	<b>Medupi Power Station Monthly Emissions Report</b>	<b>Template Identifier</b>	<b>240-43921804</b>	<b>Rev</b>	<b>6</b>
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		<b>Effective Date</b>	<b>May 2018</b>		
		<b>Review Date</b>	<b>May 2021</b>		

Phumudzo Thivhafuni

Date: 2019/06/21

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Ref: 12/4/12L-W2/A3 – May 2019

Dear Phumudzo

**MEDUPI POWER STATION MONTHLY EMISSIONS REPORT FOR THE MONTH OF MAY 2019**

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 May 2019 only.

**1. Raw Materials and Products**


**Table 1: Quantity of raw materials and products for Unit 4, 5 and 6 in May 2019**

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption/ Rate (Quantity)	Unit 4, 5 and 6 consumption May 2019
	Coal	Tons/month	1 875 000	533660
	Fuel Oil	Tons/month	40 000	2321
Production Rates	Product/ By-Product Name	Unit	Maximum Production Capacity Permitted (Quantity)	Unit 4, 5 and 6 Production Rate in Month of May 2019
	Energy	MW	4 800	1777
	Ash Emitted	Tons/month	not specified	149.4

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**Table 2: Daily consumption and production rates**


Date	Reportable hours of Operation			Fuel Consumption (tons)				Production rate (MW)		
	Unit 4	Unit 5	Unit 6	Oil			Coal	U4	U5	U6
				Aux Boiler	Units	Total	Units			
01-May-19	24.0	0.0	24.0	0.00	97	97	16057	549.6	448.5	662.3
02-May-19	24.0	14.1	24.0	0.00	373	373	17929	490.5	492.2	733.5
03-May-19	24.0	24.0	24.0	0.00	228	228	20489	755.2	509.9	650.7
04-May-19	24.0	24.0	24.0	0.00	0	0	19645	788.9	509.9	577.1
05-May-19	24.0	24.0	24.0	0.00	3	3	17515	583.3	509.9	563.2
06-May-19	24.0	24.0	24.0	0.00	6	6	18284	639.6	553.8	568.9
07-May-19	24.0	24.0	24.0	0.00	19	19	18718	700.2	487.1	613.3
08-May-19	24.0	24.0	24.0	0.00	59	59	19436	715.5	454.4	659.0
09-May-19	24.0	7.8	24.0	0.00	77	77	16253	744.5	484.6	625.2
10-May-19	24.0	0.0	24.0	0.00	148	148	17925	756.5	433.3	583.7
11-May-19	24.0	10.2	24.0	0.00	152	152	20441	688.2	617.2	619.2
12-May-19	24.0	24.0	24.0	0.00	12	12	19236	613.8	569.9	606.1
13-May-19	24.0	24.0	24.0	0.00	5	5	19896	681.1	562.4	621.7
14-May-19	24.0	24.0	24.0	0.00	0	0	19896	679.0	578.4	647.7
15-May-19	24.0	24.0	24.0	0.00	0	0	19543	668.3	530.5	652.5
16-May-19	24.0	17.7	24.0	0.00	3	3	18889	735.5	482.1	663.0
17-May-19	24.0	0.0	24.0	0.00	44	44	14215	753.2	0	595.8
18-May-19	24.0	0.0	24.0	0.00	2	2	13146	653.2	0	595.3
19-May-19	24.0	0.0	24.0	0.00	33	33	11888	565.7	0	575.7
20-May-19	24.0	0.0	24.0	0.00	5	5	12821	625.5	0	605.3
21-May-19	24.0	0.0	24.0	0.00	10	10	13555	702.7	0	602.7
22-May-19	24.0	0.0	24.0	0.00	1	1	11779	490.4	0	625.3
23-May-19	24.0	0.0	24.0	0.00	52	52	12067	516.5	193.9	641.2
24-May-19	24.0	4.5	24.0	0.00	454	454	15295	286.1	573.0	677.7
25-May-19	24.0	24.0	24.0	0.00	231	231	18557	569.9	579.9	649.2
26-May-19	24.0	24.0	24.0	0.00	18	18	18306	668.0	562.9	621.1
27-May-19	0.1	24.0	24.0	0.00	43	43	17431	626.0	612.1	650.9
28-May-19	17.4	24.0	24.0	0.00	180	180	19806	741.6	564.5	636.8
29-May-19	24.0	24.0	24.0	0.00	8	8	19143	723.3	457.5	668.4
30-May-19	24.0	24.0	24.0	0.00	45	45	17433	610.7	462.9	603.1
31-May-19	24.0	24.0	24.0	0.00	13	13	18069	635.5	480.4	598.8

Note: Medupi Power Station Unit 5 was on outage from 17-23 May 2019 for Boiler tube leak repairs.

