	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: 2018/05/30

Limpopo Dept. of Economic Development, Environment and Tourism

Enquiries:

Private Bag 9484
POLOKWANE
0700

Ref: 12/4/12L-W2/A3 – Apr 2018

Dear Phumudzo

MEDUPI POWER STATION MONTHLY EMISSIONS REPORT FOR THE MONTH OF APRIL 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 April 2018 only.

1. Raw Materials and Products

Table 1: Quantity of raw materials and products used/produced for Unit 4, 5 and 6 in April 2018

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Unit 4, 5 and 6 consumption April 2018
	Coal	Tons/month	1 875 000	603 530
	Fuel Oil	Tons/month	40 000	741
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Unit 4, 5 and 6 Production Rate in Month of April 2018
	Energy	MW	4800	2024
	Ash Emitted	Tons/month	not specified	115.4

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Table 2: Daily consumption and production rates

	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-Apr-18	24.0	24.0	0.0	0.00	13	13	13576	683	621	
02-Apr-18	24.0	24.0	0.0	0.00	17	17	12877	613	602	
03-Apr-18	24.0	24.0	0.0	0.00	0	0	13797	657	648	
04-Apr-18	24.0	24.0	0.0	0.00	57	57	20182	711	665	587
05-Apr-18	24.0	24.0	4.4	0.00	30	30	18963	724	738	546
06-Apr-18	24.0	24.0	2.7	0.00	160	160	22633	683	719	704
07-Apr-18	24.0	24.0	24.0	0.00	8	8	22754	713	682	686
08-Apr-18	24.0	24.0	24.0	0.00	40	40	22732	720	651	735
09-Apr-18	24.0	24.0	11.7	0.00	17	17	19587	751	732	620
10-Apr-18	24.0	24.0	3.3	0.00	66	66	23667	743	748	714
11-Apr-18	24.0	24.0	24.0	0.00	13	13	22647	685	741	705
12-Apr-18	24.0	20.2	24.0	0.00	19	19	21774	740	745	722
13-Apr-18	24.0	0.0	24.0	0.00	0	0	16752	724	494	724
14-Apr-18	24.0	5.5	24.0	0.00	142	142	21667	698	681	684
15-Apr-18	24.0	24.0	24.0	0.00	0	0	20933	656	669	668
16-Apr-18	24.0	24.0	24.0	0.00	0	0	21179	664	689	689
17-Apr-18	24.0	24.0	24.0	0.00	0	0	22624	684	728	695
18-Apr-18	15.8	24.0	24.0	0.00	0	0	19053	619	737	613
19-Apr-18	1.1	24.0	24.0	1.16	109	110	21761	647	741	664
20-Apr-18	24.0	24.0	24.0	0.00	0	0	21362	694	745	615
21-Apr-18	24.0	24.0	24.0	0.00	10	10	22498	723	757	702
22-Apr-18	24.0	24.0	24.0	0.00	0	0	21122	673	695	693
23-Apr-18	24.0	24.0	24.0	0.00	11	11	20896	662	727	662
24-Apr-18	24.0	24.0	24.0	2.65	6	9	21599	658	751	671
25-Apr-18	24.0	24.0	24.0	0.00	0	0	19813	630	639	652
26-Apr-18	24.0	24.0	24.0	0.00	11	11	20409	646	660	658
27-Apr-18	24.0	24.0	24.0	0.13	3	3	19134	600	663	628
28-Apr-18	24.0	24.0	24.0	0.00	0	0	19093	608	619	628
29-Apr-18	24.0	24.0	24.0	0.00	8	8	19120	616	623	621
30-Apr-18	24.0	24.0	24.0	0.00	1	1	19327	657	642	600

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2. Abatement Technology

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

Associated Unit/Stack	Technology Type	Actual Utilisation (%) for the month of April 2018
Unit 4,5 and 6	Low NO _x Burners	100
	Pulse Jet Fabric Filter Plant	100

3. Energy Source Characteristics

Table 4: Energy Source Material Characteristics for the month of April 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	1.5
Ash Content	35 - 39	34.46

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

Characteristic	Stipulated Range (%)	Monthly Average Content (%)
Oil		
Sulphur Content	0.5 - 3.5	2.1
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: Daily averages emissions for the month of April 2018

