Eskom
Generation

Department of Agriculture, Rural Development, Land and Environmental Affairs
The Director: Pollution and Waste Management
Private Bag X11219
Nelspruit 1200

Date:
14th March 2018
Enquiries:

Attention:
Mr. M Mahlalela

Nkangala District Municipality
PO Box 437
Middelburg 1050

Attention:
Mr. V Mahlangu

MATLA POWER STATION
AIR QUALITY REPORT FOR FEBRUARY 2018

The figures reported in this report are preliminary, and are to be considered for information purposes only. Final annual figures are those reported within 60 days of the independent audit conducted at the end of the financial year (March).

1. PARTICULATE EMISSIONS: MONTHLY TONNAGES.

	BLR	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
Monthly Tonnage	1	42.2	78.69	59.33	70.23	34.95	61.36	65.19	71.68	108.77	90.10	46.69	Off
	2	Off	Off	Off	36.73	31.62	47.40	56.79	51.66	99.27	84.35	165.43	57.98
	3	51.3	52.70	44.69	39.75	30.24	48.85	61.23	47.64	97.34	82.94	172.35	55.05
	4	108.8	132.59	71.47	31.23	22.41	165.94	148.80	183.23	165.67	173.61	188.43	166.34
	5	29.5	39.39	27.69	25.52	17.14	30.95	45.36	147.51	74.42	49.59	82.97	68.06
	6	76.4	85.91	63.43	44.15	39.51	Off	Off	Off	5.37	22.74	53.43	62.15
	Station	308.3	389.3	266.62	247.61	175.85	354.51	377.37	501.73	550.84	503.33	709.30	409.57
GWhSO		1553.0	1767.8	1768.5	1357.6	1977.7	1557.1	1703.4	1580.5	1802.7	1998.5	1783.6	1562.9

Generation Division (Operating Unit Coal 2)
Matla Power Station SA
Delmas Road
Private Bag X 5012, Kriel, 2271 SA
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2. COAL AND LOAD FACTOR:

STATION		MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
Load Factor		81.32	79.94	77.79	77.44	73.03	75.25	78.05	80.55	83.88	85.33	82.96	88.34
Ash Content	%	26.46	26.17	28.43	26.01	26.24	28.42	28.70	24.34	24.11	29.57	27.15	23.3
Sulphur Content	%	1.00	1.00	1.00	0.79	0.94	1.00	1.00	1.00	1.0	1.0	1.0	0.95
Total Moisture	%	9.60	9.53	8.54	9.46	9.33	9.54	7.10	8.11	10.69	9.64	9.43	9.60

3. GASEOUS EMISSIONS:

CO_2 emissions: kilotons emitted per month, calculated from coal analysis and emission factors.

	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
Units 1-3												
Unit 4												
Unit 5												
Unit 6												
All Units												

SO_2 emissions: kilotons emitted per month, calculated from coal analysis and emission factors.

	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
Units 1-3	6.15	5.97	6.46	9.97	6.53	9.64	8.66	9.40	10.46	10.31	8.25	6.95
Unit 4	3.18	2.86	3.27	2.74	2.16	3.52	3.15	3.62	3.38	3.71	2.89	2.85
Unit 5	2.92	2.76	3.18	3.57	2.32	2.99	3.02	3.25	3.15	3.50	3.31	3.02
Unit 6	3.56	2.86	3.51	3.34	2.36	Off	Off	Off	0.44	2.80	3.70	2.46
All Units	15.81	14.45	16.42	19.63	13.37	16.15	14.83	16.27	17.43	20.32	18.15	15.28

NO_x emissions: kilotons emitted per month, calculated from coal analysis and emission factors.

	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
Units 1-3	1.93	1.87	2.02	3.12	2.96	3.02	2.71	2.95	3.28	3.23	2.59	2.18
Unit 4	1.00	0.98	1.02	0.86	0.98	1.10	0.99	1.13	1.06	1.16	0.91	0.89
Unit 5	0.91	0.87	1.00	1.12	1.05	0.94	0.95	1.02	0.99	1.10	1.04	0.95
Unit 6	1.12	0.90	1.10	1.05	1.07	Off	Off	Off	0.14	0.88	1.16	0.77
All Units	4.95	4.53	5.14	6.15	6.07	5.06	4.65	5.10	5.46	6.37	5.69	4.79

CO_2 emissions: kilotons emitted per month, measured with the continuous emission monitoring system. NOTE: These are unverified values for information purposes only.

	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
Units 1-3												
Unit 4												
Unit 5												
Unit 6												
All Units												

SO_2 emissions: kilotons emitted per month, measured with the continuous emission monitoring system. NOTE: These are unverified values for information purposes only.

	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
Units 1-3	10.50	8.82	7.32	8.91	6.29	7.60	7.82	7.59	12.65	9.94	7.15	5.55
Unit 4	4.36	2.20	3.64	1.49	1.27	2.89	1.54	2.91	2.51	2.43	1.61	1.81
Unit 5	3.29	3.38	4.04	2.34	2.25	4.66	1.55	2.84	3.05	2.89	2.54	2.57
Unit 6	2.90	2.47	2.99	2.81	2.05	Off	Off	Off	0.14	1.06	1.44	1.03
All Units	21.04	16.86	17.99	15.55	11.85	15.15	10.91	13.35	18.36	16.33	12.74	10.96

NO_X emissions: kilotons emitted per month, measured with the continuous emission monitoring system. NOTE: These are unverified values for information purposes only.

	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
Units 1-3	4.51	4.71	3.73	2.65	3.04	3.78	3.57	3.48	5.98	5.03	3.26	2.98
Unit 4	2.89	1.39	2.24	1.03	0.85	1.81	0.87	1.84	1.53	1.52	0.98	1.30
Unit 5	1.61	1.71	1.96	1.30	1.16	2.41	0.68	1.35	1.41	1.35	1.43	1.32
Unit 6	1.80	1.23	1.36	1.38	0.99	Off	Off	Off	0.07	0.54	0.79	0.55
All Units	10.81	9.05	9.29	6.35	6.04	8.01	5.12	6.66	8.99	8.44	6.46	6.15

CO_2 emissions (mg/Nm^3): Average concentration per month (at 273 K, 101.3 kPa and 10% O_2), measured with the continuous emission monitoring system. NOTE: These are unverified values for information purposes only

	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
Units 1-3												
Unit 4												
Unit 5												
Unit 6												

SO_2 emissions (mg/Nm^3): Average concentration per month (at 273 K, 101.3 kPa and 10% O_2), measured with the continuous emission monitoring system. NOTE: These are unverified values for information purposes only

Limit 4000	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
Units 1-3	3450	2604	2021	1671	1582	1875	2094	1831	2390	2127	1883	1587
Unit 4	3416	1687	2492	1938	1589	2112	1627	2023	1513	1447	1476	1350
Unit 5	1975	1932	2025	2003	1749	2562	1731	1966	2046	1906	1751	1827
Unit 6	1680	1590	1658	1508	1395	Off	Off	Off	1421	1385	1353	1406

SO_2 daily average emissions: AEL limit exceedances

Limit 3500	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
Units 1-3	0	0	0	0	0	0	0	0	0	0	0	0
Unit 4	27	0	0	0	0	0	0	0	0	0	0	0
Unit 5	0	0	0	0	0	0	0	0	0	0	0	0
Unit 6	0	0	0	0	0	0	0	0	0	0	0	0

NO_x emissions (mg/Nm^3): Average concentration per month (at 273 K, 101.3 kPa and 10% O_2), measured with the continuous emission monitoring system. NOTE: These are unverified values for information purposes only

Limit 1700	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
Units 1-3	1499	1392	1030	763	760	932	956	838	1128	1074	858	851
Unit 4	2260	1070	1539	1326	1042	1313	914	1269	914	894	896	970
Unit 5	974	981	975	1109	915	1291	759	938	949	892	982	936
Unit 6	1058	799	746	741	657	Off	Off	Off	682	705	751	751

NO_x daily average emissions: AEL limit exceedances

Limit 1200	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
Units 1-3	0	30	0	1	0	0	0	0	2	0	0	0
Unit 4	27	0	14	15	0	17	0	20	0	0	0	0
Unit 5	0	0	0	1	0	21	0	0	0	0	0	0
Unit 6	1	0	0	0	0	0	0	0	0	0	0	0

All units: kilotons emitted per month, calculated from coal analysis and emission factors (Verified).

	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
CO_2	1564.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SO_2	10.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NO_X	8.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

All units: Average concentration per month (at 273 K, 101.3 kPa and 10% O_2) (Verified).

