

ROADS AND TRAFFIC AUTHORITY NSW

M5 EAST FREEWAY

AIR QUALITY READINGS ABOVE GOAL

15, 16 and 17 April 2009

ASSESSMENT REPORT



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Introduction

Air quality readings above the goal were recorded on 15, 16 and 17 April 2009 at the M5 East ambient air quality monitoring stations. These readings related to particulate matter PM₁₀ greater than the ambient 24-hr goal of 50 µg/m³. The readings over the goal were:

1. 15 April 2009: Particulate matter - PM₁₀ at all 4 ambient monitors
2. 16 April 2009 Particulate matter – PM₁₀ at 1 Ambient monitor
3. 17 April 2009 Particular matter _ PM₁₀ at 2 ambient monitors

Incident: 15th to 17th April 2009– Particulate Matter

Readings above the 24-hour PM₁₀ air quality goal were recorded at the M5 East Freeway air quality monitoring stations, on 15, 16 and 17 April 2009. Details of the validated and unvalidated results for the period are shown in Table 1 below. (Daily-unvalidated data as portrayed graphically on the RTA Web site is at Appendix 1).

TABLE 1

Particulate (PM ₁₀) Concentrations Measured at M5 East Air Quality Monitoring Sites (24-hour Average - µg/m ³)					
Date		Station			
		T1	U1	X1	CBMS
15/4	<u>Unvalidated</u>	58	62	66	68
	<u>Validated</u>	59.5	63.4	67.4	70
16/4	<u>Unvalidated</u>	178	183	191	194
	<u>Validated</u>	176.4	181.8	189.9	191.9
17/4	<u>Unvalidated</u>	47	47	52	53
	<u>Validated</u>	46.9	46.6	51.3	52.7

Readings shown in red were validated above the PM₁₀ air quality standard of 50 µg/m³.

In accordance with the requirements of the M5 East Tunnel DUAP Condition 73/4 Protocol, the air quality readings above the goal at the M5 East monitoring stations were found to have been caused by an extraordinary event being a dust event in NSW. Widespread DECC readings above the ambient air quality goal for fine particulates (See Appendix 5) were recorded at ground level across Sydney over this period (Refer Appendix 3). Media reports confirmed the event (See Appendix 6).

The M5 East Freeway is therefore considered not to have been the cause of the readings being above the goal.

Assessment vs 73/4 protocol

The following actions have been carried out in accordance with the M5 East Freeway DUAP Condition 73/4 Protocol:

1. Planning NSW and DECC were notified by e-mail within one day of the monitoring indicating that a readings above the goal of the 24 hour PM₁₀ air quality goal had occurred;
2. Quality validation of the data was undertaken confirming that the TEOM 24hr average readings were above the 50 µg/m³ ambient air quality goal for fine particulates (PM₁₀) at ground level;
3. Information was obtained from the DECC air quality monitoring sites in the Sydney Basin via DECC's website to determine whether the readings above the goal were caused by a Sydney-wide event. DECC monitored results and published data confirmed that a dust event had an adverse impact on regional air quality (refer to Appendix 4 and 5). Media reports also confirmed the dust event (See Appendix 6)
4. On obtaining confirmation that an extraordinary event had occurred, an assessment report was prepared and submitted to Planning NSW and EPA.

Date	Hour	CO	NO ₂	PM ₁₀	Wind	Wind	PM ₁₀
		ppm	µg/m ³	µg/m ³	Direction	Velocity km/h	µg/m ³ (daily avg)
16/04/2009	12am	0.32		430.4	SSW	8	178
16/04/2009	1am	0.29	14.4	324.6	SSW	7	178
16/04/2009	2am	0.22	8.2	238	SW	8	178
16/04/2009	3am	0.15	10.3	173.6	SW	7	178
16/04/2009	4am	0.1	8.2	151.8	SW	5	178
16/04/2009	5am	0.07	16.4	143.1	W	1	178
16/04/2009	6am	0.07	41.1	129.2	W	2	178
16/04/2009	7am	0.11	51.3	171.5	WNW	2	178
16/04/2009	8am	0.14	41.1	175.1	W	6	178
16/04/2009	9am	0.16	34.9	193.6	W	6	178
16/04/2009	10am	0.19	32.9	224.5	WNW	5	178
16/04/2009	11am	0.22	30.8	207.6	NW	3	178
16/04/2009	12pm	0.25	30.8	189.7	NNW	3	178
16/04/2009	1pm	0.27	24.6	177.6	NE	2	178
16/04/2009	2pm	0.27	22.6	136	NNE	2	178
16/04/2009	3pm	0.24	32.9	165.6	ENE	6	178
16/04/2009	4pm	0.24	41.1	165.5	ENE	7	178
16/04/2009	5pm	0.26	55.5	167.3	NE	6	178
16/04/2009	6pm	0.29	69.8	152.2	NNE	2	178
16/04/2009	7pm	0.34	78.1	135.8	NW	1	178
16/04/2009	8pm	0.39	67.8	118.3	WSW	1	178
16/04/2009	9pm	0.45	61.6	106.1	W	2	178
16/04/2009	10pm	0.53	53.4	98.3	W	1	178
16/04/2009	12am	0.32		430.4	SSW	8	178
16/04/2009	1am	0.29	14.4	324.6	SSW	7	178