Days	PM (mg/Nm ³)			SO ₂ (mg/Nm ³)			NO _x (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	6	
01-Apr-18	31.26	33.43		2937.0	3037.0		736.2	448.2		11.0	2.6		132.0		89.8	89.7				23.9		7.3	6.9			
02-Apr-18	26.50	34.63		2910.2	2748.6		672.7	444.3		7.8	3.8		131.4		89.7	89.6				23.6		7.7	7.0			
03-Apr-18	27.60	36.47		2900.5	2771.5		696.4	474.1		7.0	4.1		132.9		89.7	89.6				24.4		7.5	6.8			
04-Apr-18	39.27	26.65		3438.2	3315.7		744.6	493.5		6.7	5.0		132.7		89.7	89.6				24.8		7.4	6.8			
05-Apr-18	47.01	35.07	9.67	3119.6	2949.3	2779.7	791.0	534.1	499.7	8.1	4.3	16.0	136.7	132.8	89.5	89.4	89.5			25.8	28.7	7.2	6.3	7.5		
06-Apr-18	33.11	33.56	46.56	3368.3	3169.6	3093.1	712.8	485.4	493.1	6.3	3.3	9.1	134.6	155.0	89.9	89.4	89.5			25.6	34.7	7.6	6.3	6.2		
07-Apr-18	38.15	28.77	18.20	3254.0	3166.0	3226.0	752.3	494.4	507.7	9.0	3.0	3.6	133.9	149.1	89.7	89.6	89.7			24.1	33.3	7.2	6.9	6.2		
08-Apr-18	42.33	29.15	21.49	3082.3	2876.6	2971.2	746.5	418.5	482.0	8.4	6.6	11.6	131.1	141.5	90.0	89.9	90.0			24.2	34.1	7.2	7.2	6.0		
09-Apr-18	39.08	31.94	12.93	3421.6	3163.0	3408.2	748.7	375.6	464.4	12.6	14.2	13.9	132.9	133.1	90.1	90.0	90.1			25.3	30.4	7.0	6.1	6.6		
10-Apr-18	43.15	39.87	17.08	3460.0	3364.7	3178.4	780.8	447.2	360.3	6.5	14.7	23.4	134.3	138.4	89.7	89.7	89.7			25.7	33.5	7.1	6.0	6.2		
11-Apr-18	40.38	41.64	18.32	3426.7	3280.9	3155.1	691.5	347.6	469.1	8.9	6.3	11.1	132.0	137.5	89.8	89.7	89.8			25.6	33.8	7.7	6.1	6.6		
12-Apr-18	40.53	36.05	16.19	4174.9	3878.5	3585.4	720.9	340.1	477.4	5.2	6.2	13.9	127.4	135.6	90.1	90.1	90.1			25.1	33.4	7.3	6.3	6.3		
13-Apr-18	46.46		24.15	3377.8		2884.5	763.3		479.7	6.3		8.3	125.1	138.8	90.2	90.1	90.2			21.9	33.9	7.3	7.3	6.3		
14-Apr-18	44.41	29.89	24.61	3460.4	3562.3	2916.3	713.6	315.8	485.1	5.8	2.8	8.6	130.5	138.8	90.1	90.0	90.2			24.3	33.9	7.4	6.5	6.4		
15-Apr-18	40.55	24.46	25.39	3795.7	3464.1	3109.1	683.0	308.3	467.7	7.4	5.1	10.9	130.0	139.7	90.2	90.1	90.1			24.0	32.4	7.7	6.6	6.5		
16-Apr-18	40.63	24.98	23.84	3681.2	3829.4	2925.9	683.3	314.1	455.7	5.0	4.7	9.1	128.7	138.7	90.2	90.1	90.1			24.3	31.6	7.6	6.4	6.3		
17-Apr-18	44.30	27.59	23.58	3449.2	3382.6	3405.9	734.8	348.4	461.1	6.7	3.5	10.2	130.7	137.0	90.1	90.0	90.2			25.3	32.4	7.6	6.4	6.3		
18-Apr-18	37.72	26.85	20.40	3295.3	3318.9	3164.5	708.5	339.4	492.8	79.3	3.5	14.9	131.9	137.0	90.0	89.9	90.1			25.4	32.4	7.9	6.3	7.0		
19-Apr-18	37.87	36.23	26.01	3336.8	3206.1	2735.0	583.9	349.6	414.2	15.1	4.7	6.2	134.0	133.7	89.7	89.6	89.9			25.6	29.8	8.2	6.3	6.6		
20-Apr-18	44.64	38.99	25.27	3216.2	3139.0	2904.8	583.8	329.2	435.7	8.4	6.9	5.3	133.3	139.9	89.7	89.6	89.7			25.5	32.0	7.5	6.2	7.1		
21-Apr-18	43.77	47.66	19.63	3172.0	3084.9	2741.0	590.6	454.2	399.1	9.4	8.1	4.7	133.0	135.7	89.8	89.8	89.7			26.0	30.2	7.3	6.1	7.1		
22-Apr-18	36.97	22.32	29.88	3338.9	3306.1	2560.4	616.7	422.8	416.3	7.0	5.0	9.2	131.4	139.3	89.8	89.8	89.8			24.7	33.3	7.5	6.5	6.3		
23-Apr-18	38.41	24.85	29.10	3291.1	3122.4	2776.5	613.0	333.1	389.8	10.7	5.0	5.4	132.6	138.3	89.9	89.8	89.8			25.2	33.0	7.8	6.4	6.5		
24-Apr-18	44.63	18.39	25.01	3054.3	2974.0	2666.7	642.5	405.8	391.0	8.9	4.2	4.5	136.3	137.5	90.0	89.9	89.9			25.9	31.6	8.1	6.4	6.7		
25-Apr-18	40.96	12.50	34.62	3248.2	3137.4	2524.8	632.3	373.0	418.3	11.3	3.7	3.0	131.5	139.4	90.0	89.9	90.0			24.0	32.4	7.9	7.1	6.8		
26-Apr-18	42.51	14.07	31.03	3316.9	3236.4	2708.2	632.2	417.8	424.9	9.3	6.1	5.9	132.4	137.8	90.0	89.9	90.0			24.4	31.6	7.9	7.0	6.8		
27-Apr-18	36.87	15.23	28.16	3314.2	3221.7	2635.1	538.3	370.8	434.9	10.5	5.8	11.8	129.0	138.9	90.0	89.9	90.0			24.4	31.8	8.1	6.9	6.7		
28-Apr-18	41.20	13.14	26.15	3368.6	3153.7	2695.9	551.0	366.8	406.4	8.4	9.7	5.8	128.5	135.0	90.1	90.0	90.0			23.6	30.6	8.1	7.2	6.9		
29-Apr-18	43.17	13.83	26.04	3612.5	3417.5	2744.1	570.8	380.2	384.9	8.0	7.2	26.2	128.7	135.0	90.1	90.0	90.1			23.8	30.6	8.1	7.2	6.9		
30-Apr-18	42.57	16.57	29.32	3554.3	3390.4	2810.0	574.9	376.1	406.6	10.6	7.8	11.9	129.3	134.9	90.2	90.1	90.1			24.3	30.2	7.9	7.0	7.0		

