	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6
		Document Identifier	240-88543153	Rev	1
		Effective Date	January 2018		
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Date: 2020/02/29

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Ref: 12/4/12L-W2/A3 – Jan 2020

Dear Phumudzo

MEDUPI POWER STATION MONTHLY EMISSIONS REPORT FOR THE MONTH OF JANUARY 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 January 2020 only.

1. Raw Materials and Products

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

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Unit 2,3, 4, 5 and 6 consumption January 2020
	Coal	Tons/month	1 875 000	936 968
	Fuel Oil	Tons/month	40 000	3 471
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Unit 2, 3, 4, 5 and 6 Production Rate in Month of January 2020
	Energy	MW	4 800	2 868
	Ash Emitted	Tons/month	not specified	217.5

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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- Jan -19	16.3	24.0	24.0	24.0	24.0	0	6	6	31796	3029
02- Jan -19	0.0	24.0	24.0	24.0	24.0	0	1	1	31134	2877
03- Jan -19	23.1	24.0	24.0	24.0	24.0	0	0	0	27079	2682
04- Jan -19	24.0	24.0	24.0	24.0	24.0	0	255	255	26131	2530
05- Jan -19	24.0	24.0	24.0	24.0	24.0	0	97	97	31057	3009
06- Jan -19	24.0	24.0	24.0	24.0	24.0	0	86	86	31266	3054
07- Jan -19	24.0	24.0	24.0	24.0	24.0	0	15	15	29830	3020
07- Jan -19	24.0	24.0	23.9	24.0	24.0	0	33	33	30423	2868
09- Jan -19	24.0	24.0	0.0	24.0	24.0	0	57	57	22673	2437
10- Jan -19	5.9	24.0	0.0	24.0	24.0	0	103	103	26889	2819
11- Jan -19	1.7	24.0	21.8	24.0	24.0	0	397	397	27113	2544
12- Jan -19	0.0	24.0	24.0	24.0	24.0	0	242	242	28297	2642
13- Jan -19	22.2	24.0	24.0	24.0	24.0	0	52	52	28945	2656
14- Jan -19	24.0	24.0	24.0	10.2	24.0	0	87	87	29764	2959
15- Jan -19	24.0	24.0	24.0	4.3	24.0	0	140	140	34311	3272
16- Jan -19	1.8	24.0	24.0	24.0	24.0	0	13	13	26517	2827
17- Jan -19	4.1	24.0	24.0	24.0	24.0	0	254	254	33419	3140
18- Jan -19	24.0	24.0	24.0	24.0	24.0	0	44	44	29998	2823
19- Jan -19	24.0	24.0	24.0	24.0	24.0	0	61	61	30238	3010
20- Jan -19	24.0	24.0	24.0	24.0	24.0	0	83	83	27608	2603
21- Jan -19	24.0	24.0	24.0	24.0	24.0	0	285	285	26818	2477
22- Jan -19	24.0	8.4	23.3	24.0	24.0	0	289	289	28178	2728
23- Jan -19	24.0	4.8	0.0	24.0	24.0	0	253	253	28162	2620
24- Jan -19	24.0	24.0	0.0	24.0	24.0	0	47	47	25365	2340
25- Jan -19	24.0	24.0	0.0	24.0	23.5	0	166	166	28953	2792
26- Jan -19	24.0	0.0	19.3	24.0	0.0	14.46	132	132	19325	1817
27- Jan -19	24.0	0.0	24.0	24.0	0.0	0	19	19	21156	2077
28- Jan -19	24.0	0.0	24.0	24.0	4.8	0	178	178	25650	2417
29- Jan -19	24.0	0.0	24.0	24.0	24.0	0	45	45	25522	2403
30- Jan -19	24.0	0.0	24.0	24.0	24.0	0	11	11	25054	2354
31- Jan -19	24.0	0.0	24.0	24.0	24.0	0	20	20	25087	2367

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2. Abatement Technology

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

Associated Unit/Stack	Technology Type	Efficiency
Unit 1	Fabric Filter Plant (FFP)	0
Unit 2	Fabric Filter Plant (FFP)	99.954%
Unit 3	Fabric Filter Plant (FFP)	99.874%
Unit 4	Fabric Filter Plant (FFP)	99.911%
Unit 5	Fabric Filter Plant (FFP)	99.949%
Unit 6	Fabric Filter Plant (FFP)	99.874%

