

**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 Rate    | Consumption Rate Sep-2020 |
|----------------------------|---------------------------|--------|---------------------------------------|---------------------------|
|                            | Coal                      | Tons   | 550 000                               | 157 460.70                |
|                            | Fuel Oil                  | Tons   | 5 000                                 | 1 204.74                  |
|                            |                           |        |                                       |                           |
| Production Rates           | Product / By-Product Name | Units  | Maximum Production Capacity Permitted | Production Rate Sep-2020  |
|                            | Energy                    | GWh    | 1600                                  | 280.42                    |
|                            | Ash                       | Tons   | not specified                         | 31 870                    |
|                            | RE PM                     | kg/MWh | not specified                         | 0.051                     |

**2 ENERGY SOURCE CHARACTERISTICS**

| Coal Characteristic | Units | Stipulated Range | Monthly Average Content |
|---------------------|-------|------------------|-------------------------|
| CV Content          | MJ/kg | 19.56            | 23.10                   |
| Sulphur Content     | %     | < 2              | 0.90                    |
| Ash Content         | %     | 25 to 35         | 20.24                   |

### 3 EMISSION LIMITS (mg/Nm³)

| Associated Unit/Stack | PM | SOx  | NOx |
|-----------------------|----|------|-----|
| Stack 1               | 50 | 3500 | 750 |
| Stack 2               | 50 | 3500 | 750 |
| Stack 3               | 50 | 3500 | 750 |
| Stack 4               | 50 | 3500 | 750 |

### 4 ABATEMENT TECHNOLOGY (%)

| Associated Unit/Stack | Technology Type           | Efficiency Sep-2020 |
|-----------------------|---------------------------|---------------------|
| Unit 1                | Fabric Filter Plant (FFP) | 100.0%              |
| Unit 2                | Fabric Filter Plant (FFP) | Unit Off-line       |
| Unit 3                | Fabric Filter Plant (FFP) | Unit Off-line       |
| Unit 4                | Fabric Filter Plant (FFP) | 99.95%              |
| Unit 5                | Fabric Filter Plant (FFP) | 99.98%              |
| Unit 6                | Fabric Filter Plant (FFP) | Unit Off-line       |
| Unit 7                | Fabric Filter Plant (FFP) | Unit Off-line       |
| Unit 8                | Fabric Filter Plant (FFP) | 99.95%              |

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> |
|-----------------------|-------|-----------------|------|-----------------|
| Stack 1               | 100.0 | 65.1            | 73.7 | 63.9            |
| Stack 2               | 100.0 | 53.9            | 54.2 | 54.2            |
| Stack 3               | 99.9  | 84.7            | 91.3 | 76.5            |
| Stack 4               | 99.7  | 86.8            | 95.0 | 86.1            |

### 6 EMISSION PERFORMANCE

Table 6.1: Monthly tonnages for the month of September-2020

| Associated Unit/Stack | PM (tons)   | SO <sub>2</sub> (tons) | NO <sub>x</sub> (tons) | CO <sub>2</sub> (tons) |
|-----------------------|-------------|------------------------|------------------------|------------------------|
| 1                     | 1.0         | 646                    | 259                    | 97 446                 |
| 2                     | 0.0         | 0                      | 0                      | 0                      |
| 3                     | 0.0         | 0                      | 0                      | 0                      |
| 4                     | 3.5         | 841                    | 383                    | 125 976                |
| 5                     | 1.2         | 507                    | 254                    | 90 576                 |
| 6                     | 1.4         | 671                    | 337                    | 131 363                |
| 7                     | 0.0         | 0                      | 0                      | 0                      |
| 8                     | 7.3         | 718                    | 347                    | 145 484                |
| <b>SUM</b>            | <b>14.4</b> | <b>3 384</b>           | <b>1 580</b>           | <b>590 845</b>         |

