588	1757	1860	1571	1756	1796	3500
10-Jan	1625	1810	1858	1687	1824	1837	3500
11-Jan	1646	1806	1903	1710	1817	1741	3500
12-Jan	1613	1745	1782	1644	1717	1689	3500
13-Jan	1605	1757	1826	1610	1715	1737	3500
14-Jan	1605	1767	1789	1649	1735	1718	3500
15-Jan	1610	1721	1796	1662	1700	1713	3500
16-Jan	1591	1752	1792	1655	1749	1788	3500
17-Jan	1598	1901	1888	1779	1735	1787	3500
18-Jan	1551	OFF	1830	1789	1705	1714	3500
19-Jan	1637	1964	1886	1832	1759	1813	3500
20-Jan	1668	1805	1899	1770	1833	1795	3500
21-Jan	1640	1785	1887	1717	1766	1921	3500
22-Jan	1596	1721	1786	1665	1730	OFF	3500
23-Jan	1645	1814	1804	1771	1816	OFF	3500
24-Jan	1624	1736	1835	1711	1780	OFF	3500
25-Jan	1548	1642	1732	1629	1759	OFF	3500
26-Jan	1581	1677	1874	1836	1718	OFF	3500
27-Jan	1596	1784	1898	1764	1790	OFF	3500
28-Jan	1655	1772	1769	1741	1757	OFF	3500
29-Jan	1555	OFF	1684	1675	1625	OFF	3500
30-Jan	1645	1744	1897	1819	1784	OFF	3500
31-Jan	1718	1731	1924	1825	1701	OFF	3500

ADDENDUM TO MONTHLY EMISSIONS REPORT

Final NOx Concentration (mg/Nm³)

Date	U1	U2	U3	U4	U5	U6	Limit
01-Jan	694	580	603	OFF	661	758	1100
02-Jan	833	644	693	OFF	717	740	1100
03-Jan	845	648	601	OFF	666	698	1100
04-Jan	865	622	664	OFF	684	733	1100
05-Jan	831	588	658	OFF	710	779	1100
06-Jan	575	629	653	OFF	667	836	1100
07-Jan	787	639	636	OFF	645	870	1100
08-Jan	857	612	575	490	635	848	1100
09-Jan	818	646	597	812	664	831	1100
10-Jan	817	652	612	865	673	846	1100
11-Jan	834	645	634	831	639	804	1100
12-Jan	804	654	578	676	644	807	1100
13-Jan	842	675	586	655	647	772	1100
14-Jan	830	593	580	639	626	759	1100
15-Jan	836	592	588	720	675	772	1100
16-Jan	779	628	608	702	635	778	1100
17-Jan	823	495	610	732	623	801	1100
18-Jan	882	OFF	602	828	666	845	1100
19-Jan	908	532	716	858	702	846	1100
20-Jan	908	673	736	899	654	803	1100
21-Jan	863	620	688	784	612	679	1100
22-Jan	865	659	751	886	664	OFF	1100
23-Jan	906	631	760	926	643	OFF	1100
24-Jan	856	710	744	906	626	OFF	1100
25-Jan	886	698	672	932	682	OFF	1100
26-Jan	762	723	707	856	668	OFF	1100
27-Jan	814	708	707	912	713	OFF	1100
28-Jan	629	714	753	909	725	OFF	1100
29-Jan	723	OFF	669	814	735	OFF	1100
30-Jan	797	677	709	975	686	OFF	1100
31-Jan	960	730	763	973	731	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
Feb-23	99.19%	0.9	100.00%	0.0	96.88%	3.5	OFF	OFF	100.00%	0.0	99.16%	0.9
Mar-23	99.30%	0.9	99.19%	1.0	99.22%	1.0	100.00%	0.0	98.57%	1.8	99.19%	1.0
Apr-23	OFF	OFF	100.00%	0.0	97.91%	2.5	100.00%	0.0	99.24%	0.9	OFF	OFF
May-23	OFF	OFF	98.56%	1.8	99.36%	0.8	100.00%	0.0	96.91%	3.8	100.00%	0.0
Jun-23	100.00%	0.0	100.00%	0.0	99.41%	0.7	98.31%	2.0	98.52%	1.8	100.00%	0.0
Jul-23	100.00%	0.0	100.00%	0.0	99.19%	1.0	100.00%	0.0	100.00%	0.0	99.22%	1.0
Aug-23	100.00%	0.0	100.00%	0.0	98.46%	1.9	100.00%	0.0	99.23%	1.0	99.12%	1.1
Sep-23	99.17%	1.0	100.00%	0.0	98.51%	1.8	100.00%	0.0	98.34%	2.0	99.17%	1.0
Oct-23	99.98%	0.0	96.81%	4.0	98.31%	2.1	100.00%	0.0	99.34%	0.8	99.30%	0.9
Nov-23	97.53%	2.96	97.57%	2.92	99.17%	1.00	100.00%	0.00	100.00%	0.00	99.71%	0.35
Dec-23	100.00%	0.0	97.95%	2.5	100.00%	0.0	98.62%	1.7	98.03%	2.4	97.91%	2.6
Jan-24	97.90%	2.6	98.73%	1.6	100.00%	0.0	100.00%	0.0	99.32%	0.8	100.00%	0.0

