

FEBRUARY 2025

ANKERLIG POWER STATION MONTHLY EMISSION REPORT
Atmospheric Emission Licence WCCT036





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Date:
19 March 2025

Enquiries:
021 573 6162

Ref: ANK/2025/02

Dear Ian

ANKERLIG POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF FEBRUARY 2025

This serves as the monthly report required in terms of Section 9 in Ankerlig Power Station's Atmospheric Emission License (WCCT036). The emissions are for the month of February, these being SO₂, CO₂, PM and NO_x (as NO₂).

1 Raw Materials and Products

Table 1: Quantity of Raw Materials and Products used/produced for the month of February 2025

| | | | | |
|----------------------------|----------------------------|--|--------------------------------------|-----------------------------------|
| Raw Materials and Products | Raw Material Type | Units | Max Permitted Consumption Rates/unit | Station Consumption Rate Feb 2025 |
| | Diesel | Litres | 40 000 | 44 399 766.20 |
| | LPG | Kg | 19 per start/unit | |
| | | | | |
| Hours of operation | Permitted Hrs of operation | Total No of hours operated under normal conditions | | |
| | 24/7 | 948 | | |
| | | | | |
| Production Rates | Product/By-product | Units | Max Production Capacity Permitted | Production Rate: Feb 2025 |
| | Energy | MW | 150 | 139 561.10 |
| | | | | |

NB: Figures reported are station figures while the limits are unit based (x9)

Generation Division
Peaking Business Unit
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Table 2: Fuel usage per unit and efficiency

| Fuel Usage Per Unit/Hour | Fuel Efficiency |
|---|---|
| <i>Unit 11: 37 462.04</i> <i>Unit 12: N/A</i> <i>Unit 21: 39 692.09</i> <i>Unit 22: 40 281.15</i> <i>Unit 31: 38 308.04</i> <i>Unit 32: 38.237.53</i> <i>Unit 41: 38 442.72</i> <i>Unit 42: 38 664.74</i> <i>Unit 43: 39 204.88</i> | <i>Unit 11: 317.62</i> <i>Unit 12: N/A</i> <i>Unit 21: 315.25</i> <i>Unit 22: 317.64</i> <i>Unit 31: 318.66</i> <i>Unit 32: 329.07</i> <i>Unit 41: 313.33</i> <i>Unit 42: 319.50</i> <i>Unit 43: 317.65</i> |

2 Hours of Operation

Table 3: Each unit and respective days operating under normal operation (Please note the units rarely run for the entire day)

| Unit | Hours operating under normal operation | Test-run hours | Total |
|--------------|--|----------------|-------------|
| 11 | 92 | 24 | 116 |
| 12 | 0 | 0 | 0 |
| 21 | 148 | 20 | 168 |
| 22 | 153 | 18 | 171 |
| 31 | 47 | 15 | 62 |
| 32 | 72 | 19 | 91 |
| 41 | 147 | 33 | 180 |
| 42 | 115 | 27 | 142 |
| 43 | 174 | 36 | 210 |
| <i>Total</i> | <i>948</i> | <i>192</i> | <i>1140</i> |
| | | | |

3 Abatement Technology

Table 4: Abatement Equipment Control Technology availability for the month of February

| Associated Unit | Technology Type | Actual Utilisation (%) for the month of February |
|-----------------|-----------------|--|
| Unit 11 | Low NOx burners | 100% |
| Unit 12 | N/A | N/A |
| Unit 21 | Low NOx burners | 100% |
| Unit 22 | Low NOx burners | 100% |
| Unit 31 | Low NOx burners | 100% |
| Unit 32 | Low NOx burners | 100% |
| Unit 41 | Low NOx burners | 100% |
| Unit 42 | Low NOx burners | 100% |
| Unit 43 | Low NOx burners | 100% |

Table 5: Tonnages and mg/Nm³ for the month of February

| | Date | CO (mg/Nm ³) | NO _x (mg/Nm ³) | PM (mg/Nm ³) | SO ₂ (mg/Nm ³) |
|---|------------|--------------------------|---------------------------------------|--------------------------|---------------------------------------|
| Hourly Licence Limit mg/Nm³ | | | 250 | 50 | 500 |
| Unit 11 | 2025/02/05 | 4.71 | 91.14 | 0 | 1.41 |
| | 2025/02/16 | 1.88 | 29.69 | 0 | 0.75 |
| | 2025/02/17 | 5.66 | 96.81 | 0 | 2.74 |
| | 2025/02/20 | 0.4 | 109 | 0 | 0.4 |
| | 2025/02/21 | 2.02 | 49.23 | 0 | 1.61 |
| | 2025/02/22 | 4.14 | 82.79 | 0 | 2.02 |
| | 2025/02/23 | 1.75 | 116.5 | 0 | 0.9 |
| | 2025/02/25 | 0.5 | 131 | 0 | 2.7 |
| | 2025/02/27 | 8.15 | 136.8 | 0 | 1.32 |
| | 2025/02/28 | 4.3 | 165 | 0 | 0.7 |
| | | | | | |
| | | | | | |
| Unit 12 | N/A | | | | |
| | | | | | |
| | | | | | |
| Unit 21 | 2025/02/05 | 2.3 | 135.71 | 0 | 0.1 |
| | 2025/02/06 | 1.57 | 134.82 | 0 | 0.45 |
| | 2025/02/16 | 1.7 | 137.57 | 0 | 0.69 |
| | 2025/02/17 | 1.72 | 134.71 | 0 | 0.44 |
| | 2025/02/19 | 2.58 | 125.6 | 0 | 0.18 |
| | 2025/02/20 | 2.58 | 132.83 | 0 | 0.1 |
| | 2025/02/21 | 1.83 | 134.1 | 0 | 0.82 |
| | 2025/02/22 | 1.93 | 131.68 | 0 | 0.55 |

