

**CAMDEN POWER STATION MONTHLY EMISSIONS REPORT**

Atmospheric Emission License CPS/0012/2019/F03


**1 RAW MATERIALS AND PRODUCTS**

| Raw Materials and Products | Raw Material Type         | Units  | Maximum Permitted Consumption         | Actual Consumption Mar-2021 |
|----------------------------|---------------------------|--------|---------------------------------------|-----------------------------|
|                            | Coal                      | Tons   | 550 000                               | 197 849,00                  |
|                            | Fuel Oil                  | Tons   | 5 000                                 | 1 925,35                    |
|                            |                           |        |                                       |                             |
| Production Rates           | Product / By-Product Name | Units  | Maximum Production Capacity Permitted | Actual Production Mar-2021  |
|                            | Energy                    | GWh    | 1600                                  | 319,04                      |
|                            | Ash                       | Tons   | not specified                         | 47 543                      |
|                            | RE PM                     | kg/MWh | not specified                         | 0,067                       |

**2 ENERGY SOURCE CHARACTERISTICS**

| Coal Characteristic | Units | Stipulated Range | Monthly Average Content |
|---------------------|-------|------------------|-------------------------|
| CV Content          | MJ/kg | 19,56            | 22,09                   |
| Sulphur Content     | %     | < 2              | 0,90                    |
| Ash Content         | %     | 25 to 35         | 24,03                   |

### 3 EMISSION LIMITS (mg/Nm³)

| Associated Unit/Stack | PM | SOx  | NOx  |
|-----------------------|----|------|------|
| Stack 1               | 50 | 3500 | 1100 |
| Stack 2               | 50 | 3500 | 1100 |
| Stack 3               | 50 | 3500 | 1100 |
| Stack 4               | 50 | 3500 | 1100 |

### 4 ABATEMENT TECHNOLOGY (%)

| Associated Unit/Stack | Technology Type           | Efficiency Mar-2021 |
|-----------------------|---------------------------|---------------------|
| Unit 1                | Fabric Filter Plant (FFP) | 99,9%               |
| Unit 2                | Fabric Filter Plant (FFP) | 99,95%              |
| Unit 3                | Fabric Filter Plant (FFP) | 100,00%             |
| Unit 4                | Fabric Filter Plant (FFP) | Unit Off-line       |
| Unit 5                | Fabric Filter Plant (FFP) | 99,97%              |
| Unit 6                | Fabric Filter Plant (FFP) | Unit Off-line       |
| Unit 7                | Fabric Filter Plant (FFP) | 99,96%              |
| Unit 8                | Fabric Filter Plant (FFP) | 99,93%              |

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

### 5 MONITOR RELIABILITY (%)

| Associated Unit/Stack | PM    | SO <sub>2</sub> | NO   | CO <sub>2</sub> | O <sub>2</sub> |
|-----------------------|-------|-----------------|------|-----------------|----------------|
| Stack 1               | 100,0 | 94,9            | 96,3 | 76,1            | 88,2           |
| Stack 2               |       | 78,3            | 0,0  | 26,1            | 87,0           |
| Stack 3               | 100,0 | 95,1            | 96,5 | 56,7            | 38,3           |
| Stack 4               | 100,0 | 92,0            | 94,1 | 92,7            | 95,0           |

### 6 EMISSION PERFORMANCE

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

| Associated Unit/Stack | PM (tons) | SO <sub>2</sub> (tons) | NO <sub>x</sub> (tons) | CO <sub>2</sub> (tons) |
|-----------------------|-----------|------------------------|------------------------|------------------------|
| 1                     | 4,9       | 1 281                  | 477                    | 207 662                |
| 2                     | 4,5       | 1 048                  | 428                    | 173 489                |
| 3                     | 0,0       | 0                      | 0                      | 0                      |
| 4                     | 0,0       | 0                      | 0                      | 0                      |
| 5                     | 2,6       | 814                    | 358                    | 220 013                |
| 6                     | 0,0       | 0                      | 0                      | 0                      |
| 7                     | 2,1       | 652                    | 280                    | 68 882                 |
| 8                     | 7,3       | 1 359                  | 612                    | 150 451                |
| SUM                   | 21,3      | 5 153                  | 2 155                  | 820 497                |