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## 2. Abatement Technology

Table 3: Abatement Equipment Control Technology utilisation for month of May 2019

Associated Unit/Stack	Technology Type	Actual Utilisation (%) for the month of May 2019
Unit 4,5 and 6	Low NO <sub>x</sub> Burners	100
	Pulse Jet Fabric Filter Plant	100

## 3. Energy Source Characteristics

Table 4: Energy Source Material Characteristics for the month of May 2019

Characteristic	Stipulated Range (% by weight on a dry basis)	Monthly Average Content (% by weight on a dry basis)
	<b>Coal</b>	
Sulphur Content	1.3 - 2.2	1.42
Ash Content	35 - 39	34

Table 5: Energy Source Material Characteristics for the month of May 2019

Characteristic	Stipulated Range (%)	Monthly Average Content (%)
	<b>Oil</b>	
Sulphur Content	0.5 - 3.5	2.2
Ash Content	0.02 - 0.1	0.017

## 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:

SO<sub>2</sub>= 3500 mg/Nm<sup>3</sup>

Dust= 50 mg/Nm<sup>3</sup>

NO<sub>2</sub>= 750 mg/Nm<sup>3</sup>

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Table 6: Daily averages emissions for the month of May 2019

Days	PM (mg/Nm <sup>3</sup> )			SO <sub>2</sub> (mg/Nm <sup>3</sup> )			NO <sub>2</sub> (mg/Nm <sup>3</sup> )			CO (mg/Nm <sup>3</sup> )			Temp (°C)			Press (kPa)			Velocity (m/s)			O <sub>2</sub> (%)			CO <sub>2</sub> (mg/Nm <sup>3</sup> )			
	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	4	5	6
1	10.3		34.1	3 873	2 464	3 751	638	456	507	12	5	23	117.8	143.4	90.0	90.0	90.0		10.9	8.7	7.6	9.7	6.8					
2	12.9	18.3	43.1	3 588	2 427	3 630	689	440	513	18	5	28	119.5	147.0	90.2	90.1	90.1		10.6	9.4	8.4	8.9	6.3					
3	25.9	21.9	45.8	3 953	2 412	3 555	630	405	479	13	7	20	119.9	143.6	90.0	90.0	90.0		10.5	8.6	6.3	8.4	7.1					
4	25.3	27.4	38.1	3 735	2 467	3 642	609	377	430	17	7	13	117.6	136.3	89.9	89.9	89.9		10.6	7.8	6.2	8.3	7.7					
5	15.4	29.6	34.7	3 451	2 323	3 441	527	356	365	5	4	12	115.4	128.8	90.2	90.1	90.2		10.5	7.7	7.1	8.2	8.0					
6	19.7	27.5	40.9	3 103	2 278	3 287	540	387	385	8	6	10	118.4	131.8	90.3	90.3	90.3		11.1	7.8	6.9	7.6	8.0					
7	22.4	25.5	41.6	3 226	1 988	3 052	536	382	390	8	8	15	118.2	133.2	90.4	90.3	90.4		10.1	8.1	6.6	8.5	7.3					
8	20.0	9.9	39.7	3 637	2 196	3 273	548	348	394	5	7	17	116.8	133.6	90.1	90.0	90.1		9.2	8.6	6.4	8.8	7.0					
9	32.0	9.9	48.8	3 606	2 332	3 309	576	346	387	77	17	14	117.9	134.8	89.8	89.8	89.8		10.0	8.4	6.1	8.5	7.3					
10	46.7		46.7	3 253	2 146	3 081	597	356	413	37	10	15	111.3	135.7	90.1	90.0	90.1		9.9	7.8	6.4	9.1	7.3					
