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Date:
29 December 2023

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LRP01PLA000 _0372/20231221

Dear Mr. Sibaya

LETHABO POWER STATION EMISSION MONTHLY REPORT FOR NOVEMBER 2023

Please find attached Lethabo Power Station emission report for the month of November 2023.

Also attached are the Ambient Air Quality Monitoring Report, Complaints Register and the Fugitive Dust Fallout Monitoring Report for November 2023.

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

Yours sincerely

Karabo Rakgolela
GENERAL MANAGER

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Eskom Holdings SOC Ltd Reg No 2002/015527/30



Report

Lethabo Power Station

Report name: **Lethabo Power Station
November 2023
Emission Report**

Reference number: **LRP01PLA000_0372/20231221**
Document Type: **Report**
Area of Applicability: **Environment**
Report Date: **December-2023**
Classification: **Controlled Disclosure**

Signatures:

Compiled by:

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System Engineer

Date: 21/12/2023

Verified by:

W de Klerk

Senior Advisor

Date: 2023 12 21

Reviewed by:

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Acting BPE Manager

Date: 2023/12/21

Reviewed by:

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PE Manager

Date:

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Date: 2023-12-21

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Reviewed by:

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Technical Manager

Date: 2023/12/22

Approved by:

Onicca Nkejane

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Date: 22-12-2023

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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 Nov-2023 |
|----------------------------|-------------------|-------|------------------------------------|---------------------------|
| | Coal | Tons | 2 000 000 | 1 559 636 |
| | Fuel Oil | Tons | 1 700 | 1457.820 |

| Production Rates | Product / By-Product Name | Units | Maximum Production Capacity Permitted | Indicative Production Rate Nov-2023 |
|------------------|---------------------------|--------|---------------------------------------|-------------------------------------|
| | Energy | GWh | 2 743.200 | 1 851.051 |
| | Ash | Tons | 770 000 | 577 065.220 |
| | RE Ash | kg/MWh | Not Specified | 311.750 |

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) | 0.670 |
| Ash Content | % | 37.37 (Standard) | 37.000 |

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 Nov-2023 | Technology Type | SO ₃ Utilization Nov-2023 |
|-----------------------|----------------------------------|---------------------|-----------------|--------------------------------------|
| Unit 1 | Electrostatic Precipitator (ESP) | 99.70% | SO ₃ | 95.1% |
| Unit 2 | Electrostatic Precipitator (ESP) | 99.31% | SO ₃ | 94.2% |
| Unit 3 | Electrostatic Precipitator (ESP) | 99.63% | SO ₃ | 83.9% |
| Unit 4 | Electrostatic Precipitator (ESP) | 99.76% | SO ₃ | 86.1% |
| Unit 5 | Electrostatic Precipitator (ESP) | 99.79% | SO ₃ | 89.2% |
| Unit 6 | Electrostatic Precipitator (ESP) | 99.71% | SO ₃ | 94.6% |

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 | 92.9 | 100.0 | 100.0 |
| Unit 2 | 86.4 | 99.7 | 99.9 |
| Unit 3 | 94.9 | 99.9 | 100.0 |
| Unit 4 | 98.6 | 100.0 | 100.0 |
| Unit 5 | 97.6 | 100.0 | 100.0 |
| Unit 6 | 96.2 | 100.0 | 99.7 |

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 November 2023

| Associated Unit/Stack | PM (tons) | SO ₂ (tons) | NO _x (tons) |
|-----------------------|----------------|------------------------|------------------------|
| Unit 1 | 319.7 | 3 430 | 1 830 |
| Unit 2 | 648.3 | 4 209 | 1 757 |
| Unit 3 | 340.9 | 3 172 | 1 451 |
| Unit 4 | 113.2 | 1 688 | 888 |
| Unit 5 | 206.0 | 3800 | 1602 |
| Unit 6 | 247.0 | 3 454 | 1 492 |
| SUM | 1 875.1 | 19 753 | 9 021 |

Table 6.2: Operating days in compliance to PM AEL Limit - November 2023

| Associated Unit/Stack | Normal | Grace | Section 30 | Contra-vention | Total Exceedance | Average PM (mg/Nm ³) |
|-----------------------|-----------|-----------|------------|----------------|------------------|----------------------------------|
| Unit 1 | 23 | 7 | 0 | 0 | 7 | 158.3 |
| Unit 2 | 14 | 16 | 0 | 0 | 16 | 264.2 |
| Unit 3 | 11 | 19 | 0 | 0 | 19 | 196.1 |
| Unit 4 | 7 | 6 | 0 | 0 | 6 | 157.4 |
| Unit 5 | 23 | 7 | 0 | 0 | 7 | 96.6 |
| Unit 6 | 15 | 12 | 0 | 0 | 12 | 141.7 |
| SUM | 93 | 67 | 0 | 0 | 67 | |

Table 6.3: Operating days in compliance to SO₂ AEL Limit - November 2023

| Associated Unit/Stack | Normal | Grace | Section 30 | Contra-vention | Total Exceedance | Average SO ₂ (mg/Nm ³) |
|-----------------------|------------|----------|------------|----------------|------------------|---|
| Unit 1 | 30 | 0 | 0 | 0 | 0 | 1 610.8 |
| Unit 2 | 30 | 0 | 0 | 0 | 0 | 1 734.4 |
| Unit 3 | 30 | 0 | 0 | 0 | 0 | 1 857.5 |
| Unit 4 | 18 | 0 | 0 | 0 | 0 | 1 650.5 |
| Unit 5 | 30 | 0 | 0 | 0 | 0 | 1 782.9 |
| Unit 6 | 28 | 0 | 0 | 0 | 0 | 1 890.5 |
| SUM | 166 | 0 | 0 | 0 | 0 | |

Table 6.4: Operating days in compliance to NOx AEL Limit - November 2023

| Associated Unit/Stack | Normal | Grace | Section 30 | Contra-vention | Total Exceedance | Average NOx (mg/Nm³) |
|-----------------------|------------|----------|------------|----------------|------------------|----------------------|
| Unit 1 | 30 | 0 | 0 | 0 | 0 | 859.5 |
| Unit 2 | 30 | 0 | 0 | 0 | 0 | 722.0 |
| Unit 3 | 30 | 0 | 0 | 0 | 0 | 849.0 |
| Unit 4 | 18 | 0 | 0 | 0 | 0 | 799.8 |
| Unit 5 | 30 | 0 | 0 | 0 | 0 | 751.5 |
| Unit 6 | 28 | 0 | 0 | 0 | 0 | 809.3 |
| SUM | 166 | 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 - November 2023