Table 6.2: Operating days in compliance to PM AEL Limit - September 2020

| Associated Unit/Stack | Normal    | Grace    | Section 30 | Contravention | Total Exceedance | Average PM (mg/Nm³) |
|-----------------------|-----------|----------|------------|---------------|------------------|---------------------|
| Stack 1               | 13        | 0        | 0          | 0             | 0                | 2.8                 |
| Stack 2               | 31        | 0        | 0          | 0             | 0                | 7.7                 |
| Stack 3               | 25        | 0        | 0          | 0             | 0                | 3.3                 |
| Stack 4               | 28        | 0        | 0          | 0             | 0                | 8.0                 |
| <b>SUM</b>            | <b>97</b> | <b>0</b> | <b>0</b>   | <b>0</b>      | <b>0</b>         |                     |

Table 6.3: Operating days in compliance to SOx AEL Limit - September 2020

| Associated Unit/Stack | Normal     | Grace    | Section 30 | Contravention | Total Exceedance | Average SOx (mg/Nm³) |
|-----------------------|------------|----------|------------|---------------|------------------|----------------------|
| Stack 1               | 15         | 0        | 0          | 0             | 0                | 0.0                  |
| Stack 2               | 31         | 0        | 0          | 0             | 0                | 0.0                  |
| Stack 3               | 28         | 0        | 0          | 0             | 0                | 0.0                  |
| Stack 4               | 29         | 0        | 0          | 0             | 0                | 0.0                  |
| <b>SUM</b>            | <b>103</b> | <b>0</b> | <b>0</b>   | <b>0</b>      | <b>0</b>         |                      |

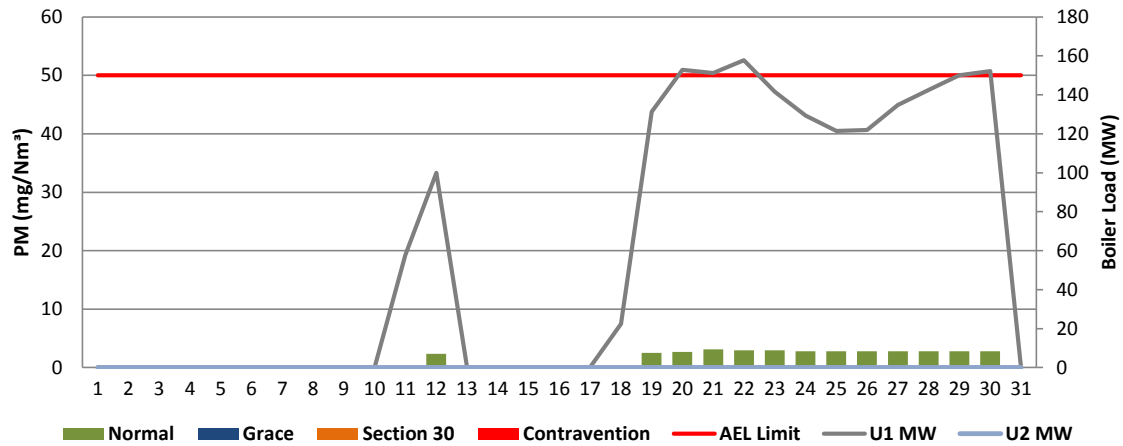
Table 6.4: Operating days in compliance to NOx AEL Limit - September 2020

| Associated Unit/Stack | Normal     | Grace    | Section 30 | Contravention | Total Exceedance | Average NOx (mg/Nm³) |
|-----------------------|------------|----------|------------|---------------|------------------|----------------------|
| Stack 1               | 15         | 0        | 0          | 0             | 0                | 0.0                  |
| Stack 2               | 31         | 0        | 0          | 0             | 0                | 0.0                  |
| Stack 3               | 28         | 0        | 0          | 0             | 0                | 0.0                  |
| Stack 4               | 29         | 0        | 0          | 0             | 0                | 0.0                  |
| <b>SUM</b>            | <b>103</b> | <b>0</b> | <b>0</b>   | <b>0</b>      | <b>0</b>         |                      |