	MAR 2017	APR 2017	MAY 2017	JUN 2017	JUL 2017	AUG 2017	SEP 2017	OCT 2017	NOV 2017	DEC 2017	JAN 2018	FEB 2018
CO2 mg/Nm3	203348	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SO2 mg/Nm3	1389	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NO2 mg/Nm3	906	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

4. PARTICULATE EMISSION PERFORMANCE

	MONTH AVERAGE EMISSIONS	AEL LIMIT(DAILY AVERAGE)	HIGHEST DAILY AVERAGE
UNIT	mg/Nm3	mg/Nm3	mg/Nm3
1, 2 & 3	32.8	200	183.54
4	127.7	200	602.25
5	47.7	100	155.31
6	86.6	100	259.93
Station	73.7		
YTD	57.74		

ABATEMENT APPARATUS AVAILABILITY

Unit		1	2	3	4	5	6	Station
Precipitator efficiency	%	Off	99.86	99.87	99.60	99.84	99.85	99.80
Precipitator availability	%	Off	99.98	99.43	97.47	99.70	99.20	99.14
SO_3 plant utilisation	%	Off	96.05	94.84	98.45	95.66	95.12	95.05

ATMOSPHERIC EMISSION LICENSE LIMIT EXCEEDED

	AEL LIMIT EXCEEDED (TOTAL)	AEL LIMIT EXCEEDED (LIGHT-UP/SHUT DOWN)	AEL LIMIT EXCEEDED (UPSET CONDITIONS)	AEL LIMIT EXCEEDED (MAINTENANCE)	AEL LIMIT EXCEEDED (SECTION 30 / CONTRAVENTION)
UNIT	Days	Days	Days	Days	Days
1, 2 & 3	0	0	0	0	0
4	3	1	1	1	0
5	1	0	0	1	0
6	4	2	0	1	1
Station	8	3	1	3	1
YTD	57	8	20	20	9

5. DISCUSSION

Unit 1:

Unit was taken off load on the 10th January 2018 for a major refurbishment outage.

Unit 2:

The flue gas conditioning plant performed well during the month and particulate emissions well below the AEL limit has been reported for the month.
A few minor precipitator and SO_3 flue gas conditioning plant incidents were reported for the month.

Unit 3:

The flue gas conditioning plant performed well during the month and particulate emissions well below the AEL limit has been reported for the month.
A few minor precipitator and SO_3 flue gas conditioning plant incidents were reported for the month.

Unit 4:

The unit experienced several precipitator field failures as from the 10th February 2018 due to internal faults, electrical issues and full dust hoppers. This resulted in an increase in particulate emissions.
The unit was taken off load on the 17th February 2018 at 22:36 for maintenance to repair a leaking spray water valve. The opportunity was utilised to inspect and carry out precipitator repairs. The outage duration however did not allow for all of the faults to be rectified. The unit returned to service on the 19th February 2018 at 13:16.
The unit was taken off load on the 23rd February 2018 at 21:58 for precipitator repairs. The unit returned to service on the 26th February 2018 at 02:43. The particulate emissions improved substantially following the outage.

Unit 5:

The unit experienced several precipitator field failures due to full dust hoppers as from the 15th February 2018. The situation was aggravated due to a deterioration in coal quality. The particulate emissions reduced substantially as from the 21st February 2018 due to interventions in clearing the hopper levels.
Particulate emissions well below the AEL limit has been recorded for the month.

Unit 6:

The unit was taken off load on the 9th February 2018 at 23:22 for maintenance to repair a leaking spray water valve. The unit returned to service on the 12th February 2018 at 03:20. The opportunity was utilised to carry out minor precipitator repairs.
The unit was taken off load on the 14th February 2018 at 07:34 for boiler tube leak repairs. The unit returned to service on the 17th February 2018 at 06:41.
On return to of the unit problems were experienced with the SO_3 flue gas conditioning plant in that the sulphur flow to the burner could not be established within the allowed 72 hour grace period. Maintenance attended to various components that were identified and established sulphur flow on the 20th February 2018 at 16:20. See attached section 30 report.

SO_3 common Plant:

The SO_3 common plant was taken off line on the 31st January 2018 at 08:15 for maintenance to replace several warming steam line steam traps as per planned programme. The common plant PTW was cleared at 22:00 on the 31st January 2018 and the unit flue gas conditioning plants returned to service on the 1st February 2018 at 20:50.
The SO_3 common plant tripped on the 9th February 2018 at 11:05 on surge pipe level protection. All flue gas conditioning plants were back in service at 18:15 on the same day.
The above incidents resulted in high particulate emissions for the day.
The common plant tripped twice during the month during sulphur off loading, these incidents were of a short duration and the impact on the particulate emissions was limited.

Gas Emissions:

The south stack gas emissions analyser failed on the 18th February 2018 due to water in the control air system. The average of the first half of the month was used to supplement the missing data.
The maintenance contract with the OEM has been concluded and regular maintenance of the CEM's will commence as from March 2018

General:

The coal quality supplied to boilers 5 and 6 deteriorated during the month, impacting negatively on the particulate emissions.

6. LIGHT UP:

Unit:	4	
Fires in:	05:00	19 February 2018
Synchronisation:	13:16	19 February 2018
Emissions below Limit:	10:59	21 February 2018
Fires in to synchronisation:	8:16	Hours
Synchronisation to < Limit:	45:43	Hours

Unit:	4	
Fires in:	22:54	25 February 2018
Synchronisation:	02:43	26 February 2018
Emissions below Limit:	06:50	26 February 2018
Fires in to synchronisation:	3:49	Hours
Synchronisation to < Limit:	4:07	Hours

Unit:	6	
Fires in:	22:00	11 February 2018
Synchronisation:	03:20	12 February 2018
Emissions below Limit:	17:09	12 February 2018
Fires in to synchronisation:	5:20	Hours
Synchronisation to < Limit:	13:49	Hours

Unit:	6	
Fires in:	23:40	16 February 2018
Synchronisation:	06:41	17 February 2018
Emissions below Limit:	00:15	21 February 2018
Fires in to synchronisation:	7:01	Hours
Synchronisation to < Limit:	89:34	Hours