Date	Hour	CO	NO ₂	PM ₁₀	Wind	Wind	PM ₁₀
		ppm	µg/m ³	µg/m ³	Direction	Velocity km/h	µg/m ³ (daily avg)
17/04/2009	12am	0.68		94.1	W	2	47
17/04/2009	1am	0.82	47.2	83.4	W	3	47
17/04/2009	2am	0.91	39	73.1	W	2	47
17/04/2009	3am	0.95	37	70.7	W	3	47
17/04/2009	4am	0.96	45.2	66.6	WNW	4	47
17/04/2009	5am	0.96	34.9	54.3	W	3	47
17/04/2009	6am	0.96	39	56.3	W	4	47
17/04/2009	7am	0.96	51.3	71.6	W	6	47
17/04/2009	8am	0.91	49.3	23.8	W	6	47
17/04/2009	9am	0.77	24.6	22.8	SW	8	47
17/04/2009	10am	0.65	14.4	47.6	SSW	6	47
17/04/2009	11am	0.56	14.4	50.7	S	7	47
17/04/2009	12pm	0.49	14.4	34	S	8	47
17/04/2009	1pm	0.43	12.3	44.4	S	8	47
17/04/2009	2pm	0.36	14.4	48.1	S	8	47
17/04/2009	3pm	0.29	18.5	47.7	S	8	47
17/04/2009	4pm	0.24	20.5	42	S	7	47
17/04/2009	5pm	0.26	24.6	37.4	SSW	7	47
17/04/2009	6pm	0.27	26.7	30.7	SSW	6	47
17/04/2009	7pm	0.28	26.7	28.8	S	5	47
17/04/2009	8pm	0.28	22.6	23.6	S	5	47
17/04/2009	9pm	0.28	32.9	29.1	SSE	5	47
17/04/2009	10pm	0.28	32.9	24.9	SSE	4	47
17/04/2009	11pm	0.31	53.4	26.4	W	5	47
17/04/2009	12am	0.68		94.1	W	2	47

Station U1 - Hourly average readings

Date	Hour	CO	NO ₂	PM ₁₀	Wind	Wind	PM ₁₀
		ppm	µg/m ³	µg/m ³	Direction	Velocity km/h	µg/m ³ (daily avg)
15/04/2009	12am	0.33		11.4	NNW	7	62
15/04/2009	1am	0.35	49.3	11.4	WNW	7	62
15/04/2009	2am	0.35	47.2	12.2	WNW	8	62
15/04/2009	3am	0.36	39	12.2	WNW	11	62
15/04/2009	4am	0.36	37	12.3	WNW	8	62
15/04/2009	5am	0.35	34.9	9.9	NW	5	62
15/04/2009	6am	0.35	30.8	12.9	NW	9	62
15/04/2009	7am	0.37	28.8	18.8	WNW	10	62
15/04/2009	8am	0.39	32.9	14.6	WNW	11	62
15/04/2009	9am	0.38	37	12.4	WNW	12	62
15/04/2009	10am	0.36	26.7	14.3	WNW	12	62
15/04/2009	11am	0.34	20.5	13.4	NW	10	62
15/04/2009	12pm	0.32	12.3	12	NW	12	62
15/04/2009	1pm	0.28	10.3	13.4	WNW	19	62
15/04/2009	2pm	0.23	8.2	14.4	WNW	21	62
15/04/2009	3pm	0.16	10.3	14.2	WNW	19	62
15/04/2009	4pm	0.09	14.4	13	WNW	17	62
15/04/2009	5pm	0.05	24.6	14.7	WNW	15	62
15/04/2009	6pm	0.05	47.2	21.2	W	12	62
15/04/2009	7pm	0.08	57.5	33.3	W	12	62
15/04/2009	8pm	0.1	41.1	72.9	W	19	62
15/04/2009	9pm	0.1	26.7	182.6	SSW	6	62
15/04/2009	10pm	0.11	24.6	400.1	SSW	10	62
15/04/2009	11pm	0.11	12.3	529.7	SSW	12	62