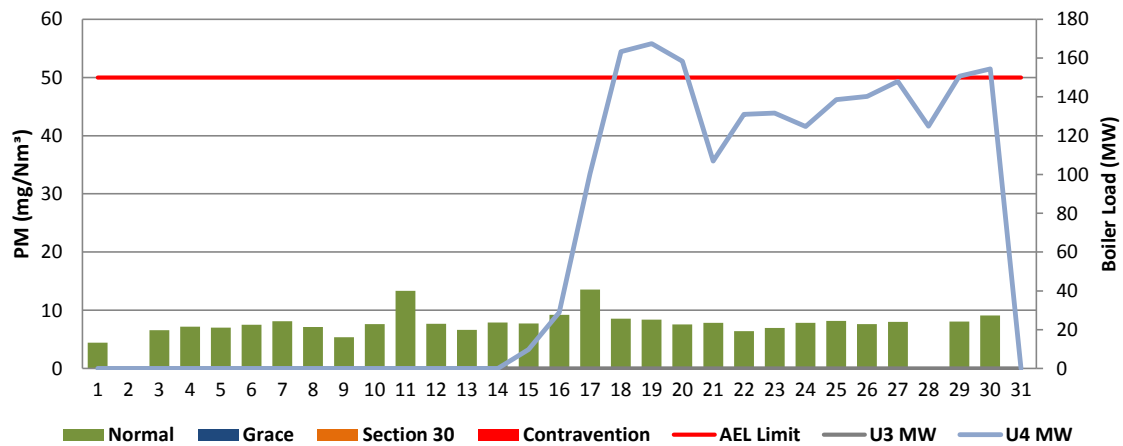
Table 6.5: Legend Description

| 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 |

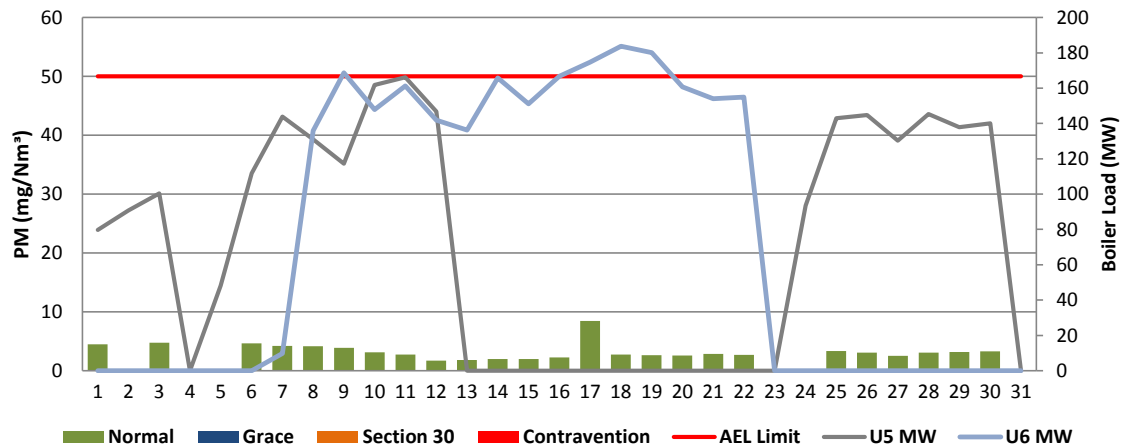
**Figure 1: Camden Stack 1 PM Emissions - September 2020**



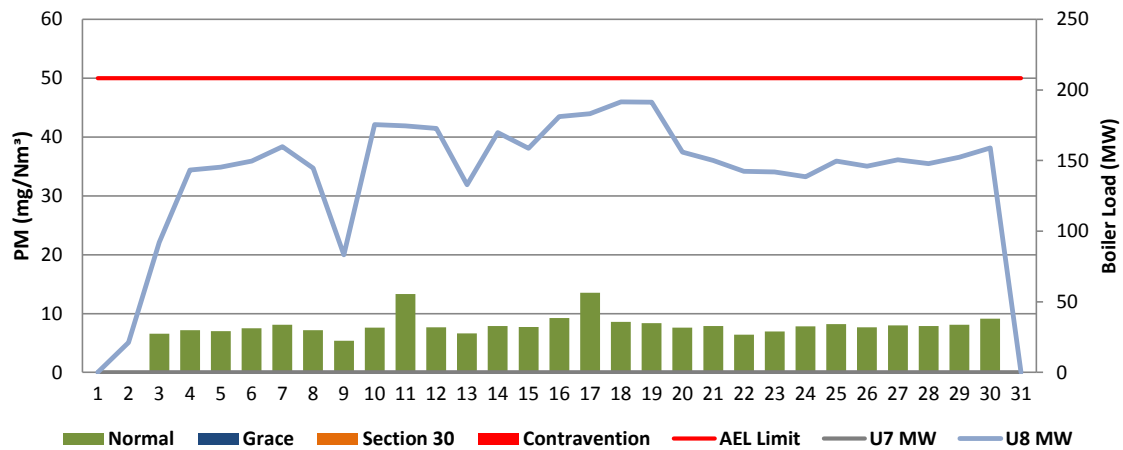
**Figure 2: Camden Stack 2 PM Emissions - September 2020**