7. GRAPHS:

See attached graphs

8. COMPLAINTS

Name of complainant	Date	Description of complaint	Action taken
No Complaints			

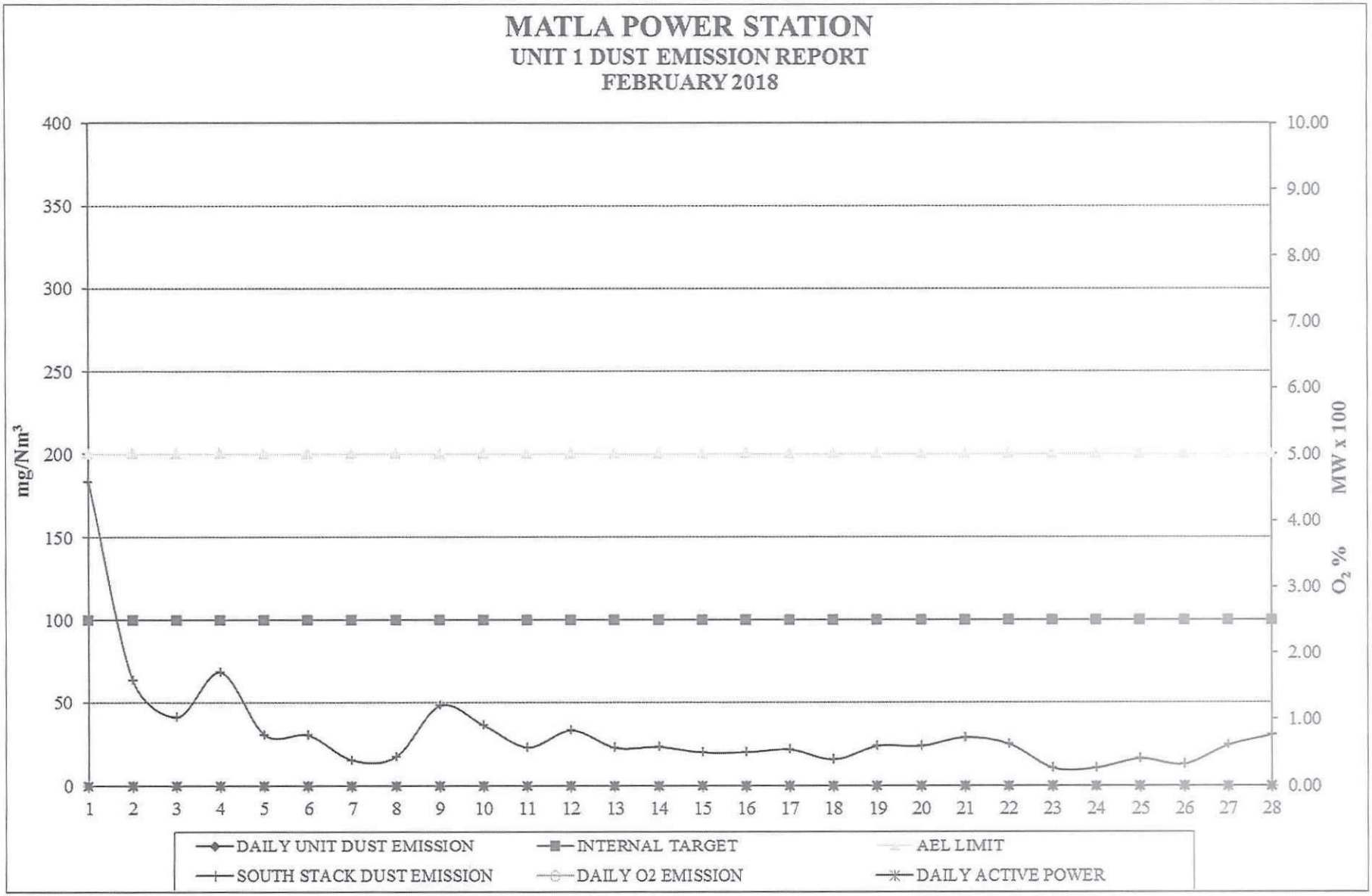
9. NOTIFICATION OF CONTRAVENTION OF EMISSION LICENCE CONDITIONS

Date	20 February 2018
Power Station Unit(s)	Matla Power Station – Unit 6
Date of incident *Time of incident*	Start date and time: 20 February 2018 at 06:41 End date: 21 February 2018 at 00:15
Nature of incident	Extended start-up [ ] On-line maintenance [X] Extended shut-down [ ]
Emission limit exceedance	Particulate Matter 100mg/Nm^3
Details of incident	The unit returned to service from boiler tube leak repairs and synchronised on load on the 17th February 2018 at 06:41. The start-up was deemed to be a cold start. The SO3 flue gas conditioning run up was initiated but no sulphur flow could be established. The SO3 plant was taken out of service several times and isolated for maintenance to locate the reason for the sulphur flow failure. The problem was eventually traced to a blocked sulphur injection lance. Sulphur flow was established and the particulate emissions reduced to below the AEL limit at 00:15 on the 21st February 2018.
Risks posed by the incident to public health, safety and property	The main area affected by the high emissions is within a 15km radius of the power station. The area is rural and mainly farming. The impact on the livestock and crops is negligible
Toxicity of substance or by-products released by the incident	The dust is non-toxic
Mitigation to avoid or minimize the incident effects on public health and the environment	The unit load has been reduced during the event in order to limit the particulate emissions
Compiler and contact details	Name: Tel no: Email:
Responsible manager and contact details	Name: Tel no: Email:

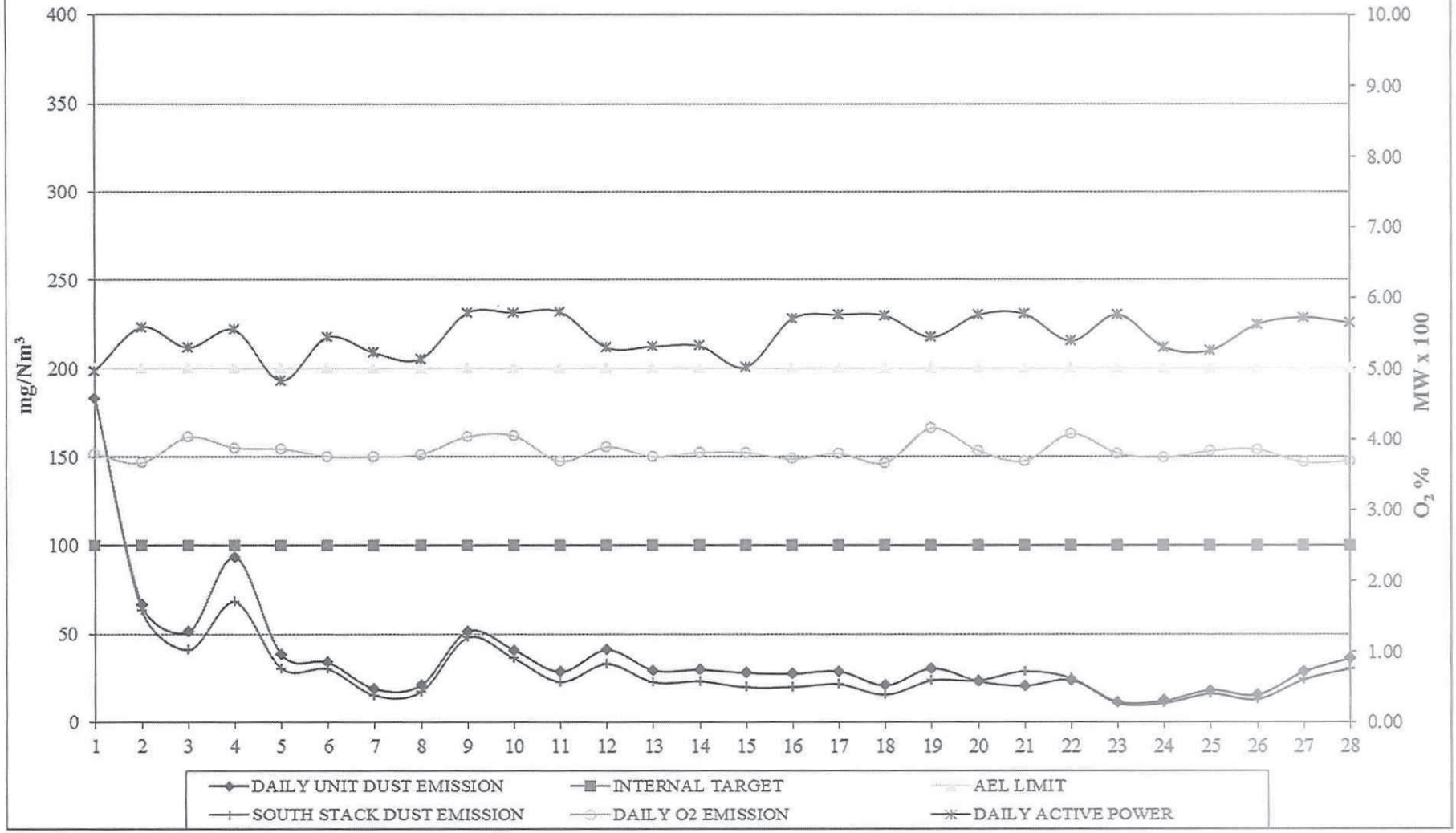
BOILER PLANT ENGINEERING

Copies to: Licensing Authority
Power Station Manager
Environmental Practitioner
Engineering Manager
Boiler Plant Engineering Manager
Maintenance Manager
Unit Electrical Maintenance Manager
Operating Manager
Production Manager
Outside Plant Maintenance Manager
Coal Manager
Megawatt Park, Corporate Consultant Air Pollution
Plant Performance Units 1 to 6