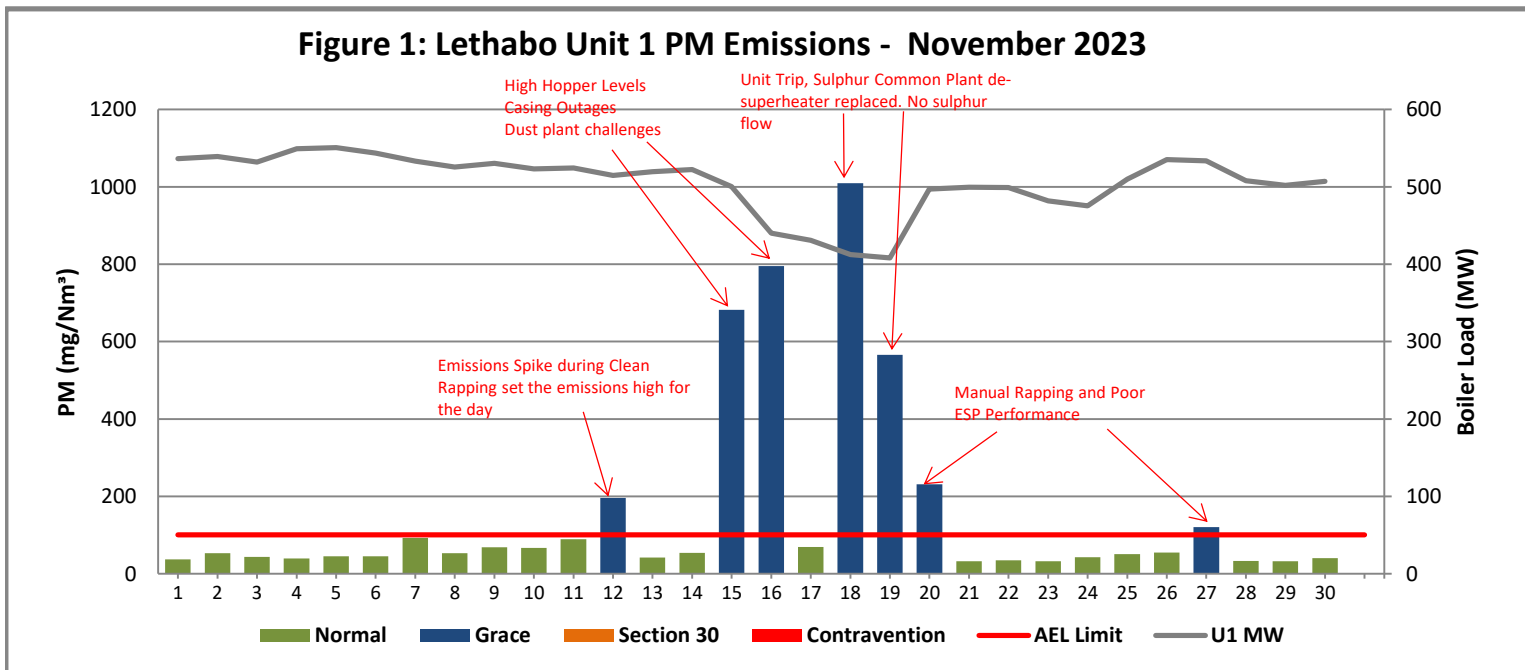


Figure 2: Lethabo Unit 2 PM Emissions - November 2023

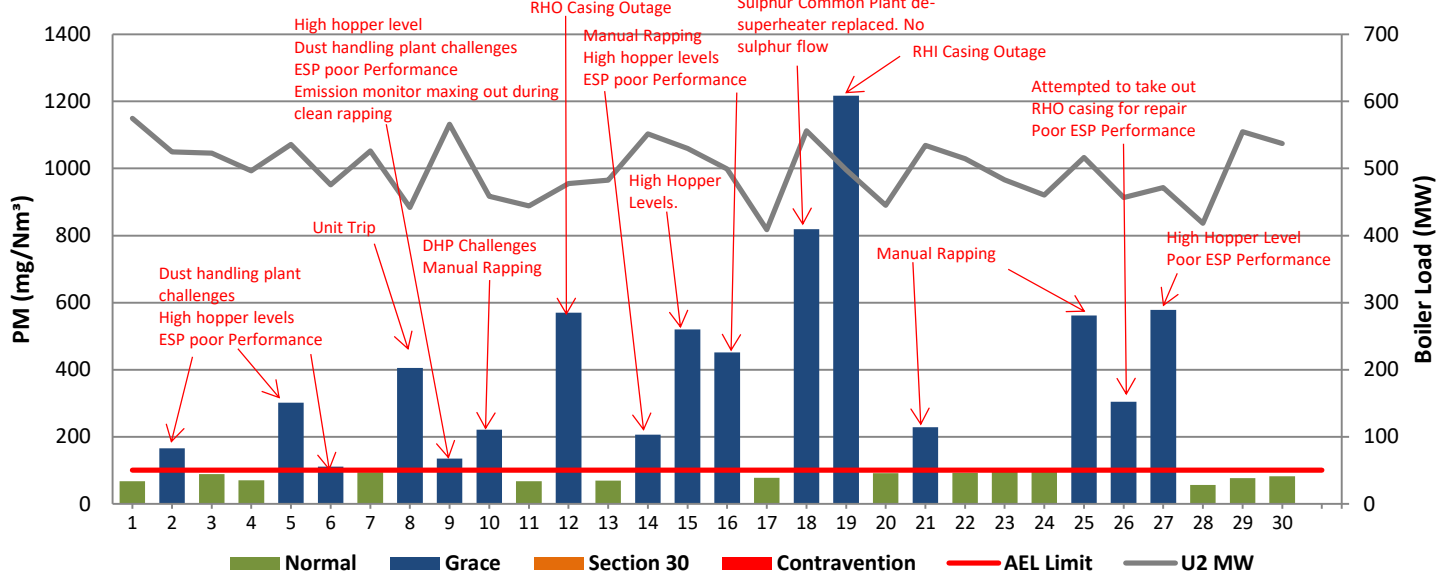


Figure 3: Lethabo Unit 3 PM Emissions - November 2023

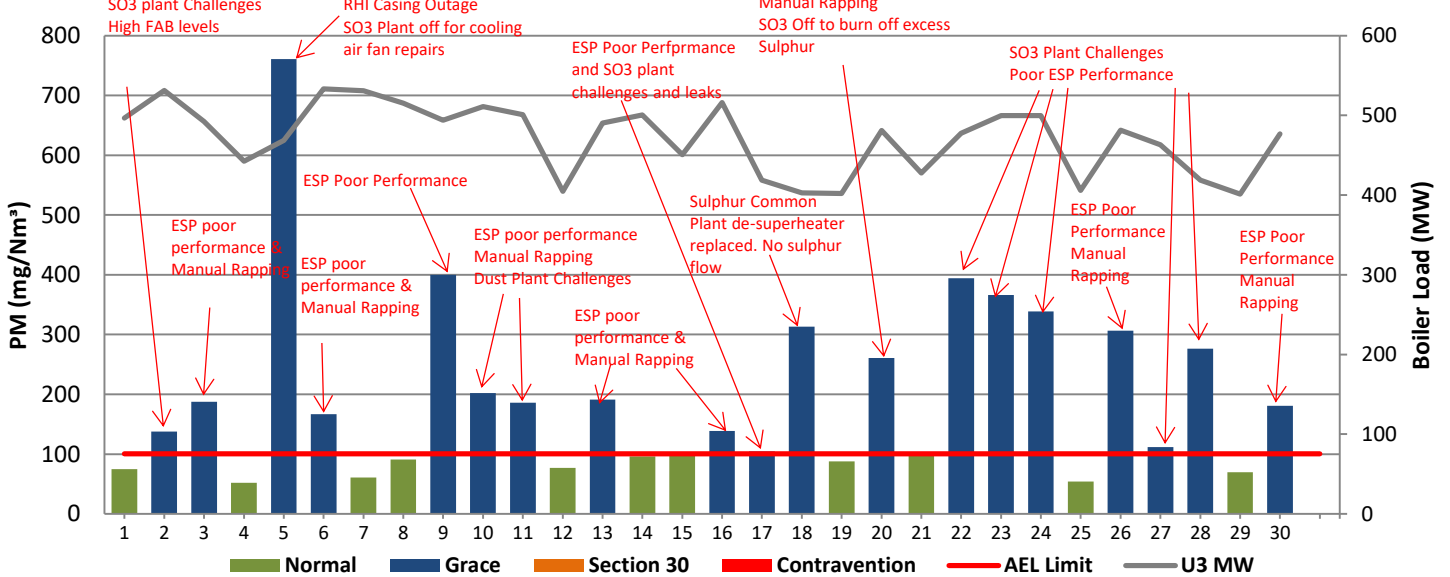


Figure 4: Lethabo Unit 4 PM Emissions - November 2023

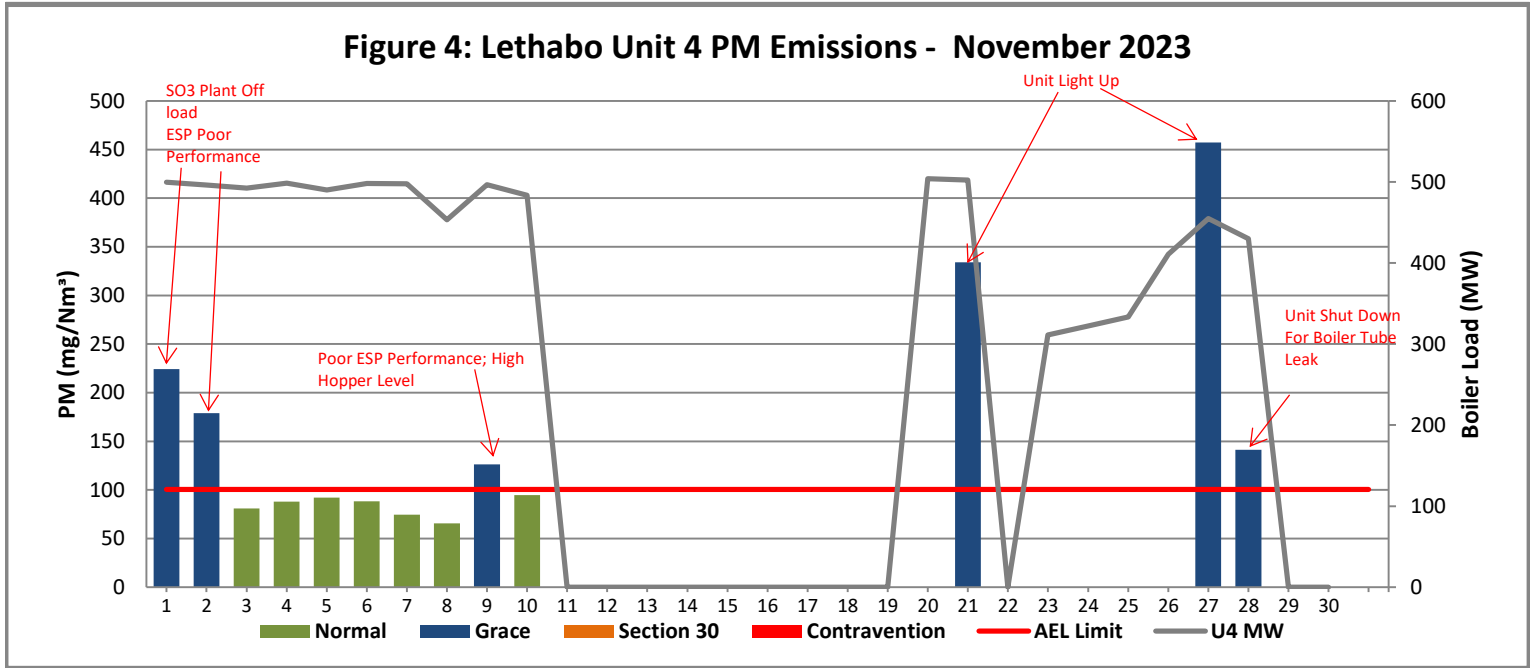


Figure 5: Lethabo Unit 5 PM Emissions - November 2023

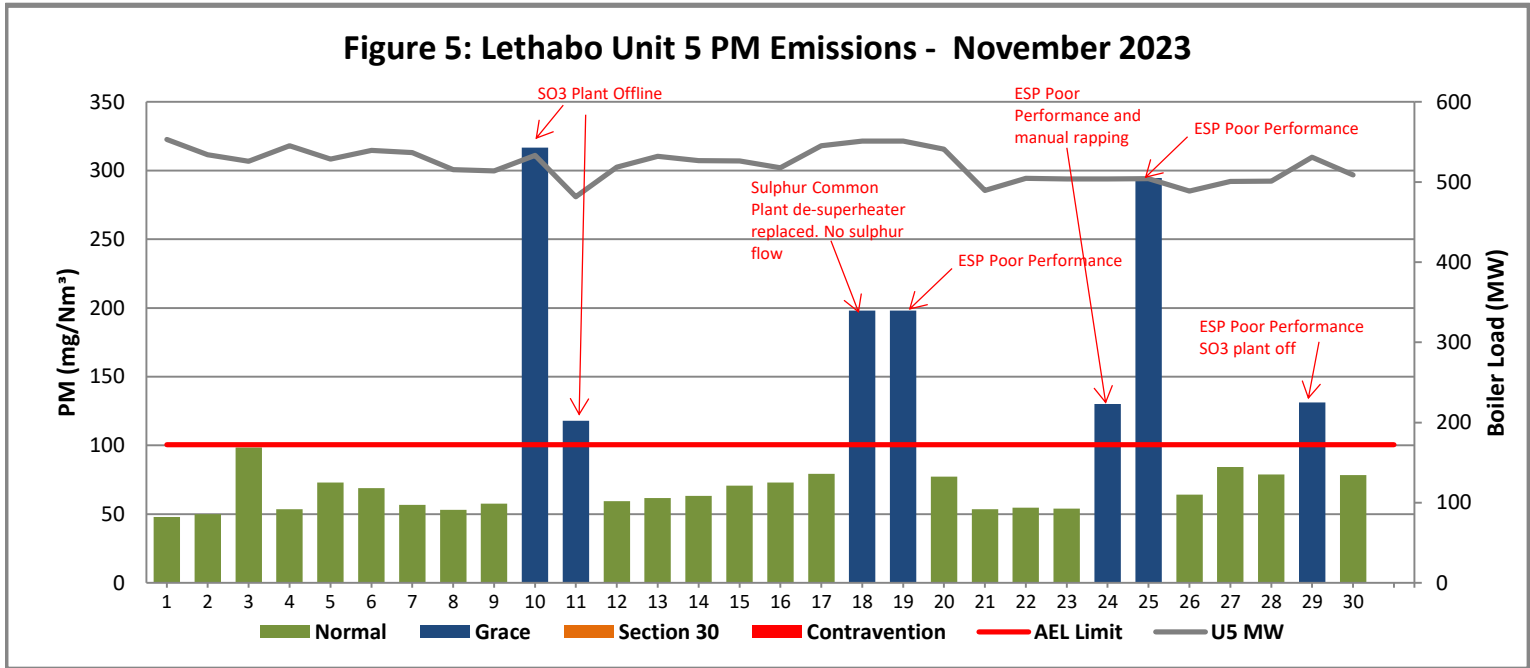


Figure 6: Lethabo Unit 6 PM Emissions - November 2023

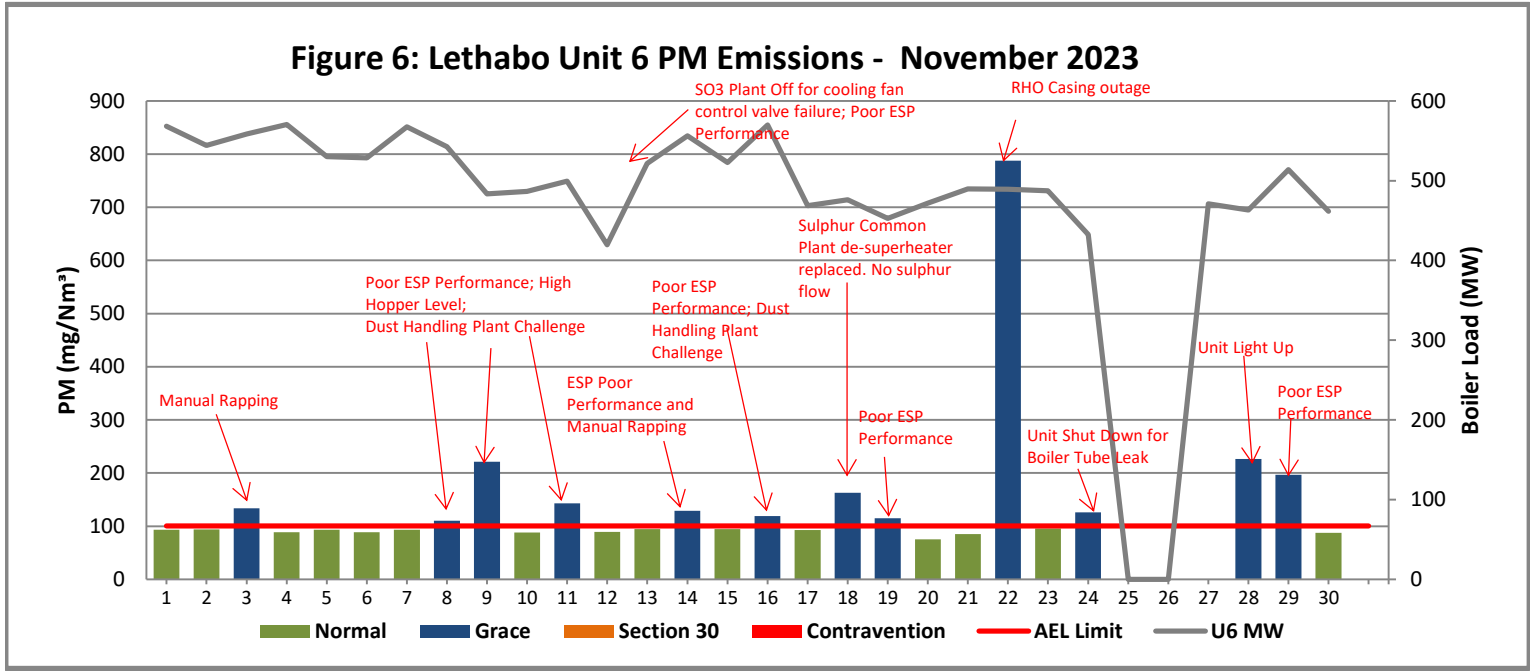


Figure 7: Lethabo Unit 1 SO₂ Emissions - November 2023

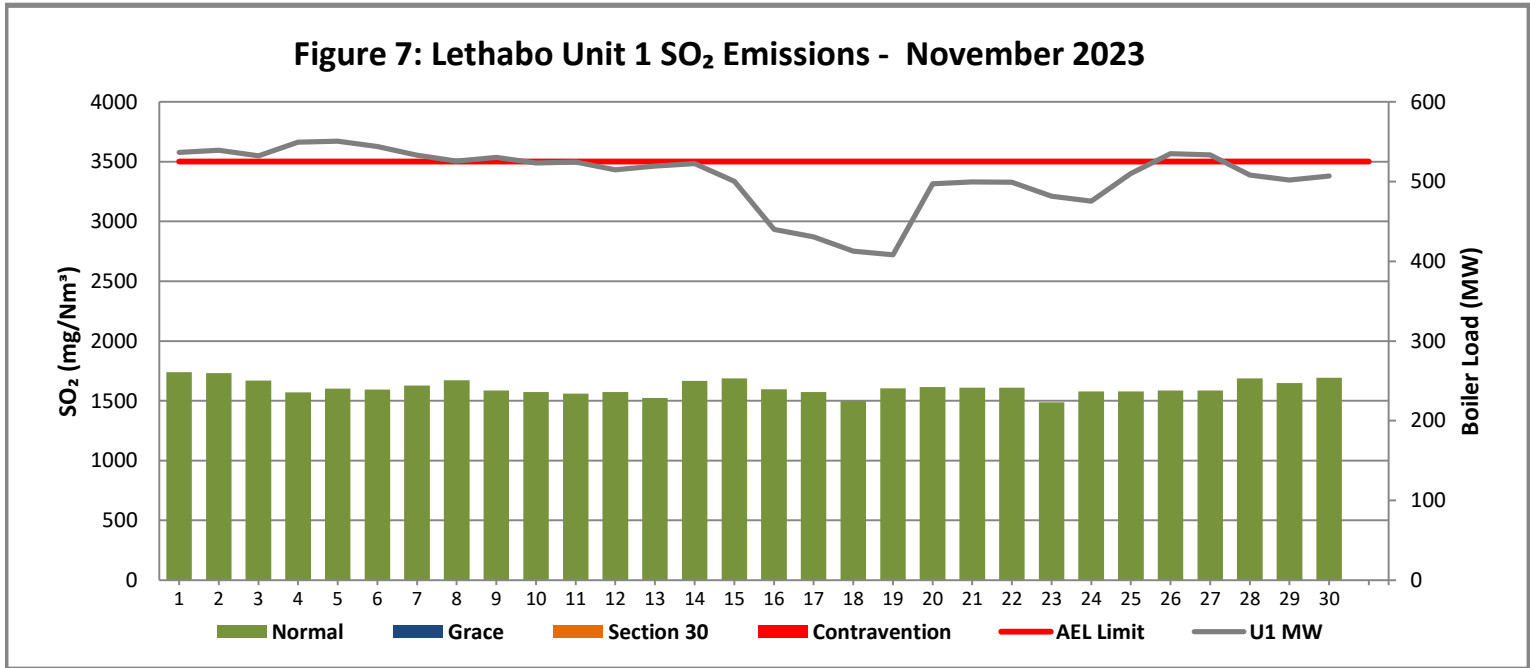


Figure 8: Lethabo Unit 2 SO₂ Emissions - November 2023

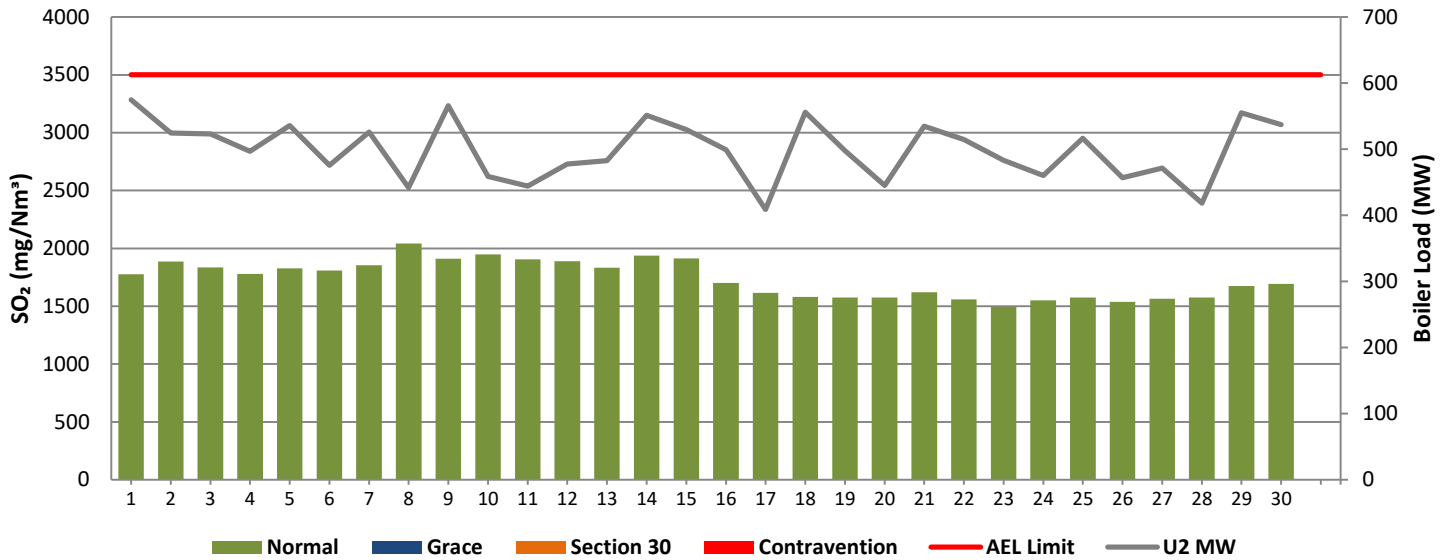


Figure 9: Lethabo Unit 3 SO₂ Emissions - November 2023

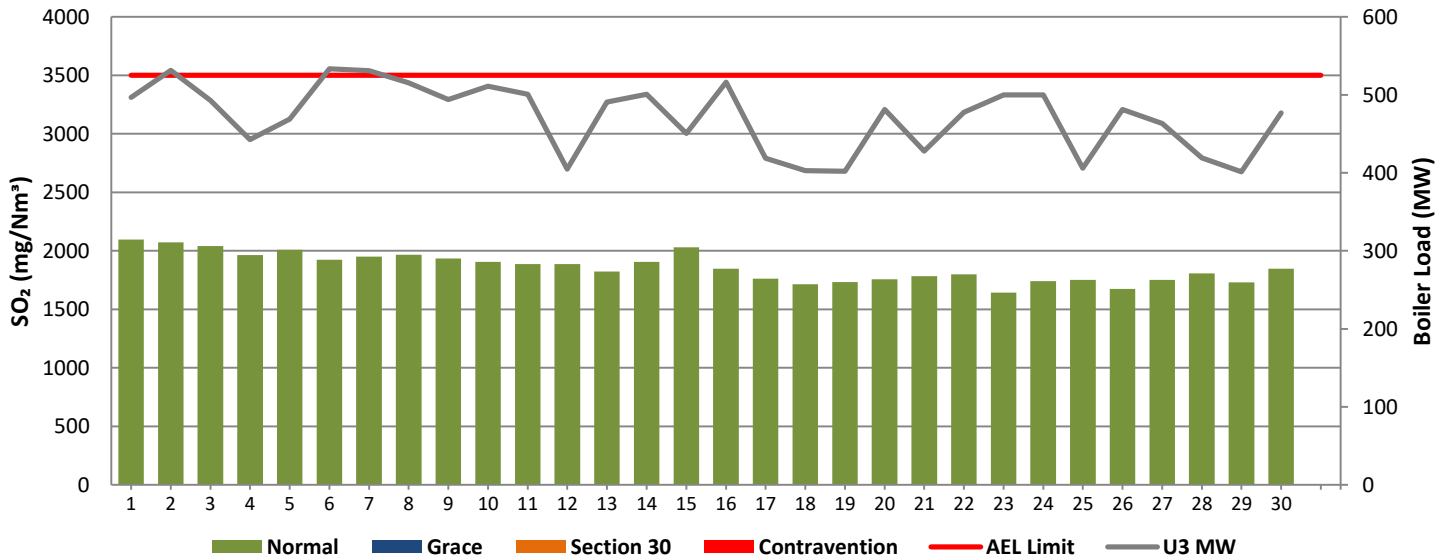


Figure 10: Lethabo Unit 4 SO₂ Emissions - November 2023

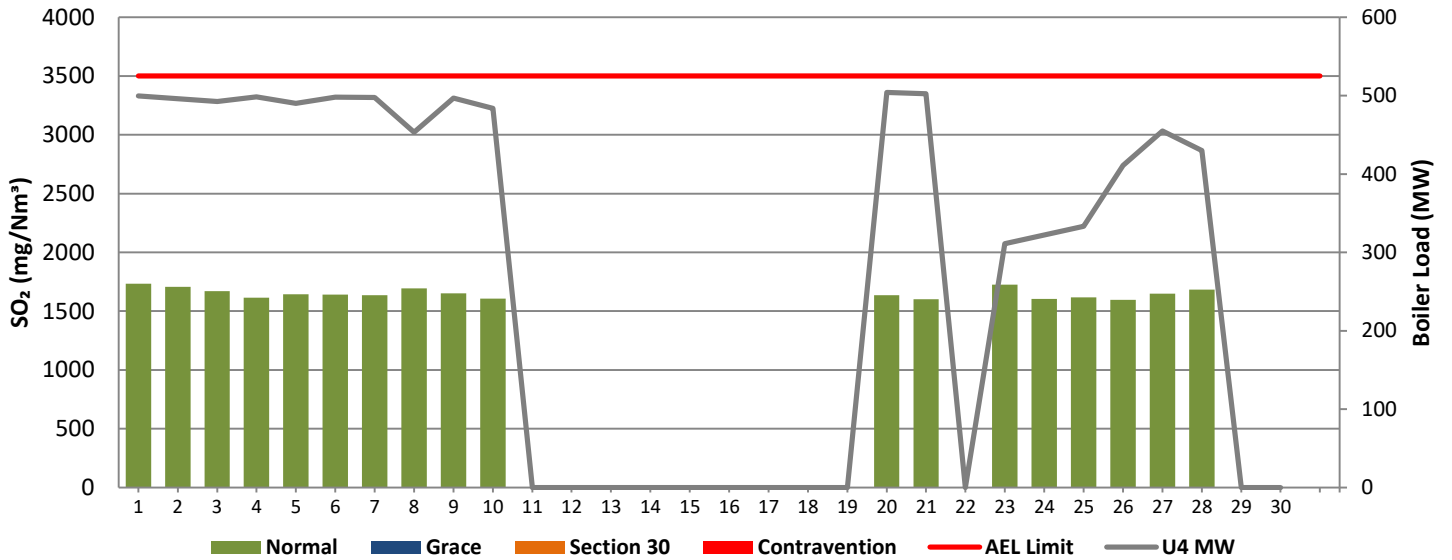


Figure 11: Lethabo Unit 5 SO₂ Emissions - November 2023

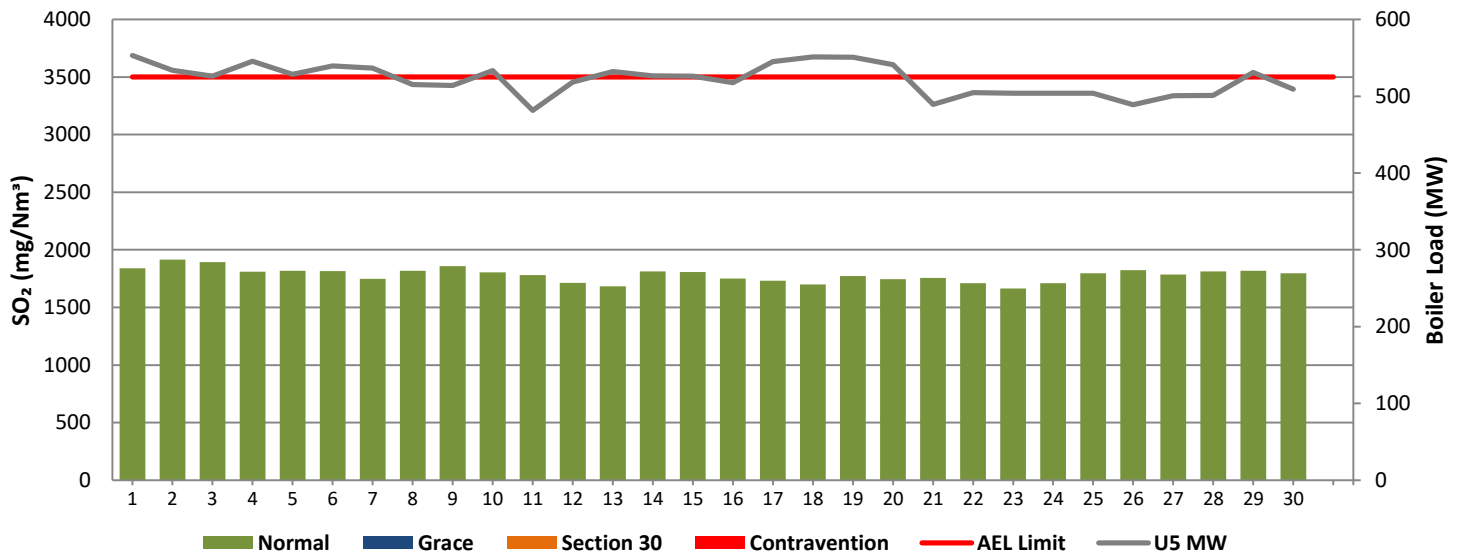


Figure 12: Lethabo Unit 6 SO₂ Emissions - November 2023

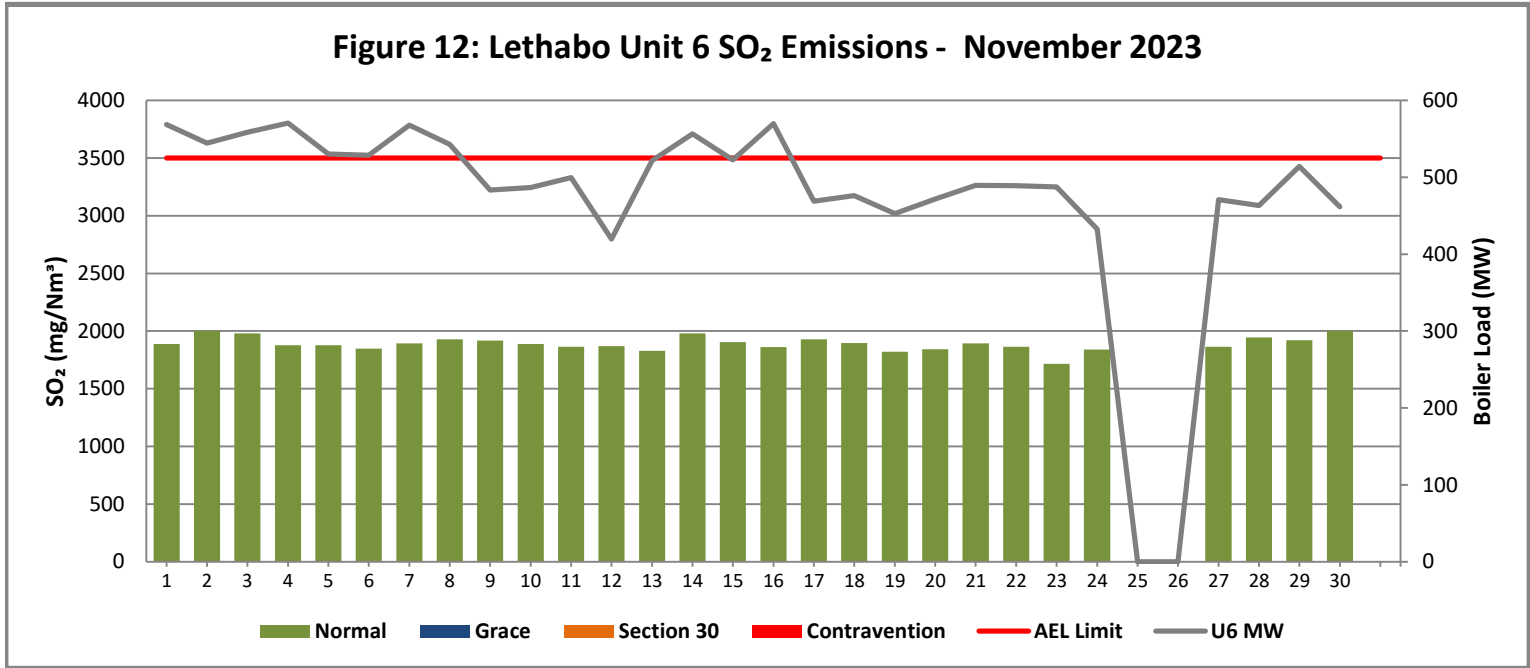


Figure 13: Lethabo Unit 1 NO_x Emissions - November 2023

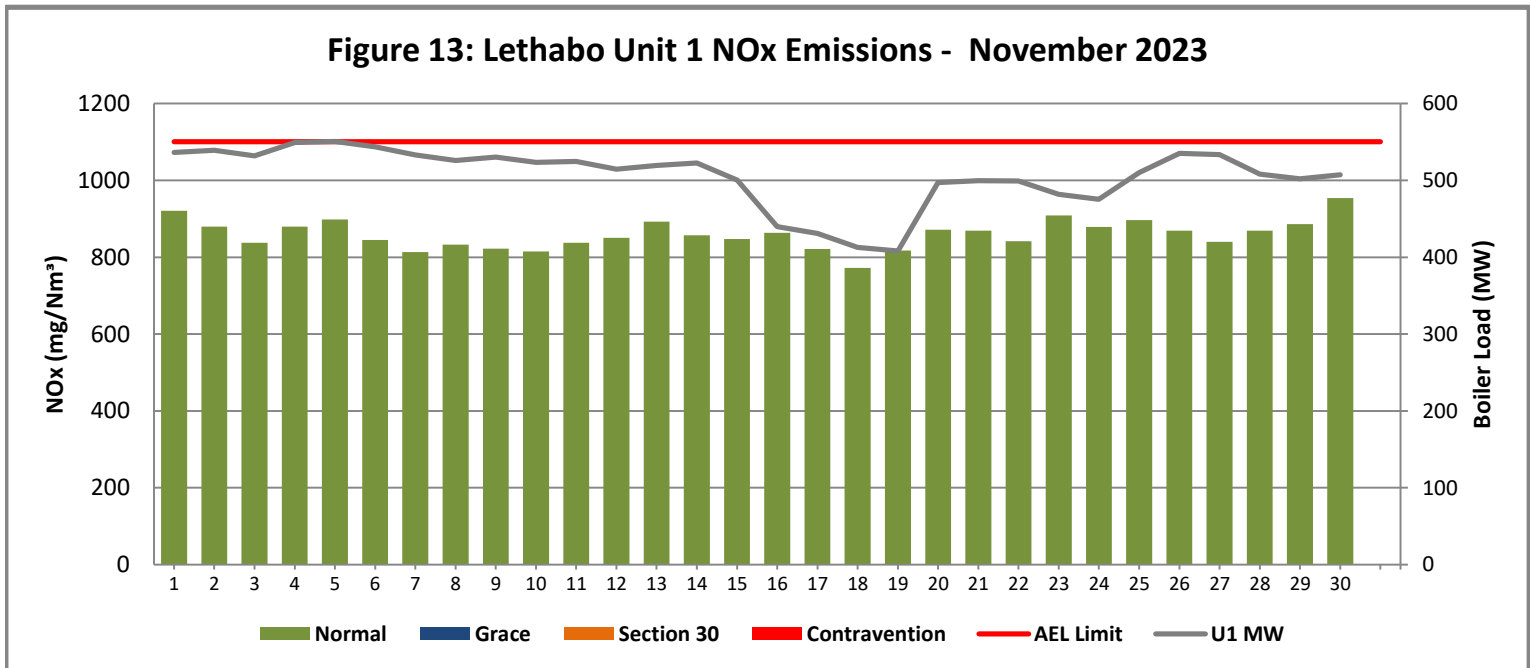


Figure 14: Lethabo Unit 2 NOx Emissions - November 2023

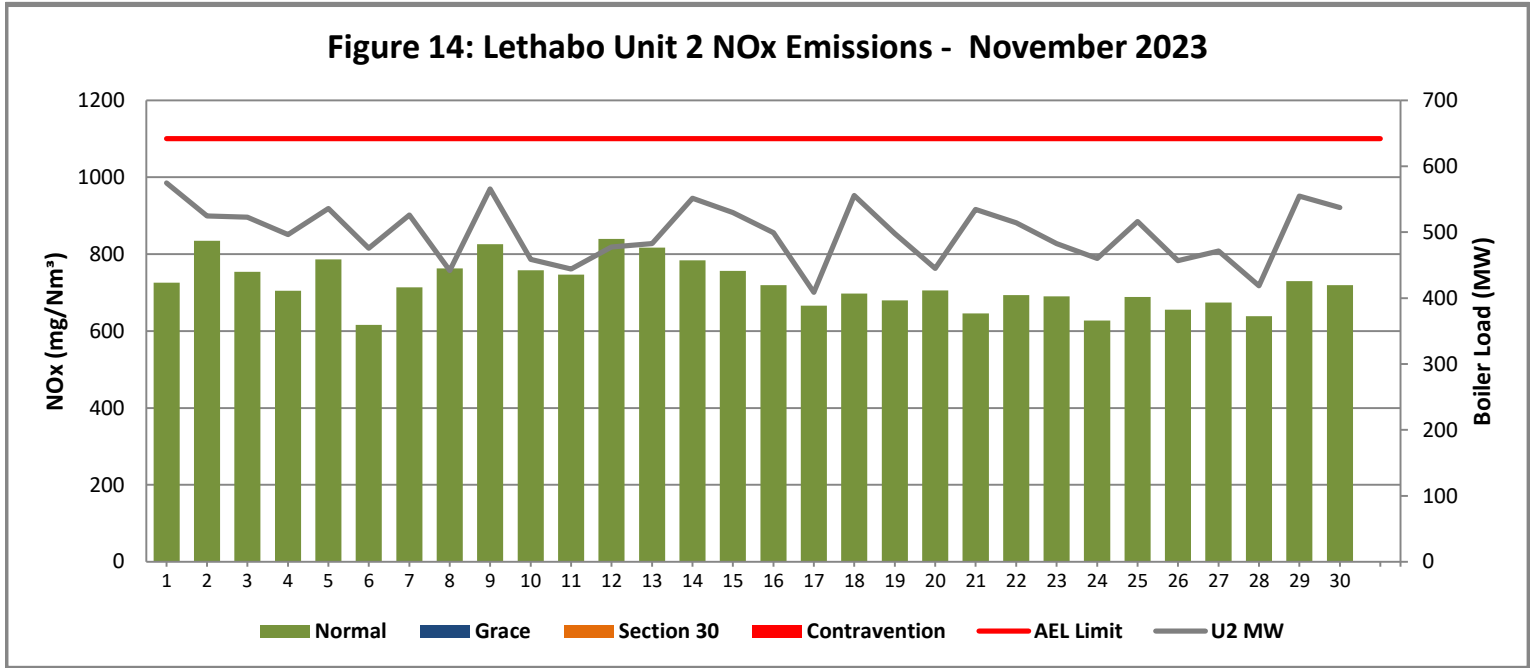


Figure 15: Lethabo Unit 3 NOx Emissions - November 2023

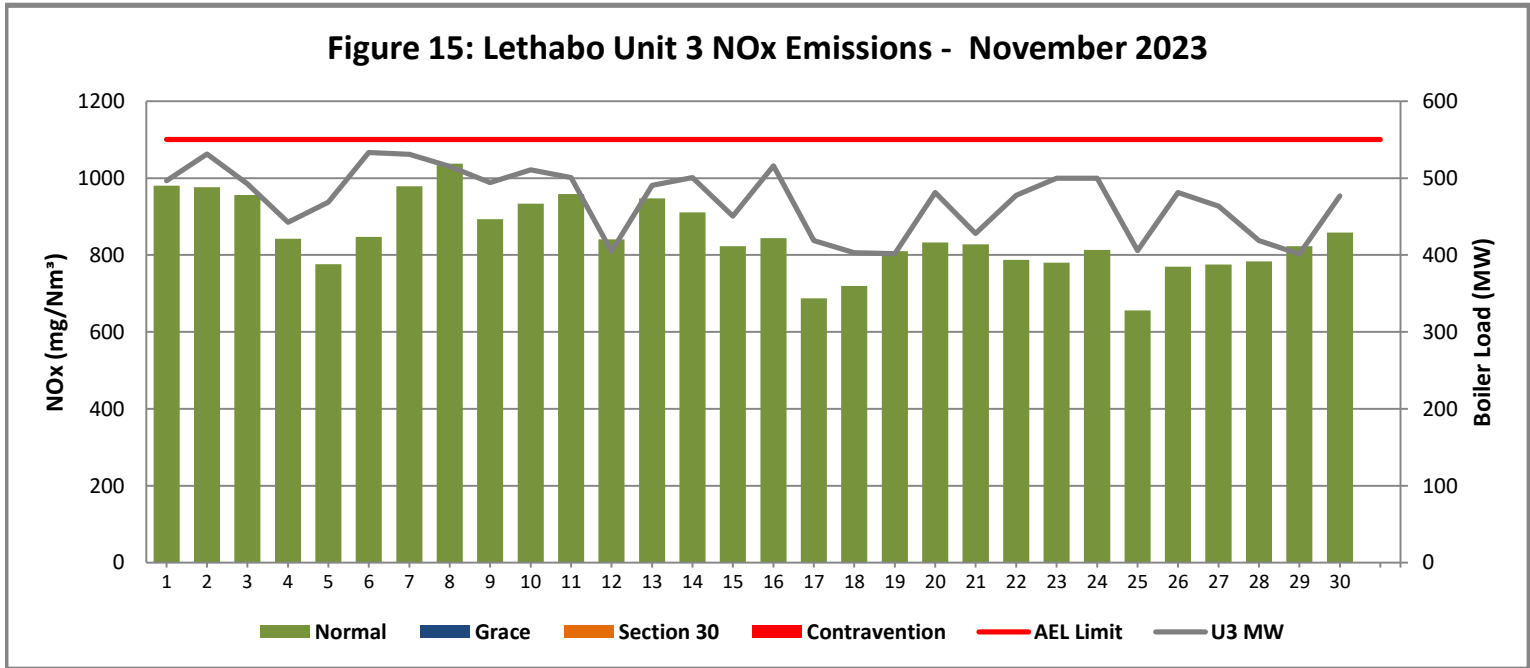


Figure 16: Lethabo Unit 4 NOx Emissions - November 2023

