Eskom

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07 May 2020

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Ref: (12/4/12L-W4/A3)

Dear Mrs Thivhafuni

MATIMBA POWER STATION'S MONTHLY EMISSIONS REPORT FOR THE MONTH OF MARCH 2020

This serves as the monthly report required in terms of Section 7.7.1 in Matimba Power Station's Atmospheric Emission License 12/4/12L-W4/A3.

Raw Materials and Products

Table 1: Quantity of Raw Materials and Products used/produced for the month.

Raw Materials and Products used	Raw Material Type	Unit	Maximum Permitted Consumption Rate (Quantity)	Consumption Rate
	Coal	Tons/month	1 500 000	1 473 367
	Fuel Oil	Tons/month	1 200	493.562
Production Rates	**Product/ By-Product Name**	**Unit**	**Maximum Production Capacity Permitted (Quantity)**	**Production Rate**
	Energy	GWh	4 212.6	2 263.793

Abatement Technology

Table 2: Abatement Equipment Control Technology utilise.

Associated Unit	Technology Type	Actual Utilisation (%)
Unit 1	Electrostatic Precipitator	99.969
Unit 2	Electrostatic Precipitator	99.968
Unit 3	Electrostatic Precipitator	99.966
Unit 4	Electrostatic Precipitator	99.923
Unit 5	Electrostatic Precipitator	99.978
Unit 6	Electrostatic Precipitator	99.954

Associated Unit	Technology Type	Actual Utilisation (%)
Unit 1	SO_3 Plant	90
Unit 2	SO_3 Plant	97
Unit 3	SO_3 Plant	97
Unit 4	SO_3 Plant	90
Unit 5	SO_3 Plant	100
Unit 6	SO_3 Plant	97

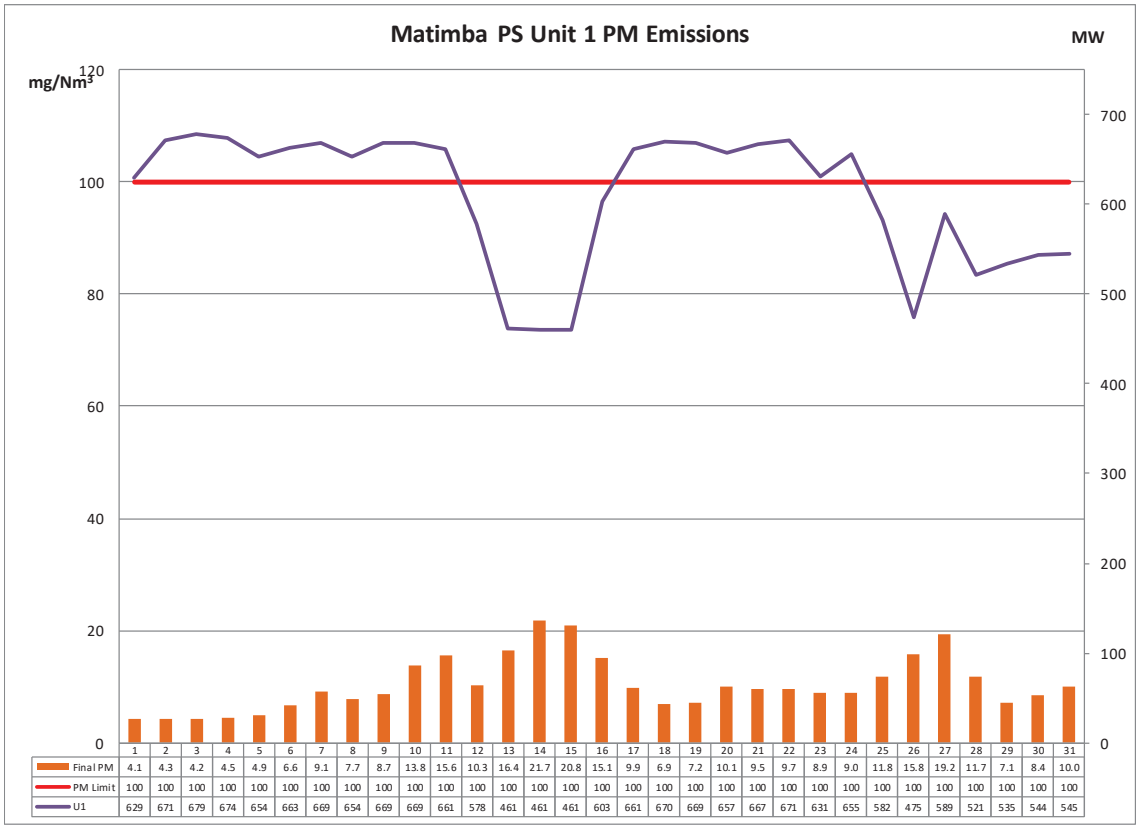
Energy Source Characteristics

Table 3: Energy Source Material Characteristics.

	Characteristic	Stipulated Range (Unit)	Monthly Average Content
Coal burned	**Sulphur Content**	0.8-1.6%	1.35
	Ash Content	30-40%	32.83

Emissions Reporting

Unit 1 particulate emissions

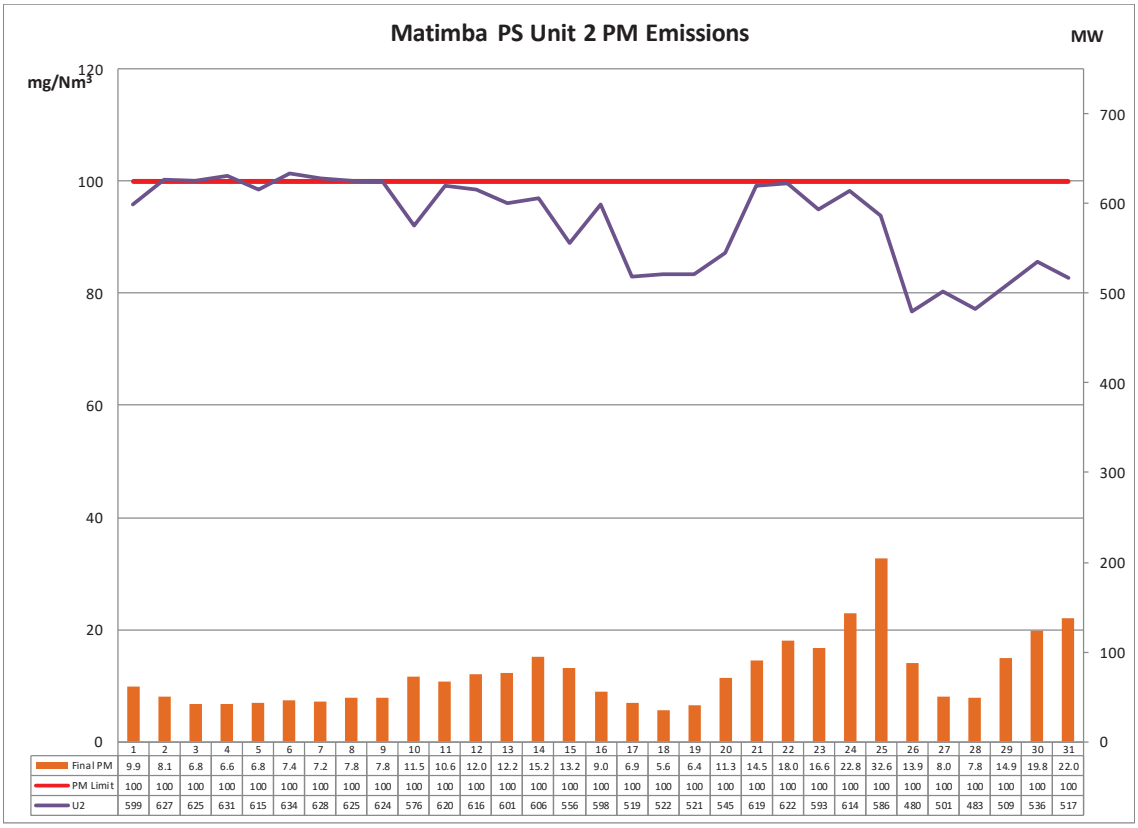


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final PM	4.1	4.3	4.2	4.5	4.9	6.6	9.1	7.7	8.7	13.8	15.6	10.3	16.4	21.7	20.8	15.1	9.9	6.9	7.2	10.1	9.5	9.7	8.9	9.0	11.8	15.8	19.2	11.7	7.1	8.4	10.0
PM Limit	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U1	629	671	679	674	654	663	669	654	669	669	661	578	461	461	461	603	661	670	669	657	667	671	631	655	582	475	589	521	535	544	545

Graph 1: Particulate matter daily average emissions against emission limit for unit 1 for the month of March 2020

Interpretation:
All daily averages below particulate emission limit of 100 mg/Nm^3.

Unit 2 particulate emissions

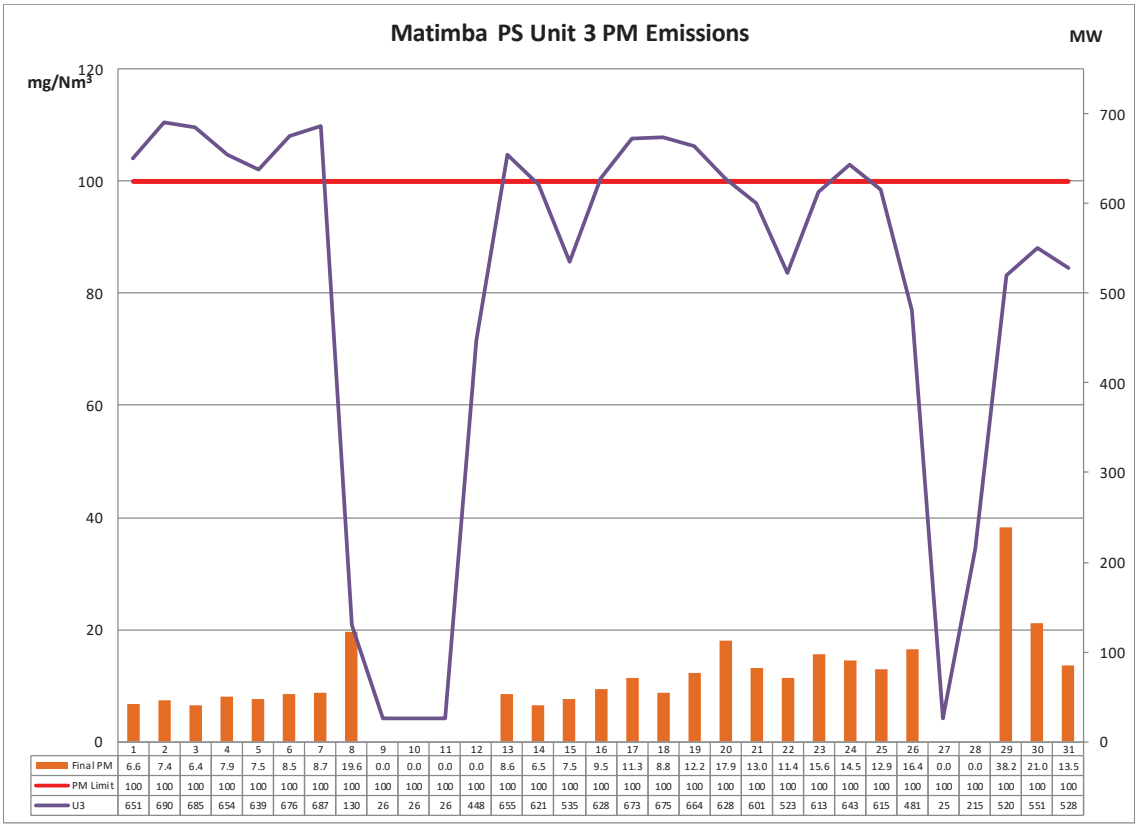


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final PM	9.9	8.1	6.8	6.6	6.8	7.4	7.2	7.8	7.8	11.5	10.6	12.0	12.2	15.2	13.2	9.0	6.9	5.6	6.4	11.3	14.5	18.0	16.6	22.8	32.6	13.9	8.0	7.8	14.9	19.8	22.0
PM Limit	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U2	599	627	625	631	615	634	628	625	624	576	620	616	601	606	556	598	519	522	521	545	619	622	593	614	586	480	501	483	509	536	517

Graph 2: Particulate matter daily average emissions against emission limit for unit 2 for the month of March 2020

Interpretation:
All daily averages below particulate emission limit of 100 mg/Nm^3.