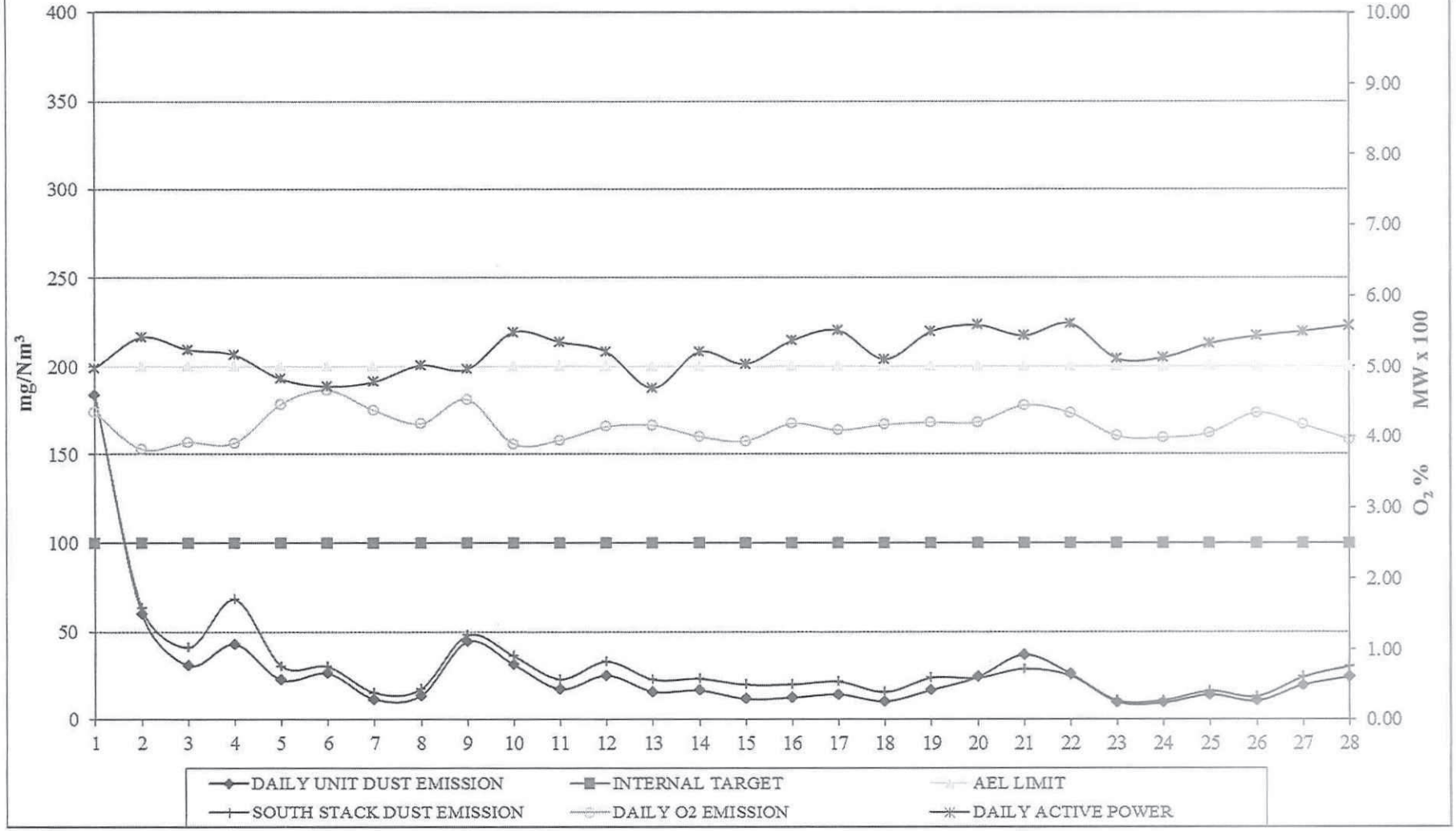
MATLA POWER STATION
UNIT 1 DUST EMISSION REPORT
FEBRUARY 2018

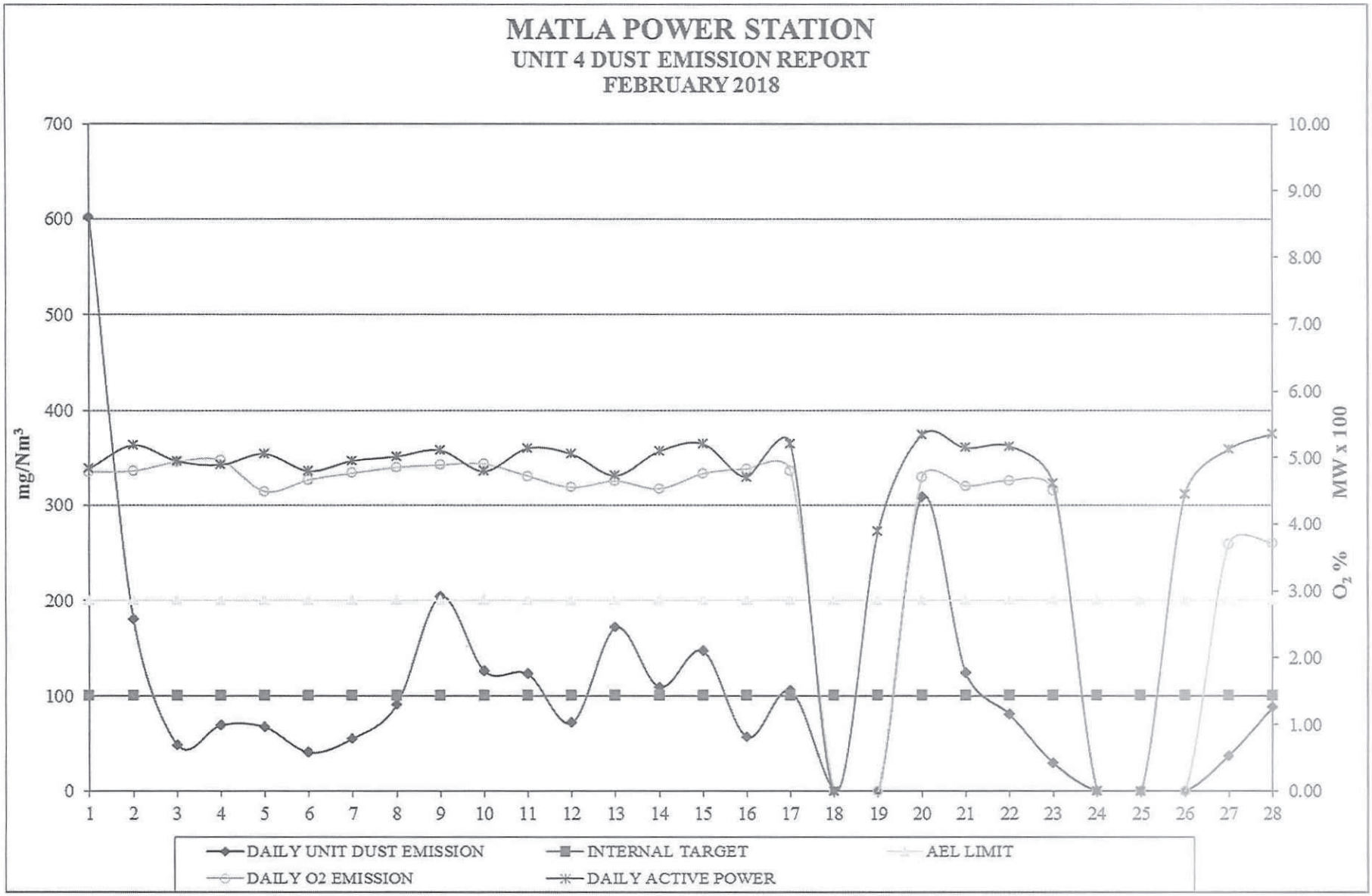


MATLA POWER STATION
UNIT 2 DUST EMISSION REPORT
FEBRUARY 2018



MATLA POWER STATION
UNIT 3 DUST EMISSION REPORT
FEBRUARY 2018

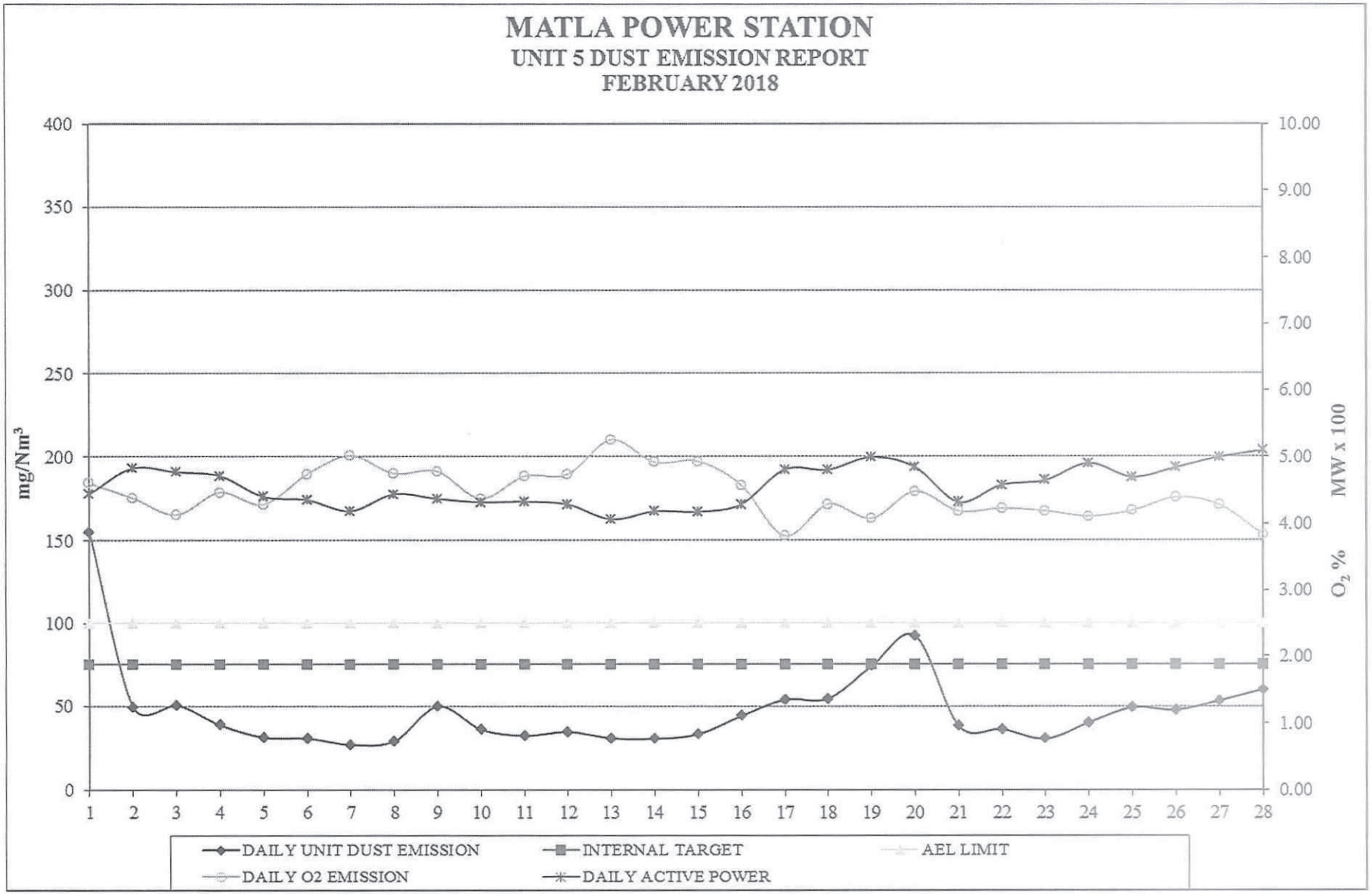


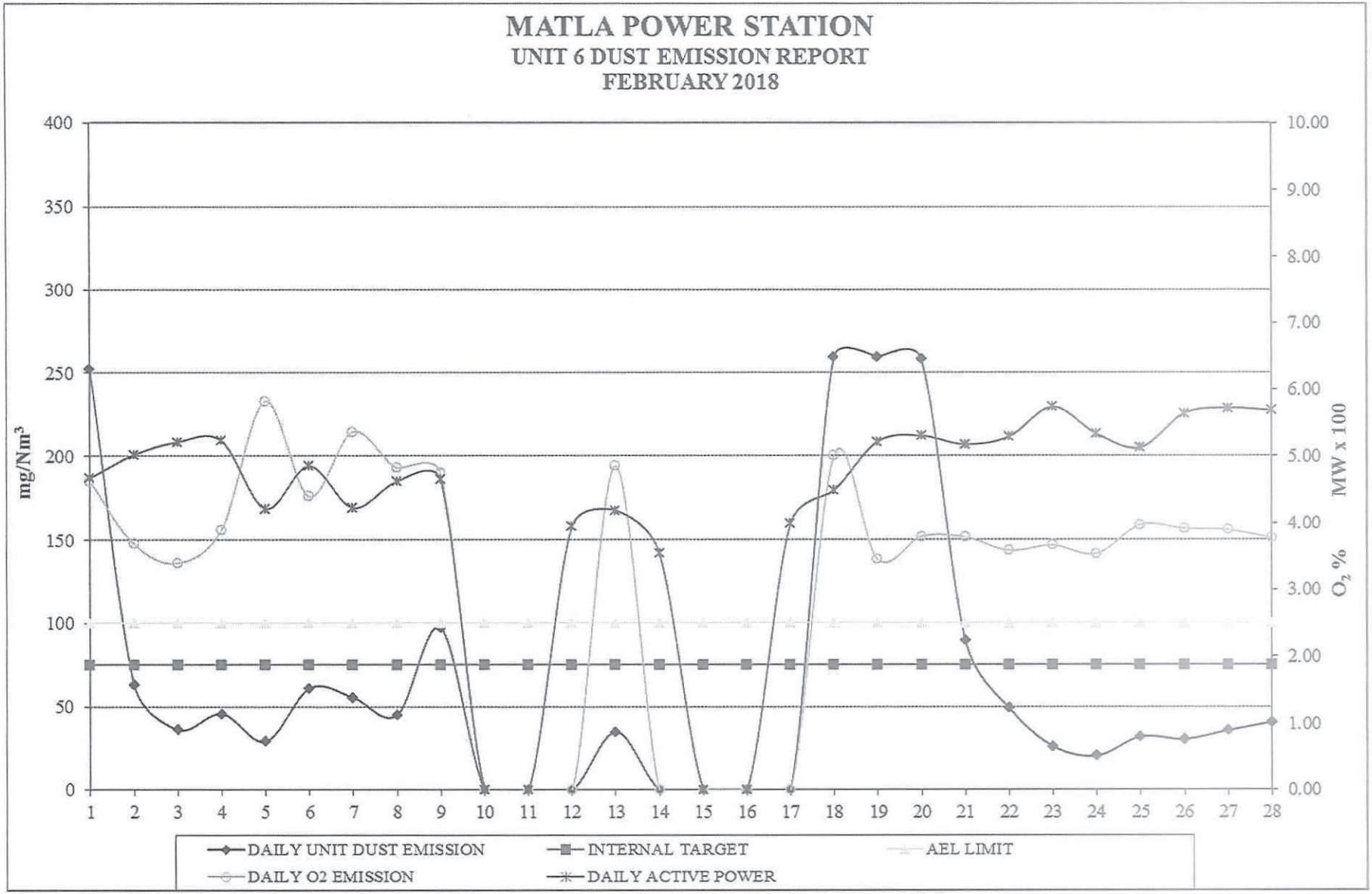

MATLA POWER STATION
UNIT 4 DUST EMISSION REPORT
FEBRUARY 2018
mg/Nm³
O₂ %
MW x 100
700
600
500
400
300
200
100
0
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
