

Environment Protection Act 1970

STATE ENVIRONMENT PROTECTION POLICY (AMBIENT AIR QUALITY)

No. S19, Gazette 9/2/1999, as varied by

Variation to the State Environment Protection Policy (Ambient Air Quality)

No. S240, Gazette 21/12/2001 at page 48; and

Variation to the State Environment Protection Policy (Ambient Air Quality)

No. G30, Gazette 28/7/2016

This is not an Authorised version of the Policy.

This document provides a consolidated version of the State Environment Protection Policy (Ambient Air Quality) and subsequent variations (referenced above).

PART 1 – PRELIMINARY

1. Title

This policy may be cited as the State Environment Protection Policy (Ambient Air Quality).

2. Purposes

The purposes of this Order are to:

- (1) adopt the requirements of the National Environment Protection (Ambient Air Quality) Measure but with a more stringent environmental quality objective for particles as PM₁₀; and
- (2) incorporate components of the State environment protection policy (The Air Environment) to include all ambient air quality objectives relevant to Victoria within this policy.

3. Commencement

This Order will come into operation upon publication in the Government Gazette.

4. Contents of policy

This policy is divided into parts as follows -

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4. Contents of Policy

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SCHEDULE 1 – Environmental Indicators

SCHEDULE 2 – Environmental Quality Objectives and Goal

SCHEDULE 3 – Australian Standards Methods for Environmental Indicator Monitoring

PART I - PRELIMINARY

5. Definitions

- (1) This clause defines particular words and expressions used in this policy.
- (2) In this policy:

“**Agreement**” means the agreement made on 1 May 1992 between the Commonwealth, the States, the Australian Capital Territory, the Northern Territory

and the Australian Local Government Association, a copy of which is set out in the Schedule to the **National Environment Protection Council (Victoria) Act 1995**;

“ambient air” means the external air environment, it does not include the air environment inside buildings or structures;

“Authority” means the Environment Protection Authority constituted under the **Environment Protection Act 1970**;

“Council” means the National Environment Protection Council established by section 8 of the **National Environment Protection Council (Victoria) Act 1995** and the equivalent provision of the corresponding Act of the Commonwealth and each participating State and Territory;

“environmental indicator” means any physical, chemical or biological characteristic used as a measure of environmental quality, as described in clause 9 and is exactly equivalent to a “pollutant” in the national ambient air quality measure.

“environmental quality objective” means a level of an indicator prescribed for the protection of a beneficial use as described in clause 9 and has the same meaning as a “national environment protection standard” in the national ambient air quality measure.

“exceptional event” means a fire or dust occurrence that adversely affects air quality at a particular location, and causes an exceedance of 1 day average standards in excess of normal historical fluctuations and background levels, and is directly related to:

- (a) bushfire;
- (b) authorised hazard reduction burning; or
- (c) continental scale windblown dust;

“fire management” means all activities associated with the management of fire prone land, including the use of fire to meet land management goals and objectives;

“monitoring station” means a facility for measuring the concentration of one or more pollutants in the ambient air in a region or sub-region;

“national ambient air quality measure” means the National Environment Protection (Ambient Air Quality) Measure as in force on 3 March 2016;

Notes:

For a compilation of the National Environment Protection (Ambient Air Quality) Measure as in force on 3 March 2016, see F2016C00215 on the Federal Register of Legislation maintained under the Legislation Act 2003 (Cwlth), which can be accessed on the internet at: <https://www.legislation.gov.au/>.

National Environment Protection Measures are made by the National Environment Protection Council operating under complementary legislation of the Commonwealth and each State and Territory, namely the:

- National Environment Protection Council Act 1994 (Cwlth),
- National Environment Protection Council (New South Wales) Act 1995 (NSW),
- National Environment Protection Council (Victoria) Act 1995 (Vic),
- National Environment Protection Council (Queensland) Act 1994 (Qld),
- National Environment Protection Council (Western Australia) Act 1996 (WA),
- National Environment Protection Council (South Australia) Act 1995 (SA),
- National Environment Protection Council (Tasmania) Act 1995 (Tas),
- National Environment Protection Council Act 1994 (ACT), and
- National Environment Protection Council (Northern Territory) Act 1994 (NT).