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

| Associated Unit/Stack | Normal    | Grace    | Section 30 | Contravention | Total Exceedance | Average PM (mg/Nm³) |
|-----------------------|-----------|----------|------------|---------------|------------------|---------------------|
| Stack 1               | 29        | 0        | 0          | 0             | 0                | 8,8                 |
| Stack 2               | 0         | 0        | 0          | 0             | 0                |                     |
| Stack 3               | 20        | 0        | 0          | 0             | 0                | 5,5                 |
| Stack 4               | 29        | 0        | 0          | 0             | 0                | 9,9                 |
| <b>SUM</b>            | <b>78</b> | <b>0</b> | <b>0</b>   | <b>0</b>      | <b>0</b>         |                     |

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

| Associated Unit/Stack | Normal    | Grace    | Section 30 | Contravention | Total Exceedance | Average SOx (mg/Nm³) |
|-----------------------|-----------|----------|------------|---------------|------------------|----------------------|
| Stack 1               | 30        | 0        | 0          | 0             | 0                | 2 005,3              |
| Stack 2               | 0         | 0        | 0          | 0             | 0                |                      |
| Stack 3               | 22        | 0        | 0          | 0             | 0                | 1 579,0              |
| Stack 4               | 31        | 0        | 0          | 0             | 0                | 1 850,2              |
| <b>SUM</b>            | <b>83</b> | <b>0</b> | <b>0</b>   | <b>0</b>      | <b>0</b>         |                      |

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

| Associated Unit/Stack | Normal    | Grace    | Section 30 | Contravention | Total Exceedance | Average NOx (mg/Nm³) |
|-----------------------|-----------|----------|------------|---------------|------------------|----------------------|
| Stack 1               | 30        | 0        | 0          | 0             | 0                | 769,7                |
| Stack 2               | 0         | 0        | 0          | 0             | 0                |                      |
| Stack 3               | 22        | 0        | 0          | 0             | 0                | 690,7                |
| Stack 4               | 31        | 0        | 0          | 0             | 0                | 810,0                |
| <b>SUM</b>            | <b>83</b> | <b>0</b> | <b>0</b>   | <b>0</b>      | <b>0</b>         |                      |

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: Camden Stack 1 PM Emissions - March 2021