DAILY UNIT DUST EMISSION
INTERNAL TARGET
AEL LIMIT
DAILY O2 EMISSION
DAILY ACTIVE POWER

MATLA POWER STATION

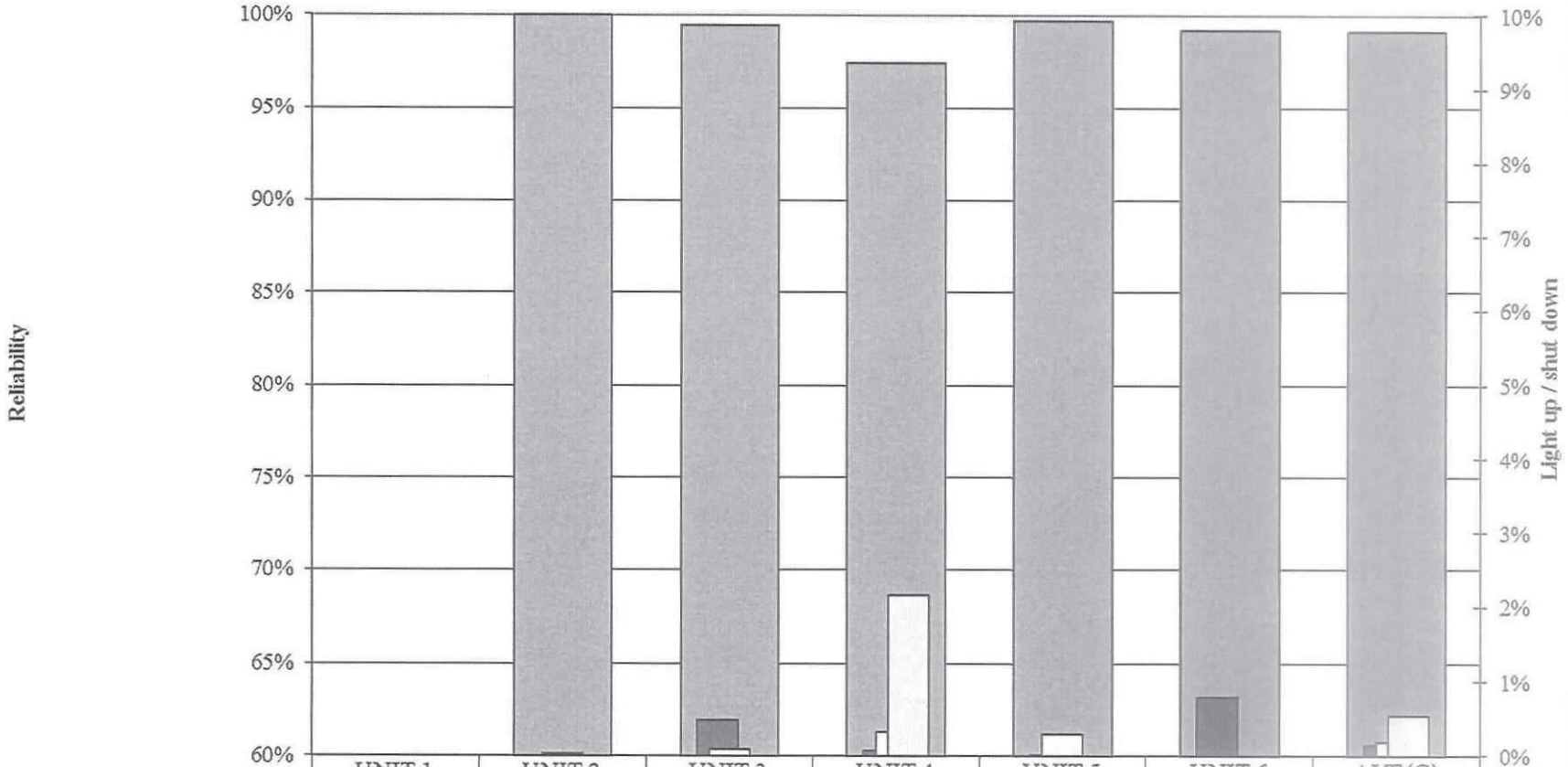
UNIT 5 DUST EMISSION REPORT

FEBRUARY 2018




MATLA POWER STATION
UNIT 6 DUST EMISSION REPORT
FEBRUARY 2018
mg/Nm³
O₂ %
MW x 100
400
350
300
250
200
150
100
50
0
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
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
DAILY UNIT DUST EMISSION
INTERNAL TARGET
AEL LIMIT
DAILY O2 EMISSION
DAILY ACTIVE POWER