11	38.4	19.3	42.6	3 305	2 024	2 865	533	355	405	12	32	18	123.1	133.4	90.3	90.2	90.2		12.3	8.0	6.7	7.2	7.1					
12	23.2	21.7	41.4	3 561	2 251	3 246	523	348	411	5	20	15	123.6	133.1	90.3	90.2	90.2		11.3	8.0	7.0	7.4	7.4					
13	27.4	21.6	45.7	3 600	2 237	3 211	536	366	413	6	14	19	123.6	135.4	90.1	90.1	90.1		11.2	8.1	6.8	7.6	7.1					
14	21.6	20.9	41.0	3 562	2 461	3 168	551	365	393	10	16	30	124.5	135.5	90.1	90.1	90.1		11.5	8.4	6.9	7.3	7.1					
15	18.5	21.6	39.6	3 238	2 381	3 136	535	385	401	5	36	19	125.6	133.8	90.1	90.1	90.1		11.9	8.5	7.3	7.4	7.1					
16	20.6	15.2	46.2	3 431	2 512	3 269	578	391	424	5	8	18	132.9	136.5	90.0	90.0	90.0		12.1	8.6	6.9	8.1	7.0					
17	19.3		42.5	3 488		3 271	562		434	5		11		134.4	89.9		89.9			7.8	7.5			7.4				
18	6.1		45.9	2 662		3 194	530		485	20		27		132.0	89.9		90.0			7.8	8.0			7.4				
19	19.4		41.2	3 670		3 431	462		391	13		25		132.5	90.1		90.0			7.7	7.3			7.6				
20	3.7		39.0	4 050		3 765	493		397	7		34		130.9	90.0		90.0			8.0	7.1			7.5				
21	27.1		28.6	3 448		3 273	528		430	11		20		125.9	89.1		89.1			7.7	6.7			7.3				
22	15.1		29.3	3 425		3 320	575		457	10		29		126.6	90.2		90.1			8.1	8.4			7.2				
23	9.3		37.4	3 098	2 050	3 197	486	471	427	8	5	59	138.5	130.1	90.2	90.1	90.2		8.6	8.4	7.6	12.4	7.2					
24	5.5	11.3	39.7	2 973	2 395	3 254	572	357	404	14	112	88	125.0	132.9	90.5	90.4	90.4		11.4	8.6	10.7	7.3	6.7					
25	9.9	16.8	38.7	3 826	2 972	3 718	518	380	425	7	97	86	123.8	130.4	90.5	90.4	90.4		10.9	8.3	7.7	7.0	7.2					
26	12.9	19.4	35.2	3 316	2 402	3 097	501	337	364	11	110	89	116.7	123.4	90.3	90.3	90.3		10.6	8.0	6.8	7.2	7.4					
27	5.8	45.9	39.7	3 377	2 989	3 539	498	374	430	6	134	24	123.7	127.5	90.1	90.1	90.1		11.5	8.4	7.6	6.8	7.2					
28	29.2	48.1	40.8	3 331	2 527	3 213	548	382	438	5	111	31	118.2	127.2	90.0	90.0	90.1		10.8	8.1	7.0	7.3	7.3					
29	29.7	51.6	36.8	3 304	2 384	3 206	575	464	451	8	16	56	113.9	130.6	90.1	90.2	90.1		9.7	8.3	7.1	8.5	6.8					
30	12.4	43.9	25.0	3 347	2 375	3 205	588	435	482	6	4	32	111.2	128.3	90.2	90.2	90.2		9.2	7.7	7.5	8.4	7.4					
31	9.8	32.3	26.6	3 363	2 420	3 237	563	453	452	5	4	41	113.1	128.6	90.0	90.0	90.0		9.5	7.7	7.1	8.3	7.4					

Note:

- There is no reportable data on areas shaded black; this is a result of unit trip, outage and or grace period.
- Unit 4 temperature and velocity meters are faulty. The Power station maintenance team is awaiting spares for the repairs of the instrument to be conducted.
- Medupi Power Station is awaiting spares for unit 4, 5 and 6 CO<sub>2</sub> monitor.

