	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6
		Document Identifier	240-88543153	Rev	1
		Effective Date	January 2018		
		Review Date	January 2021		

Phumudzo Thivhafuni

Date: 2020/03/31

Limpopo Dept. of Economic Development, Environment and Tourism

Enquiries: TR. Rammutla

Private Bag 9484
POLOKWANE
0700

Tel: 014 762 6375

ThivhafuniPO@ledet.gov.za

Ref: 12/4/12L-W2/A3 – Feb 2020

Dear Phumudzo

MEDUPI POWER STATION MONTHLY EMISSIONS REPORT FOR THE MONTH OF FEBRUARY 2020

This document serves as the monthly report required in terms of Section 7.7.1 of Medupi Power Station Provisional Atmospheric Emission License (AEL), 12/4/12L-W2/A3.

This report is a reflection of Unit 2, 3, 4, 5 and 6 gaseous and particulate emissions performance against the AEL limit for the month of February 2020 only.

1. Raw Materials and Products

Table 1: Quantity of raw materials and products for Unit 2, 3, 4, 5 and 6 in February 2020

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Unit 2,3, 4, 5 and 6 consumption February 2020
	Coal	Tons/month	1 875 000	660 004
	Fuel Oil	Tons/month	40 000	2 708
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Unit 2, 3, 4, 5 and 6 Production Rate in Month of February 2020
	Energy	MW	4 800	2 304
	Ash Emitted	Tons/month	not specified	224.3

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.


	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6
		Document Identifier	240-88543153	Rev	1
		Effective Date	January 2018		
		Review Date	January 2021		


Table 2: Daily consumption and production rates

Date	Reportable hours of Operation					Fuel Consumption (tons)				Production (MW)
	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Oil			Coal	Units
						Aux Boiler	Units	Total	Units	2,3,4,5 &6
01- Feb -19	24.0	0.0	24.0	24.0	24.0	0	2	2	24345	2354.241
02- Feb -19	24.0	0.0	24.0	24.0	24.0	0	19	19	24923	2366.602
03- Feb -19	24.0	0.0	24.0	24.0	24.0	0.539	1	1.539	23890	2207.476
04- Feb -19	24.0	0.0	24.0	24.0	24.0	0.47	28	28.47	24811	2316.615
05- Feb -19	24.0	0.0	24.0	24.0	24.0	0	0	0	25008	2183.567
06- Feb -19	24.0	0.0	24.0	24.0	24.0	0	12	12	25291	2236.664
07- Feb -19	24.0	0.0	24.0	24.0	24.0	0	33	33	24098	2298.335
07- Feb -19	24.0	0.0	24.0	24.0	24.0	0	75	75	26136	2347.655
09- Feb -19	24.0	0.0	24.0	24.0	12.2	0	18	18	24711	2269.936
10- Feb -19	24.0	0.0	24.0	24.0	4.7	0	106	106	25008	2534.134
11- Feb -19	24.0	0.0	24.0	24.0	24.0	0	66	66	25452	2416.888
12- Feb -19	24.0	0.0	24.0	24.0	24.0	0	53	53	25244	2419.4
13- Feb -19	24.0	0.0	24.0	24.0	24.0	0	79	79	21687	2434.42
14- Feb -19	24.0	0.0	24.0	24.0	24.0	0	193	193	22339	2501.315
15- Feb -19	24.0	0.0	24.0	24.0	7.2	1.7	197	198.75	23992	2533.117
16- Feb -19	24.0	0.0	24.0	24.0	0.0	0	159	159	24501	2300.452
17- Feb -19	24.0	0.0	7.1	24.0	6.2	0	58	58	25953	2427.79
18- Feb -19	24.0	0.0	6.8	24.0	24.0	0	56	56	23397	2365.716
19- Feb -19	24.0	0.0	24.0	24.0	24.0	0	10	10	22468	2535.13
20- Feb -19	24.0	0.0	24.0	24.0	24.0	0	25	25	23475	2212.736
21- Feb -19	24.0	0.0	24.0	24.0	24.0	0	17	17	23042	2050.802
22- Feb -19	24.0	0.0	24.0	24.0	24.0	0	187	187	20413	2199.578
23- Feb -19	24.0	0.0	24.0	24.0	24.0	0	324	324	23120	2104.153
24- Feb -19	24.0	0.0	24.0	24.0	11.8	0	37	37	20607	2094.953
25- Feb -19	24.0	0.0	24.0	24.0	1.3	0	181	181	15691	2241.599
26- Feb -19	24.0	0.0	24.0	13.3	24.0	0	554	554	16032	2256.399
27- Feb -19	24.0	0.0	14.8	0.0	21.2	0	47	47	17868	1980.584
28- Feb -19	24.0	0.0	3.0	0.0	0.0	0	12	12	18051	1597.438
29- Feb -19	24.0	0.0	24.0	0.0	17.5	0	157	157	18455	1718.691

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.