“participating jurisdiction” means the Commonwealth, a participating State or a participating Territory;

“participating State” means a State:

- that is a party to the Agreement; and
- in which an Act that corresponds to the **National Environment Protection Council (Victoria) Act 1995** is in force in accordance with the Agreement;

“participating Territory” means a Territory:

- that is a party to the Agreement; and
- in which an Act that corresponds to the **National Environment Protection Council (Victoria) Act 1995** is in force in accordance with the Agreement;

“particles as PM₁₀” means particulate matter with an equivalent aerodynamic diameter of 10 micrometres or less;

“particles as PM_{2.5}” means particulate matter with an equivalent aerodynamic diameter of 2.5 micrometres or less;

“performance monitoring station” means a monitoring station used to measure achievement against the goal;

“ppm” means parts per million by volume;

“region” means an area within a boundary surrounding population centres as determined by the relevant participating jurisdiction;

“sub-region” means a populated area within a region whose air quality differs from other areas in the region due to the topography, meteorology and sources of pollutants;

“µg/m³” means microgram per cubic metre referenced to a temperature of 0 degrees Celsius and an absolute pressure of 101.325 kilopascals;

6. Desired environmental outcome and goal

- (1) The desired environmental outcome of this policy is ambient air quality that allows for the adequate protection of the beneficial uses set out in clause 8.
- (2) The Goal of this policy is:
 - (a) for carbon monoxide, nitrogen dioxide, photochemical oxidants (as ozone), sulphur dioxide, lead, particles as PM₁₀, particles as PM_{2.5} and visibility reducing particles, to achieve the environmental quality objectives as assessed in accordance with clause 10, to the extent specified in Table 1 of Schedule 2; and
 - (b) for particles as PM_{2.5}, to achieve by 2025 further reductions in maximum concentrations to the extent specified in Table 2 of Schedule 2.

PART II – BOUNDARIES OF THE AREA AFFECTED

7. Policy area

This policy shall be observed throughout the State of Victoria and shall apply to all ambient air.

PART III – BENEFICIAL USES TO BE PROTECTED

8. Beneficial uses

The following beneficial uses are protected throughout the State of Victoria:

- (1) human health and well-being.
- (2) life, health and well-being of other forms of life including animals and vegetation.
- (3) visibility.
- (4) useful life and aesthetic appearance of buildings, structures, property and materials.
- (5) aesthetic enjoyment and local amenity.

PART IV - ENVIRONMENTAL INDICATORS AND ENVIRONMENTAL QUALITY OBJECTIVES

9. Environmental indicators and environmental quality objectives

- (1) The environmental indicators of this policy are set out in Schedule 1.
- (2) The environmental quality objectives of this policy are set out in Schedule 2.

- (3) For carbon monoxide, nitrogen dioxide, photochemical oxidants (as ozone), sulphur dioxide, lead, particles as PM₁₀ and particles as PM_{2.5}, the environmental quality objective for an averaging period mentioned in Column 3 of Table 1 of Schedule 2 is the corresponding concentration in Column 4 of Table 1 of Schedule 2.
- (4) For visibility reducing particles, the environmental quality objective for an averaging period mentioned in Column 3 of Table 1 of Schedule 2 is the distance in Column 4 of Table 1 of Schedule 2.

10. Monitoring and Reporting Protocol

- (1) The processes set out in clauses 11 to 19 shall be used for measuring and reporting the concentration of environmental indicators in the air to determine:
 - (a) whether the environmental quality objectives of this policy are being met;
or
 - (b) the extent of the difference between the measured concentration of pollutants in the air and the environmental quality objectives.
- (2) The Authority must establish monitoring procedures, and commence assessment and reporting in accordance with clauses 11 to 19 within 3 years after commencement of the national ambient air quality measure.