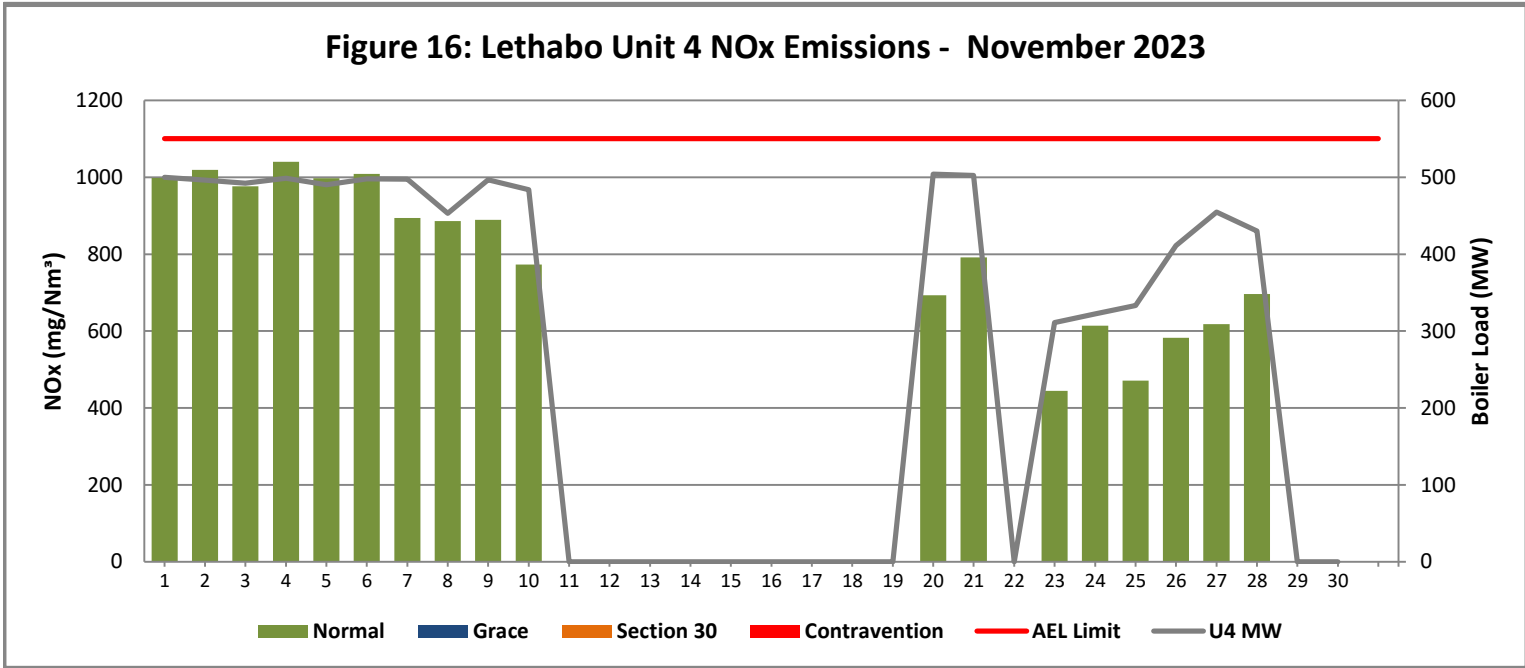


Figure 17: Lethabo Unit 5 NOx Emissions - November 2023

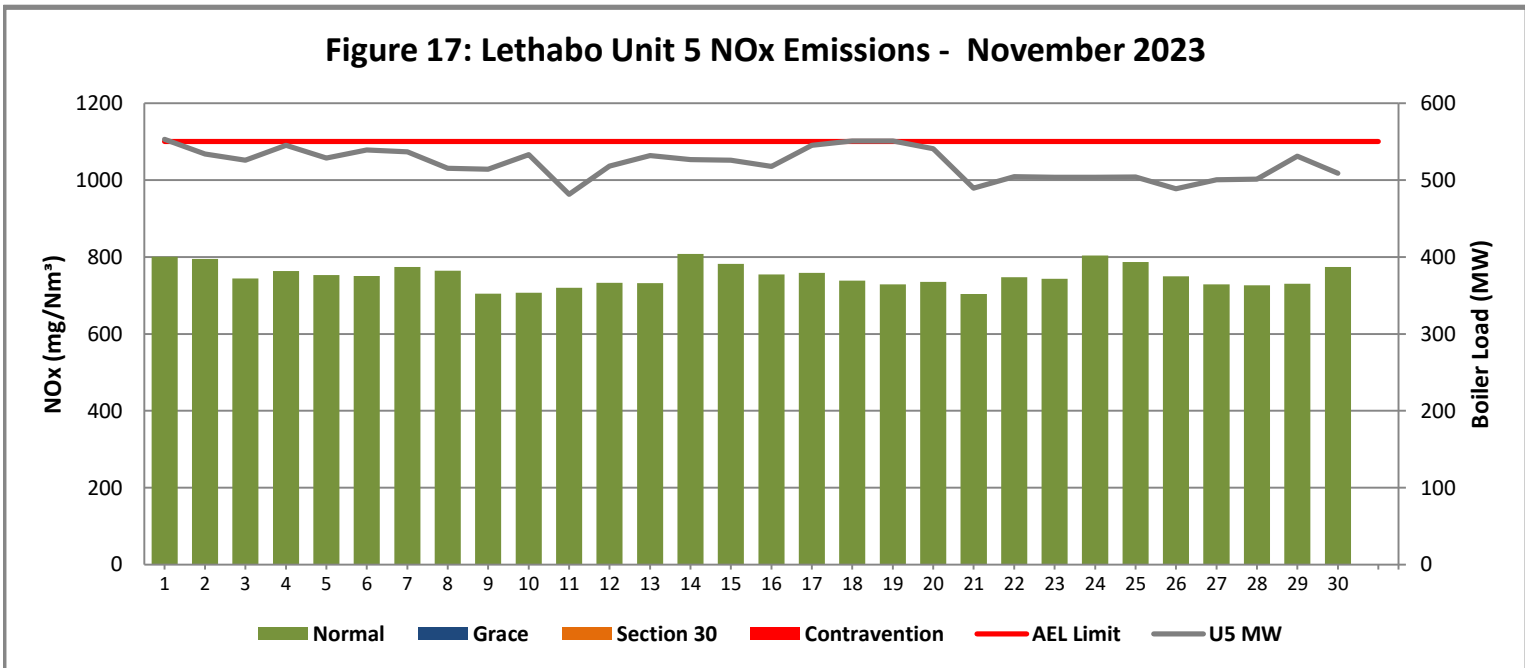
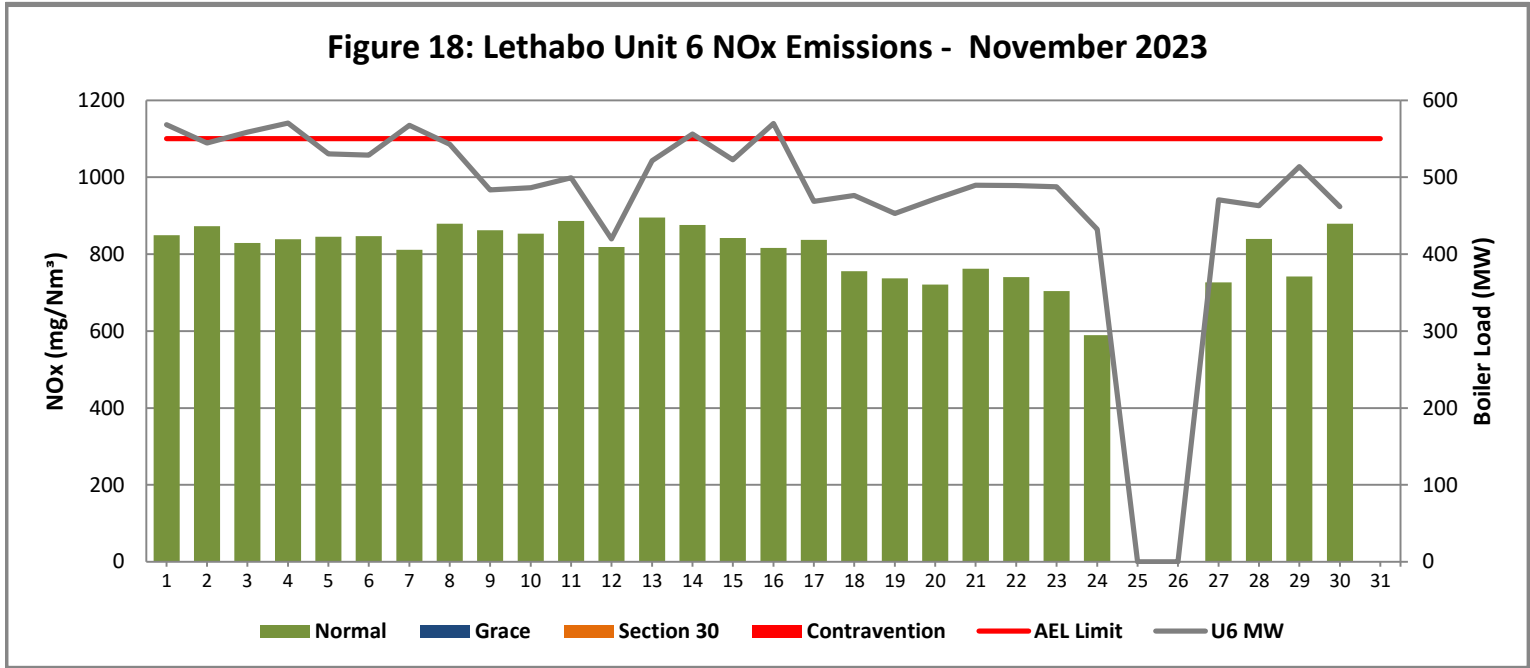


Figure 18: Lethabo Unit 6 NOx Emissions - November 2023



7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1: PM Start-up information for the month of November 2023

| | | | | | | | |
|---|---|------------------------------|--|----------|--|----------|----------|
| Unit No.1 | <i>Unit tripped correctly when main oil pump front bearing temperature (SB11T051)</i> | | | | | | |
| Breaker Open (BO) | 6:07 PM | 2023/11/18 | | | | | |
| Draught Group (DG) Shut Down (SD) | <i>DG did not trip or SD</i> | <i>DG did not trip or SD</i> | | | | | |
| BO to DG SD (duration) | n/a | DD:HH:MM | | 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.2 | <i>Unit tripped on vacuum protection</i> | | | | | | |
| Breaker Open (BO) | 10:34 AM | 2023/11/08 | | | | | |
| Draught Group (DG) Shut Down (SD) | <i>DG did not trip or SD</i> | <i>DG did not trip or SD</i> | | | | | |
| BO to DG SD (duration) | n/a | DD:HH:MM | | 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.3 | | | | | | | | |
| 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.4 | <i>High Vacuum defects repairs & Boiler valve repairs & Boiler Tube Leak</i> | | <i>Main exciter front bearing temperaturee high & Unit off due to MOP front bearing temperature high</i> | | <i>Low boiler drum level.</i> | | <i>Boiler tripped due to black furnace</i> | |
