



Generation

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MATLA POWER STATION

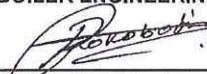
Atmospheric Emission License 17/4/AEL/MP312/11/14

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BOILER ENGINEERING MANAGER

08/02/2022

DATE



ENVIRONMENTAL MANAGER

08/08/2022

DATE



ENGINEERING MANAGER

09/02/2022

DATE

MATLA POWER STATION MONTHLY EMISSIONS REPORT

Atmospheric Emission License 17/4/AEL/MP312/11/14



1 RAW MATERIALS AND PRODUCTS

| Raw Materials and Products | Raw Material Type | Units | Max Permitted Consumption Rate | Consumption Rate Dec-2021 |
|----------------------------|---------------------------|--------|-----------------------------------|---------------------------|
| | Coal | Tons | 1 475 000 | 825 593 |
| | Fuel Oil | Tons | 2 500 | 666 |
| Production Rates | Product / By-Product Name | Units | Max Production Capacity Permitted | Production Rate Dec-2021 |
| | Energy | GWh | 2 567 | 1 250 |
| | Ash | Tons | 471 000 | 245 036 |
| | RE PM | kg/MWh | not specified | 0,654 |

2 ENERGY SOURCE CHARACTERISTICS

| Coal Characteristic | Units | Stipulated Range | Monthly Average Content |
|---------------------|-------|------------------|-------------------------|
| Sulphur Content | % | 0.8-1.1 | 1,00 |
| Ash Content | % | 21-40 | 29,68 |

3 EMISSION LIMITS (mg/Nm³)

| Associated Unit/Stack | PM | SO ₂ | NO |
|-----------------------|-----|-----------------|------|
| South | 200 | 3500 | 1200 |
| Unit 4 | 200 | 3500 | 1200 |
| Unit 5 | 100 | 3500 | 1200 |
| Unit 6 | 100 | 3500 | 1200 |

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

4 ABATEMENT TECHNOLOGY (%)

| Associated Unit/Stack | Technology Type | Efficiency Dec-2021 |
|-----------------------|----------------------------------|---------------------|
| South | Electro Static Precipators (ESP) | 99,539% |
| Unit 4 | Electro Static Precipators (ESP) | 99,808% |
| Unit 5 | Electro Static Precipators (ESP) | 99,482% |
| Unit 6 | Electro Static Precipators (ESP) | 99,853% |

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

5 DATA RELIABILITY (%)

| Associated Unit/Stack | PM | SO ₂ | NO | O ₂ |
|-----------------------|------|-----------------|------|----------------|
| South | 82,8 | 99,5 | 99,5 | 100,0 |
| Unit 4 | 76,4 | 99,4 | 99,4 | 99,4 |
| Unit 5 | 85,8 | 99,9 | 99,9 | 100,0 |
| Unit 6 | 99,7 | 97,0 | 97,0 | 97,0 |

High pm emissions

6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of December-2021

| Associated Unit/Stack | PM | SOx | NOx |
|-----------------------|-------|----------|---------|
| Unit 1 | 189,1 | 1 844,3 | 1 167,7 |
| Unit 2 | 3,6 | 23,9 | 18,6 |
| Unit 3 | 230,7 | 2 136,4 | 1 423,7 |
| Unit 4 | 81,3 | 1 485,3 | 441,7 |
| Unit 5 | 259,7 | 3 699,2 | 1 643,9 |
| Unit 6 | 53,4 | 1 481,7 | 607,2 |
| SUM | 817,9 | 10 670,9 | 5 302,9 |

Table 6.2: Operating days in compliance to PM AEL Limit - December 2021

| Associated Unit/Stack | Normal | Grace | Section 30 | Contravention | Total Exceedance | Average PM (mg/Nm ³) |
|-----------------------|-----------|-----------|------------|---------------|------------------|----------------------------------|
| South | 26 | 4 | 1 | 0 | 5 | 143,9 |
| Unit 4 | 10 | 2 | 0 | 0 | 2 | 122,5 |
| Unit 5 | 17 | 9 | 4 | 0 | 13 | 162,5 |
| Unit 6 | 13 | 1 | 0 | 0 | 1 | 79,8 |
| SUM | 66 | 16 | 5 | 0 | 21 | |