11. Monitoring plan

- (1) The Authority must prepare a draft monitoring plan consistent with this Part setting out how it proposes to monitor air quality for the purposes of this policy.
- (2) The draft monitoring plan required by sub-clause (1) must be submitted to the Victorian member of Council.
- (3) A final monitoring plan must be submitted to Council by the Victorian member of Council by 30 June 2000.

12. Methods of measuring and assessing concentration of environmental indicators

For the purpose of evaluating performance against the environmental quality objectives the concentration of environmental indicators in the air:

- (a) is to be measured at performance monitoring stations; or

Note: Because the concentrations of different environmental indicators vary across a region, it would not be necessary or appropriate to co-locate the measuring instrumentation for all environmental indicators at each performance monitoring station.

- (b) is to be assessed by other means that provide information equivalent to measurements which would otherwise occur at a performance monitoring station.

Note: These methods could include, for example, the use of emission inventories, windfield and dispersion modelling, and comparisons with other regions.

13. Accreditation of performance monitoring

The operator of a performance monitoring station must be accredited by the National Association of Testing Authorities.

14. Location of performance monitoring stations

- (1) To the extent practicable, performance monitoring stations should be sited in accordance with the requirements for Australian Standard AS/NZS 3580.1.1:2007 (Methods for sampling and analysis of ambient air – Guide to siting air monitoring equipment). Any variations must be notified to Council for use in assessing reports.
- (2) Performance monitoring station(s) must be located in a manner such that they contribute to obtaining a representative measure of the air quality likely to be experienced by the general population in the region or sub-region.
- (3) A performance monitoring station should be operated in the same location for at least 5 years unless the integrity of the measurements is affected by unforeseen circumstances.

15. Number of performance monitoring stations

- (1) Subject to sub-clauses (2) and (3) below, the number of performance monitoring stations for a region with a population of 25,000 people or more must be the next whole number above the number calculated in accordance with the formula:

$$1.5P + 0.5$$

where **P** is the population of the region (in millions).

- (2) Additional performance monitoring stations may be needed where pollutant levels are influenced by local characteristics such as topography, weather or emission sources.
- (3) Fewer performance monitoring stations may be needed where it can be demonstrated that pollutant levels are reasonably expected to be consistently lower than the environmental quality objectives mentioned in this policy.

16. Trend stations

- (1) A number of performance monitoring stations within the State of Victoria must be nominated as trend stations.
- (2) The number of performance monitoring stations to be nominated as trend stations must be sufficient to monitor and assess long term changes in ambient air quality in different parts of the State of Victoria.
- (3) A trend station must be operated in the same location for one or more decades.

17. Monitoring methods

- (1) Subject to subclauses (2) and (3) the Australian Standard Methods set out in Schedule 3 should be used for monitoring environmental indicators in the air.

- (2) Where an Australian Standard Method has not yet been developed for a monitoring method, appropriate internationally recognised methods or standards may be used that provide equivalent information for assessment purposes.
- (3) Other monitoring methods may be used if:
 - (a) calibration and validation studies show:
 - (i) the accuracy and precision of the other method; and
 - (ii) the method can be compared with the relevant Australian Standard Method; and
 - (b) the equipment used is calibrated to the standard required by the equipment manufacturer; and
 - (c) the equipment provides equivalent information for assessment purposes.

18. Evaluation of performance against environmental quality objectives and goal

- (1) The Authority must evaluate the annual performance of the State of Victoria as set out in this clause.
- (2) For each performance monitoring station in the State of Victoria or assessment in accordance with subclause 12(b) there must be:
 - (a) a determination of the exposed population in the region or sub-region represented by the station; and
 - (b) an evaluation of performance against the environmental quality objectives and goal of this policy, other than in relation to Table 2 of Schedule 2, as:
 - (i) meeting; or
 - (ii) not meeting; or
 - (iii) not demonstrated.
- (2A) The Authority must evaluate and report population exposures to particles as PM_{2.5} annually from June 2018.

Note: To ensure national consistency, evaluation and reporting shall be undertaken in accordance with any procedures or methods agreed by participating jurisdictions.