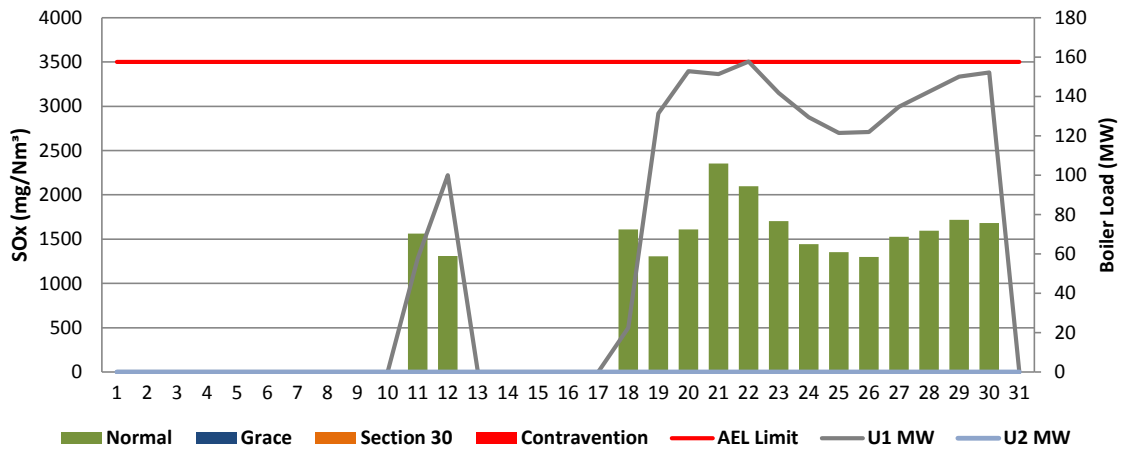
**Figure 3: Camden Stack 3 PM Emissions - September 2020**



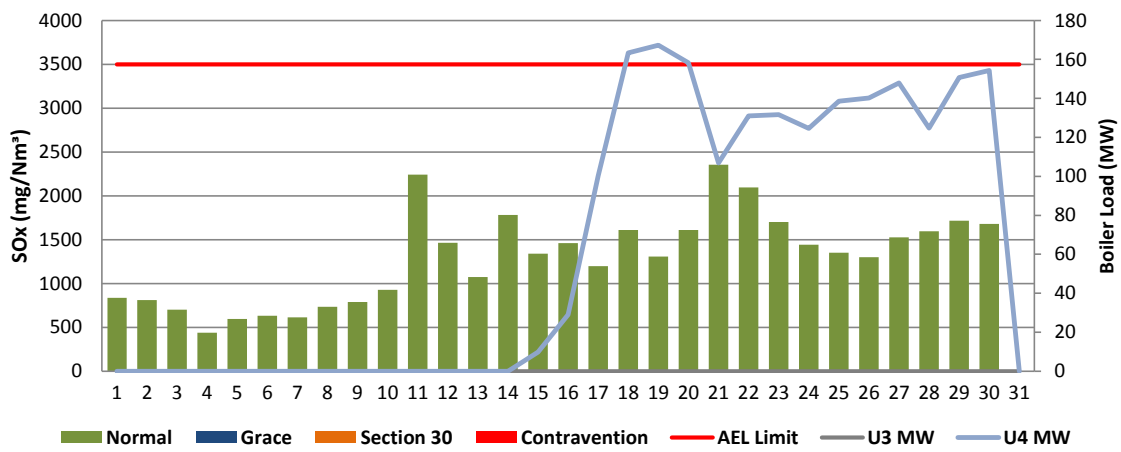
**Figure 4: Camden Stack 4 PM Emissions - September 2020**