Table 6.3: Operating days in compliance to SOx AEL Limit - December 2021

| Associated Unit/Stack | Normal | Grace | Section 30 | Contravention | Total Exceedance | Average SOx (mg/Nm ³) |
|-----------------------|-----------|----------|------------|---------------|------------------|-----------------------------------|
| South | 31 | 0 | 0 | 0 | 0 | 1 313,4 |
| Unit 4 | 14 | 0 | 0 | 0 | 0 | 2 155,5 |
| Unit 5 | 31 | 0 | 0 | 0 | 0 | 2 218,3 |
| Unit 6 | 15 | 0 | 0 | 0 | 0 | 2 124,6 |
| SUM | 91 | 0 | 0 | 0 | 0 | |

Table 6.4: Operating days in compliance to NOx AEL Limit - December 2021

| Associated Unit/Stack | Normal | Grace | Section 30 | Contravention | Total Exceedance | Average NOx (mg/Nm ³) |
|-----------------------|-----------|----------|------------|---------------|------------------|-----------------------------------|
| South | 31 | 0 | 0 | 0 | 0 | 870,5 |
| Unit 4 | 14 | 0 | 0 | 0 | 0 | 635,3 |
| Unit 5 | 31 | 0 | 0 | 0 | 0 | 992,7 |
| Unit 6 | 15 | 0 | 0 | 0 | 0 | 871,4 |
| SUM | 91 | 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 |  | Emissions below Emission Limit Value (ELV) |
| Grace |  | Emissions above the ELV during grace period |
| Section 30 |  | Emissions above ELV during a NEMA S30 incident |
| Contravention |  | Emissions above ELV but outside grace or S30 incident conditions |