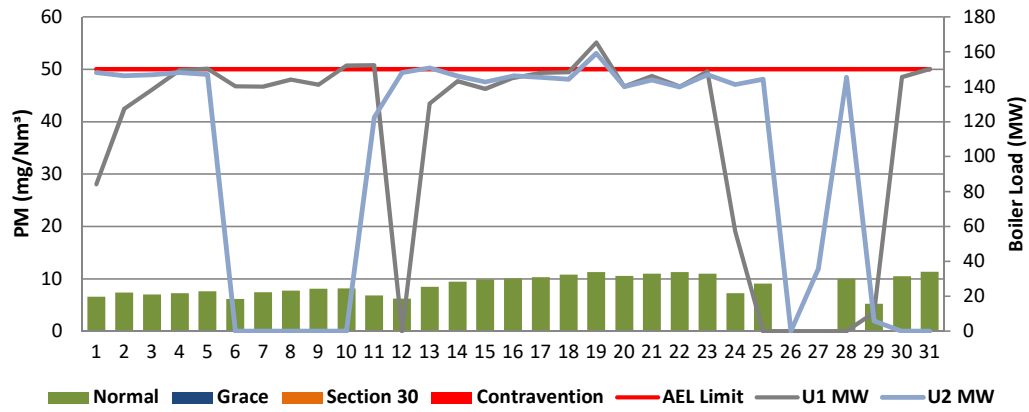
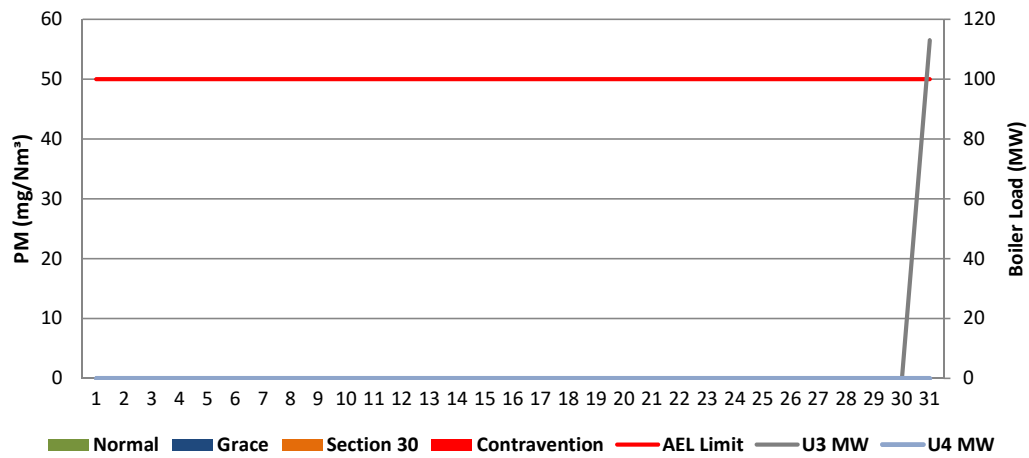
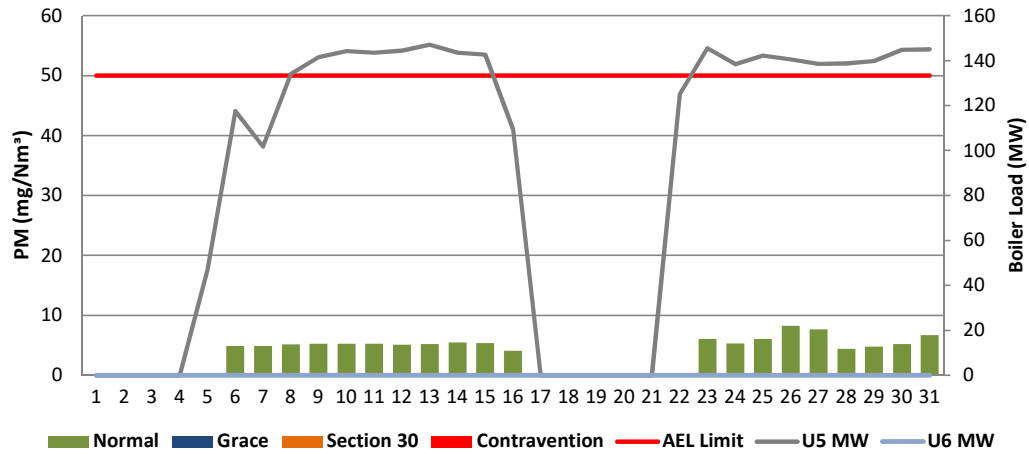


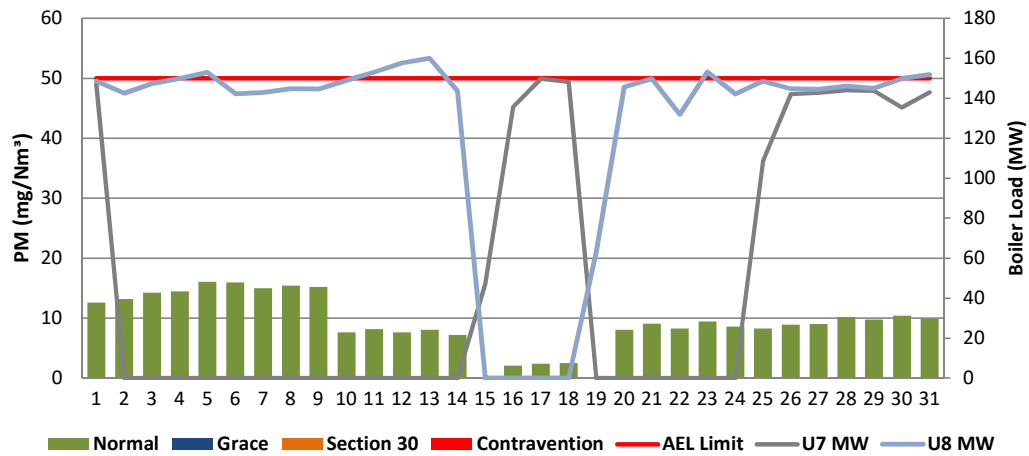
Figure 2: Camden Stack 2 PM Emissions - March 2021