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
Feb-23	89.39%	3.0	100.00%	0.0	82.41%	4.9	OFF	OFF	79.69%	5.7	100.00%	0.0
Mar-23	100.00%	0.0	98.89%	0.3	95.16%	1.5	95.50%	1.4	99.33%	0.2	95.00%	1.6
Apr-23	OFF	OFF	99.66%	0.1	100.00%	0.0	98.93%	0.3	94.58%	1.6	OFF	OFF
May-23	OFF	OFF	100.00%	0.0	99.89%	0.0	99.33%	0.2	100.00%	0.0	90.67%	2.9
Jun-23	85.96%	4.2	81.82%	5.5	96.56%	1.0	97.86%	0.6	86.81%	4.0	97.50%	0.8
Jul-23	97.98%	0.6	97.83%	0.7	100.00%	0.0	97.85%	0.7	99.67%	0.1	100.00%	0.0
Aug-23	99.33%	0.2	95.61%	1.4	100.00%	0.0	97.47%	0.8	100.00%	0.0	100.00%	0.0
Sep-23	100.00%	0.0	98.19%	0.5	98.75%	0.4	99.72%	0.1	99.58%	0.1	95.83%	1.3
Oct-23	99.73%	0.1	100.00%	0.0	96.91%	1.0	100.00%	0.0	100.00%	0.0	97.27%	0.8
Nov-23	95.14%	1.5	94.17%	1.8	83.89%	4.8	86.14%	4.2	89.17%	3.3	94.62%	1.6
Dec-23	92.47%	2.3	97.67%	0.7	81.25%	5.8	84.48%	4.8	93.82%	1.9	85.62%	4.5
Jan-24	95.73%	1.3	90.43%	3.0	69.76%	9.4	91.80%	2.5	89.78%	3.2	95.24%	1.5

ADDENDUM TO MONTHLY EMISSIONS REPORT

Particulate Emission Monitors

Availability						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Feb-23	99.11%	96.87%	98.72%	OFF	93.83%	96.29%
Mar-23	99.68%	98.75%	99.06%	97.17%	97.33%	99.12%
Apr-23	OFF	99.43%	98.61%	99.57%	94.31%	OFF
May-23	OFF	97.07%	99.85%	99.46%	95.56%	99.50%
Jun-23	99.23%	95.11%	99.19%	98.33%	99.03%	99.86%
Jul-23	98.92%	100.00%	99.60%	99.73%	98.33%	99.87%
Aug-23	99.73%	92.28%	99.22%	98.85%	97.85%	98.79%
Sep-23	99.44%	98.61%	98.89%	99.03%	97.99%	97.98%
Oct-23	100.00%	96.51%	99.33%	99.73%	98.66%	99.69%
Nov-23	92.92%	86.39%	94.86%	98.60%	97.64%	96.16%
Dec-23	98.12%	92.68%	95.74%	90.32%	95.03%	97.85%
Jan-24	98.28%	85.65%	94.35%	90.76%	92.88%	97.82%