Figure 1: Matla South Stack PM Emissions - December 2021

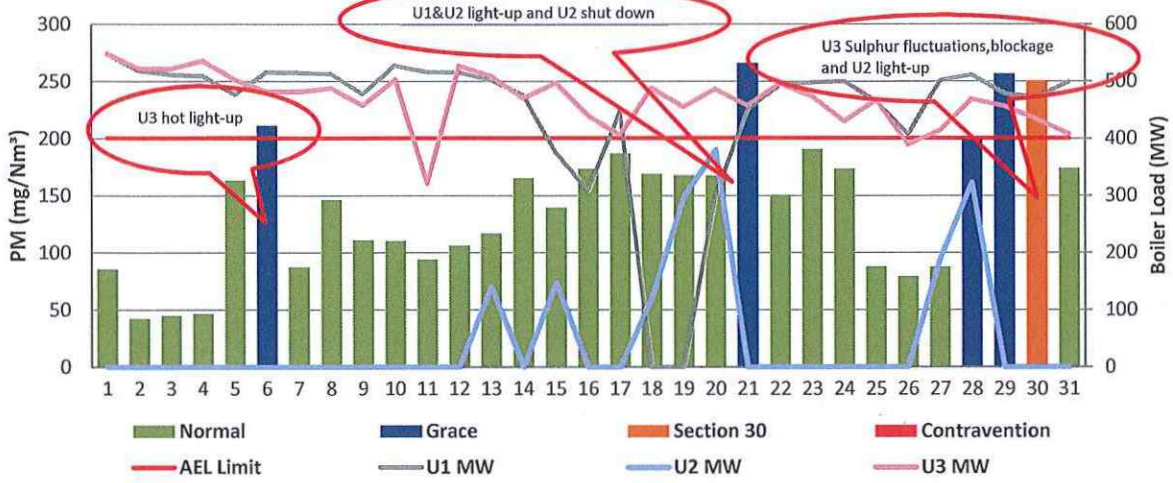


Figure 2: Matla Unit 4 PM Emissions - December 2021

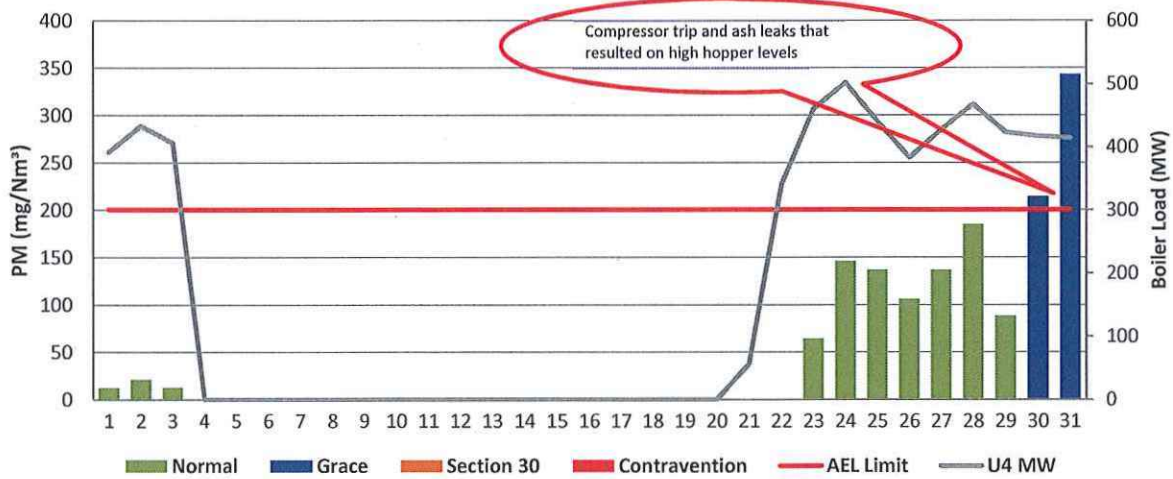