- (3) The Authority may provide an evaluation of a region as a whole against the environmental quality objectives using appropriate methodologies that provide equivalent information for assessment purposes.
- (4) Performance must be evaluated as “not demonstrated” if there has been no monitoring or no assessment by an approved alternative method as provided in clause 12.

19. Reporting

- (1) The Authority must ensure that a report on Victoria’s compliance with this policy, other than in relation to Table 2 of Schedule 2, is prepared in an

approved form and the Victorian member of Council must submit it to Council by the 30 June next following each reporting year.

- (2) In this clause “**reporting year**” means a year ending on 31 December.
- (3) The report must include:
 - (a) the evaluations and assessments mentioned in clause 18; and
 - (b) an analysis of the extent to which the environmental quality objectives of this policy are, or are not, met in the State of Victoria; and
 - (c) a statement of the progress made towards achieving the goal.
- (4) The report is not required to include information regarding environmental quality objectives for visibility reducing particles.
- (5) The description of the circumstances which led to exceedances, including the influence of natural events and fire management, must be reported to the extent that such information can be determined.
- (6) When reporting against particles as PM₁₀ and particles as PM_{2.5} 1 day average standards the Authority will report all measured data, including monitoring data that is directly associated with an exceptional event, and identify and describe any exceptional event.
- (7) The Authority will maintain and make available records relating to the determination of exceptional events.
- (8) For the purpose of reporting compliance against particles as PM₁₀ and particles as PM_{2.5} 1 day average standards, the Authority must exclude monitoring data that has been determined as being directly associated with an exceptional event.
- (9) For the purpose of reporting compliance against particles as PM₁₀ and particles as PM_{2.5} 1 year average standards, the Authority must include all measured data, including monitoring data that is directly associated with an exceptional event.

Note: To ensure national consistency, all reporting or record-keeping referred to in subclauses 19(6), (7), (8) or (9) must be undertaken in accordance with any procedures or methods agreed by participating jurisdictions.
- (10) A report for a pollutant must include the percentage of data available in the reporting period.

SCHEDULE 1 – ENVIRONMENTAL INDICATORS

- Carbon monoxide
- Sulfur dioxide
- Nitrogen dioxide
- Lead
- Photochemical oxidants (as ozone)
- Particles (as PM₁₀ and PM_{2.5})
- Visibility reducing particles

SCHEDULE 2 – ENVIRONMENTAL QUALITY OBJECTIVES AND GOAL

Table 1: Environmental quality objectives for environmental indicators

Column 1 Item	Column 2 Environmental Indicator (Pollutant)	Column 3 Averaging period	Column 4 Environmental quality objectives	Column 5 Maximum allowable exceedances
1	Carbon monoxide (maximum concentration)	8 hours	9.0 ppm	1 day a year
2	Nitrogen dioxide (maximum concentration)	1 hour 1 year	0.12 ppm 0.03 ppm	1 day a year none
3	Photochemical oxidants (as ozone) (maximum concentration)	1 hour 4 hours	0.10 ppm 0.08 ppm	1 day a year 1 day a year
4	Sulfur dioxide (maximum concentration)	1 hour 1 day 1 year	0.20 ppm 0.08 ppm 0.02 ppm	1 day a year 1 day a year none
5	Lead (maximum concentration)	1 year	0.50 µg/m ³	none
6	Particles as PM ₁₀ (maximum concentration)	1 day 1 year	50 µg/m ³ 20 µg/m ³	none none
6A	Particles as PM _{2.5} (maximum concentration)	1 day 1 year	25 µg/m ³ 8 µg/m ³	none none
7	Visibility reducing particles (minimum visual distance)	1 hour	20 km	3 days a year

Table 2: Environmental quality objectives for particles as PM_{2.5} by 2025

Column 1 Environmental Indicator (Pollutant)	Column 2 Averaging period	Column 3 Environmental quality objectives
Particles as PM _{2.5} (maximum concentration)	1 day	20 µg/m ³ by 2025
	1 year	7 µg/m ³ by 2025

For the purposes of this policy the following definitions shall apply:

