	Medupi Power Station Monthly Emissions Reporting Form	Document No.	240-88543153
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Phumudzo Thivhafuni

Date: 2018/03/02

Limpopo Dept. of Economic Development, Environment and Tourism

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Ref: 12/4/12L-W2/A3 – Jan 2018

Dear Phumudzo

MEDUPI POWER STATION MONTHLY EMISSIONS REPORT FOR THE MONTH OF JANUARY 2018

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 4, 5 and 6 gaseous and particulate emissions performance against the AEL limit for the month of January 2018 only.

1. Raw Materials and Products

Table 1: Quantity of raw materials and products used/produced for Unit 5 and 6 in January 2018

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Unit 4, 5 and 6 consumption January 2018
	Coal	Tons/month	1 875 000	685 986
	Fuel Oil	Tons/month	40 000	765.4
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Unit 4, 5 and 6 Production Rate in Month of January 2018
	Energy	MW	4800	1950
	Ash Emitted	Tons/month	not specified	359.2

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Table 2: Daily consumption rates for fuel

Date	Reportable hours of Operation			Fuel Consumption (tons)				Production rate (MW)		
	Unit 4	Unit 5	Unit 6	Oil			Coal	U4	U5	U6
				Aux Boiler	Unit 4, 5 & 6	Total	Unit 4, 5 & 6)			
01-Jan-18	0.0	24.0	24.0	0.00	93	93	19644	562	636	617
02-Jan-18	0.0	24.0	24.0	0.00	11	11	19744	587	591	615
03-Jan-18	20.7	24.0	24.0	0.42	17	17.4	20038	600	574	607
04-Jan-18	24.0	24.0	24.0	0.00	19	19	20576	600	636	669
05-Jan-18	24.0	24.0	24.0	0.00	0	0	20755	619	657	606
06-Jan-18	24.0	24.0	24.0	0.00	2	2	20696	603	654	617
07-Jan-18	24.0	24.0	24.0	0.00	18	18	20439	603	605	604
08-Jan-18	24.0	24.0	24.0	0.00	10	10	20643	635	622	618
09-Jan-18	24.0	24.0	24.0	0.00	7	7	21057	653	668	603
10-Jan-18	24.0	24.0	24.0	0.00	19	19	23490	704	656	679
11-Jan-18	24.0	24.0	24.0	0.00	18	18	21087	717	625	676
12-Jan-18	24.0	24.0	24.0	0.00	7	7	22528	720	597	617
13-Jan-18	24.0	24.0	24.0	0.00	19	19	22976	785	607	598
14-Jan-18	24.0	24.0	24.0	0.00	2	2	23169	776	611	628
15-Jan-18	24.0	24.0	24.0	0.00	38	38	23152	741	635	637
16-Jan-18	24.0	24.0	24.0	0.00	22	22	23347	785	624	624
17-Jan-18	24.0	24.0	24.0	0.00	0	0	22217	726	597	601
18-Jan-18	24.0	24.0	24.0	0.00	24	24	22909	790	599	602
19-Jan-18	6.7	24.0	24.0	0.00	25	25	18659	630	600	599
20-Jan-18	8.9	20.3	24.0	0.00	110	110	21599	757	600	604
21-Jan-18	24.0	0.0	24.0	0.00	78	78	22267	757	629	642
22-Jan-18	24.0	19.5	24.0	0.00	101	101	24650	753	673	689
23-Jan-18	24.0	24.0	24.0	0.00	0	0	24097	758	631	641
24-Jan-18	24.0	24.0	24.0	0.00	0	0	23730	786	632	638
25-Jan-18	24.0	24.0	24.0	0.00	6	6	23850	739	618	692
26-Jan-18	24.0	24.0	24.0	0.00	2	2	23627	772	636	601
27-Jan-18	24.0	24.0	24.0	0.00	0	0	22838	741	598	601
28-Jan-18	24.0	9.2	24.0	0.00	9	9	21020	733	486	601
29-Jan-18	24.0	3.9	24.0	0.00	96	96	24651	713	689	667
30-Jan-18	24.0	24.0	9.6	0.00	4	4	23331	688	700	584
31-Jan-18	24.0	24.0	13.1	0.00	8	8	23201	670	675	598

