

Mr. Chakane Sibaya  
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Date:  
24 February 2023

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Ref. LRP02PLA000 \_0322/20221013

Dear Mr. Sibaya,

## **LETHABO POWER STATION EMISSION MONTHLY REPORT FOR SEPTEMBER 2022 RESUBMISSION**

Please find attached revised emissions report for the month of September 2022 for Lethabo Power Station.

The resubmission is made due to the Unit 5 gaseous correlation curve that expired in July 2022 and the data was backfitted with a valid correlation curve which was implemented in December 2022. As such, the monthly reports for this period were revised. Additionally, a revised emissions reporting tool were used to improve the integrity of reported data.

Also attached are the Ambient Air Quality Monitoring Report, Complaints Register and the Fugitive dust Fallout Monitoring Report for September 2022.

For additional information please do not hesitate to contact us.

Yours sincerely



Bongani Mvelase  
**GENERAL MANAGER**



Report


Lethabo Power Station

Report name: **Lethabo Power Station  
September 2022  
Emission Report**

Reference number: **LRP02PLA000\_0322/20221013**  
Document Type: **Report**  
Area of Applicability: **Environment**  
Report Date: **October-2022**  
Classification: **Controlled Disclosure**

Signatures:

**Compiled by:**

  
.....  
P Parag  
**System Engineer**


**Date:** 2023/02/17  
.....

**Verified by:**

  
.....  
W de Klerk  
**Senior Advisor Environment**

**Date:** 2023 02 20  
.....

**Reviewed by:**

pp   
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N Mazibuko  
**BPE Manager**

**Date:** 20/02/2023  
.....

**Reviewed by:**

  
.....  
C Govinden  
**PE Manager**


**Date:** 2023-02-21  
.....

**Reviewed by:**

  
.....  
L Nel  
**C&I Manager**

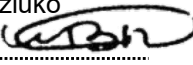
**Date:** 2023-02-21  
.....

**Reviewed by:**

  
.....  
M Hariram  
**Environmental Manager**

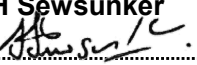
**Date:** 2023-02-22  
.....

**Approved by:**

Nathi Maziuko  
  
.....  
**Engineering Manager**

**Date:** 2023/02/23  
.....

**Approved by:**

H Sewsunker  
  
.....  
**Technical Plant Manager**

**Date:** 2023/02/23  
.....

**CONTROLLED DISCLOSURE**

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**LETHABO POWER STATION MONTHLY EMISSIONS REPORT**

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


**1. RAW MATERIALS AND PRODUCTS**

| Raw Materials and Products | Raw Material Type | Units | Maximum Permitted Consumption Rate | Consumption Rate Sep-2022 |
|----------------------------|-------------------|-------|------------------------------------|---------------------------|
|                            | Coal              | Tons  | 2 000 000                          | 1 317 961                 |
|                            | Fuel Oil          | Tons  | 1 700                              | 795.08                    |

| Production Rates | Product / By-Product Name | Units  | Maximum Production Capacity Permitted | Production Rate Sep-2022 |
|------------------|---------------------------|--------|---------------------------------------|--------------------------|
|                  | Energy                    | GWh    | 2743.2                                | 1 917.46                 |
|                  | Ash                       | Tons   | 770 000                               | 508 205.9                |
|                  | RE Ash                    | kg/MWh | Not Specified                         | 265.04                   |

**2. ENERGY SOURCE CHARACTERISTICS**

| Coal Characteristic | Units | Stipulated Range | Monthly Average Content |
|---------------------|-------|------------------|-------------------------|
|                     |       |                  |                         |
| Sulphur Content     | %     | 0.656 (Standard) | 0.700                   |
| Ash Content         | %     | 37.37 (Standard) | 38.560                  |

\*Please 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/Nm<sup>3</sup>)

| Associated Unit/Stack | PM  | SO <sub>2</sub> | 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 Sep-2022 |
|-----------------------|---|---------------------|
| Unit 1                | <i>Electrostatic Precipitator (ESP)</i> | 99.84%              |
| Unit 2                | <i>Electrostatic Precipitator (ESP)</i> | 99.89%              |
| Unit 3                | <i>Electrostatic Precipitator (ESP)</i> | 99.87%              |
| Unit 4                | <i>Electrostatic Precipitator (ESP)</i> | 99.67%              |
| Unit 5                | <i>Electrostatic Precipitator (ESP)</i> | 99.86%              |
| Unit 6                | <i>Electrostatic Precipitator (ESP)</i> | 99.81%              |

Note: ESP plant does not have bypass mode operation, hence plant 100% Utilised.

### 5. MONITOR RELIABILITY (%)

| Associated Unit/Stack | PM    | SO <sub>2</sub> | NO    |
|-----------------------|-------|-----------------|-------|
| Unit 1                | 98.7  | 100.0           | 100.0 |
| Unit 2                | 100.0 | 100.0           | 100.0 |
| Unit 3                | 92.9  | 99.6            | 100.0 |
| Unit 4                | 96.0  | 93.8            | 93.8  |
| Unit 5                | 99.3  | 94.9            | 94.9  |
| Unit 6                | 99.2  | 94.9            | 94.9  |

Note: NOx emissions is measured as NO in PPM. Final NOx value is expressed as total NO<sub>2</sub>

## 6. EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of September 2022

| Associated Unit/Stack | PM (tons)    | SO <sub>2</sub> (tons) | NO <sub>x</sub> (tons) |
|-----------------------|--------------|------------------------|------------------------|
| Unit 1                | 162.6        | 3 399                  | 1 894                  |
| Unit 2                | 89.2         | 2 796                  | 1 251                  |
| Unit 3                | 39.9         | 1 072                  | 419                    |
| Unit 4                | 244.1        | 2 678                  | 1 335                  |
| Unit 5                | 114.5        | 3284                   | 1271                   |
| Unit 6                | 169.7        | 3 424                  | 1 651                  |
| <b>SUM</b>            | <b>820.1</b> | <b>16 653</b>          | <b>7 822</b>           |

Table 6.2: Operating days in compliance to PM AEL Limit - September 2022

| Associated Unit/Stack | Normal     | Grace     | Section 30 | Contra-vention | Total Exceedance | Average PM (mg/Nm <sup>3</sup> ) |
|-----------------------|------------|-----------|------------|----------------|------------------|----------------------------------|
| Unit 1                | 27         | 3         | 0          | 0              | 3                | 81.0                             |
| Unit 2                | 27         | 1         | 0          | 0              | 1                | 52.7                             |
| Unit 3                | 9          | 1         | 0          | 0              | 1                | 75.4                             |
| Unit 4                | 17         | 7         | 0          | 0              | 7                | 159.9                            |
| Unit 5                | 25         | 5         | 0          | 0              | 5                | 61.6                             |
| Unit 6                | 29         | 1         | 0          | 0              | 1                | 85.6                             |
| <b>SUM</b>            | <b>134</b> | <b>18</b> | <b>0</b>   | <b>0</b>       | <b>18</b>        |                                  |

Table 6.3: Operating days in compliance to SO<sub>2</sub> AEL Limit - September 2022

| Associated Unit/Stack | Normal     | Grace    | Section 30 | Contra-vention | Total Exceedance | Average SO <sub>2</sub> (mg/Nm <sup>3</sup> ) |
|-----------------------|------------|----------|------------|----------------|------------------|---|
| Unit 1                | 30         | 0        | 0          | 0              | 0                | 1 568.0                                       |
| Unit 2                | 29         | 0        | 0          | 0              | 0                | 1 549.8                                       |
| Unit 3                | 11         | 0        | 0          | 0              | 0                | 1 708.0                                       |
| Unit 4                | 25         | 0        | 0          | 0              | 0                | 1 690.0                                       |
| Unit 5                | 30         | 0        | 0          | 0              | 0                | 1 746.9                                       |
| Unit 6                | 30         | 0        | 0          | 0              | 0                | 1 722.6                                       |
| <b>SUM</b>            | <b>155</b> | <b>0</b> | <b>0</b>   | <b>0</b>       | <b>0</b>         |   |

Table 6.4: Operating days in compliance to NOx AEL Limit - September 2022

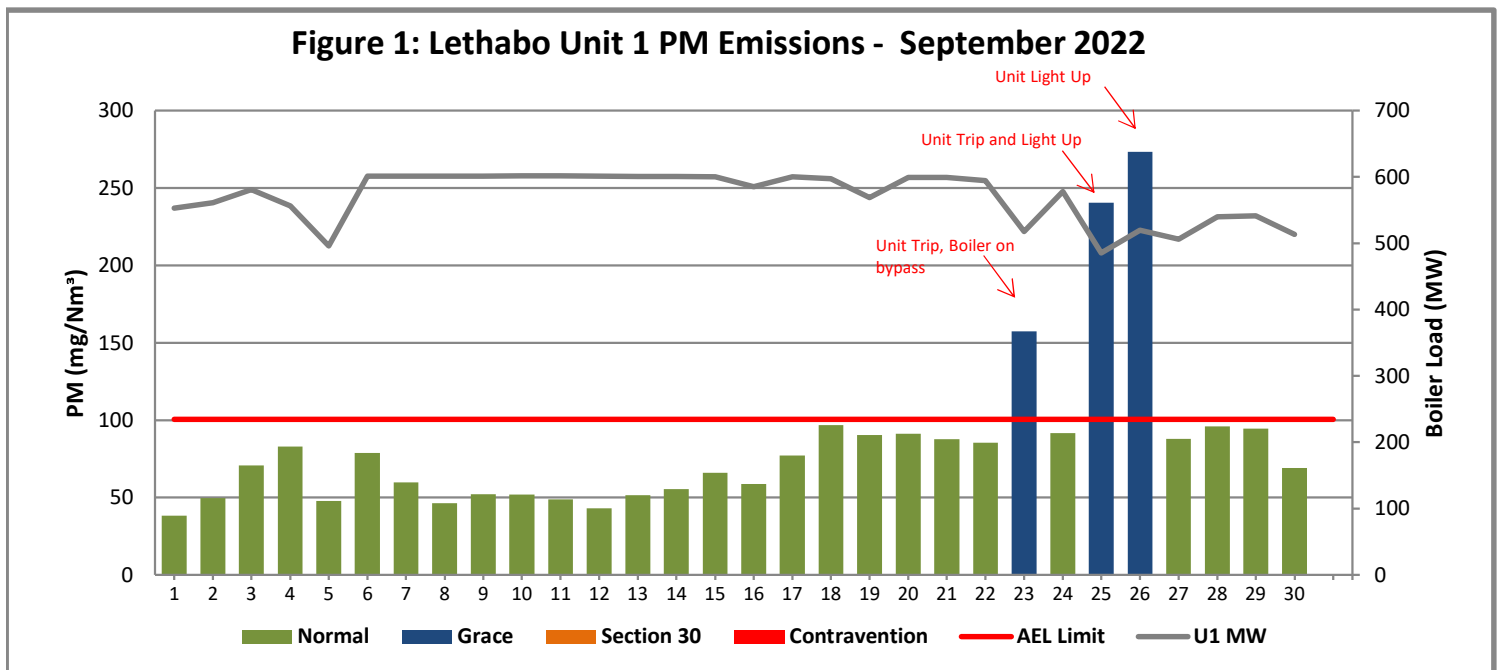
| Associated Unit/Stack | Normal     | Grace    | Section 30 | Contra-vention | Total Exceedance | Average NOx (mg/Nm <sup>3</sup> ) |
|-----------------------|------------|----------|------------|----------------|------------------|-----------------------------------|
| Unit 1                | 30         | 0        | 0          | 0              | 0                | 871.7                             |
| Unit 2                | 29         | 0        | 0          | 0              | 0                | 683.0                             |
| Unit 3                | 11         | 0        | 0          | 0              | 0                | 631.5                             |
| Unit 4                | 25         | 0        | 0          | 0              | 0                | 834.1                             |
| Unit 5                | 30         | 0        | 0          | 0              | 0                | 676.6                             |
| Unit 6                | 30         | 0        | 0          | 0              | 0                | 829.3                             |
| <b>SUM</b>            | <b>155</b> | <b>0</b> | <b>0</b>   | <b>0</b>       | <b>0</b>         |                                   |

Note: NOx emissions is measured as NO in PPM. Final NOx value is expressed as total NO<sub>2</sub>