Figure 3: Matla Unit 5 PM Emissions - December 2021

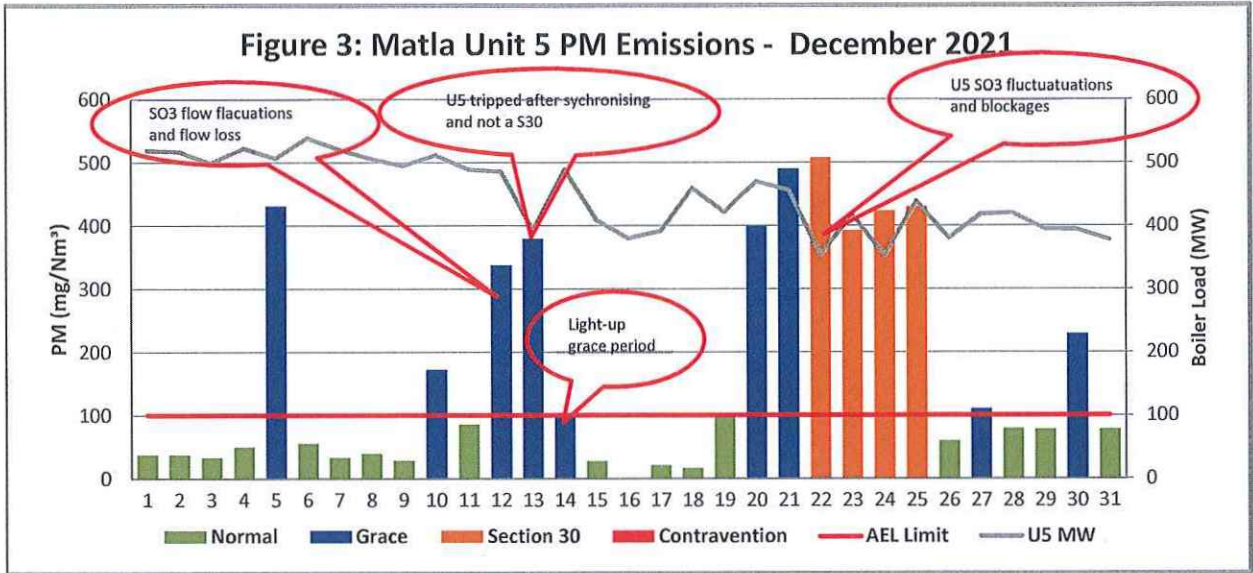


Figure 4: Matla Unit 6 PM Emissions - December 2021

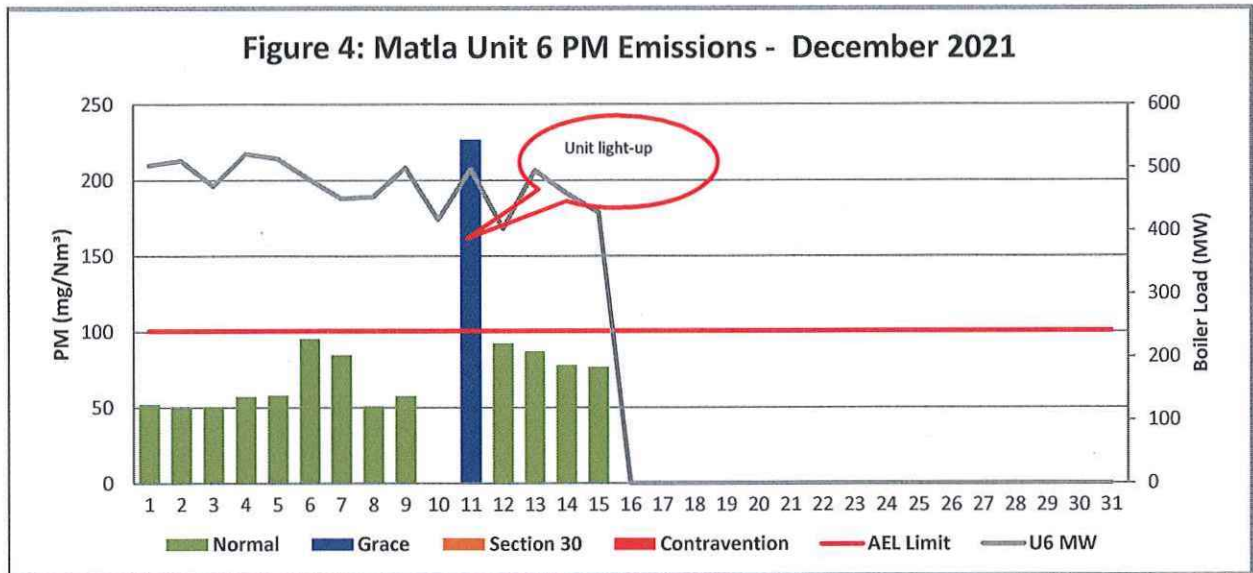


Figure 5: Matla South Stack SOx Emissions - December 2021