MATLA POWER STATION
PRECIPITATOR RELIABILITY
FEBRUARY 2018

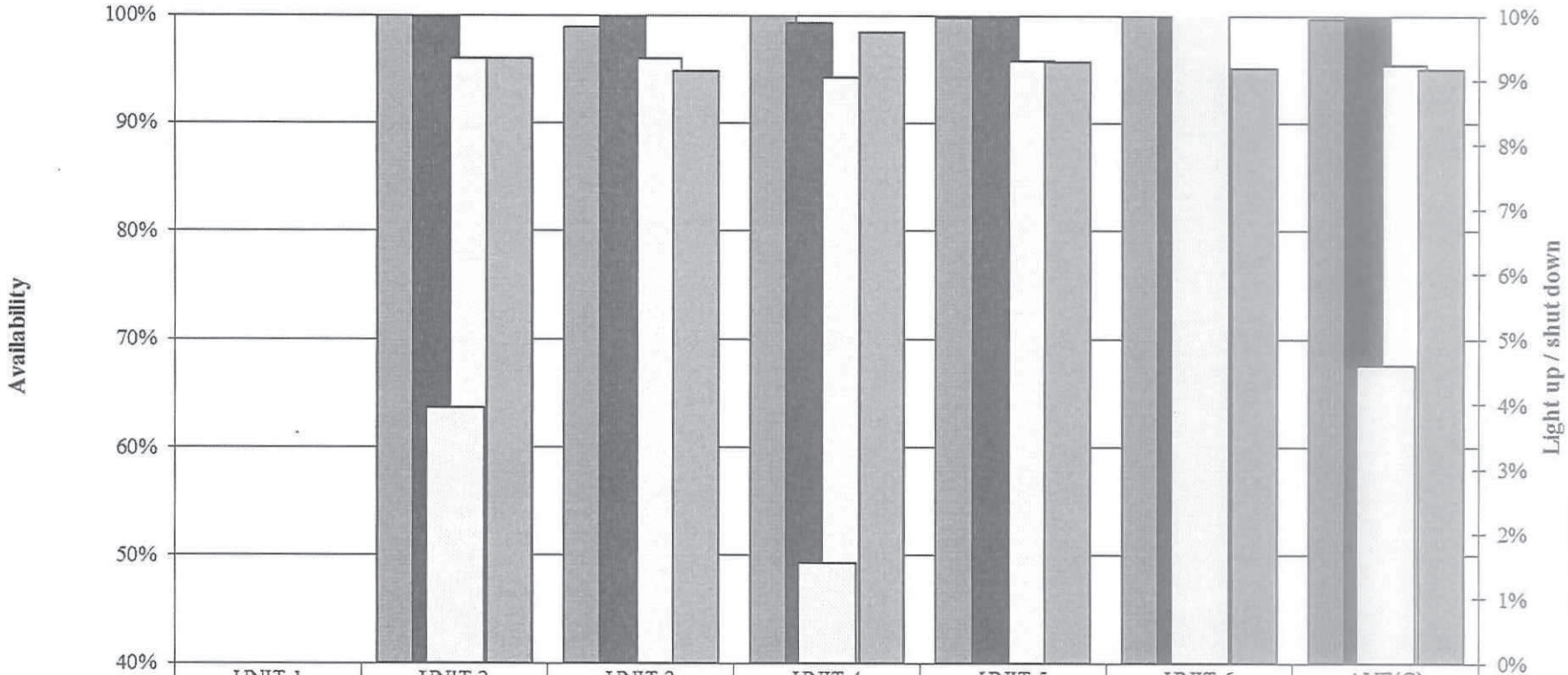


	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	UNIT 6	AVE(G)
Reliability		99.98%	99.43%	97.47%	99.70%	99.20%	99.14%
Loss due to hopper levels		0.00%	0.48%	0.07%	0.00%	0.80%	0.14%
Loss due to short term incidents		0.02%	0.09%	0.32%	0.29%	0.00%	0.18%
Loss due to Internal faults		0.00%	0.00%	2.15%	0.00%	0.00%	0.54%

MATLA POWER STATION

SO_3 PLANT AVAILABILITY

FEBRUARY 2018

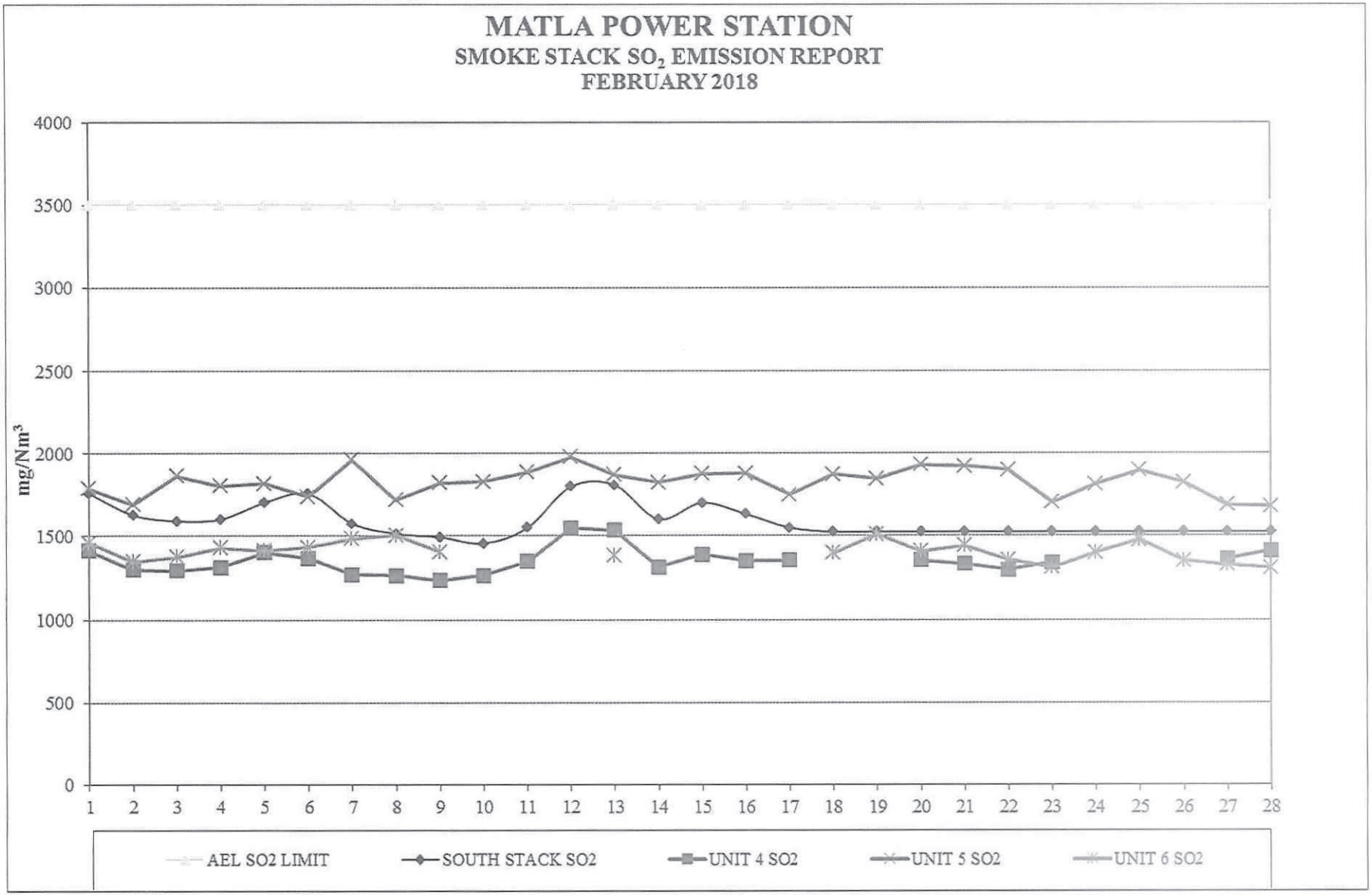


	UNIT 1	UNIT 2	UNIT 3	UNIT 4	UNIT 5	UNIT 6	AVE(G)
Unit Plant		100.00%	98.91%	100.00%	99.82%	100.00%	99.75%
Desuperheater		100.00%	99.98%	99.31%	100.00%	100.00%	99.86%
Common plant		96.05%	95.96%	94.24%	95.85%	95.12%	95.44%
SO3 Injection		96.05%	94.84%	98.45%	95.66%	95.12%	95.05%
Light-up/		3.94%	0.00%	1.55%	0.00%	17.47%	4.59%

