

Appendix A Assessment of compliance with the AAQ NEPM

Appendix A contains tables and time series figures that detail the air pollutant concentrations and assess their compliance with the AAQ NEPM standards. The AAQ NEPM was revised in 2021 to include new standards for SO₂ and new goals for PM_{2.5}. These changes were effective from 1 January 2025 however, as the monitoring campaign occurred prior to this change, the standards and goals referred to in this report are those that were in force during 2023 and 2024.

The tables are:

- Table A-1. Comparison of NEPM short term standards and monitored concentrations: This table presents a compliance assessment for hourly, 8-hourly and daily guidelines.
- Table A-2. Comparison of NEPM annual standards and observed concentrations: This table presents a compliance assessment for annual guidelines.
- Table A-3. Top four recorded concentrations: This table lists the four highest observed concentrations for each pollutant. It also specifies the corresponding AAQ NEPM standard and the number of exceedances (in days) of the standard.
- Table A-4. Percentile distribution of ambient air pollutant concentrations: This table provides a statistical distribution of monitored concentrations.

The time series figures are:

- Figure A-1. 8-hourly average CO concentrations.
- Figure A-2. Hourly average NO₂ concentrations.
- Figure A-3. 8-hourly average O₃ concentrations.
- Figure A-4. Hourly and daily average SO₂ concentrations.
- Figure A-5. Daily average PM₁₀ concentrations.
- Figure A-6. Daily average PM_{2.5} concentrations.

These figures allow for a visual assessment of how pollutant concentrations varied throughout the monitoring period.

Table A-1. Comparison of NEPM short term standards and monitored concentrations

Pollutant	AAQ NEPM standard		Campaign measurements	Performance against the standard
	Averaging period	Maximum concentration standard	Maximum concentration	
CO	8 hours	9.0 ppm	0.8 ppm	Met
NO ₂	1 hour	0.08 ppm	0.06 ppm	Met
O ₃	8 hours	0.065 ppm	0.047 ppm	Met
SO ₂	1 hour	0.10 ppm	0.005 ppm	Met
	1 day	0.02 ppm	0.002 ppm	Met
PM ₁₀	1 day	50 µg/m ³	34.8 µg/m ³	Met
PM _{2.5}	1 day	25 µg/m ³	28.3 µg/m ³	Not met

Table A-2. Comparison of NEPM annual standards and observed concentrations

Pollutant	AAQ NEPM standard		Campaign measurements	Performance against the standard
	Averaging period	Maximum concentration standard	Average concentration	
NO ₂	1 year	0.015 ppm	0.011 ppm	Met
PM ₁₀	1 year	25 µg/m ³	13.2 µg/m ³	Met
PM _{2.5}	1 year	8 µg/m ³	6.1 µg/m ³	Met

Lead	1 year	0.50 µg/m ³	0.002 µg/m ³	Met
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Table A-3. Top four recorded concentrations

Pollutant	AAQ NEPM standard		Number of exceedances (days)	1 st High	2 nd High	3 rd High	4 th High
	Averaging period	Concentration standard					
CO	8 hours	9.0 ppm	0	0.8	0.8	0.8	0.8
NO ₂	1 hour	0.08 ppm	0	0.060	0.053	0.050	0.046
O ₃	8 hours	0.065 ppm	0	0.047	0.047	0.047	0.046
SO ₂	1 hour	0.10 ppm	0	0.005	0.004	0.004	0.004
	1 day	0.02 ppm	0	0.002	0.002	0.001	0.001
PM ₁₀	1 day	50 µg/m ³	0	34.8	34.4	34.2	32.1
PM _{2.5}	1 day	25 µg/m ³	3	28.3	27.7	26.8	24.8

Table A-4. Percentile distribution of ambient air pollutant concentrations

Pollutant	AAQ NEPM standard		Max conc.	Percentile (%)					
				99th	98th	95th	90th	75th	50th
CO	8 hours	9.0 ppm	0.8	0.6	0.5	0.4	0.3	0.2	0.2
NO ₂	1 hour	0.08 ppm	0.060	0.032	0.028	0.025	0.020	0.015	0.010
O ₃	8 hours	0.065 ppm	0.047	0.036	0.033	0.030	0.028	0.023	0.019
SO ₂	1 hour	0.10 ppm	0.005	0.002	0.001	0.001	0.001	0.001	0.0004
	1 day	0.02 ppm	0.002	0.001	0.001	0.001	0.001	0.001	0.0005
PM ₁₀	1 day	50 µg/m ³	34.8	31.6	27.2	22.7	19.9	16.1	12.4
PM _{2.5}	1 day	25 µg/m ³	28.3	23.6	18.6	13.0	10.6	7.4	5.1

