Eskom

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Date:
15 April 2024

Enquiries:
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Ref: *ANK/2024/3*

Dear Ian

ANKERLIG POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF MARCH 2024

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 March, these being SO_2, CO_2, PM and NO_x (as NO_2).

1 Raw Materials and Products

Table 1. Quantity of Raw Materials and Products used/produced for the month of March 2024

Raw Materials and Products used	**Raw Material Type**	**Unit**	**Maximum Permitted Consumption/ Rate (Quantity)**	**Total consumption in Month of March**
	Fuel Diesel	Tons/hour/unit	*40*	**42 638 749.11L**
Production Rates	**Product/ By-Product Name**	**Unit**	**Maximum Production Capacity Permitted per unit (MW)**	**Total production/Power sent out in Month of March**
	Energy	MWh	*170 MW per hour per unit*	**136 675.70 MW/h**
	Fuel use per hour per unit (L)		**Fuel efficiency Litres per MWH**	
	Unit 11: *36 770.04* ***Unit 12:*** *N/A* ***Unit 21:*** *36 823.25* ***Unit 22****: 36 439.41* ***Unit 31****: 36 728.98* ***Unit 32****: 36 473.33* ***Unit 41:*** *33 955* ***Unit 42****: 34 937.45* ***Unit 43:*** *36 124.03*		***Unit 11****: 307.58* ***Unit 12****: N/A* ***Unit 21:*** *308.58* ***Unit 22****: 310.90* ***Unit 31****: 316.35* ***Unit 32****: 319.52* ***Unit 41****: 306.32* ***Unit 42****: 313.20* ***Unit 43****: 309.77*	

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2 Abatement Technology

Table 2. Abatement Equipment Control Technology availability for the month of March

Associated Unit	Technology Type	Actual Utilisation (%) for the month of March
Unit 11	Low NOx burners	*100%*
Unit 12	Low NOx burners	*100%*
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 3: Tonnages and mg/Nm^3 for the month of March

	Date	CO (mg/Nm^3)	NO_x (mg/Nm^3)	PM (mg/Nm^3)	SO_2 (mg/Nm^3)
Hourly Licence Limit mg/Nm^3			**250**	**75**	**3500**
Unit 11	2024/03/06	17.43	24.42	0	22.04
	2024/03/07	16.16	24.16	0	23.02
	2024/03/08	15.2	24.5	0	24.4
	2024/03/11	19.67	28.12	0	27.88
	2024/03/12	15.11	26.14	0	28.06
	2024/03/15	16.8	29	0	33.2
	2024/03/19	22.5	32	0	36.9
	2024/03/20	22.32	32.63	0	37.71
	2024/03/21	23.32	33.88	0	38.8
	2024/03/22	17.74	32.13	0	39.71
	2024/03/23	16.68	32.08	0	41.95
Unit 12	N/A				
Unit 21	2024/03/01	2	31.86	0	0.3
	2024/03/04	2.1	135.4	0	0.38
	2024/03/05	1.9	139.63	0	0.22
	2024/03/06	2.06	143.21	0	0.34
	2024/03/07	2.33	125.17	0	0.12
	2024/03/08	2.51	127.5	0	0.39
	2024/03/09	2	126.94	0	0.94
	2024/03/11	3.56	127	0	0.8
	2024/03/12	1.99	131.71	0	0.64
	2024/03/13	1.65	128	0	0.1
	2024/03/14	1.88	130	0	1.65

	2024/03/15	2.65	135	0	0.25
	2024/03/17	2.14	140.36	0	0.85
	2024/03/18	1.90	131.78	0	0.95
	2024/03/19	2.1	129	0	0.1
	2024/03/20	2.55	130.25	0	0.13
	2024/03/21	2.53	130.89	0	0.62
	2024/03/23	2.331	144.5	0	0.93
Unit 22	2024/03/04	1.06	129.4	0	1.98
	2024/03/05	1.62	126.9	0	3.43
	2024/03/06	2.16	134.13	0	4.11
	2024/03/07	1.98	119	0	8.07
	2024/03/08	1.66	118.6	0	3.1
	2024/03/09	1.5	110.79	0	3.68
	2024/03/13	1.9	121	0	1.8
	2024/03/14	1.74	119	0	2.86
	2024/03/16	1.67	122.5	0	5.95
	2024/03/17	3.15	120.5	0	3.35
	2024/03/18	1.72	129.75	0	1.12
	2024/03/21	1.83	121.75	0	2.14
	2024/03/23	1.31	123.75	0	1.73
Unit 31	2024/03/06	7.17	139.67	0	0.52
	2024/03/07	6.82	131.78	0	0.38
	2024/03/08	7.97	130.57	0	0.88
	2024/03/09	7.45	130.12	0	0.32
	2024/03/15	6.7	139	0	0.5
	2024/03/21	7.63	130.33	0	0.26
	2024/03/23	7.49	137.63	0	1.03
Unit 32	2024/03/01	9.07	159.57	0	1.34
	2024/03/04	8.7	159	0	0.66
	2024/03/05	8.19	163.57	0	1.15
	2024/03/06	7.69	168.59	0	1.33
	2024/03/07	7.23	162.43	0	1.26
	2024/03/08	7.1	157	0	1.23
	2024/03/09	7.49	159.82	0	1.16
	2024/03/11	8.34	155.12	0	1.78
	2024/03/12	7.84	150.42	0	1.39
	2024/03/13	7.64	162.6	0	0.93
	2024/03/14	7.99	158.86	0	0.77
	2024/03/15	7.35	161	0	0.1
	2024/03/16	7.45	172.5	0	0.18
	2024/03/17	7.39	159.5	0	0.83
	2024/03/18	6.66	164.36	0	0.54