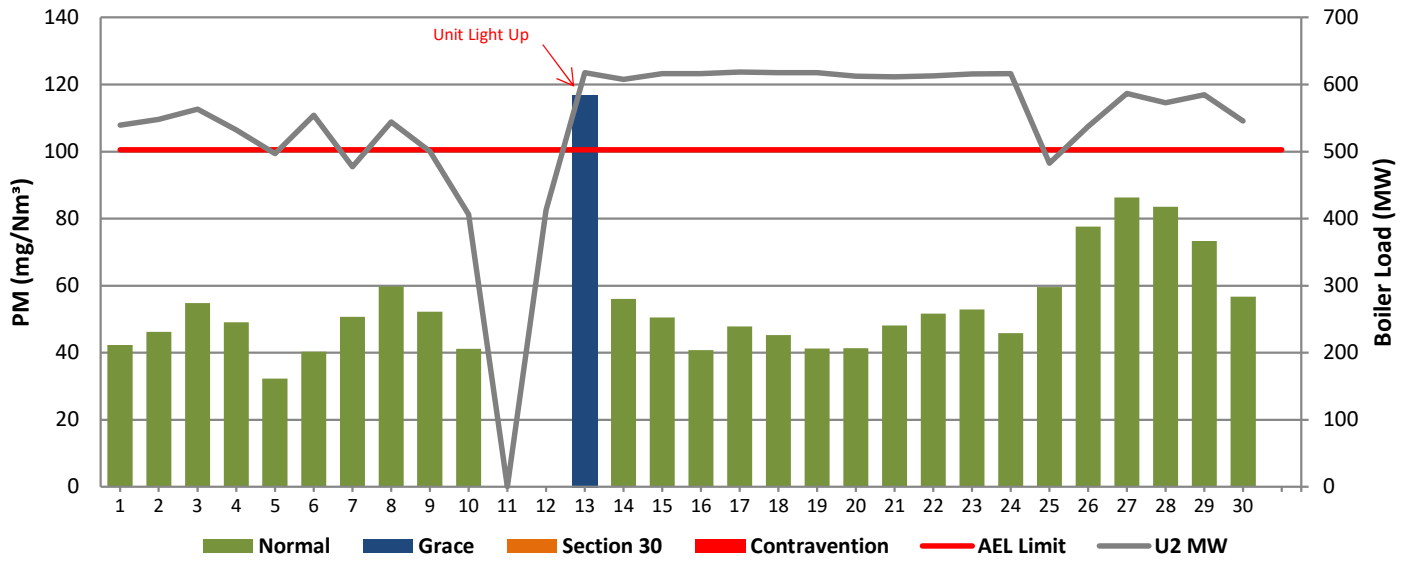
Table 6.5: Legend Description

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

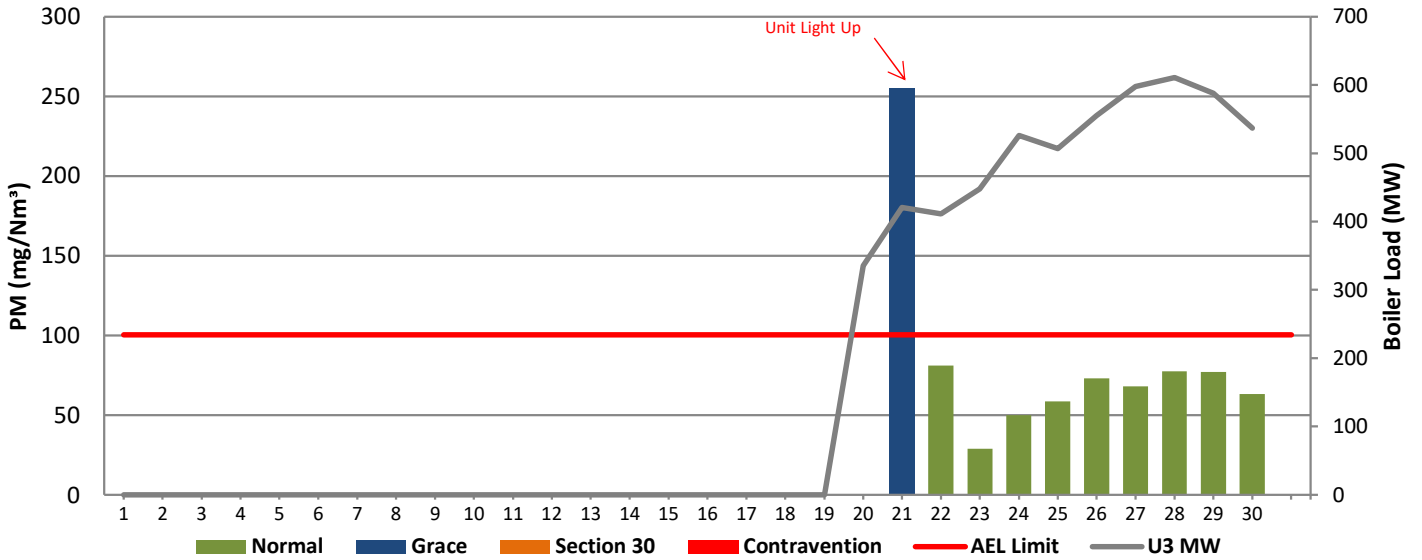
Figure 1: Lethabo Unit 1 PM Emissions - September 2022



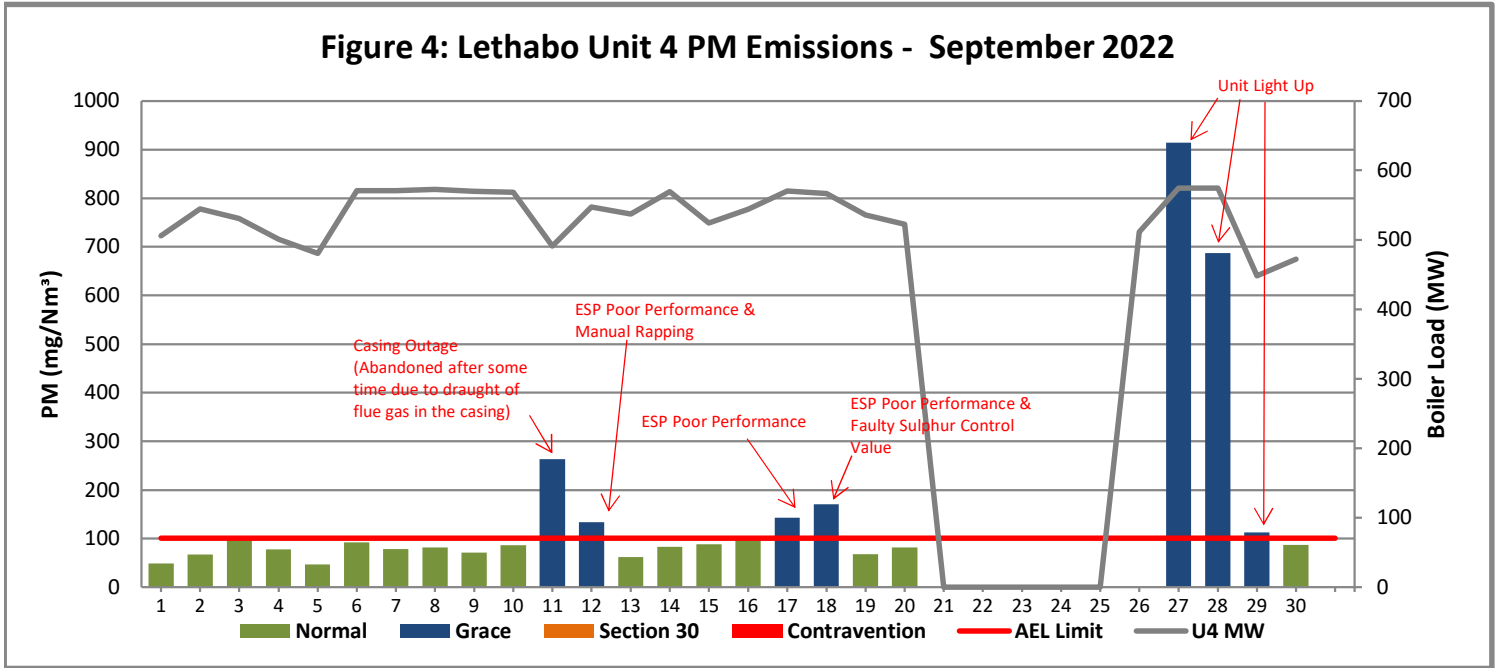
**Figure 2: Lethabo Unit 2 PM Emissions - September 2022**



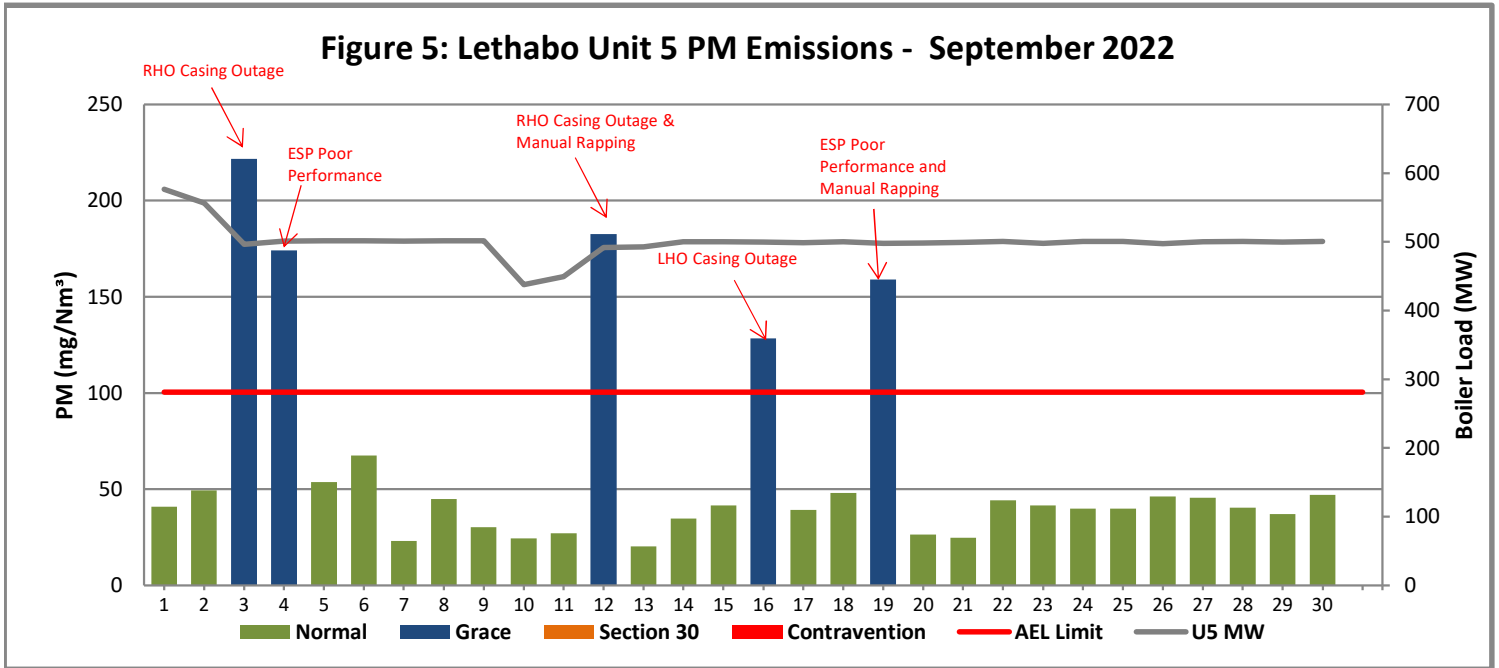
**Figure 3: Lethabo Unit 3 PM Emissions - September 2022**



