

Environment Protection Act 1970

STATE ENVIRONMENT PROTECTION POLICY (AMBIENT AIR QUALITY)

No. S19, Gazette 9/2/1999

As Varied by State Environment Protection Policy (Air Quality Management)

No. S240, Gazette 21/12/2001

**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
Policy variation (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 Council (Ambient Air Quality) Measure as the State environment protection policy (Ambient Air Quality); and
- (2) incorporate components of the State environment protection policy (The Air Environment) to include all ambient air quality objectives relevant to Victoria within the State environment protection policy (Ambient Air Quality).

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 -

1. Title
2. Purposes
3. Commencement
4. Contents of Policy

PART I - PRELIMINARY

5. Definitions

6. Desired environmental outcome and goal

PART II – BOUNDARIES OF THE AREA AFFECTED

7. Policy area

PART III – BENEFICIAL USES TO BE PROTECTED

8. Beneficial Uses

PART IV – ENVIRONMENTAL INDICATORS AND ENVIRONMENTAL QUALITY OBJECTIVES

9. Environmental indicators and environmental quality objectives

PART V – ATTAINMENT PROGRAM

10. Monitoring and reporting protocol
11. Monitoring Plans
12. Methods of Measuring and Assessing Concentration of Pollutants
13. Accreditation of Performance Monitoring
14. Location of Performance Monitoring Stations
15. Number of Performance Monitoring Stations
16. Trend Stations
17. Monitoring Methods
18. Evaluation of performance against environmental quality objectives and goal
19. Reporting

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;

“**national ambient air quality measure**” means the National Environment Protection Council (Ambient Air Quality) Measure made by the National Environment Protection Council on 26 June 1998 under subsection 14(1) 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;

“**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 is exactly equivalent to a “national environment protection standard” in the national ambient air quality measure.

“**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;

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

“**participating State**” means a State:

- (a) that is a party to the Agreement; and
- (b) 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:

- (a) that is a party to the Agreement; and
- (b) 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;

“**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;

“ $\mu\text{g}/\text{m}^3$ ” 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 to achieve the objectives as assessed in accordance with clause 10, within ten years from commencement of the national ambient air quality measure to the extent specified in Schedule 2 column 5.

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 each environmental indicator mentioned in Schedule 2, the environmental quality objective for an averaging period mentioned in the Schedule is the concentration in column 4.

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 AS2922-1987 (Ambient Air-Guide for Siting of Sampling Units). Any variations from AS2922-1987 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 as:
 - (i) meeting; or
 - (ii) not meeting; or
 - (iii) not demonstrated.
- (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 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 those ambient air quality objectives contained in Schedule 2 which are not included in the national ambient air quality measure.
- (4) The description of the circumstances which led to exceedences, including the influence of natural events and fire management, must be reported to the extent that such information can be determined.
- (5) 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
- Visibility reducing particles

SCHEDULE 2 – ENVIRONMENTAL QUALITY OBJECTIVES AND GOAL

Column 1 Item	Column 2 Environmental Indicator (Pollutant)	Column 3 Averaging period	Column 4 Environmental quality objectives	Column 5 Goal within 10 years maximum allowable exceedences
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	50 µg/m ³	5 days a year
7	Visibility reducing particles (minimum visual distance)	1 hour	20 km	3 days a year

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, 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, the time periods are defined as follows:
- | | |
|------|---|
| day | calendar day during which the associated standard 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, are the arithmetic mean concentrations.
- (8): Compliance with the 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	AS3580.7.1-1992
Nitrogen dioxide	Determination of Oxides of Nitrogen-Chemiluminescence Method	AS3580.5.1-1993
Photochemical oxidants (as ozone)	Determination of Ozone-Direct Reading Instrumental Method	AS3580.6.1-1990
Sulfur dioxide	Determination of Sulfur Dioxide-Direct Reading Instrumental Method	AS3580.4.1-1990
Lead	Determination of Particulate Lead-High Volume Sampler Gravimetric Collection-Flame Atomic Absorption Spectrometric Method Determination of Total Suspended Particulates (TSP) - High Volume Sampler Gravimetric Method	AS2800-1985 AS2724.3-1984
Particles as PM ₁₀	Determination of Suspended Particulate Matter-PM ₁₀ High Volume Sampler with Size Selective Inlet-Gravimetric Method Determination of Suspended Particulate Matter- PM ₁₀ Dichotomous Sampler-Gravimetric Method	AS3580.9.6-1990 AS3580.9.7-1990