| | | | | | |
|----------------|------------|-------|--------|---|------|
| | 2025/02/23 | 1.83 | 121 | 0 | 0.1 |
| | 2025/02/25 | 1.95 | 139.75 | 0 | 1.65 |
| | 2025/02/26 | 4 | 140.67 | 0 | 0.1 |
| | 2025/02/27 | 1.86 | 140.08 | 0 | 1.06 |
| | 2025/02/28 | 1.72 | 141.36 | 0 | 0.69 |
| | | | | | |
| | | | | | |
| | | | | | |
| Unit 22 | 2025/02/05 | 54.08 | 131.75 | 0 | 0.53 |
| | 2025/02/06 | 48.6 | 110 | 0 | 3.7 |
| | 2025/02/16 | 26.5 | 116.75 | 0 | 2.44 |
| | 2025/02/17 | 13.25 | 111.65 | 0 | 1.7 |
| | 2025/02/19 | 38.6 | 121.8 | 0 | 5.22 |
| | 2025/02/20 | 22.78 | 115 | 0 | 1.6 |
| | 2025/02/21 | 0.81 | 113.29 | 0 | 1.58 |
| | 2025/02/22 | 0.62 | 109.58 | 0 | 1.72 |
| | 2025/02/23 | 24.58 | 101.75 | 0 | 0 |
| | 2025/02/25 | 27.02 | 125.25 | 0 | 3.5 |
| | 2025/02/26 | 8.87 | 122.2 | 0 | 3.79 |
| | 2025/02/27 | 5.39 | 112.17 | 0 | 1.99 |
| | 2025/02/28 | 5.68 | 114.65 | 0 | 1.45 |
| | | | | | |
| | | | | | |
| | | | | | |
| Unit 31 | 2025/02/16 | 0.36 | 13.83 | 0 | 0.48 |
| | 2025/02/17 | 1.21 | 43.86 | 0 | 0.39 |
| | 2025/02/20 | 3.3 | 124 | 0 | 0.2 |
| | 2025/02/22 | 0.25 | 1 | 0 | 2.74 |
| | 2025/02/23 | 0.65 | 2 | 0 | 8.7 |
| | 2025/02/26 | 0.37 | 1.29 | 0 | 0.61 |
| | 2025/02/27 | 0.1 | 1 | 0 | 0.2 |
| | | | | | |
| | | | | | |
| | | | | | |
| Unit 32 | 2025/02/16 | 1.41 | 157.86 | 0 | 1.24 |
| | 2025/02/17 | 1.55 | 162.4 | 0 | 0.9 |
| | 2025/02/20 | 0.2 | 144 | 0 | 0 |
| | 2025/02/21 | 1.43 | 163.5 | 0 | 0 |
| | 2025/02/22 | 1.63 | 159.18 | 0 | 0.55 |
| | 2025/02/23 | 1.45 | 149.5 | 0 | 0.5 |
| | 2025/02/26 | 1.31 | 168.86 | 0 | 1.96 |
| | 2025/02/27 | 1.63 | 168.5 | 0 | 0.38 |
| | | | | | |
| | | | | | |
| | | | | | |
| Unit 41 | 2025/02/05 | 1.43 | 168.57 | 0 | 4.64 |
| | 2025/02/06 | 5.25 | 169.1 | 0 | 10.3 |
| | 2025/02/16 | 4.7 | 159.93 | 0 | 6.06 |