| Breaker Open (BO) | 9:10 AM | 2023/11/10 | 12:25 PM | 2023/11/21 | 3:35 PM | 2023/11/24 | 6:36 AM | 2023/11/26 |
| Draught Group (DG) Shut Down (SD) | 11:00 PM | 2023/11/10 | 2:46 AM | 2023/11/22 | 7:37 PM | 2023/11/24 | DG did not trip or SD | DG did not trip or SD |
| BO to DG SD (duration) | 00:13:50 | DD:HH:MM | 00:14:21 | DD:HH:MM | 00:04:02 | DD:HH:MM | n/a | DD:HH:MM |
| Fires in time | 2:08 AM | 2023/11/20 | 5:53 PM | 2023/11/23 | 8:27 PM | 2023/11/25 | 10:40 AM | 2023/11/26 |
| Synch. to Grid (or BC) | 2:43 AM | 2023/11/20 | 6:24 PM | 2023/11/23 | 8:45 PM | 2023/11/25 | 12:09 PM | 2023/11/26 |
| Fires in to BC (duration) | 00:00:35 | DD:HH:MM | 00:00:31 | DD:HH:MM | 00:00:18 | DD:HH:MM | 00:01:29 | DD:HH:MM |
| Emissions below limit from BC (end date) | 11:00 PM | 2023/11/22 | 12:00 AM | 2023/11/25 | not > limit | not > limit | 7:45 PM | 2023/11/28 |
| Emissions below limit from BC (duration) | 02:20:17 | DD:HH:MM | 01:05:36 | DD:HH:MM | n/a | DD:HH:MM | 02:07:36 | DD:HH:MM |

| | | | | | | | | |
|---|---------------------------------|-------------|--|----------|--|----------|--|----------|
| Unit No.4 | <i>Boiler tube leak repairs</i> | | | | | | | |
| Breaker Open (BO) | 7:39 PM | 2023/11/28 | | | | | | |
| Draught Group (DG) Shut Down (SD) | 9:14 AM | 2023/11/29 | | | | | | |
| BO to DG SD (duration) | 00:13:35 | DD:HH:MM | | DD:HH:MM | | DD:HH:MM | | DD:HH:MM |