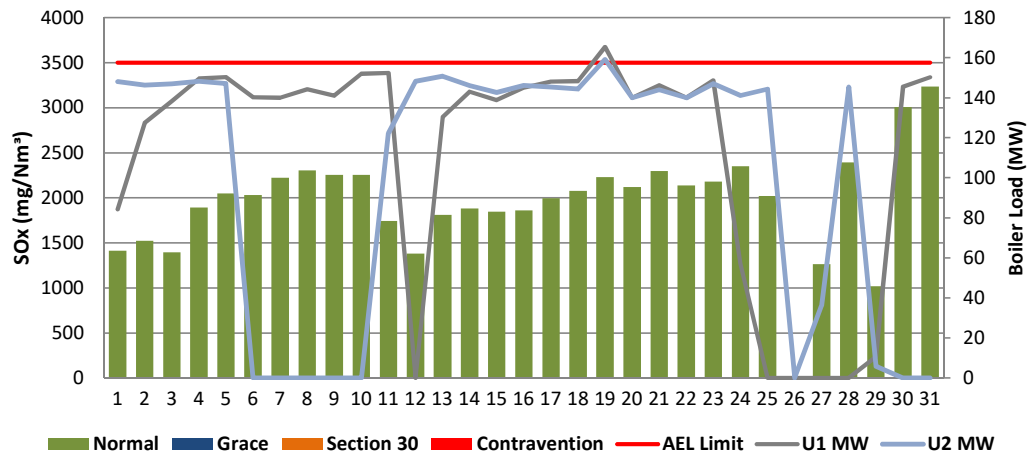
**Figure 3: Camden Stack 3 PM Emissions - March 2021**



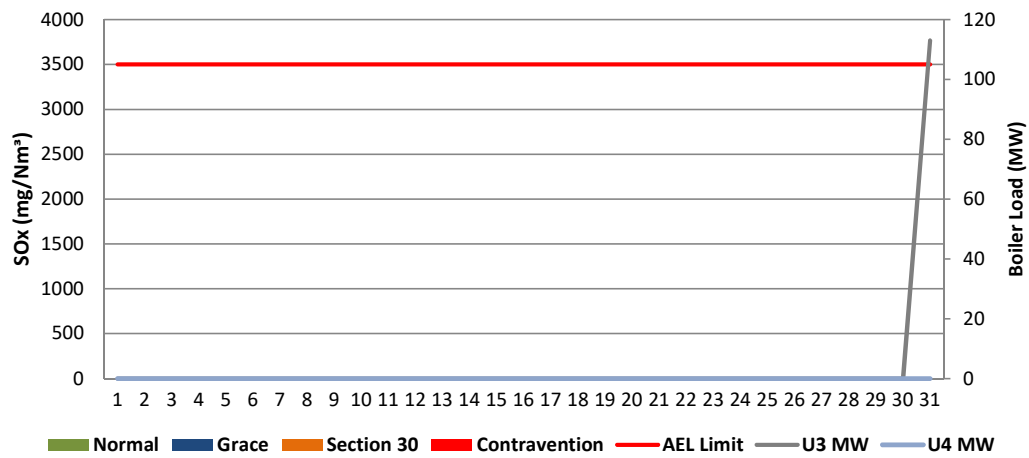
**Figure 4: Camden Stack 4 PM Emissions - March 2021**