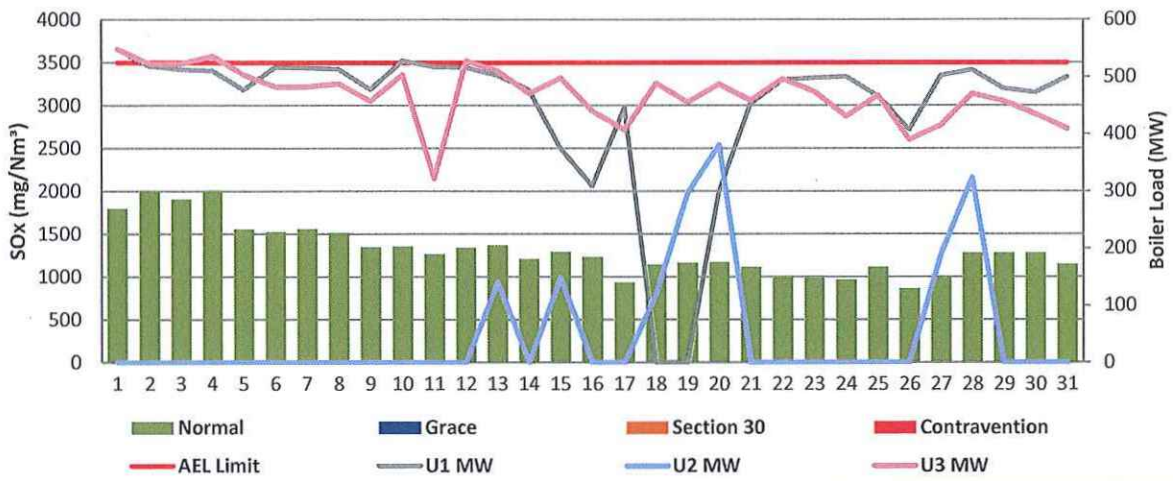


Figure 6: Matla Unit 4 SOx Emissions - December 2021

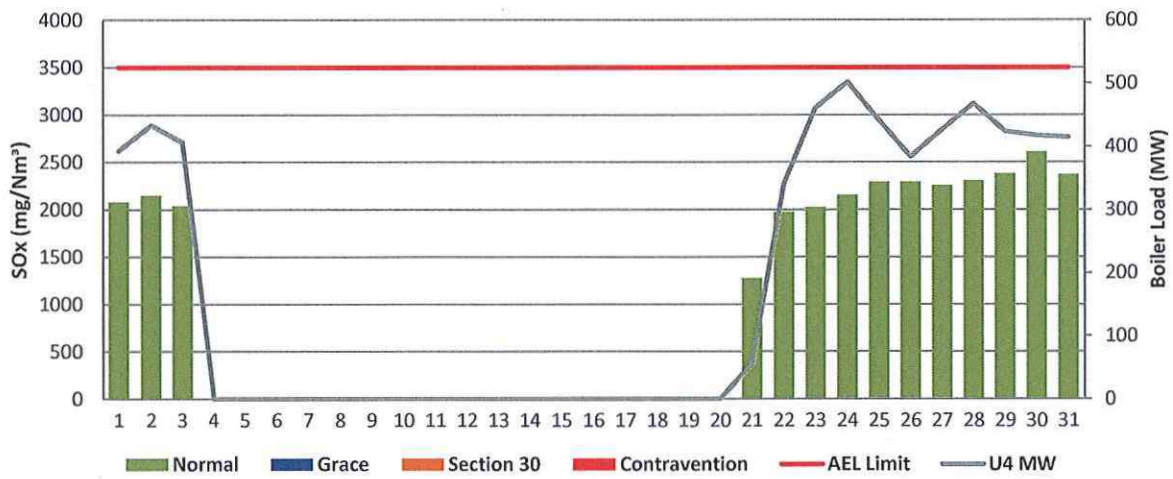


Figure 7: Matla Unit 5 SOx Emissions - December 2021