**Figure 4: Lethabo Unit 4 PM Emissions - September 2022**

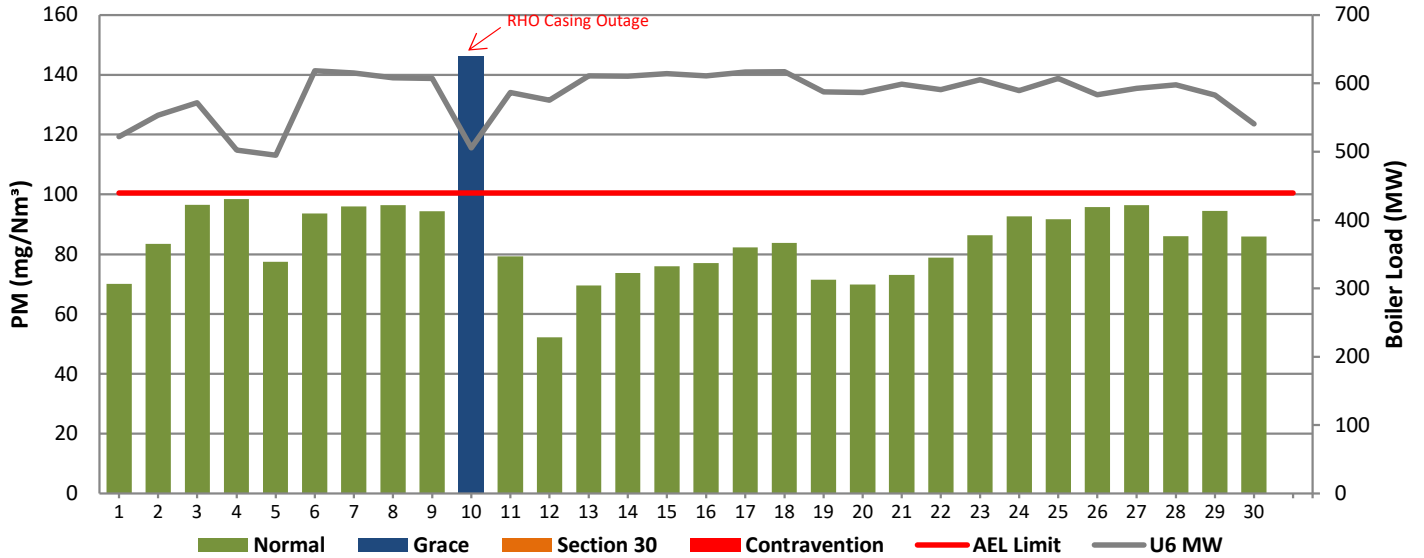


**Figure 5: Lethabo Unit 5 PM Emissions - September 2022**

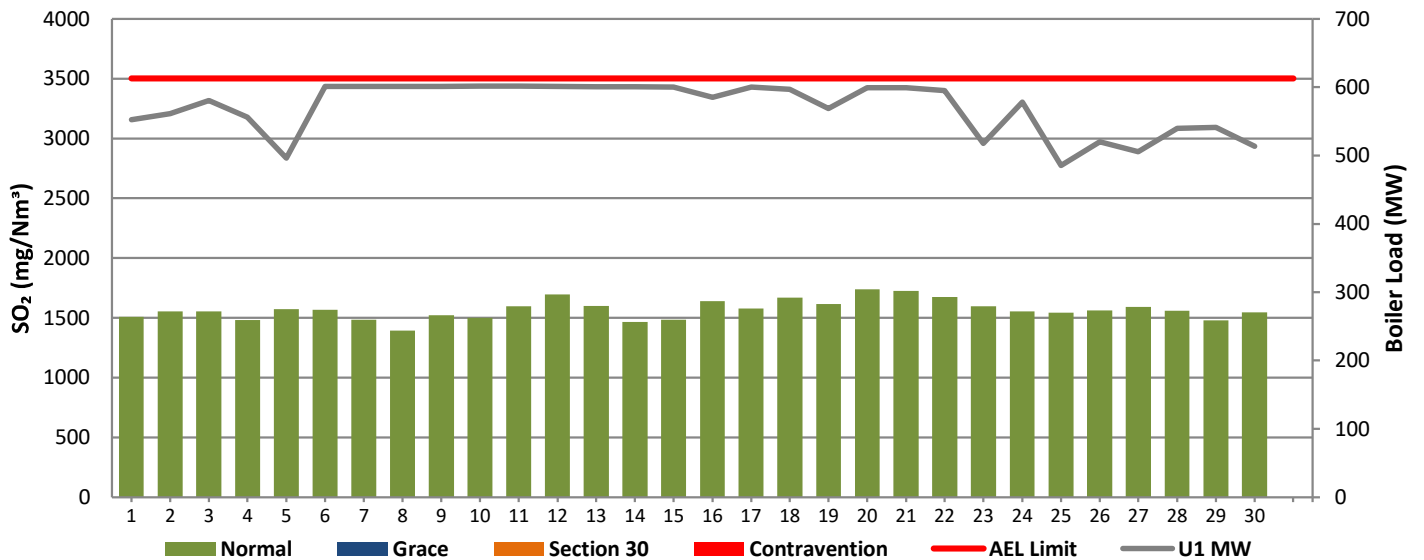




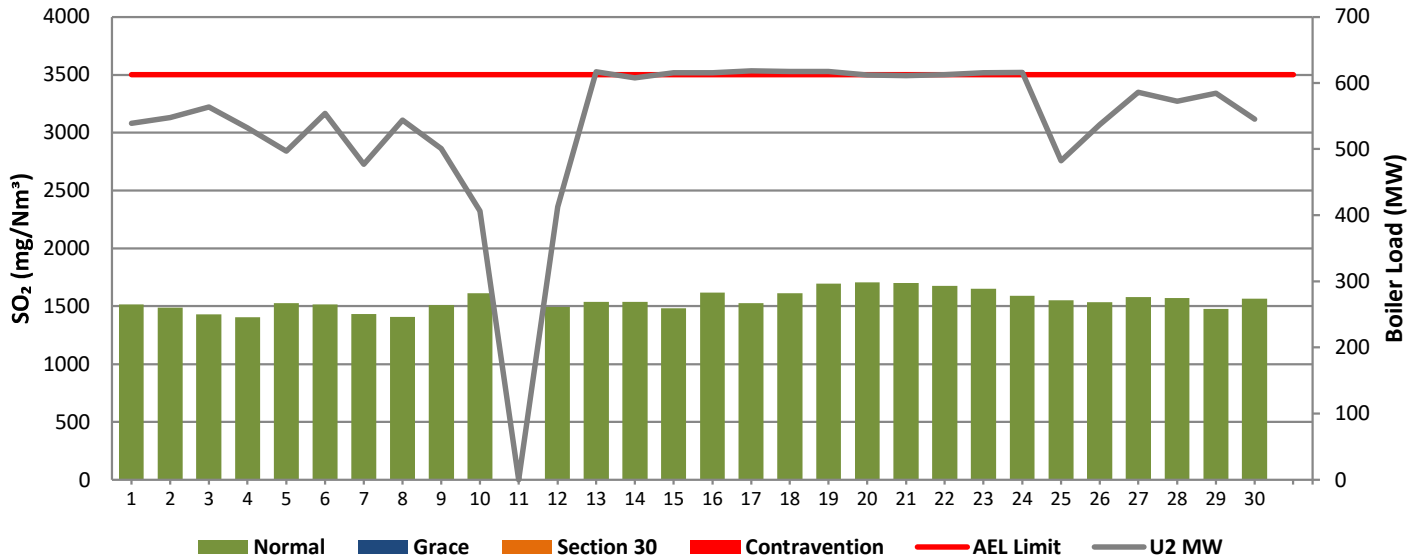
**Figure 6: Lethabo Unit 6 PM Emissions - September 2022**



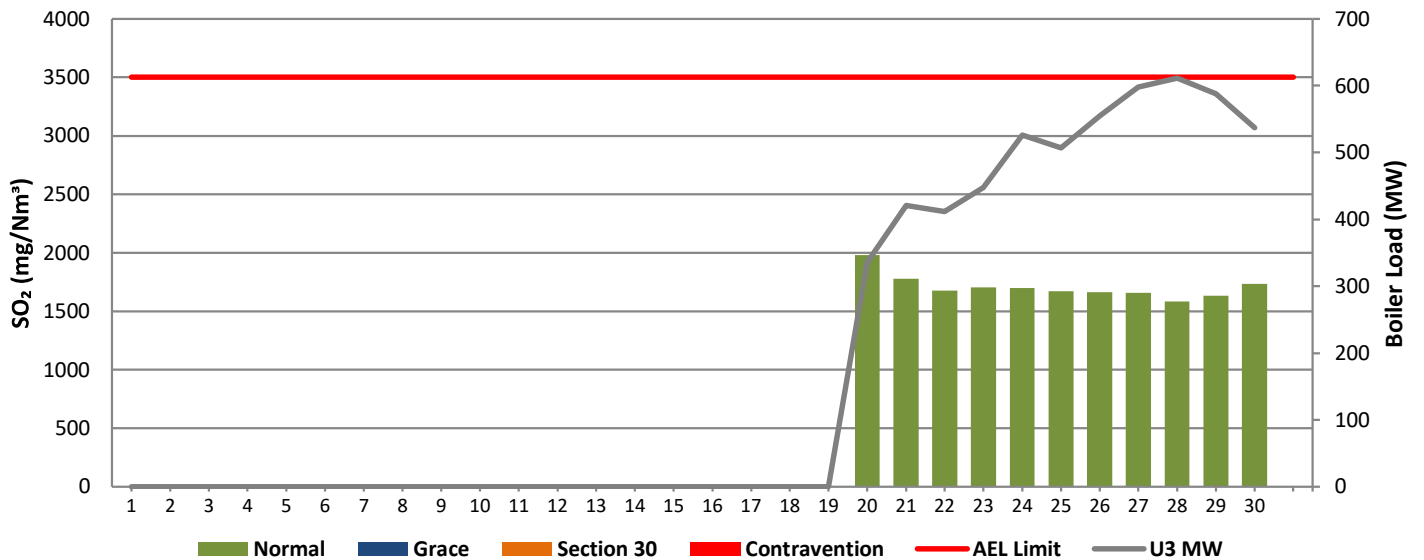
**Figure 7: Lethabo Unit 1 SO<sub>2</sub> Emissions - September 2022**



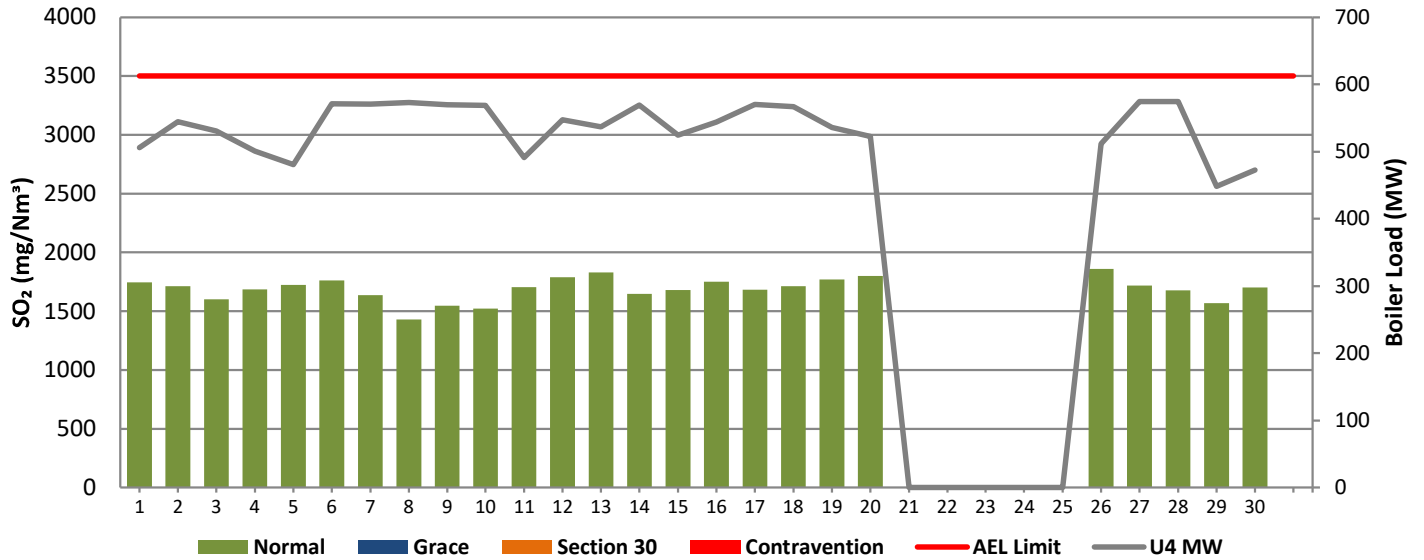
**Figure 8: Lethabo Unit 2 SO<sub>2</sub> Emissions - September 2022**



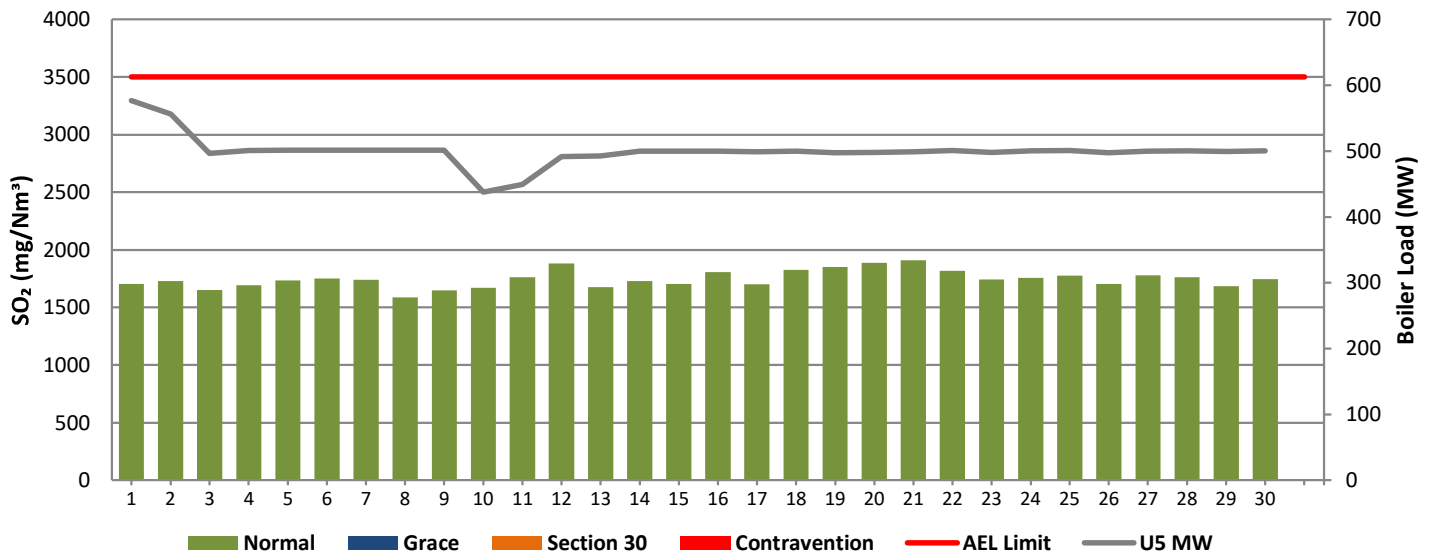
**Figure 9: Lethabo Unit 3 SO<sub>2</sub> Emissions - September 2022**