Unit 3 particulate emissions

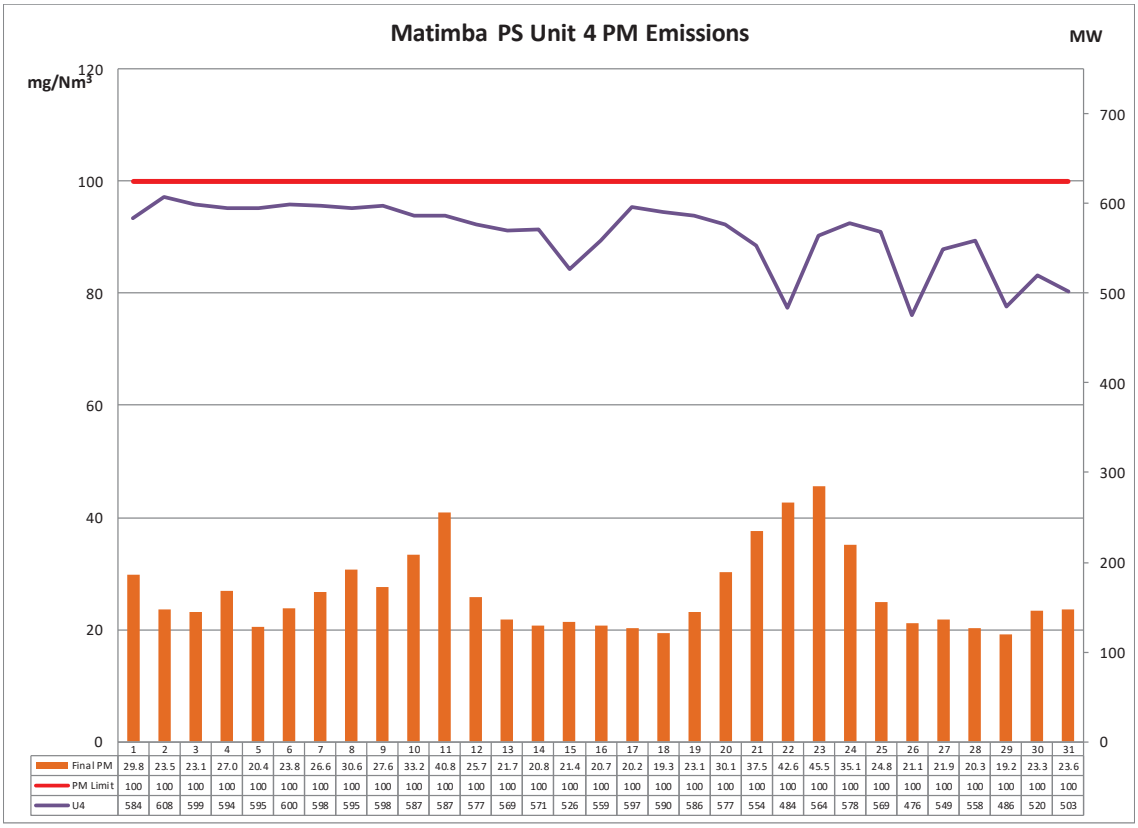


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final PM	6.6	7.4	6.4	7.9	7.5	8.5	8.7	19.6	0.0	0.0	0.0	0.0	8.6	6.5	7.5	9.5	11.3	8.8	12.2	17.9	13.0	11.4	15.6	14.5	12.9	16.4	0.0	0.0	38.2	21.0	13.5
PM Limit	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U3	651	690	685	654	639	676	687	130	26	26	26	448	655	621	535	628	673	675	664	628	601	523	613	643	615	481	25	215	520	551	528

Graph 3: Particulate matter daily average emissions against emission limit for unit 3 for the month of March 2020

Interpretation:
All daily averages below particulate emission limit of 100 mg/Nm^3.

Unit 4 particulate emissions

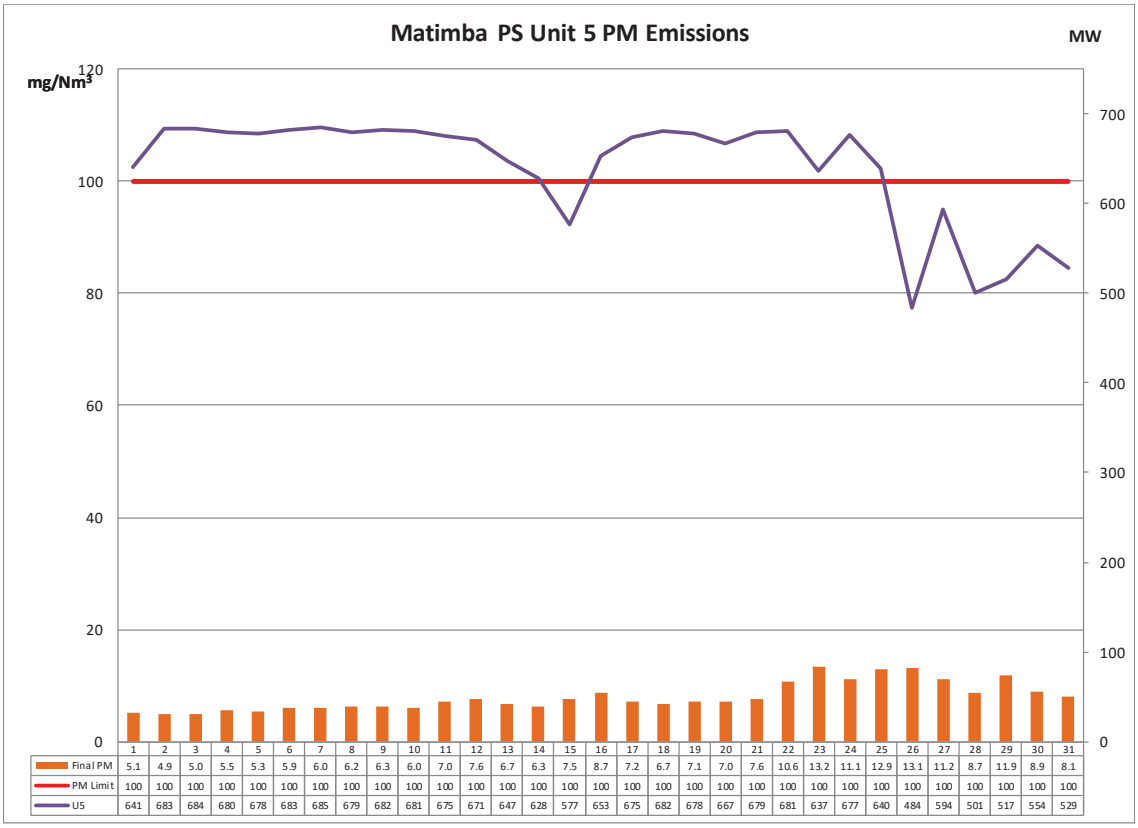


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final PM	29.8	23.5	23.1	27.0	20.4	23.8	26.6	30.6	27.6	33.2	40.8	25.7	21.7	20.8	21.4	20.7	20.2	19.3	23.1	30.1	37.5	42.6	45.5	35.1	24.8	21.1	21.9	20.3	19.2	23.3	23.6
PM Limit	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U4	584	608	599	594	595	600	598	595	598	587	587	577	569	571	526	559	597	590	586	577	554	484	564	578	569	476	549	558	486	520	503

Graph 4: Particulate matter daily average emissions against emission limit for unit 4 for the month of March 2020

Interpretation:
All daily averages below particulate emission limit of 100 mg/Nm^3.

Unit 5 particulate emissions

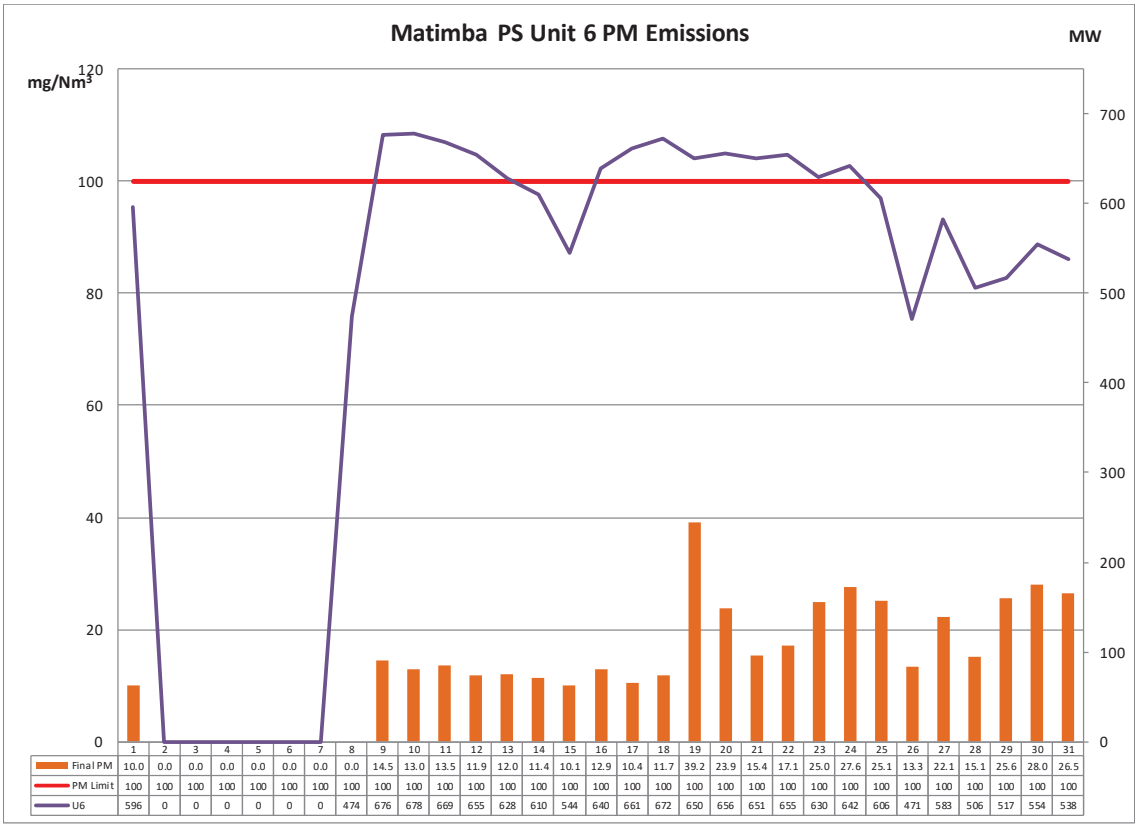


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final PM	5.1	4.9	5.0	5.5	5.3	5.9	6.0	6.2	6.3	6.0	7.0	7.6	6.7	6.3	7.5	8.7	7.2	6.7	7.1	7.0	7.6	10.6	13.2	11.1	12.9	13.1	11.2	8.7	11.9	8.9	8.1
PM Limit	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U5	641	683	684	680	678	683	685	679	682	681	675	671	647	628	577	653	675	682	678	667	679	681	637	677	640	484	594	501	517	554	529

Graph 5: Particulate matter daily average emissions against emission limit for unit 5 for the month of March 2020

Interpretation:
All daily averages below particulate emission limit of 100 mg/Nm^3.

