



Ventia Pty Ltd

AirportlinkM7 Ambient Air Quality Monitoring Report

December 2015

Ref: DR.1512APL281.1

Issue Date: 15 January 2016

Norditech Pty Ltd
Unit 36/70 Holbeche Road
Arndell Park NSW 2148

m: +61 403 248 038
p: + 61 2 9622 6327
f: +61 2 9622 6340
bruno.nourdine@norditech.com.au
www.norditech.com.au



Document Control

Revision	Date	Details	Prepared By	Approved By
0	13/01/2016	Original	CP	BN
1	15/01/2016	Added footnote to TSP data table. Changed incorrect highlighting of value.	CP	BN

Prepared by



Chris Priser
15 January 2016

Approved by



Bruno Nourdine
15 January 2016

Contents

Glossary.....	1
Executive Summary	2
<i>Exceedence Reporting</i>	<i>2</i>
Introduction	3
Monitoring	4
<i>Site Locations</i>	<i>4</i>
<i>Station Instrumentation Details</i>	<i>4</i>
<i>Data Logging</i>	<i>5</i>
Results	6
<i>Station 1 (Aviation High School)</i>	<i>6</i>
Summary	6
Carbon Monoxide Summary	8
PM _{2.5} Summary	9
PM ₁₀ Summary	10
<i>Station 2 (Kedron State High School)</i>	<i>11</i>
Summary	11
Nitrogen Dioxide Summary	12
Carbon Monoxide Summary	13
PM _{2.5} Summary	14
PM ₁₀ Summary	15
<i>Station 3 (Lewis Street)</i>	<i>16</i>
Summary	16
Nitrogen Dioxide Summary	17
Carbon Monoxide Summary	18
PM _{2.5} Summary	19
PM ₁₀ Summary	20
<i>Station 4 (Airportlink Operation Centre)</i>	<i>21</i>
Summary	21
Nitrogen Dioxide Summary	22
Carbon Monoxide Summary	23
PM _{2.5} Summary	24
PM ₁₀ Summary	25
<i>Station 5 (Cartwright Street)</i>	<i>26</i>
Summary	26
Nitrogen Dioxide Summary	27
Carbon Monoxide Summary	28
PM _{2.5} Summary	29
PM ₁₀ Summary	30
Graphical Representations	31
<i>Nitrogen Dioxide</i>	<i>31</i>
<i>Carbon Monoxide 8hr Rolling Averages</i>	<i>32</i>
<i>PM₁₀ 24hr Averages</i>	<i>33</i>
<i>PM_{2.5} 24hr Averages</i>	<i>34</i>
TSP High Volume Air Sampler Results	35
Validation Tables	36
<i>Station 1 Aviation High School</i>	<i>36</i>

<i>Station 2 Kedron State High School</i>	<i>37</i>
<i>Station 3 Lewis Street.....</i>	<i>38</i>
<i>Station 4 Airport Link Operation Centre</i>	<i>39</i>
<i>Station 5 Cartwright St.....</i>	<i>40</i>

Glossary

The following terms and abbreviations may be found throughout this report:

AQMS – Air Quality Monitoring Station

EPA – Environment Protection Authority

NO – Nitric Oxide

NO₂ – Nitrogen Dioxide

NO_x – Nitrogen Oxides

CO – Carbon Monoxide

PM₁₀ – Particulate matter of 10 microns or less aerodynamic equivalent size

PM_{2.5} – Particulate matter of 2.5 microns or less aerodynamic equivalent size

TSP – Total Suspended Particulate

HVAS – High Volume Air Sampler

ppm – Parts Per Million

µg/m³ – micrograms per cubic meter

AHS – Aviation High School

KSHS – Kedron State High School

LS – Lewis Street

ALOC – Airportlink Operation Centre

CS – Cartwright St

Executive Summary

Exceedence Reporting

There were no readings over the relevant Air Quality Standards during the reporting period.

AirportlinkM7 AQMS Exceedence Reporting December 2015							
Pollutant	Averaging period	Maximum Allowed Concentration	Number of Exceedences December 2015				
			Station 1 (AHS)	Station 2 (KSHS)	Station 3 (LS)	Station 4 (ALOC)	Station 5 (CS)
Carbon Monoxide	8 hour (rolling average)	8 ppm	0	0	0	0	0
Nitrogen dioxide	1 hour	0.120 ppm	0	0	0	0	0
	1 year	63 µg/m ³	0	0	0	0	0
PM2.5	24 hour	25 µg/m ³	0	0	0	0	0
PM10	24 hour	50 µg/m ³	0	0	0	0	0

Table 1 Exceedence Reporting

Maximum allowed concentration criteria are as specified in Condition 19(k) of the Conditions of Approval.

Introduction

Norditech Pty Ltd was appointed by Ventia Pty Limited in February 2015 to operate, maintain and report on the AirportlinkM7 Air Quality Monitoring Network.

The AirportlinkM7 Air Quality Monitoring Network consists of five sites located in close proximity to key locations of the Airportlink project, and is a requirement of the Conditions of Approval issued by the Coordinator General.

The addresses of the two parties are as follows

AirportlinkM7
PO Box 412
Lutwyche QLD 4030

Norditech Pty Ltd
Unit 36/70 Holbeche Rd
Arndell Park NSW 2148

Monitoring

Site Locations

AirportlinkM7 Site Location Coordinates		
	Latitude	Longitude
Station 1 (Aviation High School)	-27° 24' 46.5084"	153° 3' 48.0744"
Station 2 (Kedron State High School)	-27° 24' 47.5344"	153° 2' 17.8476"
Station 3 (Lewis Street)	-27° 24' 39.5532"	153° 3' 18.18"
Station 4 (Airportlink Operation Centre)	-27° 24' 43.2252"	153° 1' 58.3104"
Station 5 (Cartwright Street)	-27° 26' 22.5852"	153° 2' 5.784"

Table 2 Site Location Coordinates

Station Instrumentation Details

Each station continuously monitors the following pollutants:

- NO (Nitrogen Oxide)
- NO₂ (Nitrogen Dioxide)
- NO_x (Total Oxides of Nitrogen)
- CO (Carbon Monoxide)
- PM₁₀
- PM_{2.5}
- TSP (Samples on a 1 in 6 day cycle)

Monthly validated data for each site are provided in the following Microsoft® Excel™ spreadsheet

- 201512 ALM7 Monthly Validated Data Spreadsheet.xlsx
 - Sheet 1 – 5 minute average data
 - Sheet 2 – 1 hour average data
 - Sheet 3 – 8 hour average data
 - Sheet 4 – 24 hour average data

Instrumentation Details								
Parameter	Units	Uncertainty	Method	Station 1	Station 2	Last Calibration Date		
						Station 3	Station 4	Station 5
NO NO ₂ NO _x	ppm	2.78%	AS 3580.5.1	14/12/2015	14/12/2015	14/12/2015	14/12/2015	14/12/2015
CO	ppm	2.56%	AS 3580.7.1	14/12/2015	14/12/2015	14/12/2015	14/12/2015	14/12/2015
PM ₁₀	µg/m ³	3.21 µg/m ³	AS 3580.9.11	30/11/2015*	25/11/2015	30/11/2015*	24/11/2015*	24/11/2015
PM _{2.5}	µg/m ³	3.21 µg/m ³	AS 3580.9.11 / EQPM 0308-170	30/11/2015	25/11/2015	30/11/2015	24/11/2015	24/11/2015
TSP	µg/m ³	7.34%	AS 3580.9.3	30/11/2015	25/11/2015	30/11/2015	24/11/2015	24/11/2015

Table 3 Instrumentation Details

Data Logging

Data are recorded to a WinAQMS data logger located at each site at 5 minute averaging periods, calculated from 10 second samples. All data are retrieved periodically, approximately on an hourly basis, over a private 3G network, to a central WinCollect database, where data validation is performed to remove any data not deemed as valid prior to reporting. Data validation is performed as per the relevant standard, and/or as per the instrument manufacturers recommended guidelines.

All averages greater than 5 minute averages are calculated from the 5 minute average data set. 75% valid data must be available to calculate re-averaged data. For example, to calculate a 1hr average from 5 minute data, there must be a minimum of 9 out of 12 valid 5 minute average data points available.

All data is recorded to Australian Eastern Standard Time.

Data capture rates are calculated as per the following formula:

$$\text{Data Capture Rate \%} = \frac{\text{Available data points}}{\text{Total data points}} * 100$$

where:

Available data points = total number of 5 minute averages for the reporting period in which valid data was recorded

Total data points = total number of 5 minute averages for the reporting period inclusive of invalid data

Results

Station 1 (Aviation High School)

Summary

Station 1 Aviation High School Ambient AQMS Summary December 2015				
	NO ₂ (ppm)	CO (ppm)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)
Monthly Average	0.003	0.3	3.6	15.8
Min 1hr Average	-0.002	0.0	-1.0	0.6
Max 1hr Average	0.017	1.0	51.8	249.0
Max 8hr Rolling Average	N/A	0.7	N/A	N/A
Max 24hr Average	N/A	N/A	5.9	33.9
Capture Rate (%)	96.1	95.7	57.8	98.7

Table 4 Station 1 Monthly Summary

Maximum allowable CO 8 hour rolling average is 8ppm
Maximum allowable NO₂ 1 hour average is 0.12 ppm
Maximum allowable PM_{2.5} 24 hour average is 25 µg/m³
Maximum allowable PM₁₀ 24 hour average is 50 µg/m³

Nitrogen Dioxide Summary

Station 1 Aviation High School Ambient AQMS Nitrogen Dioxide Summary December 2015

Date	24hr Avg (ppm)	1 hr Avgs			Number of Exceedences 1hr Avg > 0.120 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max		
1/12/2015	0.002	-0.001	0.007	07:00	0	97.2
2/12/2015	0.010	-0.001	0.017	16:00	0	97.2
3/12/2015	0.003	0.000	0.016	00:00	0	97.2
4/12/2015	0.003	0.000	0.006	22:00	0	97.2
5/12/2015	0.001	-0.001	0.010	02:00	0	97.2
6/12/2015	0.001	-0.002	0.009	22:00	0	97.2
7/12/2015	0.003	0.000	0.010	02:00	0	97.2
8/12/2015	0.004	0.000	0.011	06:00	0	97.2
9/12/2015	0.004	0.000	0.015	05:00	0	97.2
10/12/2015	0.005	0.000	0.014	21:00	0	97.2
11/12/2015	0.007	0.001	0.015	04:00	0	97.2
12/12/2015	0.009	0.002	0.015	20:00	0	97.2
13/12/2015	0.003	-0.001	0.016	21:00	0	97.2
14/12/2015	0.006	0.001	0.011	20:00	0	93.8
15/12/2015	0.006	0.001	0.016	07:00	0	97.2
16/12/2015	0.005	0.001	0.012	21:00	0	97.2
17/12/2015	0.003	-0.001	0.010	02:00	0	97.2
18/12/2015	0.005	0.001	0.012	23:00	0	97.2
19/12/2015	0.004	-0.001	0.014	23:00	0	97.2
20/12/2015	0.002	-0.001	0.010	00:00	0	97.2
¹ 21/12/2015	-	-0.001	0.001	09:00	0	66.3
22/12/2015	0.003	0.000	0.009	06:00	0	97.2
23/12/2015	0.002	0.000	0.007	05:00	0	97.2
24/12/2015	0.004	0.002	0.006	06:00	0	97.2
25/12/2015	0.000	-0.002	0.005	23:00	0	97.2
26/12/2015	0.001	-0.001	0.006	00:00	0	97.2
27/12/2015	0.000	-0.002	0.002	05:00	0	97.2
28/12/2015	-0.001	-0.002	0.000	06:00	0	97.2
29/12/2015	0.000	-0.001	0.002	22:00	0	97.2
30/12/2015	0.000	-0.001	0.002	20:00	0	97.2
31/12/2015	0.000	-0.001	0.002	5:00	0	97.2

