

JANUARY 2025

ANKERLIG POWER STATION MONTHLY EMISSION REPORT  
Atmospheric Emission Licence WCCT036





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Date:  
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Enquiries:  
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Ref: ANK/2025/01

Dear Ian

## ANKERLIG POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF JANUARY 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 January, these being SO<sub>2</sub>, CO<sub>2</sub>, PM and NO<sub>x</sub> (as NO<sub>2</sub>).

### 1 Raw Materials and Products

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

Raw Materials and Products	Raw Material Type	Units	Max Permitted Consumption Rate/unit/hour	Consumption Rate per unit/hr Jan 2025	Station fuel consumption for Jan 2025
	Diesel	Litres	40 000	Unit 11: 36 415 Unit 12: N/A Unit 21: 37 989.74 Unit 22: 36 839.11 Unit 31: 34 318.48 Unit 32: 35 940.80 Unit 41: 37 324.15 Unit 42: 36 986.34 Unit 43: 38 157.55	46 048 974.20
Production Rates	Product/By-product	Units	Max Production Capacity Permitted/unit	Production capacity per unit	Station Production Rate: Jan 2025
	Energy	MW	150	Unit 11: 22700.4576 Unit 12: N/A Unit 21: 22882.892 Unit 22: 21057.9616 Unit 31: 6373.0198 Unit 32: 10910.8598 Unit 41: 19673.2795 Unit 42: 24264.3794 Unit 43: 20359.9596	148 222.81

## 2 Hours of Operation for the month

Table 2: 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	149	44	193
12	0	0	0
21	154	32	186
22	140	39	179
31	40	19	59
32	72	26	98
41	133	28	161
42	162	41	203
43	132	33	165
<i>Total</i>	<i>982</i>	<i>280</i>	<i>1262</i>

## 3 Abatement Technology

Table 3: Abatement Equipment Control Technology availability for the month of January

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

Table 4: Tonnages and mg/Nm<sup>3</sup> for the month of January

	Date	CO (mg/Nm <sup>3</sup> )	NO <sub>x</sub> (mg/Nm <sup>3</sup> )	PM (mg/Nm <sup>3</sup> )	SO <sub>2</sub> (mg/Nm <sup>3</sup> )
<b>Hourly Licence Limit mg/Nm<sup>3</sup></b>			<b>250</b>	<b>50</b>	<b>500</b>
<b>Unit 11</b>	2025/01/01	85.46	184.14	0	59.04
	2025/01/05	91.97	188.22	0	75.42
	2025/01/07	94.73	198.67	0	84.93
	2025/01/08	97.38	198.52	0	89.92
	2025/01/09	99.99	199.47	0	94.91
	2025/01/10	100.08	203.72	0	96.76

	2025/01/13	111.43	203.5	0	104.38
	2025/01/15	97.77	210.28	0	111.56
	2025/01/20	0.58	41.02	0	0.1
	2025/01/27	0.63	15.66	0	0.1
	2025/01/28	7.66	87.42	0	1.67
	2025/01/29	0.7	48.29	0	0.21
	2025/01/30	4.33	46	0	0.68
	2025/01/31	0.15	25	0	0.5
Unit 12	N/A				
Unit 21	2025/01/01	1.76	130.71	0	11.31
	2025/01/05	1.62	120.92	0	11.5
	2025/01/07	4.28	142.5	0	0.23
	2025/01/08	1.78	120.58	0	8.4
	2025/01/09	1.71	122.24	0	3.74
	2025/01/10	1.3	128	0	0.1
	2025/01/17	5.9	115.67	0	0.4
	2025/01/18	1.27	117.44	0	6.02
	2025/01/20	2.28	126.5	0	13.98
	2025/01/25	2.35	96.63	0	12.56
	2025/01/27	2.3	138.71	0	0.46
	2025/01/28	1.97	125.67	0	0.24
	2025/01/29	2.45	136.47	0	81.74
	2025/01/30	1.34	125.59	0	1.23
	2025/01/31	1.83	131.83	0	0.18
Unit 22	2025/01/01	0.44	116.43	0	0.41
	2025/01/05	0.64	108.69	0	2.11
	2025/01/07	1.02	118.5	0	1.9
	2025/01/08	0.91	111.86	0	2.27
	2025/01/09	0.7	109.1	0	1.36
	2025/01/10	0.4	109	0	0.4
	2025/01/13	0.5	111.73	0	2.19
	2025/01/15	0.51	119.86	0	0.17
	2025/01/20	0.55	108.67	0	0.88
	2025/01/27	0.47	125	0	0.27
	2025/01/28	0.13	111.86	0	0.51
	2025/01/29	0.67	111.94	0	1.17
	2025/01/30	0.85	102.57	0	1.13
	2025/01/31	0.27	112	0	0.37
Unit 31	2025/01/05	0.18	27.83	0	0.25