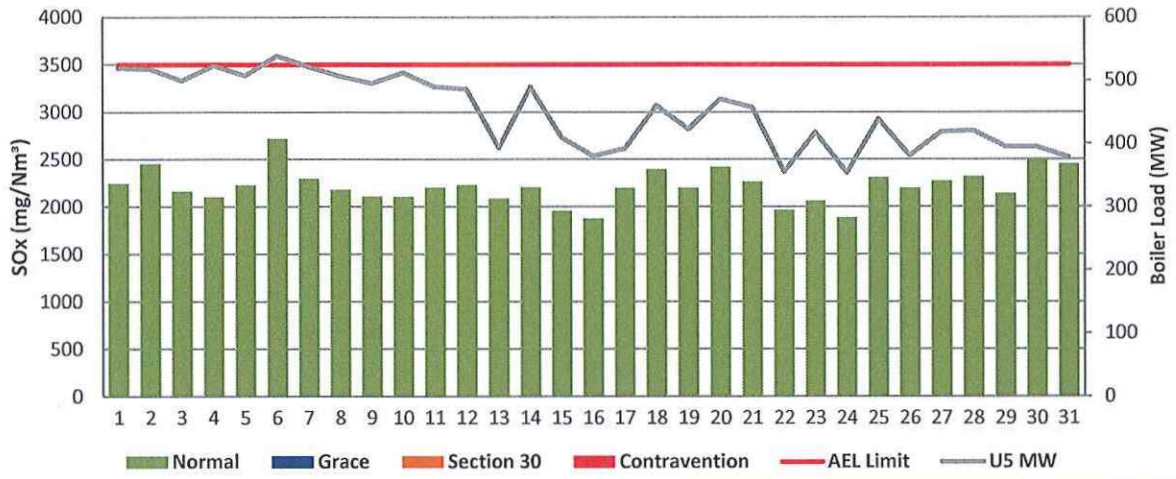


Figure 8: Matla Unit 6 SOx Emissions - December 2021



Figure 9: Matla South Stack NOx Emissions - December 2021

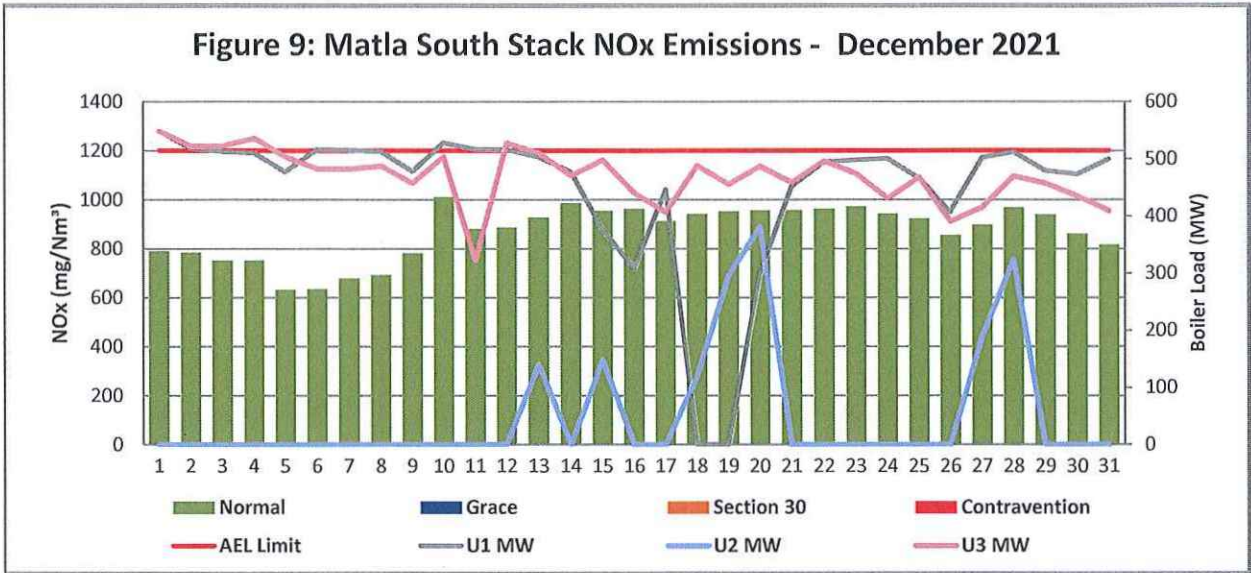