2. Abatement Technology


Table 3: Abatement Equipment Control Technology utilisation for month of January 2018

Associated Unit/Stack	Technology Type	Actual Utilisation (%) for the month of January 2018
Unit 4,5 and 6	Low NO _x Burners	100

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Pulse Jet Fabric Filter Plant		100	

3. Energy Source Characteristics

Table 4: Energy Source Material Characteristics for the month of January 2018

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	1.45
Ash Content	35 - 39	34.3

Table 5: Energy Source Material Characteristics for the month of January 2018

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

4. Emissions Reporting

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

The daily emission limits are as follows:

SO₂= 3500 mg/Nm³

Dust= 50 mg/Nm³

NO₂= 750 mg/Nm³

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Table 6: Unit 6 daily averages emissions for the month of January 2018

Days	PM (mg/Nm ³)			SO ₂ (mg/Nm ³)			NO ₂ (mg/Nm ³)			CO (mg/Nm ³)			Temp (°C)			Press (kPa)			Velocity (m/s)			O ₂ (%)		
	Unit	4	5	6	4	5	6	4	5	6	4	5	6	4	5	6	4	5	6	4	5	6	4	5
01-Jan-18		19.03	53.94		3397.7	3343.1		386.5	510.4		27.1	6.0		139.3	140.8		88.9	89.0		23.8	30.9		5.8	6.9
02-Jan-18		23.66	62.29		3338.2	3183.3		404.2	540.3		33.7	9.1		137.9	138.3		89.1	89.2		23.4	31.3		6.7	7.7
03-Jan-18	12.38	23.91	43.86	2968.2	3177.1	3048.1	684.6	382.8	410.7	5.1	19.2	4.6	133.0	129.4	129.9	80.0	89.8	89.9	18.4	22.9	30.5	7.2	7.0	7.7
04-Jan-18	12.75	23.74	48.46	3243.6	3340.3	3109.3	736.0	450.7	413.8	5.4	86.8	14.8	133.0	133.4	136.1	80.0	89.9	90.0	18.4	24.0	32.0	7.2	6.5	6.9
05-Jan-18	12.40	35.69	47.82	2922.2	3153.7	2968.0	703.1	426.5	390.5	5.7	68.7	5.9	133.0	131.9	134.8	80.2	89.5	89.6	18.4	24.2	30.5	6.7	6.3	7.4
06-Jan-18	15.98	42.67	56.46	2988.9	3312.0	2990.5	718.2	426.5	380.1	8.6	19.4	9.1	133.0	136.4	137.5	80.0	89.1	89.2	18.4	24.3	31.6	6.9	6.2	7.5
07-Jan-18	16.41	37.49	61.47	3201.3	3398.5	3112.1	653.7	420.3	388.2	7.4	5.8	4.6	133.0	133.3	136.0	80.0	89.1	89.2	18.4	23.5	31.2	7.4	6.6	7.6
08-Jan-18	19.30	47.55	62.70	3347.8	3629.7	3270.8	564.9	402.6	381.9	7.9	12.6	7.4	133.0	131.7	137.2	81.4	89.1	89.1	18.4	23.7	31.9	7.0	6.4	7.5
09-Jan-18	15.43	61.11	48.36	3314.2	3654.0	3353.8	595.0	425.7	403.9	10.8	43.1	15.4	133.0	128.2	132.8	81.9	89.3	89.4	18.4	24.0	30.7	7.0	6.2	7.5
10-Jan-18	7.78	60.80	32.34	2946.9	3274.3	2987.1	620.2	436.0	375.2	10.5	17.2	12.6	133.0	128.7	130.9	82.6	89.8	89.9	18.4	24.4	32.9	6.6	6.4	6.9
11-Jan-18	7.08	65.08	61.19	3033.4	3284.0	2978.4	767.8	453.0	413.0	8.9	6.6	8.7	133.0	128.2	133.2	82.5	90.0	90.0	18.4	23.8	32.6	6.3	6.6	6.8
12-Jan-18	6.66	64.62	56.52	2930.4	3168.1	2946.3	672.4	445.6	393.3	9.1	4.9	10.1	133.0	123.9	131.8	83.5	89.8	89.9	18.4	23.6	30.7	6.4	7.1	7.2