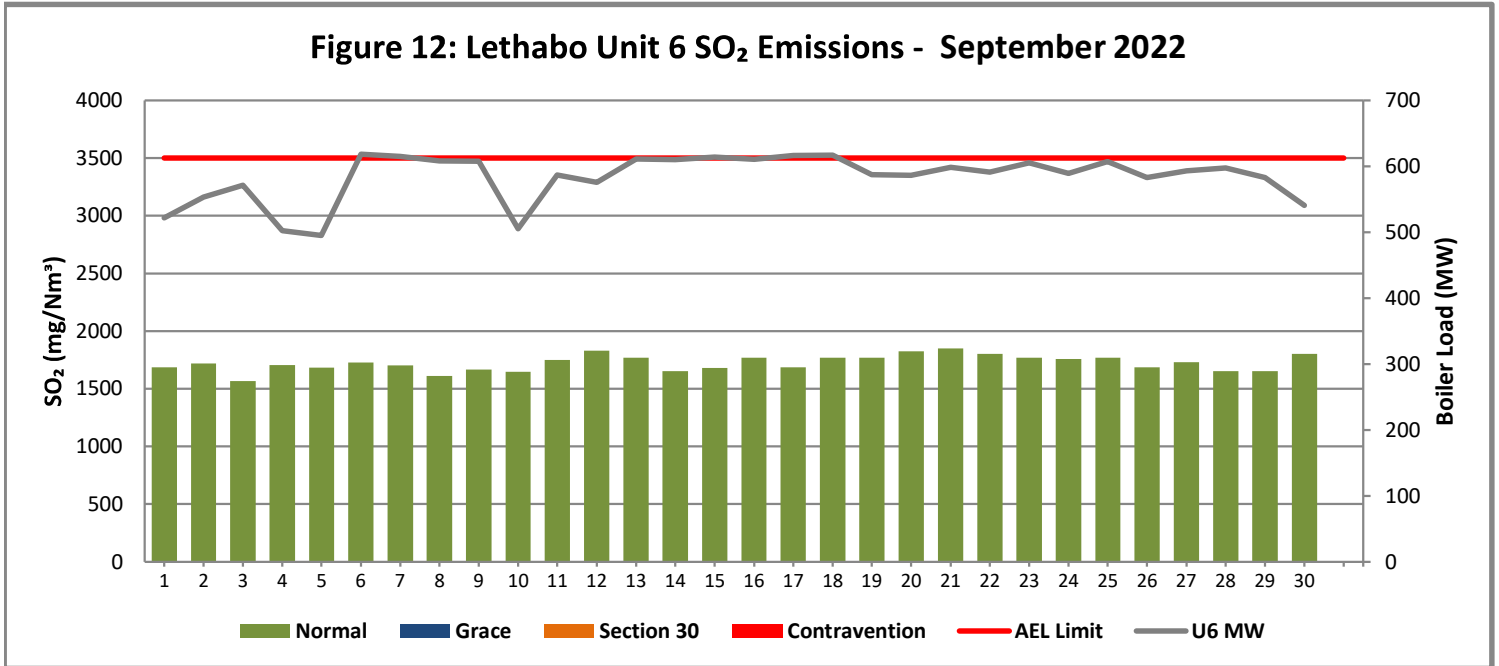
**Figure 10: Lethabo Unit 4 SO<sub>2</sub> Emissions - September 2022**



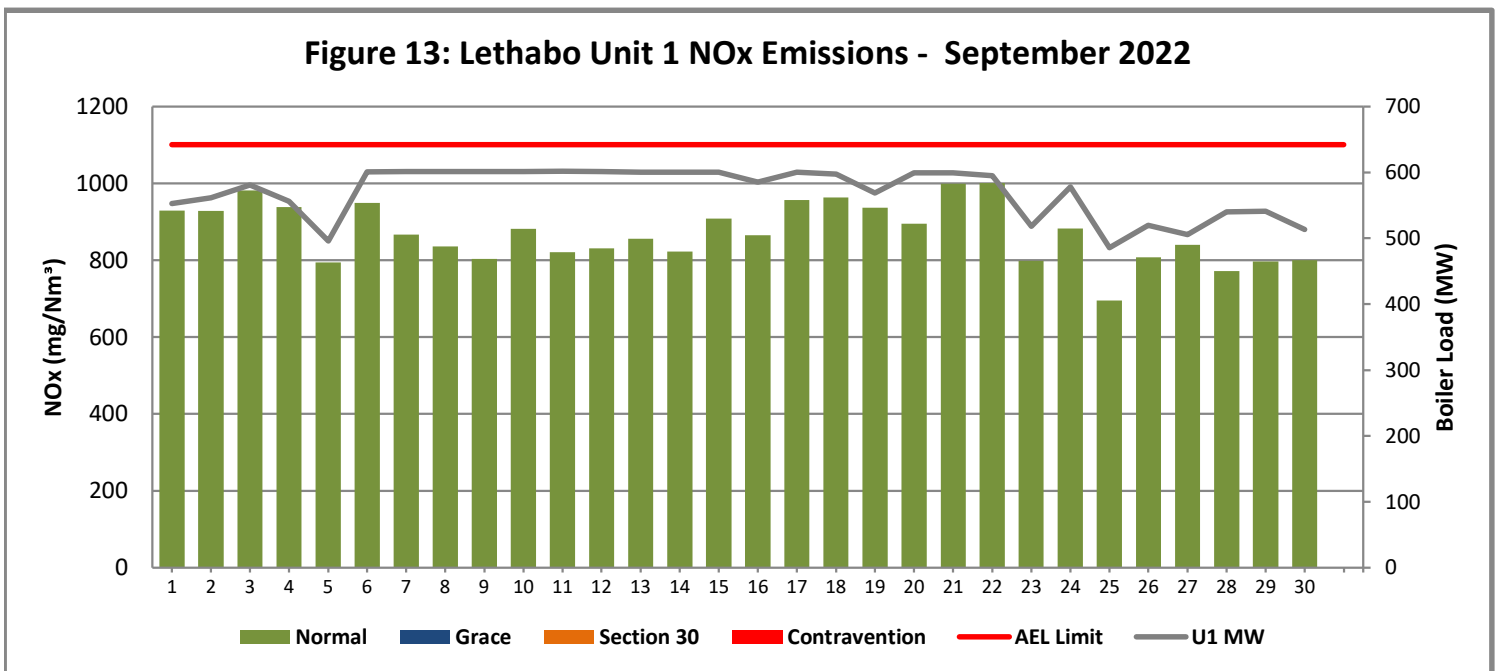
**Figure 11: Lethabo Unit 5 SO<sub>2</sub> Emissions - September 2022**



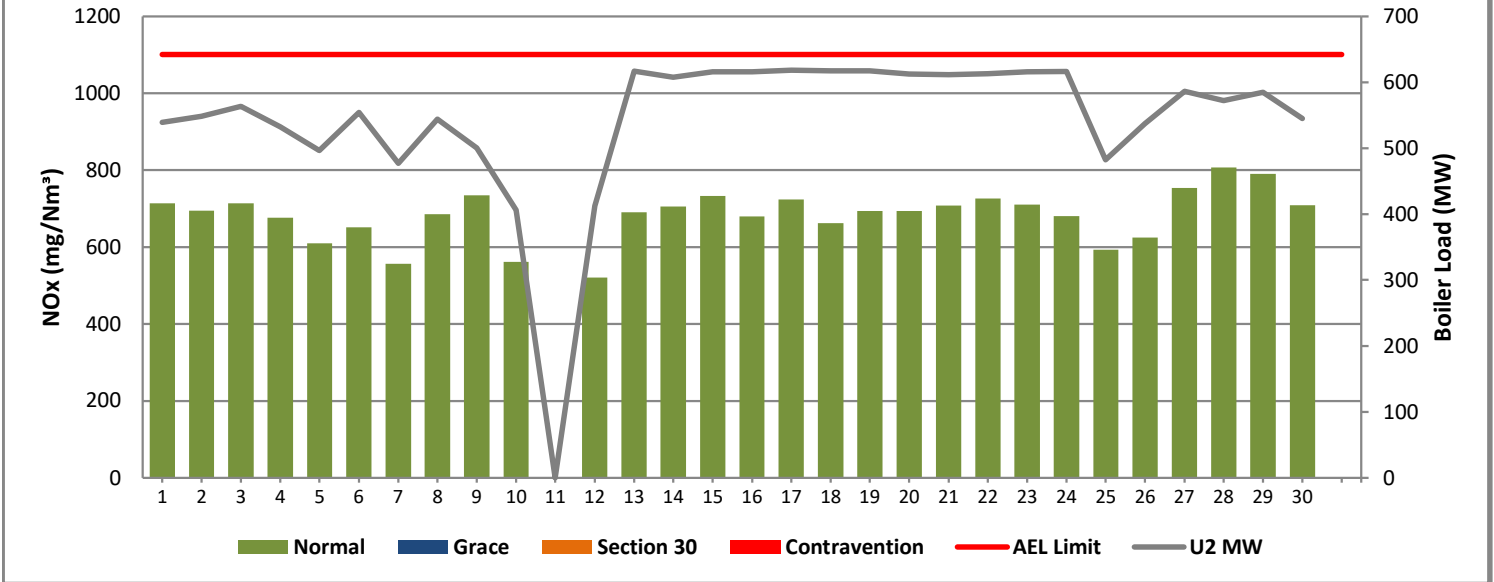
**Figure 12: Lethabo Unit 6 SO<sub>2</sub> Emissions - September 2022**



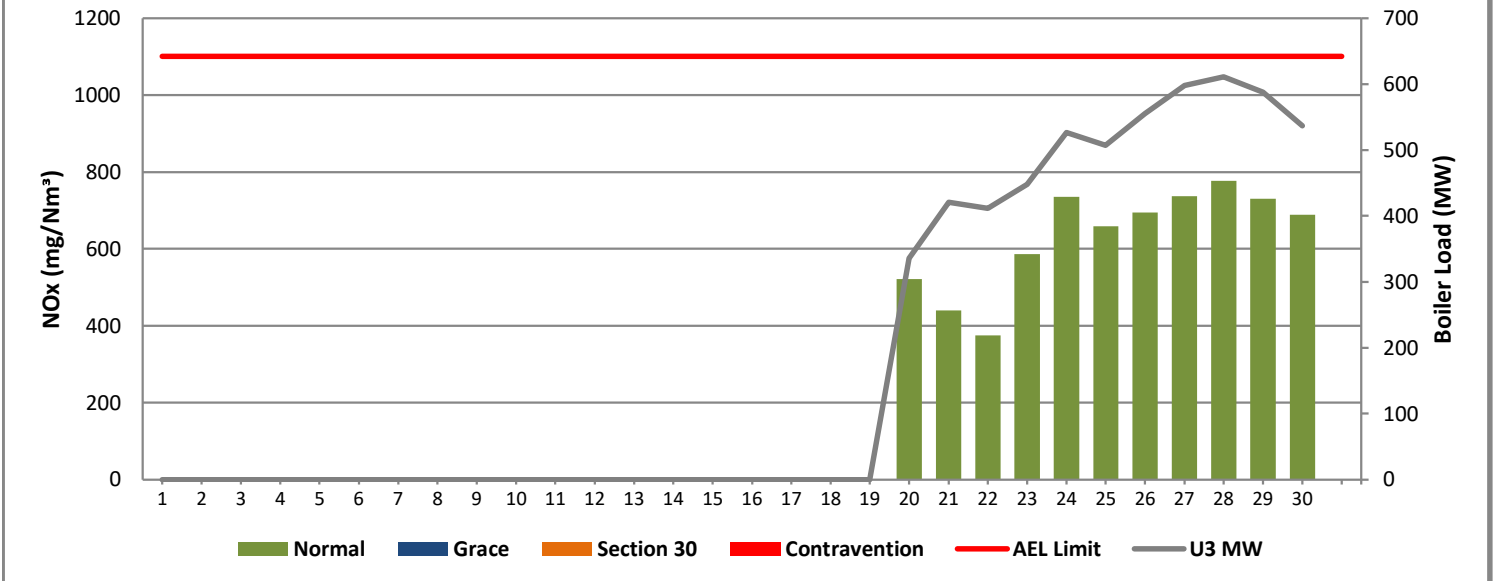
**Figure 13: Lethabo Unit 1 NO<sub>x</sub> Emissions - September 2022**



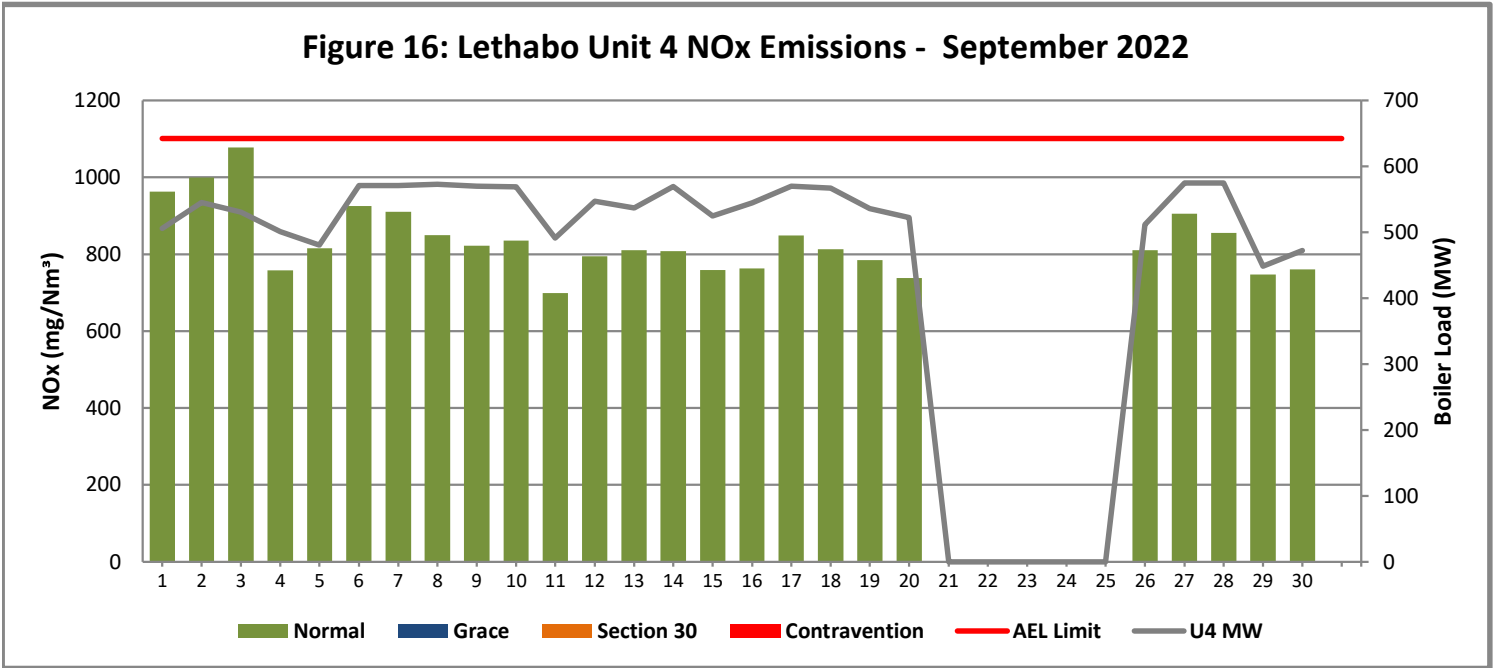
**Figure 14: Lethabo Unit 2 NOx Emissions - September 2022**



