Rubber sector compliance with VOC COUNCIL DIRECTIVE 1999/13/EC

Brussels, 1st October 2007

Background

Council Directive 1999/13/EC is aimed at the prevention of formation of tropospheric ozone by reducing VOC emissions of 20 industrial sectors. Such a reduction can be obtained either by "treatment" of emissions or by reduction of solvent consumption thereby allowing an increased efficiency in solvent usage. The deadline for compliance for existing installations is October 2007.

In order to comply with the requirements of the Council Directive, the European Rubber industry has focused its efforts towards reducing solvent emissions at source through the implementation of the "reduction scheme" option and, where necessary, via further improvements in solvent abatement systems.

According to the Directive: *"The purpose of the reduction scheme is to allow the operator the possibility to achieve by other means emission reductions, equivalent to those achieved if the emission limit values were to be applied. To that end the operator may use any reduction scheme, specially designed for his installation, provided that in the end an equivalent emission reduction is achieved"*. This innovative concept for the first time introduced the idea of an efficient usage of solvents as complementary or alternative to emission treatment.

However, there are a number of problems that have been brought to our attention with regard to the implementation of "reduction scheme." These relate primarily to the reduction scheme either not being fully recognised or promoted by regulators consistently across all EU countries. The primary purpose of this communication is to bring to light some of the issues that need to be addressed in order to ensure consistency in implementation of the Directive as well as to maximize the environmental benefits accrued from the utilization of solvent reduction schemes.

For **existing installations** some Member States do not explicitly recognise the possibility of referring to a reference point in line with Directive definition: "*reference point for emission reductions should correspond as closely as possible to the emissions which would have resulted had no reduction action been taken"*. An installation applying the reduction scheme can refer to any period provided appropriate evidence is submitted to demonstrate that during this period "no reduction action was taken".

For **new installations** the efficient utilisation of solvents can also be significantly impeded because some Member States do not explicitly recognise the option that allows efficient usage of solvents as potentially viable through reduction schemes for new factories. The rubber industry is currently expanding and it is keen to further consolidate this expansion trend in Europe. A harmonised and clear legal framework is essential for this purpose.

Specific Points:

Legal framework

- **Directive 1999/13/EC: alternative compliance choices**

  According to Article 5 paragraph 2, it is stated that:

  All installations shall comply with:
  - *either the **emission limit values** in waste gases and the fugitive emission values, or the total emission values, and other requirements laid down in Annex IIA or*
  - *the requirement of the **reduction scheme** specified in Annex IIB*

  The term "all installations" refers both to new and existing installations Therefore the provision for the application of the reduction scheme should not be restricted to existing installations but also be available to new installations. In addition, the entire ***reduction scheme*** *shall be considered applicable to all* installations listed in the Annex IIA, regardless of whether the total emission limit values are expressed in terms of solvent used per quantity of product or as a percentage.

- **Directive 1999/13/EC: Compliance verification**

  According to Article 8 paragraph 4, related to abatement monitoring actions by Member States, it is stated that:

  Measurements are not required in the case where end-of-pipe abatement equipment is not needed to comply with this Directive.

  This provision appears to make available the option that an operator need not install any abatement equipment when a reduction method is used to comply with the Directive.

- **Reference Point Annex IIB**

  EU Directive 1999/13 states in Annex IIB, Chapter 2, paragraph (ii):

  (ii) the reference point for emission reductions should correspond as closely as possible to the emissions which would have resulted had no reduction action been taken.

  The "reference point" definition clarifies the reference benchmark for both existing and new installations:

  - for existing installations the "reference point" corresponds to the quantity of solvent consumed to build tires in the period preceding the implementation of the reduction techniques. It is essential that adequate clarity exists with regard

to determination of the reference point which in turn determines compliance with the reduction target for October 2007. It is worth noting that the European Rubber Industry began to make significant improvements in its solvent consumption much before the EU Directive 1999/13/EC came into existence.

- for new installations the "reference point" shall be calculated to be equivalent to the technical reference determined for the same factory in which techniques allowing the efficient usage of solvents and other measures to ensure compliance with the target emissions are not yet implemented.

- **Reduction scheme (Annex IIB)**

The example provided in Annex IIB explicitly refers to the reduction scheme for both existing and **new installations**.
For existing installations the annex implicitly defines the method to be followed by defining starting point and target values. The same criteria shall apply according to the example practice, detailed in Annex IIB paragraph 2.

(i) the operator shall forward an emission reduction plan which includes in particular decreases in the average solvent content of the total input and/or increased efficiency in the use of solids to achieve a reduction of the total emissions from the installation to a given percentage of the annual reference emissions, termed the target emission. This must be done on the following time frame:

Time period		Maximum allowed total annual emissions
New installations	Existing installations	
By 31.10.2001	By 31.10.2005	Target emission × 1,5
By 31.10.2004	By 31.10.2007	Target emission

The time period indicated above refers to a case of a new installation realised after the date of issue of the Directive. Obviously the Directive is not restricted in its application to *New installations* created within 2004; until 31.10.2004 new installations could have implemented reduction schemes within a certain time frame (with an intermediate target), whereas after 31.10.2004 New Installation deciding to implement a reduction scheme would have to ensure compliance with target emissions immediately (considering Directive Whereas n.15 on national basis). The target emission is calculated with respect to a documented *reference point*. The target emission is different from factory to factory, but the operator shall provide evidence about the new installation benchmark (reference point).

The techniques allowing an existing or new installation to reduce solvent consumption shall be applied and "maintained" to avoid future increase in solvent usage and it shall be in reference to the amount of rubber processed or number of articles produced.

Evidence of solvent consumption, as noted in solvent purchasing records, should be deemed as sufficient by Competent Authorities for the purpose of determining a baseline figure for the reference period.

ETRMA position

At present, most of the existing installations in the European rubber industry could comply with the EU Directive 1999/13/EC by adopting a reduction scheme. This would lead to an end result that would be the same as that achieved by compliance with the emission limit values.

The same "efficiency" concept shall apply to new installations. It will be up to the operator to demonstrate a reference consumption level of a similar production process, by applying all the techniques that would allow a reference installation to achieve the emission target.

Reduction schemes should be encouraged because they provide environmental benefits that exceed those derived from compliance simply with emission limit values, including **reduced avoidable solvent production, reduced CO_2 emissions, and reduced energy consumption by solvent abatement equipment**). The application of a reduction scheme is perfectly in line with the Directive's requirements for both existing and new installations provided that the operator can prove that the reduction scheme is applicable to the process.

Conclusions

We have provided argument to show that:

a. **the application of reduction schemes is not only limited to existing installations but should also be open to new installations; implementing an efficient solvent usage only for existing installations appears to be inconsistent with the aim of the Directive 1999/13/EC;**

b. **the operator of a new installation can apply any reduction scheme specially designed for his installation (Annex IIB p.1) upon demonstrating that it will steadily achieve by other means emission reductions equivalent to those achieved if the emission limit values were to be applied;**

c. **when adopting a reduction scheme, the reference point for both existing and new installations shall correspond, in terms of amount of used solvents per product weight, as closely as possible *to the emissions which would have resulted had no reduction action been taken*. For existing installations this shall be refer, based on documented evidences, to any "no action" period and, for new installations, it shall refer to a proven benchmark of the operator.**