Date	Hour	CO	NO ₂	PM ₁₀	Wind	Wind	PM ₁₀
		ppm	µg/m ³	µg/m ³	Direction	Velocity km/h	µg/m ³ (daily avg)
16/04/2009	12am	0.12		443.1	SSW	18	183
16/04/2009	1am	0.12	6.2	338.3	SSW	15	183
16/04/2009	2am	0.1	4.1	250.5	SW	16	183
16/04/2009	3am	0.05	6.2	184	SW	16	183
16/04/2009	4am	0.03	4.1	153.7	WSW	13	183
16/04/2009	5am	0.03	12.3	141.8	W	8	183
16/04/2009	6am	0.06	45.2	145.7	NW	10	183
16/04/2009	7am	0.12	49.3	183.7	NW	8	183
16/04/2009	8am	0.13	37	182.1	W	9	183
16/04/2009	9am	0.15	32.9	192.5	WNW	7	183
16/04/2009	10am	0.17	24.6	225.6	WNW	7	183
16/04/2009	11am	0.19	24.6	214.2	NW	5	183
16/04/2009	12pm	0.2	24.6	190.4	NNW	6	183
16/04/2009	1pm	0.21	20.5	174.8	NNW	3	183
16/04/2009	2pm	0.19	16.4	140.9	N	5	183
16/04/2009	3pm	0.16	30.8	151	ENE	9	183
16/04/2009	4pm	0.17	39	151	ENE	10	183
16/04/2009	5pm	0.18	53.4	153.7	ENE	9	183
16/04/2009	6pm	0.22	67.8	150	N	6	183
16/04/2009	7pm	0.26	69.8	144.8	N	5	183
16/04/2009	8pm	0.3	63.7	135.1	WNW	3	183
16/04/2009	9pm	0.38	63.7	120.9	WSW	4	183
16/04/2009	10pm	0.48	63.7	119.5	NW	3	183
16/04/2009	11pm	0.59	55.5	110	WNW	5	183

Date	Hour	CO	NO ₂	PM ₁₀	Wind	Wind	PM ₁₀
		ppm	µg/m ³	µg/m ³	Direction	Velocity km/h	µg/m ³ (daily avg)
17/04/2009	12am	0.66		106.6	W	4	47
17/04/2009	1am	0.76	53.4	101.1	W	5	47
17/04/2009	2am	0.8	45.2	89.1	W	5	47
17/04/2009	3am	0.83	37	72.5	W	6	47
17/04/2009	4am	0.85	37	60.7	W	5	47
17/04/2009	5am	0.81	32.9	49.2	WNW	7	47
17/04/2009	6am	0.77	34.9	48.6	W	9	47
17/04/2009	7am	0.74	47.2	63.5	W	7	47
17/04/2009	8am	0.69	47.2	32.4	W	10	47
17/04/2009	9am	0.57	22.6	36.6	WSW	13	47
17/04/2009	10am	0.47	8.2	40.1	SSW	11	47
17/04/2009	11am	0.38	6.2	43.7	S	16	47
17/04/2009	12pm	0.31	6.2	31.3	S	16	47
17/04/2009	1pm	0.25	6.2	38.1	S	17	47
17/04/2009	2pm	0.17	6.2	43.3	S	19	47
17/04/2009	3pm	0.08	8.2	42.5	S	19	47
17/04/2009	4pm	0.03	8.2	34.5	S	20	47
17/04/2009	5pm	0.03	12.3	32.7	S	16	47
17/04/2009	6pm	0.05	14.4	30.4	S	17	47
17/04/2009	7pm	0.06	14.4	28.5	S	14	47
17/04/2009	8pm	0.07	14.4	25	S	14	47
17/04/2009	9pm	0.08	16.4	28.7	SSE	13	47
17/04/2009	10pm	0.08	26.7	23.4	SSE	10	47
17/04/2009	11pm	0.12	49.3	22.9	W	6	47