**Figure 15: Lethabo Unit 3 NOx Emissions - September 2022**



**Figure 16: Lethabo Unit 4 NOx Emissions - September 2022**



**Figure 17: Lethabo Unit 5 NOx Emissions - September 2022**

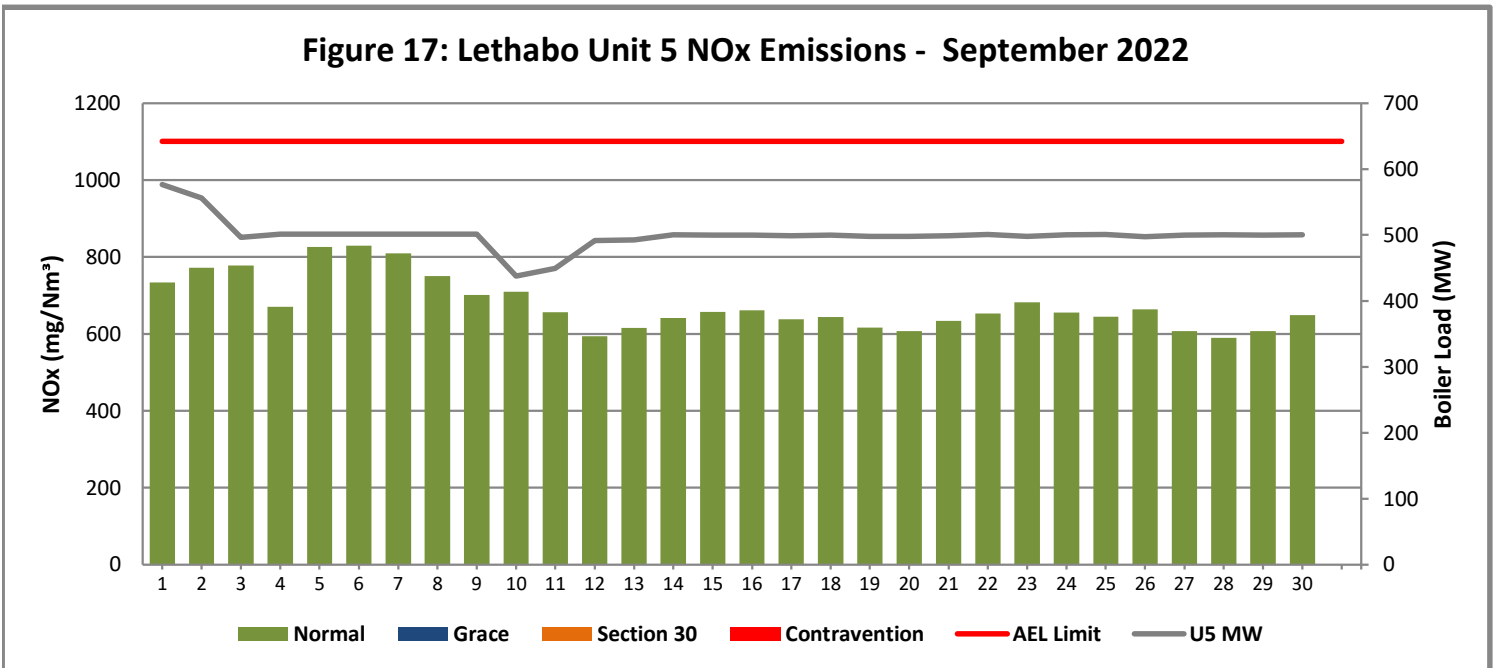
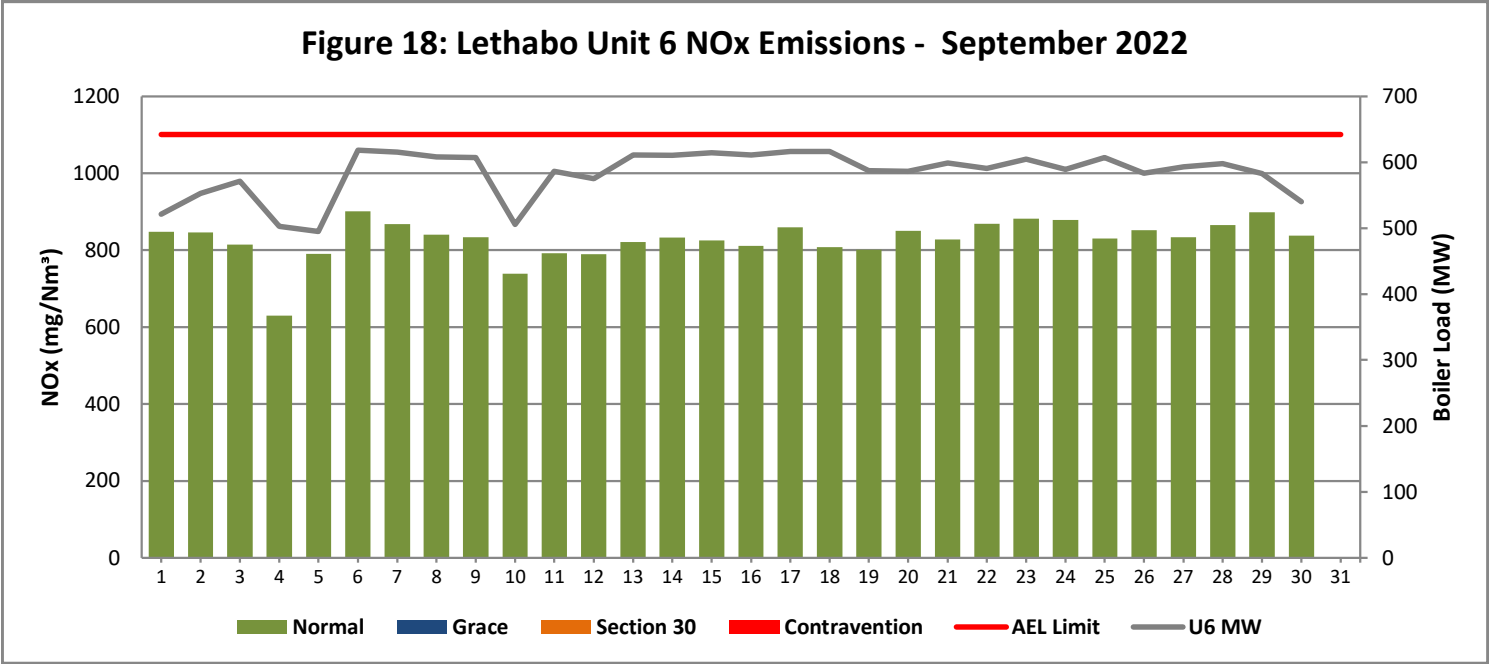


Figure 18: Lethabo Unit 6 NOx Emissions - September 2022



## 7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1: PM Start-up information for the month of September 2022

|   |  |                              |  |            |  |          |  |          |
|---|--|------------------------------|--|------------|--|----------|--|----------|
| <b>Unit No.1</b>                                | <i>Shunt capacitor bank tripped on the Rigi feeder</i> |                              | <i>Unit tripped due to Lethabo-Rigi 1 275kV feeder switching operation</i> |            |  |          |  |          |
| <b>Breaker Open (BO)</b>                        | 5:04 AM  | 2022/09/23                   | 12:34 AM   | 2022/09/25 |  |          |  |          |
| <b>Draught Group (DG) Shut Down (SD)</b>        | <i>DG did not trip or SD</i>                           | <i>DG did not trip or SD</i> | 3:45 AM  | 2022/09/25 |  |          |  |          |
| <b>BO to DG SD (duration)</b>                   | n/a  | DD:HH:MM                     | 00:03:11   | DD:HH:MM   |  | DD:HH:MM |  | DD:HH:MM |
| <b>Fires in time</b>                            |  |                              | 4:46 AM  | 2022/09/25 |  |          |  |          |
| <b>Synch. to Grid (or BC)</b>                   |  |                              | 5:35 AM  | 2022/09/25 |  |          |  |          |
| <b>Fires in to BC (duration)</b>                |  | DD:HH:MM                     | 00:00:49   | DD:HH:MM   |  | DD:HH:MM |  | DD:HH:MM |
| <b>Emissions below limit from BC (end date)</b> |  |                              | 5:00 PM  | 2022/09/27 |  |          |  |          |
| <b>Emissions below limit from BC (duration)</b> |  | DD:HH:MM                     | 02:11:25   | DD:HH:MM   |  | DD:HH:MM |  | DD:HH:MM |

|   |   |            |  |            |  |          |  |          |
|---|---|------------|--|------------|--|----------|--|----------|
| <b>Unit No.2</b>                                | <i>Main turbine steam ejector air v/v and hydra step leak repairs</i> |            | <i>Unit 2 tripped due to Lethabo-Rigi 1 275kV feeder switching operation</i> |            |  |          |  |          |
| <b>Breaker Open (BO)</b>                        | 5:34 AM   | 2022/09/10 | 12:36 AM   | 2022/09/25 |  |          |  |          |
| <b>Draught Group (DG) Shut Down (SD)</b>        | 5:30 AM   | 2022/09/11 | 1:47 AM  | 2022/09/25 |  |          |  |          |
| <b>BO to DG SD (duration)</b>                   | 00:23:56  | DD:HH:MM   | 00:01:11   | DD:HH:MM   |  | DD:HH:MM |  | DD:HH:MM |
| <b>Fires in time</b>                            | 12:01 PM  | 2022/09/12 | 9:03 AM  | 2022/09/25 |  |          |  |          |
| <b>Synch. to Grid (or BC)</b>                   | 2:49 PM   | 2022/09/12 | 9:13 AM  | 2022/09/25 |  |          |  |          |
| <b>Fires in to BC (duration)</b>                | 00:02:48  | DD:HH:MM   | 00:00:10   | DD:HH:MM   |  | DD:HH:MM |  | DD:HH:MM |
| <b>Emissions below limit from BC (end date)</b> | 2:00 AM   | 2022/09/14 | 12:45 AM   | 2022/09/25 |  |          |  |          |
| <b>Emissions below limit from BC (duration)</b> | 01:11:11  | DD:HH:MM   | #####  | DD:HH:MM   |  | DD:HH:MM |  | DD:HH:MM |



|   |                                       |            |  |          |  |          |          |
|---|---------------------------------------|------------|--|----------|--|----------|----------|
| <b>Unit No.3</b>                                | <i>Shut down for Interim repairs.</i> |            |  |          |  |          |          |
| <b>Breaker Open (BO)</b>                        |                                       |            |  |          |  |          |          |
| <b>Draught Group (DG) Shut Down (SD)</b>        |                                       |            |  |          |  |          |          |
| <b>BO to DG SD (duration)</b>                   |                                       | DD:HH:MM   |  | DD:HH:MM |  | DD:HH:MM | DD:HH:MM |
| <b>Fires in time</b>                            | 4:07 PM                               | 2022/09/20 |  |          |  |          |          |
| <b>Synch. to Grid (or BC)</b>                   | 5:00 PM                               | 2022/09/20 |  |          |  |          |          |
| <b>Fires in to BC (duration)</b>                | 00:00:53                              | DD:HH:MM   |  | DD:HH:MM |  | DD:HH:MM | DD:HH:MM |
| <b>Emissions below limit from BC (end date)</b> | 6:00 PM                               | 2022/09/22 |  |          |  |          |          |
| <b>Emissions below limit from BC (duration)</b> | 02:01:00                              | DD:HH:MM   |  | DD:HH:MM |  | DD:HH:MM | DD:HH:MM |

|   |                                  |            |  |          |  |          |          |
|---|----------------------------------|------------|--|----------|--|----------|----------|
| <b>Unit No.4</b>                                | <i>Boiler tube leak repairs.</i> |            |  |          |  |          |          |
| <b>Breaker Open (BO)</b>                        | 7:25 AM                          | 2022/09/20 |  |          |  |          |          |
| <b>Draught Group (DG) Shut Down (SD)</b>        | 8:16 PM                          | 2022/09/20 |  |          |  |          |          |
| <b>BO to DG SD (duration)</b>                   | 00:12:51                         | DD:HH:MM   |  | DD:HH:MM |  | DD:HH:MM | DD:HH:MM |
| <b>Fires in time</b>                            | 2:58 AM                          | 2022/09/26 |  |          |  |          |          |
| <b>Synch. to Grid (or BC)</b>                   | 4:45 AM                          | 2022/09/26 |  |          |  |          |          |
| <b>Fires in to BC (duration)</b>                | 00:01:47                         | DD:HH:MM   |  | DD:HH:MM |  | DD:HH:MM | DD:HH:MM |
| <b>Emissions below limit from BC (end date)</b> | 12:00 AM                         | 2022/09/30 |  |          |  |          |          |
| <b>Emissions below limit from BC (duration)</b> | 03:19:15                         | DD:HH:MM   |  | DD:HH:MM |  | DD:HH:MM | DD:HH:MM |