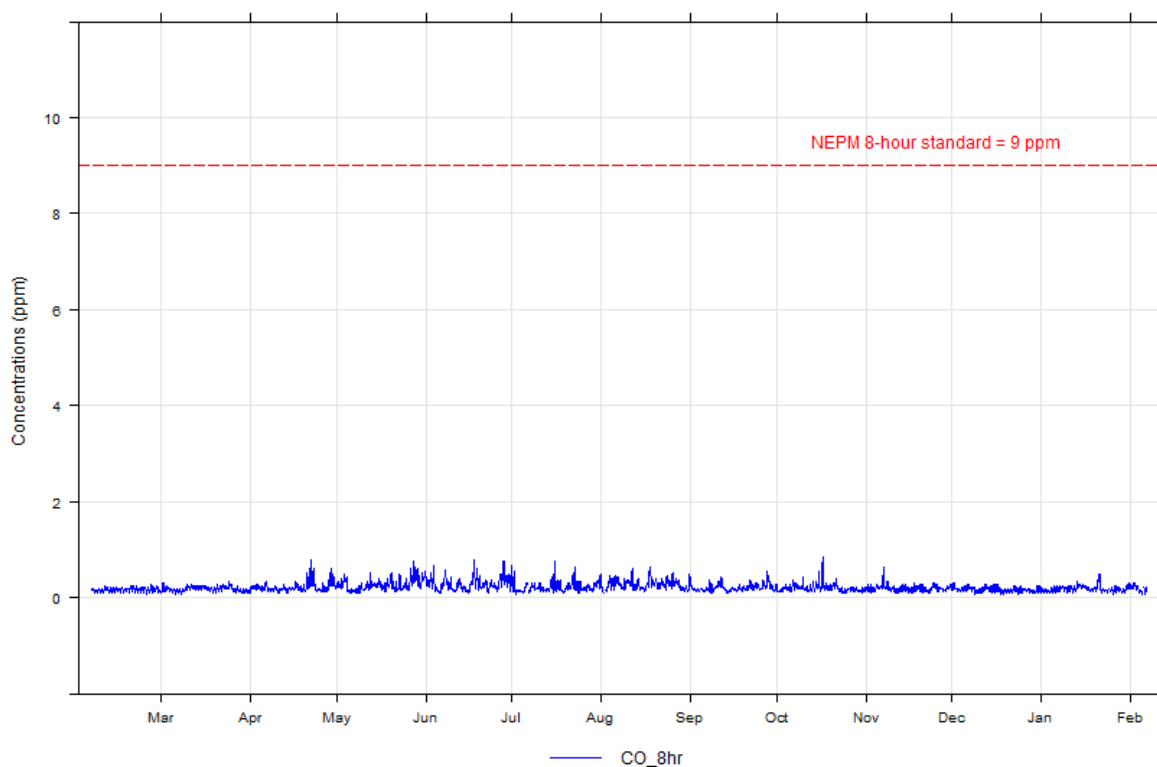


Figure A-1. 8-hour average CO concentrations

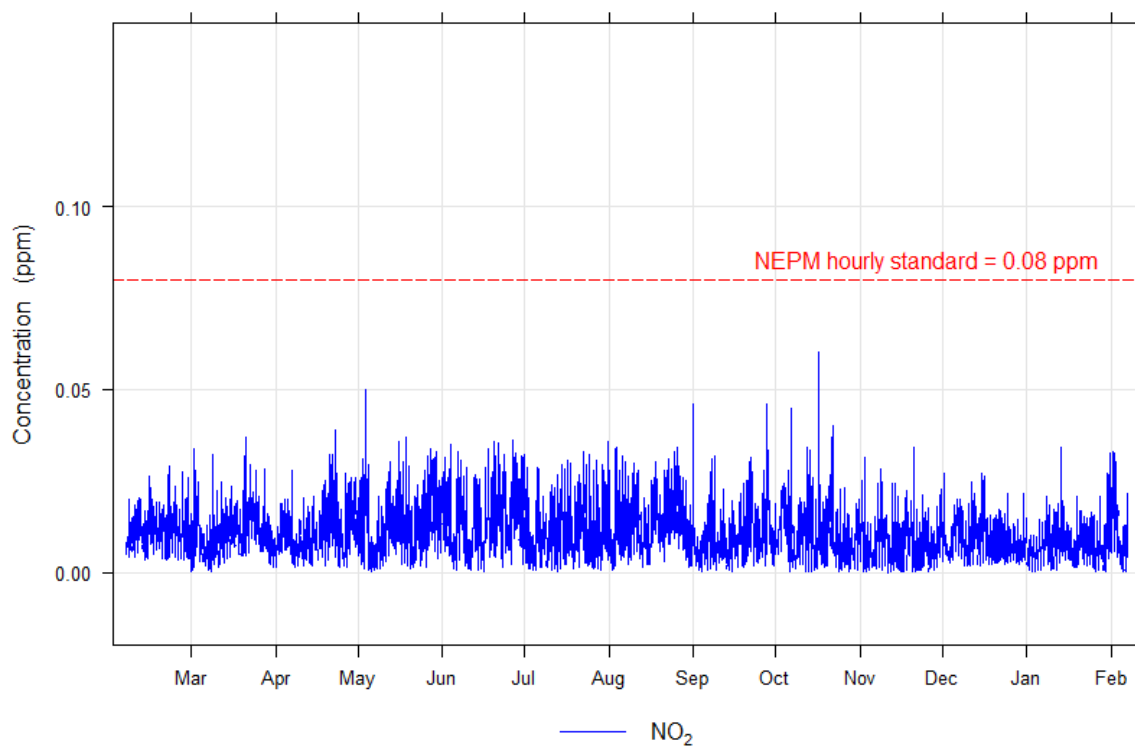