13-Jan-18	8.58	55.45	55.58	2920.5	3193.5	3061.3	675.6	474.9	407.1	7.8	9.7	11.2	133.0	128.6	131.8	86.1	89.5	89.9	18.4	23.4	30.7	6.3	6.8	7.7
14-Jan-18	9.15	60.37	58.47	2849.8	3162.0	2788.0	657.9	470.4	387.1	15.5	12.8	8.4	133.0	130.5	133.3	85.9	89.4	89.6	18.4	23.6	30.9	6.3	6.5	7.4
15-Jan-18	8.60	60.71	59.03	2741.3	2968.2	2868.0	639.4	452.6	462.1	7.1	10.2	8.0	133.0	131.3	137.2	85.6	89.4	89.5	18.4	24.1	32.0	6.5	6.6	7.4
16-Jan-18	9.47	62.89	59.49	2634.3	2827.9	2759.1	633.6	455.5	465.6	11.0	12.7	7.7	133.0	132.4	136.8	86.0	89.7	89.5	18.4	23.8	32.5	6.2	6.5	7.3
17-Jan-18	9.03	65.09	51.58	2861.1	3111.7	2582.3	639.1	460.6	450.8	12.5	9.0	4.5	133.0	131.0	136.0	83.4	89.7	89.8	18.4	23.4	31.6	6.4	6.7	7.4
18-Jan-18	11.83	56.38	50.49	3024.9	3202.2	2761.5	604.5	439.4	396.2	7.8	4.6	3.8	133.0	129.3	135.6	86.7	89.6	89.8	18.4	23.4	30.6	6.3	6.7	7.4
19-Jan-18	14.11	68.80	54.90	3063.1	3161.5	3131.6	501.0	426.3	381.2	18.0	5.1	3.6	133.0	129.3	135.3	85.0	89.5	89.7	18.4	23.5	30.5	6.7	7.1	7.7
20-Jan-18	23.23	65.29	62.19	3071.2	3092.5	2882.7	753.9	451.2	354.6	15.1	5.4	5.1	133.0	129.7	134.7	86.3	89.4	89.6	18.4	23.4	30.9	6.2	7.0	7.7
21-Jan-18	18.42		63.58	3001.3		2869.8	716.7		443.8	10.9		6.7	133.0		136.5	84.5		89.5	18.4		30.6	6.2		7.4
22-Jan-18	17.00	64.82	67.59	3355.6	3583.4	3024.9	715.0	522.9	507.3	7.6	18.4	11.2	133.0	133.8	138.4	85.7	89.4	89.5	18.4	24.8	32.0	6.7	6.5	6.9
23-Jan-18	12.71	64.53	82.25	3012.2	3329.4	3344.9	727.4	488.5	528.0	8.4	12.4	7.3	133.0	129.5	141.2	85.5	89.3	89.5	18.4	24.1	33.8	6.3	6.6	6.7
24-Jan-18	12.36	62.47	74.65	2833.7	3052.8	2959.5	780.8	477.1	544.9	13.0	7.8	8.4	133.0	130.0	137.6	86.5	89.4	89.4	18.4	23.7	31.9	6.3	6.5	7.0
25-Jan-18	11.32	56.94	74.41	2971.0	3300.5	2805.8	734.8	487.7	477.7	9.8	10.6	10.2	133.0	129.7	136.4	85.3	89.4	89.5	18.4	23.7	31.9	6.5	6.6	7.1
26-Jan-18	11.20	63.88	83.80	3047.5	3341.1	2962.6	740.9	479.3	417.8	9.4	11.7	27.2	133.0	130.6	138.6	86.7	89.5	89.4	18.4	23.9	34.5	6.4	6.5	7.1
27-Jan-18	9.87	54.05	55.03	3081.0	3372.8	3100.0	709.9	485.2	444.5	8.9	6.1	4.1	133.0	128.3	135.3	85.1	89.5	89.6	18.4	23.1	30.6	6.5	6.8	7.4
28-Jan-18	10.47	59.55	17.41	3021.4	3141.4	3075.3	714.9	531.1	457.5	9.8	6.4	3.0	133.0	121.8	135.6	85.2	89.4	89.6	18.4	21.8	30.6	6.5	8.4	7.4
29-Jan-18	8.08	66.93	37.34	3136.5	3414.9	2990.6	681.1	460.3	457.9	9.3	6.7	1.9	133.0	129.5	137.9	84.1	89.6	89.4	18.4	24.9	30.9	6.5	6.5	7.3
30-Jan-18	9.94	65.47	48.73	3233.5	3422.8	3174.7	681.4	443.5	469.7	7.9	7.0	4.4	133.0	131.2	136.7	82.3	89.4	89.7	18.4	25.1	32.6	6.8	6.3	6.8
31-Jan-18	8.65	58.82	44.67	3256.9	3538.6	3034.6	702.2	459.1	385.2	10.6	6.4	7.5	133.0	127.3	132.7	81.6	89.2	89.5	18.4	24.8	29.1	7.0	6.9	7.6