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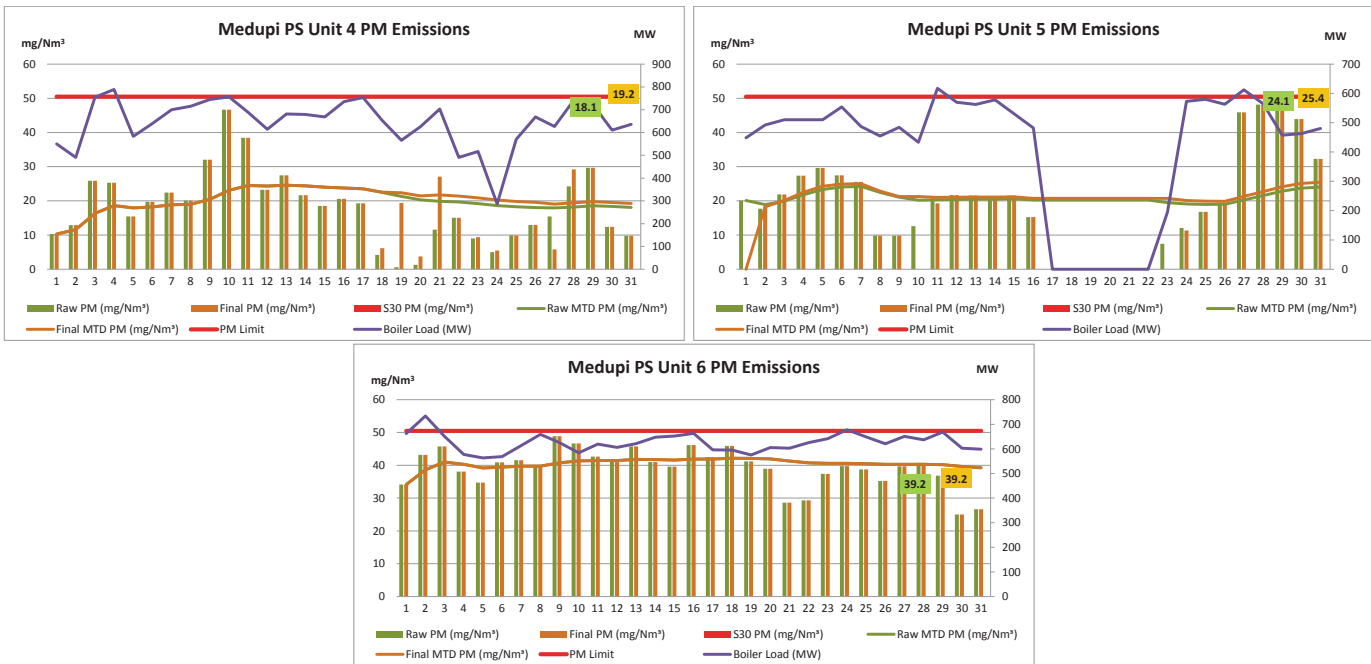
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Figure 1: Medupi Power Station graphical representation of the daily average emissions for particulates