MATLA POWER STATION

SMOKE STACK SO_2 EMISSION REPORT

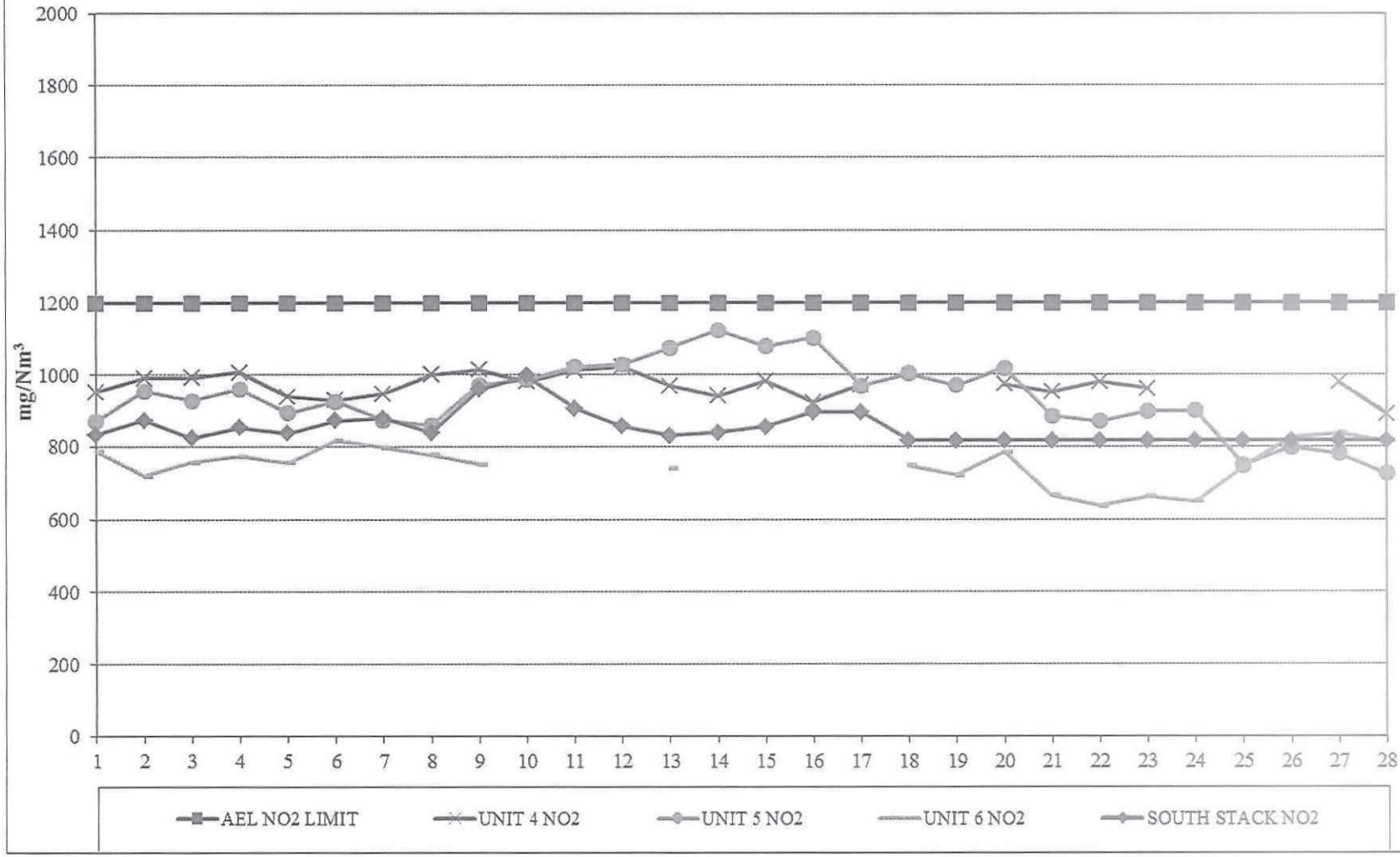
FEBRUARY 2018



MATLA POWER STATION

SMOKE STACK NO EMISSION REPORT

FEBRUARY 2018



NB! Please ensure that all the information provided in brackets are removed before submitting this report to the all the Authorities.

environmental affairs Department: Environmental Affairs REPUBLIC OF SOUTH AFRICA ENVIRONMENTAL MANAGEMENT INSPECTORATE	Document Type:	Emergency Incident Report	
	Title for the incident:	ESKOM MATLA POWER STATION UNIT 6 EMISSIONS AEL EXCEEDING AEL	
	Date of the incident :	20 February 2018	
Reference:	Reference Number: I	Initial Submission Date:	21 February 2018
Revision No.:	Rev 00	Compiled by:	Mbali Mhlana

This form provides a template for the emergency incident report required in terms of section 30(5) of the National Environmental Management Act (Act No. 107 of 1998) (hereinafter "NEMA") in which the responsible person or, where the incident occurred in the course of that person's employment, his or her employer, must, within 14 days of the incident, report to the Director General, provincial head of department and municipality such information as is available to enable an initial evaluation of the incident, including: (a) the nature of the incident; (b) the substances involved and an estimation of the quantity released and their possible acute effect on persons and the environment and data needed to assess these effects; (c) initial measures taken to minimise impacts; (d) causes of the incident, whether direct or indirect, including equipment, technology, system, or management failure; and (e) measures taken and to be taken to avoid a recurrence of such incident.

In terms of section 30(1)(a) of NEMA, an "incident" means an unexpected sudden occurrence, including a major emission, fire or explosion leading to serious danger to the public or potentially serious pollution of or detriment to the environment, whether immediate or delayed.

In line with section 24 of the Constitution of the Republic of South Africa (Act No. 108 of 1996), "serious" is taken to be a measure of the impact of an incident where such an incident has had, could have had, is having, or will have a negative impact on human health or well-being.

1. RESPONSIBLE PERSON

In terms of section 30(1)(b) of NEMA, the "responsible person" includes any person who: (i) is responsible for the incident; (ii) owns any hazardous substance involved in the incident; or (iii) was in control of any hazardous substance involved in the incident at the time of the incident

1.1	Name:	1.2	Designation: Power Station General Manager
1.3	Postal Address: Private Bag X 5012 Kriel , 2271	1.4	Physical Address: Matla Power Station Delmas Road, Kriel
1.5	Telephone (B/H): 017 612 6440	1.6	Telephone (A/H): 083 235 4433 or 082 600 7689
1.7	Fax:		
1.8	E-mail:		
1.9	Nature of Business: Electricity Generation		

2. EMERGENCY INCIDENT SUMMARY INFORMATION

Mark the appropriate boxes

2.1 Fire:		2.2 Spill:		2.3 Explosion:		2.4 Gaseous Emission:	
2.5 Injuries		2.6 Reportable injuries:		2.7 Hospitalisation:		2.8 Fatalities:	
2.9 Open water impacts:		2.10 Ground water impacts:		2.11 Atmospheric impacts:	X	2.12 Soil impacts:	
2.13 Own emergency response involved		2.14 Fire prevention services involved		2.15 Government hazardous materials emergency response involved		2.16 More than 1 governmental emergency response service involved	
2.17 Emission of non-toxic substances at low concentrations		2.18 Emission of non-toxic substances at high concentrations		2.19 Emission of toxic substances at low concentrations		2.20 Emission of toxic substances at high concentrations	
2.21 No evacuation required	x	2.22 Immediate area evacuated		2.23 Immediate surrounds evacuated		2.24 Evacuation of the general public	
2.25 Others							

3. INITIAL EMERGENCY INCIDENT REPORT

In terms of section 30(3) of NEMA, the responsible person or, where the incident occurred in the course of that person's employment, his or her employer must forthwith after knowledge of the incident, report through the most effective means reasonably available: (a) the nature of the incident; (b) any risks posed by the incident to public health, safety and property; (c) the toxicity of substances or byproducts released by the incident; and (d) any steps that should be taken in order to avoid or minimise the effects of the incident on public health and the environment to: (i) the Director General; (ii) the South African Police Services and the relevant fire prevention service; (iii) the relevant provincial head of department or municipality; and (iv) all persons whose health may be affected by the incident.