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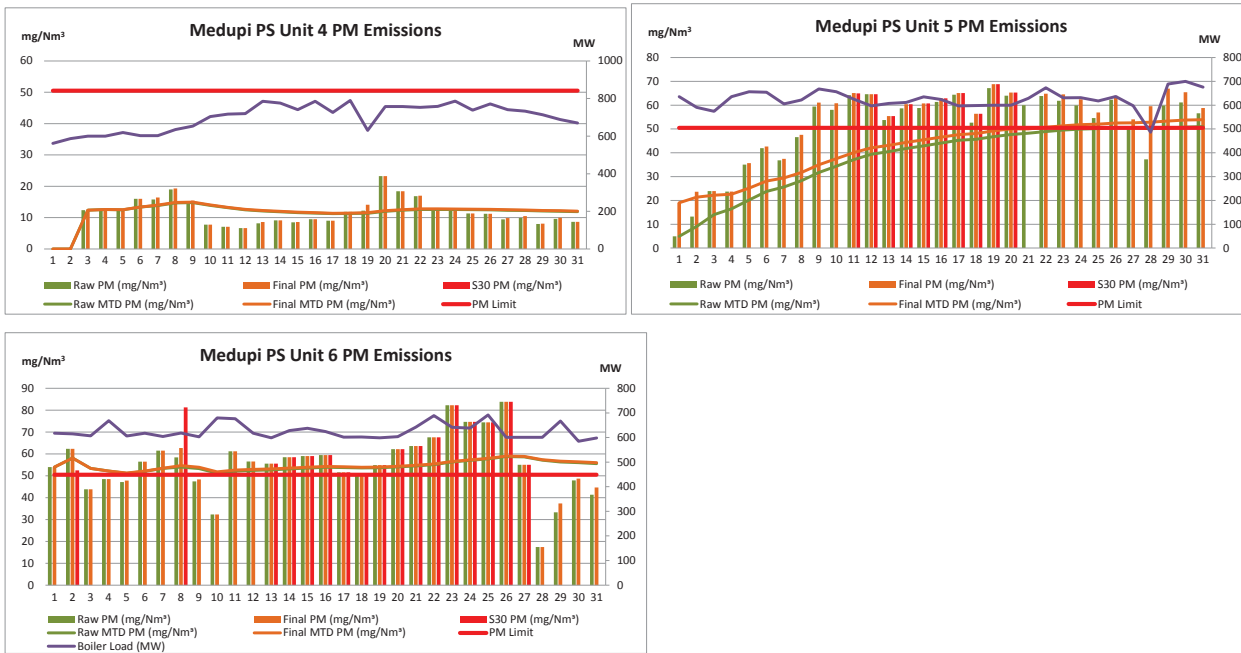
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Note: Unit 5 boiler tripped on fuel air ratio low on 20 January 2018, the unit was operating on grace on 21 January 2018 and hence no reportable emissions figures. Unit 4 turbine tripped on 31 December 2018 and as such there was no reportable emissions figures for unit 4 emissions on 1 and 2 January 2018, the unit was operating on grace.