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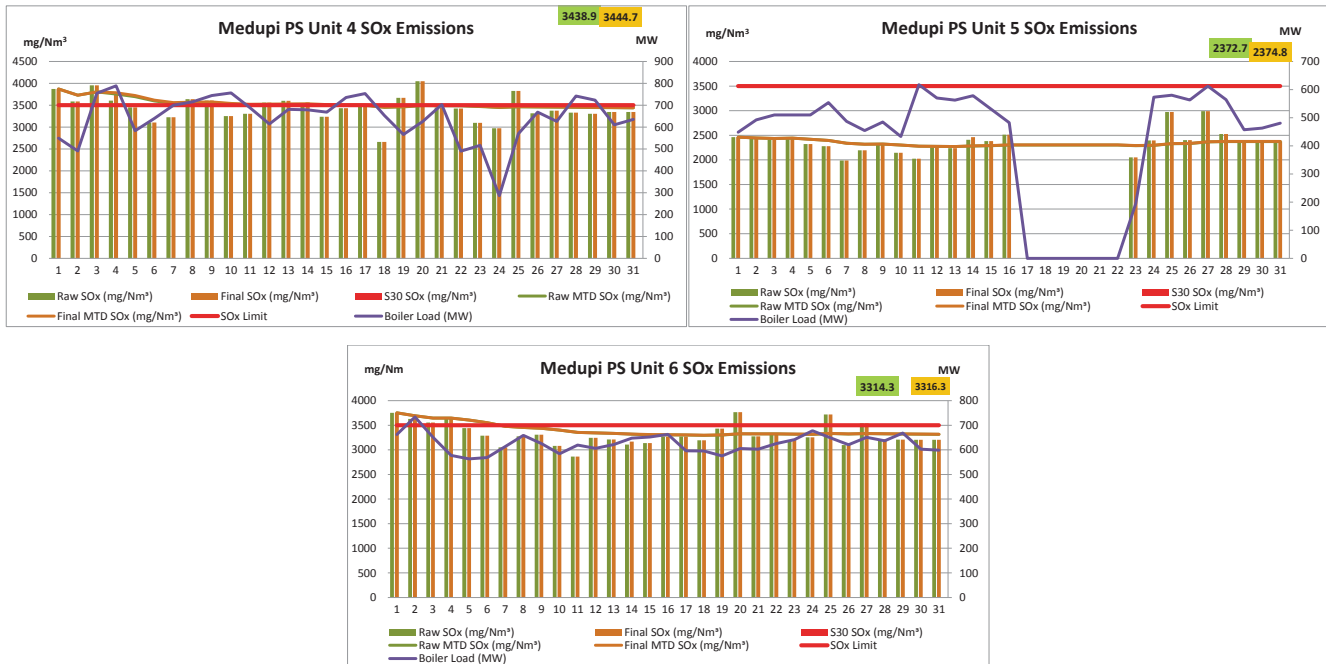
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Figure 2: Medupi Power Station graphical representation of the daily average emissions for SOx



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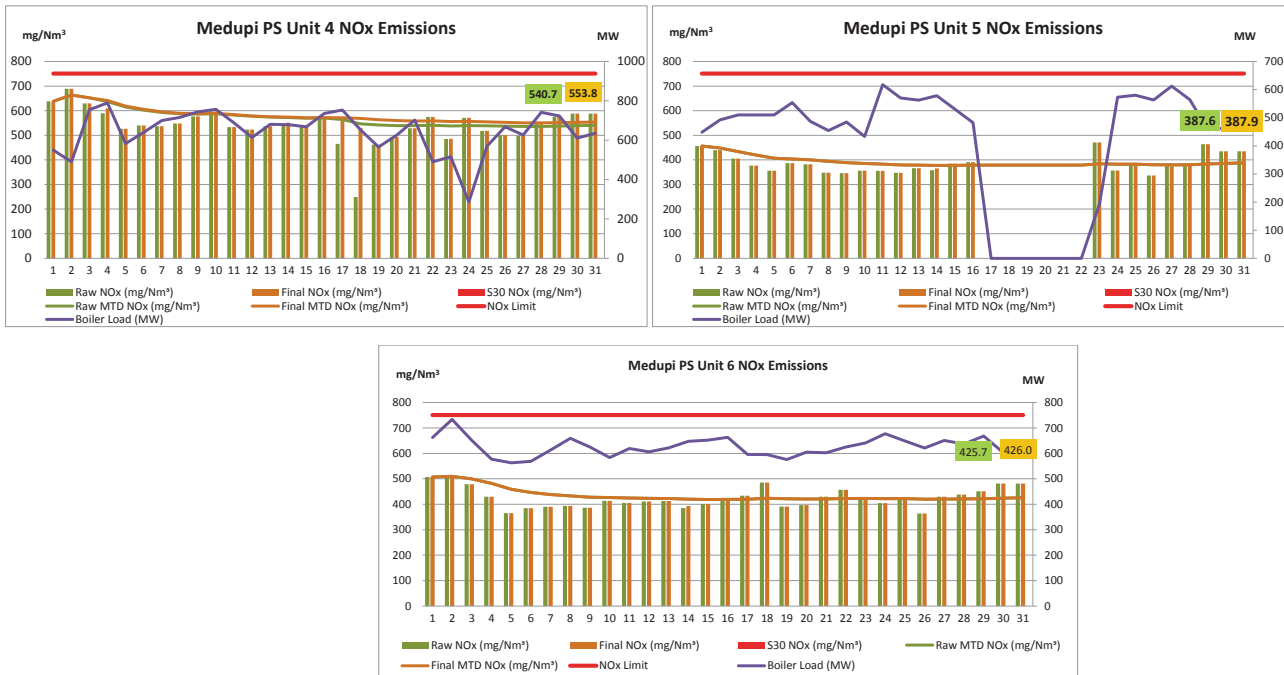
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Figure 3: Medupi Power Station graphical representation of the daily average emissions for NOx