Figure A-2. Hourly average NO₂ concentrations

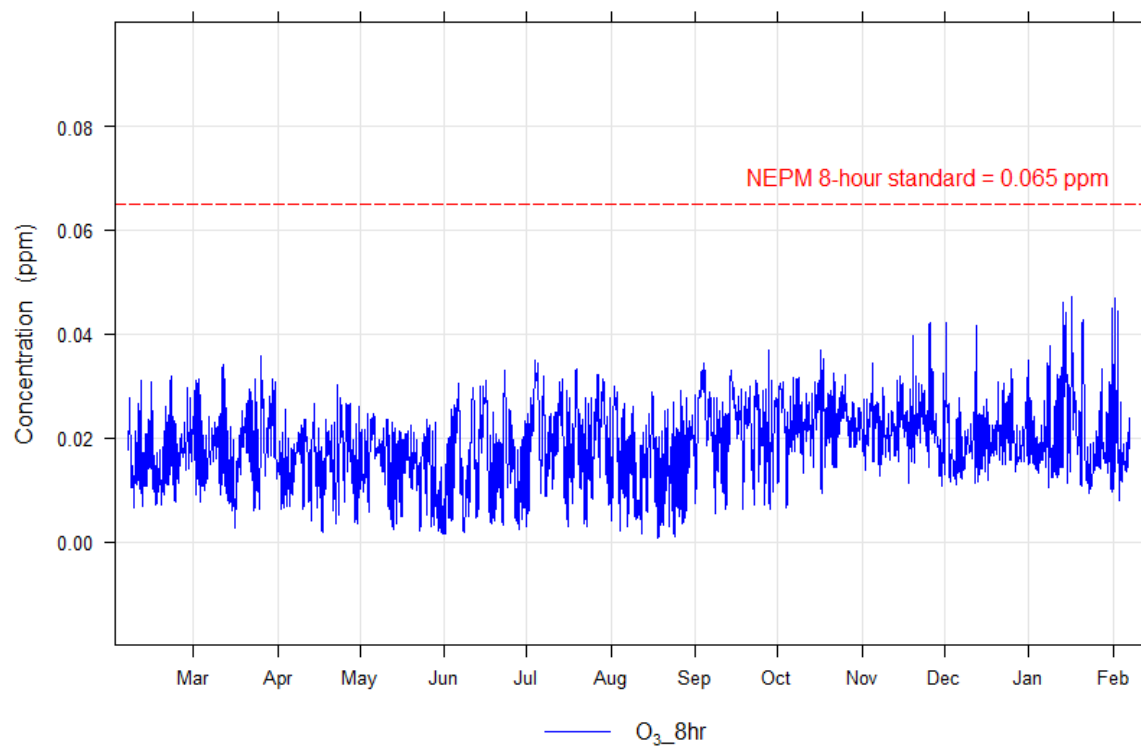


Figure A-3. 8-hour O₃ concentrations