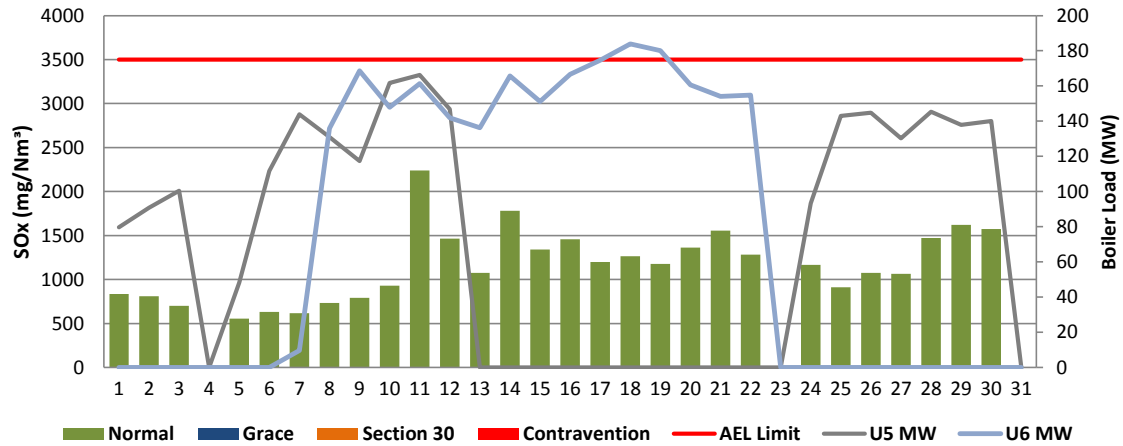
**Figure 5: Camden Stack 1 SOx Emissions - September 2020**



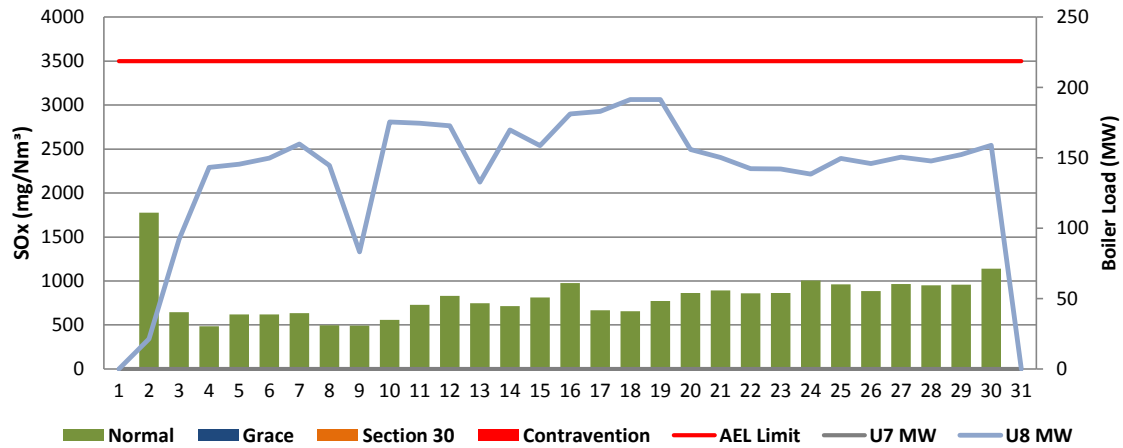
**Figure 6: Camden Stack 2 SOx Emissions - September 2020**