3. Energy Source Characteristics

Table 4: Energy Source Material Characteristics for the month of January 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	2.08
Ash Content	35 - 39	33.2

Table 5: Energy Source Material Characteristics for the month of January 2020

Characteristic	Stipulated Range (%)	Monthly Average Content (%)
Oil		
Sulphur Content	0.5 - 3.5	2.4
Ash Content	0.02 - 0.1	0.011

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

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Table 6: Medupi Power Station Emissions data

Date	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 3 Final CEM mg/Nm ³			Unit 3 Other CEMS Data				
	U1	U2	U3	U4	U5	U6	U1	U2	U3	U4	U5	U6	SOx	NOx	CO	O ₂	H ₂ O	°C	kPa	m/s	SOx	NOx	CO	O ₂	H ₂ O	°C	kPa	m/s
2020/01/01	24.9	45.4	43.9	6.8	34.4		1198.8	738.9	437.6	564.7	327.7	4 201	791	5	6.3	3.0	136.8	89.4	25.4	2 671	307	81	6.7	3.6	139.6	88.8	16.5	
2020/01/02			38.5	39.8	6.2	37.5		1172.6	717.7	364.1	558.8	318.4	3 920	753	12	6.7	3.4	125.3	89.4	24.9	2 687	288	29	7.8	4.9	130.7	88.9	17.1
2020/01/03	10.4	37.4	22.1	5.7	26.6		997.0	663.1	313.2	508.1	262.4	3 935	849	3	7.7	4.9	129.9	89.5	23.4	2 661	354	20	7.4	4.4	128.3	88.9	15.2	
2020/01/04	5.6	42.2	17.4	5.5	22.2		1121.1	763.0	348.4	460.3	292.1	3 902	838	50	7.1	4.0	130.3	89.5	25.0	2 593	339	17	6.5	3.3	134.9	88.9	16.5	
2020/01/05	17.5	44.5	25.8	6.7	31.5		1152.7	803.1	330.3	572.9	316.8	3 933	852	30	6.8	3.7	133.1	89.3	25.4	2 534	366	16	6.3	3.0	138.1	88.6	17.2	
2020/01/06	16.1	50.7	5.2	4.5	4.8		1131.4	793.9	4165.8	5726.2	2913.4	3 887	935	1	6.9	3.7	133.4	89.2	25.0	2 496	361	70	6.3	3.1	137.7	88.5	17.0	
2020/01/07	17.7	45.8	45.7	7.4	43.5		1139.7	753.5	447.4	585.8	301.6	3 906	863	199	6.9	3.8	130.8	89.4	25.0	2 608	381	17	6.6	3.3	136.8	88.7	16.5	
2020/01/08	25.6	31.8	44.0	7.6	39.2		1137.4	720.2	328.8	571.6	282.9	3 687	608	52	6.8	3.7	128.9	89.3	24.7	2 489	322	19	6.8	3.6	132.3	88.7	15.9	
2020/01/09	32.6	44.9		7.4	31.7		1039.5	827.5		571.7	314.9	3 686	630	8	7.6	4.7	125.6	89.3	23.9	2 356	296	119	6.5	3.3	137.6	88.7	18.0	
2020/01/10	26.6	61.5		7.0	24.7		892.5	646.6	296.1	591.9	323.8	3 891	708	4	8.7	6.1	121.8	89.5	22.5	2 420	369	107	8.7	6.0	137.9	88.9	17.0	
2020/01/11	15.7	32.8	36.6	7.2	36.8		700.8	588.7	374.0	579.1	319.6	3 472	690	8	9.9	9.8	116.1	89.7	20.0	2 704	371	10	8.2	5.5	128.6	89.2	14.4	
2020/01/12		30.0	44.8	7.8	35.4		749.2	617.7	327.5	580.9	320.0	3 766	745	1	10.1	7.9	114.4	89.6	21.2	2 633	323	9	7.6	4.7	127.2	89.0	14.4	