Unit 6 particulate emissions

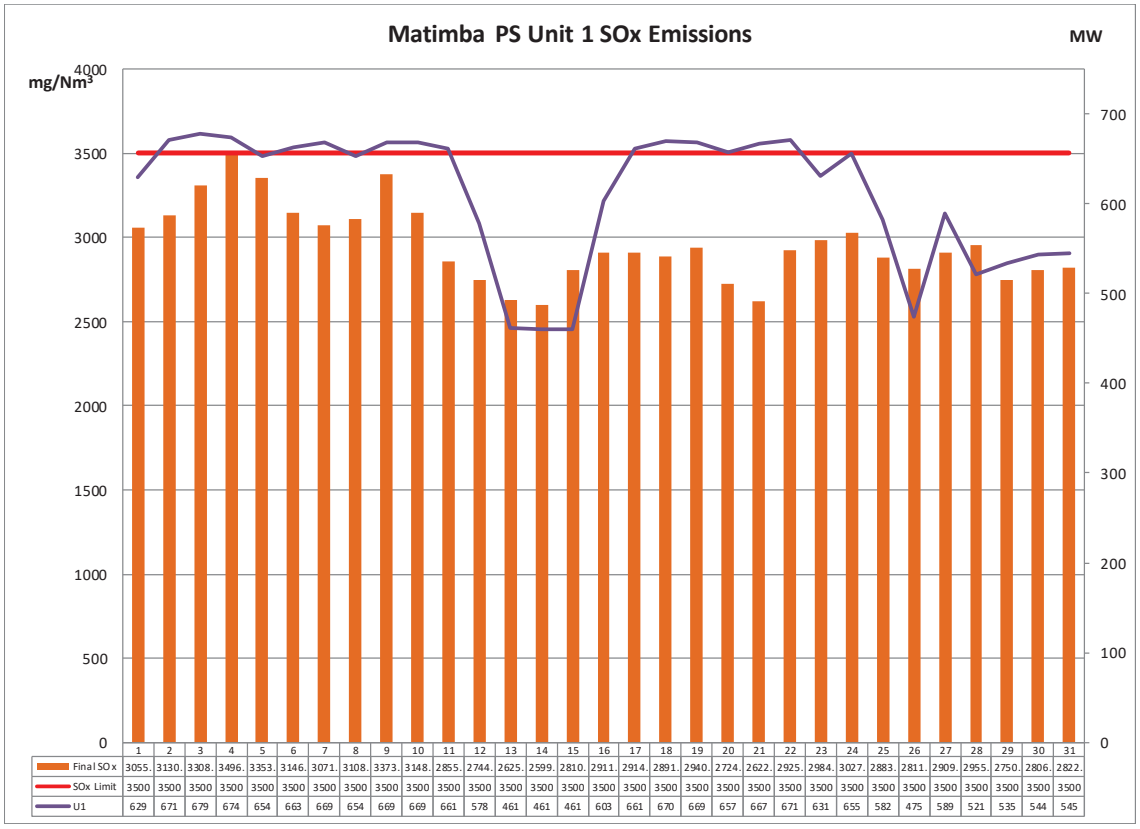


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final PM	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.5	13.0	13.5	11.9	12.0	11.4	10.1	12.9	10.4	11.7	39.2	23.9	15.4	17.1	25.0	27.6	25.1	13.3	22.1	15.1	25.6	28.0	26.5
PM Limit	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U6	596	0	0	0	0	0	0	474	676	678	669	655	628	610	544	640	661	672	650	656	651	655	630	642	606	471	583	506	517	554	538

Graph 6: Particulate matter daily average emissions against emission limit for unit 6 for the month of March 2020

Interpretation:
All daily averages below particulate emission limit of 100 mg/Nm^3.

Unit 1 SO_2 emissions

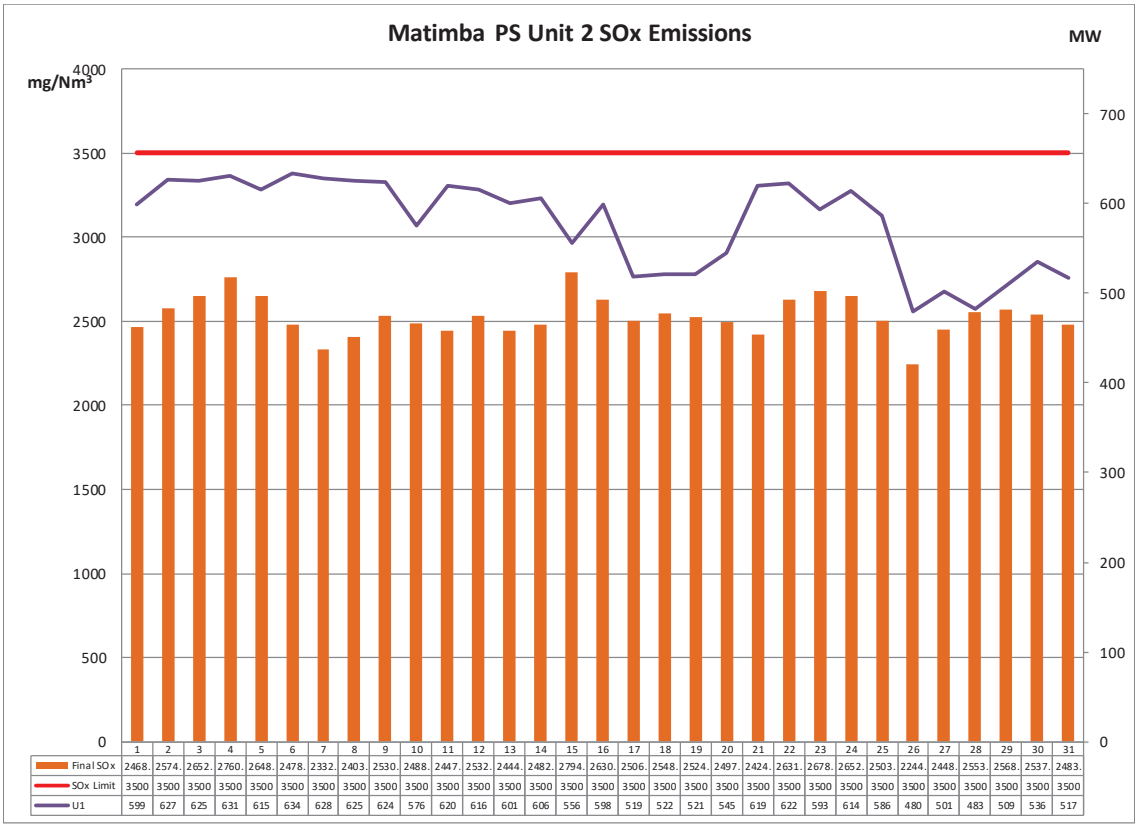


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final SOx	3055.	3130.	3308.	3496.	3353.	3146.	3071.	3108.	3373.	3148.	2855.	2744.	2625.	2599.	2810.	2911.	2914.	2891.	2940.	2724.	2622.	2925.	2984.	3027.	2883.	2811.	2909.	2955.	2750.	2806.	2822.
SOx Limit	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
U1	629	671	679	674	654	663	669	654	669	669	661	578	461	461	461	603	661	670	669	657	667	671	631	655	582	475	589	521	535	544	545

Graph 7: SO_2 daily average emissions against emission limit for unit 1 for the month of March 2020

Interpretation:
All daily averages below SO2 emission limit of 3500 mg/Nm3.

Unit 2 SO_2 emissions

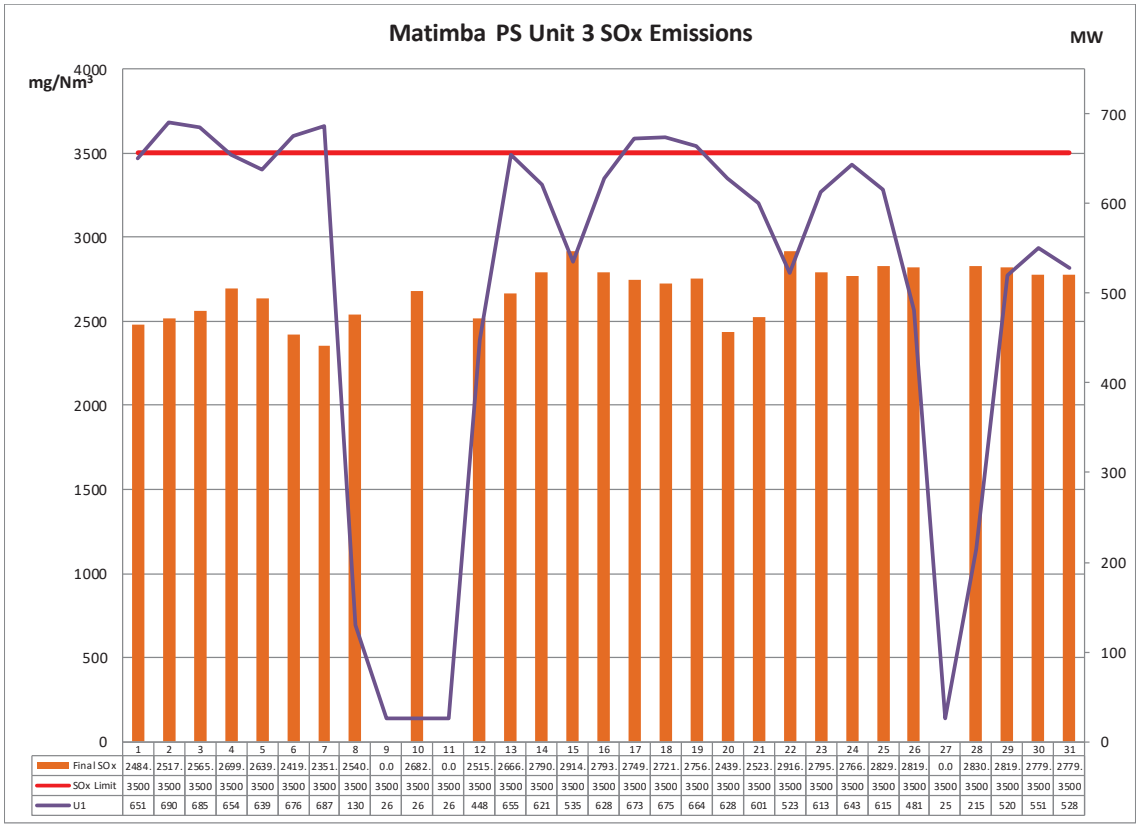


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final SOx	2468.	2574.	2652.	2760.	2648.	2478.	2332.	2403.	2530.	2488.	2447.	2532.	2444.	2482.	2794.	2630.	2506.	2548.	2524.	2497.	2424.	2631.	2678.	2652.	2503.	2244.	2448.	2553.	2568.	2537.	2483.
SOx Limit	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
U1	599	627	625	631	615	634	628	625	624	576	620	616	601	606	556	598	519	522	521	545	619	622	593	614	586	480	501	483	509	536	517

Graph 8: SO_2 daily average emissions against emission limit for unit 2 for the month of March 2020

Interpretation:
All daily averages below SO_2 emission limit of 3500 mg/Nm^3.