Gaseous Emission Monitors

Availability												
Month	Unit 1		Unit 2		Unit 3		Unit 4		Unit 5		Unit 6	
	SO _x	NO _x	SO _x	NO _x	SO _x	NO _x	SO _x	NO _x	SO _x	NO _x	SO _x	NO _x
Feb-23	99.85%	99.85%	100.00%	100.00%	100.00%	100.00%	OFF	OFF	100.00%	99.28%	100.00%	100.00%
Mar-23	100.00%	100.00%	100.00%	100.00%	99.87%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Apr-23	OFF	OFF	100.00%	100.00%	99.86%	99.86%	99.95%	99.95%	100.00%	100.00%	OFF	OFF
May-23	OFF	OFF	100.00%	100.00%	100.00%	100.00%	99.60%	99.87%	99.73%	99.87%	99.52%	99.68%
Jun-23	99.70%	99.85%	99.58%	100.00%	99.71%	100.00%	100.00%	100.00%	100.00%	100.00%	99.86%	100.00%
Jul-23	98.39%	98.39%	98.08%	97.95%	98.12%	98.39%	98.39%	98.25%	97.92%	97.92%	98.25%	98.39%
Aug-23	100.00%	100.00%	99.83%	99.83%	100.00%	100.00%	99.86%	100.00%	100.00%	100.00%	100.00%	100.00%
Sep-23	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.85%	99.85%
Oct-23	99.46%	99.46%	99.33%	99.46%	99.19%	99.19%	99.46%	99.46%	99.33%	99.46%	99.40%	99.40%
Nov-23	100.00%	100.00%	99.72%	99.86%	99.86%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.73%
Dec-23	100.00%	100.00%	100.00%	100.00%	100.00%	98.95%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Jan-24	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	99.87%	100.00%	100.00%	100.00%

Oxygen Monitor Availability						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Feb-23	100.00%	100.00%	100.00%	OFF	99.51%	100.00%
Mar-23	100.00%	100.00%	100.00%	86.16%	99.87%	99.81%
Apr-23	OFF	99.83%	99.86%	99.83%	99.86%	OFF
May-23	OFF	100.00%	100.00%	100.00%	99.87%	99.84%
Jun-23	100.00%	99.55%	99.86%	99.68%	100.00%	100.00%
Jul-23	98.12%	97.76%	98.12%	98.25%	100.00%	97.72%
Aug-23	100.00%	99.83%	99.87%	100.00%	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%	99.33%	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%	99.73%	99.46%
Jan-24	99.87%	99.86%	100.00%	100.00%	100.00%	98.10%

ADDENDUM TO MONTHLY EMISSIONS REPORT

14. EFFICIENCY

ESP Efficiency (%)						
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Feb-23	99.808%	99.800%	99.785%	OFF	99.669%	99.733%
Mar-23	99.797%	99.858%	99.780%	99.780%	99.745%	99.831%
Apr-23	OFF	99.893%	99.731%	99.854%	99.646%	OFF
May-23	OFF	99.812%	99.802%	99.868%	99.667%	99.822%
Jun-23	99.948%	99.717%	99.787%	99.864%	99.796%	99.858%
Jul-23	99.904%	99.864%	99.793%	99.869%	99.879%	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	99.904%	99.728%	99.730%	99.825%	99.855%	99.829%
Nov-23	99.700%	99.307%	99.626%	99.756%	99.790%	99.705%
Dec-23	99.762%	99.426%	99.561%	99.418%	99.614%	99.667%
Jan-24	99.825%	99.503%	99.670%	99.690%	99.756%	99.721%