2020/01/13	25.8	32.8	42.3	6.3	37.7		1061.6	704.3	361.8	360.5	280.5	3 765	723	2	8.1	5.4	122.0	89.4	25.3	2 692	334	20	6.8	3.7	131.4	88.8	15.5	
2020/01/14	8.6	43.2	26.4	5.1	26.4		1143.9	817.9	371.8	514.4	305.1	3 650	729	3	7.2	4.2	124.9	89.4	25.4	2 628	343	40	6.0	2.8	133.2	88.9	17.0	
2020/01/15	5.8	50.0	36.2	7.4	45.3		1184.2	852.7	502.9	578.2	323.7	3 827	733	2	6.7	3.7	127.2	89.5	25.4	2 718	344	67	5.9	2.6	134.5	89.0	17.6	
2020/01/16	0.1	47.7	24.4	8.3	40.2		869.2	830.3	394.9	589.8	273.2	3 736	766	7	9.1	6.7	127.7	89.5	23.2	2 769	366	17	6.1	2.8	136.2	88.9	17.4	
2020/01/17	0.2	49.3	24.8	9.0	40.6		1047.1	859.5	330.0	719.8	272.6	3 822	606	7	8.6	5.9	122.1	89.3	26.1	2 690	355	18	5.9	2.4	138.9	88.7	17.9	
2020/01/18	26.9	32.5	17.9	9.4	32.9		936.1	605.1	352.9	747.2	297.8	3 982	659	6	8.7	6.1	117.5	89.0	23.5	2 873	372	7	7.7	4.7	126.9	88.5	14.2	
2020/01/19	14.7	31.9	21.8	10.0	40.8		942.2	654.3	363.2	799.5	330.3	4 145	697	50	8.5	5.9	117.3	88.9	23.3	2 918	360	16	7.3	4.1	128.7	88.4	14.9	
2020/01/20	16.8	30.5	22.1	9.8	30.2		1032.5	581.3	344.3	691.0	261.7	3 985	648	15	7.9	5.1	122.6	89.4	24.3	2 870	369	8	8.1	5.1	124.0	88.9	14.0	
2020/01/21	20.7	24.0	33.6	8.8	27.2		1027.1	541.8	288.0	662.9	277.8	4 169	799	9	8.0	5.2	124.7	89.5	24.4	2 945	395	8	8.2	5.3	122.9	89.0	13.1	
2020/01/22	18.4	13.0	22.8	13.9	33.5		1055.5	413.1	353.7	797.4	332.7	4 033	758	50	8.0	5.1	125.8	89.3	25.2	3 049	349	13	10.1	7.8	118.5	88.9	12.0	
2020/01/23	17.5	24.7		17.3	41.3		1043.8	759.1		819.5	331.9	3 942	750	50	8.0	5.2	129.0	89.2	25.2	2 761	339	67	6.6	3.4	133.6	88.6	16.5	
2020/01/24	10.9	16.2		16.3	37.6		983.1	614.7		814.8	273.0	4 006	745	19	8.2	5.5	125.3	89.6	23.9	2 871	377	12	7.3	4.2	129.2	89.1	14.0	
2020/01/25	7.9	13.2		15.9	43.4		992.2	546.1	317.7	813.0	329.4	4 017	603	2	8.1	5.4	120.7	89.6	23.6	2 879	326	10	7.8	4.9	128.0	89.1	12.9	
2020/01/26	12.1		18.7	15.9			1114.5		331.3	800.9		3 932	615	24	7.4	4.4	127.0	89.4	25.2									
2020/01/27	22.7		20.5	17.6			942.7		349.3	810.0	197.1	3 926	610	18	9.3	8.1	129.8	89.4	26.0									
2020/01/28	14.2		13.5	16.9	53.0		1086.5		319.4	783.0	305.6	3 653	640	16	7.7	5.8	126.1	89.7	25.5									
2020/01/29	11.8		21.5	16.9	45.3		1127.8		384.9	783.8	295.3	3 870	650	2	7.8	4.9	129.5	89.5	26.6									
2020/01/30	14.1		22.1	24.6	62.0		1117.6		354.1	718.0	314.1	3 665	619	901	7.8	5.0	128.9	89.7	26.4									
2020/01/31	14.6		25.9	24.5	40.8		1173.9		339.5	784.1	294.0	3 713	644	3	7.6	4.5	129.4	89.7	27.1									

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Table 7: Medupi Power Station Emissions data