Unit 3 SO_2 emissions

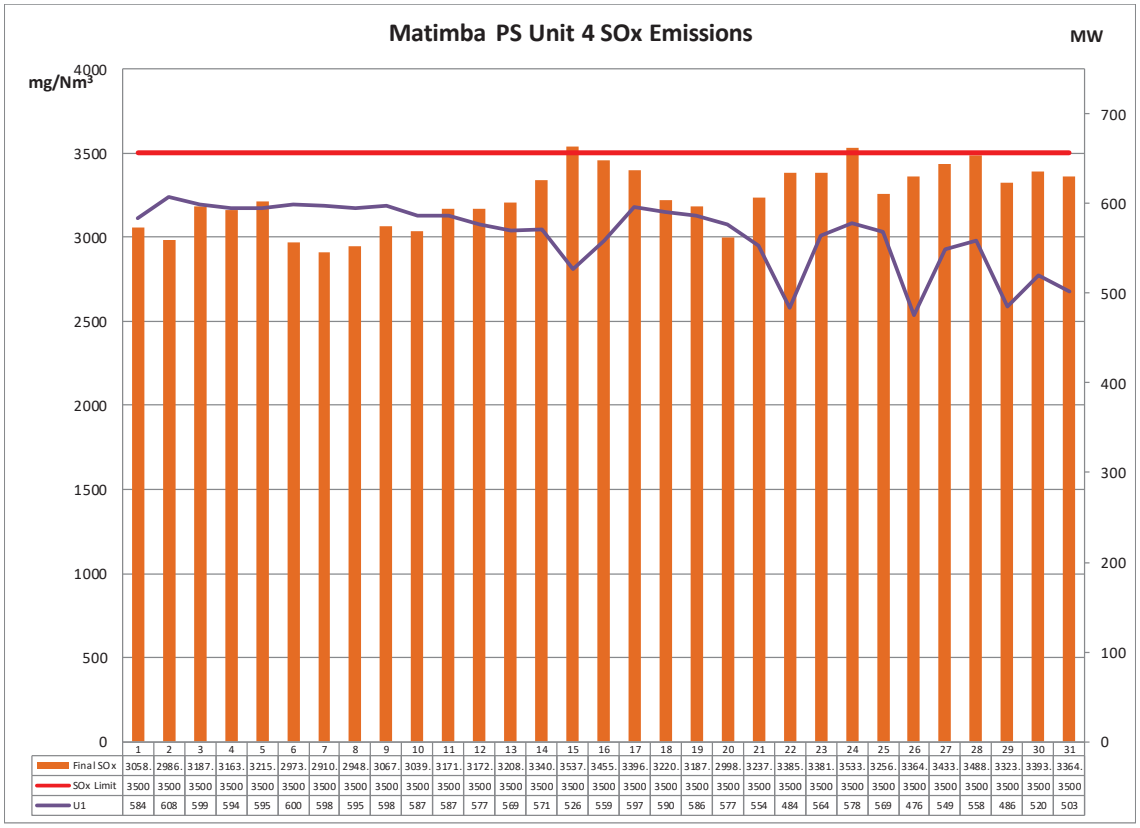


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final SOx	2484.	2517.	2565.	2699.	2639.	2419.	2351.	2540.	0.0	2682.	0.0	2515.	2666.	2790.	2914.	2793.	2749.	2721.	2756.	2439.	2523.	2916.	2795.	2766.	2829.	2819.	0.0	2830.	2819.	2779.	2779.
SOx Limit	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
U1	651	690	685	654	639	676	687	130	26	26	26	448	655	621	535	628	673	675	664	628	601	523	613	643	615	481	25	215	520	551	528

Graph 9: SO_2 daily average emissions against emission limit for unit 3 for the month of March 2020

Interpretation:
All daily averages below SO2 emission limit of 3500 mg/Nm3.

Unit 4 SO_2 emissions

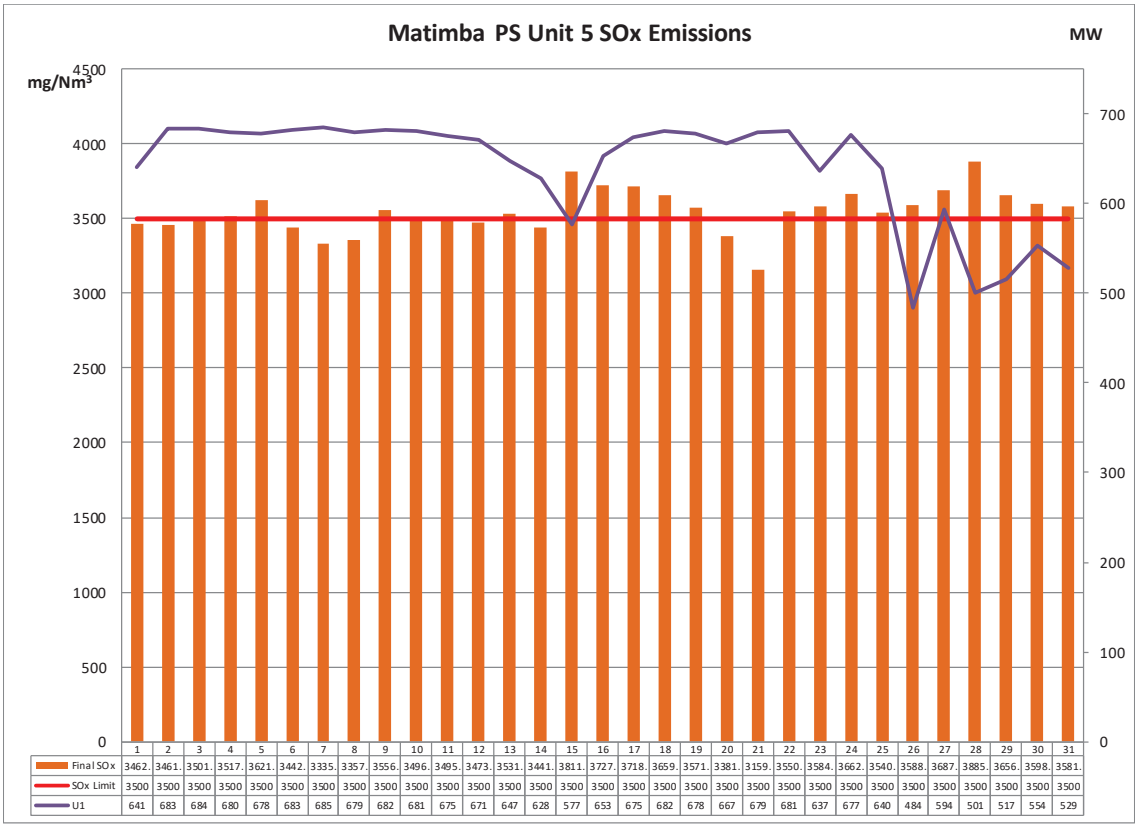


Graph 10: SO_2 daily average emissions against emission limit for unit 4 for the month of March 2020

Interpretation:

The SO_2 daily average of 3500mg/Nm^3 was exceeded on the 15th and 24th of March 2020. The monthly average however remained below the 3500mg/Nm^3 limit. It is suspected that the exceedances are due to an increase in the sulphur content of the coal used in the combustion process. The increased emissions will be thoroughly investigated to determine the root cause.

Unit 5 SO_2 emissions

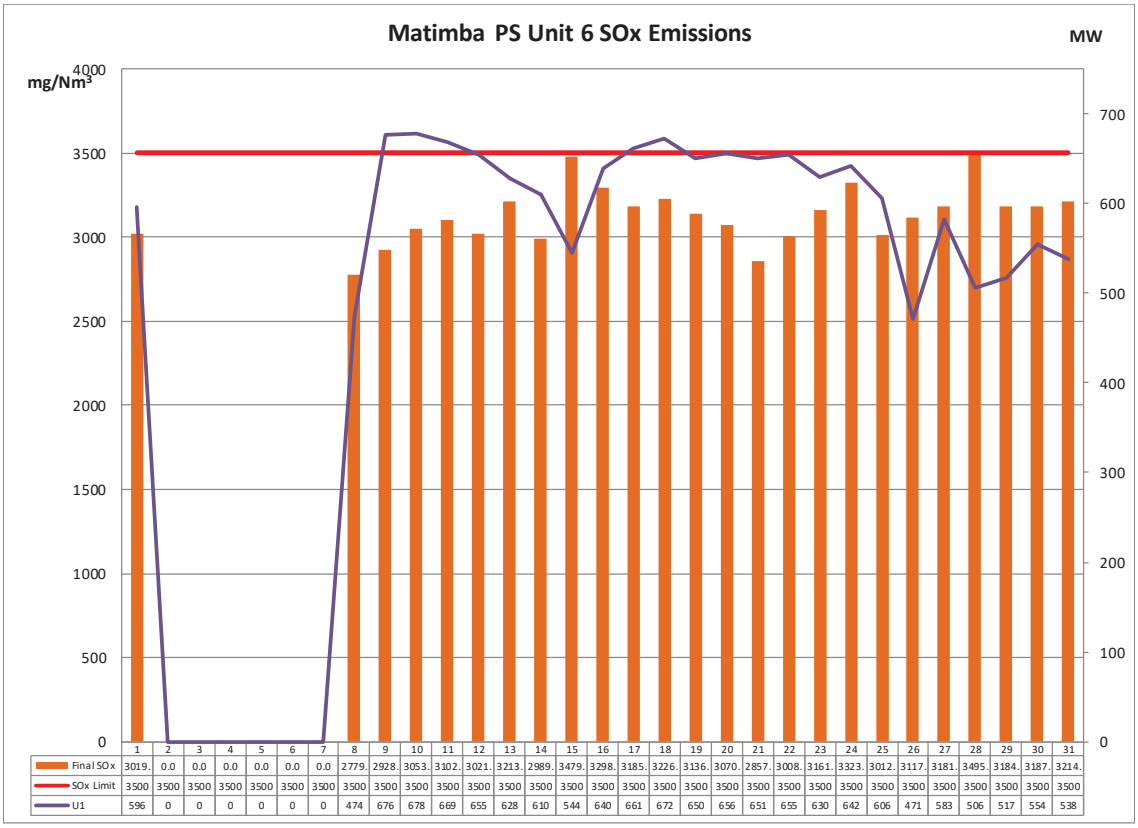


Graph 11: SO_2 daily average emissions against emission limit for unit 5 for the month of March 2020

Interpretation:
The SO_2 daily average of 3500mg/Nm^3 was exceeded from the 3rd until the 5th, the 9th, 13th from the 15th until the 19th and from the 22nd until the 31st of March 2020. This lead to a monthly average of 3550.3 mg/Nm^3 which exceeds the monthly average limit of 3500mg/Nm^3.

It is suspected that the exceedances are due to an increase in the sulphur content of the coal used in the combustion process. The exceedances will be thoroughly investigated to determine the root cause.

Unit 6 SO_2 emissions

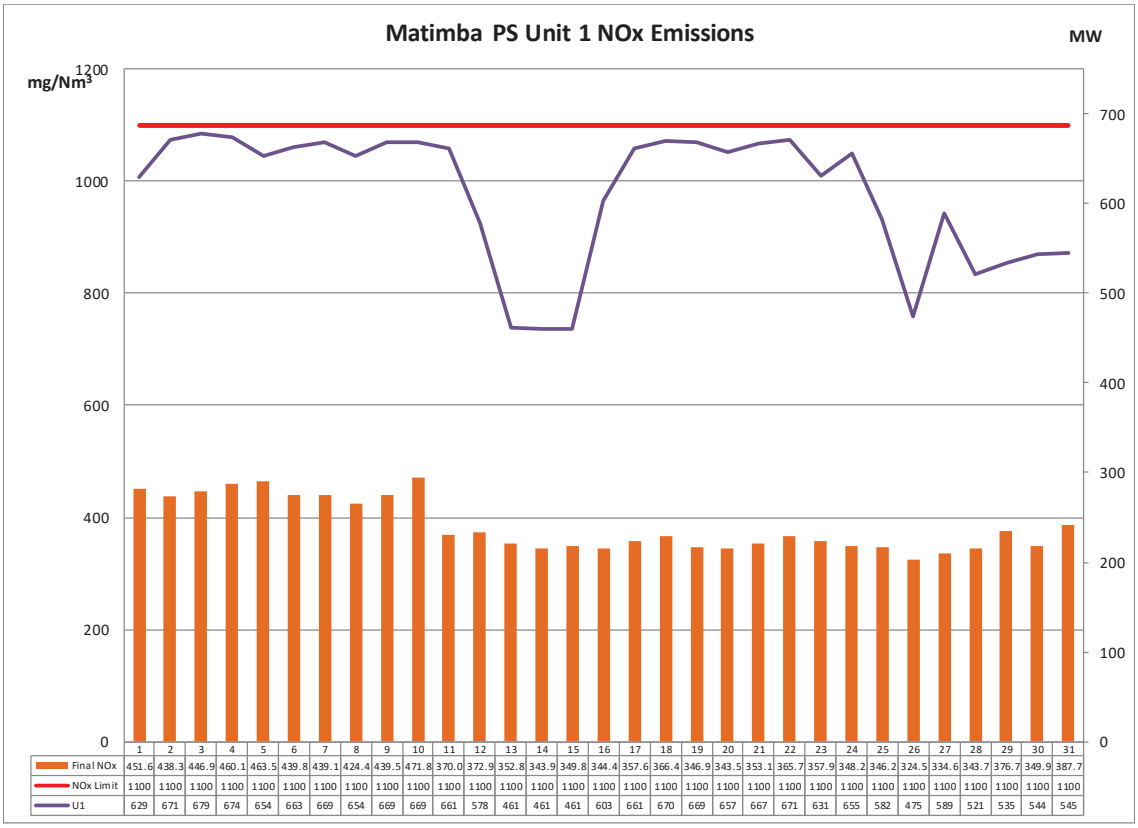


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final SOx	3019.	0.0	0.0	0.0	0.0	0.0	0.0	2779.	2928.	3053.	3102.	3021.	3213.	2989.	3479.	3298.	3185.	3226.	3136.	3070.	2857.	3008.	3161.	3323.	3012.	3117.	3181.	3495.	3184.	3187.	3214.
SOx Limit	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
U1	596	0	0	0	0	0	0	474	676	678	669	655	628	610	544	640	661	672	650	656	651	655	630	642	606	471	583	506	517	554	538

Graph 12: SO_2 daily average emissions against emission limit for unit 6 for the month of March 2020

Interpretation:
All daily averages below SO2 emission limit of 3500 mg/Nm3.