15. REMARKS

UNIT	MWLOSS	REASON	ACTUALSTARTDATE	ACTUALENDDATE
1	150	Dust plant standinghg	2024/01/01 06:23:00	2024/01/02 04:03:00
1	71	Dust plant standing	2024/01/02 04:03:00	2024/01/02 05:46:00
1	100	EF: High stack emissions	2024/01/02 20:06:00	2024/01/03 05:03:00
1	147	AM: SO 3 plant problem.	2024/01/06 05:00:00	2024/01/06 05:30:00
1	593	low drum level due to EFP A tripped	2024/01/06 05:30:00	2024/01/06 12:54:00
1	150	High stack emissions.	2024/01/09 00:01:00	2024/01/09 08:20:00
1	100	EF: High stack emissions	2024/01/09 08:20:00	2024/01/09 10:25:00
1	50	EF: High stack emissions	2024/01/09 10:25:00	2024/01/09 11:15:00
1	148	high stack emissions.	2024/01/11 21:07:00	2024/01/12 04:29:00
1	150	High stack emissions.	2024/01/12 09:17:00	2024/01/13 05:18:00
1	100	LH Inner precip casing repairs	2024/01/13 05:18:00	2024/01/14 04:17:00
1	100	AM: LHO Precip casing repairs.	2024/01/14 04:17:00	2024/01/14 23:59:00
1	593	Unit tripped due A-EFP trip	2024/01/26 09:41:00	2024/01/26 13:32:00
1	50	RHO casing repairs	2024/01/28 04:09:00	2024/01/29 00:02:00
2	97	Dust plant standing	2024/01/01 05:02:00	2024/01/02 04:18:00
2	21	Dust plant standing	2024/01/02 04:18:00	2024/01/02 05:28:00
2	89	high stack emissions	2024/01/02 08:33:00	2024/01/03 05:12:00
2	43	EF: High stack emissions	2024/01/03 18:28:00	2024/01/03 20:10:00
2	148	EF: High stack emissions	2024/01/03 20:10:00	2024/01/04 05:30:00
2	45	High stack emissions	2024/01/04 11:40:00	2024/01/04 13:19:00
2	148	high stack emissions	2024/01/04 13:19:00	2024/01/04 16:48:00
2	95	EF: High stack emissions	2024/01/04 20:18:00	2024/01/05 05:54:00
2	147	High stack emissions	2024/01/05 09:46:00	2024/01/05 19:20:00
2	97	High stack emissions.	2024/01/07 18:26:00	2024/01/08 04:38:00
2	49	High stack emissions	2024/01/08 08:49:00	2024/01/08 12:31:00
2	113	High stack emissions	2024/01/08 12:31:00	2024/01/09 15:54:00
2	50	EF: High stack emissions	2024/01/09 15:54:00	2024/01/10 05:14:00
2	146	high stack emissions.	2024/01/11 20:32:00	2024/01/12 04:49:00
2	48	High stack emissions	2024/01/12 09:06:00	2024/01/13 06:16:00
2	48	High stack emissions.	2024/01/14 11:52:00	2024/01/15 16:54:00
2	593	Spraywater valves water leak repairs.	2024/01/17 00:09:00	2024/01/19 20:44:00
2	120	RHO precip casing repairs.	2024/01/20 06:00:00	2024/01/21 19:43:00
2	147	AM: High stack emissions.	2024/01/22 09:26:00	2024/01/22 11:35:00
2	92	EF:High stack emissions	2024/01/22 20:09:00	2024/01/23 04:40:00
2	50	High Stack emissions.	2024/01/25 12:49:00	2024/01/25 16:42:00
2	50	High stack emissions	2024/01/25 19:38:00	2024/01/26 00:11:00
2	150	High stack emissions.	2024/01/27 00:51:00	2024/01/27 08:05:00
2	100	High stack emissions.	2024/01/27 08:05:00	2024/01/27 13:27:00
2	50	High stack emissions	2024/01/27 13:27:00	2024/01/27 16:50:00
2	50	High stack emissions.	2024/01/28 00:25:00	2024/01/28 04:46:00
2	593	Boiler tube other	2024/01/28 15:34:00	2024/01/30 11:26:00
3	80	Ef: High stack emissions	2024/01/01 00:00:00	2024/01/02 10:22:00
3	101	Dust plant standing.	2024/01/01 04:31:00	2024/01/01 16:57:00