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**Table 7: Monthly tonnages for the month of May 2019**

Unit	PM (tons)	SO <sub>2</sub> (tons)	NO <sub>2</sub> (tons)	CO (tons)	CO <sub>2</sub> (tons)
1	0.0	0	0		
2	0.0	0	0		
3	0.0	0	0		
4	45.1	7 673	1 231		
5	29.6	3 052	488		
6	74.7	6 309	810		
<b>SUM</b>	149.4	17 035	2 529		

Unit 4, 5 and 6 CO<sub>2</sub> monitoring equipment is currently not functional, procurement process is undergoing to purchase the spare required to fix/repair the equipment. It is anticipated that, the spare will be onsite by end of August 2019.

## 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	30:17:30	00:00:00	00:00:00	00:06:30
5	22:14:10	00:00:00	00:00:00	08:09:50
6	31:00:00	00:00:00	00:00:00	00:00:00

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**Table 9: Days operating in Emergency Level one (EL1)**

Hours May EL1			
Date	EL1 Start	Date	EL1 Start
01-May-19	17h39 EL1&MCR in force.(19h14 Cancelled)	16-May-19	17h20: EL1 in force(20h29 Cancelled)
02-May-19	None	17-May-19	17:45 : EL1 and MCR in force 18:43 : EL1 and MCR cancelled
03-May-19	08h16 EL1 and MCR in-force. 09h44 EL1& MCR Cancelled.	18-May-19	17:14 EL1 & MCR in force. 19h20 : EL1 & MCR Cancelled
04-May-19	(17:20) EL1 and MCR in force 19:36 Cancelled.	19-May-19	None
05-May-19	None	20-May-19	16h48: EL1 in force 19:44 Cancelled.
06-May-19	(17:13) EL1 and MCR in force (21:16) EL1 and MCR cancelled	21-May-19	16h19: EL1 in force. 21:16 Cancelled.
07-May-19	None	22-May-19	11h05: EL1 in force. (22h02 Cancelled)
08-May-19	None	23-May-19	None
09-May-19	None	24-May-19	None
10-May-19	None	25-May-19	None
11-May-19	16:54 EL1 and MCR in-force. (20h10 Cancelled)	26-May-19	None
12-May-19	(17:05) EL1 and MCR in force 21:00 EL1&MCR cancelled	27-May-19	None
13-May-19	(06:57) EL1 and MCR cancelled (16:44) EL1 and MCR in force 21:36 Cancelled.	28-May-19	(16:20) EL1 and MCR in force 20:52 EL1 cancelled.
14-May-19	(17:35) EL1 and MCR in force (19:10) EL1 and MCR cancelled	29-May-19	(15:15) EL1 and MCR in force 21:50 EL1 cancelled.
15-May-19	(17:45) EL1 and MCR in force (18:43) EL1 and MCR cancelled	30-May-19	16:09) EL1 and MCR in force (21:26) EL1 and MCR cancelled
		31-May-19	16:21) EL1 and MCR in force (20:50) EL1 and MCR cancelled


## 6. Comments on the performance and availability of each unit

Unit 4 and 6 PM performance was well within the Ambit of the AEL limit. Unit 5 was off for 8 days due to tube leak and there were no exceedances for SO<sub>2</sub>, and NO<sub>x</sub> during May 2019 reporting period. Unit 5 exceeded the

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daily average emissions limit for PM on 29 May 2019. There were seven and 12 exceedances of SO<sub>2</sub> daily average limit recorded at unit 6 and 4 respectively during May reporting period.