	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6
		Document Identifier	240-88543153	Rev	1
		Effective Date	January 2018		
		Review Date	January 2021		

2. Abatement Technology

Table 3: Abatement Equipment Control Technology utilisation for month of February 2020

Associated Unit/Stack	Technology Type	Efficiency
Unit 1	<i>Fabric Filter Plant (FFP)</i>	
Unit 2	<i>Fabric Filter Plant (FFP)</i>	99.950%
Unit 3	<i>Fabric Filter Plant (FFP)</i>	
Unit 4	<i>Fabric Filter Plant (FFP)</i>	99.893%
Unit 5	<i>Fabric Filter Plant (FFP)</i>	99.800%
Unit 6	<i>Fabric Filter Plant (FFP)</i>	99.885%

3. Energy Source Characteristics

Table 4: Energy Source Material Characteristics for the month of February 2020

Characteristic	Stipulated Range (% by weight on a dry basis)	Monthly Average Content (% by weight on a dry basis)
	Coal	
Sulphur Content	1.3 - 2.2	
Ash Content	35 - 39	34.16680264

4. Emissions Reporting

Medupi Power Station uses Continuous Emission Monitoring System which uses the extractive method for analysis.

The emission limits are as follows:

SO₂ Monthly = 3500 mg/Nm³ Dust Daily= 50 mg/Nm³ NO₂ Daily= 750 mg/Nm³

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.



Medupi Power Station Monthly Emissions Report


Template Identifier	240-43921804	Rev	6
Document Identifier	240-88543153	Rev	1
Effective Date	January 2018		
Review Date	January 2021		

2020/03/31	Final PM mg/Nm ³ (minus 24 hrs for tonnage calc.)				Velocity (m/s) to Gas Volume (Nm ³ /s)				Unit 2 Final CEM mg/Nm ³			Unit 2 Other CEMS Data					Unit 4 Final CEM mg/Nm ³				Unit 4 Other CEMS Data					
Date	U2	U4	U5	U6	U2	U4	U5	U6	SOx	NOx	CO	O ₂	H ₂ O	°C	kPa	m/s	SOx	NOx	CO	CO ₂	CO ₂	O ₂	H ₂ O	°C	kPa	m/s
2020/02/01	13.5	21.9	60.6	62.2	1167.3	352.1	711.2	308.5	2 654	427	14	7.3	5.0	128.9	89.7	26.4	2 969	498	8			8.5	11.5	125.7	89.1	8.3
2020/02/02	14.0	25.8	60.3	40.8	1222.7	340.3	784.1	294.0	2 695	445	12	7.0	4.5	129.4	89.7	27.1	2 938	504	5			9.0	6.3	125.7	90.1	8.3
2020/02/03	16.5	20.8	53.3	35.4	1264.4	308.3	705.4	270.4	2 733	454	12	6.7	4.2	132.4	89.6	27.6	3 046	569	5			10.1	7.6	125.7	89.9	8.3
2020/02/04	15.9	43.1	40.1	45.8	1265.7	366.1	607.2	308.3	2 766	470	12	6.6	4.1	131.2	89.7	27.3	3 167	517	33			8.1	5.2	125.7	90.0	8.3
2020/02/05	19.5	31.6	28.6	50.1	1246.7	282.9	503.5	280.3	2 796	466	12	6.8	4.3	130.9	89.7	27.2	2 587	623	9			9.3	8.3	125.7	90.0	7.1
2020/02/06	14.0	54.8	41.9	45.4	1076.8	242.0	663.5	279.5	2 908	493	12	7.5	5.4	124.6	89.6	24.7	2 344	683	19			11.1	8.9	125.7	89.8	7.1
2020/02/07	8.8	41.4	49.3	45.2	1034.9	304.5	771.2	273.0	3 057	506	12	7.6	5.3	123.2	89.2	24.0	2 547	532	23			9.1	8.2	125.7	89.6	7.5
2020/02/08	11.2	42.9	48.3	43.1	1232.4	361.9	690.8	273.1	3 057	497	14	6.4	3.7	134.0	89.3	26.3	2 996	536	58			8.2	5.3	125.7	89.6	8.3