Station X1 - Hourly average readings

Date	Hour	CO	NO ₂	PM ₁₀	Wind	Wind	PM ₁₀
		ppm	µg/m ³	µg/m ³	Direction	Velocity km/h	µg/m ³ (daily avg)
15/04/2009	12am	0.37		10.8	NNW	7	66
15/04/2009	1am	0.39	53.4	10.9	WNW	6	66
15/04/2009	2am	0.38	51.3	11.1	WNW	9	66
15/04/2009	3am	0.37	43.1	11	WNW	10	66
15/04/2009	4am	0.37	41.1	11.3	WNW	8	66
15/04/2009	5am	0.35	37	9.6	NW	6	66
15/04/2009	6am	0.34	32.9	12.2	NW	9	66
15/04/2009	7am	0.36	32.9	15.9	WNW	10	66
15/04/2009	8am	0.45	37	15.6	WNW	10	66
15/04/2009	9am	0.44	39	12.8	WNW	10	66
15/04/2009	10am	0.41	28.8	11.1	NW	10	66
15/04/2009	11am	0.38	24.6	12.2	NW	10	66
15/04/2009	12pm	0.33	12.3	11.4	NW	11	66
15/04/2009	1pm	0.28	12.3	15.4	NW	16	66
15/04/2009	2pm	0.2	8.2	26.9	WNW	18	66
15/04/2009	3pm	0.11	10.3	4.6	WNW	16	66
15/04/2009	4pm	-0.05	16.4	13.9	WNW	15	66
15/04/2009	5pm	-0.12	30.8	16.3	WNW	12	66
15/04/2009	6pm	-0.13	51.3	23.6	W	10	66
15/04/2009	7pm	-0.11	63.7	35.5	W	11	66
15/04/2009	8pm	-0.09	43.1	74.6	W	15	66
15/04/2009	9pm	-0.1	24.6	213.8	SSW	6	66
15/04/2009	10pm	-0.09	22.6	442.3	SSW	10	66
15/04/2009	11pm	-0.09	12.3	554.3	SSW	12	66

Date	Hour	CO	NO ₂	PM ₁₀	Wind	Wind	PM ₁₀
		ppm	µg/m ³	µg/m ³	Direction	Velocity km/h	µg/m ³ (daily avg)
16/04/2009	12am	-0.08		443.9	SSW	15	191
16/04/2009	1am	-0.06	4.1	341.9	SSW	14	191
16/04/2009	2am	-0.07	6.2	257.9	SSW	16	191
16/04/2009	3am	-0.1	6.2	190.8	SW	15	191
16/04/2009	4am	-0.12	4.1	163.5	SW	14	191
16/04/2009	5am	-0.1	12.3	158.1	WSW	6	191
16/04/2009	6am	-0.05	49.3	158.6	NW	7	191
16/04/2009	7am	0.03	53.4	198.9	NW	7	191
16/04/2009	8am	0.05	41.1	183	W	7	191
16/04/2009	9am	0.07	37	197.6	W	6	191
16/04/2009	10am	0.09	28.8	230.8	WNW	6	191
16/04/2009	11am	0.11	26.7	215.6	NW	3	191
16/04/2009	12pm	0.13	28.8	197.5	NNW	4	191
16/04/2009	1pm	0.15	24.6	183.6	N	2	191
16/04/2009	2pm	0.13	20.5	135.5	N	3	191
16/04/2009	3pm	0.11	39	156.4	NE	5	191
16/04/2009	4pm	0.12	55.5	151.9	NE	5	191
16/04/2009	5pm	0.16	67.8	153.6	NE	4	191
16/04/2009	6pm	0.22	76	152.3	NNE	3	191
16/04/2009	7pm	0.27	71.9	151.2	N	3	191
16/04/2009	8pm	0.31	65.7	144.5	WNW	1	191
16/04/2009	9pm	0.4	73.9	140.9	WSW	2	191
16/04/2009	10pm	0.51	69.8	137.8	NNW	3	191
16/04/2009	11pm	0.62	67.8	143.9	NW	5	191