|   |   |          |   |          |  |          |  |          |
|---|---|----------|---|----------|--|----------|--|----------|
| <b>Unit No.5</b>                                | 0 |          | 0 |          |  |          |  |          |
| <b>Breaker Open (BO)</b>                        |   |          |   |          |  |          |  |          |
| <b>Draught Group (DG) Shut Down (SD)</b>        |   |          |   |          |  |          |  |          |
| <b>BO to DG SD (duration)</b>                   |   | DD:HH:MM |   | DD:HH:MM |  | DD:HH:MM |  | DD:HH:MM |
| <b>Fires in time</b>                            |   |          |   |          |  |          |  |          |
| <b>Synch. to Grid (or BC)</b>                   |   |          |   |          |  |          |  |          |
| <b>Fires in to BC (duration)</b>                |   | DD:HH:MM |   | DD:HH:MM |  | DD:HH:MM |  | DD:HH:MM |
| <b>Emissions below limit from BC (end date)</b> |   |          |   |          |  |          |  |          |
| <b>Emissions below limit from BC (duration)</b> |   | DD:HH:MM |   | DD:HH:MM |  | DD:HH:MM |  | DD:HH:MM |

|   |   |          |   |          |   |          |  |          |
|---|---|----------|---|----------|---|----------|--|----------|
| <b>Unit No.6</b>                                | 0 |          | 0 |          | 0 |          |  |          |
| <b>Breaker Open (BO)</b>                        |   |          |   |          |   |          |  |          |
| <b>Draught Group (DG) Shut Down (SD)</b>        |   |          |   |          |   |          |  |          |
| <b>BO to DG SD (duration)</b>                   |   | DD:HH:MM |   | DD:HH:MM |   | DD:HH:MM |  | DD:HH:MM |
| <b>Fires in time</b>                            |   |          |   |          |   |          |  |          |
| <b>Synch. to Grid (or BC)</b>                   |   |          |   |          |   |          |  |          |
| <b>Fires in to BC (duration)</b>                |   | DD:HH:MM |   | DD:HH:MM |   | DD:HH:MM |  | DD:HH:MM |
| <b>Emissions below limit from BC (end date)</b> |   |          |   |          |   |          |  |          |
| <b>Emissions below limit from BC (duration)</b> |   | 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 September 2022 in mg/Nm<sup>3</sup>

## 8. MAINTENANCE

|                               |                    |                    |                    |         |
|-------------------------------|--------------------|--------------------|--------------------|---------|
| <b>Unit 1</b>                 |                    |                    |                    |         |
| <b>Beginning of</b>           | 2022/09/24 23:54   | 2022/09/25 07:03   | 2022/09/25 23:59   |         |
| <b>Reason for Maintenance</b> | LHO Casing Repairs | LHO Casing Repairs | RHI Casing Repairs |         |
| <b>End (Time):</b>            | 2022/09/25 00:34   | 2022/09/25 23:59   | 2022/09/26 15:16   |         |
| <b>Duration</b>               | 0:40:00            | 16:56:00           | 15:17:00           | 0:00:00 |

|                               |         |         |         |         |
|-------------------------------|---------|---------|---------|---------|
| <b>Unit 2</b>                 |         |         |         |         |
| <b>Beginning of</b>           |         |         |         |         |
| <b>Reason for Maintenance</b> |         |         |         |         |
| <b>End (Time):</b>            |         |         |         |         |
| <b>Duration</b>               | 0:00:00 | 0:00:00 | 0:00:00 | 0:00:00 |

|                               |         |         |         |         |
|-------------------------------|---------|---------|---------|---------|
| <b>Unit 3</b>                 |         |         |         |         |
| <b>Beginning of</b>           |         |         |         |         |
| <b>Reason for Maintenance</b> |         |         |         |         |
| <b>End (Time):</b>            |         |         |         |         |
| <b>Duration</b>               | 0:00:00 | 0:00:00 | 0:00:00 | 0:00:00 |

|                               |                   |         |         |         |
|-------------------------------|-------------------|---------|---------|---------|
| <b>Unit 4</b>                 |                   |         |         |         |
| <b>Beginning of</b>           | 2022/09/10 23:33  |         |         |         |
| <b>Reason for Maintenance</b> | LHI Precip Casing |         |         |         |
| <b>End (Time):</b>            | 2022/09/11 20:29  |         |         |         |
| <b>Duration</b>               | 20:56:00          | 0:00:00 | 0:00:00 | 0:00:00 |

|                               |         |         |         |         |
|-------------------------------|---------|---------|---------|---------|
| <b>Unit 5</b>                 |         |         |         |         |
| <b>Beginning of</b>           |         |         |         |         |
| <b>Reason for Maintenance</b> |         |         |         |         |
| <b>End (Time):</b>            |         |         |         |         |
| <b>Duration</b>               | 0:00:00 | 0:00:00 | 0:00:00 | 0:00:00 |

|                               |                     |         |         |         |
|-------------------------------|---------------------|---------|---------|---------|
| <b>Unit 6</b>                 |                     |         |         |         |
| <b>Beginning of</b>           | 2022/09/10 01:40:00 |         |         |         |
| <b>Reason for Maintenance</b> | RHO Precip Casing   |         |         |         |
| <b>End (Time):</b>            | 2022/09/11 00:44:00 |         |         |         |
| <b>Duration</b>               | 23:04:00            | 0:00:00 | 0:00:00 | 0:00:00 |

## 9. GENERAL

### Unit 1 Monitor Reliability

27/09/2022: Monitor Reliability low (79.2%) due to variability greater than 10% between output 1 and output 2. Also max out during clean rapping.

### Unit 3 Monitor Reliability

21/09/2022: Monitor Reliability low (28.9%) due to unit light up.

### Unit 4 Monitor Reliability

27/09/2022: Monitor Reliability low (41.7%) due to monitor maxing out and unit light up.

28/08/2022: Monitor Reliability low (75%) due to monitor maxing out and unit light up.

### Unit 4:

Unit synchronised on 2022/09/26 @ 04h45, emissions was to be below the limit between 2022/09/29 @ 04h45 and remain below the limit until 2022/09/30 @ 23:59. The Unit did not incur a Section 30 as from 04:45 on 29/09/2022 to 23:55 29/09/2022 the emission average was 98.84 mg/Nm<sup>3</sup>. Furthermore, the emissions on 30/09/2022 was 86.71 mg/Nm<sup>3</sup>.

**ADDENDUM TO MONTHLY EMISSIONS REPORT**

**10. S30 INCIDENT OR LEGAL CONTRAVENTION REGISTER**

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

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

**11. PARTICULATE EMISSIONS**

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

| MONTH  | UNIT 1 | UNIT 2 | UNIT 3 | UNIT 4 | UNIT 5 | UNIT 6 | STATION |
|--------|--------|--------|--------|--------|--------|--------|---------|
| Oct-21 | 0.63   | 0.53   | 0.50   | 0.50   | 0.40   | OFF    | 0.51    |
| Nov-21 | 0.34   | 0.59   | 0.52   | 0.52   | 0.41   | 0.41   | 0.46    |
| Dec-21 | 0.39   | OFF    | 0.55   | 0.57   | 0.34   | 0.29   | 0.42    |
| Jan-22 | 0.37   | OFF    | 0.52   | 0.46   | 0.47   | 0.36   | 0.44    |
| Feb-22 | 0.47   | 1.06   | 0.62   | 0.44   | 0.38   | 0.59   | 0.56    |
| Mar-22 | 0.73   | 0.90   | 0.66   | 0.58   | 0.33   | 0.43   | 0.57    |
| Apr-22 | 0.60   | 0.61   | 0.53   | 0.45   | OFF    | 0.37   | 0.51    |
| May-22 | 0.55   | 0.59   | 0.33   | 0.19   | OFF    | 0.44   | 0.45    |
| Jun-22 | 0.55   | 0.63   | 0.37   | 0.77   | OFF    | 0.48   | 0.56    |
| Jul-22 | 0.38   | 0.44   | 0.42   | 0.58   | 0.11   | 0.37   | 0.43    |
| Aug-22 | 0.29   | 0.46   | 0.50   | 0.71   | 0.27   | 0.32   | 0.43    |
| Sep-22 | 0.40   | 0.24   | 0.31   | 0.79   | 0.32   | 0.40   | 0.41    |

**ADDENDUM TO MONTHLY EMISSIONS REPORT**

**12. DAILY EMISSIONS FIGURES**

**Final Dust Concentration (mg/Nm<sup>3</sup>)**

| Date   | U1  | U2  | U3  | U4   | U5  | U6  | Limit |
|--------|-----|-----|-----|------|-----|-----|-------|
| 31-Aug | 38  | 55  | OFF | 52   | 86  | 79  | 100   |
| 01-Sep | 38  | 42  | OFF | 48   | 44  | 70  | 100   |
| 02-Sep | 50  | 46  | OFF | 67   | 49  | 83  | 100   |
| 03-Sep | 71  | 55  | OFF | 98   | 222 | 96  | 100   |
| 04-Sep | 83  | 49  | OFF | 78   | 174 | 98  | 100   |
| 05-Sep | 48  | 32  | OFF | 47   | 54  | 77  | 100   |
| 06-Sep | 79  | 40  | OFF | 92   | 68  | 94  | 100   |
| 07-Sep | 60  | 51  | OFF | 78   | 23  | 96  | 100   |
| 08-Sep | 46  | 60  | OFF | 82   | 45  | 96  | 100   |
| 09-Sep | 52  | 52  | OFF | 71   | 30  | 94  | 100   |
| 10-Sep | 52  | 41  | OFF | 86   | 24  | 146 | 100   |
| 11-Sep | 49  | OFF | OFF | 263  | 27  | 79  | 100   |
| 12-Sep | 43  | OFF | OFF | 134  | 183 | 52  | 100   |
| 13-Sep | 51  | 50  | OFF | 62   | 20  | 70  | 100   |
| 14-Sep | 56  | 56  | OFF | 83   | 35  | 74  | 100   |
| 15-Sep | 66  | 51  | OFF | 88   | 42  | 76  | 100   |
| 16-Sep | 59  | 41  | OFF | 98   | 128 | 77  | 100   |
| 17-Sep | 77  | 48  | OFF | 143  | 39  | 82  | 100   |
| 18-Sep | 97  | 45  | OFF | 170  | 48  | 84  | 100   |
| 19-Sep | 90  | 41  | OFF | 67   | 159 | 71  | 100   |
| 20-Sep | 91  | 41  | OFF | 81   | 26  | 70  | 100   |
| 21-Sep | 88  | 48  | 177 | OFF  | 25  | 73  | 100   |
| 22-Sep | 85  | 52  | 81  | OFF  | 44  | 79  | 100   |
| 23-Sep | 157 | 53  | 29  | OFF  | 42  | 86  | 100   |
| 24-Sep | 92  | 46  | 50  | OFF  | 40  | 93  | 100   |
| 25-Sep | 118 | 46  | 59  | OFF  | 40  | 92  | 100   |
| 26-Sep | 285 | 91  | 73  | OFF  | 46  | 96  | 100   |
| 27-Sep | 88  | 86  | 68  | 1014 | 46  | 96  | 100   |
| 28-Sep | 96  | 83  | 78  | 687  | 40  | 86  | 100   |
| 29-Sep | 95  | 73  | 77  | 113  | 37  | 94  | 100   |
| 30-Sep | 69  | 57  | 63  | 87   | 47  | 86  | 100   |

**ADDENDUM TO MONTHLY EMISSIONS REPORT**

**Final SOx Concentration (mg/Nm<sup>3</sup>)**

| Date   | U1   | U2   | U3   | U4   | U5   | U6   | Limit |
|--------|------|------|------|------|------|------|-------|
| 31-Aug | 1425 | 1482 | OFF  | 1675 | 1707 | 1650 | 3500  |
| 01-Sep | 1510 | 1514 | OFF  | 1744 | 1703 | 1684 | 3500  |
| 02-Sep | 1553 | 1487 | OFF  | 1714 | 1729 | 1720 | 3500  |
| 03-Sep | 1553 | 1429 | OFF  | 1599 | 1652 | 1565 | 3500  |
| 04-Sep | 1479 | 1405 | OFF  | 1685 | 1692 | 1705 | 3500  |
| 05-Sep | 1572 | 1528 | OFF  | 1723 | 1735 | 1683 | 3500  |
| 06-Sep | 1567 | 1514 | OFF  | 1762 | 1752 | 1728 | 3500  |
| 07-Sep | 1483 | 1434 | OFF  | 1638 | 1740 | 1704 | 3500  |
| 08-Sep | 1391 | 1407 | OFF  | 1428 | 1587 | 1611 | 3500  |
| 09-Sep | 1522 | 1508 | OFF  | 1547 | 1648 | 1665 | 3500  |
| 10-Sep | 1502 | 1613 | OFF  | 1520 | 1670 | 1647 | 3500  |
| 11-Sep | 1597 | OFF  | OFF  | 1705 | 1763 | 1749 | 3500  |
| 12-Sep | 1696 | 1492 | OFF  | 1789 | 1882 | 1830 | 3500  |
| 13-Sep | 1600 | 1540 | OFF  | 1831 | 1675 | 1771 | 3500  |
| 14-Sep | 1466 | 1538 | OFF  | 1649 | 1729 | 1651 | 3500  |
| 15-Sep | 1483 | 1482 | OFF  | 1678 | 1703 | 1680 | 3500  |
| 16-Sep | 1639 | 1618 | OFF  | 1750 | 1806 | 1770 | 3500  |
| 17-Sep | 1580 | 1526 | OFF  | 1682 | 1699 | 1685 | 3500  |
| 18-Sep | 1667 | 1613 | OFF  | 1713 | 1826 | 1767 | 3500  |
| 19-Sep | 1615 | 1694 | OFF  | 1768 | 1850 | 1769 | 3500  |
| 20-Sep | 1738 | 1708 | 1979 | 1802 | 1887 | 1826 | 3500  |
| 21-Sep | 1724 | 1699 | 1779 | OFF  | 1910 | 1849 | 3500  |
| 22-Sep | 1673 | 1674 | 1678 | OFF  | 1817 | 1803 | 3500  |
| 23-Sep | 1598 | 1652 | 1704 | OFF  | 1744 | 1769 | 3500  |
| 24-Sep | 1554 | 1589 | 1700 | OFF  | 1757 | 1757 | 3500  |
| 25-Sep | 1544 | 1553 | 1673 | OFF  | 1776 | 1769 | 3500  |
| 26-Sep | 1560 | 1537 | 1664 | 1858 | 1702 | 1685 | 3500  |
| 27-Sep | 1593 | 1579 | 1659 | 1719 | 1779 | 1729 | 3500  |
| 28-Sep | 1558 | 1571 | 1585 | 1677 | 1762 | 1651 | 3500  |
| 29-Sep | 1479 | 1478 | 1633 | 1568 | 1685 | 1654 | 3500  |
| 30-Sep | 1545 | 1566 | 1733 | 1703 | 1746 | 1803 | 3500  |