Figure 1: Daily average emissions for the January 2018



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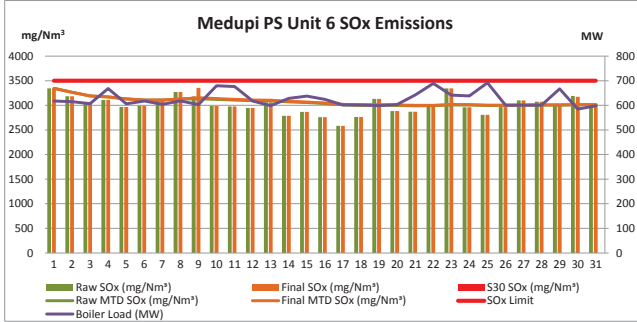
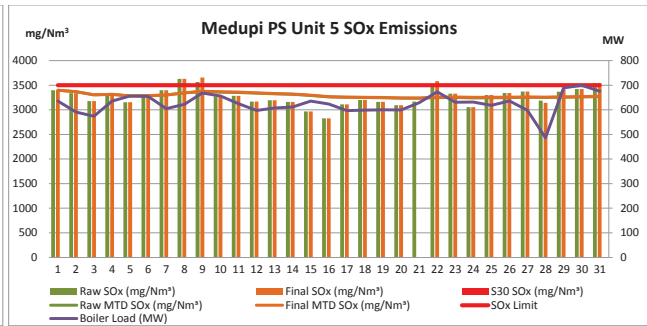
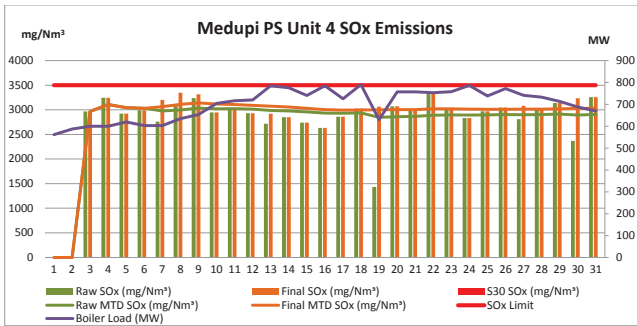
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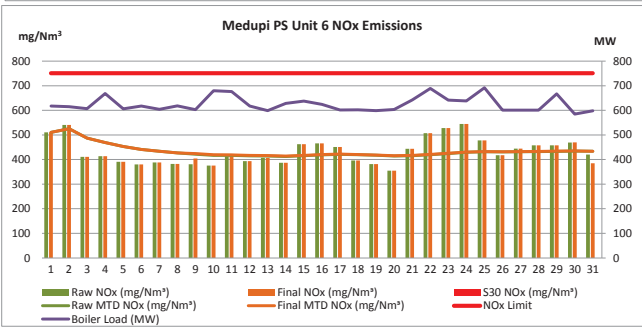
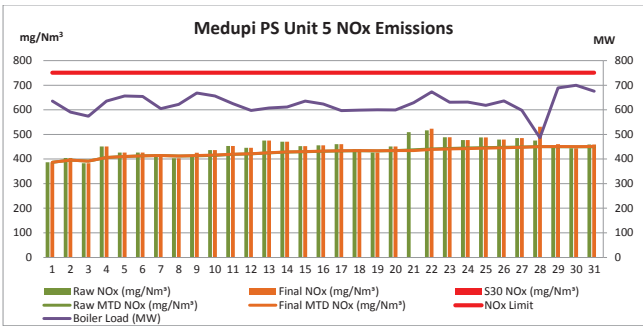
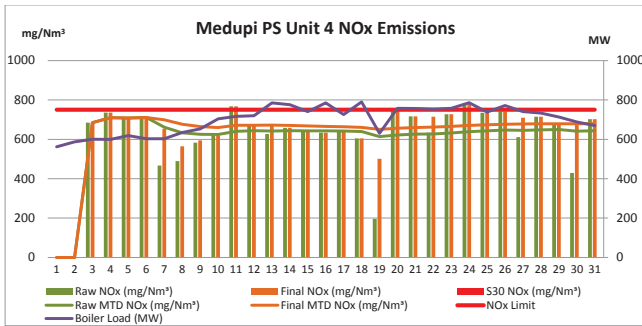
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Table 7: Monthly tonnages for the month of January 2018