- (1): Lead sampling must be carried out for a period of 24 hours at least every sixth day.
- (2): Measurement of lead must be carried out on Total Suspended Particles (TSP) or its equivalent.
- (3): In Column 3 of Table 1 and Column 2 of Table 2 of Schedule 2, the averaging periods are defined as follows:
 - 1 hour clock hour average
 - 4 hour rolling 4 hour average based on 1 hour averages
 - 8 hour rolling 8 hour average based on 1 hour averages
 - 1 day calendar day average
 - 1 year calendar year average
- (4): In Column 5 of Table 1 of Schedule 2, the time periods are defined as follows:
 - day calendar day during which the associated environmental quality objective is exceeded
 - year calendar year.
- (5): All averaging periods of 8 hours or less must be referenced by the end time of the averaging period. This determines the calendar day to which the averaging periods are assigned.
- (6): For the purposes of calculating and reporting 4 and 8 hour averages, the first rolling average in a calendar day ends at 1.00 am, and includes hours from the previous calendar day.
- (7): The concentrations in Column 4 of Table 1 and Column 3 of Table 2 of Schedule 2, are the arithmetic mean concentrations.
- (8): Compliance with the environmental quality objective for visibility reducing particles is to be determined by the light-scattering properties of the air environment at relative humidities of less than 70 per cent. Since the concentration of visibility reducing particles is inversely related to visibility, the maximum concentration corresponds to the minimum visibility.

SCHEDULE 3 – AUSTRALIAN STANDARDS METHODS FOR ENVIRONMENTAL INDICATOR MONITORING

Environmental indicator	Method title	Method number
Carbon monoxide	Determination of Carbon Monoxide-Direct Reading Instrumental Method	AS 3580.7.1-2011 (as amended by Amdt 1-2012)
Nitrogen dioxide	Determination of Oxides of Nitrogen-Direct Reading Instruments Method	AS/NZS 3580.5.1-2011
Photochemical oxidants (as ozone)	Determination of Ozone-Direct Reading Instrumental Method	AS 3580.6.1-2011
Sulfur dioxide	Determination of Sulfur Dioxide-Direct Reading Instrumental Method	AS 3580.4.1-2008
Lead	Determination of Suspended Particulate Matter - Particulate metals high or low volume sampler gravimetric collection – Inductively coupled plasma (ICP) spectrometric method	AS/NZS 3580.9.15:2014
	Determination of Suspended Particulate Matter - Total suspended particulate matter (TSP) – High volume sampler gravimetric method	AS/NZS 3580.9.3:2015
Particles as PM ₁₀	Determination of Suspended Particulate Matter-PM ₁₀ High Volume Sampler with Size Selective Inlet-Gravimetric Method	AS/NZS 3580.9.6:2003
	Determination of Suspended Particulate Matter- Dichotomous Sampler (PM ₁₀ , coarse PM and PM _{2.5})-Gravimetric Method	AS/NZS 3580.9.7:2009
	Determination of Suspended Particulate Matter-PM ₁₀ continuous direct mass	AS 3580.9.8-2008

	method using tapered element oscillating microbalance analyser	
	Determination of Suspended Particulate Matter-PM ₁₀ Low Volume Sampler-Gravimetric Method	AS/NZS 3580.9.9:2006
	Determination of Suspended Particulate Matter-PM ₁₀ beta attenuation monitors	AS/NZS 3580.9.11:2008 (as amended by Amdt 1:2009)
Particles as PM _{2.5}	Determination of Suspended Particulate Matter-PM _{2.5} low volume sampler - Gravimetric Method	AS/NZS 3580.9.10:2006
	Determination of Suspended Particulate Matter-PM _{2.5} beta attenuation monitors	AS/NZS 3580.9.12:2013
	Determination of Suspended Particulate Matter-PM _{2.5} continuous direct mass method using a tapered element oscillating microbalance monitor	AS/NZS 3580.9.13:2013
	Determination of Suspended Particulate Matter-PM _{2.5} high volume sampler with size selective inlet-Gravimetric Method	AS/NZS 3580.9.14:2013