Note: Unit 4 temperature and velocity meters are faulty. A notification has been loaded for the maintenance team to fix the instrument. There is no reportable data on areas shaded black. The days wherein EL1 was declared is highlighted in green.

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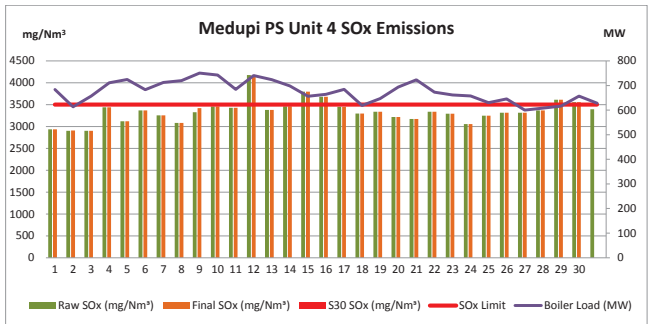
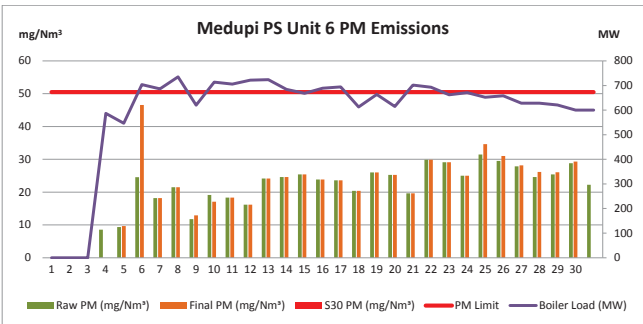
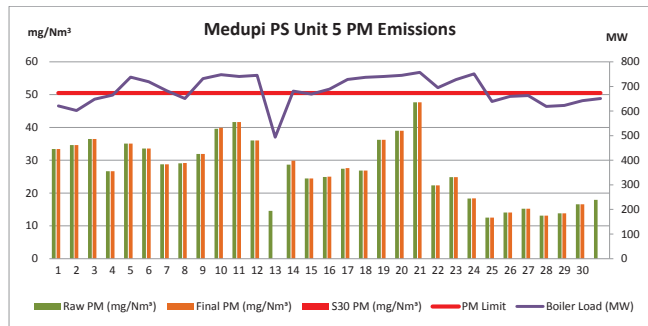