2020/02/19	Unit 4 Final CEM mg/Nm ³			Unit 4 Other CEMS Data					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	SO _x	NO _x	CO	O ₂	H ₂ O	°C	kPa	m/s	SO _x	NO _x	CO	O ₂	H ₂ O	°C	kPa	m/s	SO _x	NO _x	CO	O ₂	H ₂ O	°C	kPa	m/s
2020/01/01	1 971	425	80	7.5	5.9	128.4	89.6	9.6	2 936	434	2	7.1	86.3	124.9	89.5	12.0	2 635	338	22	7.6	5.9	129.4	89.6	7.2
2020/01/02	1 992	403	7	7.8	5.9	128.4	89.6	8.1	2 942	415	2	6.9	86.3	122.8	89.6	11.6	2 643	312	69	8.0	5.9	124.5	89.6	7.2
2020/01/03	2 085	460	10	8.6	5.9	128.4	89.7	7.5	2 922	403	2	7.5	86.3	120.9	89.6	10.9	2 630	329	22	9.4	5.9	118.4	89.7	6.5
2020/01/04	1 723	399	13	8.7	5.9	128.4	89.7	8.3	2 891	368	3	8.0	86.3	119.4	89.6	10.2	2 616	264	32	9.1	5.9	119.3	89.7	7.1
2020/01/05	2 214	439	40	8.4	5.9	128.4	89.4	7.8	2 934	435	1	6.9	86.3	125.8	89.4	12.0	2 629	320	23	8.2	5.9	126.1	89.4	7.3
2020/01/06	2 008	441	15	8.0	5.9	128.4	89.1	9.5	2 932	434	1	6.9	86.3	127.1	889.7	12.0	2 589	429	9	8.8	5.9	129.9	89.8	7.1
2020/01/07	1 904	404	37	8.1	5.0	128.4	92.2	9.9	2 868	432	2	7.0	87.4	127.1	92.1	12.0	2 496	467	8	8.6	5.7	130.3	92.2	7.0
2020/01/08	1 829	464	56	8.5	5.7	128.4	89.5	7.8	2 703	435	2	7.0	87.4	126.1	89.4	12.0	2 471	461	8	8.8	6.1	130.3	89.5	6.9
2020/01/09									2 759	419	6	7.0	87.2	123.0	89.4	11.9	2 424	380	22	8.0	5.1	129.1	89.4	7.2
2020/01/10	1 874	476	8	9.7	7.2	128.4	89.6	7.8	2 981	482	2	7.0	87.4	124.6	89.6	12.4	2 510	372	13	7.9	4.9	126.7	89.6	7.3
2020/01/11	2 199	468	14	7.8	4.7	128.4	89.9	8.3	3 059	525	2	7.2	87.6	125.9	89.8	12.3	2 706	435	18	8.2	5.3	131.6	89.8	7.4
2020/01/12	1 976	472	10	7.8	4.9	128.4	89.8	7.3	2 841	466	1	7.1	87.5	124.0	89.7	12.2	2 505	363	34	7.8	4.8	128.2	89.8	7.1
2020/01/13	1 941	446	5	8.5	5.8	128.4	89.6	8.6	2 672	479	1	9.0	89.8	113.1	89.6	8.5	2 446	454	17	9.1	6.3	126.0	89.6	6.9
2020/01/14	1 952	457	15	8.2	5.4	128.4	89.2	8.6	2 861	469	5	7.9	88.8	112.5	89.6	11.2	2 406	454	46	8.9	6.2	121.1	89.2	7.4
2020/01/15	2 338	427	25	7.4	5.2	128.4	89.7	10.9	3 033	426	6	7.0	87.3	120.9	89.6	12.0	2 480	386	150	8.1	5.2	124.1	89.7	7.3
2020/01/16	2 970	387	31	7.6	5.3	128.4	89.7	8.7	3 087	440	5	7.0	87.4	122.9	89.6	12.3	2 534	429	6	9.0	6.3	120.6	89.7	6.6
2020/01/17	2 646	375	29	7.4	4.3	128.4	89.5	7.2	3 017	465	13	6.0	85.7	133.3	89.4	14.4	2 580	467	7	9.0	6.2	126.1	89.5	6.7
2020/01/18	2 714	418	14	8.2	5.3	128.4	89.2	8.2	3 009	472	14	5.6	85.1	132.1	89.1	14.6	2 538	417	72	8.3	5.5	124.7	89.1	6.9
2020/01/19	2 998	418	18	6.9	3.7	128.4	89.0	7.7	3 123	460	24	5.4	84.7	131.9	88.9	15.4	2 648	397	165	7.8	4.8	124.4	89.0	7.4
2020/01/20	2 935	480	6	8.8	6.1	128.4	89.6	8.3	3 011	493	7	6.2	86.1	131.8	89.5	14.0	2 485	440	24	10.4	8.1	113.8	89.6	7.1
2020/01/21	3 031	526	7	10.8	8.8	128.4	89.7	8.3	3 227	518	12	6.5	86.4	128.0	89.6	13.5	2 540	411	21	9.4	6.8	118.2	89.7	6.9
2020/01/22	3 076	404	100	8.5	5.6	128.4	89.5	8.3	3 061	480	18	5.6	85.1	133.0	89.4	15.6	2 618	295	34	7.7	4.7	124.1	89.5	7.3
2020/01/23									2 978	463	16	5.6	85.1	136.9	89.2	16.1	2 599	298	60	7.4	4.2	128.2	89.4	7.2
2020/01/24									2 981	469	17	5.5	85.0	135.6	89.6	15.8	2 657	458	11	8.6	5.8	123.8	89.8	6.4
2020/01/25	2 999	493	10	8.8	6.0	128.4	89.8	7.7	3 062	469	20	5.4	84.7	132.9	89.7	15.6	2 694	409	155	7.8	4.8	127.6	89.8	7.3
2020/01/26	2 893	516	6	9.3	6.6	128.4	89.6	8.3	2 939	463	14	5.5	85.0	134.8	89.5	15.6								
2020/01/27	3 029	516	19	8.6	5.8	128.4	89.6	8.3	2 972	485	22	5.5	84.8	136.2	89.5	15.7	2 493	542	17	12.9	11.0	122.6	89.7	7.1
2020/01/28	3 187	504	33	8.1	5.1	128.4	89.9	7.3	3 088	488	23	5.5	84.8	131.9	89.8	15.0	2 608	307	44	8.9	6.1	126.6	89.9	7.4
2020/01/29	3 300	491	30	7.8	6.3	128.4	92.3	8.3	3 139	472	36	5.7	85.2	132.2	91.9	14.8	2 679	363	15	9.0	6.4	127.5	92.1	7.1
2020/01/30	2 969	498	8	8.5	11.5	128.4	90.1	8.3	3 032	432	43	6.0	86.3	133.9	89.9	14.3	2 588	341	21	8.6	5.9	132.1	90.0	7.6
2020/01/31	2 938	504	5	9.0	6.3	128.4	90.1	8.3	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