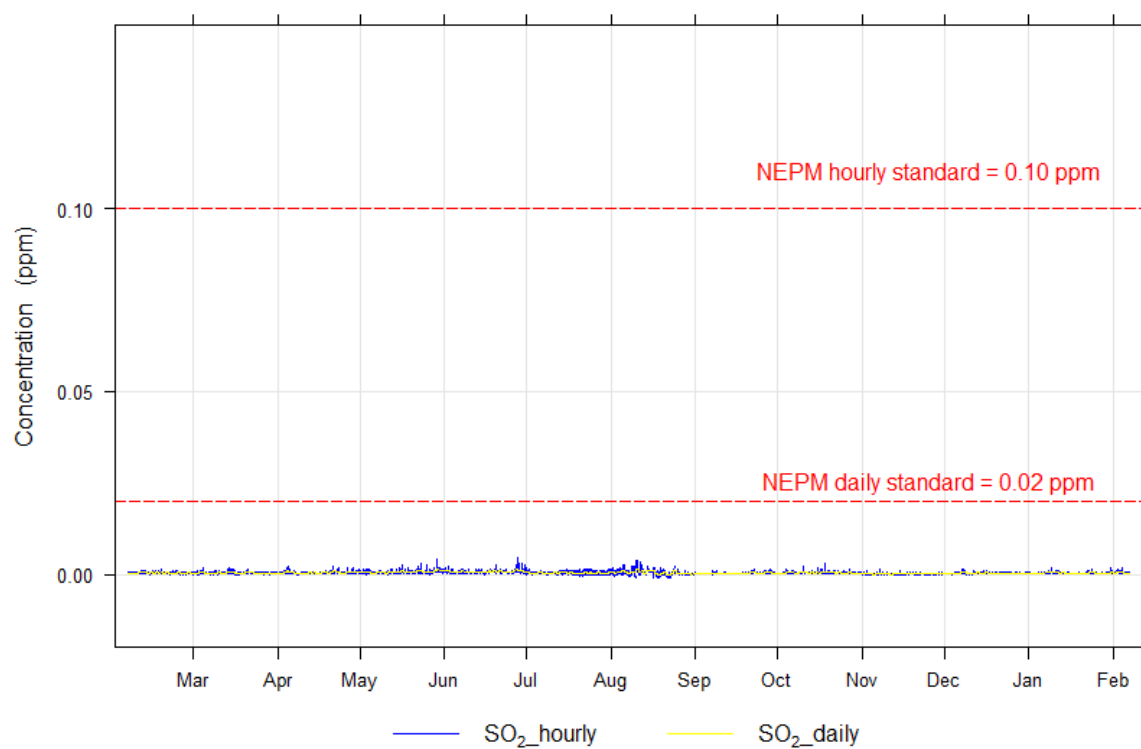


Figure A-4. Hourly and daily SO₂ concentrations

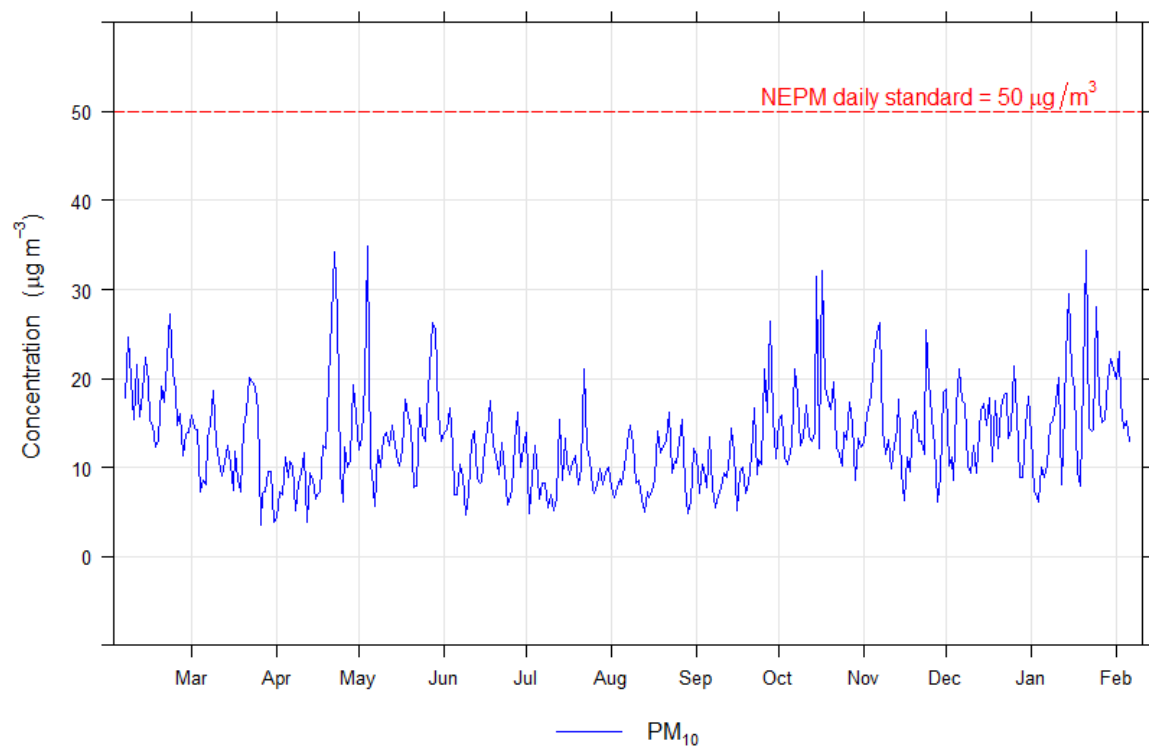