Date	Hour	CO ppm	NO2 µg/m ³	PM10 µg/m ³	Wind Direction	Wind Velocity km/h	PM10 µg/m3 (daily avg)
17/04/2009	12am	0.67		126.2	WSW	2	52
17/04/2009	1am	0.73	63.7	120.2	W	4	52
17/04/2009	2am	0.72	57.5	118.5	WNW	4	52
17/04/2009	3am	0.74	49.3	85.7	W	5	52
17/04/2009	4am	0.75	43.1	58.6	W	4	52
17/04/2009	5am	0.71	45.2	64.3	W	7	52
17/04/2009	6am	0.66	45.2	53.9	W	8	52
17/04/2009	7am	0.64	53.4	49.6	W	7	52
17/04/2009	8am	0.6	53.4	41.5	WSW	11	52
17/04/2009	9am	0.5	26.7	46.9	SW	12	52
17/04/2009	10am	0.43	10.3	43.4	SSW	11	52
17/04/2009	11am	0.36	6.2	42.4	S	10	52
17/04/2009	12pm	0.3	6.2	33	SSW	12	52
17/04/2009	1pm	0.24	6.2	38.8	S	12	52
17/04/2009	2pm	0.17	6.2	41.1	S	13	52
17/04/2009	3pm	0.09	8.2	42.8	SSW	14	52
17/04/2009	4pm	0.05	8.2	36.7	S	15	52
17/04/2009	5pm	0.07	14.4	33.4	SSW	13	52
17/04/2009	6pm	0.1	18.5	30.9	SSW	13	52
17/04/2009	7pm	0.12	14.4	28.9	S	12	52
17/04/2009	8pm	0.13	10.3	26.1	S	11	52
17/04/2009	9pm	0.15	12.3	28.2	S	8	52
17/04/2009	10pm	0.16	18.5	24.3	SSW	7	52
17/04/2009	11pm	0.2	53.4	24.7	W	4	52

Station CBMS - Hourly average readings

Date	Hour	CO	NO ₂	PM ₁₀	Wind	Wind	PM ₁₀
		ppm	µg/m ³	µg/m ³	Direction	Velocity km/h	µg/m ³ (daily avg)
15/04/2009	12am	0.3		11	WNW	8	68
15/04/2009	1am	0.31	55.5	10.6	W	10	68
15/04/2009	2am	0.3	53.4	10.8	W	12	68
15/04/2009	3am	0.29	45.2	11.4	W	12	68
15/04/2009	4am	0.29	41.1	11.3	WNW	10	68
15/04/2009	5am	0.29	37	7.2	WNW	7	68
15/04/2009	6am	0.27	34.9	14.5	NW	12	68
15/04/2009	7am	0.28	34.9	23.8	WNW	12	68
15/04/2009	8am	0.32	39	8.3	W	14	68
15/04/2009	9am	0.31	41.1	4.2	WNW	18	68
15/04/2009	10am	0.29	30.8	9.8	WNW	18	68
15/04/2009	11am	0.26	20.5	6.4	NW	19	68
15/04/2009	12pm	0.24	12.3	7.2	NW	20	68
15/04/2009	1pm	0.2	10.3	9.2	WNW	30	68
15/04/2009	2pm	0.16	8.2	16.5	WNW	31	68
15/04/2009	3pm	0.09	10.3	11.3	WNW	28	68
15/04/2009	4pm	0.03	18.5	15.5	WNW	21	68
15/04/2009	5pm	0.02	32.9	15.5	WNW	17	68
15/04/2009	6pm	0.06	55.5	26.3	W	15	68
15/04/2009	7pm	0.14	63.7	36.4	W	15	68
15/04/2009	8pm	0.19	43.1	72.1	W	19	68
15/04/2009	9pm	0.22	26.7	259.3	SSW	9	68
15/04/2009	10pm	0.25	22.6	468.4	S	11	68
15/04/2009	11pm	0.27	12.3	570.7	SSW	15	68

