

**STATE ENVIRONMENT PROTECTION POLICY (AIR QUALITY MANAGEMENT)
DEVELOPING ACTION PLANS FOR NEW CLASS 3 INDICATORS**

Publication 930

November 2003

WHY DEVELOP A CLASS 3 ACTION PLAN?

In 2001, the *State Environment Protection Policy (Air Quality Management)* [SEPP(AQM)] was revised and 19 new substances were added to the list of class 3 indicators in Schedule A of the policy. Class 3 indicators are extremely hazardous substances due to their carcinogenic, mutagenic, teratogenic, highly toxic or highly persistent characteristics. Because of this, emissions to air of Class 3 indicators must be reduced to the maximum extent achievable (MEA).

The SEPP requires that EPA licence holders that generate emissions of one of the new class 3 indicators develop an action plan to demonstrate how and when MEA will be achieved. The plan must be submitted by the end of 2003.

Emissions of the class 3 indicators transferred from the previous version of SEPP (AQM) should already be reduced to the maximum extent achievable by technology (MEAT). These class 3 indicators are: asbestos; benzene; beryllium and beryllium compounds; MDI (diphenylmethane diisocyanate); radionuclides; TDI (toluene-2,4-diisocyanate and toluene-2,6-diisocyanate); vinyl chloride.

Generators of these emissions are encouraged to review their activities leading to the emissions, and develop an action plan to work towards achieving MEA.

WHAT ARE THE NEW CLASS 3 INDICATORS?

The new class 3 indicators are:

Acrolein	Acrylonitrile
Alpha chlorinated toluenes and benzoyl chloride	Arsenic and compounds
Benzene* in petrol and liquid mixtures containing 1% or less of benzene by volume	1,3-butadiene
Cadmium and cadmium compounds	Chromium VI compounds
1,2-dichloroethane (ethylene dichloride)	Dioxins and Furans (as TCDD I-TEQs)
Epichlorohydrin	Ethylene oxide
Hydrogen cyanide	Nickel and Nickel compounds
PAH(as BaP)	Pentachlorophenol
Phosgene	Propylene oxide
Respirable crystalline silica (measured as PM _{2.5})	Trichloroethylene

*Benzene has been listed as a class 3 indicator since the 1980s with an exemption for benzene in petrol and liquid mixtures containing 1 per cent or less of benzene by volume. This exemption has been removed.

WHAT IS MAXIMUM EXTENT ACHIEVABLE?

The SEPP defines MEA as a degree of reduction that uses the most effective, practicable means to minimise the risk to human health from those emissions.

The particular circumstances at the premises with class 3 emissions should be taken into account when determining MEA for that premises.

Maximising emission reduction may require the application of new, original or innovative practices to a particular source.

For these highly hazardous emissions, MEA means that additional investment may be required, compared to that for best practice.

WHERE DO I START?

Step 1. Determine class 3 emissions (sources and amounts).

Start with a desktop exercise to determine which new class 3 indicators are likely to be emitted. Consideration should be given to fuel, solvent and raw material inputs, processes that contribute to emissions of wastes, and operating procedures and housekeeping. If emissions in your licence are currently identified by a generic term such as 'TOC' (total organic compounds) or 'VOC' (volatile organic compounds) then you need to identify any class 3 indicators likely to be in the mixture.

List the likely class 3 indicators present and then for each one, estimate or state the emissions in kilograms per year. An approximate value for the

amount of emissions is sufficient for the purpose of evaluating emissions management options.

Step 2. Determine MEA for each emission.

Use the waste management hierarchy for each significant emission identified in step 1:

- avoidance, for example use alternative raw material, solvent or fuel; improve leak detection and repair regime;
- re-use/re-cycling, for example capture emissions and return to process or send to another user;
- recovery of energy, for example capture emissions and use as fuel;
- treatment, for example capture emissions and treat;
- disposal, remaining emissions go to air.

In the first instance it may be beneficial for you to do this in conjunction with other members of your industry sector. Then consider any options that may be appropriate for your premises to achieve further reduction to MEA.

Step 3. Assess options for improvements.

A common sense approach should be used to assess options and prioritise actions. Factors such as the hazardous nature of the substance, the sensitivity of the receiving environment, likely emission reductions, practicability and cost effectiveness should be taken into account. Options for improvement may be discussed with your client manager.

You may choose to model emissions to determine maximum predicted ground level concentrations. While design criteria are not a statutory requirement for existing sources of emissions, they may be used as a tool to aid in decision making. Before commencing any detailed quantitative assessment, you are advised to discuss the issues with your client manager. Assessment against numerical criteria should only be undertaken when the predicted emissions used in the assessment are based on estimations of emissions that have been reduced to MEA.

Step 4. Develop a proposed action plan

Once the actions have been selected and prioritised, they should be documented in your action plan. The action plan must include evidence of how you have determined reductions to MEA for your premises, discussion and evaluation of possible options, details of changes to be incorporated and realistic timelines.

In assessing proposed timelines EPA expects most action plans to be completed by December 2006 (five years from the time the policy was made), however the circumstances of individual premises, including such things as the investment cycles and planned upgrades, can be taken into account.

Step 5. Agree on action plan with EPA

Once received and reviewed by EPA, the proposed action plan will be discussed with you and actions and timelines agreed to. You will then need to update EPA on actions being undertaken, as part of the overall site reporting requirements.