## 7. Light up information

**Table 10: PM Start-up information for the month of May**

Event No.	Event 1		Event 1	
Unit	Unit 4		Unit 5	
Fires in	2019/05/27	2019/05/27	02:10 PM	2019/05/23
Synchronisation with Grid	06:30 AM	2019/05/27	07:25 PM	2019/05/23
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	00:05:55	Hrs (dd:hh:mm)	00:05:15	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)

**Table 11: Emission Average from Fires-in to Synchronisation**

South Stack Emission Average from Fires-in to Synchronisation (Date and Time)							
Unit	Fires-In		Synchronisation		PM	SO <sub>2</sub>	NO <sub>x</sub>
Unit 4	2019/05/27	12:35 AM	2019/05/27	06:30 AM	4.6	2966.4	539.0
Unit 5	2019/05/23	02:10 PM	2019/05/23	07:25 PM	3.1	2102.2	417.9


**Table 12: Point Source emissions released during Shut-down**

South Stack Emission Average Breaker Open (BO) to Draft Group Shut Down (SD) (Date & Time)							
Unit	Breaker Open		DG SD		PM	SO <sub>2</sub>	NO <sub>x</sub>
Unit 4	2019/05/27	12:05 AM	2019/05/27	12:25 AM	5.8	3015.5	0.0
Unit 5	2019/05/16	05:40 PM	2019/05/17	07:05 AM	10.5	2269.6	383.6

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## 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 CO<sub>2</sub> monitor verification test not yet conducted as a result of challenges on the equipment, the Power Station is in the process of procuring spares to fix the equipment, and the Licencing Authority will be notified prior to conducting the test.

**Table 13: Periods during which CEMS was inoperative**

Date	Nature of Repair/Adjustment
None	Not Applicable

**Table 14: CEMS Monitor Reliability**

Variable	Unit 4	Unit 5	Unit 6
Dust	100.0	100.0	100.0
SO <sub>2</sub>	99.8	100.0	100.0
NO <sub>x</sub>	96.9	100.0	100.0
CO	100.0	100.0	100.0
O <sub>2</sub>	97.3	100.0	100.0
Temperature	0.0	100.0	100.0
Pressure	100.0	100.0	100.0
Velocity	0.8	96.4	100.0
CO <sub>2</sub>	66.9	0.0	0.5

## 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 are emailed to the Licensing authority on a monthly basis.

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		<b>Review Date</b>	<b>May 2021</b>		

**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 15: Total Volatile Organic Compound (TVOC) for May 2019

		
<b>CALCULATION OF EMISSIONS OF TOTAL VOLATILE COMPOUNDS FROM FUEL OIL STORAGE TANKS*</b>		
<b>Date:</b>	31 May 2019	
<b>Station:</b>	Medupi Power Station	
<b>Province:</b>	Limpopo Province	
<b>Tank no.</b>	1-2	
<b>Description:</b>	Outdoor fuel oil storage tank	
<b>Tank Type:</b>	Vertical fixed roof (vented to atmosphere)	
<b>Material stored:</b>	Fuel Oil 150	
<b>MONTHLY INPUT DATA FOR THE STATION</b> Please only insert relevant monthly data inputs into the <b>blue cells</b> below Choose from a dropdown menu in the <b>green cells</b> The total VOC emissions for the month are in the <b>red cells</b> IMPORTANT: Do not change <b>any</b> other cells without consulting the AQ CoE		
<b>MONTH:</b>	May	
<b>GENERAL INFORMATION:</b>	<b>Data</b>	<b>Unit</b>
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:	2321	tons/month
Molecular weight of the fuel oil:	166.00	Lb/lb-mole
<b>METEROLOGICAL DATA FOR THE MONTH</b>	<b>Data</b>	<b>Unit</b>
Daily average ambient temperature	19.51	°C
Daily maximum ambient temperature	28.42	°C
Daily minimum ambient temperature	12.06	°C
Daily ambient temperature range	15.04	°C
Daily total insolation factor	3.91	kWh/m <sup>2</sup> /day
Tank paint colour	Aluminum/Specular	NA
Tank paint solar absorbance	0.39	NA
<b>FINAL OUTPUT:</b>	<b>Result</b>	<b>Unit</b>
Breathing losses:	0.70 kg/month	
Working losses:	0.07 kg/month	
<b>TOTAL LOSSES (Total TVOC Emissions for the month):</b>	<b>0.76 kg/month</b>	
*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.		

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

There were no activities relating to community awareness campaign during the month of May 2019.