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to instrument fault

Table 5 Station 1 Nitrogen Dioxide Monthly Summary

Carbon Monoxide Summary

Station 1 Aviation High School Ambient AQMS Carbon Monoxide Summary December 2015								
Date	24 hr Avg (ppm)	1 hr Avgs			8 hr Rolling Avgs		No. of exceedences 8hr Avg > 8.0 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max	Max (ppm)	Time of Max		
1/12/2015	0.3	0.1	0.5	23:00	0.4	23:00	0	96.5
2/12/2015	0.4	0.3	0.5	17:00	0.5	22:00	0	96.9
3/12/2015	0.2	0.2	0.3	00:00	0.4	00:00	0	96.9
4/12/2015	0.2	0.1	0.3	22:00	0.3	23:00	0	96.9
5/12/2015	0.3	0.2	0.4	22:00	0.3	23:00	0	96.9
6/12/2015	0.2	0.1	0.3	22:00	0.3	01:00	0	96.9
7/12/2015	0.3	0.2	0.4	21:00	0.4	23:00	0	96.5
8/12/2015	0.2	0.1	0.4	06:00	0.4	00:00	0	96.9
9/12/2015	0.2	0.1	0.3	06:00	0.3	01:00	0	96.9
10/12/2015	0.3	0.2	0.4	19:00	0.4	23:00	0	96.9
11/12/2015	0.3	0.1	0.4	19:00	0.4	23:00	0	96.5
12/12/2015	0.3	0.3	0.4	18:00	0.4	00:00	0	96.9
13/12/2015	0.5	0.4	1.0	22:00	0.7	23:00	0	96.9
14/12/2015	0.2	0.1	0.4	05:00	0.7	00:00	0	93.1
15/12/2015	0.4	0.2	0.7	07:00	0.5	12:00	0	96.5
16/12/2015	0.2	0.1	0.4	20:00	0.4	00:00	0	96.9
17/12/2015	0.3	0.1	0.4	18:00	0.3	21:00	0	96.5
18/12/2015	0.5	0.3	0.7	23:00	0.6	23:00	0	96.9
19/12/2015	0.3	0.2	0.4	23:00	0.6	00:00	0	96.9
20/12/2015	0.3	0.2	0.4	02:00	0.4	06:00	0	96.9
¹ 21/12/2015	-	0.1	0.3	22:00	0.3	01:00	0	66.0
22/12/2015	0.3	0.1	0.4	20:00	0.3	23:00	0	96.9
23/12/2015	0.2	0.1	0.3	20:00	0.3	00:00	0	96.9
24/12/2015	0.2	0.0	0.4	08:00	0.3	15:00	0	96.9
25/12/2015	0.5	0.3	0.6	18:00	0.6	20:00	0	96.5
26/12/2015	0.2	0.0	0.4	23:00	0.5	00:00	0	96.9
27/12/2015	0.2	0.1	0.3	17:00	0.3	01:00	0	96.5
28/12/2015	0.2	0.0	0.4	23:00	0.4	23:00	0	96.9
29/12/2015	0.3	0.2	0.5	22:00	0.4	23:00	0	96.9
30/12/2015	0.3	0.2	0.4	20:00	0.4	00:00	0	96.5
31/12/2015	0.2	0.2	0.3	23:00	0.4	00:00	0	96.5

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to instrument fault

Table 6 Station 1 Carbon Monoxide Monthly Summary

PM_{2.5} Summary

Station 1 Aviation High School Ambient AQMS Particulate PM _{2.5} Summary December 2015						
Date	24 hr Avg ($\mu\text{g}/\text{m}^3$)	1 hr Avgs			No. of exceedences 24hr Avg > 25.0 $\mu\text{g}/\text{m}^3$	Capture Rate
		Min ($\mu\text{g}/\text{m}^3$)	Max ($\mu\text{g}/\text{m}^3$)	Time of Max		
¹ 1/12/2015	-	-	-	-	0	0.0
¹ 2/12/2015	-	-	-	-	0	0.0
¹ 3/12/2015	-	-1.0	1.9	18:00	0	12.5
¹ 4/12/2015	-	-1.0	-0.1	22:00	0	8.3
¹ 5/12/2015	-	-	-	-	0	0.0
¹ 6/12/2015	-	-1.0	5.4	20:00	0	20.8
¹ 7/12/2015	-	-1.0	-1.0	14:00	0	4.2
¹ 8/12/2015	-	1.0	1.0	13:00	0	4.2
¹ 9/12/2015	-	1.0	51.8	03:00	0	45.8
¹ 10/12/2015	-	-1.0	5.7	13:00	0	62.5
¹ 11/12/2015	-	-0.9	6.8	22:00	0	70.8
12/12/2015	4.6	1.0	10.6	16:00	0	95.8
13/12/2015	5.9	-0.8	15.2	22:00	0	91.7
¹ 14/12/2015	-	0.1	9.0	03:00	0	45.8
¹ 15/12/2015	-	-	-	-	0	0.0
¹ 16/12/2015	-	-	-	-	0	0.0
¹ 17/12/2015	-	0.0	4.9	19:00	0	25.0
18/12/2015	3.2	-0.9	8.7	07:00	0	83.3
19/12/2015	3.5	-0.7	6.8	09:00	0	91.7
20/12/2015	4.0	0.2	8.7	07:00	0	100.0
21/12/2015	3.4	-1.0	6.8	18:00	0	100.0
22/12/2015	3.3	1.0	6.0	15:00	0	100.0
23/12/2015	3.0	0.0	6.8	20:00	0	87.5
24/12/2015	3.6	-0.9	13.8	20:00	0	100.0
¹ 25/12/2015	-	-1.0	6.9	19:00	0	70.8
26/12/2015	1.8	-1.0	4.0	22:00	0	91.7
27/12/2015	4.1	-0.7	13.3	18:00	0	100.0
28/12/2015	5.9	-1.0	10.6	11:00	0	91.7
29/12/2015	3.3	0.1	7.7	04:00	0	100.0
30/12/2015	3.9	-0.8	8.7	22:00	0	100.0
31/12/2015	4.1	-0.8	7.0	19:00	0	87.5

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to instrument fault

Table 7 Station 1 PM_{2.5} Monthly Summary

PM₁₀ Summary

Station 1 Aviation High School Ambient AQMS Particulate PM10 Summary December 2015

Date	24 hr Avg ($\mu\text{g}/\text{m}^3$)	1 hr Avgs			No. of exceedences 24hr Avg > 50.0 $\mu\text{g}/\text{m}^3$	Capture Rate
		Min ($\mu\text{g}/\text{m}^3$)	Max ($\mu\text{g}/\text{m}^3$)	Time of Max		
1/12/2015	16.1	9.5	20.3	16:00	0	100.0
2/12/2015	13.8	7.3	21.8	08:00	0	100.0
3/12/2015	19.8	8.1	37.3	16:00	0	100.0
4/12/2015	17.3	12.5	22.6	19:00	0	100.0
5/12/2015	14.2	9.6	18.8	12:00	0	100.0
6/12/2015	13.9	9.5	35.8	02:00	0	100.0
7/12/2015	19.1	8.5	41.4	04:00	0	100.0
8/12/2015	21.0	9.3	249.0	02:00	0	100.0
9/12/2015	33.9	10.4	121.5	03:00	0	100.0
10/12/2015	16.7	7.7	28.3	18:00	0	100.0
11/12/2015	18.6	13.6	24.9	21:00	0	100.0
12/12/2015	14.8	6.9	20.2	20:00	0	95.8
13/12/2015	18.5	6.0	37.9	21:00	0	100.0
14/12/2015	22.2	13.2	28.2	08:00	0	95.8
15/12/2015	19.0	13.5	29.4	07:00	0	100.0
16/12/2015	16.1	8.0	23.4	16:00	0	100.0
17/12/2015	14.3	5.1	23.3	17:00	0	100.0
18/12/2015	11.9	6.3	17.1	09:00	0	100.0
19/12/2015	11.5	8.1	18.2	16:00	0	100.0
20/12/2015	14.2	8.6	20.0	11:00	0	91.7
21/12/2015	16.8	11.0	24.8	17:00	0	100.0
22/12/2015	16.6	8.3	22.1	06:00	0	100.0
23/12/2015	13.6	4.3	22.7	19:00	0	100.0
24/12/2015	9.0	3.2	21.0	14:00	0	100.0
25/12/2015	7.3	4.7	9.9	10:00	0	87.5
26/12/2015	9.6	4.5	16.5	02:00	0	100.0
27/12/2015	11.2	0.6	27.8	16:00	0	91.7
28/12/2015	16.0	3.0	24.7	13:00	0	95.8
29/12/2015	11.2	3.4	16.3	09:00	0	100.0
30/12/2015	12.5	7.6	25.6	15:00	0	100.0
31/12/2015	17.1	12.9	26.0	17:00	0	100.0

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

Table 8 Station 1 PM₁₀ Monthly Summary

Station 2 (Kedron State High School)

Summary

Station 2 Kedron State High School Ambient AQMS Summary December 2015				
	NO ₂ (ppm)	CO (ppm)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)
Monthly Average	0.005	0.1	5.2	14.7
Min 1hr Average	0.001	0.0	0.4	2.1
Max 1hr Average	0.017	0.3	29.0	35.6
Max 8hr Rolling Average	N/A	0.2	N/A	N/A
Max 24hr Average	N/A	N/A	9.0	22.7
Capture Rate (%)	58.8	95.7	94.0	98.8

Table 9 Station 2 Monthly Summary

Maximum allowable CO 8 hour rolling average is 8ppm
 Maximum allowable NO₂ 1 hour average is 0.12 ppm
 Maximum allowable PM_{2.5} 24 hour average is 25 µg/m³
 Maximum allowable PM₁₀ 24 hour average is 50 µg/m³

Nitrogen Dioxide Summary

Station 2 KSHS Ambient AQMS Nitrogen Dioxide Summary December 2015						
Date	24hr Avg (ppm)	1 hr Aves			Number of Exceedences 1hr Avg > 0.120 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max		
1/12/2015	0.004	0.002	0.008	05:00	0	93.4
2/12/2015	0.008	0.002	0.016	23:00	0	97.2
¹ 3/12/2015	-	0.017	0.017	00:00	0	4.2
¹ 4/12/2015	-	-	-	-	0	0.0
¹ 5/12/2015	-	-	-	-	0	0.0
¹ 6/12/2015	-	-	-	-	0	0.0
¹ 7/12/2015	-	-	-	-	0	0.0
¹ 8/12/2015	-	-	-	-	0	0.0
¹ 9/12/2015	-	-	-	-	0	0.0
¹ 10/12/2015	-	-	-	-	0	0.0
¹ 11/12/2015	-	-	-	-	0	0.0
¹ 12/12/2015	-	-	-	-	0	0.0
¹ 13/12/2015	-	-	-	-	0	0.0
² 14/12/2015	-	0.002	0.009	23:00	0	31.3
15/12/2015	0.007	0.002	0.016	07:00	0	92.0
16/12/2015	0.007	0.003	0.012	22:00	0	93.8
17/12/2015	0.006	0.002	0.015	02:00	0	95.5
18/12/2015	0.007	0.002	0.013	06:00	0	92.7
19/12/2015	0.005	0.001	0.013	04:00	0	94.8
20/12/2015	0.005	0.001	0.014	00:00	0	93.1
21/12/2015	0.003	0.001	0.013	06:00	0	94.1
22/12/2015	0.004	0.001	0.010	05:00	0	95.1
23/12/2015	0.003	0.001	0.008	23:00	0	94.4
24/12/2015	0.007	0.004	0.012	21:00	0	93.8
25/12/2015	0.003	0.001	0.008	00:00	0	94.8
26/12/2015	0.003	0.001	0.009	00:00	0	92.7
27/12/2015	0.003	0.001	0.005	23:00	0	95.8
28/12/2015	0.002	0.001	0.005	06:00	0	95.1
29/12/2015	0.004	0.001	0.008	05:00	0	93.8
30/12/2015	0.003	0.002	0.007	06:00	0	93.4
31/12/2015	0.003	0.002	0.006	5:00	0	93.4