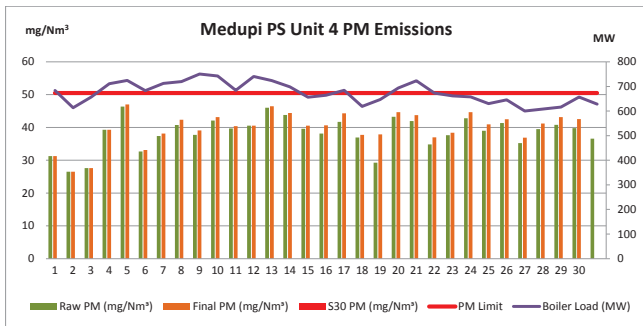
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Figure 1: Daily average emissions for the April 2018



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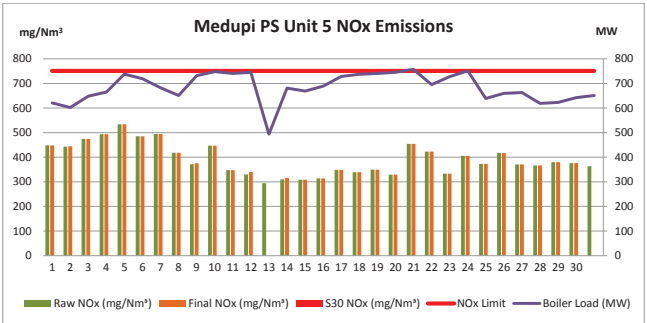
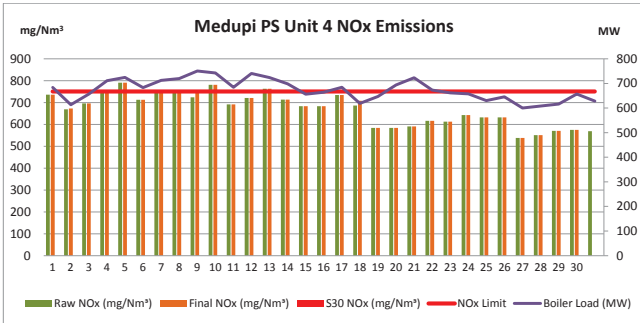
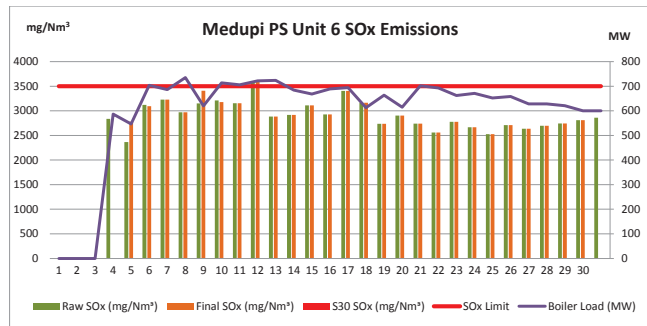
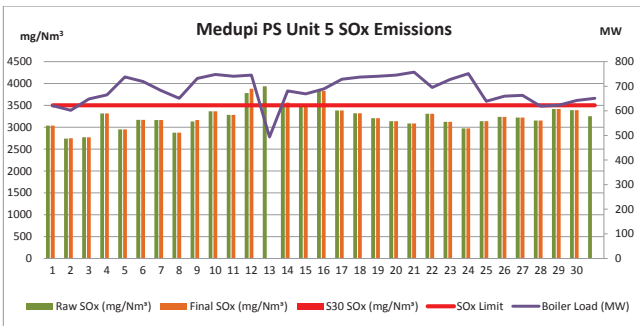
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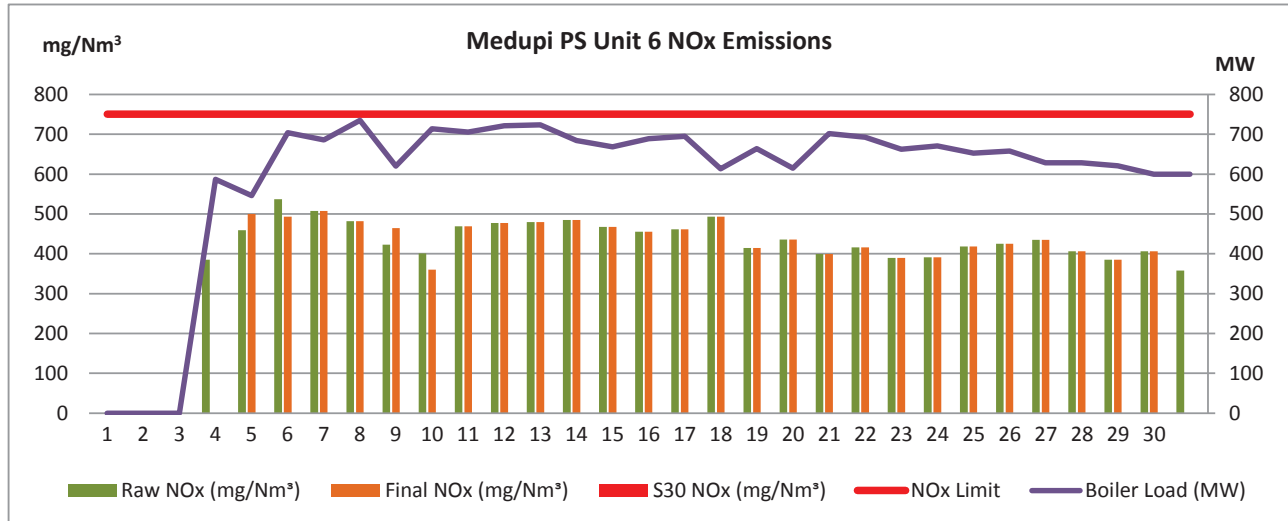