2020/02/09	10.6	37.8	44.3	46.5	1278.3	350.3	662.9	267.9	2 977	468	12	6.1	3.4	131.2	89.4	26.5	3 313	572	11			8.6	5.8	125.7	89.6	8.3
2020/02/10	9.5	29.1	58.1	30.4	1211.6	464.8	804.7	286.8	2 954	481	12	6.6	4.1	124.4	89.3	25.7	3 385	472	42			6.9	3.7	125.7	89.6	9.7
2020/02/11	9.8	29.3	50.9	35.7	1202.1	378.6	712.8	282.5	2 838	477	12	6.6	4.1	125.0	89.2	25.6	3 090	455	29			7.0	3.8	125.7	89.5	7.9
2020/02/12	9.3	42.0	46.5	34.2	1146.8	399.3	744.1	282.3	2 842	437	13	6.8	4.2	123.3	89.2	24.7	2 908	414	40			7.3	4.2	125.7	89.5	8.6
2020/02/13	10.2	31.3	59.0	65.3	1228.2	360.1	734.3	269.3	2 869	404	20	6.2	3.6	125.4	89.4	25.4	2 722	388	13			7.7	4.7	125.7	89.7	8.0
2020/02/14	11.0	39.5	59.8	34.7	1235.7	458.1	754.7	268.4	3 007	412	31	6.2	3.6	125.1	89.5	25.4	2 948	448	125			7.4	4.3	125.7	89.7	9.9
2020/02/15	11.9	39.7	75.7	95.5	1285.0	336.8	803.2	282.5	2 860	419	35	6.1	3.4	125.5	89.4	26.2	2 927	498	14			8.0	5.0	125.7	89.7	7.6
2020/02/16	14.1	41.4	71.0		1273.1	343.8	824.0	206.3	2 769	401	17	6.0	3.3	127.7	89.3	26.0	2 936	493	16			7.7	4.7	125.7	89.6	7.6
2020/02/17	16.8	38.2	62.7	46.1	1259.8	362.2	764.9	231.9	2 667	406	19	6.1	3.4	130.2	89.5	25.9	2 794	447	13			8.2	5.3	125.7	89.7	8.3
2020/02/18	14.5	33.2	40.7	5.7	1195.1	424.3	642.4	238.9	2 632	382	21	6.3	3.7	128.4	89.5	25.0	2 830	392	40			7.3	4.4	125.7	89.8	9.1
2020/02/19	16.2	51.2	37.1	55.5	1250.3	421.0	709.9	228.6	2 634	511	13	6.3	3.7	127.8	89.4	26.0	2 244	419	63			7.7	6.5	125.7	88.8	9.4
2020/02/20	17.7	37.5	26.4	47.6	1290.1	360.3	561.8	211.5	2 753	515	12	6.1	3.4	129.1	89.5	26.6	2 728	494	22			8.3	5.4	125.7	89.8	8.3
2020/02/21	17.5	40.6	23.0	27.5	1294.0	369.8	499.1	187.0	2 678	519	11	6.1	3.3	127.7	89.6	26.5	2 780	482	35			8.0	4.9	125.7	89.9	8.3
2020/02/22	20.0	36.4	28.3	51.3	1284.2	352.8	565.5	221.1	2 742	574	47	6.2	3.5	126.8	90.6	26.3	2 912	487	7			8.5	5.7	125.7	89.6	8.3
2020/02/23	20.2	21.7	23.4	50.5	1315.5	332.7	517.2	206.1	2 799	545	12	6.0	2.8	132.5	89.4	27.0	3 046	555	5			9.2	6.6	125.7	89.6	8.3
2020/02/24	18.9	19.4	24.1	54.7	1260.5	340.8	575.1	204.4	2 705	525	11	6.4	3.2	127.6	89.3	26.4	2 959	519	5			8.9	6.2	125.7	89.5	8.3
2020/02/25	15.4	31.4	25.9	35.6	1212.6	370.9	651.2	191.4	2 857	489	12	6.7	3.5	123.0	89.3	25.7	3 070	457	158			7.2	3.9	125.7	89.5	7.9
2020/02/26	15.5	57.9	20.7	42.6	1249.3	322.9	615.8	201.7	2 800	444	15	6.6	3.3	118.2	89.7	25.8	3 095	521	74			8.3	7.1	125.7	90.0	7.4
2020/02/27	15.3	51.1		42.8	1210.5	361.0	403.1	207.5	2 656	441	18	6.7	3.8	120.7	89.6	25.5	5 396	987	30			8.3	8.8	125.7	89.8	8.3
2020/02/28	19.5	49.9			1322.7	315.3		234.8	2 723	470	13	6.4	3.1	126.7	89.4	27.6	2 275	529	2			8.5	11.3	125.7	89.5	7.4
2020/02/29	20.6	42.8		53.7	1266.5	337.5		217.7	2 491	478	13	6.7	3.5	127.0	89.3	27.0	1 878	526	4			9.0	6.0	125.7	89.3	8.3