Date	Hour	CO	NO ₂	PM ₁₀	Wind	Wind	PM ₁₀
		ppm	µg/m ³	µg/m ³	Direction	Velocity km/h	µg/m ³ (daily avg)
16/04/2009	12am	0.29		465.3	S	19	194
16/04/2009	1am	0.27	6.2	349.1	S	16	194
16/04/2009	2am	0.22	6.2	254.5	SSW	17	194
16/04/2009	3am	0.15	8.2	190	SSW	17	194
16/04/2009	4am	0.12	6.2	164.3	SW	13	194
16/04/2009	5am	0.11	10.3	151.8	WSW	7	194
16/04/2009	6am	0.12	47.2	148	WNW	9	194
16/04/2009	7am	0.17	53.4	178.3	WNW	9	194
16/04/2009	8am	0.18	41.1	187.4	W	12	194
16/04/2009	9am	0.2	34.9	196.7	W	10	194
16/04/2009	10am	0.21	28.8	223.9	WNW	9	194
16/04/2009	11am	0.21	26.7	220	NW	8	194
16/04/2009	12pm	0.2	26.7	195.8	NW	8	194
16/04/2009	1pm	0.19	22.6	182	NNW	6	194
16/04/2009	2pm	0.16	18.5	127.9	NW	4	194
16/04/2009	3pm	0.11	32.9	162.7	NE	10	194
16/04/2009	4pm	0.1	41.1	161.2	NE	14	194
16/04/2009	5pm	0.1	53.4	169	NE	13	194
16/04/2009	6pm	0.11	59.6	158.6	N	10	194
16/04/2009	7pm	0.13	61.6	161.4	N	7	194
16/04/2009	8pm	0.16	65.7	153.8	WNW	1	194
16/04/2009	9pm	0.23	78.1	148.8	WSW	4	194
16/04/2009	10pm	0.3	76	147.3	NNW	3	194
16/04/2009	11pm	0.41	69.8	141.7	W	5	194

Date	Hour	CO	NO ₂	PM ₁₀	Wind	Wind	PM ₁₀
		ppm	µg/m ₃	µg/m ³	Direction	Velocity	µg/m ³
						km/h	(daily avg)
17/04/2009	12am	0.47		134.3	SW	5	53
17/04/2009	1am	0.58	63.7	121.6	W	6	53
17/04/2009	2am	0.64	59.6	122.6	W	5	53
17/04/2009	3am	0.7	49.3	93.1	W	8	53
17/04/2009	4am	0.73	43.1	68.1	WSW	9	53
17/04/2009	5am	0.74	41.1	61.4	WSW	9	53
17/04/2009	6am	0.77	47.2	59.9	WSW	11	53
17/04/2009	7am	0.72	43.1	34.6	WSW	11	53
17/04/2009	8am	0.68	43.1	34.5	WSW	11	53
17/04/2009	9am	0.59	20.5	38.4	SW	13	53
17/04/2009	10am	0.53	10.3	50.6	S	9	53
17/04/2009	11am	0.46	8.2	44.3	SSE	12	53
17/04/2009	12pm	0.39	8.2	33.9	S	13	53
17/04/2009	1pm	0.33	6.2	46.8	SSE	14	53
17/04/2009	2pm	0.24	8.2	44.5	S	14	53
17/04/2009	3pm	0.17	10.3	43.6	SSE	18	53
17/04/2009	4pm	0.12	12.3	39.9	SSE	17	53
17/04/2009	5pm	0.11	20.5	33.3	S	15	53
17/04/2009	6pm	0.11	22.6	27.2	S	15	53
17/04/2009	7pm	0.12	18.5	27.7	SSE	14	53
17/04/2009	8pm	0.12	12.3	24	SSE	12	53
17/04/2009	9pm	0.13	12.3	32	SSE	9	53
17/04/2009	10pm	0.14	18.5	25.8	SSE	7	53
17/04/2009	11pm	0.18	51.3	32.1	WSW	7	53

APPENDIX 2 - E-mail Notifications of Reading above Goal

E-mails stating there was an above average reading station for PM10 were sent to the appropriate staff in the RTA, DECC and Planning NSW

Dates and times of e-mails are shown below

Station	Date of e-mail	Time	Recorded level	Date of event
T1	Thursday 16 April 2009	12.28	58	Wednesday 15 April 2009
U1	Thursday 16 April 2009	12.28	62	Wednesday 15 April 2009
CBMS	Thursday 16 April 2009	12.28	68	Wednesday 15 April 2009
X1	Thursday 16 April 2009	12.28	66	Wednesday 15 April 2009

Station	Date of e-mail	Time	Recorded level	Date of event
U1	Friday 17 April 2009 **	10.28	198	Thursday 16 April 2009

Station	Date of e-mail	Time	Recorded level	Date of event
CBMS	Saturday 18 April 2009	12.28	53	Friday 17 April 2009
X1	Saturday 18 April 2009	12.28	52	Friday 17 April 2009