Table 7: Monthly tonnages for the month of April 2018


Unit	PM (tons)	SO ₂ (tons)	NO ₂ (tons)	CO (tons)	CO ₂ (tons)
1	0.0	0	0	0	0
2	0.0	0	0	0	0
3	0.0	0	0	0	0
4	0.0	11 313	2 286	33	0
5	60.3	6 894	851	13	0
6	55.1	6 564	995	21	0
SUM	115.4	24 771	4 132	67	0

Note: Unit 4 tonnages are not calculated due to unavailability of flow and temperature meter

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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	30:00:00
2	00:00:00	00:00:00	00:00:00	30:00:00
3	00:00:00	00:00:00	00:00:00	30:00:00
4	29:16:55	00:00:00	00:00:00	00:07:05
5	29:01:40	00:00:00	00:00:00	00:22:20
6	26:00:35	00:00:00	00:00:00	03:23:25


6. Comments on the performance and availability of each unit

- Unit 4 was available for most of the time during the reporting period and was off load for a period less than 8 hours, particulates emissions was well within the limit for entire reporting period. SO₂ and NO_x exceeded the maximum allowable daily average limit on five occasions.
- Unit 5 was on off a period less than 24 hours during the reporting period. Zero incidences of particulate and NO_x emissions limit exceedance were recorded; there were two exceedances of SO₂ daily average emissions limit in the month of April 2018.
- Unit 6 was off for more than 4 days. Zero incidences of particulate and NO_x emissions limit exceedance were recorded; there were one exceedances of SO₂ daily average emissions limit in the month of April 2018.