3	97	EF: High hopper levels	2024/01/02 01:45:00	2024/01/02 02:13:00
3	86	EF: High hopper levels	2024/01/02 02:13:00	2024/01/02 10:22:00
3	166	High stack emissions	2024/01/02 10:22:00	2024/01/02 19:17:00
3	39	High stack emissions	2024/01/02 19:17:00	2024/01/02 19:38:00
3	11	High stack emissions	2024/01/02 19:38:00	2024/01/02 20:04:00
3	181	EF: High stack emissions	2024/01/02 20:04:00	2024/01/03 16:31:00
3	130	EF: High stack emissions	2024/01/03 16:31:00	2024/01/03 16:51:00
3	81	EF: High stack emissions	2024/01/03 16:51:00	2024/01/03 18:26:00
3	128	High stack emissions	2024/01/03 18:26:00	2024/01/04 05:51:00
3	81	EF: High stack emissions	2024/01/04 05:51:00	2024/01/04 07:57:00
3	130	High stack emissions	2024/01/04 07:57:00	2024/01/04 18:19:00
3	180	High stack emissions	2024/01/04 18:19:00	2024/01/05 05:13:00
3	81	EF: High stack emissions	2024/01/05 05:13:00	2024/01/05 09:32:00
3	178	High stack emissions	2024/01/05 09:32:00	2024/01/05 12:06:00
3	81	High stack emissions	2024/01/05 12:06:00	2024/01/05 18:25:00
3	96	EF: High stack emissions	2024/01/07 05:00:00	2024/01/08 12:54:00
3	117	High stack emissions	2024/01/08 12:54:00	2024/01/08 14:49:00
3	100	High stack emissions	2024/01/08 14:49:00	2024/01/10 08:30:00
3	176	EF: High stack emissions-SO3 plant OFF	2024/01/10 08:30:00	2024/01/12 18:43:00
3	593	Unit 3 tripped on differential expansion	2024/01/12 18:43:00	2024/01/12 22:20:00
3	181	Ef: High stack emissions	2024/01/12 23:50:00	2024/01/15 17:30:00
3	85	High stack emissions	2024/01/15 17:30:00	2024/01/16 07:00:00
3	93	High stack emissions.	2024/01/17 03:15:00	2024/01/17 11:51:00
3	77	EF: High stack Emissions	2024/01/17 11:51:00	2024/01/18 10:06:00
3	40	EF: High stack emissions	2024/01/18 10:06:00	2024/01/19 07:17:00
3	75	EF: High stack emissions	2024/01/19 15:47:00	2024/01/20 04:36:00
3	181	High stack emissions	2024/01/20 08:30:00	2024/01/20 11:18:00
3	131	High stack emissions	2024/01/20 11:18:00	2024/01/20 12:07:00
3	81	High stack emissions	2024/01/20 12:07:00	2024/01/20 15:31:00
3	129	EF: High stack emissions.	2024/01/20 15:31:00	2024/01/21 07:53:00
3	81	High stack emissions	2024/01/21 07:53:00	2024/01/21 10:00:00
3	129	High stack emissions.	2024/01/21 21:46:00	2024/01/22 04:42:00
3	181	High stack emissions	2024/01/22 20:49:00	2024/01/23 05:07:00
3	74	High stack emissions.	2024/01/23 10:10:00	2024/01/24 00:23:00
3	74	High stack emissions	2024/01/25 12:57:00	2024/01/25 16:49:00
3	178	High stack emissions	2024/01/25 19:50:00	2024/01/26 00:52:00
3	173	High stack emissions	2024/01/27 01:19:00	2024/01/27 08:08:00
3	128	High stack emissions.	2024/01/27 08:08:00	2024/01/27 11:32:00
3	80	High stack emissions.	2024/01/27 11:32:00	2024/01/27 16:44:00
3	80	High stack emissions.	2024/01/28 00:52:00	2024/01/28 01:31:00
3	180	High stack emissions.	2024/01/28 01:31:00	2024/01/28 10:06:00
3	130	High stack emissions.	2024/01/28 10:06:00	2024/01/28 13:00:00
3	80	High stack emissions.	2024/01/28 13:00:00	2024/01/28 21:39:00
3	180	High stack emissions	2024/01/28 21:39:00	2024/01/29 03:38:00
3	110	High stack emissions.	2024/01/29 03:38:00	2024/01/29 05:43:00
3	80	High stack emissions	2024/01/29 05:43:00	2024/01/29 17:00:00
3	100	EF: High srtack emissions	2024/01/30 00:34:00	2024/01/30 05:00:00
3	100	EF: High stack emissions	2024/01/31 01:42:00	2024/01/31 05:04:00
3	50	high stack emissions	2024/01/31 10:26:00	2024/01/31 16:41:00