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.

	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6	
		Document Identifier	240-88543153	Rev	1	
		Effective Date	January 2018			
		Review Date	January 2021			

2020/03/31	Unit 5 Final CEM mg/Nm ³			Unit 5 Other CEMS Data					Unit 6 Final CEM mg/Nm ³			Unit 6 Other CEMS Data				
Date	SOx	NOx	CO	O ₂	H ₂ O	°C	kPa	m/s	SOx	NOx	CO	O ₂	H ₂ O	°C	kPa	m/s
2020/02/01	3 032	432	43	6.0	86.3	133.9	89.0	14.3	2 594	342	21	8.7	6.0	132.1	89.1	7.6
2020/02/02	3 124	452	28	5.5	84.8	134.2	89.9	15.1	2 636	358	15	8.7	5.9	130.6	90.0	7.1
2020/02/03	3 103	464	31	6.0	85.6	133.1	89.8	14.0	2 610	371	6	9.0	6.3	132.0	89.9	6.7
2020/02/04	3 216	453	18	6.8	87.0	127.3	89.9	12.6	2 657	358	17	8.4	5.6	134.8	90.0	7.3
2020/02/05	3 239	521	9	7.7	88.5	121.1	89.9	11.0	2 734	325	7	9.0	6.3	133.2	89.9	7.0
2020/02/06	3 392	502	15	6.2	86.0	133.1	89.7	13.4	2 870	311	7	8.9	6.2	133.5	89.8	6.9
2020/02/07	3 572	474	19	5.3	84.7	136.9	89.5	14.9	2 953	311	11	8.9	6.2	135.4	89.6	6.8
2020/02/08	3 365	517	13	6.0	85.7	132.5	89.5	13.8	2 866	282	9	8.7	5.8	133.6	89.6	6.6
2020/02/09	3 458	505	12	6.1	85.9	129.1	89.5	13.2	2 887	319	21	9.0	6.5	128.2	89.6	6.6
2020/02/10	3 416	462	20	5.3	84.4	132.6	89.5	15.3	2 780	332	30	7.3	4.1	127.3	89.6	6.2
2020/02/11	3 184	459	13	5.8	85.4	130.3	89.4	14.0	2 662	312	35	7.1	3.9	128.0	89.5	6.0
2020/02/12	3 168	447	5	5.7	85.2	130.9	89.4	14.5	2 684	306	45	7.5	4.3	128.7	89.5	6.2
2020/02/13	3 134	436	8	5.9	85.6	129.3	89.6	14.4	2 618	325	61	8.8	6.0	130.9	89.7	6.6
2020/02/14	3 261	431	10	5.8	85.4	128.7	89.7	14.7	2 669	301	22	9.6	7.1	123.0	89.8	6.9
2020/02/15	3 164	442	15	5.5	84.7	131.8	89.6	15.4	2 609	337	14	9.8	7.5	124.4	89.8	7.4
2020/02/16	3 060	444	18	5.5	84.9	134.5	89.5	16.0	1 858	388	11	11.4	12.4	108.2	89.5	6.0
2020/02/17	2 969	423	21	5.7	85.2	134.9	89.5	15.0	2 494	318	11	11.4	9.4	124.6	89.7	7.1
2020/02/18	2 922	453	11	6.5	86.4	129.8	89.6	13.1	2 566	276	18	11.4	9.2	128.6	89.7	7.4
2020/02/19	2 884	472	11	6.3	86.6	131.2	88.7	14.5	2 438	277	11	11.7	9.7	126.6	88.8	7.3
2020/02/20	3 072	458	6	7.0	87.4	127.0	89.7	11.9	2 549	306	7	12.2	10.4	124.7	89.8	7.1
2020/02/21	3 066	547	5	7.7	88.6	121.9	89.8	10.9	2 239	355	7	12.6	12.3	117.4	89.9	6.4
2020/02/22	3 033	509	9	7.2	87.6	124.0	89.5	12.0	2 467	357	18	11.9	10.4	125.2	89.6	7.1
2020/02/23	3 072	536	9	7.6	88.2	124.9	89.5	11.3	2 432	381	27	11.9	10.1	128.7	89.6	6.7
2020/02/24	3 291	551	4	7.1	87.5	123.9	89.4	12.1	2 452	419	20	12.1	11.0	123.8	89.6	6.7
2020/02/25	3 155	471	4	6.4	86.2	126.2	89.4	13.1	2 337	348	12	12.5	11.6	112.8	89.5	6.4
2020/02/26	3 266	475	20	6.8	86.9	120.8	89.9	12.5	2 653	353	31	12.2	10.4	117.6	90.0	6.6
2020/02/27	3 044	544	8	9.3	89.9	109.9	89.7	9.7	2 353	355	26	11.9	10.6	118.3	89.8	6.6
2020/02/28									1 802	291	18	11.3	9.0	112.1	89.4	6.9
2020/02/29									2 281	298	43	12.2	9.1	121.4	89.3	7.2

Table 5: Medupi Power Station graphical representation of emissions data

CONTROLLED DISCLOSURE

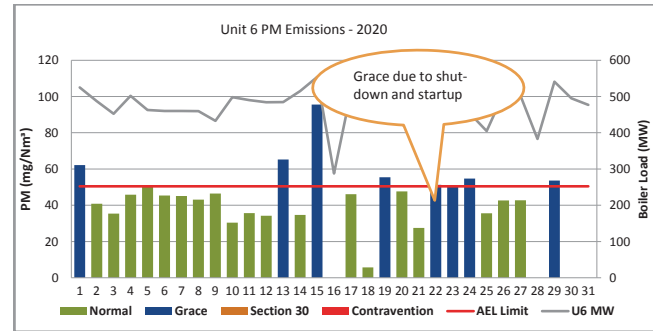
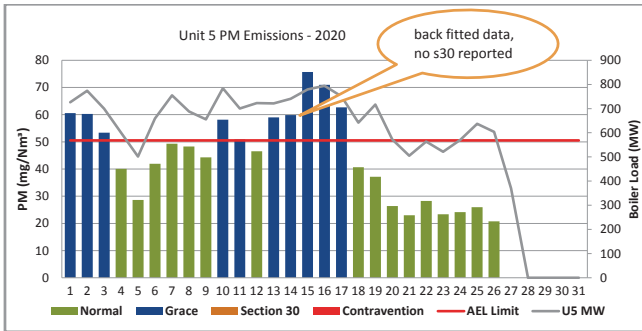
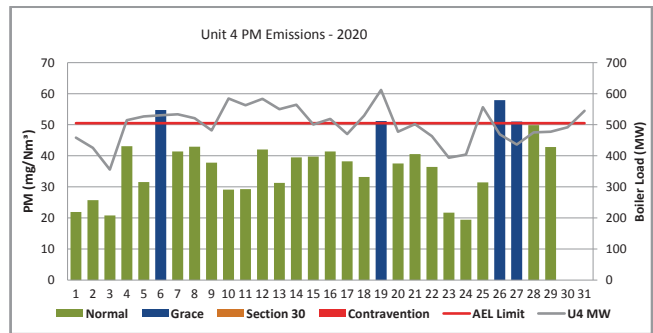
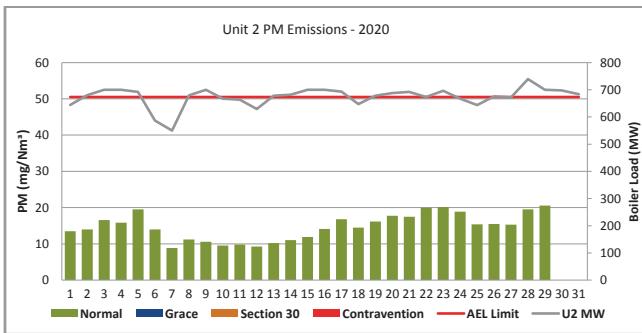
When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.