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7. Light up information

Table 9: PM Start-up information for the month of April

Event No.	Event 1			
Unit 4	Unit 4			
Fires in	05:40 PM		2018/04/18	
Synchronisation with Grid	10:50 PM		2018/04/18	
Emissions below limit from Sync (Date and Time)	did not go above limit		did not go above limit	
Fires in to synchronization	00:05:10		Hrs (dd:hh:mm)	
Synchronization to < limit (Duration)	did not go above limit		Hrs (dd:hh:mm)	
Event No.	Event 1			
Unit 5	Unit 5			
Fires in	12:30 AM		2018/04/13	
Synchronisation with Grid	06:25 PM		2018/04/13	
Emissions below limit from Sync (Date and Time)	did not go above limit		did not go above limit	
Fires in to synchronization	00:17:55		Hrs (dd:hh:mm)	
Synchronization to < limit (Duration)	did not go above limit		Hrs (dd:hh:mm)	
Event No.	Event 1		Event 2	
Unit 6	Unit		Unit	
Fires in	07:35 AM	2018/04/05	11:40 AM	2018/04/09
Synchronisation with Grid	09:15 PM	2018/04/05	08:35 PM	2018/04/09
Emissions below limit from Sync (Date and Time)	did not go above limit	did not go above limit	did not go above limit	did not go above limit
Fires in to synchronization	00:13:40	Hrs (dd:hh:mm)	00:08:55	Hrs (dd:hh:mm)
Synchronization to < limit (Duration)	did not go above limit	Hrs (dd:hh:mm)	did not go above limit	Hrs (dd:hh:mm)

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Table 10: Emission Average from Fires-in to Synchronisation

Emission Average (mg/Nm ³) from Fires-in to Synchronisation (Date and Time)							
Unit	Fires-In		Synchronisation		PM	SO ₂	NO _x
4	2018/04/18	05:40 PM	2018/04/18	10:50 PM	0.0	0.0	0.0
5	2018/04/13	12:30 AM	2018/04/13	06:25 PM	3.3	3563.3	311.7
6	2018/04/05	07:35 AM	2018/04/05	09:15 PM	5.2	1348.7	328.2
6	2018/04/09	11:40 AM	2018/04/09	08:35 PM	5.1	1375.2	218.2

Table 11: Point Source emissions released during Shut-down

Emission Average (mg/Nm ³) Breaker Open (BO) to Draft Group Shut Down (SD) (Date & Time)							
Unit	Breaker Open		DG SD		PM	SO ₂	NO _x
4	2018/04/18	03:50 PM	2018/04/18	03:45 PM	29.7	2232.1	252.6
5	2018/04/12	08:10 PM	2018/04/12	10:40 PM	1.8	0.0	17.2

8. Continuous Emission Monitoring Systems (CEMS)

Unit 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, the Licencing Authority will be notified prior to conducting the test. The Department will be notified of the exact date for the test.

Table 12: Periods during which CEMS was inoperative

Date	Time	Duration	Nature of Repair/Adjustment
N/A	N/A	N/A	N/A

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Table 13: CEMS Monitor Reliability

Variable	Unit 4	Unit 5	Unit 6
Dust	100	100	99.8
SO2	100	99.8	99.0
NOx	100	99.8	99.0
CO	100	100	100
O2	96.5	99.8	99.0
Temperature	-	100	100
Pressure	-	100	100
Velocity	-	100	99.7
CO ₂	-	-	-

9. CEMS Calibration certificates and equipment used for calibration

See attached Appendix A

10. Ambient Air Quality Monitoring Report

The Ambient Air Quality Monitoring and Dust fall-out report for the month of April and March 2018 respectively will be emailed to the Licensing authority as an attachment to this report.

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 observed on the exterior walls of the fuel oil tanks.

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Table 14: Total Volatile Organic Compound (TVOC) for April 2018

		
CALCULATION OF EMISSIONS OF TOTAL VOLATILE COMPOUNDS FROM FUEL OIL STORAGE TANKS*		
Date:	30 April 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:	April	
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:	1761.109	tons/month
Molecular weight of the fuel oil:	166.00	Lb/lb-mole
METEROLOGICAL DATA FOR THE MONTH	Data	Unit
Daily average ambient temperature	20.60	°C
Daily maximum ambient temperature	27.37	°C
Daily minimum ambient temperature	13.11	°C
Daily ambient temperature range	10.46	°C
Daily total insolation factor	3.84	kWh/m ² /day
Tank paint colour	Aluminum/Specular	NA
Tank paint solar absorbance	0.39	NA
FINAL OUTPUT:	Result	Unit
Breathing losses:	0.61 kg/month	
Working losses:	0.05 kg/month	
TOTAL LOSSES (Total TVOC Emissions for the month):	0.66 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, Tritech 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>		

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

There were no activities planned for the month of April 2018. Medupi Power Station is currently in talks with Matimba Power Station and Exxaro Grootgeluk mine to hold a joint awareness campaign within Lephalale. A new schedule has been developed and schools have been engaged to finalize the arrangement for awareness campaign.