Figure 10: Matla Unit 4 NOx Emissions - December 2021

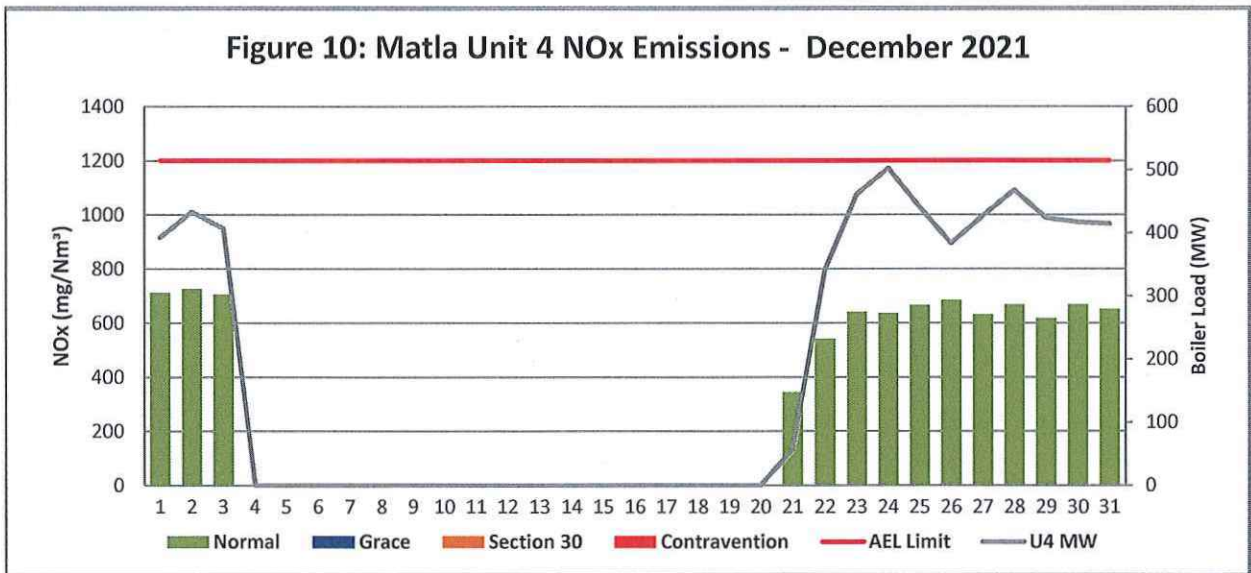


Figure 11: Matla Unit 5 NOx Emissions - December 2021

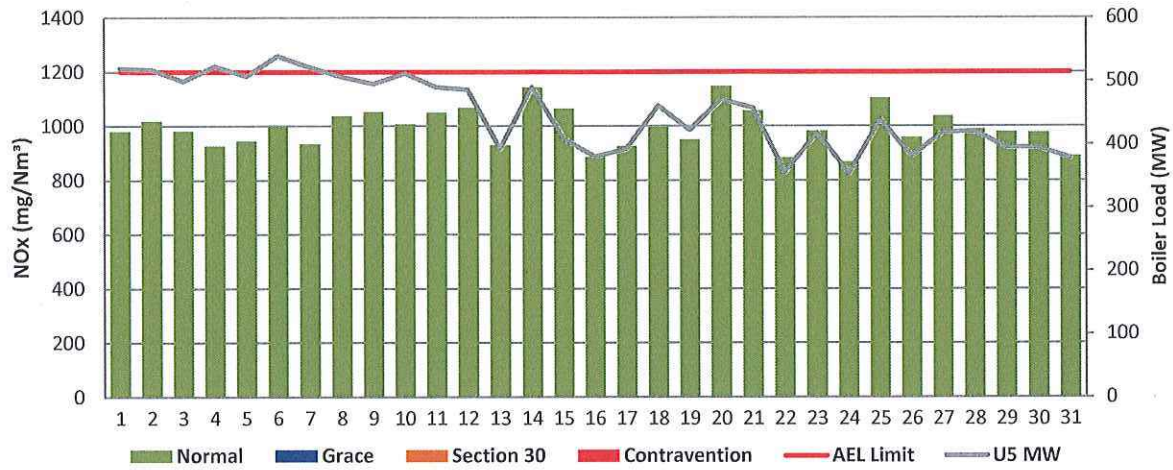
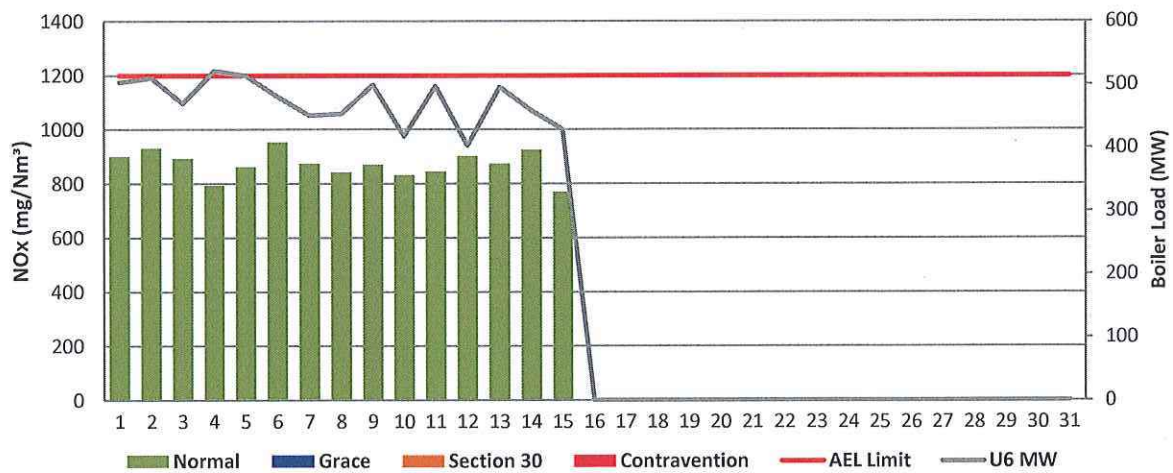