4	593	High stack emissions.	2024/01/01 00:00:00	2024/01/08 16:43:00
4	31	EF: High stack emissions	2024/01/11 08:39:00	2024/01/11 12:11:00
4	78	EF: High stack emissions	2024/01/11 12:11:00	2024/01/11 15:43:00
4	179	EF: High stack emissions	2024/01/11 15:43:00	2024/01/11 19:33:00
4	190	High stack emissions.	2024/01/11 19:33:00	2024/01/12 17:12:00
4	147	High stack emissions	2024/01/13 05:00:00	2024/01/17 17:02:00
4	50	EF: High stack emissions	2024/01/17 17:02:00	2024/01/20 04:42:00
4	133	EF: High stack emissions	2024/01/20 08:53:00	2024/01/20 11:58:00
4	104	High stack emissions	2024/01/20 11:58:00	2024/01/20 17:50:00
4	80	High stack emissions	2024/01/25 21:10:00	2024/01/25 22:42:00
4	68	High stack emissions	2024/01/28 00:34:00	2024/01/28 08:50:00
4	172	EF: High stack emissions	2024/01/30 01:43:00	2024/01/30 04:45:00
5	109	High stack emissions.	2024/01/01 00:00:00	2024/01/01 16:23:00
5	10	Ef; High stack emissions	2024/01/01 16:23:00	2024/01/01 20:25:00
5	108	EF: High stack emissions	2024/01/01 20:25:00	2024/01/02 03:56:00
5	25	High emissions	2024/01/02 03:56:00	2024/01/02 04:46:00
5	106	High stack emissions	2024/01/05 09:45:00	2024/01/05 11:58:00
5	11	High stack emissions	2024/01/05 11:58:00	2024/01/05 12:08:00
5	8	RHO precip casing repairs.	2024/01/10 23:50:00	2024/01/11 20:03:00
5	98	High stack emissions.	2024/01/16 01:02:00	2024/01/16 04:24:00
5	40	EF; High stack emissions	2024/01/16 13:42:00	2024/01/16 14:50:00
5	96	EF: High stack emissions	2024/01/17 03:15:00	2024/01/17 16:20:00
5	97	EF: High stack emissions	2024/01/17 17:11:00	2024/01/18 05:12:00
5	48	EF; High stack emissions	2024/01/18 13:17:00	2024/01/18 16:43:00
5	48	EF: High stack emissions	2024/01/19 13:15:00	2024/01/19 14:51:00
5	100	EF: High stack emissions	2024/01/19 14:51:00	2024/01/19 16:48:00
5	50	EF High stack emissions	2024/01/19 16:48:00	2024/01/19 17:21:00
6	164	Dust plant standing.	2024/01/01 04:18:00	2024/01/01 16:34:00
6	70	AM: Dust plant standing	2024/01/01 16:34:00	2024/01/01 20:36:00
6	168	EF: Dust plant standing	2024/01/01 20:36:00	2024/01/02 10:22:00
6	167	EF: High hopper levels	2024/01/02 10:22:00	2024/01/04 17:29:00
6	10	EF: High hopper levels	2024/01/04 17:29:00	2024/01/04 17:44:00
6	115	EF: High stack emissions	2024/01/04 22:17:00	2024/01/05 03:16:00
6	166	EF: High stack emissions	2024/01/05 03:16:00	2024/01/05 09:14:00
6	184	High stack emissions	2024/01/05 09:14:00	2024/01/06 02:35:00
6	165	EF: High stack emissions	2024/01/06 20:23:00	2024/01/07 00:24:00
6	57	High stack emissions.	2024/01/08 11:04:00	2024/01/08 16:17:00
6	157	High stack emissions.	2024/01/09 00:10:00	2024/01/10 05:21:00
6	157	EF: High stack emissions	2024/01/11 09:06:00	2024/01/11 16:50:00
6	160	High stack emissions	2024/01/13 00:33:00	2024/01/14 03:24:00
6	160	High stack emissions.	2024/01/14 08:03:00	2024/01/14 16:08:00
6	160	High stack emissions	2024/01/15 02:45:00	2024/01/16 05:17:00
6	60	High stack emissions.	2024/01/16 05:17:00	2024/01/16 16:48:00
6	160	High stack emissions.	2024/01/17 03:15:00	2024/01/17 16:19:00
6	145	High Stack emissions	2024/01/17 20:34:00	2024/01/18 16:43:00
6	60	High stack emissions.	2024/01/18 16:43:00	2024/01/19 04:38:00
6	160	High stack emissions.	2024/01/19 04:38:00	2024/01/20 17:33:00
6	60	EF: High stack emissions and D mill coal bunker empty	2024/01/20 17:33:00	2024/01/21 01:35:00
6	593	Outage	2024/01/21 01:35:00	2024/01/31 23:59:59