13. Complaints Register


Table 15: Complaints for the month of April 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
N/A	No complaints received	N/A	N/A	N/A	N/A

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Compiled by:

Senior Environmental Advisor

Reviewed by:

Boiler System Engineer

Supported by:

Environmental Manager

Supported by:

Boiler Engineering Manager

Supported by:

Engineering Group Manager (Acting)

I Rudi van der Wal, declares that the information provided in this report is accurate and correct.


Yours sincerely

GENERAL MANAGER: MEDUPI POWER STATION

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APPENDIX 1

CEMS Calibration certificates



12 Angellier street, Berdeno, Bokaburg, 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:	
					1555	
					Doc. No: EA_3656	
Customer:		Medupi Power			Job No: SC943	
Contact Name:		Christo Vorster	Phone:	014 762 2255	Fax:	
Model:		Voedisch MGA 23	Serial No:		16339	
Auxiliary Equipment:		Unit 6				

CHAN		PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER
1	ZERO	7 ppm	8 ppm	Air	21 %	Air
	SPAN	881 ppm	879 ppm	CO	879.2 ppm	12635
2	ZERO	3 ppm	0 ppm	Air	21 %	Air
	SPAN	829 ppm	834 ppm	NO	833.9 ppm	3207
3	ZERO	8 ppm	0.0 ppm	Air	21 %	Air
	SPAN	2507 ppm	2428 ppm	CO2	2427.7 ppm	0034
4	ZERO	0.06 %	0.0 %	N2	99.99 %	12635
	SPAN	21.07 %	20.95 %	O2	20.95 %	Air

Report: Diagnostics OK, coolers running, but one parasitic pump on cooler 1 not working, calibration was done with zero and span gas, analyser respond to all test gas, all in place and in working order.

Date: 09 Apr 2018
 Cal Due Date: Jul 2018
 Service Engineer:






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

CALIBRATION CERTIFICATE

					CERTIFICATE NO:	
					2553	
					Doc. No. EA_5656	
Customer:	Medupi Power			Job No:	5C943	
Contact Name:	Christo Vorster	Phone:	014 762 2255	Fax:		
Model:	Foedisch MGA 23		Serial No:	13668		
Auxiliary Equipment:	Unit 4					

CHAN		PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER
1	ZERO	3 ppm	0 ppm	Air	21 %	Air
	SPAN	874 ppm	879 ppm	CO	879.2 ppm	12635
2	ZERO	10 ppm	0 ppm	Air	21 %	Air
	SPAN	816 ppm	834 ppm	NO	833.9 ppm	3207
3	ZERO	0 ppm	0 ppm	Air	21 %	Air
	SPAN	2347 ppm	2428 ppm	SO2	2427.7 ppm	0034
4	ZERO	0.33 %	0.0 %	N2	99.99 %	12635
	SPAN	21.49 %	20.95 %	O2	20.95 %	Air

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

Date: 09 Apr 2018

Cal Due Date: Jul 2018


Service Engineer:



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

CALIBRATION CERTIFICATE

					CERTIFICATE NO: 2554	
					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 ppm	0 ppm	Air	21 %	Air
	SPAN	882 ppm	879 ppm	CO	879.2 ppm	12635
2	ZERO	2 ppm	0 ppm	Air	21 %	Air
	SPAN	838 ppm	834 ppm	NO	833.9 ppm	3207
3	ZERO	4 ppm	0 ppm	Air	21 %	Air
	SPAN	2367 ppm	2428 ppm	SO2	2427.7 ppm	0034
4	ZERO	0.02 %	0.0 %	N2	99.99 %	12635
	SPAN	21.39 %	20.95 %	Air	20.95 %	Air

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

Date: 09 Apr 2018

Cal Due Date: Jul 2018


Service Engineer:



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Annexure 2

Ambient Air Quality Monitoring report

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