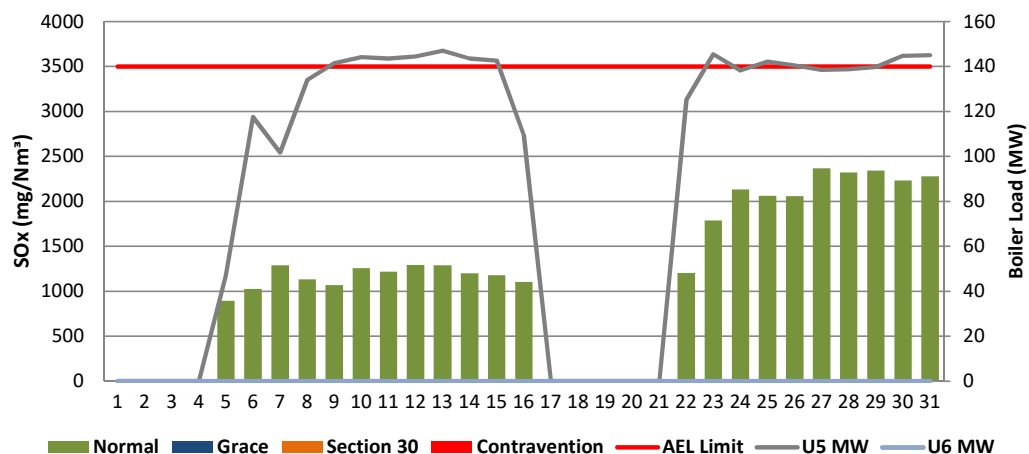
**Figure 5: Camden Stack 1 SOx Emissions - March 2021**



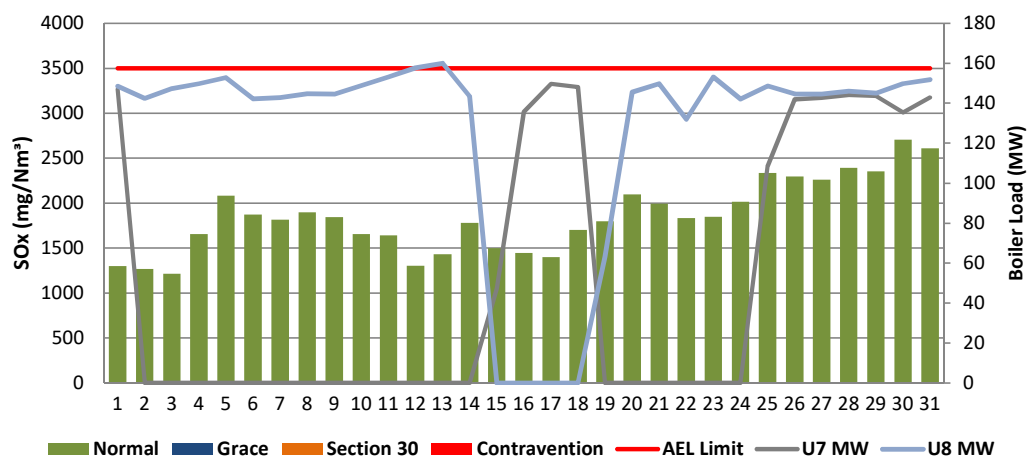
**Figure 6: Camden Stack 2 SOx Emissions - March 2021**