Unit	PM (tons)	SO ₂ (tons)	NO ₂ (tons)	CO (tons)
1				
2				
3				
4				
5	149.6	9 130	1 248	49
6	209.5	8 184	1 181	23

5. Shutdown/start-up information

Table 8: Days operating under normal operation, days in grace period and section 30 days respectively

Unit	Operating Days (DD:HH:MM)			
	Normal operation	In grace period	Under S 30	Unit off load
1	00:00:00	00:00:00	00:00:00	31:00:00
2	00:00:00	00:00:00	00:00:00	31:00:00
3	00:00:00	00:00:00	00:00:00	31:00:00
4	30:04:15	00:00:00	00:00:00	00:19:45
5	07:09:20	02:00:00	21:00:00	00:14:40
6	04:22:40	03:16:00	22:08:00	00:01:20

6. Comments on the performance and availability of each unit

Unit 4, 5 and 6 were each off load for a period not exceeding a day for this reporting period. For most of the days unit 5 and 6 were operating above the AEL limit of 50mg/Nm³ for particulate. Medupi power station identified the problem in December 2017 and reported in terms NEMA S30, this problem is not yet fully resolved and as such, both unit 5 and 6 are not operated at full load except for the periods wherein emergency generation is declared by the National Control. A period of on-line re-bagging of Unit 5 and Unit 6 was started to address the high emissions. Unit 5 will have a full re-bag and unit 6 will have a 26% re-bag. After this period normal maintenance will continue where the PJFF cells are being inspected and maintained on a daily basis.

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Light up information

Event No.	<i>Event 1</i>		<i>Event 2</i>		<i>Event 3</i>	
Unit 5	<i>Unit 5</i>		<i>Unit 5</i>		<i>Unit 6</i>	
Fires in	<i>10:10 PM</i>	<i>2018/01/20</i>	<i>09:10 AM</i>	<i>2018/01/28</i>	<i>09:35 AM</i>	<i>2018/01/30</i>
Synchronisation with Grid	<i>04:25 AM</i>	<i>2018/01/21</i>	<i>08:00 PM</i>	<i>2018/01/28</i>	<i>10:50 AM</i>	<i>2018/01/30</i>
Emissions below limit from Sync (Date and Time)	<i>12:00 AM</i>	<i>2018/01/27</i>	<i>12:00 AM</i>	<i>2018/02/01</i>	<i>did not go above limit</i>	<i>did not go above limit</i>
Fires in to synchronization	<i>00:06:15</i>	Hrs (dd:hh:mm)	<i>00:10:50</i>	Hrs (dd:hh:mm)	<i>00:01:15</i>	Hrs (dd:hh:mm)
Synchronization to < limit (Duration)	<i>05:11:00</i>	Hrs (dd:hh:mm)	<i>02:18:00</i>	Hrs (dd:hh:mm)	<i>did not go above limit</i>	Hrs (dd:hh:mm)