Medupi Power Station Monthly Emissions Report

Template Identifier	240-43921804	Rev	6
Document Identifier	240-88543153	Rev	1
Effective Date	January 2018		
Review Date	January 2021		



CONTROLLED DISCLOSURE

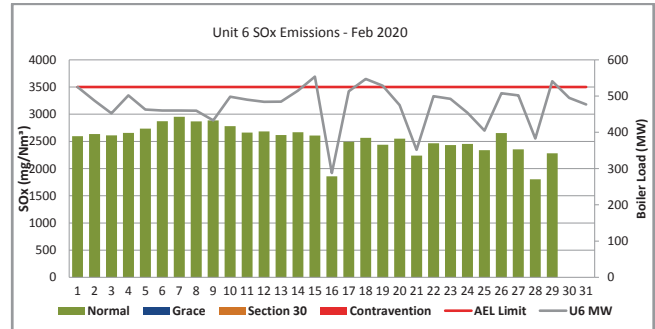
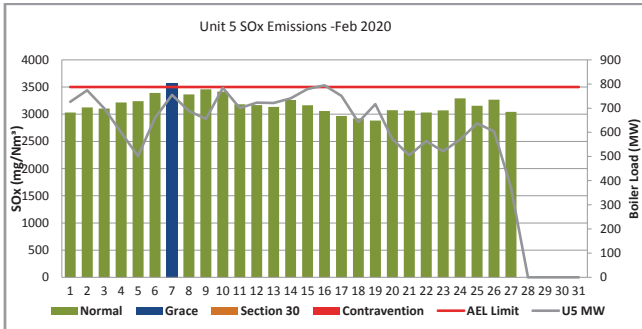
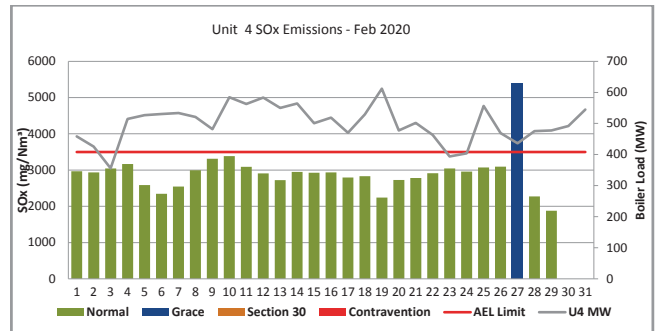
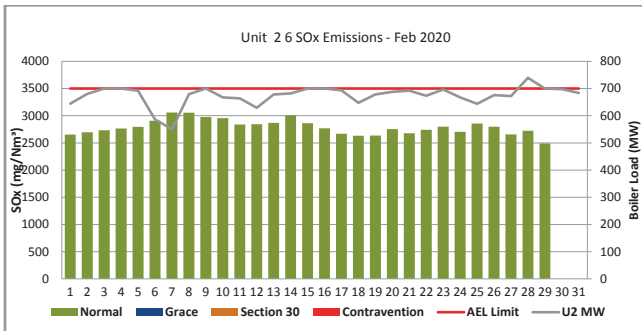
When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.



Medupi Power Station Monthly Emissions Report

Template Identifier	240-43921804	Rev	6
Document Identifier	240-88543153	Rev	1
Effective Date	January 2018		
Review Date	January 2021		