| Fires in time | 1:37 AM | 2023/12/02 | | | | | | |
| Synch. to Grid (or BC) | 3:12 AM | 2023/12/02 | | | | | | |
| Fires in to BC (duration) | 00:01:35 | DD:HH:MM | | DD:HH:MM | | DD:HH:MM | | DD:HH:MM |
| Emissions below limit from BC (end date) | not > limit | not > limit | | | | | | |
| Emissions below limit from BC (duration) | n/a | DD:HH:MM | | DD:HH:MM | | DD:HH:MM | | DD:HH:MM |

| | | | | | | | |
|---|--|------------------------------|--|----------|--|----------|----------|
| Unit No.5 | <i>unit tripped due to Poor vacuum</i> | | | | | | |
| Breaker Open (BO) | <i>2:14 PM</i> | <i>2023/11/21</i> | | | | | |
| 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.6 | <i>Boiler tube leak repairs</i> | | | | | | |
| Breaker Open (BO) | <i>6:21 AM</i> | <i>2023/11/24</i> | | | | | |
| Draught Group (DG) Shut Down (SD) | <i>8:23 PM</i> | <i>2023/11/24</i> | | | | | |
| BO to DG SD (duration) | <i>00:14:02</i> | DD:HH:MM | | DD:HH:MM | | DD:HH:MM | DD:HH:MM |
| Fires in time | <i>6:52 AM</i> | <i>2023/11/27</i> | | | | | |
| Synch. to Grid (or BC) | <i>8:16 AM</i> | <i>2023/11/27</i> | | | | | |
| Fires in to BC (duration) | <i>00:01:24</i> | DD:HH:MM | | DD:HH:MM | | DD:HH:MM | DD:HH:MM |
| Emissions below limit from BC (end date) | <i>8:00 AM</i> | <i>2023/12/01</i> | | | | | |
| Emissions below limit from BC (duration) | <i>03:23:44</i> | 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 November 2023 in mg/Nm³