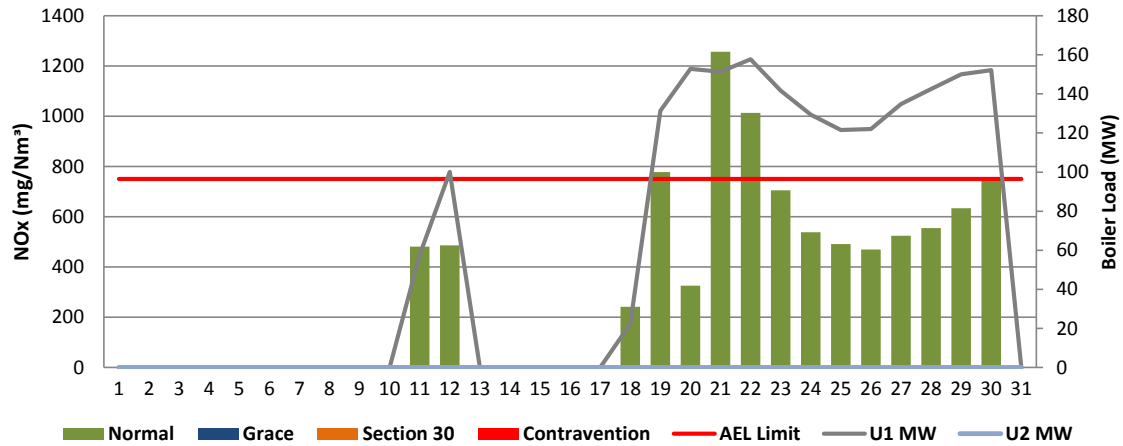
**Figure 7: Camden Stack 3 SOx Emissions - September 2020**



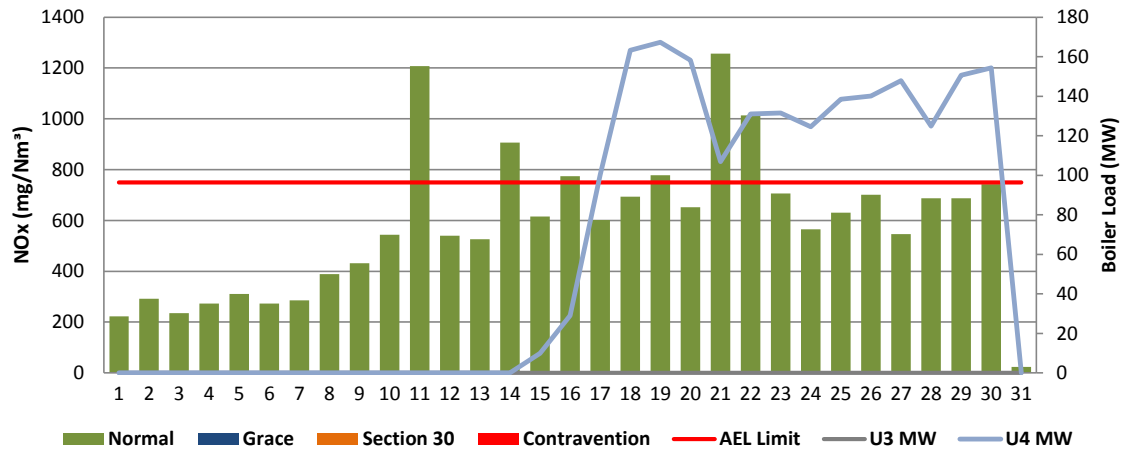
**Figure 8: Camden Stack 4 SOx Emissions - September 2020**