Figure A-5. Daily PM₁₀ concentrations

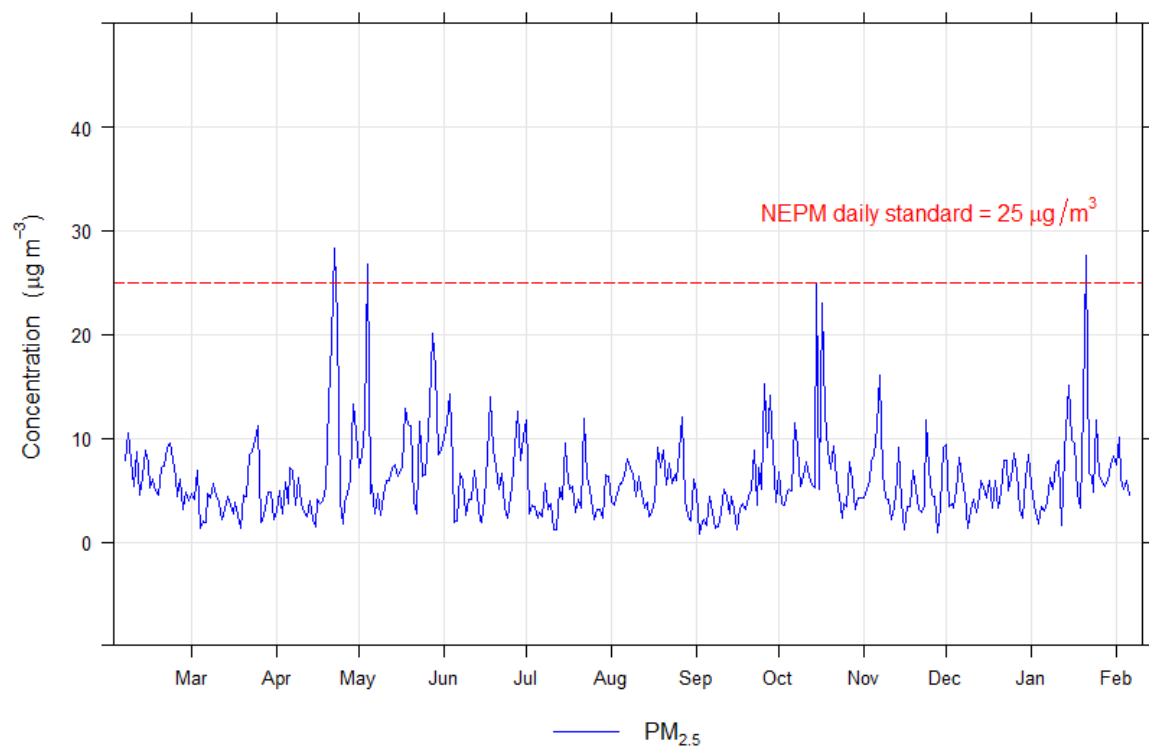


Figure A-6. Daily PM_{2.5} concentrations