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Table 9: Emission Average from Fires-in to Synchronisation

Emission Average from Fires-in to Synchronisation (Date and Time)							
Unit	Fires-In		Synchronisation		PM	SO ₂	NO _x
Unit 4	2017/12/31	05:35 PM	2018/01/02	03:15 AM	27.7	3235.5	613.7
Unit 4	2018/01/20	10:10 PM	2018/01/21	04:25 AM	18.9	2776.1	556.9
Unit 4	2018/01/28	09:10 AM	2018/01/28	08:00 PM	17.5	3251.7	438.7
Unit 6	2018/01/30	09:35 AM	2018/01/30	10:50 AM	54.2	3195.7	463.7

Table 10: Point Source emissions released during Shut-down

Emission Average Breaker Open (BO) to Draft Group Shut Down (SD) (Date & Time)							
Unit	Breaker Open		DG SD		PM	SO ₂	NO _x
Unit 4	2018/01/19	06:40 AM	2018/01/19	06:50 AM	23.4	3138.7	491.1
Unit 5	2018/01/20	08:15 PM	2018/01/20	10:05 PM	51.4	3302.3	494.3

7. Continuous Emission Monitoring Systems (CEMS)

Unit 4 and 5 Continuous Emission Monitoring Systems were in operation at all times when the unit was on load. Unit 6 dust monitoring probe was replaced on 28 January 2018, the activity took less than 2 hours to complete. CEMS CO₂ monitor verification test not yet conducted, the Licencing Authority will be notified prior to conducting the test. The Department will be notified of the exact date for the test.

Table 11: Periods during which CEMS was inoperative

Date	Time	Duration	Nature of Repair/Adjustment
28 January 2018	28 January 2018	60 minutes	Replacement of Dust Monitoring probe

8. CEMS Calibration certificates and equipment used for calibration

See attached annexure 1.

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9. Continuous Emission Monitoring Systems (CEMS)

Table 12: CEMS Monitor Reliability

Variable	Unit 4	Unit 5	Unit 6
Dust	100.0	94.0	98.2
SO ₂	95.8	100.0	100.0
NO _x	93.8	100.0	99.9
CO	100.0	100.0	100.0
O ₂	95.2	99.8	99.9
Temperature	100.0	100.0	100.0
Pressure	0.0	100.0	100.0
Velocity	100.0	100.0	100.0
CO ₂	Not yet commissioned	Not yet commissioned	Not yet commissioned

10. Ambient Air Quality Monitoring Report

The Ambient Air Quality Monitoring and Dust fall-out report for the month of January 2018 will be forwarded to the Licensing authority once received from the service provider.

11. Visual inspection of the exterior walls of the fuel oil tanks, fuel oil inventory data and TVOC Estimation

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

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Date:	31 January 2018		
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 blue cells below Choose from a dropdown menu in the green cells The total VOC emissions for the month are in the red cells IMPORTANT: Do not change any other cells without consulting the AQ CoE			
MONTH:	January		
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:	3197.44686	tons/month	
Molecular weight of the fuel oil:	166.00	Lb/lb-mole	
METEROLOGICAL DATA FOR THE MONTH	Data	Unit	
Daily average ambient temperature	25.11	°C	
Daily maximum ambient temperature	31.57	°C	
Daily minimum ambient temperature	17.48	°C	
Daily ambient temperature range	14.10	°C	
Daily total insolation factor	5.87	kWh/m ² /day	
Tank paint colour	Aluminum/Specular	NA	
Tank paint solar absorbance	0.39	NA	
FINAL OUTPUT:	Result	Unit	
Breathing losses:	0.74 kg/month		
Working losses:	0.09 kg/month		
TOTAL LOSSES (Total TVOC Emissions for the month):	0.83 kg/month		
*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.			

Table 13: Total Volatile Organic Compound (TVOC) for January 2018

12. Air quality improvements Initiatives and Public education and awareness campaigns

There were no activities planned for the month of January 2018.