**Figure 9: Camden Stack 1 NOx Emissions - September 2020**

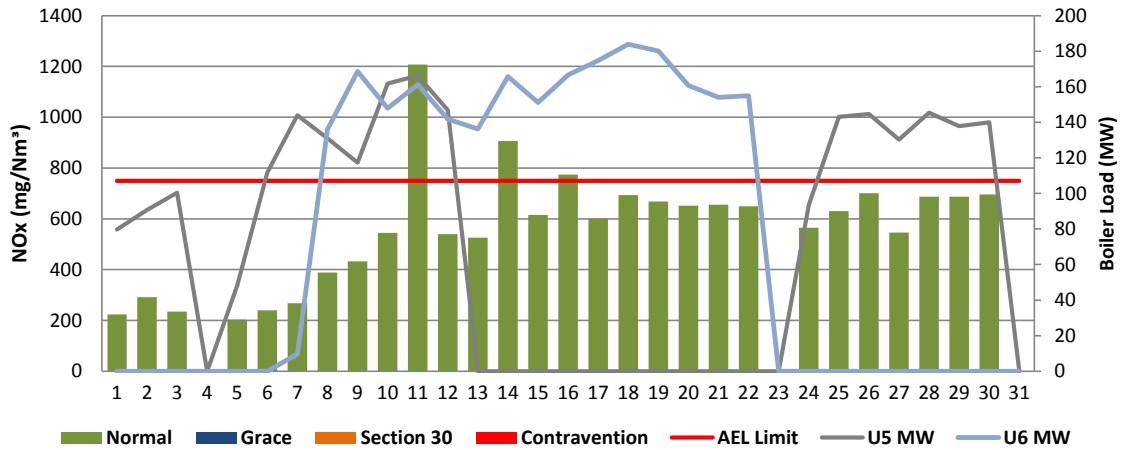


**Figure 10: Camden Stack 2 NOx Emissions - September 2020**

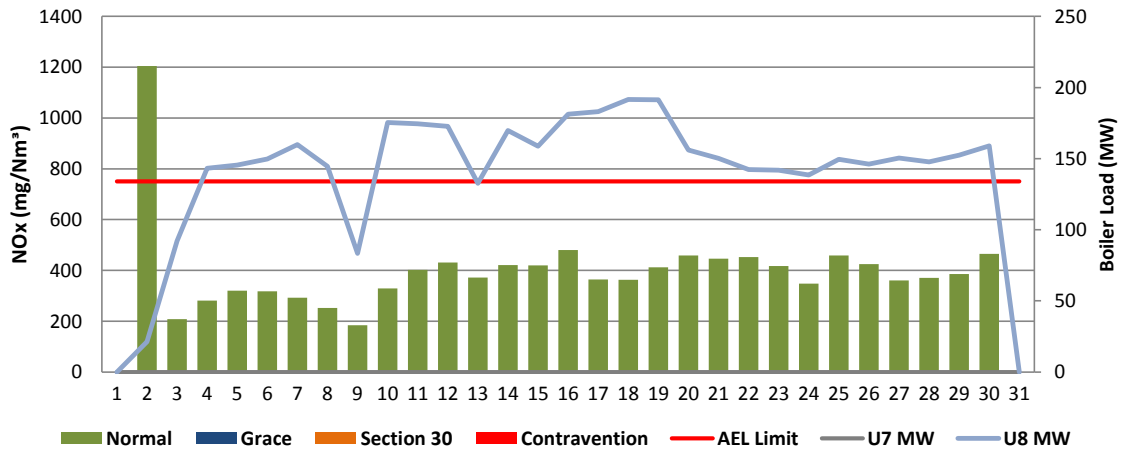




**Figure 11: Camden Stack 3 NOx Emissions - September 2020**



**Figure 12: Camden Stack 4 NOx Emissions - September 2020**



## 10 GENERAL / ABNORMALITIES

**Unit 1:**

None

**Unit 2:**

off

**Unit 3:**

off

**Unit 4:**

Unit off due to none

**Unit 5:**

None

None

**Unit 6:**

off

**Unit 7:**

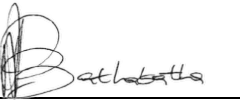
off

**Unit 8:**

None

Stack 2 repairs have since been completed, currently busy with the preparations for correlations and parallel tests

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Engineering Manager

22/10/2020

Date

  
Environmental Manager

22/10/2020

Date

Compiled by: Environmental Department & verified by Boiler Eng

Env. Practitioner & System Eng

For: Department of Environmental Affairs and Tourism

Chief Air Pollution Control Officer

Copies: Eskom Environmental Management

D Herbst  
B Mccourt

Group Technology Engineering

R Rampiar  
E Patel

Camden Power Station:

Engineering Manager  
Operating Manager  
Maintenance Manager  
Unit Production Manager  
Boiler Engineering Manager  
System Engineer  
Environmental Officer  
Performance and Test  
Production Manager