PM Exceedances		
U1.	Dust Plant Challenges High Hopper Levels Poor ESP Performance	01-Jan
U1.	ESP Poor Performance Manual Rapping	03-Jan
U1.	ESP Poor Performance	05-Jan
U1.	Unit 1 Tripped (Boiler off) Unit 1 Synchronised @12:55	06-Jan
U1.	Unit Light Up	07-Jan
U1.	Unit Light Up	08-Jan
U1.	ESP Poor Performance	11-Jan
U1.	ESP Casing Outage	13-Jan
U1.	ESP Casing Outage	14-Jan
U1.	ESP Poor Performance 1 x High Hopper Level	28-Jan
U2.	Dust Plant Challenges High Hopper Levels Poor ESP Performance	01-Jan
U2.	LHI Casings Outage	08-Jan
U2.	Manual Rapping	10-Jan
U2.	ESP Poor Performance	11-Jan
U2.	ESP Poor Performance	16-Jan
U2.	Unit Light Up	19-Jan
U2.	Unit Light Up	20-Jan
U2.	Unit Light Up	21-Jan
U2.	Unit Light Up	22-Jan
U2.	ESP Poor Performance 1x High Hopper Level Manual Rapping	26-Jan
U2.	Unit Shut Down for possible Boiler Tube Leak	29-Jan
U2.	SOL 11:25 30 January 2024, the unit needs to be below the limit from 11:24 on the 2nd of February 2024 and for the rest of that day remain below the limit including the following day	30-Jan
U2.	Unit Light Up	31-Jan

