

Manual of European Environmental Policy

The following pages are a section from the Manual of European Environmental Policy written by the Institute for European Environmental Policy.

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This section is the text of the Manual as published in 2012. It is therefore important to note the following:

- The contents have not been updated since 2012 and no guarantee is given of the accuracy of the contents given potential subsequent developments.
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Volatile organic compounds from industry

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| Formal references | |
| 1999/13/EC (OJ L85 29.3.1999) | Directive on the limitation of emissions of VOCs due to the use of organic solvents in certain activities and installations |
| Proposed 6.11.96 – COM(96)538 | |
| 2000/541/EC (OJ L230 12.9.2000) | Decision on criteria for assessing national plans according to Article 6 of Council Directive 1999/13/EC |
| 2004/42/EC (OJ L143 30.4.2004) | Directive on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle-refinishing products and amending Directive 1999/13/EC |
| Legal base | Article 192 TFEU (originally Art. 130s EEC Treaty) |
| Binding dates | |
| Entry into force | 29 March 1999 |
| Formal compliance | 1 April 2001 |
| Application to new installations | From April 2001 |

The [Industrial Emissions Directive](#) 2010/75/EU repeals Directive 1999/13/EC and its amendments from 7 January 2014.

Purpose of the Directive

The Directive is intended to reduce emissions of volatile organic compounds (VOCs) from the use of solvents in certain sectors of industry. It complements other Community measures that aim to control VOCs in their own right, such as VOCs from petrol (Directive [94/63/EC](#)) (see section on volatile organic compounds from petrol), as well as limiting the secondary air pollutants whose formation VOCs may lead to, and in particular ozone (see Air Framework Directive [2008/50/EC](#)), in support of both Community goals and international agreements. Directive 1999/13/EC is often commonly known as the Solvent Emissions Directive (or SED).

Summary of the Directive

The Directive applies to the following categories of industry (Annex I):

- Various coating activities (including adhesive coating, coil coating, vehicle coating, winding wire coating and surface coating in relation to metallic, plastic, wooden, textile, fabric, leather, film and paper surfaces).
- Vehicle refinishing.
- Impregnation of wood.
- Wood and plastic lamination.
- Printing.
- Manufacturing of coating preparations, varnishes, inks and adhesives.
- Conversion of natural or synthetic rubber.
- Dry cleaning.
- Footwear manufacturing.

- Manufacturing of pharmaceutical products.
- Surface cleaning.
- Vegetable oil extraction and fat and vegetable oil refining.

Any particular installation will only fall under the Directive, however, if it operates above specified solvent consumption thresholds (Annex IIA). There is some overlap between the coverage of this Directive and that of the Integrated Pollution Prevention and Control (IPPC) Directive [2008/1/EC](#), so some installations may be subject to the requirements of both regimes.

Once the Directive has been brought into effect, Member States must ensure that any new installations to which it applies comply with the specified requirements before being put into operation. Existing installations must be brought into compliance no later than 31 October 2007. For installations which are not already covered by Directive 2008/1/EC, Directive 1999/13/EC requires both new and existing installations to be registered or authorized as one aspect of compliance. Those installations covered by Directive 2008/1/EC will need to obtain a permit under that regime anyway.

The principal focus of the Directive is the reduction of solvent emissions. However, it sets out three different ways in which this can be achieved: uniform emission limit values, reduction schemes, or national plans.

Uniform emission limit values and reduction schemes

Article 5 of the Directive obliges Member States to ensure that certain emission controls are achieved through the imposition of conditions in individual authorizations or the use of general building rules. The controls must achieve one of two aims: either all installations must comply with specific limits laid down in Annex IIA to the Directive; or they must meet the requirements of a reduction scheme specified in accordance with Annex IIB.

Annex IIA is very precise, setting out different emission limit values for waste gases and fugitive emissions, or alternatively for total emissions, for each of the main activities covered by the Directive. The limits are mostly expressed in relation to the total carbon content.

Annex IIB, in contrast, is much less specific, although undoubtedly it would lead to detailed controls in practice. It provides a route for operators to achieve by other means the reductions that would be realized if the Annex IIA limits were applied. Where this option is exercised, emission reduction schemes must be designed for individual installations. Annex IIB sets out the principles for such schemes, as well as practical issues to be addressed including calculation of reference points and target emission levels, and production of emission reduction plans.