***Note that a temporary loss of data to the RTA website on 16 April 2009 resulted in emails not being generated for all stations.*

APPENDIX 3: VALIDATED RECORDINGS

M5 East Ambient Air Quality Exceedance Report

Validated Data PM10 24 hour average from 5 min data

15 April 2009 to 17 April 2009

	X1	T1	U1	CBMS
15/04/2009	67.4	59.5	63.4	70
16/04/2009	189.9	176.4	181.8	191.9
17/04/2009	51.3	46.9	46.6	52.7

APPENDIX 4 - Sydney Wide DECC Data – 24 hour average – PM₁₀ data

DECC 24-hour summary of pollutant concentrations measured at air quality monitoring sites - 15 April 2009

Pollutants		Ozone O3	Ozone O3	Nitrogen dioxide NO2	Visibility NEPH	Carbon monoxide CO	Sulfur dioxide SO2	Particles PM10
Averaging Periods		max 1-hour average	max rolling 4-hour average	max 1-hour average	max 1-hour average	max rolling 8-hour average	max 1-hour average	24-hour average
Sydney east	RANDWICK	3.9	3.7	2.8	1.58			73.9
	ROZELLE	1.5	1.4	2.0	1.62	0.7		60.7
	LINDFIELD	3.4	3.1	2.3			0.1	42.0
	CHULLORA	3.5	3.3	2.2	1.60	0.5	0.0	71.4
	EARLWOOD	3.6	3.4	2.3				66.2
Sydney north-west	RICHMOND	3.7	3.6	0.9	0.87		0.2	35.8
	ST MARYS	3.7	3.6	1.4				57.0
	VINEYARD	3.4	3.2	0.9	1.24		0.0	46.5
	PROSPECT	3.6	3.4	2.3	1.71	0.5	0.1	60.1
Sydney south-west	BARGO	3.3	3.3	1.1	2.11			
	BRINGELLY							
	LIVERPOOL	3.4	3.2	2.2	1.64	0.5		76.4
	MACARTHUR	3.3	3.2	1.8	1.54	0.4	0.1	110.2
	OAKDALE	3.2	3.1	0.2				129.9
Illawarra	WOLLONGONG	3.3	3.1	1.0	2.17	0.4		160.5
	KEMBLA GRANGE	3.3	3.3		1.90			136.0
	ALBION PARK STH	3.9	3.8	1.2	2.52		0	138.1
Lower Hunter	WALLSEND				0.41		0.1	13.7
	BERESFIELD	3.7	3.5	2.2	0.42			17.7
	NEWCASTLE	3.9	3.8	2.9	0.44	0.8	0.3	
Central tablelands	BATHURST							224.4
North-west slopes	TAMWORTH							9.8
South-west slopes	ALBURY							105.7

DECC website 24-hour summary of pollutant concentrations measured at air quality monitoring sites - 16April 2009

Pollutants		<u>Ozone</u> O3	<u>Ozone</u> O3	<u>Nitrogen</u> <u>dioxide</u> NO2	<u>Visibility</u> NEPH	<u>Carbon</u> <u>monoxide</u> CO	<u>Sulfur</u> <u>dioxide</u> SO2	<u>Particles</u> PM10
<u>Averaging Periods</u>		max 1-hour average	max rolling 4-hour average	max 1-hour average	max 1-hour average	max rolling 8-hour average	max 1-hour average	24-hour average
Sydney east	RANDWICK	4.4	4.3	2.9	1.09			191.1
	ROZELLE	2.1	1.9	2.7	1.31	0.6		196.9
	LINDFIELD	3.5	3.3	2.6	1.96		0.1	175.7
	CHULLORA	3.3	3.3	3.6	1.26		0.2	199.6
	EARLWOOD	3.6	3.1	3.6	1.24			191.0
Sydney north-west	RICHMOND	3.9	3.8	2.0	1.54		0.1	198.9
	ST MARYS	4.1	3.8	1.8	1.48			186.7
	VINEYARD	3.8	3.6	1.7	1.37		0	230.6
	PROSPECT	3.5	3.5	3.3	1.60	0.8	0.2	221.6
Sydney south-west	BARGO	3.0	3.0	1.8	0.97			
	BRINGELLY	3.5	3.3	1.7	1.12		0.1	198.5
	LIVERPOOL	3.1	3.0	4.0	1.17	0.8		177.4
	MACARTHUR	3.4	3.2	3.4	0.93	0.4	0.1	194.8
	OAKDALE	3.1	2.9	0.3	1.32			150.8
Illawarra	WOLLONGONG	3.6	3.4	3.0	1.06	0.5	0.1	136.7
	KEMBLA GRANGE	3.1	3.1	1.5	0.77			136.2
	ALBION PARK STH	4.1	3.9	2.4	1.47		0	133.9
Lower Hunter	WALLSEND				0.89		0.8	179.5
	BERESFIELD	2.8	2.6	2.4	0.74			171.8
	NEWCASTLE	3.0	2.6	2.1	1.15	0.8	0.9	245.4
Central tablelands	BATHURST							142.2
North-west slopes	TAMWORTH							36.2
South-west slopes	ALBURY							26.2
	WAGGA WAGGA							