8. MAINTENANCE

| | | | | |
|-------------------------------|---------------------------|-----------------------|--|--|
| Unit 1 | | | | |
| Beginning of | 2023/11/16 15:15 | 2023/11/15 18:50 | | |
| Reason for Maintenance | RHO Precip Casing Repairs | RHI Precip for hopper | | |
| End (Time): | 2023/11/18 18:07 | 2023/11/16 15:00 | | |
| Duration | 50:52:00 | 20:10:00 | | |

| | | | | |
|-------------------------------|---------------------------|---------------------------|---------------------|-------------------|
| Unit 2 | | | | |
| Beginning of | 2023/11/19 00:06:00 | 2023/11/25 00:22:00 | 2023/11/27 12:15:00 | 2023/11/12 00:00 |
| Reason for Maintenance | RHI Precip casing repairs | LHI Precip casing repairs | LHO Precip casing | RHO Casing Outage |
| End (Time): | 2023/11/19 17:29:00 | 2023/11/25 17:12:00 | 2023/11/28 00:00:00 | 2023/11/13 00:00 |
| Duration | 17:23:00 | 16:50:00 | 11:45:00 | 24:00:00 |

| | | | | |
|-------------------------------|---------------------------|--|--|--|
| Unit 3 | | | | |
| Beginning of | 2023/11/05 00:00:00 | | | |
| Reason for Maintenance | RHI Precip casing repairs | | | |
| End (Time): | 2023/11/05 23:57:00 | | | |
| Duration | 23:57:00 | | | |

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

| | | | | |
|-------------------------------|--|--|--|--|
| Unit 5 | | | | |
| Beginning of | | | | |
| Reason for Maintenance | | | | |
| End (Time): | | | | |
| Duration | | | | |

| | | | | |
|-------------------------------|---------------------|--|--|--|
| Unit 6 | | | | |
| Beginning of | 2023/11/22 07:08:00 | | | |
| Reason for Maintenance | RHO Casing Outage | | | |
| End (Time): | 2023/11/22 15:34:00 | | | |
| Duration | 8:26:00 | | | |

9. GENERAL

Unit 1 Monitor Reliability

15/11/2023 - 16/11/2023; 18/11/2023 - 19/11/2023: PM Monitor Reliability low due to monitors reading maximum.

Unit 2 Monitor Reliability

12/11/2023; 15/11/2023 - 16/11/2023; 18/11/2023 - 19/11/2023; 25/11/2023; 27/11/2023: PM Monitor Reliability low due to monitors reading maximum.

Unit 3 Monitor Reliability

05/11/2023; 26/11/2023: PM Monitor Reliability low due to monitors reading maximum.

Unit 6 Monitor Reliability

22/11/2023: PM Monitor Reliability low due to monitors reading maximum.

Unit 4 Velocity Monitor Reliability

24/11/2023: Velocity Monitor Reliability low (76.2%) due to Unit Trip

CO2 and Velocity Monitors Low Reliability Units 1-6:

Due to correction of bad data as per internal emission data integrity review actions in 2021 and 2022. Bad Velocity data and Bad CO2 data were corrected/removed as per the review actions and findings.

ADDENDUM TO MONTHLY EMISSIONS REPORT

10. S30 INCIDENT OR LEGAL CONTRAVENTION REGISTER

To be completed in the case of a S30 incident or a legal contravention:

| Unit no | Incident Start Date | Incident End Date | Incident Cause | Remedial action | S30 initial notification sent | Date S30 investigation report sent | Date DEA Acknowledgment | Date DEA Acceptable | Comments / Reference No. |
|---------|---------------------|-------------------|----------------|-----------------|-------------------------------|------------------------------------|-------------------------|---------------------|--------------------------|
| | | | | | | | | | |
| | | | | | | | | | |

11. PARTICULATE EMISSIONS

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

| MONTH | UNIT 1 | UNIT 2 | UNIT 3 | UNIT 4 | UNIT 5 | UNIT 6 | STATION |
|--------|--------|--------|--------|--------|--------|--------|---------|
| Dec-22 | 0.58 | 0.67 | 0.58 | OFF | 0.94 | 0.50 | 0.65 |
| Jan-23 | 0.40 | 0.69 | 0.59 | OFF | 0.74 | 0.45 | 0.57 |
| 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 |

ADDENDUM TO MONTHLY EMISSIONS REPORT

12. DAILY EMISSIONS FIGURES

Final Dust Concentration (mg/Nm³)

| Date | U1 | U2 | U3 | U4 | U5 | U6 | Limit |
|--------|------|------|-----|-----|-----|-----|-------|
| 31-Oct | 34 | 98 | 64 | 60 | 35 | 90 | 100 |
| 01-Nov | 37 | 67 | 75 | 224 | 48 | 93 | 100 |
| 02-Nov | 53 | 166 | 138 | 179 | 50 | 94 | 100 |
| 03-Nov | 43 | 89 | 188 | 81 | 98 | 133 | 100 |
| 04-Nov | 39 | 71 | 52 | 88 | 54 | 89 | 100 |
| 05-Nov | 45 | 301 | 761 | 92 | 73 | 93 | 100 |
| 06-Nov | 45 | 111 | 167 | 88 | 69 | 89 | 100 |
| 07-Nov | 92 | 95 | 61 | 75 | 57 | 94 | 100 |
| 08-Nov | 53 | 406 | 91 | 66 | 53 | 110 | 100 |
| 09-Nov | 68 | 135 | 400 | 126 | 58 | 221 | 100 |
| 10-Nov | 67 | 221 | 202 | 95 | 317 | 88 | 100 |
| 11-Nov | 89 | 67 | 186 | OFF | 118 | 143 | 100 |
| 12-Nov | 196 | 570 | 77 | OFF | 59 | 89 | 100 |
| 13-Nov | 42 | 70 | 191 | OFF | 62 | 95 | 100 |
| 14-Nov | 54 | 206 | 96 | OFF | 63 | 129 | 100 |
| 15-Nov | 682 | 520 | 98 | OFF | 71 | 95 | 100 |
| 16-Nov | 795 | 452 | 139 | OFF | 73 | 119 | 100 |
| 17-Nov | 69 | 78 | 105 | OFF | 79 | 93 | 100 |
| 18-Nov | 1009 | 819 | 313 | OFF | 198 | 163 | 100 |
| 19-Nov | 566 | 1217 | 88 | OFF | 198 | 115 | 100 |
| 20-Nov | 231 | 91 | 261 | OFF | 77 | 75 | 100 |
| 21-Nov | 32 | 228 | 98 | 334 | 53 | 85 | 100 |
| 22-Nov | 35 | 93 | 394 | OFF | 55 | 788 | 100 |
| 23-Nov | 32 | 99 | 366 | OFF | 54 | 96 | 100 |
| 24-Nov | 43 | 96 | 339 | OFF | 130 | 126 | 100 |
| 25-Nov | 51 | 562 | 54 | OFF | 295 | OFF | 100 |
| 26-Nov | 55 | 304 | 306 | OFF | 64 | OFF | 100 |
| 27-Nov | 121 | 579 | 111 | 457 | 84 | OFF | 100 |
| 28-Nov | 33 | 57 | 276 | 141 | 79 | 227 | 100 |
| 29-Nov | 32 | 77 | 70 | OFF | 131 | 197 | 100 |
| 30-Nov | 40 | 83 | 181 | OFF | 78 | 88 | 100 |

ADDENDUM TO MONTHLY EMISSIONS REPORT

Final SOx Concentration (mg/Nm³)

| Date | U1 | U2 | U3 | U4 | U5 | U6 | Limit |
|--------|------|------|------|------|------|------|-------|
| 31-Oct | 1670 | 1768 | 2036 | 1715 | 1846 | 1977 | 3500 |
| 01-Nov | 1740 | 1776 | 2095 | 1735 | 1840 | 1888 | 3500 |
| 02-Nov | 1731 | 1887 | 2073 | 1708 | 1915 | 2000 | 3500 |
| 03-Nov | 1669 | 1836 | 2040 | 1669 | 1895 | 1979 | 3500 |
| 04-Nov | 1572 | 1779 | 1963 | 1614 | 1811 | 1877 | 3500 |
| 05-Nov | 1603 | 1828 | 2009 | 1644 | 1817 | 1878 | 3500 |
| 06-Nov | 1593 | 1807 | 1925 | 1641 | 1814 | 1847 | 3500 |
| 07-Nov | 1628 | 1854 | 1949 | 1636 | 1747 | 1893 | 3500 |
| 08-Nov | 1671 | 2041 | 1966 | 1693 | 1817 | 1928 | 3500 |
| 09-Nov | 1587 | 1909 | 1934 | 1651 | 1858 | 1918 | 3500 |
| 10-Nov | 1573 | 1949 | 1905 | 1607 | 1804 | 1888 | 3500 |
| 11-Nov | 1560 | 1904 | 1886 | OFF | 1779 | 1865 | 3500 |
| 12-Nov | 1572 | 1888 | 1885 | OFF | 1713 | 1870 | 3500 |
| 13-Nov | 1523 | 1833 | 1822 | OFF | 1684 | 1828 | 3500 |
| 14-Nov | 1667 | 1936 | 1906 | OFF | 1813 | 1979 | 3500 |
| 15-Nov | 1687 | 1912 | 2029 | OFF | 1807 | 1904 | 3500 |
| 16-Nov | 1596 | 1701 | 1846 | OFF | 1751 | 1861 | 3500 |
| 17-Nov | 1573 | 1616 | 1761 | OFF | 1731 | 1928 | 3500 |
| 18-Nov | 1497 | 1580 | 1714 | OFF | 1699 | 1897 | 3500 |
| 19-Nov | 1604 | 1575 | 1733 | OFF | 1773 | 1820 | 3500 |
| 20-Nov | 1616 | 1575 | 1756 | 1635 | 1746 | 1843 | 3500 |
| 21-Nov | 1609 | 1621 | 1782 | 1601 | 1756 | 1894 | 3500 |
| 22-Nov | 1609 | 1558 | 1798 | OFF | 1711 | 1864 | 3500 |
| 23-Nov | 1488 | 1495 | 1643 | 1726 | 1663 | 1716 | 3500 |
| 24-Nov | 1578 | 1551 | 1741 | 1604 | 1711 | 1839 | 3500 |
| 25-Nov | 1579 | 1574 | 1752 | 1617 | 1796 | OFF | 3500 |
| 26-Nov | 1586 | 1536 | 1674 | 1596 | 1823 | OFF | 3500 |
| 27-Nov | 1587 | 1565 | 1752 | 1650 | 1787 | 1864 | 3500 |
| 28-Nov | 1686 | 1576 | 1808 | 1683 | 1812 | 1944 | 3500 |
| 29-Nov | 1648 | 1675 | 1730 | OFF | 1817 | 1921 | 3500 |
| 30-Nov | 1693 | 1693 | 1847 | OFF | 1795 | 2002 | 3500 |