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to instrument fault

² Loss of data due to maintenance

Table 10 Station 2 Nitrogen Dioxide Monthly Summary

Carbon Monoxide Summary

Station 2 KSHS Ambient AQMS Carbon Monoxide Summary December 2015

Date	24 hr Avg (ppm)	1 hr Avgs			8 hr Rolling Avgs		No. of exceedences 8hr Avg > 8.0 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max	Max (ppm)	Time of Max		
1/12/2015	0.1	0.1	0.2	17:00	0.2	00:00	0	93.1
2/12/2015	0.2	0.1	0.3	23:00	0.2	23:00	0	96.9
3/12/2015	0.1	0.0	0.3	00:00	0.2	00:00	0	96.9
4/12/2015	0.1	0.0	0.1	22:00	0.1	23:00	0	96.9
5/12/2015	0.1	0.1	0.1	22:00	0.1	00:00	0	96.9
6/12/2015	0.1	0.0	0.1	02:00	0.1	04:00	0	96.9
7/12/2015	0.1	0.0	0.1	05:00	0.1	06:00	0	96.9
8/12/2015	0.1	0.1	0.2	06:00	0.1	07:00	0	96.9
9/12/2015	0.1	0.1	0.1	19:00	0.1	20:00	0	96.9
10/12/2015	0.1	0.1	0.2	22:00	0.2	23:00	0	96.9
11/12/2015	0.1	0.1	0.2	06:00	0.2	07:00	0	96.9
12/12/2015	0.2	0.1	0.2	10:00	0.2	23:00	0	96.2
13/12/2015	0.1	0.1	0.3	23:00	0.2	00:00	0	96.9
¹ 14/12/2015	-	0.1	0.2	00:00	0.2	05:00	0	65.3
15/12/2015	0.1	0.1	0.3	07:00	0.2	08:00	0	96.9
16/12/2015	0.1	0.1	0.2	21:00	0.1	23:00	0	96.5
17/12/2015	0.1	0.1	0.2	06:00	0.2	07:00	0	96.9
18/12/2015	0.1	0.1	0.2	06:00	0.1	07:00	0	96.9
19/12/2015	0.1	0.1	0.2	04:00	0.1	07:00	0	96.9
20/12/2015	0.1	0.0	0.3	00:00	0.2	06:00	0	96.9
21/12/2015	0.1	0.0	0.2	06:00	0.1	00:00	0	96.9
22/12/2015	0.1	0.1	0.2	05:00	0.1	06:00	0	96.9
23/12/2015	0.1	0.0	0.1	23:00	0.1	23:00	0	96.9
24/12/2015	0.2	0.1	0.2	12:00	0.2	13:00	0	96.9
25/12/2015	0.1	0.1	0.2	10:00	0.2	00:00	0	96.9
26/12/2015	0.1	0.1	0.2	23:00	0.2	23:00	0	96.9
27/12/2015	0.1	0.1	0.2	17:00	0.2	00:00	0	96.9
28/12/2015	0.1	0.0	0.1	13:00	0.1	00:00	0	96.9
29/12/2015	0.1	0.0	0.1	16:00	0.1	18:00	0	96.9
30/12/2015	0.0	0.0	0.1	18:00	0.1	20:00	0	96.9
31/12/2015	0.1	0.0	0.1	17:00	0.1	20:00	0	96.9

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to maintenance

Table 11 Station 2 Carbon Monoxide Monthly Summary

PM_{2.5} Summary

Station 2 KSHS Ambient AQMS Particulate PM _{2.5} Summary December 2015						
Date	24 hr Avg ($\mu\text{g}/\text{m}^3$)	1 hr Avgs			No. of exceedences 24hr Avg > 25.0 $\mu\text{g}/\text{m}^3$	Capture Rate
		Min ($\mu\text{g}/\text{m}^3$)	Max ($\mu\text{g}/\text{m}^3$)	Time of Max		
1/12/2015	6.7	0.4	24.6	19:00	0	95.8
2/12/2015	8.6	2.5	14.3	00:00	0	100.0
3/12/2015	4.2	1.0	12.8	00:00	0	100.0
4/12/2015	5.0	1.7	10.3	08:00	0	100.0
5/12/2015	4.3	2.2	7.7	12:00	0	100.0
6/12/2015	7.7	2.5	16.6	18:00	0	100.0
7/12/2015	5.5	2.3	13.1	00:00	0	100.0
8/12/2015	5.5	0.8	16.7	02:00	0	100.0
9/12/2015	8.2	1.1	22.1	22:00	0	100.0
10/12/2015	6.0	0.4	29.0	22:00	0	100.0
11/12/2015	6.4	0.6	21.9	16:00	0	91.7
12/12/2015	0.8	0.4	2.7	00:00	0	100.0
13/12/2015	9.0	0.4	21.7	02:00	0	100.0
² 14/12/2015	-	0.5	24.1	22:00	0	66.7
15/12/2015	4.6	0.4	23.7	02:00	0	91.7
16/12/2015	6.0	0.4	28.6	04:00	0	100.0
17/12/2015	6.0	0.4	20.9	02:00	0	100.0
18/12/2015	6.4	0.4	25.7	02:00	0	100.0
19/12/2015	3.0	0.4	9.9	08:00	0	100.0
20/12/2015	5.0	0.4	18.9	16:00	0	100.0
21/12/2015	8.0	0.8	23.4	22:00	0	100.0
22/12/2015	6.4	0.5	21.2	05:00	0	75.0
23/12/2015	3.5	0.4	26.9	22:00	0	100.0
¹ 24/12/2015	-	0.5	16.4	08:00	0	66.7
25/12/2015	0.4	0.4	0.4	10:00	0	100.0
¹ 26/12/2015	-	0.4	9.7	15:00	0	66.7
¹ 27/12/2015	-	4.4	21.1	02:00	0	58.3
28/12/2015	0.7	0.4	2.6	00:00	0	100.0
29/12/2015	2.7	0.4	10.5	16:00	0	100.0
30/12/2015	4.8	1.0	13.1	08:00	0	100.0
31/12/2015	4.5	1.7	10.6	22:00	0	100.0

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to instrument fault

² Loss of data due to maintenance

Table 12 Station 2 PM_{2.5} Monthly Summary

PM₁₀ Summary

Station 2 KSHS Ambient AQMS Particulate PM10 Summary December 2015						
Date	24 hr Avg ($\mu\text{g}/\text{m}^3$)	1 hr Avgs			No. of exceedences 24hr Avg > 50.0 $\mu\text{g}/\text{m}^3$	Capture Rate
		Min ($\mu\text{g}/\text{m}^3$)	Max ($\mu\text{g}/\text{m}^3$)	Time of Max		
1/12/2015	22.7	15.2	34.8	20:00	0	95.8
2/12/2015	16.7	4.3	33.7	04:00	0	100.0
3/12/2015	16.1	7.2	27.4	18:00	0	100.0
4/12/2015	16.1	11.6	23.1	08:00	0	100.0
5/12/2015	12.8	8.2	18.6	22:00	0	100.0
6/12/2015	13.1	7.4	20.1	20:00	0	100.0
7/12/2015	13.3	7.7	23.1	14:00	0	100.0
8/12/2015	10.5	5.3	14.3	18:00	0	100.0
9/12/2015	13.7	5.9	24.9	12:00	0	100.0
10/12/2015	17.1	8.2	31.3	22:00	0	100.0
11/12/2015	18.0	11.2	31.0	16:00	0	100.0
12/12/2015	15.8	7.7	27.2	00:00	0	100.0
13/12/2015	15.5	8.3	23.5	23:00	0	100.0
¹ 14/12/2015	-	21.1	31.8	20:00	0	66.7
15/12/2015	20.6	13.6	27.6	10:00	0	100.0
16/12/2015	14.0	9.2	19.5	06:00	0	100.0
17/12/2015	16.0	9.6	21.8	12:00	0	100.0
18/12/2015	12.5	7.6	22.8	00:00	0	100.0
19/12/2015	12.2	6.3	20.2	08:00	0	100.0
20/12/2015	11.9	6.7	15.5	20:00	0	100.0
21/12/2015	17.3	8.3	35.6	20:00	0	100.0
22/12/2015	19.3	7.6	33.2	00:00	0	100.0
23/12/2015	12.2	5.2	22.6	23:00	0	100.0
24/12/2015	12.7	5.2	24.2	00:00	0	100.0
25/12/2015	7.4	4.4	13.6	02:00	0	100.0
26/12/2015	9.2	3.5	19.1	16:00	0	100.0
27/12/2015	17.3	7.0	29.7	04:00	0	100.0
28/12/2015	14.0	2.1	24.1	16:00	0	100.0
29/12/2015	13.0	7.0	19.8	00:00	0	100.0
30/12/2015	10.2	2.6	18.2	20:00	0	100.0
31/12/2015	14.0	4.3	21.9	20:00	0	100.0

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to maintenance

Table 13 Station 2 PM₁₀ Monthly Summary

Station 3 (Lewis Street)

Summary

Station 3 Lewis St Ambient AQMS Summary December 2015				
	NO ₂ (ppm)	CO (ppm)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)
Monthly Average	0.007	0.2	1.6	14.0
Min 1hr Average	0.002	0.0	-1.0	2.1
Max 1hr Average	0.021	0.4	10.8	61.8
Max 8hr Rolling Average	N/A	0.3	N/A	N/A
Max 24hr Average	N/A	N/A	4.3	25.5
Capture Rate (%)	97.1	96.8	75.9	97.0