**ADDENDUM TO MONTHLY EMISSIONS REPORT**

**Final NOx Concentration (mg/Nm<sup>3</sup>)**

| Date   | U1   | U2  | U3  | U4   | U5  | U6  | Limit |
|--------|------|-----|-----|------|-----|-----|-------|
| 31-Aug | 915  | 769 | OFF | 954  | 714 | 884 | 1100  |
| 01-Sep | 929  | 714 | OFF | 962  | 734 | 848 | 1100  |
| 02-Sep | 929  | 694 | OFF | 1000 | 772 | 846 | 1100  |
| 03-Sep | 982  | 714 | OFF | 1078 | 778 | 815 | 1100  |
| 04-Sep | 938  | 676 | OFF | 758  | 670 | 630 | 1100  |
| 05-Sep | 794  | 610 | OFF | 815  | 826 | 791 | 1100  |
| 06-Sep | 949  | 651 | OFF | 925  | 829 | 902 | 1100  |
| 07-Sep | 867  | 557 | OFF | 911  | 810 | 868 | 1100  |
| 08-Sep | 836  | 686 | OFF | 849  | 750 | 841 | 1100  |
| 09-Sep | 803  | 734 | OFF | 822  | 702 | 834 | 1100  |
| 10-Sep | 882  | 562 | OFF | 835  | 710 | 739 | 1100  |
| 11-Sep | 821  | OFF | OFF | 699  | 657 | 792 | 1100  |
| 12-Sep | 831  | 521 | OFF | 794  | 594 | 790 | 1100  |
| 13-Sep | 856  | 691 | OFF | 811  | 615 | 822 | 1100  |
| 14-Sep | 822  | 706 | OFF | 808  | 641 | 833 | 1100  |
| 15-Sep | 908  | 733 | OFF | 759  | 657 | 826 | 1100  |
| 16-Sep | 865  | 680 | OFF | 763  | 661 | 811 | 1100  |
| 17-Sep | 956  | 724 | OFF | 849  | 638 | 859 | 1100  |
| 18-Sep | 963  | 662 | OFF | 813  | 643 | 807 | 1100  |
| 19-Sep | 936  | 694 | OFF | 784  | 616 | 801 | 1100  |
| 20-Sep | 895  | 694 | 521 | 738  | 607 | 850 | 1100  |
| 21-Sep | 999  | 709 | 439 | OFF  | 634 | 828 | 1100  |
| 22-Sep | 1001 | 726 | 375 | OFF  | 653 | 869 | 1100  |
| 23-Sep | 798  | 711 | 587 | OFF  | 682 | 882 | 1100  |
| 24-Sep | 882  | 681 | 735 | OFF  | 655 | 879 | 1100  |
| 25-Sep | 695  | 593 | 660 | OFF  | 644 | 831 | 1100  |
| 26-Sep | 807  | 626 | 695 | 810  | 663 | 852 | 1100  |
| 27-Sep | 840  | 753 | 737 | 905  | 608 | 834 | 1100  |
| 28-Sep | 772  | 807 | 778 | 856  | 590 | 865 | 1100  |
| 29-Sep | 797  | 790 | 730 | 748  | 607 | 899 | 1100  |
| 30-Sep | 800  | 709 | 689 | 760  | 649 | 837 | 1100  |



**ADDENDUM TO MONTHLY EMISSIONS REPORT**

**13. AVAILABILITY**

ESP utilisation

| Availability |         |               |         |               |         |               |         |               |         |               |         |               |
|--------------|---------|---------------|---------|---------------|---------|---------------|---------|---------------|---------|---------------|---------|---------------|
| Month        | Unit 1  | Days Affected | Unit 2  | Days Affected | Unit 3  | Days Affected | Unit 4  | Days Affected | Unit 5  | Days Affected | Unit 6  | Days Affected |
| Oct-21       | 97.32%  | 3.3           | 99.36%  | 0.8           | 99.33%  | 0.8           | 100.00% | 0.0           | 100.00% | 0.0           | OFF     | OFF           |
| Nov-21       | 100.00% | 0.0           | 100.00% | 0.0           | 100.00% | 0.0           | 96.26%  | 0.6           | 95.79%  | 1.2           | 100.00% | 0.0           |
| Dec-21       | 99.44%  | 0.7           | OFF     | OFF           | 98.24%  | 2.2           | 98.02%  | 2.5           | 100.00% | 0.0           | 100.00% | 0.0           |
| Jan-22       | 98.50%  | 1.9           | OFF     | OFF           | 99.32%  | 0.8           | 100.00% | 0.0           | 100.00% | 0.0           | 100.00% | 0.0           |
| Feb-22       | 100.00% | 0.0           | 100.00% | 0.0           | 100.00% | 0.0           | 100.00% | 0.0           | 100.00% | 0.0           | 98.54%  | 1.6           |
| Mar-22       | 98.73%  | 1.6           | 98.70%  | 1.6           | 100.00% | 0.0           | 100.00% | 0.0           | 100.00% | 0.0           | 100.00% | 0.0           |
| Apr-22       | 100.00% | 0.0           | 98.63%  | 1.6           | 100.00% | 0.0           | 98.46%  | 1.9           | OFF     | OFF           | 100.00% | 0.0           |
| May-22       | 98.73%  | 1.6           | 98.13%  | 2.3           | 100.00% | 0.0           | 100.00% | 0.0           | OFF     | OFF           | 100.00% | 0.0           |
| Jun-22       | 98.33%  | 2.0           | 99.05%  | 1.1           | 100.00% | 0.0           | 100.00% | 0.0           | OFF     | OFF           | 97.53%  | 3.0           |
| Jul-22       | 99.37%  | 0.8           | 98.80%  | 1.5           | 100.00% | 0.0           | 97.23%  | 3.4           | 100.00% | 0.0           | 100.00% | 0.0           |
| Aug-22       | 99.42%  | 0.7           | 98.67%  | 1.6           | 100.00% | 0.0           | 99.32%  | 0.8           | 100.00% | 0.0           | 100.00% | 0.0           |
| Sep-22       | 98.86%  | 1.4           | 100.00% | 0.0           | 100.00% | 0.0           | 99.27%  | 0.9           | 98.44%  | 1.9           | 99.20%  | 1.0           |

SO<sub>3</sub> plant utilisation

| Availability |         |               |         |               |         |               |         |               |         |               |         |               |
|--------------|---------|---------------|---------|---------------|---------|---------------|---------|---------------|---------|---------------|---------|---------------|
| Month        | Unit 1  | Days Affected | Unit 2  | Days Affected | Unit 3  | Days Affected | Unit 4  | Days Affected | Unit 5  | Days Affected | Unit 6  | Days Affected |
| Oct-21       | 99.75%  | 0.1           | 100.00% | 0.0           | 100.00% | 0.0           | 100.00% | 0.0           | 100.00% | 0.0           | OFF     | OFF           |
| Nov-21       | 100.00% | 0.0           | 100.00% | 0.0           | 100.00% | 0.0           | 88.62%  | 2.5           | 100.00% | 0.0           | 90.27%  | 2.0           |
| Dec-21       | 97.72%  | 0.7           | OFF     | OFF           | 96.64%  | 1.0           | 97.18%  | 0.9           | 99.87%  | 0.0           | 100.00% | 0.0           |
| Jan-22       | 95.79%  | 1.3           | OFF     | OFF           | 83.10%  | 5.2           | 100.00% | 0.0           | 100.00% | 0.0           | 100.00% | 0.0           |
| Feb-22       | 99.40%  | 0.2           | 85.42%  | 4.1           | 97.47%  | 0.7           | 100.00% | 0.0           | 100.00% | 0.0           | 97.17%  | 0.8           |
| Mar-22       | 87.77%  | 3.8           | 100.00% | 0.0           | 100.00% | 0.0           | 87.23%  | 4.0           | 100.00% | 0.0           | 100.00% | 0.0           |
| Apr-22       | 99.72%  | 0.1           | 100.00% | 0.0           | 95.69%  | 1.3           | 98.33%  | 0.5           | OFF     | OFF           | 100.00% | 0.0           |
| May-22       | 98.66%  | 0.4           | 100.00% | 0.0           | 97.45%  | 0.8           | 98.92%  | 0.3           | OFF     | OFF           | 96.51%  | 1.1           |
| Jun-22       | 97.78%  | 0.7           | 96.25%  | 1.1           | 98.19%  | 0.5           | 46.67%  | 16.0          | OFF     | OFF           | 98.06%  | 0.6           |
| Jul-22       | 100.00% | 0.0           | 100.00% | 0.0           | 100.00% | 0.0           | 100.00% | 0.0           | 86.67%  | 4.0           | 98.61%  | 0.4           |
| Aug-22       | 98.52%  | 0.5           | 100.00% | 0.0           | 96.51%  | 1.1           | 65.19%  | 10.8          | 99.33%  | 0.2           | 100.00% | 0.0           |
| Sep-22       | 100.00% | 0.0           | 99.58%  | 0.1           | 100.00% | 0.0           | 94.27%  | 1.7           | 97.92%  | 0.6           | 100.00% | 0.0           |

**ADDENDUM TO MONTHLY EMISSIONS REPORT**

Particulate Emission Monitors

| Availability |        |         |         |         |         |         |
|--------------|--------|---------|---------|---------|---------|---------|
|              | Unit 1 | Unit 2  | Unit 3  | Unit 4  | Unit 5  | Unit 6  |
| Oct-21       | 95.51% | 99.06%  | 99.46%  | 99.87%  | 99.87%  | OFF     |
| Nov-21       | 99.60% | 99.54%  | 99.86%  | 99.00%  | 98.61%  | 99.80%  |
| Dec-21       | 98.39% | OFF     | 96.12%  | 96.81%  | 99.87%  | 100.00% |
| Jan-22       | 98.66% | OFF     | 99.19%  | 99.87%  | 99.70%  | 100.00% |
| Feb-22       | 98.28% | 95.56%  | 99.67%  | 100.00% | 99.85%  | 99.40%  |
| Mar-22       | 94.33% | 95.83%  | 95.56%  | 99.67%  | 98.38%  | 98.79%  |
| Apr-22       | 96.20% | 94.58%  | 98.99%  | 99.57%  | OFF     | 100.00% |
| May-22       | 97.32% | 99.06%  | 99.65%  | 99.72%  | OFF     | 100.00% |
| Jun-22       | 90.56% | 97.50%  | 97.33%  | 98.56%  | OFF     | 98.71%  |
| Jul-22       | 98.92% | 98.79%  | 100.00% | 91.10%  | 100.00% | 97.54%  |
| Aug-22       | 99.85% | 96.77%  | 100.00% | 96.24%  | 98.61%  | 100.00% |
| Sep-22       | 98.69% | 100.00% | 92.89%  | 96.01%  | 99.31%  | 99.17%  |