ADDENDUM TO MONTHLY EMISSIONS REPORT

Final NOx Concentration (mg/Nm³)

| Date | U1 | U2 | U3 | U4 | U5 | U6 | Limit |
|--------|-----|-----|------|------|-----|-----|-------|
| 31-Oct | 988 | 819 | 973 | 995 | 771 | 900 | 1100 |
| 01-Nov | 921 | 726 | 981 | 999 | 801 | 849 | 1100 |
| 02-Nov | 879 | 835 | 976 | 1019 | 795 | 873 | 1100 |
| 03-Nov | 837 | 754 | 956 | 977 | 744 | 829 | 1100 |
| 04-Nov | 879 | 705 | 842 | 1040 | 764 | 839 | 1100 |
| 05-Nov | 898 | 786 | 776 | 997 | 753 | 845 | 1100 |
| 06-Nov | 845 | 616 | 847 | 1009 | 750 | 847 | 1100 |
| 07-Nov | 813 | 714 | 979 | 894 | 774 | 812 | 1100 |
| 08-Nov | 833 | 763 | 1038 | 886 | 764 | 879 | 1100 |
| 09-Nov | 822 | 826 | 893 | 890 | 705 | 862 | 1100 |
| 10-Nov | 815 | 758 | 934 | 773 | 707 | 853 | 1100 |
| 11-Nov | 838 | 747 | 958 | OFF | 720 | 887 | 1100 |
| 12-Nov | 851 | 840 | 841 | OFF | 733 | 819 | 1100 |
| 13-Nov | 892 | 817 | 947 | OFF | 732 | 896 | 1100 |
| 14-Nov | 857 | 784 | 911 | OFF | 808 | 876 | 1100 |
| 15-Nov | 847 | 757 | 823 | OFF | 782 | 842 | 1100 |
| 16-Nov | 864 | 720 | 844 | OFF | 755 | 816 | 1100 |
| 17-Nov | 821 | 666 | 687 | OFF | 759 | 837 | 1100 |
| 18-Nov | 772 | 698 | 720 | OFF | 738 | 756 | 1100 |
| 19-Nov | 817 | 680 | 810 | OFF | 729 | 737 | 1100 |
| 20-Nov | 871 | 706 | 833 | 693 | 735 | 721 | 1100 |
| 21-Nov | 869 | 646 | 828 | 791 | 704 | 763 | 1100 |
| 22-Nov | 842 | 694 | 787 | OFF | 747 | 741 | 1100 |
| 23-Nov | 909 | 690 | 780 | 445 | 744 | 704 | 1100 |
| 24-Nov | 879 | 627 | 814 | 614 | 804 | 590 | 1100 |
| 25-Nov | 897 | 689 | 656 | 472 | 787 | OFF | 1100 |
| 26-Nov | 869 | 655 | 770 | 583 | 750 | OFF | 1100 |
| 27-Nov | 840 | 674 | 775 | 618 | 729 | 726 | 1100 |
| 28-Nov | 869 | 639 | 783 | 697 | 727 | 840 | 1100 |
| 29-Nov | 886 | 730 | 823 | OFF | 731 | 742 | 1100 |
| 30-Nov | 954 | 720 | 858 | OFF | 774 | 879 | 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 |
| Dec-22 | 99.29% | 0.9 | 98.58% | 1.8 | 98.66% | 1.7 | OFF | OFF | 99.36% | 0.8 | 98.46% | 1.9 |
| Jan-23 | 98.91% | 1.3 | 99.90% | 0.1 | 97.59% | 3.0 | OFF | OFF | 99.23% | 1.0 | 98.42% | 2.0 |
| 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 |

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 |
| Dec-22 | 85.12% | 4.6 | 98.28% | 0.5 | 99.88% | 0.0 | OFF | OFF | 62.90% | 11.5 | 100.00% | 0.0 |
| Jan-23 | 90.05% | 3.1 | 93.82% | 1.9 | 100.00% | 0.0 | OFF | OFF | 91.52% | 2.6 | 100.00% | 0.0 |
| 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 | 90.05% | 3.1 | 93.82% | 1.9 | 100.00% | 0.0 | 0.00% | 31.0 | 91.52% | 2.6 | 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 |

ADDENDUM TO MONTHLY EMISSIONS REPORT

Particulate Emission Monitors

| Availability | | | | | | |
|--------------|---------|---------|--------|--------|--------|--------|
| | Unit 1 | Unit 2 | Unit 3 | Unit 4 | Unit 5 | Unit 6 |
| Dec-22 | 99.09% | 93.78% | 98.73% | OFF | 67.20% | 98.66% |
| Jan-23 | 99.46% | 90.07% | 98.79% | OFF | 96.28% | 98.39% |
| 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% |

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 |
| Dec-22 | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | OFF | OFF | 100.00% | 99.87% | 99.87% | 100.00% |
| Jan-23 | 97.85% | 97.85% | 99.69% | 99.69% | 100.00% | 100.00% | OFF | OFF | 99.85% | 99.85% | 99.60% | 99.60% |
| 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% |

| Oxygen Monitor Availability | | | | | | |
|-----------------------------|---------|---------|---------|---------|---------|---------|
| | Unit 1 | Unit 2 | Unit 3 | Unit 4 | Unit 5 | Unit 6 |
| Dec-22 | 99.65% | 99.72% | 99.72% | OFF | 99.87% | 99.87% |
| Jan-23 | 97.45% | 99.04% | 99.87% | OFF | 99.70% | 99.73% |
| 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% |

ADDENDUM TO MONTHLY EMISSIONS REPORT

14. EFFICIENCY

| ESP Efficiency (%) | | | | | | |
|--------------------|---------|---------|---------|---------|---------|---------|
| | Unit 1 | Unit 2 | Unit 3 | Unit 4 | Unit 5 | Unit 6 |
| Dec-22 | 99.788% | 99.724% | 99.768% | OFF | 99.637% | 99.799% |
| Jan-23 | 99.848% | 99.709% | 99.766% | OFF | 99.702% | 99.813% |
| 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% |

15. REMARKS

| UNIT | MWLOSS | REASON | ACTUALSTARTDATE | ACTUALENDDATE |
|------|--------|--|---------------------|---------------------|
| 1 | 50 | AM: High ash hopper levels | 2023/11/15 12:36:00 | 2023/11/16 00:00:00 |
| 1 | 50 | Ash High hoppers levels | 2023/11/16 05:00:00 | 2023/11/16 08:56:00 |
| 1 | 147 | High hopper level | 2023/11/16 08:56:00 | 2023/11/17 18:52:00 |
| 1 | 50 | AM: High ash hopper levels. | 2023/11/17 19:20:00 | 2023/11/18 00:00:00 |
| 1 | 50 | RHO Precip casing repairs | 2023/11/18 00:00:00 | 2023/11/18 18:07:00 |
| 1 | 593 | Unit tripped correctly when main oil pump front bearing temperature (SB11T051) | 2023/11/18 18:07:00 | 2023/11/19 05:10:00 |
| 1 | 296 | System Generated Ramp Event for Event id : 1878162 | 2023/11/19 05:10:00 | 2023/11/19 07:40:00 |
| 2 | 94 | dust plant standing due to 02wx12 7 02wx11 conveyor belt | 2023/11/01 22:04:00 | 2023/11/02 05:48:00 |
| 2 | 97 | EF: High hopper levels due to 22WX42 tripped on thermal overload | 2023/11/02 11:55:00 | 2023/11/02 17:00:00 |
| 2 | 80 | high hopper levels. | 2023/11/03 12:05:00 | 2023/11/03 17:15:00 |
| 2 | 97 | High stack emissions. | 2023/11/05 11:27:00 | 2023/11/05 17:25:00 |
| 2 | 270 | RH draught group tripped | 2023/11/06 18:39:00 | 2023/11/06 19:08:00 |
| 2 | 282 | AM: RH draught group tripped | 2023/11/06 19:08:00 | 2023/11/06 20:45:00 |
| 2 | 252 | AM: RH draught group tripped due to sec A/H oil leak | 2023/11/06 20:45:00 | 2023/11/07 02:42:00 |
| 2 | 76 | High stack emissions. | 2023/11/07 11:05:00 | 2023/11/07 15:44:00 |
| 2 | 80 | EF: High stack emission | 2023/11/07 22:11:00 | 2023/11/08 00:16:00 |
| 2 | 593 | Unit tripped on vacuum protection | 2023/11/08 10:34:00 | 2023/11/08 16:50:00 |
| 2 | 297 | System Generated Ramp Event for Event id : 1874768 | 2023/11/08 16:50:00 | 2023/11/08 18:20:00 |
| 2 | 75 | High stack emissions. | 2023/11/10 08:50:00 | 2023/11/10 09:38:00 |
| 2 | 144 | High stack emissions. | 2023/11/10 09:38:00 | 2023/11/10 09:58:00 |
| 2 | 158 | High stack emissions | 2023/11/10 09:58:00 | 2023/11/10 10:52:00 |
| 2 | 176 | High stack emissions. | 2023/11/10 10:52:00 | 2023/11/10 20:08:00 |
| 2 | 205 | AM: High stack emissions. | 2023/11/10 20:08:00 | 2023/11/10 22:22:00 |
| 2 | 180 | AM: High stack emissions | 2023/11/10 22:22:00 | 2023/11/11 08:56:00 |
| 2 | 130 | High stack emissions. | 2023/11/11 08:56:00 | 2023/11/11 10:14:00 |
| 2 | 80 | High stack emissions | 2023/11/11 10:14:00 | 2023/11/11 13:28:00 |
| 2 | 128 | High stack emissions | 2023/11/11 13:28:00 | 2023/11/11 17:01:00 |
| 2 | 80 | High stack emission. | 2023/11/11 17:01:00 | 2023/11/11 20:03:00 |
| 2 | 128 | EF: High stack emissions | 2023/11/11 20:03:00 | 2023/11/12 00:00:00 |
| 2 | 80 | RHO casing repairs | 2023/11/12 00:00:00 | 2023/11/12 14:00:00 |
| 2 | 80 | High stack emission | 2023/11/12 14:00:00 | 2023/11/13 00:00:00 |
| 2 | 73 | AM: High ash hopper levels. | 2023/11/15 12:36:00 | 2023/11/16 00:00:00 |
| 2 | 80 | High ash hopper levels | 2023/11/16 05:00:00 | 2023/11/16 05:56:00 |
| 2 | 175 | AM: High ash hopper levels | 2023/11/16 05:56:00 | 2023/11/16 08:56:00 |
| 2 | 80 | High hopper levels | 2023/11/16 08:56:00 | 2023/11/16 17:08:00 |
| 2 | 75 | High stack emissions | 2023/11/17 00:26:00 | 2023/11/17 01:23:00 |
| 2 | 178 | High stack emissions | 2023/11/17 01:23:00 | 2023/11/17 04:43:00 |
| 2 | 130 | High stack emissions | 2023/11/17 04:43:00 | 2023/11/17 06:35:00 |
| 2 | 180 | High stack emissions. | 2023/11/17 06:35:00 | 2023/11/18 00:47:00 |
| 2 | 77 | RHI Precip casing repairs | 2023/11/19 00:06:00 | 2023/11/19 17:29:00 |
| 2 | 175 | High stack emissions | 2023/11/20 08:15:00 | 2023/11/21 05:25:00 |
| 2 | 95 | High stack emissions | 2023/11/21 05:25:00 | 2023/11/21 05:51:00 |
| 2 | 47 | High stack emissions | 2023/11/21 05:51:00 | 2023/11/21 06:07:00 |
| 2 | 125 | High stack emissions. | 2023/11/22 09:27:00 | 2023/11/22 16:58:00 |
| 2 | 80 | High stack emissions. | 2023/11/22 16:58:00 | 2023/11/22 22:31:00 |
| 2 | 129 | High stack emissions | 2023/11/22 22:31:00 | 2023/11/23 05:05:00 |
| 2 | 76 | for high stack emissions. | 2023/11/23 08:21:00 | 2023/11/23 19:40:00 |
| 2 | 130 | High stack emissions. | 2023/11/23 19:40:00 | 2023/11/23 19:58:00 |
| 2 | 175 | High stack emissions. | 2023/11/23 19:58:00 | 2023/11/24 04:39:00 |
| 2 | 77 | AM: High Stack Emissions. | 2023/11/24 11:22:00 | 2023/11/24 13:38:00 |
| 2 | 180 | High stack emissions | 2023/11/24 13:38:00 | 2023/11/25 00:22:00 |
| 2 | 80 | LHI Precip Casing repairs | 2023/11/25 00:22:00 | 2023/11/25 17:12:00 |
| 2 | 130 | High stack emissions. | 2023/11/26 00:35:00 | 2023/11/26 00:48:00 |
| 2 | 180 | High stack emissions. | 2023/11/26 00:48:00 | 2023/11/26 06:20:00 |
| 2 | 80 | High stack emissions | 2023/11/26 06:20:00 | 2023/11/26 17:55:00 |
| 2 | 80 | High stack emissions | 2023/11/27 05:17:00 | 2023/11/27 12:15:00 |