The limits for fugitive emissions in Annex IIA do not have to be applied where they are not technically and economically feasible, as long as there is no significant risk to humans or the environment. Some activities which may be exempted from the controls of Annex IIA may also be excluded from the reduction scheme approach, again where this is not technically and economically feasible. In both cases, however, the ‘best available technique’ – a term defined in Directive 2008/1/EC – must be used to limit emissions.

Although existing installations can be allowed until 31 October 2007 to comply with the emission limit values and be registered or authorized, those which propose to make use of a reduction scheme must notify this to the competent authorities by 31 October 2005. Moreover, for any existing installations not using the reduction scheme, any newly installed abatement equipment must meet the relevant requirements of Annex IIA immediately. Conversely, where existing installations operate existing abatement plant which meets certain standards, they may be exempted from the waste gas (but not the fugitive) emission limits in Annex IIA until April 2013, as long as the total emission limit values are complied with.

Special provisions are included for dealing with ‘substantial changes’ to installations, and for situations where two or more activities are carried out together.

National plans

Article 6 provides for the use of national plans for some installations, as an alternative to control on an installation-by-installation basis. Member States may define and implement national plans to reduce emissions, and may then exempt existing installations in the sectors concerned from the emission limits of Annex IIA or the reduction scheme approach of Annex IIB. However, the plan must ensure that total emissions are reduced by at least as much as would have been achieved if the emission limits were applied. The national plan approach may not be used for the surface cleaning and dry cleaning sectors.

National plans must be submitted to the Commission for review, and must include the following elements:

- Details of the number of installations affected, their emissions, and the reductions that would be achieved if the emission limits were applied.
- A description of measures to be taken to reduce emissions.
- Monitoring arrangements.
- Binding interim targets against which progress can be measured.
- Evidence of the enforceability of the plan and details of the means by which compliance will be demonstrated.

The Commission is to assess the adequacy of both new plans submitted by Member States and plans which are in progress. This assessment will follow the criteria established in Decision 2000/541/EC. If it does not consider that the objectives of a plan will be achieved, it is to notify the Member State concerned as well as an advisory committee established under the Directive. The Member State should then say what corrective measures it proposes to take in respect of the plan. If the Commission is still not satisfied, it can require the Member State to apply the controls set out by Annexes IIA and IIB instead.

National plans are to operate without prejudice to the IPPC Directive 2006/1/EC. Therefore, any installation subject to a national plan which is also covered by Directive 2006/1/EC would continue to need to meet the standard of ‘best available techniques’.

Control and substitution of particular VOCs

Article 5 also incorporates additional controls for certain specific types of VOCs. In particular, substances or preparations that carry certain ‘risk phrases’ under Directive 67/548/EEC (and amendments) (see section on [classification, labelling and packaging of](#)

[chemical substances and mixtures](#)), due to their content of VOCs, which are carcinogenic, mutagenic or toxic to reproduction, must be replaced by less harmful alternatives. The VOCs in question are subject to a specific emission limit where the discharge exceeds a given level. Another emission limit applies to certain halogenated VOCs. Releases of the VOCs which are subject to these special provisions are to be controlled under ‘contained conditions’ as far as technically and economically feasible. None of these provisions can be dis-applied by the derogations, exemptions, or opportunities for reduction schemes or national plans allowed elsewhere in the Directive.

Monitoring, compliance and enforcement

Installations covered by the Directive must provide monitoring data to competent authorities once a year or upon request. Monitoring must be continuous where abatement equipment is used and the discharge exceeds 10 kg/h. In other cases where end-of-pipe equipment is used, monitoring may be periodic.

Operators must demonstrate their compliance with the applicable emission limit values or reduction schemes. Annex III of the Directive provides guidance on the use of ‘solvent management plans’ for the purposes of demonstrating compliance. Following technical advances, the text of Annex III was revised by Commission Directive [2010/79/EU](#).

In any event where an installation does not comply with the Directive, the operator must inform the competent authority and remedy the problem in the shortest possible time. If the non-compliance causes an immediate danger to human health, the activity must be suspended.

The Directive also requires Member States to determine sanctions applicable to breaches. These must be ‘effective, proportionate and dissuasive’.