Table 14 Station 3 Monthly Summary

Maximum allowable CO 8 hour rolling average is 8ppm

Maximum allowable NO₂ 1 hour average is 0.12 ppm

Maximum allowable PM_{2.5} 24 hour average is 25 µg/m³

Maximum allowable PM₁₀ 24 hour average is 50 µg/m³

Nitrogen Dioxide Summary

Station 3 Lewis St Ambient AQMS Nitrogen Dioxide Summary December 2015						
Date	24hr Avg (ppm)	1 hr Aves			Number of Exceedences 1hr Avg > 0.120 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max		
1/12/2015	0.005	0.003	0.008	07:00	0	97.2
2/12/2015	0.008	0.003	0.015	22:00	0	97.2
3/12/2015	0.007	0.005	0.017	00:00	0	97.2
4/12/2015	0.007	0.004	0.010	22:00	0	97.2
5/12/2015	0.007	0.004	0.012	03:00	0	97.2
6/12/2015	0.007	0.003	0.014	02:00	0	97.2
7/12/2015	0.007	0.004	0.014	23:00	0	97.2
8/12/2015	0.006	0.003	0.014	06:00	0	97.2
9/12/2015	0.005	0.003	0.008	05:00	0	97.2
10/12/2015	0.007	0.003	0.015	23:00	0	97.2
11/12/2015	0.010	0.004	0.021	02:00	0	97.2
12/12/2015	0.011	0.005	0.019	20:00	0	97.2
13/12/2015	0.008	0.003	0.016	21:00	0	97.2
14/12/2015	0.009	0.004	0.015	02:00	0	94.1
15/12/2015	0.009	0.004	0.018	07:00	0	97.2
16/12/2015	0.010	0.004	0.017	21:00	0	97.2
17/12/2015	0.008	0.005	0.015	02:00	0	97.2
18/12/2015	0.010	0.006	0.014	02:00	0	97.2
19/12/2015	0.008	0.004	0.015	23:00	0	97.2
20/12/2015	0.006	0.002	0.014	00:00	0	97.2
21/12/2015	0.004	0.003	0.011	06:00	0	97.2
22/12/2015	0.006	0.003	0.012	06:00	0	97.2
23/12/2015	0.005	0.003	0.010	23:00	0	97.2
24/12/2015	0.007	0.005	0.010	06:00	0	97.2
25/12/2015	0.004	0.002	0.008	23:00	0	97.2
26/12/2015	0.004	0.003	0.009	00:00	0	97.2
27/12/2015	0.003	0.002	0.005	05:00	0	97.2
28/12/2015	0.003	0.003	0.004	21:00	0	97.2
29/12/2015	0.004	0.003	0.006	23:00	0	97.2
30/12/2015	0.004	0.003	0.007	20:00	0	97.2
31/12/2015	0.004	0.003	0.007	6:00	0	97.2

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.
 There will be no daily results if there is less than 75% valid data for that day

Table 15 Station 3 Nitrogen Dioxide Monthly Summary

Carbon Monoxide Summary

Station 3 Lewis St Ambient AQMS Carbon Monoxide Summary December 2015								
Date	24 hr Avg (ppm)	1 hr Avgs			8 hr Rolling Avgs		No. of exceedences 8hr Avg > 8.0 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max	Max (ppm)	Time of Max		
1/12/2015	0.2	0.2	0.2	17:00	0.2	18:00	0	96.9
2/12/2015	0.3	0.2	0.4	23:00	0.3	23:00	0	96.9
3/12/2015	0.1	0.1	0.4	00:00	0.3	00:00	0	96.9
4/12/2015	0.1	0.1	0.1	22:00	0.1	23:00	0	96.9
5/12/2015	0.1	0.1	0.2	22:00	0.1	23:00	0	96.9
6/12/2015	0.1	0.1	0.2	02:00	0.2	03:00	0	96.9
7/12/2015	0.1	0.1	0.2	23:00	0.2	23:00	0	96.9
8/12/2015	0.1	0.1	0.2	06:00	0.2	06:00	0	96.9
9/12/2015	0.2	0.1	0.2	06:00	0.2	11:00	0	96.9
10/12/2015	0.2	0.1	0.3	23:00	0.2	23:00	0	96.9
11/12/2015	0.2	0.2	0.3	06:00	0.2	06:00	0	96.9
12/12/2015	0.2	0.2	0.3	18:00	0.3	23:00	0	96.9
13/12/2015	0.2	0.0	0.3	23:00	0.3	00:00	0	96.9
14/12/2015	0.2	0.1	0.3	00:00	0.2	03:00	0	93.8
15/12/2015	0.2	0.1	0.3	07:00	0.2	08:00	0	96.9
16/12/2015	0.2	0.1	0.3	21:00	0.2	23:00	0	96.9
17/12/2015	0.1	0.1	0.2	02:00	0.2	03:00	0	96.9
18/12/2015	0.2	0.1	0.2	23:00	0.2	07:00	0	96.9
19/12/2015	0.2	0.1	0.3	00:00	0.2	06:00	0	96.9
20/12/2015	0.1	0.1	0.3	02:00	0.2	06:00	0	96.9
21/12/2015	0.2	0.1	0.2	06:00	0.2	09:00	0	96.9
22/12/2015	0.2	0.1	0.2	06:00	0.2	07:00	0	96.9
23/12/2015	0.1	0.1	0.2	23:00	0.2	00:00	0	96.9
24/12/2015	0.2	0.2	0.2	14:00	0.2	21:00	0	96.9
25/12/2015	0.1	0.1	0.2	23:00	0.2	00:00	0	96.9
26/12/2015	0.1	0.1	0.2	00:00	0.2	02:00	0	96.9
27/12/2015	0.2	0.1	0.2	18:00	0.2	19:00	0	96.9
28/12/2015	0.1	0.1	0.1	13:00	0.2	00:00	0	96.9
29/12/2015	0.1	0.1	0.1	18:00	0.1	23:00	0	96.9
30/12/2015	0.1	0.1	0.1	17:00	0.1	20:00	0	96.9
31/12/2015	0.1	0.1	0.1	13:00	0.1	19:00	0	96.9

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

Table 16 Station 3 Carbon Monoxide Monthly Summary

PM_{2.5} Summary

Station 3 Lewis St Ambient AQMS Particulate PM2.5 Summary December 2015						
Date	24 hr Avg ($\mu\text{g}/\text{m}^3$)	1 hr Avgs			No. of exceedences 24hr Avg > 25.0 $\mu\text{g}/\text{m}^3$	Capture Rate
		Min ($\mu\text{g}/\text{m}^3$)	Max ($\mu\text{g}/\text{m}^3$)	Time of Max		
1/12/2015	2.7	-1.0	6.0	11:00	0	91.7
2/12/2015	1.8	-0.8	6.7	13:00	0	79.2
3/12/2015	1.7	-0.9	4.8	19:00	0	79.2
4/12/2015	1.2	-1.0	5.7	22:00	0	83.3
5/12/2015	1.4	-0.9	5.7	11:00	0	75.0
¹ 6/12/2015	-	-1.0	1.9	05:00	0	70.8
¹ 7/12/2015	-	-1.0	2.6	09:00	0	37.5
¹ 8/12/2015	-	-0.9	3.8	00:00	0	45.8
¹ 9/12/2015	-	-1.0	4.7	03:00	0	62.5
10/12/2015	1.3	-1.0	3.6	09:00	0	83.3
11/12/2015	2.8	0.0	7.7	03:00	0	95.8
12/12/2015	4.3	-0.9	10.8	21:00	0	91.7
13/12/2015	2.7	-0.9	5.9	01:00	0	100.0
14/12/2015	3.0	-1.0	8.9	11:00	0	87.5
15/12/2015	3.1	-1.0	8.9	12:00	0	83.3
16/12/2015	1.1	-1.0	4.5	23:00	0	87.5
¹ 17/12/2015	-	-1.0	2.0	10:00	0	62.5
18/12/2015	0.4	-1.0	2.0	12:00	0	79.2
19/12/2015	0.6	-1.0	2.6	23:00	0	79.2
20/12/2015	1.3	-1.0	3.9	21:00	0	87.5
21/12/2015	1.3	-1.0	4.8	11:00	0	70.8
22/12/2015	2.2	-0.8	6.0	10:00	0	75.0
¹ 23/12/2015	-	-0.9	2.8	16:00	0	70.8
¹ 24/12/2015	-	-1.0	2.8	05:00	0	58.3
¹ 25/12/2015	-	-1.0	3.0	03:00	0	33.3
26/12/2015	0.8	-1.0	4.8	00:00	0	79.2
27/12/2015	2.6	-1.0	7.6	21:00	0	75.0
28/12/2015	3.0	-1.0	6.9	15:00	0	75.0
29/12/2015	0.6	-1.0	4.6	06:00	0	70.8
30/12/2015	1.0	-1.0	3.9	22:00	0	95.8
31/12/2015	2.2	-1.0	5.8	11:00	0	87.5

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to instrument fault

Table 17 Station 3 PM_{2.5} Monthly Summary

PM₁₀ Summary

Station 3 Lewis St Ambient AQMS Particulate PM10 Summary December 2015						
Date	24 hr Avg ($\mu\text{g}/\text{m}^3$)	1 hr Avgs			No. of exceedences 24hr Avg > 50.0 $\mu\text{g}/\text{m}^3$	Capture Rate
		Min ($\mu\text{g}/\text{m}^3$)	Max ($\mu\text{g}/\text{m}^3$)	Time of Max		
1/12/2015	15.0	9.7	18.6	11:00	0	100.0
2/12/2015	13.5	7.5	42.3	07:00	0	91.7
3/12/2015	18.8	6.1	33.9	16:00	0	100.0
4/12/2015	16.4	11.4	21.6	06:00	0	100.0
5/12/2015	15.7	12.3	29.3	18:00	0	100.0
6/12/2015	14.3	8.8	21.1	15:00	0	100.0
7/12/2015	14.1	9.2	32.9	10:00	0	100.0
8/12/2015	10.7	7.0	16.3	07:00	0	100.0
9/12/2015	12.4	8.7	15.5	11:00	0	100.0
10/12/2015	14.9	9.6	26.8	18:00	0	100.0
11/12/2015	17.0	9.3	23.1	21:00	0	100.0
12/12/2015	13.4	6.8	21.0	00:00	0	100.0
13/12/2015	17.4	6.1	33.9	11:00	0	100.0
14/12/2015	25.5	13.4	61.8	11:00	0	91.7
15/12/2015	17.1	11.4	26.5	07:00	0	100.0
16/12/2015	14.9	8.1	21.2	16:00	0	100.0
17/12/2015	14.2	6.3	24.0	17:00	0	100.0
18/12/2015	12.0	6.8	16.8	07:00	0	100.0
19/12/2015	11.8	6.7	17.1	05:00	0	100.0
20/12/2015	13.6	5.8	22.4	11:00	0	95.8
21/12/2015	19.0	10.1	53.4	10:00	0	100.0
22/12/2015	14.7	9.8	21.6	05:00	0	100.0
23/12/2015	13.2	6.3	23.4	05:00	0	100.0
24/12/2015	8.9	3.5	17.7	14:00	0	95.8
25/12/2015	7.4	5.7	10.1	03:00	0	87.5
26/12/2015	9.5	3.9	14.1	19:00	0	100.0
27/12/2015	10.4	2.6	20.5	05:00	0	50.0
28/12/2015	14.6	2.1	21.0	20:00	0	95.8
29/12/2015	9.7	5.1	12.3	09:00	0	100.0
30/12/2015	10.1	6.3	17.7	15:00	0	100.0
31/12/2015	12.9	7.5	19.1	17:00	0	100.0

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.
 There will be no daily results if there is less than 75% valid data for that day

Table 18 Station 3 PM₁₀ Monthly Summary

Station 4 (Airportlink Operation Centre)

Summary

Station 4 Airportlink Operation Centre Ambient AQMS Summary December 2015				
	NO ₂ (ppm)	CO (ppm)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)
Monthly Average	0.007	0.3	3.5	15.2
Min 1hr Average	0.002	0.1	-1.0	3.2
Max 1hr Average	0.021	0.6	19.5	38.1
Max 8hr Rolling Average	N/A	0.5	N/A	N/A
Max 24hr Average	N/A	N/A	6.8	23.0
Capture Rate (%)	97.1	96.6	82.4	96.1

Table 19 Station 4 Monthly Summary

Maximum allowable CO 8 hour rolling average is 8ppm
 Maximum allowable NO₂ 1 hour average is 0.12 ppm
 Maximum allowable PM_{2.5} 24 hour average is 25 µg/m³
 Maximum allowable PM₁₀ 24 hour average is 50 µg/m³