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| 2 | 80 | LHO Precip casing repairs | 2023/11/27 12:15:00 | 2023/11/28 00:00:00 |
| 2 | 100 | High stack emissions | 2023/11/27 20:59:00 | 2023/11/28 00:00:00 |
| 2 | 180 | High stack emissions | 2023/11/28 00:00:00 | 2023/11/29 00:39:00 |
| 3 | 47 | EF: High stack emissions | 2023/11/02 12:21:00 | 2023/11/02 16:28:00 |
| 3 | 86 | High stack emissions. | 2023/11/03 09:45:00 | 2023/11/03 17:00:00 |
| 3 | 48 | AM: RHI Precip casing repairs | 2023/11/05 00:00:00 | 2023/11/05 23:57:00 |
| 3 | 30 | AM: High hopper levels | 2023/11/09 04:02:00 | 2023/11/10 04:38:00 |
| 3 | 100 | Ef: High stack emissions | 2023/11/11 23:55:00 | 2023/11/12 23:18:00 |
| 3 | 50 | EF:High stack emissions | 2023/11/12 23:18:00 | 2023/11/13 01:40:00 |
| 3 | 100 | High stack emissions | 2023/11/14 00:00:00 | 2023/11/14 05:05:00 |
| 3 | 37 | High stack emissions | 2023/11/14 21:56:00 | 2023/11/15 04:07:00 |
| 3 | 91 | EF: High stack emissions | 2023/11/15 09:01:00 | 2023/11/15 10:40:00 |
| 3 | 149 | AM: High stack emissions | 2023/11/15 10:40:00 | 2023/11/16 00:46:00 |
| 3 | 38 | Ef: High stack emissions | 2023/11/16 05:00:00 | 2023/11/16 06:13:00 |
| 3 | 123 | High stack emissions | 2023/11/17 00:16:00 | 2023/11/17 04:51:00 |
| 3 | 80 | High stack emissions. | 2023/11/17 04:51:00 | 2023/11/17 12:29:00 |
| 3 | 126 | High stack emissions. | 2023/11/17 12:29:00 | 2023/11/20 04:51:00 |
| 3 | 47 | High stack emissions | 2023/11/20 08:12:00 | 2023/11/20 14:35:00 |
| 3 | 46 | high stack emissions. | 2023/11/21 08:43:00 | 2023/11/22 03:56:00 |
| 3 | 94 | High stack emissions | 2023/11/25 00:32:00 | 2023/11/26 02:34:00 |
| 3 | 69 | High stack emissions. | 2023/11/27 01:14:00 | 2023/11/27 04:34:00 |
| 3 | 77 | High stack emissions | 2023/11/27 09:12:00 | 2023/11/27 17:05:00 |
| 3 | 100 | High stack emissions | 2023/11/28 00:49:00 | 2023/11/30 05:54:00 |
| 4 | 593 | High Vacuum defects repairs & Boiler valve repairs | 2023/11/10 09:10:00 | 2023/11/15 09:10:00 |
| 4 | 593 | AM: Boiler tube leak. | 2023/11/15 09:10:00 | 2023/11/20 02:43:00 |
| 4 | 297 | System Generated Ramp Event for Event id : 1875475 | 2023/11/20 02:43:00 | 2023/11/20 05:43:00 |
| 4 | 593 | Main exciter front bearing temperature high | 2023/11/21 12:25:00 | 2023/11/21 18:40:00 |
| 4 | 593 | Unit off due to MOP front bearing temperature high | 2023/11/21 18:40:00 | 2023/11/23 18:24:00 |
| 4 | 297 | System Generated Ramp Event for Event id : 1879089 First Outage | 2023/11/23 18:24:00 | 2023/11/23 19:54:00 |
| 4 | 297 | System Generated Ramp Event for Event id : 1879235 | 2023/11/23 19:54:00 | 2023/11/23 21:24:00 |
| 4 | 593 | AM: Low boiler drum level. | 2023/11/24 15:35:00 | 2023/11/25 20:45:00 |
| 4 | 296 | System Generated Ramp Event for Event id : 1880188 | 2023/11/25 20:45:00 | 2023/11/25 23:15:00 |
| 4 | 593 | Boiler tripped due to black furnace | 2023/11/26 06:36:00 | 2023/11/26 12:09:00 |
| 4 | 297 | System Generated Ramp Event for Event id : 1880478 | 2023/11/26 12:09:00 | 2023/11/26 13:39:00 |
| 4 | 55 | High stack emissions | 2023/11/28 00:53:00 | 2023/11/28 10:23:00 |
| 4 | 593 | Boiler tube leak repairs | 2023/11/28 19:39:00 | 2023/11/30 23:59:59 |
| 5 | 170 | High stack emissions. | 2023/11/11 10:25:00 | 2023/11/11 16:50:00 |
| 5 | 70 | High stack emissions. | 2023/11/11 16:50:00 | 2023/11/12 03:12:00 |
| 5 | 593 | unit tripped due to Poor vacuum | 2023/11/21 14:14:00 | 2023/11/21 15:41:00 |
| 5 | 297 | System Generated Ramp Event for Event id : 1879092 | 2023/11/21 15:41:00 | 2023/11/21 17:11:00 |
| 6 | 64 | High stack emissions | 2023/11/01 00:00:00 | 2023/11/01 02:39:00 |
| 6 | 40 | High stack emissions | 2023/11/01 20:07:00 | 2023/11/02 04:13:00 |
| 6 | 40 | High stack emissions | 2023/11/02 19:25:00 | 2023/11/03 03:28:00 |
| 6 | 89 | High hopper levels | 2023/11/08 20:08:00 | 2023/11/09 02:38:00 |
| 6 | 187 | AM: High ash hopper levels. | 2023/11/09 02:38:00 | 2023/11/09 04:55:00 |
| 6 | 91 | AM: High hopper levels. | 2023/11/09 04:55:00 | 2023/11/09 17:21:00 |
| 6 | 87 | High ash hopper levels | 2023/11/09 21:31:00 | 2023/11/10 04:50:00 |
| 6 | 187 | High stack emissions. | 2023/11/10 08:58:00 | 2023/11/10 16:37:00 |
| 6 | 87 | High stack emissions. | 2023/11/10 16:37:00 | 2023/11/10 18:13:00 |
| 6 | 85 | AM: High stack emissions. | 2023/11/10 19:13:00 | 2023/11/12 03:46:00 |
| 6 | 185 | AM: High hopper levels | 2023/11/12 03:46:00 | 2023/11/13 02:46:00 |
| 6 | 40 | EF: High stack emissions | 2023/11/14 13:48:00 | 2023/11/14 16:59:00 |
| 6 | 90 | High stack emissions | 2023/11/15 00:00:00 | 2023/11/15 05:34:00 |
| 6 | 85 | AM: High stack emissions. | 2023/11/15 11:43:00 | 2023/11/15 16:03:00 |
| 6 | 90 | High stack emissions. | 2023/11/17 09:02:00 | 2023/11/17 10:28:00 |
| 6 | 187 | High stack emissions. | 2023/11/17 10:28:00 | 2023/11/18 00:17:00 |
| 6 | 593 | Boiler tube leak repairs | 2023/11/24 06:21:00 | 2023/11/27 08:16:00 |
| 6 | 297 | System Generated Ramp Event for Event id : 1879952 | 2023/11/27 08:16:00 | 2023/11/27 11:16:00 |

| PM Exceedances | | |
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| U1. | Emissions Spike during Clean Rapping set the emissions high for the day | 12-Nov |
| U1. | 26 High Hopper Levels RHI Casing Isolated to assist Backlogging DHP Challenges | 15-Nov |
| U1. | DHP Challenges 11 high hopper levels RHO casing isolated to assist with backlogging | 16-Nov |
| U1. | Unit Trip, Boiler stayed on Load. Sulphur Common Plant de-superheater replaced on the ring main. No sulphur flow to all units affecting SO3 Plant | 18-Nov |
| U1. | Sulphur Common Plant de-superheater replaced on the ring main. No sulphur flow to all units affecting SO3 Plant | 19-Nov |
| U1. | ESP Manual Rapping | 20-Nov |
| U1. | ESP Manual Rapping | 27-Nov |
| U2. | ESP Poor Performance High Hopper Levels | 02-Nov |
| U2. | Dust handling plant challenges High hopper levels ESP poor Performance | 05-Nov |
| U2. | Dust handling plant challenges High hopper levels ESP poor Performance | 06-Nov |
| U2. | Unit Trip, Boiler on Bypass | 08-Nov |
| U2. | 1 high hopper level Dust handling plant challenges ESP poor Performance Emission monitor maxing out during clean rapping | 09-Nov |
| U2. | DHP Challenges Manual Rapping | 10-Nov |
| U2. | RHO Casing Outage Emissions Spike during Clean Rapping set the emissions high for the day | 12-Nov |
| U2. | ESP Poor Performance Manual Rapping 19 High Hopper Levels | 14-Nov |
| U2. | 5 high hopper levels | 15-Nov |
| U2. | ESP Poor Performance DHP Challenges | 16-Nov |
| U2. | Sulphur Common Plant de-superheater replaced on the ring main. No sulphur flow to all units affecting SO3 Plant | 18-Nov |
| U2. | RHI Casing Outage | 19-Nov |
| U2. | ESP Manual Rapping | 21-Nov |
| U2. | Manual Rapping | 25-Nov |
| U2. | Attempted to take out RHO casing for repair Poor ESP Performance | 26-Nov |
| U2. | ESP Poor Performance and High Hopper Levels | 27-Nov |
| U3. | ESP Poor Performance SO3 Plant dosing lower SO3 plant has a cooling air fan defect De-energised rapping was not done last night due to high FAB levels | 02-Nov |
| U3. | ESP Poor Performance & Manual Rapping | 03-Nov |
| U3. | The RHI casing was taken for defects for repairs yesterday, however the casing was returned late due to the castell key missing on this unit SO3 plant off for repairs on cooling air fan, work abandoned due to fumes. | 05-Nov |
| U3. | ESP Manual Rapping | 06-Nov |
| U3. | ESP Poor performance | 09-Nov |

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| U3. | ESP Poor Performance DHP challenges Manual Rapping | 10-Nov |
| U3. | DHP Challenges Manual Rapping | 11-Nov |
| U3. | ESP Poor Performance and Manual Rapping | 13-Nov |
| U3. | ESP Poor Performance | 16-Nov |
| U3. | ESP Poor Performance and SO3 plant challenges and leaks | 17-Nov |
| U3. | Sulphur Common Plant de-superheater replaced on the ring main. No sulphur flow to all units affecting SO3 Plant | 18-Nov |
| U3. | ESP Manual Rapping SO3 plant off to burn off excess sulphur in the combustion chamber | 20-Nov |
| U3. | High Hopper Levels Manual Rapping SO3 Plant Still burning of sulphur, also defect flow indication | 22-Nov |
| U3. | SO3 Plant challenges Poor ESP Performance | 23-Nov |
| U3. | SO3 Plant challenges Poor ESP Performance | 24-Nov |
| U3. | ESP Poor Performance and Manual Rapping | 26-Nov |
| U3. | ESP Poor Performance and SO3 plant challenge | 27-Nov |
| U3. | ESP Poor Performance and SO3 plant challenge | 28-Nov |
| U3. | ESP Poor Performance and Manual Rapping | 30-Nov |
| U4. | SO3 plant off load for repairs ESP Poor Performance | 01-Nov |
| U4. | SO3 Plant Off load and returned to service later in the day ESP Poor Performance | 02-Nov |
| U4. | ESP Poor Performance and 5 high hopper levels | 09-Nov |
| U4. | Unit Shut Down For Boiler tube leak repairs | 10-Nov |
| U4. | Unit Light Up | 21-Nov |
| U4. | The unit synchronised on 2023/11/23 @ 18:24, the emissions has to be below the limit by 2023/11/26 @ 18:43 and remain below the limit until at least 2023/11/27 @ 23:59 | 23-Nov |
| U4. | Unit Tripped | 24-Nov |
| U4. | The unit synchronised on 2023/11/26 @ 12:09, the emissions to be below the limit by 2023/11/29 @ 12:09 and remain below the limit until at least 2023/11/30 @ 23:59 | 26-Nov |
| U4. | Unit Light Up | 27-Nov |
| U4. | Unit Shut Down for Boiler Tube Leak | 28-Nov |
| U5. | SO3 Plant Tripped | 10-Nov |
| U5. | So3 plant offline started Ramping up at 23:00 | 11-Nov |
| U5. | Sulphur Common Plant de-superheater replaced on the ring main. No sulphur flow to all units affecting SO3 Plant | 18-Nov |
| U5. | ESP Poor Performance | 19-Nov |
| U5. | ESP Manual Rapping | 24-Nov |
| U5. | ESP Poor Performance SO3 plant off for a period the flexible pipe which were in place broke and was repaired. The plant is back in service however , the flow meter needs to be replaced | 29-Nov |
| U6. | Manual Rapping | 03-Nov |
| U6. | Dust handling plant challenges 24 High hopper levels ESP poor Performance | 08-Nov |
| U6. | Dust handling plant challenges High hopper levels ESP poor Performance | 09-Nov |
| U6. | ESP Poor Performance DHP Challenges High Hopper Levels | 11-Nov |
| U6. | ESP Poor Performance and Manual Rapping | 14-Nov |
| U6. | ESP Poor Performance DHP challenges | 16-Nov |
| U6. | Sulphur Common Plant de-superheater replaced on the ring main. No sulphur flow to all units affecting SO3 Plant | 18-Nov |
| U6. | ESP Poor Performance | 19-Nov |
| U6. | RHO Casing outage attempted but failed as isolation could not be achieved. ESP Poor Performance | 22-Nov |
| U6. | Unit Shut Down For Boiler Tube Leak | 24-Nov |

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| U6. | The unit synchronised on 2023/11/27 @ 08:16, the emissions to be below the limit by 2023/11/30 @ 08:16 and rer | 27-Nov |
| U6. | Unit Light UpManual Rapping | 28-Nov |
| U6. | ESP Poor Performance | 29-Nov |