Note: There is no reportable data on areas shaded grey; this is a result of unit not operational, unit trip, outage and or grace period.

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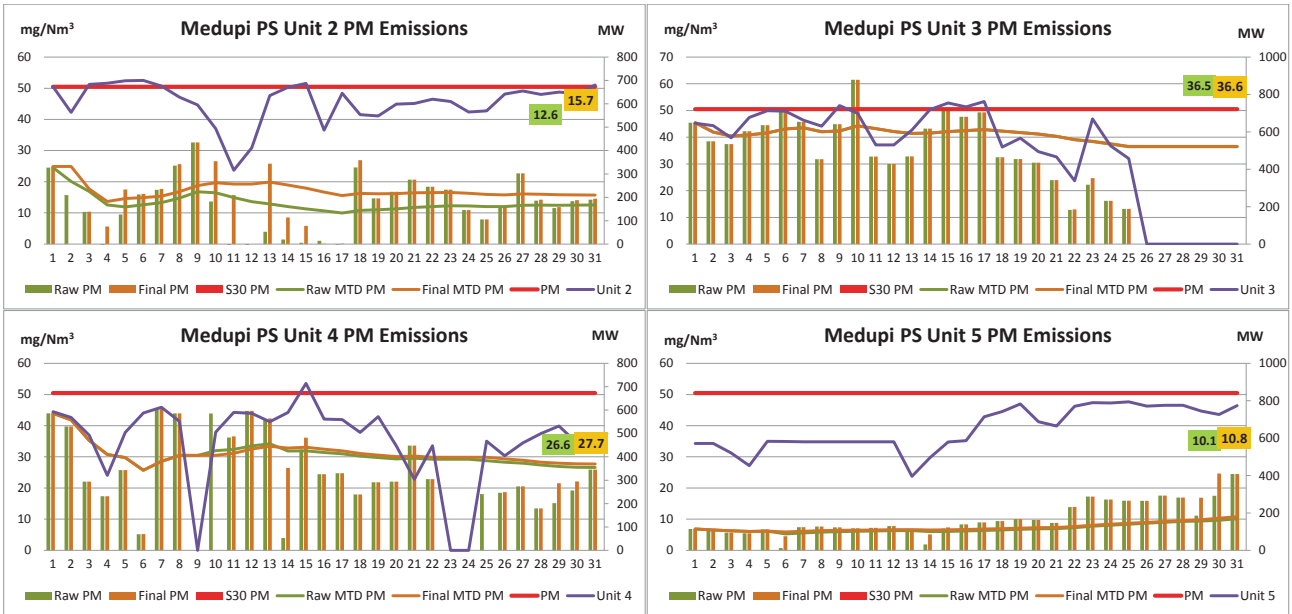
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Medupi Power Station Monthly Emissions Report