Nitrogen Dioxide Summary

Station 4 Airportlink Operation Centre Ambient AQMS Nitrogen Dioxide Summary December 2015						
Date	24hr Avg (ppm)	1 hr Aves			Number of Exceedences 1hr Avg > 0.120 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max		
1/12/2015	0.006	0.003	0.008	06:00	0	97.2
2/12/2015	0.009	0.003	0.020	22:00	0	97.2
3/12/2015	0.010	0.006	0.017	00:00	0	97.2
4/12/2015	0.010	0.004	0.017	15:00	0	97.2
5/12/2015	0.008	0.002	0.012	11:00	0	97.2
6/12/2015	0.007	0.004	0.010	21:00	0	97.2
7/12/2015	0.008	0.006	0.012	22:00	0	97.2
8/12/2015	0.007	0.004	0.015	07:00	0	97.2
9/12/2015	0.005	0.004	0.008	05:00	0	97.2
10/12/2015	0.007	0.003	0.021	18:00	0	97.2
11/12/2015	0.010	0.005	0.016	06:00	0	97.2
12/12/2015	0.011	0.004	0.019	17:00	0	97.2
13/12/2015	0.010	0.004	0.020	21:00	0	97.2
14/12/2015	0.010	0.005	0.017	23:00	0	92.7
15/12/2015	0.009	0.005	0.016	09:00	0	97.2
16/12/2015	0.012	0.005	0.018	18:00	0	97.2
17/12/2015	0.010	0.006	0.014	19:00	0	97.2
18/12/2015	0.009	0.006	0.015	23:00	0	97.2
19/12/2015	0.008	0.004	0.016	23:00	0	97.2
20/12/2015	0.006	0.002	0.015	00:00	0	97.2
21/12/2015	0.005	0.002	0.013	06:00	0	97.2
22/12/2015	0.006	0.003	0.012	06:00	0	97.2
23/12/2015	0.006	0.003	0.012	19:00	0	97.2
24/12/2015	0.009	0.005	0.015	16:00	0	97.2
25/12/2015	0.005	0.002	0.008	23:00	0	97.2
26/12/2015	0.004	0.002	0.009	00:00	0	97.2
27/12/2015	0.004	0.002	0.010	18:00	0	97.2
28/12/2015	0.005	0.002	0.010	15:00	0	97.2
29/12/2015	0.006	0.002	0.011	16:00	0	97.2
30/12/2015	0.006	0.002	0.011	17:00	0	97.2
31/12/2015	0.006	0.002	0.009	18:00	0	97.2

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.
 There will be no daily results if there is less than 75% valid data for that day

Table 20 Station 4 Nitrogen Dioxide Monthly Summary

Carbon Monoxide Summary

Station 4 Airportlink Operation Centre Ambient AQMS Carbon Monoxide Summary December 2015

Date	24 hr Avg (ppm)	1 hr Avgs			8 hr Rolling Avgs		No. of exceedances 8hr Avg > 8.0 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max	Max (ppm)	Time of Max		
1/12/2015	0.3	0.2	0.3	06:00	0.3	01:00	0	96.9
2/12/2015	0.4	0.3	0.5	23:00	0.5	23:00	0	96.9
3/12/2015	0.3	0.3	0.4	00:00	0.5	01:00	0	96.9
4/12/2015	0.2	0.1	0.3	15:00	0.3	00:00	0	96.9
5/12/2015	0.2	0.1	0.3	11:00	0.2	18:00	0	96.9
6/12/2015	0.2	0.2	0.3	20:00	0.3	21:00	0	96.9
7/12/2015	0.3	0.2	0.3	08:00	0.3	23:00	0	96.9
8/12/2015	0.3	0.2	0.4	06:00	0.3	08:00	0	96.9
9/12/2015	0.3	0.2	0.3	05:00	0.3	08:00	0	96.9
10/12/2015	0.3	0.3	0.5	18:00	0.4	22:00	0	96.9
11/12/2015	0.4	0.3	0.4	06:00	0.4	08:00	0	96.9
12/12/2015	0.4	0.3	0.5	17:00	0.4	20:00	0	96.9
13/12/2015	0.3	0.2	0.5	21:00	0.4	00:00	0	96.9
14/12/2015	0.3	0.2	0.3	07:00	0.4	00:00	0	92.4
15/12/2015	0.3	0.3	0.4	07:00	0.3	09:00	0	96.9
16/12/2015	0.3	0.3	0.6	18:00	0.4	22:00	0	96.9
17/12/2015	0.3	0.3	0.4	19:00	0.4	00:00	0	96.9
18/12/2015	0.3	0.2	0.4	22:00	0.4	00:00	0	96.9
19/12/2015	0.3	0.2	0.4	00:00	0.3	01:00	0	96.5
20/12/2015	0.2	0.2	0.3	00:00	0.3	03:00	0	96.9
21/12/2015	0.3	0.2	0.3	06:00	0.3	08:00	0	96.5
22/12/2015	0.3	0.3	0.4	06:00	0.3	08:00	0	96.9
23/12/2015	0.3	0.2	0.4	19:00	0.3	00:00	0	96.9
24/12/2015	0.4	0.3	0.5	16:00	0.4	21:00	0	96.9
25/12/2015	0.3	0.2	0.3	18:00	0.4	00:00	0	96.5
26/12/2015	0.3	0.3	0.3	00:00	0.3	00:00	0	96.5
27/12/2015	0.3	0.3	0.4	18:00	0.4	19:00	0	96.5
28/12/2015	0.3	0.3	0.4	14:00	0.4	18:00	0	96.5
29/12/2015	0.2	0.2	0.3	16:00	0.3	00:00	0	96.5
30/12/2015	0.2	0.1	0.3	15:00	0.2	20:00	0	96.5
31/12/2015	0.2	0.1	0.2	18:00	0.2	18:00	0	96.5

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

Table 21 Station 4 Carbon Monoxide Monthly Summary

PM_{2.5} Summary

Station 4 Airportlink Operation Centre Ambient AQMS Particulate PM2.5 Summary December 2015						
Date	24 hr Avg ($\mu\text{g}/\text{m}^3$)	1 hr Avgs			No. of exceedences 24hr Avg > 25.0 $\mu\text{g}/\text{m}^3$	Capture Rate
		Min ($\mu\text{g}/\text{m}^3$)	Max ($\mu\text{g}/\text{m}^3$)	Time of Max		
1/12/2015	1.6	-1.0	4.0	01:00	0	83.3
2/12/2015	3.1	-0.8	7.5	18:00	0	91.7
3/12/2015	6.4	-1.0	18.2	12:00	0	95.8
4/12/2015	5.7	3.1	9.6	14:00	0	100.0
5/12/2015	3.2	0.0	10.8	09:00	0	87.5
¹ 6/12/2015	-	-1.0	8.8	08:00	0	62.5
7/12/2015	3.1	-0.9	9.3	09:00	0	75.0
8/12/2015	4.2	-1.0	19.5	08:00	0	83.3
9/12/2015	3.5	-1.0	8.8	03:00	0	79.2
10/12/2015	1.6	-0.5	3.7	19:00	0	87.5
11/12/2015	3.7	-0.6	7.0	08:00	0	79.2
12/12/2015	3.8	-0.5	12.5	22:00	0	95.8
13/12/2015	6.8	1.5	15.2	13:00	0	100.0
14/12/2015	6.5	-0.8	16.9	00:00	0	91.7
15/12/2015	4.7	0.0	10.0	08:00	0	91.7
16/12/2015	2.9	-0.8	6.7	08:00	0	95.8
17/12/2015	2.4	-1.0	5.5	15:00	0	100.0
18/12/2015	2.0	-1.0	7.9	07:00	0	95.8
19/12/2015	3.8	0.0	11.8	07:00	0	100.0
¹ 20/12/2015	-	-0.9	18.8	07:00	0	70.8
21/12/2015	3.1	0.2	8.6	08:00	0	95.8
22/12/2015	5.0	-1.0	12.9	02:00	0	95.8
23/12/2015	2.3	-1.0	8.6	13:00	0	95.8
24/12/2015	1.6	-0.5	4.6	13:00	0	75.0
¹ 25/12/2015	-	-0.9	4.7	08:00	0	66.7
¹ 26/12/2015	-	-1.0	3.9	20:00	0	50.0
¹ 27/12/2015	-	-1.0	1.0	03:00	0	37.5
¹ 28/12/2015	-	2.3	9.6	16:00	0	33.3
29/12/2015	4.2	0.4	9.6	07:00	0	83.3
30/12/2015	3.6	-0.5	15.5	07:00	0	83.3
¹ 31/12/2015	-	-1.0	4.0	5:00	0	70.8

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to intermittent instrument fault

Table 22 Station 4 PM_{2.5} Monthly Summary

PM₁₀ Summary

Station 4 Airportlink Operation Centre Ambient AQMS Particulate PM10 Summary December 2015						
Date	24 hr Avg ($\mu\text{g}/\text{m}^3$)	1 hr Avgs			No. of exceedences 24hr Avg > 50.0 $\mu\text{g}/\text{m}^3$	Capture Rate
		Min ($\mu\text{g}/\text{m}^3$)	Max ($\mu\text{g}/\text{m}^3$)	Time of Max		
1/12/2015	15.7	9.1	20.2	11:00	0	100.0
2/12/2015	13.5	8.7	19.4	07:00	0	100.0
3/12/2015	19.2	7.4	38.1	16:00	0	100.0
4/12/2015	18.0	12.6	24.2	07:00	0	100.0
5/12/2015	15.0	10.9	20.3	18:00	0	100.0
6/12/2015	14.0	7.6	21.5	15:00	0	100.0
7/12/2015	14.3	10.4	19.5	08:00	0	100.0
8/12/2015	12.4	8.4	19.8	06:00	0	100.0
9/12/2015	13.7	9.9	19.7	10:00	0	100.0
10/12/2015	15.4	9.3	23.8	13:00	0	100.0
11/12/2015	18.6	8.2	27.9	16:00	0	100.0
12/12/2015	14.1	6.2	24.0	19:00	0	100.0
13/12/2015	18.8	6.4	29.5	17:00	0	100.0
14/12/2015	23.0	17.2	29.8	07:00	0	95.8
15/12/2015	18.6	13.7	26.2	09:00	0	100.0
16/12/2015	16.9	9.9	24.8	18:00	0	100.0
17/12/2015	16.3	9.0	26.1	17:00	0	100.0
18/12/2015	13.4	5.9	23.3	16:00	0	100.0
19/12/2015	12.9	9.3	19.2	11:00	0	100.0
20/12/2015	15.3	10.2	23.5	13:00	0	91.7
21/12/2015	17.0	6.5	30.2	17:00	0	100.0
22/12/2015	16.7	10.6	23.2	06:00	0	100.0
23/12/2015	13.9	6.0	24.8	19:00	0	100.0
24/12/2015	10.2	4.9	21.3	00:00	0	100.0
25/12/2015	8.4	3.2	13.4	10:00	0	87.5
26/12/2015	10.6	5.6	19.8	17:00	0	87.5
¹ 27/12/2015	-	3.4	18.6	14:00	0	29.2
28/12/2015	17.9	3.4	25.0	13:00	0	87.5
29/12/2015	11.8	7.6	16.1	16:00	0	100.0
30/12/2015	13.3	7.4	24.9	15:00	0	100.0
31/12/2015	17.5	10.2	26.5	13:00	0	100.0