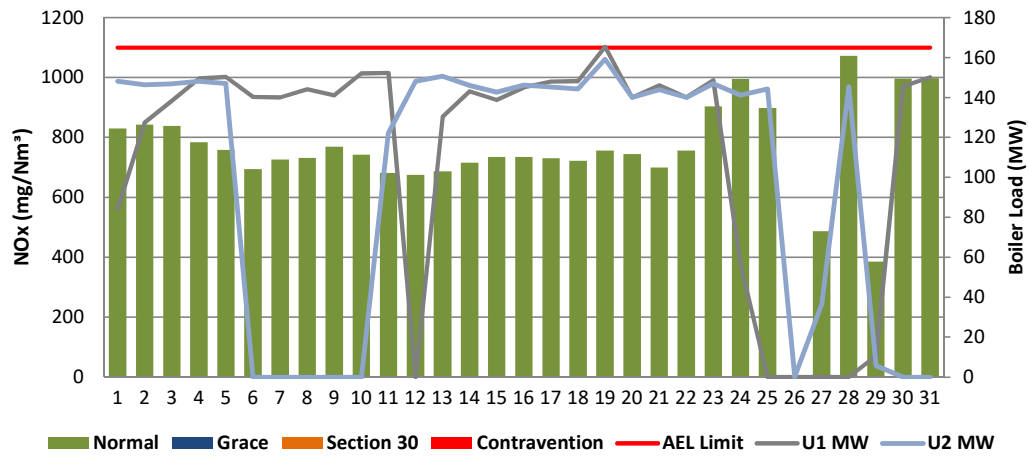
**Figure 7: Camden Stack 3 SOx Emissions - March 2021**



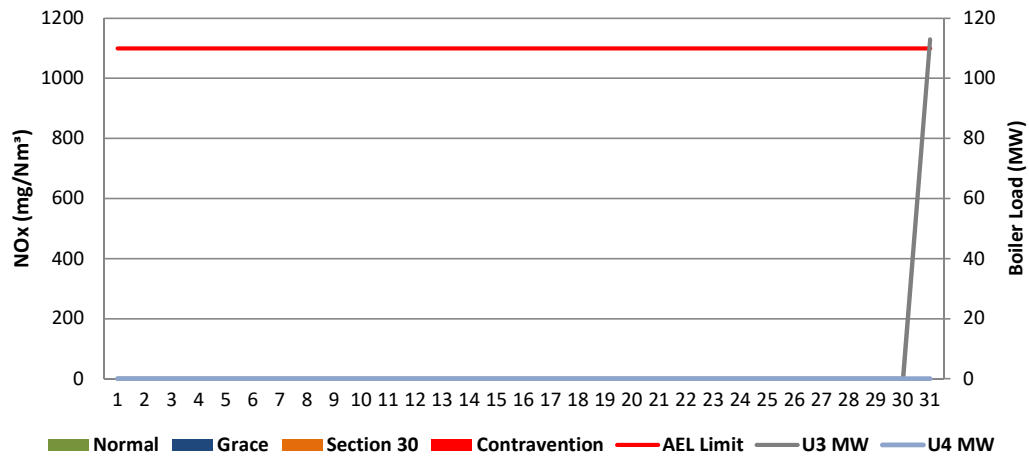
**Figure 8: Camden Stack 4 SOx Emissions - March 2021**



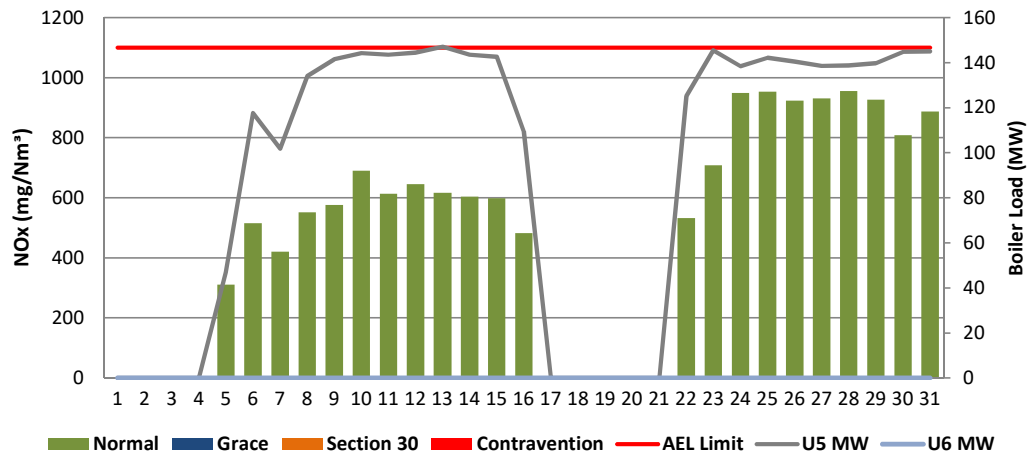
**Figure 9: Camden Stack 1 NOx Emissions - March 2021**