CONTROLLED DISCLOSURE

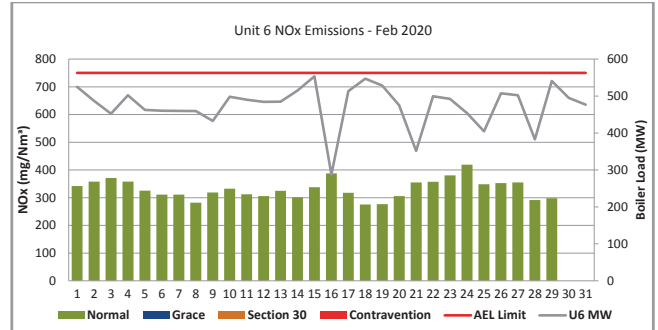
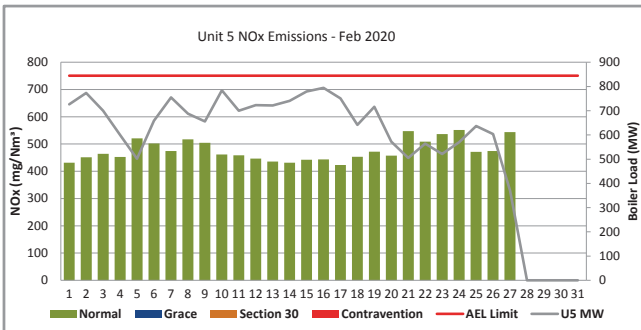
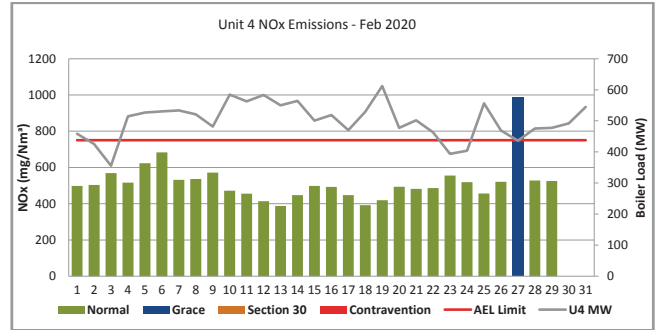
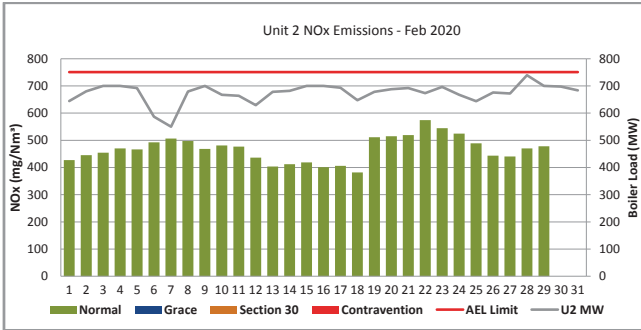
When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.



Medupi Power Station Monthly Emissions Report

Template Identifier	240-43921804	Rev	6
Document Identifier	240-88543153	Rev	1
Effective Date	January 2018		
Review Date	January 2021		



CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.


	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6
		Document Identifier	240-88543153	Rev	1
		Effective Date	January 2018		
		Review Date	January 2021		

Table 6: Monthly tonnages for the month of February 2020

Unit	PM (tons)	SO ₂ (tons)	NO ₂ (tons)	CO (tons)
1	-	-	-	-
2	33.9	6 358	1 066	37
3	0.0	0	0	0
4	48.0	4 001	699	48
5	95.9	6 637	987	31
6	46.5	3 150	400	25
SUM	224.3	20 146	3 152	141

5. Comments on the performance and availability of each unit

Gaseous emissions on all units were within the limit for February reporting period. All PM emission exceedances recorded for the month of February was in grace period i.e. within 24 hours from unit start-up, shut-down and upset conditions.

6. Continuous Emission Monitoring Systems (CEMS)

Unit 2, 3, 4, 5 and 6 Continuous Emission Monitoring Systems were in operation at all times when the unit was on load.

Table 7: Periods during which CEMS was inoperative

Date	Time	CEMS status	Comments
N/A	N/A	N/A	Data for the reporting period is available


Table 8: CEMS Monitor Reliability

Associated Unit/Stack	PM	SO ₂	NO _x	O ₂
Unit 2	99.9	100	99.9	99.7
Unit 4	99.9	89.9	89.8	89.7
Unit 5	99.8	99.5	99.5	99.5
Unit 6	99.6	98.9	94.5	93.2

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.

	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6	
		Document Identifier	240-88543153	Rev	1	
		Effective Date	January 2018			
		Review Date	January 2021			

7. CEMS Calibration certificates and equipment used for calibration

See attached Appendix A

8. Ambient Air Quality Monitoring Report

The Ambient Air Quality Monitoring and Dust fall-out report are emailed to the Licensing authority on a monthly basis.

9. Visual inspection of the exterior walls of the fuel oil tanks and TVOC Estimation

Visual inspection was conducted and there were no leaks observed on the exterior walls of the fuel oil tanks.

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.


	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6	
		Document Identifier	240-88543153	Rev	1	
		Effective Date	January 2018			
		Review Date	January 2021			


Table 9: Total Volatile Organic Compound (TVOC) for February 2019

CALCULATION OF EMISSIONS OF TOTAL VOLATILE COMPOUNDS FROM FUEL OIL STORAGE TANKS*		
Date:	31 March 2020	
Station:	Medupi Power Station	
Province:	Limpopo Province	
Tank no.	1-2	
Description:	Outdoor fuel oil storage tank	
Tank Type:	Vertical fixed roof (vented to atmosphere)	
Material stored:	Fuel Oil 150	
MONTHLY INPUT DATA FOR THE STATION Please only insert relevant monthly data inputs into the <i>blue cells</i> below Choose from a dropdown menu in the <i>green cells</i> The total VOC emissions for the month are in the <i>red cells</i> IMPORTANT: Do not change <i>any</i> other cells without consulting the AQ CoE		
MONTH:	February	
GENERAL INFORMATION:		
	Data	Unit
Total number of fuel oil tanks:	2	NA
Height of tank*:	14.2	m
Diameter of tank:	12	m
Net fuel oil throughput for the month:	2708	tons/month
Molecular weight of the fuel oil:	166.00	Lb/lb-mole
METEROLOGICAL DATA FOR THE MONTH		
	Data	Unit
Daily average ambient temperature	26.20	°C
Daily maximum ambient temperature	32.94	°C
Daily minimum ambient temperature	20.71	°C
Daily ambient temperature range	12.24	°C
Daily total insolation factor	5.72	kWh/m ² /day
Tank paint colour	Aluminum/Specular	NA
Tank paint solar absorbance	0.39	NA
FINAL OUTPUT:		
	Result	Unit
Breathing losses:	0.70 kg/month	
Working losses:	0.08 kg/month	
TOTAL LOSSES (Total TVOC Emissions for the month):	0.77 kg/month	
<small>*Calculations performed on this spreadsheet are taken from the USEPA AP-42- Section 7.1 Organic Liquid Storage Tanks - January 1996. This spreadsheet is derived from materials provided by Jimmy Peress, PE, Trittech Consulting Engineers, 85-93 Chevy Chase Street, Jamaica, NY 11432 USA, Tel - 718-454-3920, Fax - 718-454-6330, e-mail - PeressJ@nyc.rr.com.</small>		