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to instrument fault

Table 23 Station 4 PM₁₀ Monthly Summary

Station 5 (Cartwright Street)

Summary

Station 5 Cartwright St Ambient AQMS Summary December 2015				
	NO ₂ (ppm)	CO (ppm)	PM _{2.5} (µg/m ³)	PM ₁₀ (µg/m ³)
Monthly Average	0.006	0.2	9.8	18.6
Min 1hr Average	0.000	0.0	0.2	0.6
Max 1hr Average	0.022	0.5	56.5	69.9
Max 8hr Rolling Average	N/A	0.4	N/A	N/A
Max 24hr Average	N/A	N/A	13.0	26.0
Capture Rate (%)	87.9	87.2	87.8	90.5

Table 24 Station 5 Monthly Summary

Maximum allowable CO 8 hour rolling average is 8ppm

Maximum allowable NO₂ 1 hour average is 0.12 ppm

Maximum allowable PM_{2.5} 24 hour average is 25 µg/m³

Maximum allowable PM₁₀ 24 hour average is 50 µg/m³

Nitrogen Dioxide Summary

Station 5 Cartwright St Ambient AQMS Nitrogen Dioxide Summary December 2015						
Date	24hr Avg (ppm)	1 hr Aves			Number of Exceedences 1hr Avg > 0.120 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max		
1/12/2015	0.004	0.001	0.009	05:00	0	97.2
2/12/2015	0.008	0.001	0.018	21:00	0	97.2
3/12/2015	0.008	0.004	0.018	00:00	0	97.2
4/12/2015	0.008	0.004	0.013	13:00	0	97.2
5/12/2015	0.006	0.002	0.016	02:00	0	97.2
6/12/2015	0.005	0.001	0.014	04:00	0	97.2
7/12/2015	0.006	0.003	0.014	02:00	0	97.2
8/12/2015	0.005	0.002	0.015	06:00	0	97.2
9/12/2015	0.004	0.002	0.009	05:00	0	97.2
10/12/2015	0.005	0.001	0.014	22:00	0	97.2
11/12/2015	0.010	0.004	0.022	03:00	0	97.2
12/12/2015	0.011	0.004	0.020	19:00	0	97.2
13/12/2015	0.007	0.002	0.018	22:00	0	97.2
14/12/2015	0.008	0.003	0.015	05:00	0	94.1
15/12/2015	0.008	0.003	0.018	07:00	0	97.2
16/12/2015	0.007	0.003	0.011	04:00	0	97.2
¹ 17/12/2015	-	0.005	0.015	07:00	0	60.8
¹ 18/12/2015	-	-	-	-	0	0.0
¹ 19/12/2015	-	-	-	-	0	0.0
¹ 20/12/2015	-	0.000	0.003	22:00	0	42.7
21/12/2015	0.004	0.001	0.014	06:00	0	97.2
22/12/2015	0.004	0.002	0.009	06:00	0	97.2
23/12/2015	0.004	0.002	0.014	23:00	0	97.2
24/12/2015	0.007	0.004	0.011	00:00	0	97.2
25/12/2015	0.003	0.001	0.008	23:00	0	97.2
26/12/2015	0.003	0.001	0.012	05:00	0	97.2
27/12/2015	0.002	0.001	0.004	22:00	0	97.2
28/12/2015	0.002	0.001	0.003	14:00	0	97.2
29/12/2015	0.003	0.001	0.007	23:00	0	97.2
30/12/2015	0.004	0.002	0.012	04:00	0	97.2
31/12/2015	0.004	0.002	0.009	0:00	0	97.2

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to air conditioner failure

Table 25 Station 5 Nitrogen Dioxide Monthly Summary

Carbon Monoxide Summary

Station 5 Cartwright St Ambient AQMS Carbon Monoxide Summary December 2015								
Date	24 hr Avg (ppm)	1 hr Avgs			8 hr Rolling Avgs		No. of exceedences 8hr Avg > 8.0 ppm	Capture Rate
		Min (ppm)	Max (ppm)	Time of Max	Max (ppm)	Time of Max		
1/12/2015	0.3	0.2	0.3	05:00	0.3	00:00	0	96.9
2/12/2015	0.3	0.2	0.5	22:00	0.4	23:00	0	96.9
3/12/2015	0.2	0.1	0.4	00:00	0.4	01:00	0	96.9
4/12/2015	0.2	0.1	0.2	22:00	0.2	07:00	0	96.9
5/12/2015	0.2	0.2	0.3	21:00	0.3	23:00	0	96.2
6/12/2015	0.2	0.1	0.3	20:00	0.3	01:00	0	96.2
7/12/2015	0.2	0.1	0.3	21:00	0.3	01:00	0	96.2
8/12/2015	0.2	0.1	0.3	06:00	0.2	01:00	0	96.2
9/12/2015	0.2	0.1	0.3	06:00	0.2	01:00	0	96.9
10/12/2015	0.2	0.2	0.3	22:00	0.3	23:00	0	96.9
11/12/2015	0.3	0.2	0.4	21:00	0.4	23:00	0	96.5
12/12/2015	0.3	0.3	0.4	19:00	0.4	19:00	0	96.9
13/12/2015	0.2	0.1	0.4	22:00	0.4	00:00	0	96.9
14/12/2015	0.2	0.1	0.3	15:00	0.3	22:00	0	93.1
15/12/2015	0.3	0.2	0.4	06:00	0.3	12:00	0	96.9
16/12/2015	0.2	0.2	0.3	22:00	0.2	23:00	0	96.9
¹ 17/12/2015	-	0.2	0.4	07:00	0.3	13:00	0	60.4
¹ 18/12/2015	-	-	-	-	-	-	0	0.0
¹ 19/12/2015	-	-	-	-	-	-	0	0.0
¹ 20/12/2015	-	0.1	0.3	23:00	0.3	23:00	0	42.4
21/12/2015	0.3	0.1	0.4	18:00	0.3	23:00	0	96.2
22/12/2015	0.2	0.0	0.3	21:00	0.3	00:00	0	96.2
23/12/2015	0.2	0.0	0.4	23:00	0.3	23:00	0	96.2
24/12/2015	0.2	0.2	0.3	00:00	0.3	02:00	0	96.5
25/12/2015	0.2	0.0	0.3	19:00	0.2	23:00	0	95.8
26/12/2015	0.2	0.1	0.3	19:00	0.3	23:00	0	96.5
27/12/2015	0.3	0.2	0.3	18:00	0.3	01:00	0	96.5
28/12/2015	0.1	0.1	0.2	00:00	0.2	00:00	0	96.5
29/12/2015	0.1	0.0	0.1	05:00	0.1	06:00	0	96.5
30/12/2015	0.2	0.1	0.3	19:00	0.2	22:00	0	95.8
31/12/2015	0.2	0.1	0.3	20:00	0.2	21:00	0	95.8

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to air conditioner failure

Table 26 Station 5 Carbon Monoxide Monthly Summary

PM_{2.5} Summary

Station 5 Cartwright St Ambient AQMS Particulate PM _{2.5} Summary December 2015						
Date	24 hr Avg ($\mu\text{g}/\text{m}^3$)	1 hr Avgs			No. of exceedences 24hr Avg > 25.0 $\mu\text{g}/\text{m}^3$	Capture Rate
		Min ($\mu\text{g}/\text{m}^3$)	Max ($\mu\text{g}/\text{m}^3$)	Time of Max		
1/12/2015	9.2	5.0	22.9	15:00	0	100.0
2/12/2015	7.6	1.2	15.9	12:00	0	100.0
3/12/2015	9.5	4.3	17.8	17:00	0	100.0
4/12/2015	8.4	3.6	16.8	06:00	0	100.0
5/12/2015	10.5	2.4	56.5	13:00	0	100.0
6/12/2015	8.2	2.0	23.0	17:00	0	100.0
7/12/2015	8.5	3.0	23.5	18:00	0	95.8
8/12/2015	7.1	3.0	24.5	16:00	0	100.0
9/12/2015	7.0	2.1	20.8	16:00	0	100.0
10/12/2015	8.4	4.2	25.3	16:00	0	100.0
11/12/2015	11.0	5.1	18.8	17:00	0	100.0
12/12/2015	9.5	2.3	19.3	22:00	0	100.0
13/12/2015	10.7	3.3	18.3	22:00	0	100.0
14/12/2015	10.2	5.2	25.1	14:00	0	95.8
15/12/2015	12.7	4.7	53.3	05:00	0	100.0
16/12/2015	7.7	1.5	10.9	21:00	0	100.0
¹ 17/12/2015	-	5.8	14.7	07:00	0	66.7
¹ 18/12/2015	-	-	-	-	0	0.0
¹ 19/12/2015	-	-	-	-	0	0.0
¹ 20/12/2015	-	6.4	29.0	13:00	0	29.2
21/12/2015	9.2	3.2	24.9	19:00	0	100.0
22/12/2015	11.0	1.9	26.0	16:00	0	91.7
23/12/2015	11.2	0.3	34.4	18:00	0	91.7
24/12/2015	9.7	2.9	21.0	17:00	0	100.0
25/12/2015	9.1	1.1	21.2	22:00	0	83.3
26/12/2015	10.2	2.7	33.5	19:00	0	95.8
27/12/2015	11.6	1.1	22.8	17:00	0	100.0
28/12/2015	13.0	1.3	24.8	18:00	0	100.0
29/12/2015	11.4	2.0	24.0	07:00	0	87.5
30/12/2015	11.7	2.3	36.6	18:00	0	87.5
31/12/2015	10.9	0.2	27.2	19:00	0	95.8

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to air conditioner failure

Table 27 Station 5 PM_{2.5} Monthly Summary

PM₁₀ Summary

Station 5 Cartwright St Ambient AQMS Particulate PM10 Summary December 2015						
Date	24 hr Avg ($\mu\text{g}/\text{m}^3$)	1 hr Avgs			No. of exceedences 24hr Avg > 50.0 $\mu\text{g}/\text{m}^3$	Capture Rate
		Min ($\mu\text{g}/\text{m}^3$)	Max ($\mu\text{g}/\text{m}^3$)	Time of Max		
1/12/2015	19.7	6.0	42.5	16:00	0	100.0
2/12/2015	12.9	5.9	24.1	02:00	0	100.0
3/12/2015	23.8	6.1	55.9	18:00	0	100.0
4/12/2015	21.9	9.1	34.4	18:00	0	100.0
5/12/2015	17.6	7.2	36.0	18:00	0	100.0
6/12/2015	13.5	4.9	32.6	18:00	0	100.0
7/12/2015	17.9	7.2	31.7	19:00	0	100.0
8/12/2015	18.3	8.1	37.5	19:00	0	100.0
9/12/2015	19.2	5.2	47.0	15:00	0	100.0
10/12/2015	20.1	8.1	48.5	15:00	0	100.0
11/12/2015	25.2	7.9	57.7	12:00	0	100.0
12/12/2015	13.0	1.3	25.8	20:00	0	100.0
13/12/2015	20.4	7.8	36.9	17:00	0	100.0
14/12/2015	24.1	12.5	49.2	15:00	0	95.8
15/12/2015	20.2	10.6	38.5	13:00	0	100.0
16/12/2015	13.9	0.6	26.6	23:00	0	100.0
¹ 17/12/2015	-	10.2	24.5	08:00	0	66.7
¹ 18/12/2015	-	-	-	-	0	0.0
¹ 19/12/2015	-	-	-	-	0	0.0
¹ 20/12/2015	-	1.8	25.0	13:00	0	41.7
21/12/2015	26.0	15.2	36.4	10:00	0	100.0
22/12/2015	24.1	11.5	48.4	15:00	0	100.0
23/12/2015	21.6	9.6	40.9	15:00	0	100.0
24/12/2015	12.3	5.9	20.2	01:00	0	100.0
25/12/2015	11.4	2.2	43.2	15:00	0	100.0
26/12/2015	11.8	6.2	20.6	20:00	0	100.0
27/12/2015	17.7	8.1	69.9	08:00	0	100.0
28/12/2015	21.9	8.0	34.0	08:00	0	100.0
29/12/2015	14.4	6.0	23.7	03:00	0	100.0
30/12/2015	18.6	8.5	27.4	06:00	0	100.0
31/12/2015	21.7	9.2	28.1	19:00	0	100.0

Results highlighted in red indicate the highest recorded value for the relevant averaging period for the month.