3.1 Description	3.2 Date:	3.3 Time:	3.4 Medium:	3.5. Name and contact details:
Relevant fire prevention service: (in case of fire)	None			
LOCAL :	Wed 21/02/2018	04:03 PM	Email	Vusi Mahlangu Nkangala District Municipality Deputy Manager Social Services Municipal Health & Environmental Management Services Tel: (013) 249-2164 Fax Number: 086 575 5798 Email: mahlangumv@nkangaladm.gov.za Website: www.nkangaladm.gov.za
PROVINCIAL: (Those deal with Environmental Issues)	Wed 21/02/2018	04:03 PM	E-mail ,	Oarabile Magapa Environmental Control Officer:Grade B - NEMA Section 30 and Multilateral Environmental Agreements Department Of Environmental Affairs

2. EMERGENCY INCIDENT SUMMARY INFORMATION

Mark the appropriate boxes

				Private Bag X 447, PRETORIA, 0001 Tel : 012 310 3095 Cell 0723897610 Fax : 012 320 5744 Alternative fax: 086 5177 853 E-mail : omagapa@environment.gov.za Environmental Crimes and Incidents Hotline: 0800 205 005
	Wed 21/02/2018	04:03 PM	Email	Mr. M Mahlalela Department of Economic Development Environment and Tourism Private Bag X11219 Nelspruit 1200
MINISTER: WATER AND ENVIRONMENTAL AFFAIRS (National)	This being the first submission to National			Dr. T MdluliDepartment of Environmental Affairs The Director: Directorate: Air Quality Management Private Bag X447 PRETORIA 0001 Tel: (012) 310 3436 Fax: (012) 320 0488

4. INCIDENT DETAILS

In terms of NEMA section 30(5)(a) and (d), the responsible person must report on the nature of the incident as well as the causes of the incident, whether direct or indirect, including equipment, technology, system, or management failure

4.1 Location of the incident	Eskom Matla Power Station, Delmas Road, Kriel, Mpumalanga, Latitude: 26,16' 57,25" S Longitude 29,08'40, 60 E		
4.2 Incident start date and time:	20 - 21 February 2018 at 23:00	4.3 Incident duration:	2 days
4.4 Duration of exposure:	2 days		

4.5. Incident description:

Background of the incident:

On Monday 17th of February 2018, Unit 6 was returning from a cold start following a maintenance outage. On the 20th of February 2018, the daily averages emission reading was 282.8 mg/Nm3 this average was sustained until midnight following

4. INCIDENT DETAILS

In terms of NEMA section 30(5)(a) and (d), the responsible person must report on the nature of the incident as well as the causes of the incident, whether direct or indirect, including equipment, technology, system, or management failure

a block line on the SO3 plant that could not be resolved within the 72hours upon synchronisation. This resulted in the particulate emissions exceeding the Atmospheric Emission Licence (AEL) Number:17/4/AEL?MP312/11/14 limit of 100mg/Nm3.

What time was the maintenance plan breakdown started and what was the cause /s of the maintenance/startup period being used (48 or 72 hours as per the licence requirements

The sulphur flow to Unit 6 could not be established, it is suspected that the SO3 plant pipe line to unit could blocked.

What action has been taken so far

Sulphur flow has been restored following a number of attempts to clear the blockages after all defects were executed during troubleshooting on the system. this was the first discovery from the past 10years on SO3. Proper investigation is currently on going to review plant deficiency. The investigation report will be shared with the department once its completed and closed

Date and time when emission is expected to be below the limit

Operation:

Electricity Generation

Incident type:

High emission

Root Cause of the incident:

Loss of sulphur flow to the flue gas conditioning plant.

Contributory Factors to the incident:

Investigation report is underway to determine the cause of sulphur flow losses. The investigation report will be shared with the department once its completed and closed.

4.6. Wind speed and direction	All direction	**4.7. Ambient air temperature**	25°C
4.8. Weather conditions	Sunny	**4.9. Other relevant meteorological conditions**	Moderate Winds

5. POLLUTANTS RELEASED DURING INCIDENT

In terms of NEMA section 30(5)(b), the responsible person must report on the substances involved and an estimation of the quantity.

List all the pollutants directly released during the incident (i.e. exclude those pollutants that resulted from mitigation measures, e.g. flaring, treatment, dilution etc.)

5.1. Substance or mixture of substances	5.2. Reference Number	5.3. Phase eg solid, liquid or gas	5.4. Total Quantity emitted/released	5.5. Units eg Kg, L etc	5.6. Nature of emission/release
Particulate matter (ash)	PM	Solid		Tons	Emitted from tall stack

6. SECONDARY POLLUTANTS RESULTING FROM INCIDENT

In terms of NEMA section 30(5)(b), the responsible person must report on the substances involved and an estimation of the quantity released.

List all the pollutants that resulted from mitigation measures, e.g. flaring, treatment, dilution etc.

6.1. Substance or mixture of substances	6.2. Reference Number	6.3. Phase	6.4. Total Quantity emitted/released	6.5. Unit	6.6. Nature of emission
None					

7. POLLUTANT CONCENTRATIONS

In terms of NEMA section 30(5)(b), the responsible person must report on the substances involved and an estimation of the quantity released.

List all the pollutants detailed in previous section:

7.1. Substance or mixture of substances	7.2. Reference Number	7.3. Estimated pollutant concentration on different radius			
		7.3.1. 10m	7.3.2. 100m	7.3.3. 500m	7.3.4. >2000m
Particulate matter (ash)	PM				

[1] Concentration at the plume

[2] Concentration that was falling on the ground

8. INCIDENT IMPACT

In terms of NEMA section 30(5)(b), the responsible person must report on possible acute effects on persons and the environment and the responsible must provide data needed to assess these effects;

8.1. Minor injuries	None
8.2. Reportable injuries	None
8.3. Hospitalisation	None
8.4. Fatalities	None
8.5. Biological impacts	None
8.6. Impact area	The main area affected by the high emissions from Matla Power Station is within a 15km radius of the power station. The area does extend to Kriel town and Rietspruit, but the impact in these areas is lower. The towns of Kriel and Rietspruit are more densely populated than the village and farming communities in the immediate vicinity of the power station. The emissions have a negligible effect on livestock and crops on the nearby farms. Highveld priority area.
8.7. Data	Atmospheric dispersion modeling report and ambient air quality monitoring reports

9. EXISTING PREVENTION PROCEDURES AND/OR SYSTEMS

9.1. Foresight	
9.2. Procedures and/or systems	Procedure OMOP 4422, which included the AEL requirements section 7.3. All procedures and checklist in place and signed off.
9.3. Procedure and/or systems failures	Investigation underway to identify system failures.
9.4. Technical measures	Emissions levels are continuously monitored.
9.5. Technical failure	Loss of sulphur flow to the flue gas conditioning plant

10. INITIAL INCIDENT MANAGEMENT

In terms of NEMA section 30(5)(c), the responsible person must report on initial measures taken to minimise impacts.

10.1. Evacuation	Not necessary
10.2. Technical measures	
10.3. Mitigation measures	Monitoring using diagnostic check sheet and load losses taken.
10.4. Emergency Services	Not necessary

11. CLEANUP AND/OR DECONTAMINATION

In terms of NEMA section 30(5)(c), the responsible person must report on initial measures taken to minimise impacts.

11.1. Cleanup and/or decontamination	*It is not possible to clean up the ash emissions once they have been emitted from the stack, due to dispersion in the atmosphere.*

11.2. Permissions and Instructions

Provide details of any permission and/or instructions received from any organ of state during initial incident management, cleanup and/or decontamination

11.3. Type	11.4. Statuate	11.5. Issued By	11.6. Name and contact details
None			

12. MITIGATION MEASURES

In terms of NEMA section 30(5)(e), the responsible person must report on measures taken and to be taken to avoid a recurrence of such an incident.

12.1. Measure	12.2. Objective	12.3. Cost	12.4. Timing
Load losses were taken	To remedy the high dust emissions		From 20 February 2018

13. AUTHORISATIONS

Provide details on all authorisations (including permits, licenses, certificates, etc.) in respect of the activity to which this incident relates.

13.1. Type	13.2. Statute	13.3. Issued By	13.4. Issue & Expiry Date
Atmospheric Emission Licence	Section 22 of the National Environmental Management: Air Quality Act	Mpumalanga Province	Issue 30 June 2017, Review date 30 June 2022

14. HISTORY

Provide details of all similar incidents involving the responsible person in the past (i.e. from 1998). Similar incidents include those that: (i) involved similar circumstances; (ii) involved similar emissions; (iii) involved similar personnel; and/or (iv) involved similar impacts.

14.1. Incident title	14.2. Report reference	14.3. Date of incident	14.4. Summary of event
1. Eskom Matla Power Station Unit 4 2. Eskom Matla Power Station Unit 5	• I4482112017&14/7/6/2//4/2/1181 Unit 5 • I4482112017&14/7/6/2//4/2/1182 Unit 4	• 27/10/2017 • 27/10/2017	

Signed by, or as a mandated signatory for, the responsible person:		Date:	09/03/2018

APPENDIX 1
List of affected people as results of the incident

NAME	ADDRESS	PHONE	FAULT	REMARKS

APPENDIX 2

Layout map of the area likely to be affected or affected as a result of the incident

Disclaimer

Any other information not covered in the reporting template must be included.

CAUTION

In terms of section 30 (11) of NEMA as amended, it is an offence not to report an incident and liable on convection to a fine not exceeding R 1 million or imprisonment for a period not exceeding 1 year, or to both such a fine and such imprisonment.