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.

	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6
		Document Identifier	240-88543153	Rev	1
		Effective Date	January 2018		
		Review Date	January 2021		

10. Air quality improvements initiatives and public education and awareness campaigns

No awareness campaign.

11. Complaints Register


Table 10: Complaints for the month of February 2019

Source Code/ Name	Air pollution complaints received	Calculation of Impacts/ emissions associated with the incident	Date of complaint and date of response by the license holder	Results of investigation	Action taken to resolve the complaint
N/A	No complaints received	N/A	N/A	N/A	N/A

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.

	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6
		Document Identifier	240-88543153	Rev	1
		Effective Date	January 2018		
		Review Date	January 2021		


Compiled by: Lufuno Tshidzumba 
Senior Environmental Advisor

Verified by: Benjamin Rahlogo 
Chief Technologist Boiler

Supported by: Jabulani Mkhathswa 
Engineering Group Manager

I Wikus Janse Van Rensburg, declares that the information provided in this report is accurate and correct.


Yours sincerely

 2020-04-01
 Wikus Janse Van Rensburg
GENERAL MANAGER: MEDUPI POWER STATION


CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.

	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6
		Document Identifier	240-88543153	Rev	1
		Effective Date	January 2018		
		Review Date	January 2021		

APPENDIX 1: CEMS Calibration certificates



12 Angelier Street, Bardene,
BOKSBURG, SA, 1459
PO Box 328, ISANDO, SA, 1500
VAT REG #: 421 021 2249
www.e-analytics.co.za

Tel: 0861 000 092
Intl. Tel: +27 11 918 6954
Fax: +27 11 994 1037
CO REG #: 2004/007607/07
info@e-analytics.co.za

CALIBRATION CERTIFICATE

CERTIFICATE NO:			
3316			
CUSTOMER:	Medupi Power Station	JOB NO:	SC1593
CONTACT NAME:	Christo Vorster	PHONE:	014 762 2255
MODEL:	Dr Fodisch MGA 23	SERIAL NO:	13668
AUXILIARY EQUIPMENT:	Unit 4		

CHAN		PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER	EXPIRY DATE
1	ZERO	-4 ppm	0 ppm	Air	21.0 %	Air	
	SPAN	807 ppm	804 ppm	CO	803.9 ppm	80A	
2	ZERO	-3 ppm	0 ppm	Air	21.0 %	Air	
	SPAN	819 ppm	851 ppm	NO	850.9 ppm	132	
3	ZERO	-13 ppm	0 ppm	Air	21.0 %	Air	
	SPAN	2199 ppm	2162 ppm	SO2	2161.7 ppm	5905E	
4	ZERO	0.09 %	0.0 %	N2	99.99 %	132	
	SPAN	21.03 %	20.95 %	O2	20.95 %	Air	

REPORT: Wash and clean rotameter, change inlet plastic fitting, inlet filter in analyser should be change. Inspect all sample lines and rotameter. Calibrate analysers with zero and span gas, calibration was done according to cylinder standards, analysers were responding to all test gas.

Date of Calibration: 26 Nov 2019

Calibration Due Date: Feb 2020

Technician: J Faber



Bialer Lang
SERVOMEX
A HANNAH COMPANY
Document Number: TH-PPC-002-F1 Rev 2





TELEDYNE
ANALYTICAL INSTRUMENTS
A Teledyne Technologies Company

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.

	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6
		Document Identifier	240-88543153	Rev	1
		Effective Date	January 2018		
		Review Date	January 2021		



12 Angelier Street, Bardene,
BOKSBURG, GA, 1459
PO Box 328, ISANDO, GA, 1600
VAT REG #: 421 021 2249
www.e-analytics.co.za

Tel: 0861 000 032
Intl. Tel: +27 11 918 8984
Fax: +27 11 894 1037
CO REG #: 2004/007607/07
info@e-analytics.co.za

CALIBRATION CERTIFICATE

CERTIFICATE NO:			
3317			
CUSTOMER:	Medupi Power Station	JOB NO:	SC1593
CONTACT NAME:	Christo Vorster	PHONE:	014-762 2255
MODEL:	Dr Fodisch MGA 23	SERIAL NO:	13670
AUXILIARY EQUIPMENT:	Unit 5		