Member States must report on their own implementation of the Directive every three years, in accordance with the procedure laid down by Directive 91/692/EEC. The reports must demonstrate that the required emission reductions are being met, whether by way of the emission limit values, reduction schemes or national plans. Commission Decision [2002/529/EC](#) provided a questionnaire for the Member States reports on the implementation of the Directive. Commission Decision [2010/681/EU](#) provides a further questionnaire for Member States for the reporting period 1 January 2011 to 31 December 2013 and Commission Decision [2010/693/EU](#) provides a common reporting framework.

Public involvement

The Directive requires applications for new installations or for ‘substantial changes’ to be made available for public review and comment before a Decision is reached for those installations subject to Directive 2008/1/EC. In fact, this provision appears to be redundant because the same obligation exists under Directive 2008/1/EC anyway. Decisions reached by the competent authorities, monitoring data, and any general binding rules and lists of registered or authorized installations, must also be made available to the public. Data can be withheld, however, subject to the restrictions set down by Directive [90/313/EEC](#) (see section on access to information).

Exchanges of information

The Commission has organized an exchange of information between the Member States on the use of organic substances and possible substitutes. On the basis of this, the Commission has published [guidance](#) for each sector of activity covered by the Directive. This guidance is to be taken into account by Member States during authorizations and in the setting of any general binding rules. For installations that fall under Directive 2008/1/EC, the relevant guidance is that provided by the Reference Document on Best Available Techniques on Surface Treatment using Organic Solvents. A separate exchange of information has been organized by the Commission on the use of solvent management plans. The Commission has also produced responses to [frequently asked questions](#) to help guide implementation.

Directive 2004/42/EC

The amending Directive 2004/42/EC (known as the ‘Paints Directive’) aims to reduce VOC emissions by setting maximum values for the VOC content in certain categories of decorative paints and vehicle-refinishing products when these are marketed. Member States will have flexibility in the development and implementation of market surveillance mechanisms. The Directive sets EU-wide limits on solvent content in paints, varnishes and vehicle-refinishing products to come into effect in two phases. The first phase will apply from 1 January 2007 while the second will apply from 1 January 2010. For vehicle-refinishing products, there will be only one phase, which will apply from 1 January 2007. From this date, it will no longer be permitted to sell to vehicle-refinishing body shops, whatever their solvent usage, coatings, which do not comply with the limits. The exception will be for coatings sold for exclusive use in vehicle-refinishing activities covered by Directive 1999/13/EC, which are authorized in accordance with Articles 3 and 4 of that Directive. Directive 2004/42/EC also allows national measures to be maintained or introduced to control VOC emissions from vehicle-refinishing activities deleted from the scope of Directive 1999/13/EC. Member States had to transpose Directive 2004/42/EC by 30 October 2005. For the format of reporting by the Member States for 2010, the Commission adopted Decision [2010/693/EU](#) on 22 July 2010.

Development of the Directive

The Directive as adopted contains three alternative methods of control from which individual Member States can choose: specific emission limit values to be met by each installation; reduction schemes which replace existing processes with low- or zero-solvent processes; or national plans.

During the negotiation of the proposed Directive, the Parliament initially attempted to remove the third option, but this amendment was not accepted by the Commission in its amended proposal ([COM\(98\)190](#)). In the course of its second reading, the Parliament accepted the inclusion of the third option. During both of its readings, the Parliament also tried to insert an obligation on the Commission to draw up proposals to reduce VOC emissions from decorative or DIY paint, which amount to around 10 per cent of anthropogenic emissions. However, the Commission refused to accept this requirement, arguing that it was already working on such a proposal as a separate initiative, and did not want to be committed to a particular timescale.

Implementation of the Directive

Information on the measures taken by the Member States to transpose Directive 1999/31/EC can be found in their national [execution measures](#).

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The Commission released a report¹ in 2006 examining the implementation of Directive 1999/31/EC, covering reporting from the Member States for 2003 and 2004. The report concluded that most Member States had reported that the requirements of the Directive have been transposed into national laws, although a number did not meet the 1 April 2001 deadline. It also noted that some Member States subsequently interpreted the definition of 'existing' installations and the reporting period to start and finish from the date that the Directive was transposed, as opposed to the date set out in Article 15. Of the Member States that submitted sufficient data, there was an average of 6 per cent progress in registering and authorizing installations measured against the number of existing installations.