	2024/03/19	6.2	168.5	0	0
	2024/03/20	2.93	150.75	0	0.25
	2024/03/21	2.72	159.31	0	0.22
	2024/03/22	2.34	153.78	0	0.36
	2024/03/23	2.36	161.82	0	0.61
Unit 41	2024/03/05	5.5	165	0.1	7.97
	2024/03/06	5.77	167.25	0.1	7.71
	2024/03/07	5.91	161.89	0.1	6.24
	2024/03/08	6.03	154.08	0.1	5.5
	2024/03/09	6.75	153.5	0.1	6
	2024/03/14	1.27	0	0.02	0.62
	2024/03/15	5.2	0	0	2
	2024/03/18	6.38	162.82	0.09	5.9
	2024/03/20		3.88	0.1	2.54
	2024/03/21	0.25	4	0.1	2.16
	2024/03/23	1.3	1.25	0.1	1.17
Unit 42	2024/03/01	5.14	170.86	0	2.33
	2024/03/06	3.72	179.75	0	1.9
	2024/03/07	3.4	177	0	1
	2024/03/11	3.14	167.2	0	1.84
	2024/03/12	4.31	167.86	0	2.09
	2024/03/13	2.41	166.08	0	1.46
	2024/03/14	4.71	175.14	0	1.66
	2024/03/18	3.68	173.73	0	1.18
	2024/03/19	3.4	169	0	1.03
	2024/03/20	3.6	160.63	0	1.11
	2024/03/21	3.83	164.38	0	1.25
	2024/03/22	2.7	165.8	0	2.04
	2024/03/23	1.5	161.2	0	2.68
Unit 43	2024/03/05	2	134	0	0.3
	2024/03/06	2.2	134.44	0	0.88
	2024/03/07	2.05	132.5	0	0.05
	2024/03/11	1.83	128.63	0	0.55
	2024/03/12	2.33	129.71	0	0.83
	2024/03/13	1.98	130.78	0	0.48
	2024/03/14	2.11	125	0	1.44
	2024/03/15	2.8	134.5	0	1.5
	2024/03/17	0.5	1	0	1.2
	2024/03/18	1.36	84.36	0	1.08
	2024/03/19	2.02	133.75	0	1.58
	2024/03/20	1.91	118.75	0	0.8
	2024/03/21	1.9	122.92	0	0.18

	2024/03/22	1.8	124	0	0.15
	2024/03/23	2.24	122.43	0	0.41
Total Emission mass (Tons)		9.715	136.315	0	1.628

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

Table 4: 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	71	25	96
12	0	0	0
21	163	44	207
22	102	28	130
31	63	19	82
32	191	55	246
41	93	38	131
42	97	37	134
43	116	40	156
Total	*896*	*286*	*1182*

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

Table 5

Associated Unit	Technology Type	Actual Utilisation (%) for the month of March
Unit 11	CEMS	*100%*
Unit 12	CEMS	*100%*
Unit 21	CEMS	*100%*
Unit 22	CEMS	*100%*
Unit 31	CEMS	*100%*
Unit 32	CEMS	*100%*
Unit 41	CEMS	*100%*
Unit 42	CEMS	*100%*
Unit 43	CEMS	*100%*

4 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.

5 Ambient Monitoring Station
The station has had the PM analyser installed and unfortunately due to weather related damages it had to be uninstalled. The analyser must still be repaired.

6 Load Factor: 14.76%

7 Leak Detection and Repair programme
No leaks were reported during March 2024

8 Complaints Register

Table 6. Complaints for the month of March 2024

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*

9 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

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Pamela Mrubata
ANKERLIG POWER STATION