CHAN		PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER	EXPIRY DATE
1	ZERO	1 ppm	0 ppm	Air	21.0 %	Air	
	SPAN	761 ppm	804 ppm	CO	803.9 ppm	80A	
2	ZERO	-3 ppm	0 ppm	Air	21.0 %	Air	
	SPAN	815 ppm	851 ppm	NO	850.9 ppm	132	
3	ZERO	-17 ppm	0 ppm	Air	21.0 %	Air	
	SPAN	2206 ppm	2162 ppm	SO2	2161.7 ppm	5905E	
4	ZERO	-0.08 %	0.0 %	N2	99.99 %	132	
	SPAN	20.85 %	20.95 %	O2	20.95 %	Air	


REPORT: *Inspect all sample lines and rotameter. Calibrate analysers with zero and span gas, calibration was done according to cylinder standards, analysers were responding to all test gas.*

Date of Calibration: 26 Nov 2019


Calibration Due Date: Feb 2020

Technician: J Faber





Document Number: TH-PFC-002-F1 Rev 2





A Teledyne Technologies Company

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.

	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6	
		Document Identifier	240-88543153	Rev	1	
		Effective Date	January 2018			
		Review Date	January 2021			



Elemental Analytics
Analyser Specialists

12 Angeller Street, Bardene,
BOKSBURG, GA, 1459
PO Box 328, IGANDU, GA, 1600
VAT REG #: 421 021 2249
www.e-analytics.co.za

Tel: 0851 000 032
Intl. Tel: +27 11 918 6994
Fax: +27 11 894 1037
CO REG #: 2004/007607/07
info@e-analytics.co.za


CALIBRATION CERTIFICATE


CERTIFICATE NO:			
3318			
CUSTOMER:	Medupi Power Station	JOB NO:	SC1593
CONTACT NAME:	Christo Vorster	PHONE:	014 762 2255
MODEL:	Dr Fodisch MGA 23	SERIAL NO:	13669
AUXILIARY EQUIPMENT:	Unit 6		


CHAN		PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER	EXPIRY DATE
1	ZERO	-3 ppm	0 ppm	Air	21.0 %	Air	
	SPAN	817 ppm	804 ppm	CO	803.9 ppm	80A	
2	ZERO	-11 ppm	0 ppm	Air	21.0 %	Air	
	SPAN	883 ppm	851 ppm	NO	850.9 ppm	132	
3	ZERO	-35 ppm	0 ppm	Air	21.0 %	Air	
	SPAN	2265 ppm	2162 ppm	SO2	2161.7 ppm	5805E	
4	ZERO	0.03 %	0.0 %	N2	99.99 %	132	
	SPAN	20.59 %	20.95 %	O2	20.95 %	Air	

REPORT: *Inspect all sample lines and rotameter. Calibrate analysers with zero and span gas, calibration was done according to cylinder standards, analysers were responding to all test gas.*


Date of Calibration: 26 Nov 2019
Calibration Due Date: Feb 2020
Technician: J Faber







Document Number: TH-PPC-002-F1 Rev 2





A Teledyne Technologies Company

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.

	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6
		Document Identifier	240-88543153	Rev	1
		Effective Date	January 2018		
		Review Date	January 2021		



12 Angelier Street, Bardene,
BOKSBURG, SA, 1459
PO Box 328, ISANDO, SA, 1500
VAT REG #: 421 021 2249
www.e-analytics.co.za

Tel: 0851 000 092
Intl Tel: +27 11 918 6954
Fax: +27 11 894 1037
CO REG #: 2004/007607/07
info@e-analytics.co.za

CALIBRATION CERTIFICATE

		CERTIFICATE NO:	
		3315	
CUSTOMER:	Medupi Power Station	JOB NO:	SC1593
CONTACT NAME:	Christo Vorster	PHONE:	014 762 2255
MODEL:	Dr Fodisch MGA 23	SERIAL NO:	15712
AUXILIARY EQUIPMENT:	Unit 3		


CHAN	PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER	EXPIRY DATE
1	ZERO	9 ppm	0 ppm	Air	21.0 %	Air
	SPAN	802 ppm	804 ppm	CO	803.9 ppm	80A
2	ZERO	16 ppm	0 ppm	Air	21.0 %	Air
	SPAN	849 ppm	851 ppm	NO	850.9 ppm	132
3	ZERO	23 ppm	0 ppm	Air	21.0 %	Air
	SPAN	2227 ppm	2162 ppm	SO2	2161.7 ppm	590EE
4	ZERO	0.05 %	0.0 %	N2	99.99 %	132
	SPAN	21.23 %	20.95 %	O2	20.95 %	Air


REPORT: *Inspect all sample lines and rotameter. Calibrate analysers with zero and span gas, calibration was done according to cylinder standards, analysers were responding to all test gas.*

Date of Calibration: 26 Nov 2019



Calibration Due Date: Feb 2020

Technician: J Faber





Document Number: TH-PPC-002-F1 Rev 2

A Teledyne Technologies Company

CONTROLLED DISCLOSURE

When downloaded from the document management system, this document is uncontrolled and the responsibility rests with the user to ensure it is in line with the authorized version on the database.

No part of this document may be reproduced without the expressed consent of the copyright holder, Eskom Holdings SOC Limited, Reg No 2002/015527/30.