Unit 1 NO_x emissions

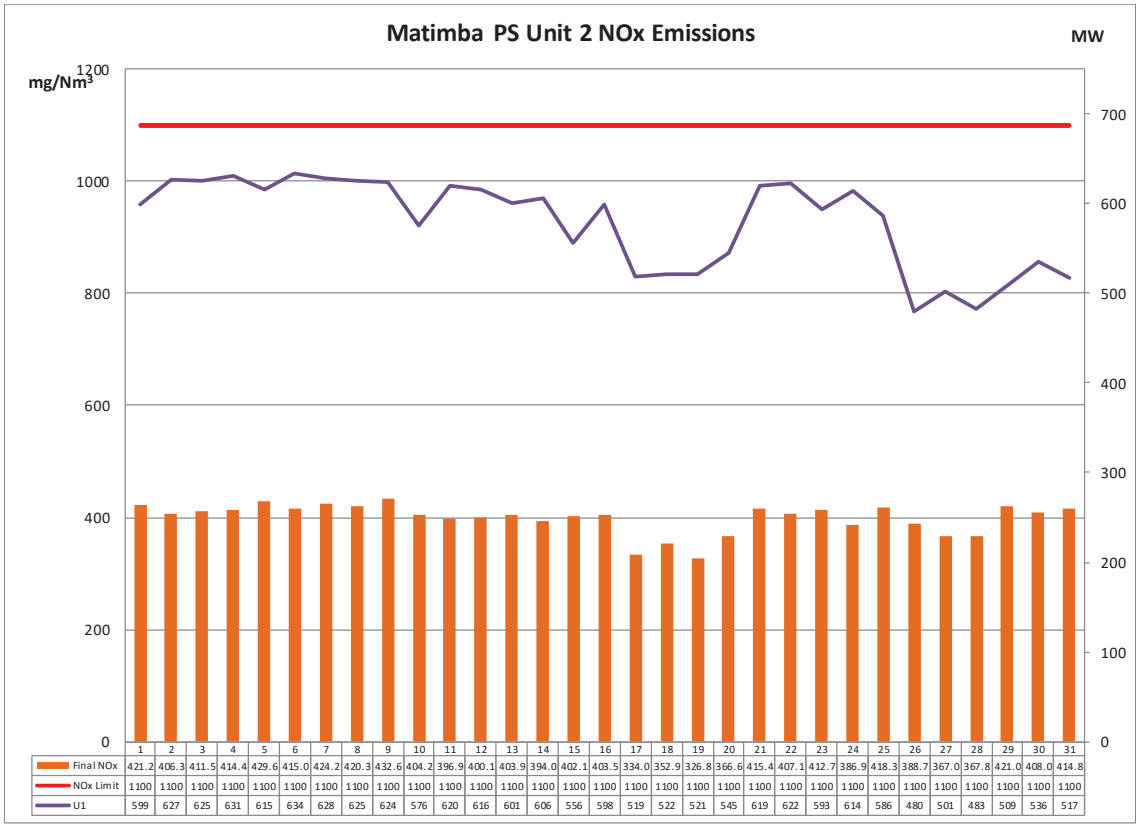


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final NOx	451.6	438.3	446.9	460.1	463.5	439.8	439.1	424.4	439.5	471.8	370.0	372.9	352.8	343.9	349.8	344.4	357.6	366.4	346.9	343.5	353.1	365.7	357.9	348.2	346.2	324.5	334.6	343.7	376.7	349.9	387.7
NOx Limit	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
U1	629	671	679	674	654	663	669	654	669	669	661	578	461	461	461	603	661	670	669	657	667	671	631	655	582	475	589	521	535	544	545

Graph 13: NO_x daily average emissions against emission limit for unit 1 for the month of March 2020

Interpretation:
All daily averages below NO_x emission limit of 1100 mg/Nm^3.

Unit 2 NO_x emissions

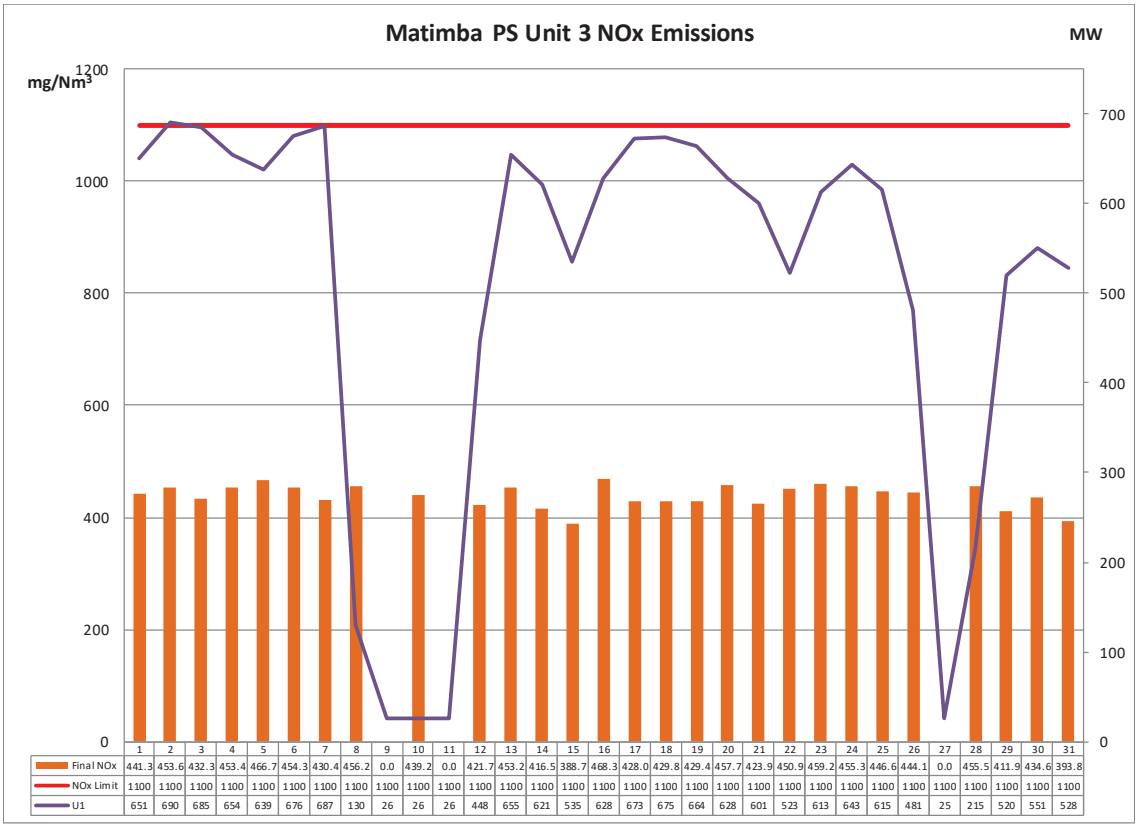


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final NOx	421.2	406.3	411.5	414.4	429.6	415.0	424.2	420.3	432.6	404.2	396.9	400.1	403.9	394.0	402.1	403.5	334.0	352.9	326.8	366.6	415.4	407.1	412.7	386.9	418.3	388.7	367.0	367.8	421.0	408.0	414.8
NOx Limit	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
U1	599	627	625	631	615	634	628	625	624	576	620	616	601	606	556	598	519	522	521	545	619	622	593	614	586	480	501	483	509	536	517

Graph 14: NO_x daily average emissions against emission limit for unit 2 for the month of March 2020

Interpretation:
All daily averages below NO_x emission limit of 1100 mg/Nm^3.

Unit 3 NO_x emissions

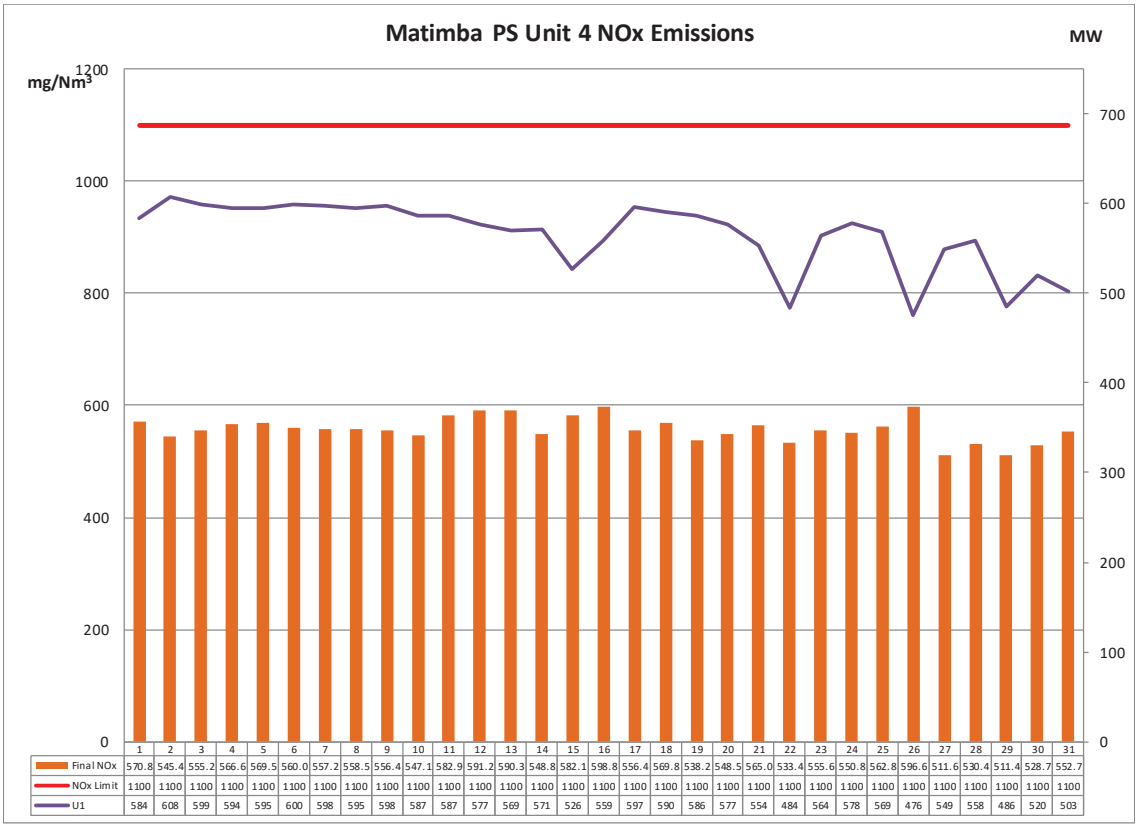


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final NOx	441.3	453.6	432.3	453.4	466.7	454.3	430.4	456.2	0.0	439.2	0.0	421.7	453.2	416.5	388.7	468.3	428.0	429.8	429.4	457.7	423.9	450.9	459.2	455.3	446.6	444.1	0.0	455.5	411.9	434.6	393.8
NOx Limit	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
U1	651	690	685	654	639	676	687	130	26	26	26	448	655	621	535	628	673	675	664	628	601	523	613	643	615	481	25	215	520	551	528

Graph 15: NO_x daily average emissions against emission limit for unit 3 for the month of March 2020

Interpretation:
All daily averages below NO_x emission limit of 1100 mg/Nm^3.