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

Table 8: Medupi Power Station graphical representation of emissions data



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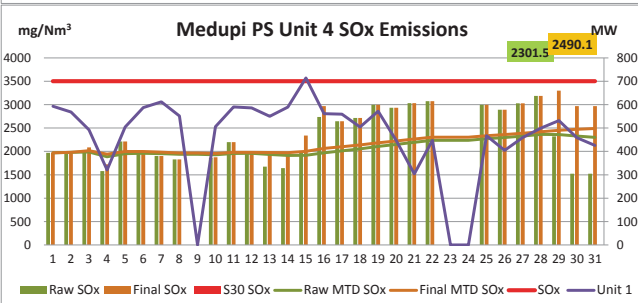
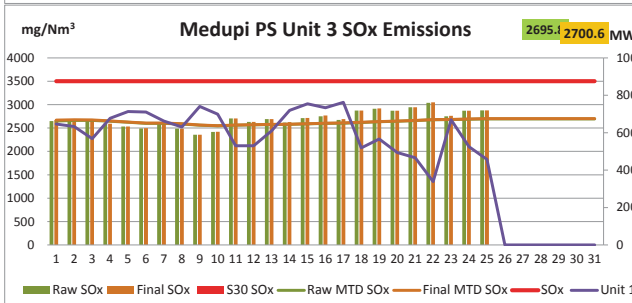
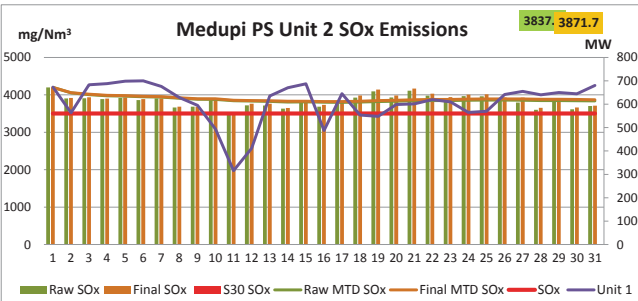
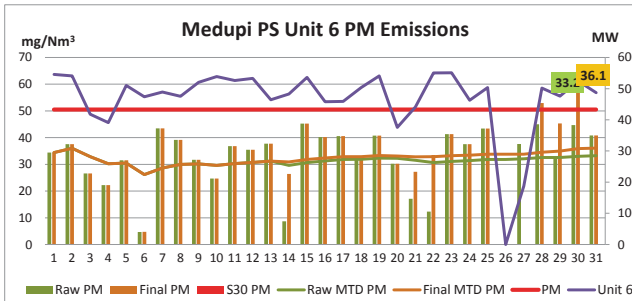
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Effective Date	January 2018		
Review Date	January 2021		