DECC website 24-hour summary of pollutant concentrations measured at air quality monitoring sites - 17April 2009

Pollutants		Ozone O3	Ozone O3	Nitrogen dioxide NO2	Visibility NEPH	Carbon monoxide CO	Sulfur dioxide SO2	Particles PM10
Averaging Periods		max 1-hour average	max rolling 4-hour average	max 1-hour average	max 1-hour average	max rolling 8-hour average	max 1-hour average	24-hour average
Sydney east	RANDWICK	3.9	3.9	2.7	0.63			57.1
	ROZELLE	2.9	2.8	2.6		1.1		57.7
	LINDFIELD	3.3	3.2	2.5	0.85		0.1	47.7
	CHULLORA	3.7	3.6	2.8	0.68	0.9		56.9
	EARLWOOD	3.6	3.5	2.5	0.76			50.0
Sydney north-west	RICHMOND	4.7	4.2	1.5	0.59		0	27.4
	ST MARYS	4.6	4.3	1.5	0.86			31.1
	VINEYARD	4.2	3.8	1.6	0.49		0	42.0
	PROSPECT	3.8	3.6	2.7	0.70	1.1		56.0
Sydney south-west	BARGO	3.5	3.4	2.1	6.72			
	BRINGELLY	4.0	3.8	1.3	0.58		0.1	32.4
	LIVERPOOL	3.7	3.6	2.6	0.59	0.9		43.7
	MACARTHUR	4.3	4.1	2.2		0.4	0.2	35.3
	OAKDALE	3.9	3.7	0.3	0.92			39.2
Illawarra	WOLLONGONG	3.0	2.6	2.3	0.75		0.6	34.8
	KEMBLA GRANGE			0.8	0.68			33.9
	ALBION PARK STH	4.1	4.0	1.0	1.29			31.7
Lower Hunter	WALLSEND				0.63		0.7	58.4
	BERESFIELD	3.5	3.3	2.0	0.54			69.9
	NEWCASTLE	4.2	3.8	2.1	0.65	0.6	0.2	73.9
Central tablelands	BATHURST							27.3
North-west slopes	TAMWORTH							42.3
South-west slopes	ALBURY							25.6

APPENDIX 5 – Media Information

Extract from media updates

Dust storms hit NSW

<http://www.weatherzone.com.au/news/dust-storm-surges-through-new-south-wales/11692>

A wall of dust is making its way north through New South Wales, after blanketing Canberra earlier this afternoon, according to weatherzone.com.au.

The dust is being whipped up by strong winds ahead of a cold front crossing southeast Australia. Gusts in excess of 90km/hr have been reported from the Snowy Mountains.

The dust is likely to reach Sydney over the next couple of hours, causing visibilities to drop. Visibility readings of less than two kilometers were reported from Canberra and other locations in southeast New South Wales earlier in the afternoon.

"The front crossing southeast Australia today has been associated with particularly severe winds. Earlier this morning, wind gusts in excess of 130km/hr wreaked havoc across Victoria and Tasmania," weatherzone.com.au meteorologist Matt Pearce said.

"The strong westerly winds ahead of the front have picked up large quantities of dust from southwest New South Wales, a region that has seen minimal rainfall in recent months."

It was a very warm day ahead of the front. Sydney reached a top of 29.3 degrees, the warmest day in April for three years.

"The winds will drop off rapidly overnight tonight as the cold front moves out into the Tasman Sea. After a couple of milder days, we will then enter a prolonged showery spell across eastern New South Wales from the weekend onwards," Pearce said.

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