Unit 4 NO_x emissions

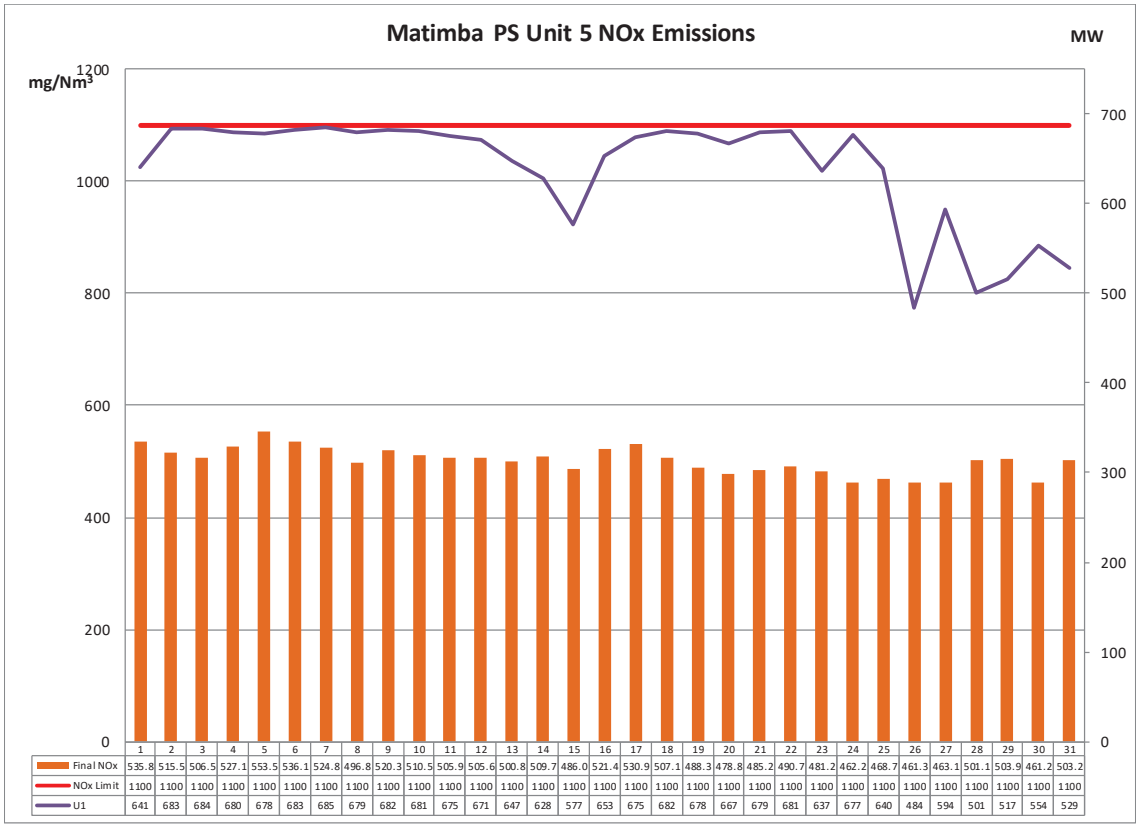


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final NOx	570.8	545.4	555.2	566.6	569.5	560.0	557.2	558.5	556.4	547.1	582.9	591.2	590.3	548.8	582.1	598.8	556.4	569.8	538.2	548.5	565.0	533.4	555.6	550.8	562.8	596.6	511.6	530.4	511.4	528.7	552.7
NOx Limit	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
U1	584	608	599	594	595	600	598	595	598	587	587	577	569	571	526	559	597	590	586	577	554	484	564	578	569	476	549	558	486	520	503

Graph 16: NO_x daily average emissions against emission limit for unit 4 for the month of March 2020

Interpretation:
All daily averages below NO_x emission limit of 1100 mg/Nm^3.

Unit 5 NO_x emissions

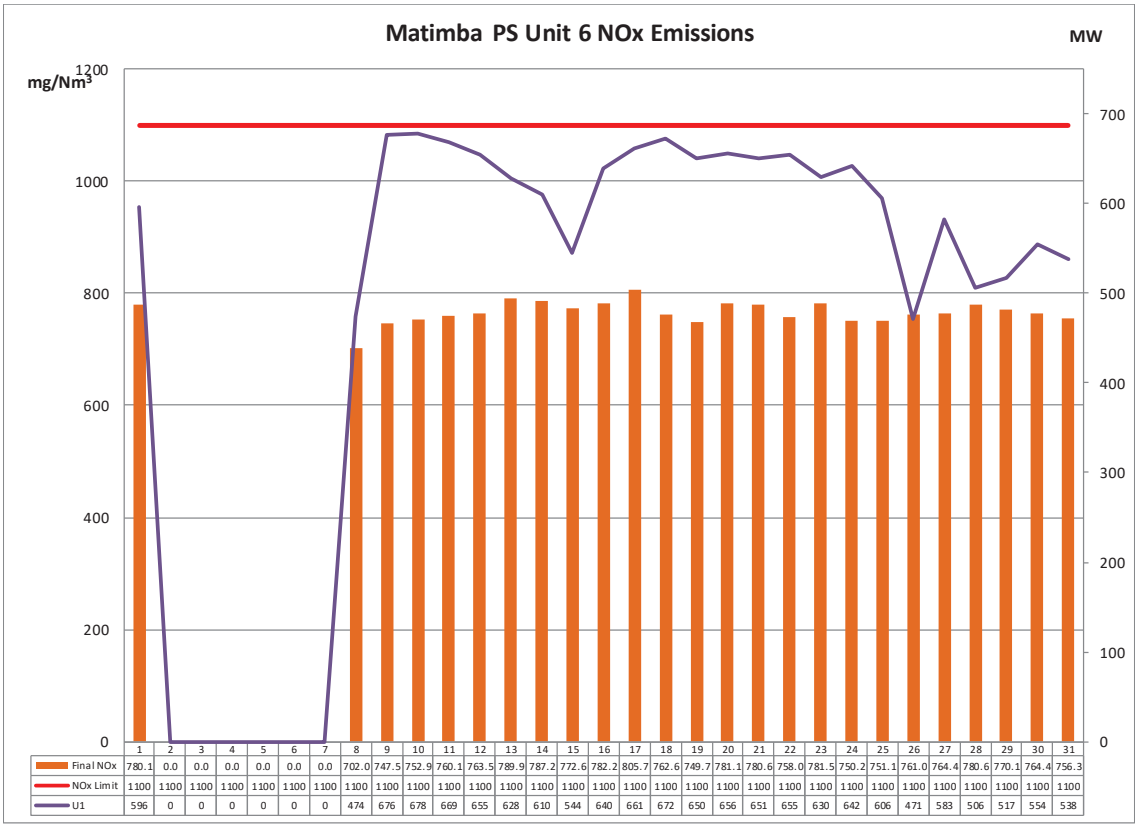


	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final NOx	535.8	515.5	506.5	527.1	553.5	536.1	524.8	496.8	520.3	510.5	505.9	505.6	500.8	509.7	486.0	521.4	530.9	507.1	488.3	478.8	485.2	490.7	481.2	462.2	468.7	461.3	463.1	501.1	503.9	461.2	503.2
NOx Limit	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
U1	641	683	684	680	678	683	685	679	682	681	675	671	647	628	577	653	675	682	678	667	679	681	637	677	640	484	594	501	517	554	529

Graph 17: NO_x daily average emissions against emission limit for unit 5 for the month of March 2020

Interpretation:
All daily averages below NO_x emission limit of 1100 mg/Nm^3.

Unit 6 NO_x emissions



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Final NOx	780.1	0.0	0.0	0.0	0.0	0.0	0.0	702.0	747.5	752.9	760.1	763.5	789.9	787.2	772.6	782.2	805.7	762.6	749.7	781.1	780.6	758.0	781.5	750.2	751.1	761.0	764.4	780.6	770.1	764.4	756.3
NOx Limit	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
U1	596	0	0	0	0	0	0	474	676	678	669	655	628	610	544	640	661	672	650	656	651	655	630	642	606	471	583	506	517	554	538

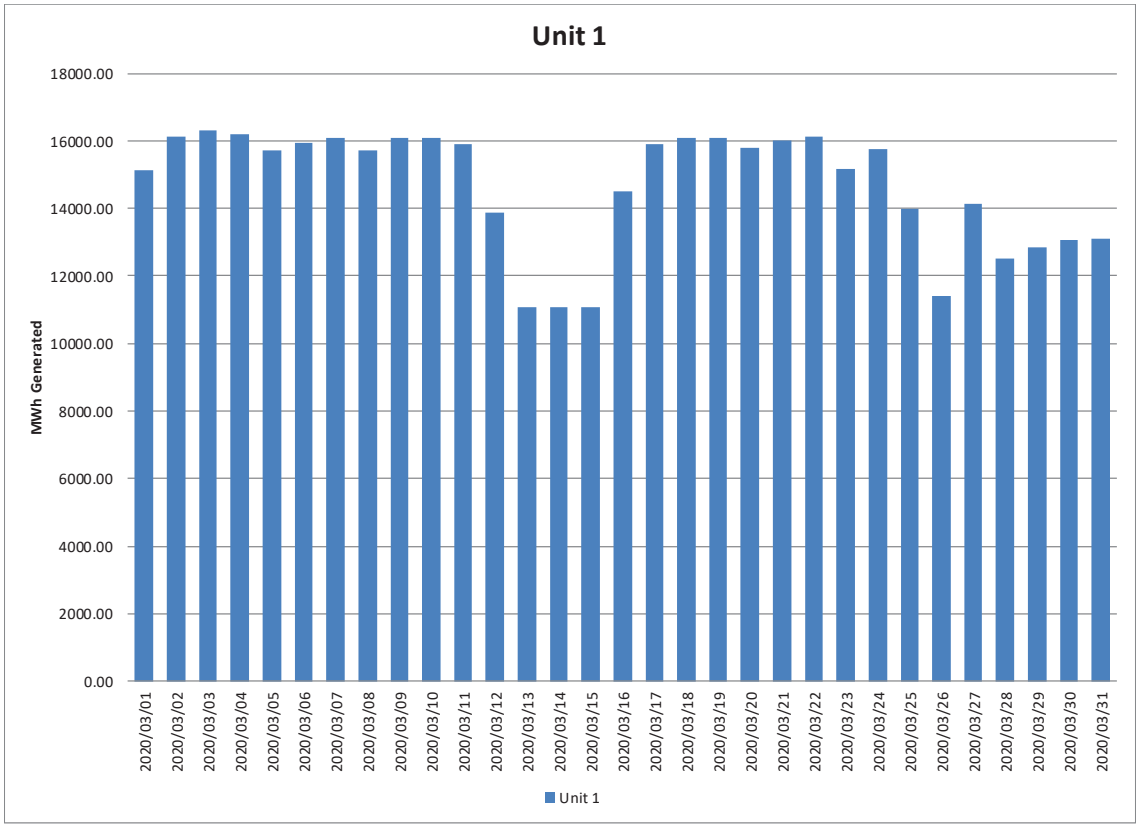
Graph 18: NO_x daily average emissions against emission limit for unit 6 for the month of March 2020

Interpretation:
All daily averages below NO_x emission limit of 1100 mg/Nm^3.