| | | | | | |
|----------------------------|------------|-------|---------|------|-------|
| | 2025/02/17 | 6.18 | 157.71 | 0 | 7.89 |
| | 2025/02/19 | 6.18 | 154 | 0 | 2.5 |
| | 2025/02/20 | 6.87 | 159.45 | 0 | 8.22 |
| | 2025/02/21 | 6.14 | 155.38 | 0 | 9.61 |
| | 2025/02/22 | 5.70 | 169.18 | 0 | 7.83 |
| | 2025/02/23 | 4.58 | 168.4 | 0 | 3.84 |
| | 2025/02/25 | 5 | 157.44 | 0 | 3.79 |
| | 2025/02/26 | 5.42 | 156.82 | 0 | 5.88 |
| | 2025/02/27 | 6.44 | 161.75 | 0 | 3.78 |
| | 2025/02/28 | 7.3 | 157 | 0 | 9.3 |
| | | | | | |
| | | | | | |
| | | | | | |
| Unit 42 | 2025/02/16 | 4.03 | 179.56 | 0.12 | 0.76 |
| | 2025/02/17 | 4.13 | 172.2 | 0.11 | 0.77 |
| | 2025/02/19 | 2.35 | 163.75 | 0.1 | 1.03 |
| | 2025/02/20 | 3.37 | 159.83 | 0 | 0.7 |
| | 2025/02/21 | 4.31 | 162.76 | 0 | 0.6 |
| | 2025/02/22 | 4.18 | 182.42 | 0 | 0.58 |
| | 2025/02/23 | 3.83 | 171.33 | 0 | 0.57 |
| | 2025/02/25 | 3.9 | 165.5 | 0 | 0.68 |
| | 2025/02/26 | 4.12 | 187.56 | 0 | 0.67 |
| | 2025/02/27 | 4.38 | 186.05 | 0 | 0.62 |
| | 2025/02/28 | 4.45 | 160.5 | 0 | 0.5 |
| | | | | | |
| | | | | | |
| | | | | | |
| Unit 43 | 2025/02/05 | 1.99 | 131.29 | 0 | 0.67 |
| | 2025/02/06 | 1.56 | 131.75 | 0 | 1.91 |
| | 2025/02/16 | 1.59 | 123.07 | 0 | 1.19 |
| | 2025/02/17 | 0.99 | 116.94 | 0 | 0.51 |
| | 2025/02/19 | 3.06 | 115.4 | 0 | 0.16 |
| | 2025/02/20 | 1.3 | 120.65 | 0 | 0.93 |
| | 2025/02/21 | 1.11 | 112.48 | 0 | 0.74 |
| | 2025/02/22 | 1.67 | 122.1 | 0 | 1.57 |
| | 2025/02/23 | 1.45 | 122.13 | 0 | 0.61 |
| | 2025/02/25 | 1.74 | 116.78 | 0 | 0.1 |
| | 2025/02/26 | 1.29 | 119.06 | 0 | 0.26 |
| | 2025/02/27 | 1.30 | 124.12 | 0 | 0.67 |
| | 2025/02/29 | 13.83 | 82.25 | 0.03 | 5 |
| | | | | | |
| | | | | | |
| | | | | | |
| Total Emission mass (Tons) | | 5.819 | 137.675 | 0 | 2.135 |

Units 11, 21,22 & 32's NOx and SOx monitor read abnormal at times during the month due to the cooler leak. Spares have been ordered and delivery is expected in Feb 2025

COMMENT: All pollutants measured were within allowed limits and no non-conformances were registered for the month under review.

4 Monitoring Equipment: Continuous Emission Monitoring System (CEMS) availability

Table 6: Actual Utilisation (%) for the month

| Associated Unit | Technology Type | Actual Utilisation (%) for the month of February |
|-----------------|-----------------|--|
| Unit 11 | CEMS | 65.52% |
| Unit 12 | CEMS | N/A |
| Unit 21 | CEMS | 100% |
| Unit 22 | CEMS | 100% |
| Unit 31 | CEMS | 67.18% |
| Unit 32 | CEMS | 100% |
| Unit 41 | CEMS | 100% |
| Unit 42 | CEMS | 100% |
| Unit 43 | CEMS | 98.58% |

Continuous Emissions Monitoring System (CEMS) at GT11 & GT31's availability was below 80%. Please note that the unit is not operating under any "upset" combustion process and does not pose a risk to the environment.

GT11: 65.52%. Faulty sampling tube.

GT31: 30.65%. SO₂ sensor faulty in the analyser. The fault triggers the complete analyser to go into malfunction with no output values or measurements sent to the system. New analyser will be installed within this month, awaiting delivery from supplier.

5 Monitoring Equipment Calibration

Continuous Emission Monitoring System (CEMS) is always online unless a fault is reported. The system auto calibrates every four (4) hours and raises an alarm if auto calibration is out of spec. Onsite technicians calibrate the system with calibration gas annually.

6 Ambient Monitoring Station

The station's new AEL does not require operation of an ambient monitoring station until decommissioning of Acacia Power Station.

7 Load Factor: 22.39%

8 Leak Detection and Repair programme

No leaks were reported during February 2025

9 Complaints Register

Table 7. Complaints for the month of February 2025

| Source Code/ Name | Root Cause Analysis | Calculation of Impacts/ emissions associated with the incident | Dispersion modelling of pollutants where applicable | Measures implemented to prevent reoccurrence | Date by which measure will be implemented |
|-------------------|---------------------|--|---|--|---|
|-------------------|---------------------|--|---|--|---|

| | | | | | |
|------|-----|-----|-----|-----|-----|
| None | N/A | N/A | N/A | N/A | N/A |
|------|-----|-----|-----|-----|-----|

10 General

The rest of the information demonstrating compliance with the emission license conditions is supplied in the annual emission reports sent to your office.

Trusting the above meets the reporting requirements specified within the stations' Atmospheric Emission License.

Do not hesitate to contact Maureen Dlulisa on 021 573 6162 for any related queries.

Yours sincerely



Pamela Mrubata

ANKERLIG POWER STATION