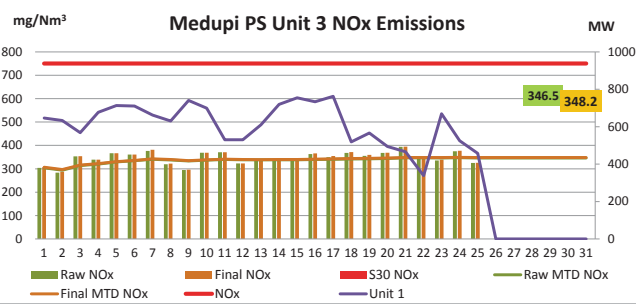
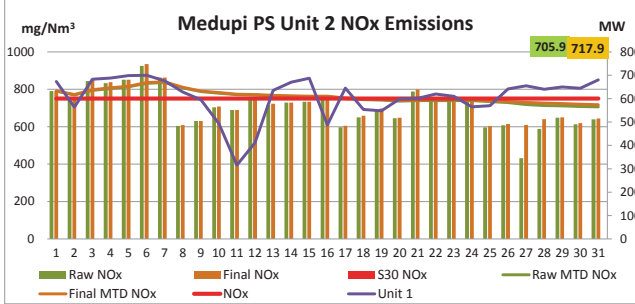
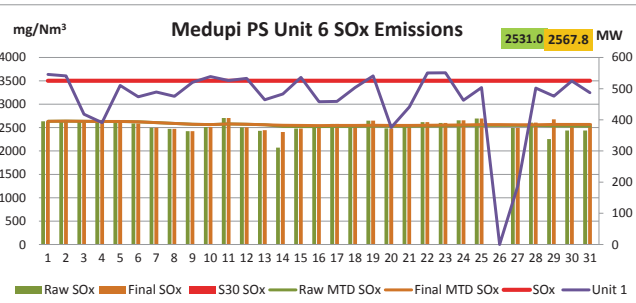
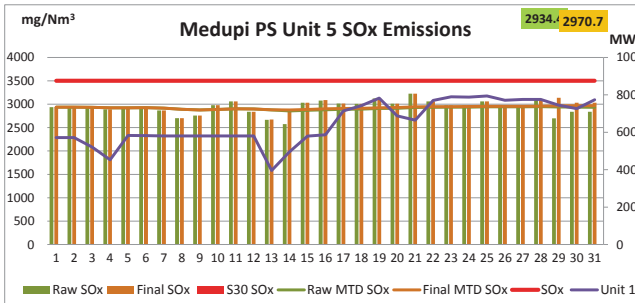
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Review Date	January 2021		



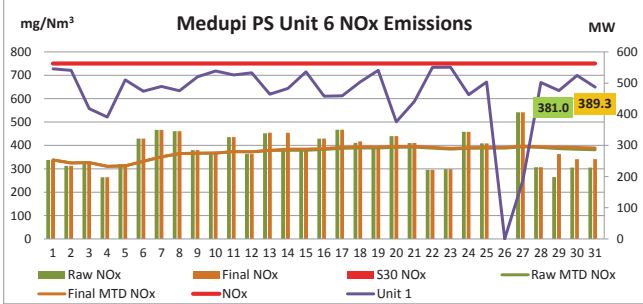
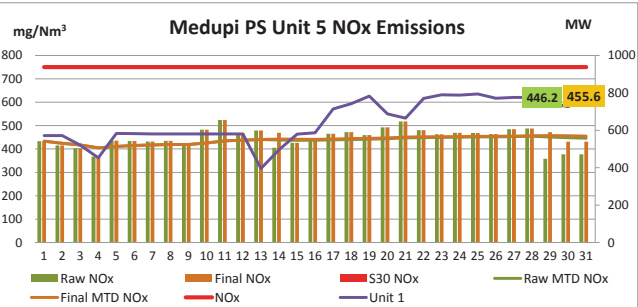
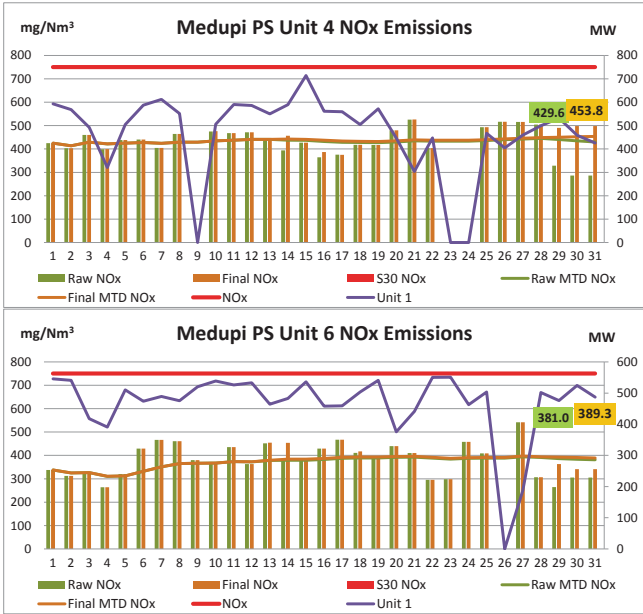
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Medupi Power Station Monthly Emissions Report