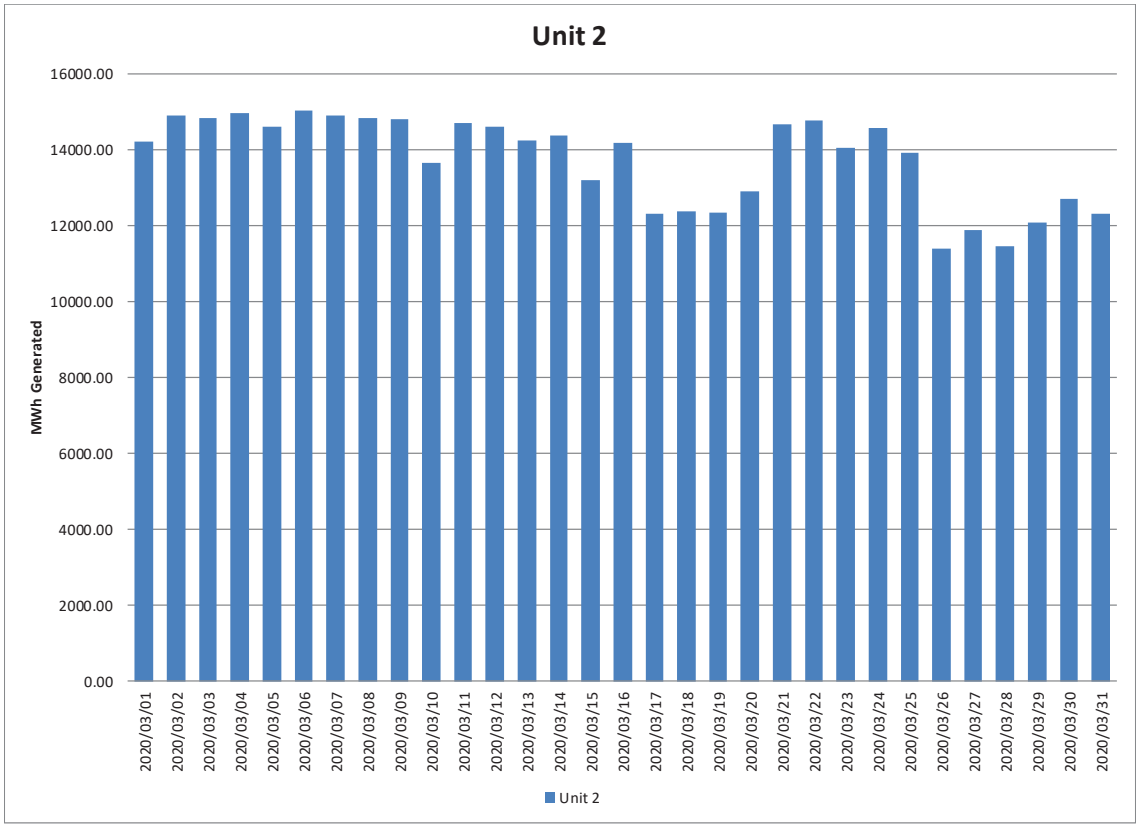
Table 4: Daily power generated per unit in MWh for the month of March 2020

Date	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
2020/03/01	15122.53	14189.33	15278.60	13950.80	15241.80	14032.20
2020/03/02	16112.60	14873.67	16237.07	14522.27	16263.90	0.00
2020/03/03	16309.94	14825.13	16115.13	14312.47	16266.20	0.00
2020/03/04	16194.47	14969.40	15340.40	14196.07	16179.70	0.00
2020/03/05	15706.27	14586.27	14964.53	14205.40	16126.30	0.00
2020/03/06	15934.87	15021.40	15847.13	14325.13	16241.20	0.00
2020/03/07	16074.60	14881.33	16115.60	14289.73	16296.40	0.00
2020/03/08	15703.73	14819.27	2546.53	14229.33	16161.80	4549.93
2020/03/09	16077.73	14780.00	0.00	14280.53	16235.10	16085.20
2020/03/10	16078.93	13643.87	0.00	14023.33	16195.60	16119.00
2020/03/11	15886.40	14696.13	0.00	14029.00	16059.80	15902.87
2020/03/12	13888.13	14590.07	10012.87	13787.00	15969.10	15592.40
2020/03/13	11090.87	14235.40	15350.80	13604.13	15398.90	14979.47
2020/03/14	11080.20	14349.47	14554.33	13638.00	14935.70	14564.07
2020/03/15	11083.53	13171.27	12467.67	12575.93	13740.30	12973.07
2020/03/16	14494.73	14179.00	14738.00	13361.80	15532.20	15214.87
2020/03/17	15885.00	12301.40	15807.20	14251.67	16055.40	15740.20
2020/03/18	16089.00	12370.33	15856.00	14098.67	16219.80	15997.47
2020/03/19	16069.80	12348.07	15607.33	14004.13	16138.50	15474.93
2020/03/20	15782.53	12900.73	14725.40	13789.47	15866.70	15599.00
2020/03/21	16017.00	14671.33	14074.20	13235.67	16162.60	15487.00
2020/03/22	16129.20	14744.87	12207.33	11566.20	16200.70	15584.67
2020/03/23	15161.60	14045.87	14376.00	13472.00	15153.40	14993.73
2020/03/24	15744.07	14552.73	15073.20	13806.40	16113.70	15271.40
2020/03/25	13981.87	13896.33	14401.13	13594.47	15223.20	14412.33
2020/03/26	11411.47	11377.60	8478.27	11380.07	11535.70	11199.47
2020/03/27	14151.40	11883.33	0.00	13112.93	14139.90	13865.40
2020/03/28	12525.07	11440.87	4500.33	13346.40	11933.30	12016.20
2020/03/29	12848.20	12064.93	12098.40	11610.93	12296.00	12292.07
2020/03/30	13067.87	12695.53	12834.47	12434.93	13184.50	13178.93
2020/03/31	13099.27	12295.80	12309.47	12018.47	12583.30	12777.87

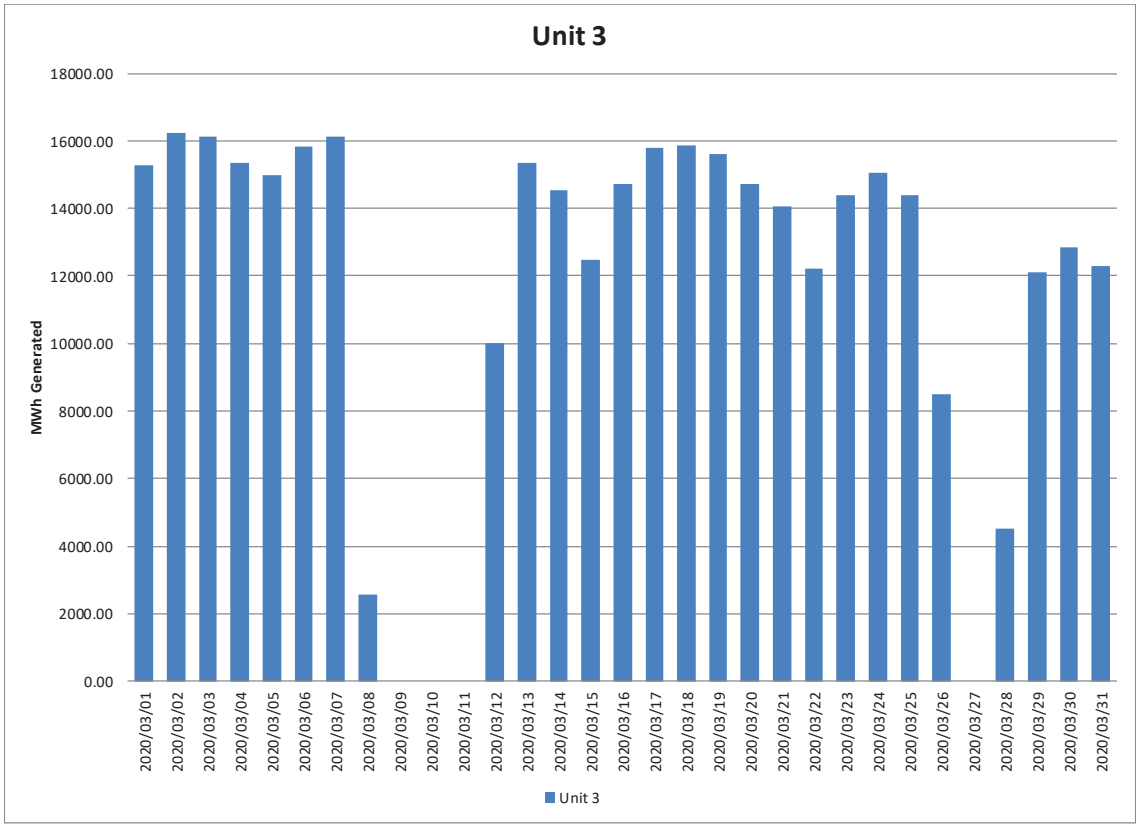
Graph 19: Unit 1 daily generated power in MWh for the month of March 2020



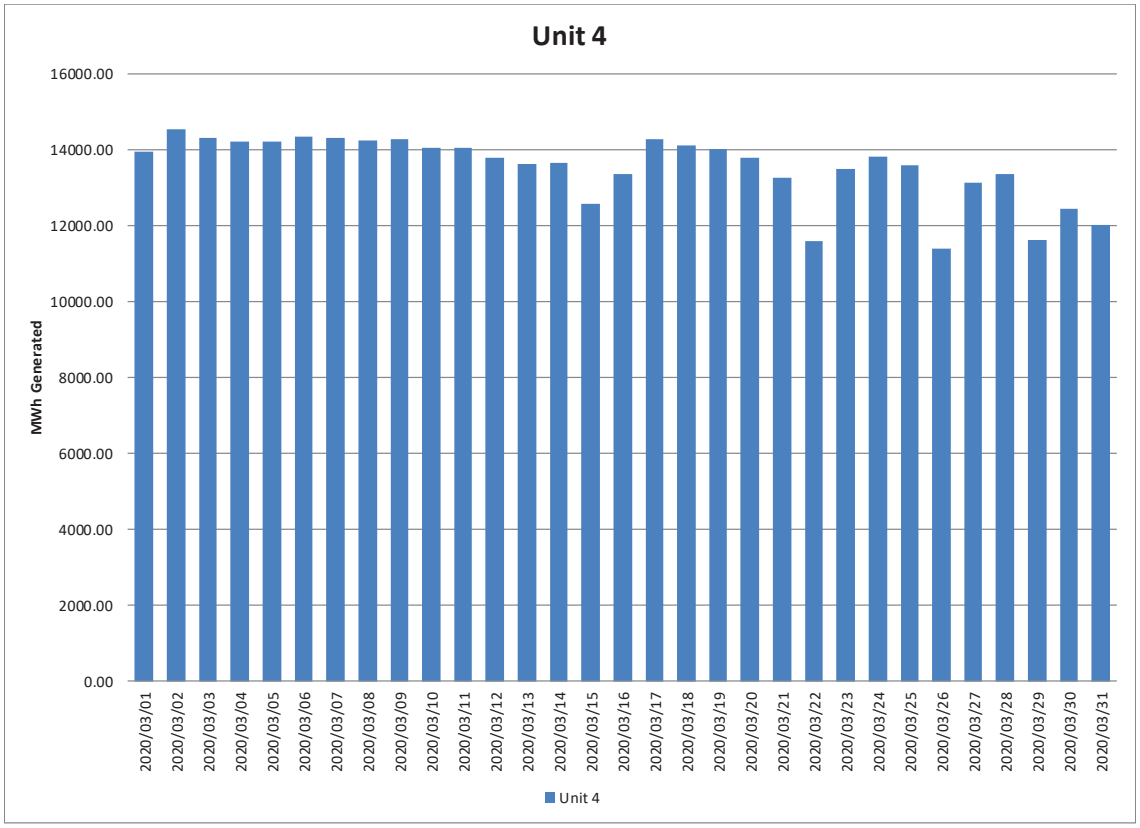
Graph 20: Unit 2 daily generated power in MWh for the month of March 2020