U3.	Dust Plant Challenges High Hopper Levels Poor ESP Performance SO3 Plant Challenges Manual Rapping	01-Jan
U3.	Dust Plant Challenges High Hopper Levels Poor ESP Performance SO3 Plant Challenges	02-Jan
U3.	SO3 Plant Challenges ESP Poor Performance	05-Jan
U3.	SO3 Plant Challenges ESP Poor Performance	06-Jan
U3.	SO3 Plant Challenges ESP Poor Performance	07-Jan
U3.	SO3 Plant Challenges ESP Poor Performance SO3 Plant leak worsend posing a SHE risk. Decision made to shut down the SO3 plant off for cooling and repair Legal Contravention Incurred	08-Jan
U3.	ESP Poor Performance SO3 plant off for cooling and repair	09-Jan
U3.	ESP Poor Performance SO3 plant off for cooling and repair	10-Jan
U3.	ESP Poor Performance SO3 plant off for cooling and repair	11-Jan
U3.	ESP Poor Performance SO3 plant off for cooling and repair	12-Jan
U3.	ESP Poor Performance SO3 plant off for cooling and repair	13-Jan
U3.	ESP Poor Performance SO3 plant off for cooling and repair	14-Jan
U3.	ESP Poor Performance SO3 plant off for cooling and repair	15-Jan
U3.	ESP Poor Performance SO3 plant off for cooling and repair	16-Jan
U3.	ESP Poor Performance SO3 plant off for cooling and repair	17-Jan
U3.	ESP Poor Performance SO3 plant in service but not on auto control	22-Jan
U3.	ESP Poor Performance and Manual Rapping	24-Jan
U3.	ESP Poor Performance Manual Rapping	26-Jan
U3.	ESP Poor Performance and Manual Rapping	31-Jan
U4.	Unit Shut Down to wash casings and address emission related challenges	01-Jan
U4.	The unit synchronised on 2024/01/08 @ 16:44, the emissions need to be below the limit by 2024/01/11 @16:44 and remain below the limit until at least 2024/01/12 @ 23:59	09-Jan
U4.	Unit Light Up	10-Jan
U4.	Unit Light Up Struggled to get SO3 Plant In Service	11-Jan
U4.	Legal Contravention Incurred	12-Jan
U4.	Abatement Technology not performing, Root cause is being investigated, ESP optimization and Dust plant challenges	13-Jan

U4.	Abatement Technology not performing, Root cause is being investigated, ESP optimization and Dust plant challenges	14-Jan
U4.	Abatement Technology not performing, Root cause is being investigated, ESP optimization and Dust plant challenges	15-Jan
U4.	Abatement Technology not performing, Root cause is being investigated, ESP optimization and Dust plant challenges	16-Jan
U4.	Abatement Technology not performing, Root cause is being investigated, ESP optimization and Dust plant challenges	17-Jan
U4.	Abatement Technology not performing, Root cause is being investigated, ESP optimization and Dust plant challenges SO3 Plant not in service due to loss in steam supply	18-Jan
U4.	SO3 plant off due to no sulphur flow	19-Jan
U4.	Monitor Maxed out Early hours of the morning ESP Poor Performance	29-Jan
U5.	ESP Manual Rapping	05-Jan
U5.	ESP Poor Performance	06-Jan
U5.	RHO casing outage	11-Jan
U5.	ESP Poor Performance and Manual Rapping	13-Jan
U5.	ESP Poor Performance LHI F3 Transformer Fire	15-Jan
U5.	ESP Poor Performance High Hopper Levels	16-Jan
U5.	ESP Poor Performance and Manual Rapping Sulphur flow lost due to loss in steam supply	18-Jan
U5.	LHO Casing Outage	20-Jan
U5.	RHI Casing Outage	21-Jan
U5.	ESP Poor Performance SO3 Plant off for repairs to the blower	30-Jan
U5.	ESP Poor Performance SO3 Plant off for repairs to the blower	31-Jan
U6.	ESP Poor Performance High Hopper Levels	03-Jan
U6.	ESP Poor Performance High Hopper Levels	04-Jan
U6.	Manual Rapping	07-Jan
U6.	ESP Poor Performance	08-Jan
U6.	ESP Poor Performance and Manual Rapping	10-Jan
U6.	ESP Poor Performance	11-Jan
U6.	ESP Poor Performance and manual rapping	12-Jan
U6.	ESP poor Performance	14-Jan
U6.	ESP Poor Performance	16-Jan
U6.	ESP Poor Performance and Manual Rapping	17-Jan
U6.	ESP Poor Performance and Manual Rapping	18-Jan
U6.	ESP Poor Performance	20-Jan
U6.	ESP Poor Performance Unit Shut Down for Outage	21-Jan