## 13. Complaints Register

Table 16: Complaints for the month of May 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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### APPENDIX 1

CEMS Calibration certificates



12 Angeller Street, Bardene,  
Boksburg, SA, 1459  
PO Box 328, Itando, SA, 1600  
VAT REG #: 421 021 3248  
[www.e-analytics.co.za](http://www.e-analytics.co.za)

Tel: 0861 000 032  
Int. Tel: +27 11 918 6994  
Fax: +27 11 894 1037  
CO REG #: 2004/007607/07  
[info@e-analytics.co.za](mailto:info@e-analytics.co.za)

### CALIBRATION CERTIFICATE

<b>CERTIFICATE NO: 3152</b>			
CUSTOMER:	Medupi Power Station	JOB NO:	SC1437
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
1	ZERO	-5.0 ppm	0 ppm	Air	21 %	Air
	SPAN	800 ppm	804 ppm	O <sub>2</sub>	803.9 ppm	80A
2	ZERO	1.0 ppm	0 ppm	Air	21 %	Air
	SPAN	911 ppm	910 ppm	NO	910 ppm	1260B
3	ZERO	-7.4 ppm	0 ppm	Air	21 %	Air
	SPAN	2205 ppm	2173 ppm	SO <sub>2</sub>	2172.8 ppm	1265A
4	ZERO	-0.08 %	0.0 %	N <sub>2</sub>	99.99 %	1260B
	SPAN	21.13 %	20.95	O <sub>2</sub>	20.95 %	Air

*REPORT: Inspect sample lines and sample system, check diagnostics. Calibrate analyser with zero and span gas, calibration was done according to cylinder standards, analyser was responding to all test gas.*

Date: 14 May 2019

Calibration Due Date: Aug 2019

Technician: J. Faber




Document Number: TH-PFC-002-F1 Rev 1

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Fax: +27 11 854 1037  
CO REG #: 3004007607007  
[info@e-analytics.co.za](mailto:info@e-analytics.co.za)

13811 Level 4 Comenza

CALIBRATION CERTIFICATE

CERTIFICATE NO: 3053

CUSTOMER:	Medupi Power Station	JOB NO:	SC1437
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
1	ZERO	-7.0 ppm	0 ppm	Air	21 %	Air
	SPAN	796 ppm	804 ppm	CO	803.9 ppm	804
2	ZERO	-12.0 ppm	0 ppm	Air	21 %	Air
	SPAN	891 ppm	910 ppm	NO	910.0 ppm	12608
3	ZERO	-15.1 ppm	0 ppm	Air	21 %	Air
	SPAN	1930 ppm	2173 ppm	SO2	2172.8 ppm	12664
4	ZERO	-0.06 %	0.0 %	N2	99.99 %	12608
	SPAN	21.2 %	20.95	O2	20.95 %	Air

REPORT: Inspect sample lines and sample system, check diagnostics, sample pump was change. Calibrate analyser with zero and span gas, analyser respond to all test gas.

Date: 14 May 2019  
Calibration Due Date: Aug 2019  
Technician: J. Faber



Document Number: TH-PFC-002-F1 Rev 1

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**ANALYTICAL** Level 4 Company

### CALIBRATION CERTIFICATE

CERTIFICATE NO: 3064

CUSTOMER:	Medupi Power Station	JOB NO:	SC1437
CONTACT NAME:	Christo Vorster	PHONE:	014 762 2255
MODEL:	Foedisch MGA 23	SERIAL NO:	16339
AUXILIARY EQUIPMENT:	Unit 6		

CHAN	PRIOR	FINAL	TEST GAS	TEST GAS VALUE	GAS CERTIFICATE NUMBER	
1	ZERO	-11.0 ppm	0 ppm	Air	21 %	Air
	SPAN	787 ppm	804 ppm	CO	803.9 ppm	80A
2	ZERO	-32.0 ppm	0 ppm	Air	21 %	Air
	SPAN	882 ppm	910 ppm	NO	910.0 ppm	12608
3	ZERO	-36.0 ppm	0 ppm	Air	21 %	Air
	SPAN	2278 ppm	2173 ppm	SO2	2172.8 ppm	12664
4	ZERO	0.05 %	0.0 %	N2	99.99 %	12608
	SPAN	20.89 %	20.95 %	O2	20.95 %	Air

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

Date: 14 May 2019  
Calibration Due Date: Aug 2019  
Technician: J. Faber




Document Number: TH-PPC-002-P1 Rev 1

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