Figure 12: Matla Unit 6 NOx Emissions - December 2021



7 SHUT DOWN AND LIGHT UP INFORMATION

Table 7.1. PM Start-up information for the month of December-2021

| South Stack | Event 1 | | Event 2 | | Event 3 | | Event 4 | |
|------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|------------|----------|------------|
| Unit No. | Unit 1 | | Unit 1 | | no event | | no event | |
| Breaker Open (BO) | 2:55 PM | 2021/12/15 | 3:45 PM | 2021/12/17 | 5:20 AM | 2021/12/11 | 1:15 PM | 2021/12/14 |
| Draught Group (DG) Shut Down (SD) | DG did not trip or SD | DG did not trip or SD | DG did not trip or SD | DG did not trip or SD | 3:00 PM | 2021/12/13 | 3:40 AM | 2021/12/16 |
| BO to DG SD (duration) | n/a | DD:HH:MM | n/a | DD:HH:MM | 02:09:40 | DD:HH:MM | 01:14:25 | DD:HH:MM |
| Fires in time | 2:55 PM | 2021/12/15 | 3:45 PM | 2021/12/17 | | | | |
| Synch. to Grid (or BC) | 10:35 PM | 2021/12/15 | 4:50 AM | 2021/12/20 | | | | |
| Fires in to BC (duration) | 00:07:40 | DD:HH:MM | 02:13:05 | DD:HH:MM | | DD:HH:MM | | DD:HH:MM |
| Emissions below limit from BC (end date) | not > limit | not > limit | not > limit | not > limit | | | | |
| Emissions below limit from BC (duration) | n/a | DD:HH:MM | n/a | DD:HH:MM | | DD:HH:MM | | DD:HH:MM |

| South Stack ...cont. | Event 5 | | Event 6 | | Event 7 | | Event 8 | |
|------------------------------------------|----------|------------|---------------|---------------|----------|----------|----------|------------|
| Unit No. | no event | | Unit 2 | | no event | | no event | |
| Breaker Open (BO) | 8:30 AM | 2021/12/18 | BO previously | BO previously | | | 6:40 PM | 2021/12/28 |
| Draught Group (DG) Shut Down (SD) | 4:30 AM | 2021/12/19 | n/a | n/a | | | 5:20 AM | 2021/12/29 |
| BO to DG SD (duration) | 00:20:00 | DD:HH:MM | n/a | DD:HH:MM | | DD:HH:MM | 00:10:40 | DD:HH:MM |
| Fires in time | | | 3:55 PM | 2021/12/26 | | | | |
| Synch. to Grid (or BC) | | | 12:30 PM | 2021/12/27 | | | | |
| Fires in to BC (duration) | | DD:HH:MM | 00:20:35 | 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) | | DD:HH:MM | n/a | DD:HH:MM | | DD:HH:MM | | DD:HH:MM |

| Unit No. 4 | Event 1 | | Event 2 | | Event 3 | | Event 4 | |
|------------------------------------------|---------|----------|---------|----------|---------|----------|---------|----------|
| 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. 5 | Event 1 | | Event 2 | | Event 3 | | Event 4 | |
|------------------------------------------|---------|----------|---------|----------|---------|----------|---------|----------|
| Breaker Open (BO) | | | | | | | | |
| Draught Group (DG) Shut Down (SD) | | | | | | | | |
| BO to DG SD (duration) | | DD:HH:MM | | DD:HH:MM | | DD:HH:MM | | DD:HH:MM |
| Fires in time | | | | | | | | |
| Synch. to Grid (or BC) | | | | | | | | |
| Fires in to BC (duration) | | DD:HH:MM | | DD:HH:MM | | DD:HH:MM | | DD:HH:MM |
| Emissions below limit from BC (end date) | | | | | | | | |
| Emissions below limit from BC (duration) | | DD:HH:MM | | DD:HH:MM | | DD:HH:MM | | DD:HH:MM |

| Unit No. 6 | Event 1 | | Event 2 | | Event 3 | | Event 4 | |
|------------------------------------------|---------|----------|---------|----------|---------|----------|---------|----------|
| 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 |

7.2: Point Source emissions released during start-up (fires-in) and Shut-down (SD) for the month of December-2021 in mg/Nm³

[Include reference to once off test showing typical emissions rates during fires in and SD]

Remember to add attachments here; see ReportAddendum Tab

Reserved for Addendum XXXX