## Gaseous Emission Monitors

| Availability |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |
|--------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|              | Unit 1          |                 | Unit 2          |                 | Unit 3          |                 | Unit 4          |                 | Unit 5          |                 | Unit 6          |                 |
| Month        | SO <sub>x</sub> | NO <sub>x</sub> | SO <sub>x</sub> | NO <sub>x</sub> | SO <sub>x</sub> | NO <sub>x</sub> | SO <sub>x</sub> | NO <sub>x</sub> | SO <sub>x</sub> | NO <sub>x</sub> | SO <sub>x</sub> | NO <sub>x</sub> |
| Oct-21       | 99.52%          | 99.36%          | 99.73%          | 99.87%          | 99.87%          | 99.87%          | 99.73%          | 99.87%          | 100.00%         | 100.00%         | OFF             | OFF             |
| Nov-21       | 99.62%          | 99.81%          | 94.79%          | 94.79%          | 100.00%         | 99.86%          | 99.84%          | 99.84%          | 100.00%         | 100.00%         | 99.81%          | 99.81%          |
| Dec-21       | 97.85%          | 97.85%          | OFF             | OFF             | 91.28%          | 91.42%          | 100.00%         | 99.87%          | 100.00%         | 100.00%         | 99.87%          | 100.00%         |
| Jan-22       | 99.87%          | 100.00%         | 0.00%           | 0.00%           | 99.87%          | 100.00%         | 99.87%          | 100.00%         | 99.72%          | 100.00%         | 99.48%          | 99.48%          |
| Feb-22       | 100.00%         | 100.00%         | 100.00%         | 100.00%         | 99.85%          | 100.00%         | 99.40%          | 99.40%          | 99.26%          | 99.40%          | 99.55%          | 99.55%          |
| Mar-22       | 98.30%          | 98.30%          | 98.92%          | 99.06%          | 99.06%          | 99.33%          | 99.84%          | 100.00%         | 98.88%          | 98.88%          | 98.79%          | 98.66%          |
| Apr-22       | 99.31%          | 99.31%          | 99.58%          | 99.86%          | 100.00%         | 99.86%          | 99.44%          | 99.86%          | OFF             | OFF             | 100.00%         | 100.00%         |
| May-22       | 99.71%          | 99.86%          | 99.60%          | 99.60%          | 99.83%          | 99.83%          | 90.93%          | 91.16%          | OFF             | OFF             | 99.83%          | 99.83%          |
| Jun-22       | 99.86%          | 99.86%          | 99.86%          | 99.86%          | 100.00%         | 100.00%         | 98.92%          | 99.07%          | OFF             | OFF             | 98.89%          | 99.17%          |
| Jul-22       | 100.00%         | 100.00%         | 100.00%         | 100.00%         | 100.00%         | 100.00%         | 99.87%          | 100.00%         | 100.00%         | 100.00%         | 98.99%          | 98.85%          |
| Aug-22       | 100.00%         | 100.00%         | 100.00%         | 100.00%         | 99.83%          | 99.83%          | 99.87%          | 99.73%          | 99.70%          | 99.57%          | 99.60%          | 99.73%          |
| Sep-22       | 100.00%         | 100.00%         | 100.00%         | 100.00%         | 99.62%          | 100.00%         | 93.83%          | 93.83%          | 94.86%          | 94.86%          | 94.86%          | 94.86%          |

| Oxygen Monitor Availability |         |         |         |         |         |         |
|-----------------------------|---------|---------|---------|---------|---------|---------|
|                             | Unit 1  | Unit 2  | Unit 3  | Unit 4  | Unit 5  | Unit 6  |
| Oct-21                      | 99.84%  | 99.87%  | 97.04%  | 99.87%  | 99.73%  | OFF     |
| Nov-21                      | 99.05%  | 89.58%  | 98.06%  | 100.00% | 99.86%  | 99.81%  |
| Dec-21                      | 97.58%  | OFF     | 91.28%  | 94.76%  | 99.86%  | 100.00% |
| Jan-22                      | 100.00% | OFF     | 99.87%  | 98.25%  | 99.17%  | 99.22%  |
| Feb-22                      | 100.00% | 100.00% | 98.74%  | 99.55%  | 99.40%  | 99.55%  |
| Mar-22                      | 98.30%  | 98.92%  | 99.19%  | 99.84%  | 98.88%  | 98.52%  |
| Apr-22                      | 99.13%  | 100.00% | 100.00% | 81.67%  | OFF     | 99.72%  |
| May-22                      | 100.00% | 99.73%  | 99.83%  | 99.75%  | OFF     | 99.83%  |
| Jun-22                      | 99.72%  | 97.22%  | 99.52%  | 98.77%  | OFF     | 98.75%  |
| Jul-22                      | 99.87%  | 99.87%  | 99.46%  | 99.87%  | 100.00% | 98.99%  |
| Aug-22                      | 99.73%  | 99.60%  | 99.67%  | 99.73%  | 99.40%  | 99.60%  |
| Sep-22                      | 99.72%  | 99.71%  | 99.62%  | 93.67%  | 94.72%  | 94.44%  |

### ADDENDUM TO MONTHLY EMISSIONS REPORT

#### 14. EFFICIENCY

| ESP Efficiency (%) |         |         |         |         |         |         |
|--------------------|---------|---------|---------|---------|---------|---------|
|                    | Unit 1  | Unit 2  | Unit 3  | Unit 4  | Unit 5  | Unit 6  |
| Oct-21             | 99.752% | 99.776% | 99.789% | 99.800% | 99.823% | OFF     |
| Nov-21             | 99.870% | 99.743% | 99.780% | 99.798% | 99.820% | 99.831% |
| Dec-21             | 99.834% | OFF     | 99.744% | 99.757% | 99.837% | 99.864% |
| Jan-22             | 99.845% | OFF     | 99.765% | 99.807% | 99.788% | 99.834% |
| Feb-22             | 99.825% | 99.561% | 99.743% | 99.823% | 99.839% | 99.745% |
| Mar-22             | 99.725% | 99.623% | 99.726% | 99.768% | 99.862% | 99.816% |
| Apr-22             | 99.778% | 99.748% | 99.786% | 99.822% | OFF     | 99.842% |
| May-22             | 99.672% | 99.488% | 99.880% | 99.961% | OFF     | 99.844% |
| Jun-22             | 99.769% | 99.712% | 99.833% | 99.657% | OFF     | 99.778% |
| Jul-22             | 99.850% | 99.800% | 99.818% | 99.753% | 99.955% | 99.832% |
| Aug-22             | 99.878% | 99.780% | 99.768% | 99.680% | 99.872% | 99.846% |
| Sep-22             | 99.836% | 99.888% | 99.868% | 99.666% | 99.863% | 99.815% |

15. REMARKS

| UNIT | MWLOSS | REASON  | ACTUALSTARTDATE     | ACTUALENDDATE       |
|------|--------|---|---------------------|---------------------|
| 1    | 30     | EF: High stack emissions  | 2022/09/18 21:46:00 | 2022/09/18 23:54:00 |
| 1    | 593    | Shunt capacitor bank tripped on the Rigi feeder                       | 2022/09/23 05:04:00 | 2022/09/23 08:12:00 |
| 1    | 297    | System Generated Ramp Event for Event id : 1740341                    | 2022/09/23 08:12:00 | 2022/09/23 09:42:00 |
| 1    | 60     | LHO Precips casing.   | 2022/09/24 23:54:00 | 2022/09/25 00:34:00 |
| 1    | 593    | Unit tripped due to Lethabo-Rigi 1 275kV feeder switching operation   | 2022/09/25 00:34:00 | 2022/09/25 05:35:00 |
| 1    | 297    | System Generated Ramp Event for Event id : 1741820                    | 2022/09/25 05:35:00 | 2022/09/25 07:05:00 |
| 1    | 118    | AM: LHO precip casing repairs   | 2022/09/25 07:03:00 | 2022/09/25 23:59:00 |
| 1    | 118    | RHI Precips casing  | 2022/09/25 23:59:00 | 2022/09/26 15:16:00 |
| 1    | 97     | High stack emissions.   | 2022/09/27 10:26:00 | 2022/09/27 16:21:00 |
| 1    | 51     | High stack emissions.   | 2022/09/27 16:21:00 | 2022/09/28 00:46:00 |
| 1    | 50     | EF:High stack emissions   | 2022/09/28 12:12:00 | 2022/09/28 16:02:00 |
| 2    | 593    | Main turbine steam ejector air v/v and hydra step leak repairs        | 2022/09/10 05:34:00 | 2022/09/12 14:49:00 |
| 2    | 297    | System Generated Ramp Event for Event id : 1735621                    | 2022/09/12 14:49:00 | 2022/09/12 17:49:00 |
| 2    | 593    | Unit 2 tripped due to Lethabo-Rigi 1 275kV feeder switching operation | 2022/09/25 00:36:00 | 2022/09/25 09:13:00 |
| 2    | 296    | System Generated Ramp Event for Event id : 1740923                    | 2022/09/25 09:13:00 | 2022/09/25 11:43:00 |
| 2    | 98     | High hopper levels  | 2022/09/28 09:13:00 | 2022/09/28 16:15:00 |
| 3    | 593    | Shut down for Interim repairs.  | 2022/09/01 00:00:00 | 2022/09/19 10:58:00 |
| 3    | 593    | System Generated Slip Event linked to PCLF Event : 1730133            | 2022/09/19 10:58:00 | 2022/09/20 17:00:00 |
| 3    | 297    | System Generated Ramp Event for Event id : 1730133                    | 2022/09/20 17:00:00 | 2022/09/20 20:00:00 |
| 3    | 68     | High hoppers level  | 2022/09/21 08:43:00 | 2022/09/22 14:30:00 |
| 4    | 168    | EF: High stack emissions  | 2022/09/03 20:30:00 | 2022/09/04 00:12:00 |
| 4    | 68     | LH inner pricip casing repairs  | 2022/09/10 23:33:00 | 2022/09/11 20:29:00 |
| 4    | 170    | Emission test.  | 2022/09/13 00:06:00 | 2022/09/13 05:13:00 |
| 4    | 164    | Emission test   | 2022/09/15 00:05:00 | 2022/09/15 04:43:00 |
| 4    | 56     | EF:High stack emissions   | 2022/09/15 20:04:00 | 2022/09/16 00:11:00 |
| 4    | 70     | High stack emissions  | 2022/09/16 13:48:00 | 2022/09/16 16:56:00 |
| 4    | 66     | High stack emission.  | 2022/09/16 19:17:00 | 2022/09/17 00:15:00 |
| 4    | 593    | Boiler tube leak repairs.   | 2022/09/20 07:25:00 | 2022/09/26 04:45:00 |
| 4    | 297    | System Generated Ramp Event for Event id : 1739270                    | 2022/09/26 04:45:00 | 2022/09/26 07:45:00 |
| 4    | 172    | EF:High stack emissions   | 2022/09/29 09:37:00 | 2022/09/29 12:35:00 |
| 4    | 199    | EF:High stack emissions   | 2022/09/29 12:35:00 | 2022/09/30 04:42:00 |
| 4    | 80     | High stack emissions  | 2022/09/30 10:02:00 | 2022/09/30 15:56:00 |
| 4    | 78     | High stack emissions  | 2022/09/30 17:31:00 | 2022/09/30 19:26:00 |
| 4    | 130    | EF:High stack emissions.  | 2022/09/30 19:26:00 | 2022/09/30 23:59:59 |
| 5    | 118    | RHO Precip casing repairs   | 2022/09/03 00:14:00 | 2022/09/03 21:09:00 |
| 5    | 118    | LHO Precip casing repairs   | 2022/09/04 00:00:00 | 2022/09/04 23:59:00 |
| 6    | 118    | EF: High stack emissions  | 2022/09/03 20:31:00 | 2022/09/04 00:06:00 |
| 6    | 50     | EF:High stack emissions   | 2022/09/08 20:36:00 | 2022/09/09 00:11:00 |
| 6    | 50     | EF:High stack emissions   | 2022/09/09 20:28:00 | 2022/09/10 00:06:00 |
| 6    | 118    | RH Outer precip casing repairs  | 2022/09/10 01:40:00 | 2022/09/11 00:44:00 |
|      |        |   |                     |                     |

**PM Exceedances**

|     |   |        |
|-----|---|--------|
| U1. | The unit tripped this morning at 05:00, however Ops reported that the boiler remained on load and the turbine is busy with runnup<br>Ops reported one high hopper level on this unit and is being cleared<br>ESP Poor Performance | 23-Sep |
| U1. | The Unit tripped.<br>Unit synchronised on 2022/09/25 @ 05h35, emissions to be below the limit by 2022/09/28 @ 05h35 and remain below the limit until 2022/09/29 @ 23:59   | 25-Sep |
| U1. | The Unit tripped yesterday.<br>Unit synchronised on 2022/09/25 @ 05h35, emissions to be below the limit by 2022/09/28 @ 05h35 and remain  | 26-Sep |
| U2. | Unit Shut down for opportunity maintenance  | 10-Sep |
| U2. | Unit Shut down for opportunity maintenance  | 11-Sep |
| U2. | Unit synchronised on 2022/09/12 @ 14:49, emissions to be below the limit by 2022/09/15 @ 14:49 and remain below the limit until 2022/09/16 @ 23:59  | 12-Sep |
| U2. | Unit 2 also tripped yesterday.<br>Unit synchronised on 2022/09/25 @ 09h10, emissions to be below the limit by 2022/09/28 @ 09h10 and remain below the limit until 2022/09/29 @ 23:59.   | 25-Sep |
| U3. | Unit Light Up   | 21-Sep |
| U4. | LHI casing isolated for outage, this was cancelled after some time due to draught in casing   | 11-Sep |
| U4. | ESP Poor Performance and Manual rapping   | 12-Sep |
| U4. | ESP Poor Performance  | 17-Sep |
| U4. | ESP Poor Performance and Sulphur Flow meter faulty (resolved @18:08)  | 18-Sep |
| U4. | Unit synchronised this morning at 04h45.<br>Unit synchronised on 2022/09/26 @ 004h45, emissions to be below the limit by 2022/09/29 @ 04h45 and remain below the limit until 2022/09/30 @ 23:59.                                  | 26-Sep |
| U4. | Unit Light Up   | 27-Sep |
| U4. | Unit Light up   | 28-Sep |
| U4. | Unit Light up<br>Unit did not incur a section 30. From 04:45 on 29/09/2022 to 23:55 29/09/2022 the emission average was 98.84 mg/Nm3.   | 29-Sep |
| U5. | RHO Casing Outage   | 03-Sep |
| U5. | ESP poor performance  | 04-Sep |
| U5. | RHO Casing and Manual Rapping   | 12-Sep |
| U5. | LHO casing outage   | 16-Sep |
| U5. | Manual Rapping 21:00-23:45  | 19-Sep |
| U6. | RHO Casing  | 10-Sep |
|     |   |        |