	2025/01/09	0.66	39.31	0	0.82
	2025/01/28	3.15	53.83	0	4
	2025/01/29	1.22	22.66	0	2.12
	2025/01/30	0.43	3.33	0	2.65
	2025/01/31	1.83	54.33	0	2.1
				0	
<b>Unit 32</b>	2025/01/05	1.32	156.55	0	0.23
	2025/01/08	1.68	159.25	0	0.19
	2025/01/09	1.73	153	0	0.17
	2025/01/20	1.36.	160.6	0	0
	2025/01/27	1.8	147.67	0	0.5
	2025/01/28	1.6	154.43	0	0.65
	2025/01/29	187	155.5	0	0.08
	2025/01/30	1.69	145	0	0.48
	2025/01/31	1.33	145.33	0	0.13
<b>Unit 41</b>	2025/01/05	3.64	146	0	5.76
	2025/01/09	4.16	148.71	0	5.88
	2025/01/17	3.5	148.38	0	3.71
	2025/01/18	5.81	150.38	0	6.29
	2025/01/20	4.42	154.17	0	6.47
	2025/01/25	5.2	145.55	0	4.77
	2025/01/27	4.76	148.71	0	3.31
	2025/01/28	5.89	156.32	0	6.78
	2025/01/29	5.2	164.18	0	7.76
	2025/01/30	5.34	148.27	0	10.30
	2025/01/31	4.93	157	0	11.67
<b>Unit 42</b>	2025/01/01	1.91	155.14	0	2.24
	2025/01/05	4.42	161.45	0	3.78
	2025/01/07	2.63	165.5	0	2.75
	2025/01/08	3.76	159.6	0	1.47
	2025/01/09	5.01	166	0	1.88
	2025/01/13	3.99	162.5	0	2.36
	2025/01/15	2.77	185.33	0	3.13
	2025/01/17	0.5	144.33	0	3.2
	2025/01/18	5.19	160	0	2.47
	2025/01/20	4.27	161.83	0	3.97
	2025/01/25	4.4	157.4	0	3.06
	2025/01/27	4.19	157.57	0	3.03
	2025/01/28	4.46	168.07	0	1.58
	2025/01/29	7.98	128.35	0	8.21
	2025/01/30	5.06	159.44	0	1.2
	2025/01/31	2.6	171.67	0	0.82
<b>Unit 43</b>	2025/01/05	1.51	120.67	0	0.63

	2025/01/08	1.32	119.63	0	1.18
	2025/01/09	0.19	127.07	0	0.42
	2025/01/17	3.34	114.63	0	0.3
	2025/01/18	1.15	115.22	0	1.14
	2025/01/20	1.4	121.17	0	0.33
	2025/01/25	1.75	114	0	0.63
	2025/01/27	1.86	113.14	0	0.31
	2025/01/28	1.55	117.78	0	0.59
	2025/01/29	1.14	121.91	0	0.64
	2025/01/30	0.7	59.33	0	1.01
	2025/01/31	0.45	1	0	0.78
<b>Total Emission mass (Tons)</b>		9.582	126.898	0	6.05

*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 Jan 2025. Awaiting spares*

**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 5: Equipment Reliability & Availability (%) for the month

Associated Unit	Technology Type	Availability	Reliability (%) for the month of January
Unit 11	CEMS	100%	75.84%
Unit 12	CEMS	100%	N/A
Unit 21	CEMS	100%	96.71%
Unit 22	CEMS	100%	94.29%
Unit 31	CEMS	100%	17.5%
Unit 32	CEMS	100%	100%
Unit 41	CEMS	100%	100%
Unit 42	CEMS	100%	96.92%
Unit 43	CEMS	100%	95.46%

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.

GT21 - peristaltic pump replacement. Moisture in the system caused the pump to stop working.

GT22 - flowrates too high and pump tripped occasionally.

GT42 - Leaking piping in the cooler. NOx converter cartridge caused the flowrate to drop and stopped to pump.

GT43 - Conductor of heating element faulty, was replaced.

Sustained faults

GT11 - Requires a new sampling tube. Temporarily tube installed till the part arrives. Auto calibration does not changeover the feed to air when performing zero calibration every four hours. Manual intervention required.

GT31 - SO<sub>2</sub> sensor faulty. The factory was informed of the urgency to get the analyzer replaced.

### 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:** 14.89%

### 8 Leak Detection and Repair programme

No leaks were reported during January 2025

### 9 Complaints Register

Table 6. Complaints for the month of January 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**