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



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	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: Monthly tonnages for the month of January 2020

Unit	PM (tons)	SO ₂ (tons)	NO ₂ (tons)	CO (tons)
1	-	-	-	-
2	27.7	7 008	1 296	108
3	64.2	4 630	600	60
4	38.9	4 182	799	39
5	29.6	8 849	1 348	31
6	57.0	5 240	801	69
SUM	217.5	29 909	4 844	307

5. Comments on the performance and availability of each unit

Medupi Power Station unit 2 gaseous CEMS parallel test were conducted on 27-30 January 2020. Correction test report with the correction factors will be implemented from the beginning of February.

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.

CEMS CO₂ monitor verification test not yet conducted on all Units as a result of challenges on the equipment, the Power Station received the spares new spares and has started with the process of replacement. Licencing Authority will be notified prior to conducting the test.

Unit 4 particulates correlation test was supposed to have been conducted prior to the end of November 2019. However, due to unfavourable plant conditions the test could not be conducted. The unit was on outage until 24 January 2019. Upon return to service, the unit could not reach the required load for the test to be conducted. The test is planned for March 2020.

Table 10: 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 11: CEMS Monitor Reliability

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	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		

Associated Unit/Stack	PM	SO ₂	NO	O ₂
Unit 2	99.6	99.6	98.0	98.2
Unit 3	100.0	99.9	99.9	99.9
Unit 4	99.5	95.0	96.8	94.4
Unit 5	99.6	99.3	99.3	99.3
Unit 6	99.6	99.2	99.2	99.2

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.

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	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 12: Total Volatile Organic Compound (TVOC) for January 2019

		
CALCULATION OF EMISSIONS OF TOTAL VOLATILE COMPOUNDS FROM FUEL OIL STORAGE TANKS*		
Date:	31 December 2019	
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	
<p style="text-align: center;"> 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 </p>		
MONTH:	December	
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:	3517	tons/month
Molecular weight of the fuel oil:	166.00	Lb/lb-mole
METEOROLOGICAL DATA FOR THE MONTH	Data	Unit
Daily average ambient temperature	27.35	°C
Daily maximum ambient temperature	33.26	°C
Daily minimum ambient temperature	21.97	°C
Daily ambient temperature range	11.30	°C
Daily total insolation factor	6.12	kWh/m ² /day
Tank paint colour	Aluminum/Specular	NA
Tank paint solar absorbance	0.39	NA
FINAL OUTPUT:	Result	Unit
Breathing losses:	0.69 kg/month	
Working losses:	0.10 kg/month	
TOTAL LOSSES (Total TVOC Emissions for the month):	0.79 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>		


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

No awareness campaign.

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	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			

11. Complaints Register


Table 13: Complaints for the month of January 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

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	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:

Senior Environmental Advisor

Verified by:

Chief Technologist Boiler

Supported by:

Boiler Engineering Manager

Supported by:

Environmental Manager

Supported by:

Engineering Group Manager

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


Yours sincerely:


GENERAL MANAGER: MEDUPI POWER STATION


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	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



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Tel: 0861 000 092
Intl. Tel: +27 11 918 8994
Fax: +27 11 894 1037
CO REG #: 2004/007607/07
info@e-analytica.co.za

CALIBRATION CERTIFICATE

		CERTIFICATE NO:	
		3316	
CUSTOMER:	Medupi Power Station	JOB NO:	SC1503
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	803.8 ppm	804	
2	ZERO	-3 ppm	0 ppm	Air	21.0 %	Air	
	SPAN	819 ppm	851 ppm	NO	850.8 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



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





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		Document Identifier	240-88543153	Rev	1
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OO REG #: 2004/007607/07
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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	5906E
4	ZERO	-0.08 %	0.0 %	N2	99.99 %	132
	SPAN	20.85 %	20.96 %	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





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	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6
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OO REG #: 2004/007607/07
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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	804	
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	5905E	
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




Bialer + Lang



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



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	Medupi Power Station Monthly Emissions Report	Template Identifier	240-43921804	Rev	6	
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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	8 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: 28 Nov 2019


Calibration Due Date: Feb 2020

Technician: J Faber





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



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