There will be no daily results if there is less than 75% valid data for that day

¹ Loss of data due to air conditioner failure

Table 28 Station 5 PM₁₀ Monthly Summary

Graphical Representations

Nitrogen Dioxide

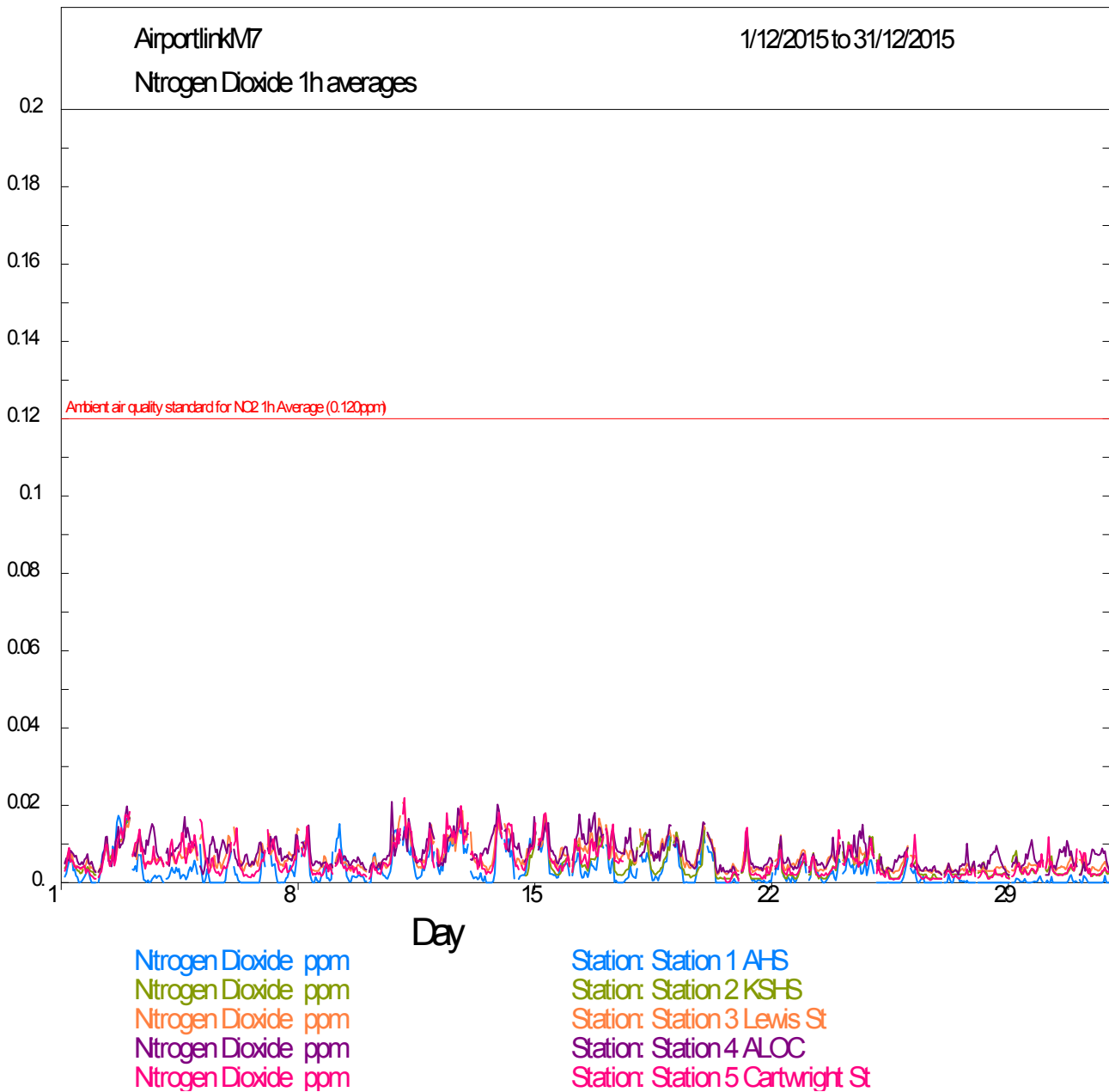


Figure 1 Nitrogen Dioxide 1hr averages

Carbon Monoxide 8hr Rolling Averages

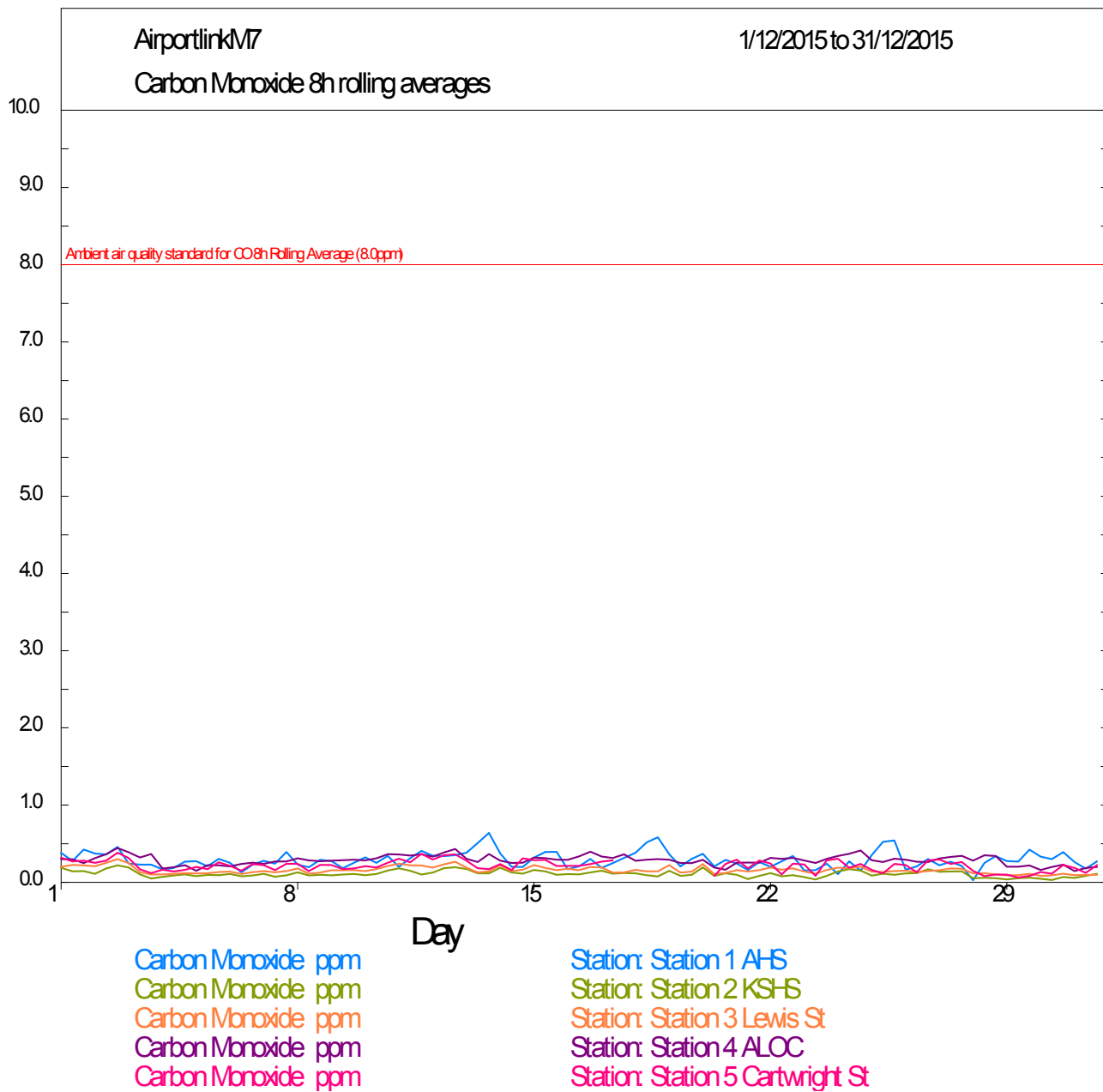


Figure 2 Carbon Monoxide 8hr rolling averages

PM₁₀ 24hr Averages

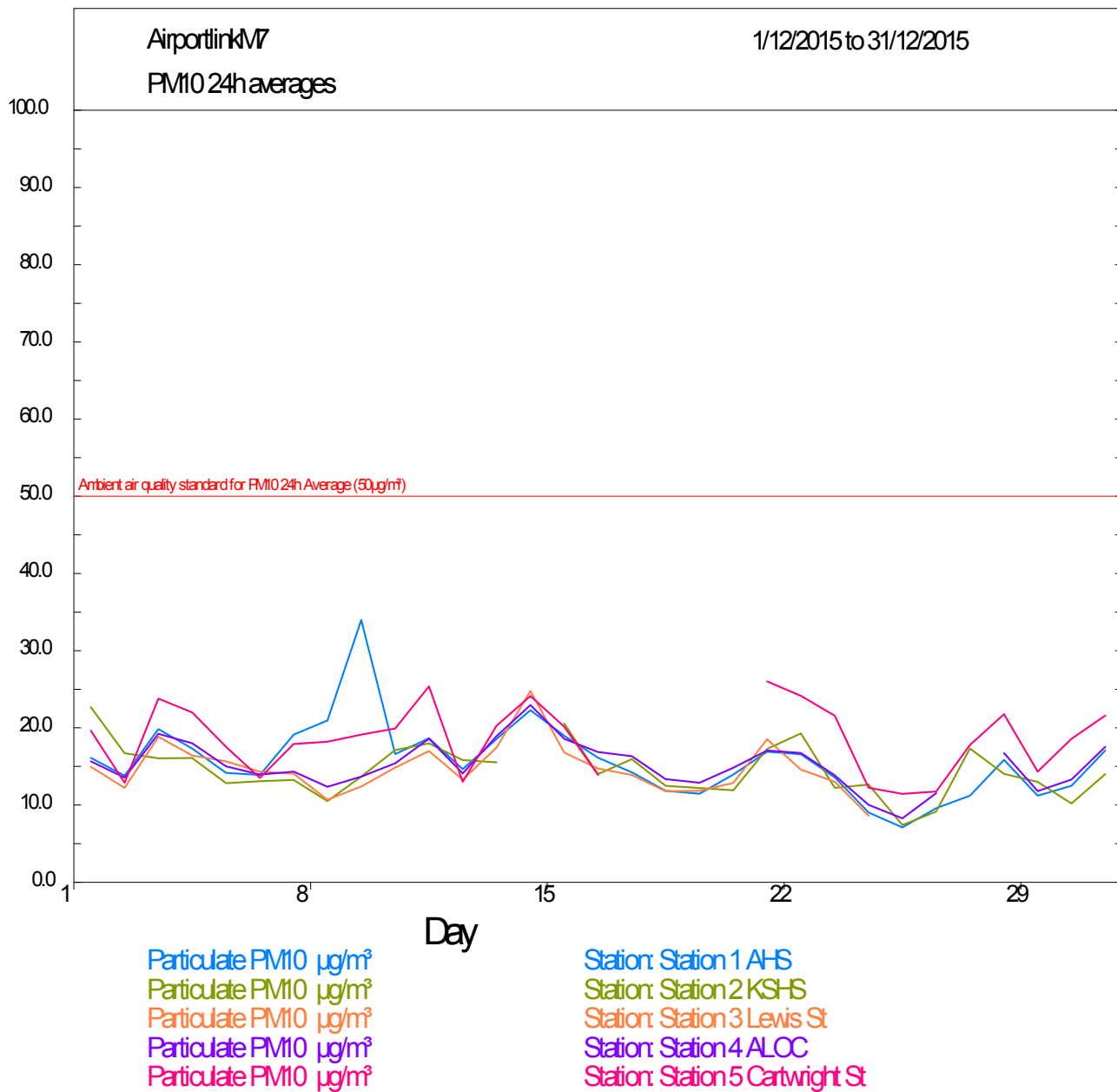


Figure 3 PM₁₀ 24hr Averages

PM_{2.5} 24hr Averages

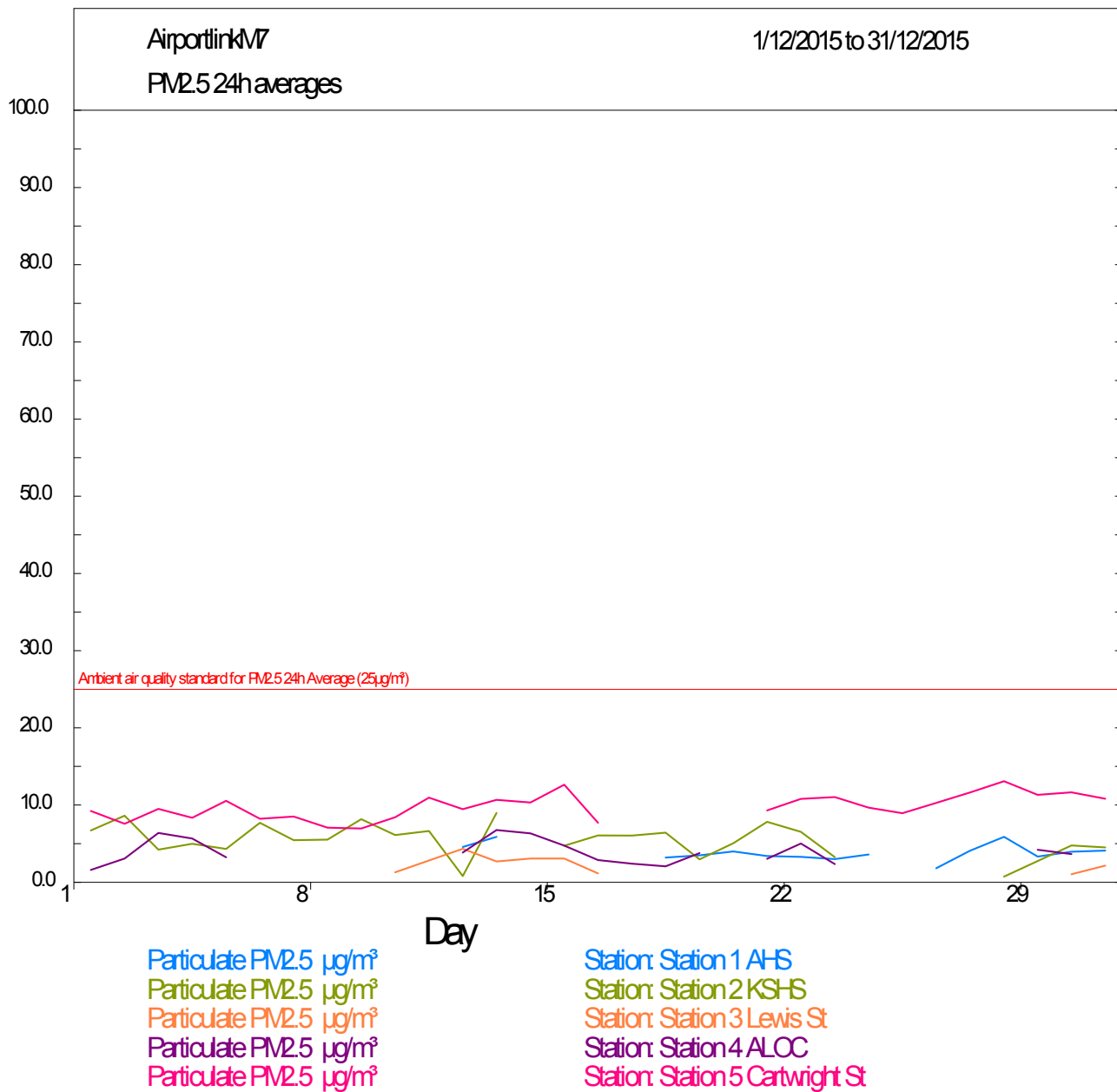


Figure 4 PM_{2.5} 24hr Averages

TSP High Volume Air Sampler Results

Total Suspended Particulate High Volume Air Sampler results are presented in Table 29 below. The HVAS are run on a one in six day cycle.

The Coordinator General's criterion of 90 $\mu\text{g}/\text{m}^3$ was not exceeded during the reporting period at any of the five sites.

TSP Results December 2015					
Sample Date	Station 1 AHS ($\mu\text{g}/\text{m}^3$)	Station 2 KSHS ($\mu\text{g}/\text{m}^3$)	Station 3 LS ($\mu\text{g}/\text{m}^3$)	Station 4 ALOC ($\mu\text{g}/\text{m}^3$)	Station 5 CS ($\mu\text{g}/\text{m}^3$)
2/12/2015	26	22	21	21	21
8/12/2015	64	24	23	27	27
14/12/2015	40	¹ -	37	41	37
20/12/2015	23	21	23	22	21
26/12/2015	17	15	16	17	15
Monthly Average	34.0	20.5	24.0	25.6	24.2

Table 29 TSP High Volume Air Sampler Results

1. HVAS run less than 24 hours due to power failure.

Validation Tables

The following tables outline any data removed during the data validation process, or automatically invalidated by the data acquisition system.

Station 1 Aviation High School

Station 1 Aviation High School Ambient AQMS Data Validation Table					
Start Date	End Date	Affected Parameters	Details of change	Validation Date	Changed By
1/12/2015	31/12/2015 04:50:00	PM _{2.5} , PM ₁₀	Intermittent unrealistic data less than -1.0 µg/m ³	12/01/2016	CP
1/12/2015 04:10:00	31/12/2015 19:35:00	PM _{2.5}	Intermittent instrument faults – error code logged	12/01/2016	CP
14/12/2015 10:30:00	14/12/2015 11:15:00	All parameters	Maintenance	12/01/2016	CP
21/12/2015 01:40:00	21/12/2015 08:50:00	CO, NO, NO ₂ , NO _x	Instrument fault	12/01/2016	CP
21/12/2015 08:55:00	21/12/2015 09:00:00	All parameters	Logger reset	12/01/2016	CP

Table 30 Station 1 Aviation High School AQMS Data Validation Table

Station 2 Kedron State High School

Station 2 Kedron State High School Ambient AQMS Data Validation Table					
Start Date	End Date	Affected Parameters	Details of change	Validation Date	Changed By
1/12/2015 00:00	1/12/2015 15:50:00	NO, NO ₂ , NO _x	Data adjusted. Multiplier A 1.096419, B 1.096419	12/01/2016	CP