It is interesting to note (given the debate on the issue during adoption of the Directive) that no Member State has chosen to adopt a national plan under the Directive. This seems to be due to a combination of practical issues and concern over how to marry implementation of a plan with the obligations for individual installations under the IPPC Directive 2008/1/EC.

A short formal implementation report of Directive 1999/31/EC was published in October 2010 ([COM\(2010\)593](#)), covering all 27 Member States. The report covered the period 2003-2007, which was mostly prior to the final implementation deadline of the Directive for existing installations (30 October 2007). This stated that 'the information provided by Member States gives no indication of any problems with the implementation of [the Directive]. Overall, Member States have implemented the provisions, measures and practices necessary to ensure compliance with the various aspects of the Directive'. By the end of 2007, there were about 53,000 existing installations in the 27 Member States covered by the Directive. The Directive provides two options for individual installations to achieve VOC reductions: either by complying with the emission limit values, or using a reduction scheme. Few installations reported using the latter option, not least because of the difficulties of assessing the equivalence between a reduction scheme and the relevant emission limit values. With regard to the Paints Directive 2004/42/EC, the overlap with Directive 1999/13/EC has caused concern with some stakeholders and authorities. The Member State implementation reports upon which the Commission assessment was based can be found in the [Reporting Obligations Database](#).

Member State reports on the implementation of the Paints Directive 2004/42/EC can be found at this [link](#), including translations into English. Reports for 2010 are submitted by Member States to the [Reporting Obligations Database](#). A Commission implementation report based on the 2007 reporting information was published on 27 May 2011 ([COM\(2011\)297](#)). It found that the main implementation challenges reported were a lack of administrative resources for monitoring and an insufficient number of (accredited) analytical laboratories. The reported number of inspections of manufacturers, importers, wholesalers, retailers and operators in 2007 varied between zero and 540, with most Member States reporting between 10 and 100 site visits. Several cases of non-compliance were found during the inspections -

the number of breaches of the VOC limits was generally below 5 per cent of the cases, while breaches of the labelling requirements were more frequent and often around 20 per cent.

Enforcement and court cases

There have been two cases concluded in the European Court of Justice concerning the Directive:

- [C-332/02](#) 27.11.03. This was a judgement against the United Kingdom for failure to transpose the Directive in Gibraltar within the prescribed time period.
- [C-443/08](#) 07.05.09. This was a judgement against France for failure to ensure full transposition, in particular that the concepts of 'small installation' and 'substantial change' were correctly established in French law.

Further developments

In December 2007 the Commission published a proposal to revise the Integrated Pollution Prevention and Control Directive [2008/1/EC](#) and six sectoral industrial emission Directives ([COM\(2007\)844](#)), including Directive 1999/13/EC. The proposal was adopted as the [Industrial Emissions Directive](#) 2010/75/EU. As a result the Directive 1999/13/EC is repealed from 7 January 2014. The Industrial Emissions Directive makes few changes to the current obligations of Directive 1999/13/EC, although it removes the option for Member States to adopt a national plan (given that such an option has not been taken up - see above).

The Commission has also examined the possibility of technical amendments to Annex III of the Paints Directive 2004/42/EC. A report² examining options for revision of the Directive was published in 2009. A draft proposal was heavily criticised by the Council in May 2010, which accused the Commission of seeking to exceed its powers. On 27 May 2011 the Commission released a Communication examining further revision of Directive 2004/42/EC ([COM\(2011\)297](#)). The Commission concluded that “according to the latest results of the integrated assessment modelling, a strengthening of the existing VOC emission reduction measures seems not to be required to achieve the intermediate objectives of the [Air] Thematic Strategy” and, therefore, “amending the scope or limit values of the Paints Directive is not justified at this stage”.

Related legislation

Directive 1999/31/EC sets conditions for a range of industrial activities. Some of these are also regulated under the Integrated Pollution Prevention and Control Directive [2008/1/EC](#). The reduction in emissions of VOCs is also an objective of other legislation, including from petrol (Directive [94/63/EC](#)) (see section on volatile organic compounds from petrol) and dangerous substances under Directive 67/548/EEC (and amendments) (see section on [classification, labelling and packaging of chemical substances and mixtures](#)). Controlling VOCs contributes to reducing tropospheric ozone pollution – the objective of the Air Quality Framework Directive [2008/50/EC](#).

References

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