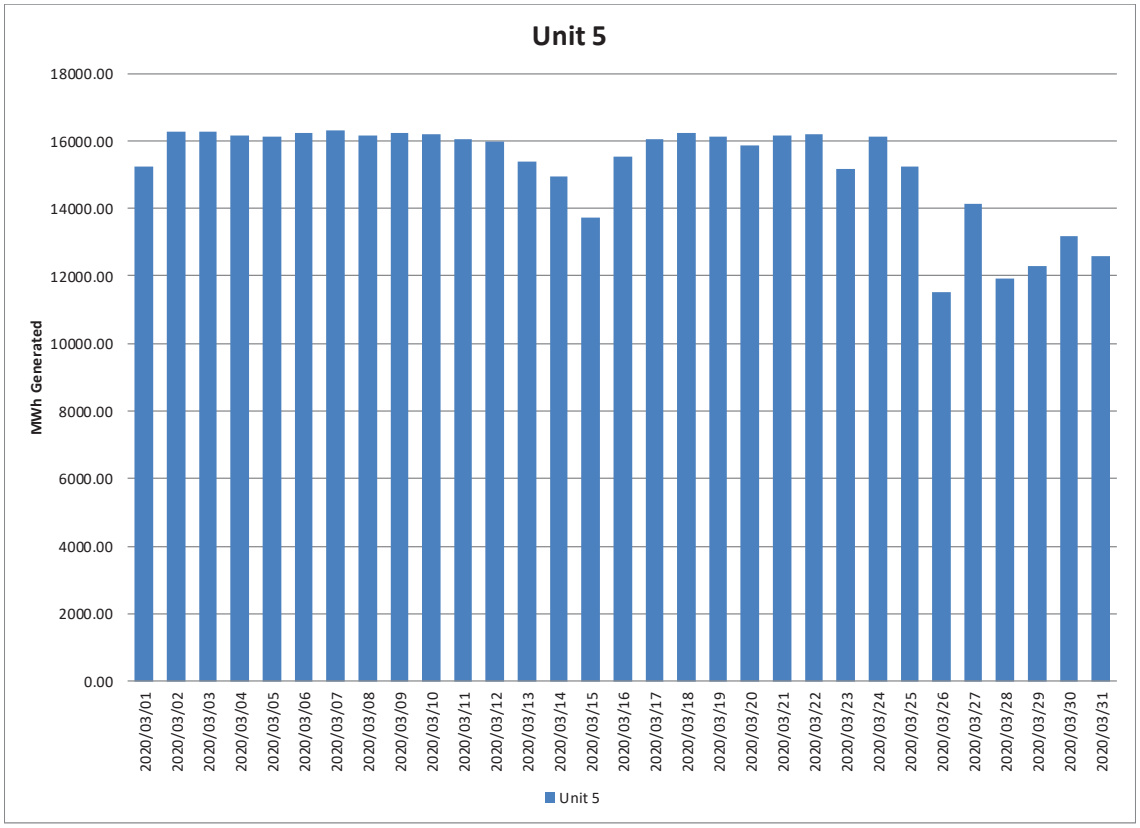
Graph 21: Unit 3 daily generated power in MWh for the month of March 2020



Graph 22: Unit 4 daily generated power in MWh for the month of March 2020



Graph 23: Unit 5 daily generated power in MWh for the month of March 2020



Graph 24: Unit 6 daily generated power in MWh for the month of March 2020

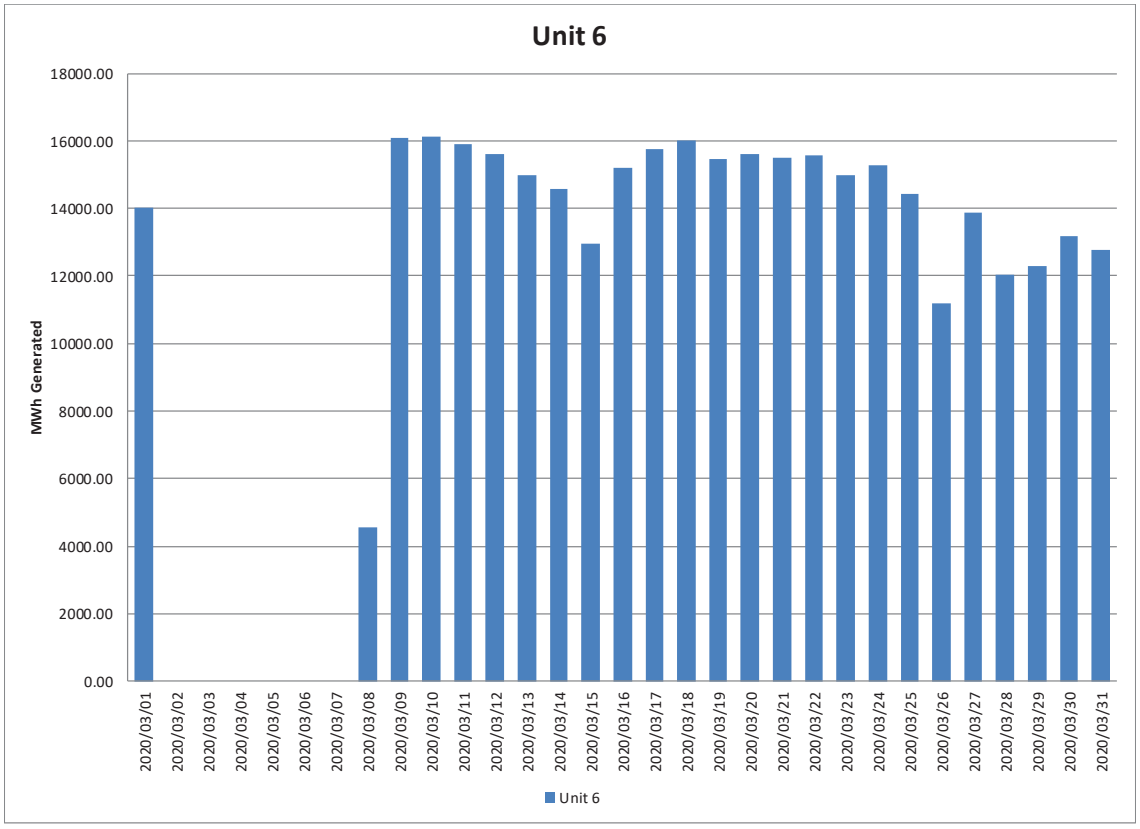


Table 5: Pollutant tonnages for the month of March 2020

Associated Unit/Stack	PM (tons)	SO_2 (tons)	NO_x (tons)
Unit 1	24.3	6 795.6	884.0
Unit 2	24.1	7 016.3	1 108.7
Unit 3	22.0	4 802.2	787.3
Unit 4	56.2	6 653.7	1 151.4
Unit 5	18.3	7 990.9	1 133.2
Unit 6	29.4	5 470.1	1 340.9
SUM	174.3	38 728.8	6 405.5

Table 6: Reference values for data provided.

Compound / Parameter	Units of Measure	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Oxygen	%	6.05	6.49	6.79	9.34	7.36	8.69
Moisture	%	4.89	3.76	4.06	4.94	4.40	4.73
Velocity	m/s	25.0	30.4	24.5	28.9	27.0	29.3
Temperature	°C	139.1	129.5	135.4	130.3	129.9	125.8
Pressure	mBar	932.7	930.3	932.3	931.3	925.9	920.5

Start-up information.

Table 7: Start-up information

Unit	6	
Fires in	09H48	2020-03-08
Synchronization with Grid	14H20	2020-03-08
Emissions below limit	15H34	2020-03-08
Fires in to synchronization	4.533	Hours
Synchronization to < Emission limit	1.234	Hours

Unit	3	
Fires in	01H29	2020-03-12
Synchronization with Grid	04H39	2020-03-12
Emissions below limit	06H00	2020-03-12
Fires in to synchronization	3.167	Hours
Synchronization to < Emission limit	1.35	Hours

Unit	3	
Fires in	11H31	2020-03-28
Synchronization with Grid	15H00	2020-03-28
Emissions below limit	16H39	2020-03-28
Fires in to synchronization	3.483	Hours
Synchronization to < Emission limit	1.65	Hours

Emergency Generation

Table 8: Emergency Generation.

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Emergency Generation hours declared by national Control	548	548	415	548	548	395
Emergency Hours declared including hours after stand down	382	382	240	382	382	220
Days over the Limit during Emergency Generation	0	0	0	0	0	0

Complaints Register

Table 9: Complaints.

Source Code/ Name	Root Cause Analysis	Calculation of Impacts/ emissions associated with the incident	Dispersion modeling of pollutants where applicable	Measures implemented to prevent reoccurrence	Date by which measure will be implemented
None					

Table 10: Total volatile compound estimates.

Eskom

CALCULATION OF EMISSIONS OF TOTAL VOLATILE COMPOUNDS FROM FUEL OIL STORAGE TANKS*

Date:	Thursday, 07 May 2020
Station:	Matimba Power Station
Province:	Limpopo Province
Tank no.	1-4
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:	**March**	
GENERAL INFORMATION:	**Data**	**Unit**
Total number of fuel oil tanks:	4	NA
Height of tank:	13.34	m
Diameter of tank:	9.53	m
Net fuel oil throughput for the month:	***493.562***	tons/month
Molecular weight of the fuel oil:	166.00	Lb/lb-mole
METEROLOGICAL DATA FOR THE MONTH	**Data**	**Unit**
Daily average ambient temperature	23.67	°C
Daily maximum ambient temperature	30.21	°C
Daily minimum ambient temperature	17.89	°C
Daily ambient temperature range	12.31	°C
Daily total insolation factor	5.08	kWh/m²/day
Tank paint colour	***Grey/medium***	NA
Tank paint solar absorbtance	0.68	NA
FINAL OUTPUT:	**Result**	**Unit**
Breathing losses:	0.55	kg/month
Working losses:	0.01	kg/month
TOTAL LOSSES (Total TVOC Emissions for the mon	**0.56**	**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, 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.

Table 11: Average % availability of monitors for the month of March 2020.

Associated Unit/Stack	PM	SO_2	NO	CO_2
Unit 1	*100.0*	*100.0*	*100.0*	
Unit 2	*100.0*	*100.0*	*100.0*	
Unit 3	*100.0*	*96.4*	*96.4*	
Unit 4	*100.0*	*100.0*	*100.0*	
Unit 5	*100.0*	*100.0*	*100.0*	
Unit 6	*100.0*	*100.0*	*100.0*	

Ambient Air quality Monitoring

The Ambient air quality monitoring report for March 2020 is not yet available. This is due to the prohibition of traveling for non-essential services in order to stop the spread of the COVID -19 virus. The report will be provided as soon as it is available.

General

Name and reference number of the monitoring method used:

1. Particulate and gas monitoring according to standards
    a. BS EN 14181:2004 - Quality Assurance of Automated Measuring Systems
    b. ESKOM internal standard 240-56242363 Emissions Monitoring and Reporting Standard

Sampling locations:

1. Stack one
    a. Particulates:
        i. S23^0 40' 2.8" E027^0 36' 34.8" 175m from ground level and 75m from the top.
    b. Gas:
        i. S23^0 40' 2.8" E027^0 36' 34.8" 100m from ground level and 150m from the top.
    c. Stack height
        i. 250 meter consist of 3 flues
2. Stack two
    a. Particulates:
        i. S23^0 40' 14.8" E027^0 36' 47.5" 175m from ground level and 75m from the top.
    b. Gas:
        i. S23^0 40' 14.8" E027^0 36' 47.5" 100m from ground level and 150m from the top.
    c. Stack height
        i. 250 meter consist of 3 flues

Unit 1

1. Zero out of 32 precipitator fields is out of service.
1. No abnormalities on the SO_3 plant. Preventative maintenance done during the month.

Unit 2

1. Four out of 32 precipitator fields is out of service. Repairs will be done during the next opportunity outage.
2. No abnormalities on the SO_3 plant. Preventative maintenance done during the month.

Unit 3

1. Two out of 32 precipitator fields is out of service. Repairs will be done during the next opportunity outage.
2. No abnormalities on the SO3 plant. Preventative maintenance done during the month.

Unit 4

1. Five precipitator fields out of service. Repairs will be done during the next opportunity outage.
2. No abnormalities on the SO_3 plant. Preventative maintenance done during the month.

Unit 5

1. All precipitator fields in service.
2. No abnormalities on the SO_3 plant.

Unit 6

1. Three out of 32 precipitator fields is out of service. Repairs will be done during the next opportunity outage.
2. No abnormalities on the SO_3 plant. Preventative maintenance done during the month.

SO3 common plant

1. No abnormalities on the sulphur storage plant.

CEMs

1. No adjustments done on the CEMs. Calibration is done every second week.

Particulate monitors

2. No downtime or repairs done on the particulate monitors.

Air quality improvements

1. None

Social responsibility conducted

No campaigns conducted in March 2020

Sampling dates and times

1. Continuous

Attachments

None

The rest of the information demonstrating compliance with the emission license conditions is supplied in the annual emission report sent to your office.

Hoping the above will meet your satisfaction.

I hereby declare that the information in this report is correct.

Yours sincerely

Obakeng Mabo

2020/05/15

GENERAL MANAGER: MATIMBA POWER STATION