1/12/2015 00:25:00	29/12/2015 03:35:00	PM _{2.5}	Intermittent instrument fault, PM _{2.5} > PM ₁₀	12/01/2016	CP
1/12/2015 15:55:00	1/12/2015 16:45:00	All parameters	Maintenance	12/01/2016	CP
3/12/2015 01:40:00	14/12/2015 08:45:00	NO, NO ₂ , NO _x	Instrument fault	12/01/2016	CP
14/12/2015 08:50:00	14/12/2015 16:20:00	All parameters	Maintenance	12/01/2016	CP
14/12/2015 16:25:00	31/12/2015 23:55:00	NO, NO ₂ , NO _x	Data adjusted. Multiplier A 1.0, B 1.090411	12/01/2016	CP
14/12/2015 20:00:00	31/12/2015 20:25:00	NO, NO ₂ , NO _x	Intermittent communication errors	12/01/2016	CP

Table 31 Station 2 Kedron High School AQMS Data Validation Table

Station 3 Lewis Street

Station 3 Lewis Street Ambient AQMS Data Validation Table					
Start Date	End Date	Affected Parameters	Details of change	Validation Date	Changed By
1/12/2015 01:05:00	31/12/2015 23:05:00	PM _{2.5}	Intermittent instrument faults – error code logged	12/01/2016	CP
1/12/2015 12:55:00	31/12/2015 15:50:00	PM _{2.5} , PM ₁₀	Intermittent unrealistic data less than -1.0 µg/m ³	12/01/2016	CP
14/12/2015 09:25:00	14/12/2015 10:05:00	All parameters	Scheduled maintenance	12/01/2016	CP
24/12/2015 19:25:00	27/12/2015 05:50:00	PM _{2.5}	Intermittent Instrument fault	12/01/2016	CP
27/12/2015 16:50:00	31/12/2015 23:55:00	PM _{2.5}	Instrument fault	12/01/2016	CP

Table 32 Station 3 Lewis St AQMS Data Validation Table

Station 4 Airport Link Operation Centre

Station 4 Airport Link Operation Centre Ambient AQMS Data Validation Table					
Start Date	End Date	Affected Parameters	Details of change	Validation Date	Changed By
1/12/2015 00:50:00	31/12/2015 23:05:00	PM _{2.5}	Intermittent instrument faults – error code logged	12/01/2016	CP
1/12/2015 13:55:00	31/12/2015 11:50:00	PM _{2.5} , PM ₁₀	Intermittent unrealistic data less than -1.0 µg/m ³	12/01/2016	CP
14/12/2015 14:45:00	14/12/2015 15:45:00	All parameters	Scheduled maintenance	12/01/2016	CP

Table 33 Station 4 Airport Link Operation Centre AQMS Data Validation Table

Station 5 Cartwright St

Station 5 Cartwright Street Ambient AQMS Data Validation Table					
Start Date	End Date	Affected Parameters	Details of change	Validation Date	Changed By
1/12/2015 17:05:00	31/12/2015 23:40:00	PM _{2.5} , PM ₁₀	Intermittent instrument faults – error code logged	12/01/2016	CP
7/12/2015 13:55:00	30/12/2015 09:50:00	PM _{2.5}	Intermittent unrealistic data less than -1.0 µg/m ³	12/01/2016	CP
14/12/2015 13:10:00	14/12/2015 13:50:00	All parameters	Maintenance	12/01/2016	CP
17/12/2015 15:15:00	20/12/2015 13:40:00	NO, NO ₂ , NO _x , CO	Instrument fault – air conditioner failure	12/01/2016	CP
17/12/2015 16:25:00	20/12/2015 13:05:00	PM _{2.5} , PM ₁₀	Communication error	12/01/2016	CP

Table 34 Station 5 Cartwright St AQMS Data Validation Table