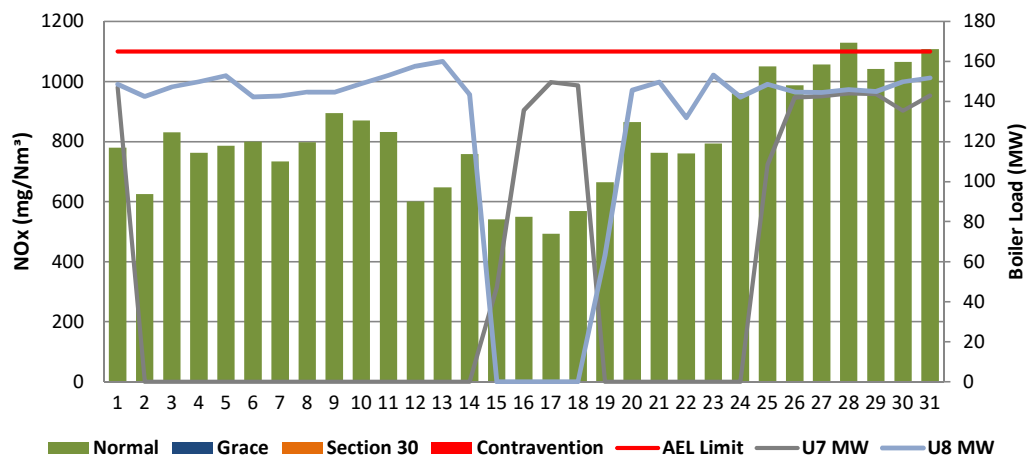
**Figure 10: Camden Stack 2 NOx Emissions - March 2021**



**Figure 11: Camden Stack 3 NOx Emissions - March 2021**



**Figure 12: Camden Stack 4 NOx Emissions - March 2021**



## 10 GENERAL / ABNORMALITIES

**Unit 1:**

None

**Unit 2:**

None

**Unit 3:**

None

**Unit 4:**

The unit was off-load for the month.

**Unit 5:**

None

**Unit 6:**

The unit was off-load for the month.

**Unit 7:**

None

**Unit 8:**

None

**Comments on Exceedances: NOx - Stack 1 (25th March 2021) and Stack 4 (28 & 31 March 2021) and on the monitor reliability for S**

U : Unit 3 light up on the 31st March 2021  
: Stack 1 - On the 25th data was erratic (see attached letter)  
: Stack 3 - O2 MRU gas analyser was defective (see attached letter)  
: Stack 4 - on the 28 and 31 March 2021 , Nox exceedance- Incidents will be investigated

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|                                                                                    |            |                                                                                     |          |
|------------------------------------------------------------------------------------|------------|-------------------------------------------------------------------------------------|----------|
|  | 20/04/2021 |  | 20/04/21 |
| Engineering Manager                                                                | Date       | Environmental Manager                                                               | Date     |

Compiled by: Environmental Department&verified by Boiler Eng

Env. Practitioner & System Eng

For: Department of Environment, Forestry & Fisheries

Chief Air Pollution Control Officer

Copies: Eskom Environmental Management

D Herbst  
B Mccourt

Gx Compliance Management  
Gx Asset Management

R Rampiar  
E Patel

Camden Power Station:

Engineering Manager  
Operating Manager  
Maintenance Manager  
Production Managers  
Boiler Engineering Manager  
System Engineer  
Environmental Manager  
Environmental Officer  
P&T and Process Engineering Manager



















Stack 2 & 3.