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13. Complaints Register

Table 14: Complaints for the month of January 2018

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
not allocated	NONE	Fugitive dust emissions	January 2018	Emissions resulted from Matimba Ash Dump and was forwarded to them for action	Matimba Power station to investigate and respond

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Medupi Power Station Monthly Emissions
Reporting Form

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Compiled by:

Senior Environmental Advisor

Prepared by:

Boiler System Engineer

Reviewed by:

Boiler Engineering Manager

Supported by:

Engineering Group Manager (Acting)

I Prince Khumalo, declares that the information provided in this report is accurate and correct.

Yours sincerely

GENERAL MANAGER: MEDUPI POWER STATION (Acting)

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Annexure 1: CEMS Calibration certificates



12 Angellier street, Berdena,
Boksburg, 1459
P.O.BOX 328, ISANDO, 1600
TEL: +27 11 918 6994
FAX: +27 11 894 1037

VAT REG #: 421 021 2249
CO REG #: 2004/007607/07

CALIBRATION CERTIFICATE

					CERTIFICATE NO:	
					2385	
					Doc. No. EA_5656	
Customer:		Medupi Power			Job No: SC943	
Contact Name:		Christo Vorster	Phone:	014 762 2255	Fax:	
Model:		Foedisch MGA 23		Serial No: 13670		
Auxiliary Equipment:		Unit 5				

	CHAN	PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER
1	ZERO	1.0 ppm	0.0 ppm	Air	99.99 %	Ambient Air
	SPAN	868 ppm	879 ppm	CO	879.2 ppm	12635
2	ZERO	0.18 %	0.00 %	N2	99.99 %	3166
	SPAN	21.05 %	20.9 %	O2	20.9 %	Ambient Air
3	ZERO	1.0 ppm	0.0 ppm	Air	99.99 %	Ambient Air
	SPAN	2009 ppm	1981 ppm	SO2	1980.6 ppm	3148
4	ZERO	4.0 ppm	0.0 ppm	Air	99.99 %	Ambient Air
	SPAN	869 ppm	871 ppm	NO	871.2 ppm	3166

Report: All diagnostics ok. Calibration was done with zero and span gas, analyser responding to all test gas.

Date: 02 Oct 2017

Cal Due Date: Jan 2018

Service Engineer:





12 Angeller street, Benoni,
 Boksburg, 1459
 P.O. BOX 328, ISANDO, 1600
 TEL: +27 11 918 6994
 FAX: +27 11 894 1037

VAT REG #: 421 021 2249
 CO REG #: 2004/007607/07

CALIBRATION CERTIFICATE

					CERTIFICATE NO:
					2386
					Doc. No: EA_5656
Customer:	Medupi Power			Job No:	SC943
Contact Name:	Christo Vorster	Phone:	014 762 2255	Fax:	
Model:	Feodisch MGA 23	Serial No:	16339		
Auxiliary Equipment:	Unit 6				

CHAN		PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER
1	ZERO	2.0 ppm	0.0 ppm	Air	99.99 %	Ambient Air
	SPAN	876 ppm	879 ppm	CO	879.2 ppm	12636
2	ZERO	0.11 %	0.00 %	N2	99.99 %	3156
	SPAN	20.46 %	20.9 %	O2	20.9 %	Ambient Air
3	ZERO	0.0 ppm	0.0 ppm	Air	99.99 %	Ambient Air
	SPAN	2034 ppm	1981 ppm	CO2	1980.6 ppm	3148
4	ZERO	1.0 ppm	0.0 ppm	Air	99.99 %	Ambient Air
	SPAN	864 ppm	871 ppm	NO	871.2 ppm	3156

Report: Diagnostics OK, cooler parastatic pump not working, has to be replaced, calibration was done with zero and span gas, analyser respond to all test gas, all in place and in working order.

Date: 02 Oct 2017

Cal Due Date: Jan 2018

Service Engineer:

