

Information on newly introduced emission control provisions for construction site equipment

On 19 September 2008, the Federal Council amended the Ordinance on Air Pollution Control in order to standardise the emission control provisions for construction site equipment. Instead of imposing a filter obligation, the Federal Council is specifying more stringent maximum emission levels which, given current developments in technology, can only be met by employing efficient particle filter systems.

In Switzerland, construction site equipment emits around 270 tonnes of particulate matter each year in the form of diesel soot. As diesel soot is a carcinogenic component of particulate matter and is therefore particularly harmful to health, emissions need to be minimised to the utmost using currently available technology so as to protect the environment and lessen the impact on the health of the general public.

Previous technical requirements (construction requirements)

To limit the emission of air pollutants at construction sites, the Swiss Federal Office for the Environment (FOEN) issued a directive on air pollution control at construction sites that entered into effect on 1 September 2002. As a means of reducing emissions of diesel soot, this directive stipulated a particle filter obligation for machines on major construction sites with a power output greater than 18 kW.

To date, however, this provision has not been uniformly implemented by the different cantons in Switzerland. In addition, the directive stipulated that only machines on major construction sites had to be equipped with a particle filter. This gave rise to uncertainty among the relevant enforcement authorities in the cantons.

Performance requirements instead of construction requirements

Now the Federal Council has inserted the corresponding provisions into the Ordinance on Air Pollution Control. At the same time, it has amended the provisions to include all construction sites in Switzerland. The general public will therefore be more effectively protected against the harmful effects of particulate matter and diesel soot in the future.

Unlike the previous directive, the newly approved amendment of the Ordinance on Air Pollution Control does not impose a particle filter obligation. Instead, it specifies an **emission limit value of 1×10^{12} #/kWh** for the number of particles that may be emitted by machines and applies with an engine power output greater than 18 kW (see transitional provisions below). Given the current status of technology, it is in practice only possible to comply with this limit value with the aid of efficient particle filter systems. The highly efficient particle filter systems available today are capable of filtering more than 97% of solid particles and more than 93% of diesel soot from the exhaust of construction machines.

It is of course conceivable that alternative methods of reducing particle emissions will come onto the market in the future. To ensure that the development of new technologies is not hampered in any way, the Federal Council has deliberately refrained from imposing technical requirements, and has therefore specified an emission limit value.

These new regulations also lead to an improvement and simplification of the certification procedure in accordance with the Federal Act on Technical Barriers to Trade. All that is now required for the approval of particle filters is a certificate of conformity with the requirements specified in the Ordinance.

Transitional provisions for smaller and older equipment/machines

The amendment of the Ordinance on Air Pollution Control applies with effect from 1 January 2009 to all new construction site equipment with an engine power output greater than 37 kW. This is the category in which the status of technology is the most advanced. For smaller machines and for the retrofitting of older machines, other deadlines apply based on engine power output and age.

For further information please refer to the following links.

- Tested and approved particle-filter systems for diesel engines:

<http://www.bafu.admin.ch/luft/00632/00639/00644/index.html?lang=en>

- Air pollution – harmonised regulations for construction site equipment (only available in German, French and Italian):

<http://www.bafu.admin.ch/dokumentation/medieninformation/00962/index.html?lang=fr&msg-id=21560>
