

VOC legislation — can we trust the enforcers?

. . . asks Glenn Greenlees of Standard Industrial Systems Ltd

It's interesting how so many of us are now committed to meeting our obligations regarding VOC emissions legislation — the deadline for compliance with the *Solvent Emissions (England & Wales) Regulations 2004* passed on 31 October 2007, some would say without a whimper (depending upon the region of the UK in which the operator is based).

Surely the operator has enough to contend with? On the face of it, there appears to be so many technologies available. So many salesmen are expounding the virtues of their particular technology be it hardware or consumables — and we all know the confusion and misinformation confronting the potential investor, when he is being encouraged to sign on the line which is dotted.

The approach by salespeople in the business of cleaning and degreasing is probably no less aggressive and no more opportunistic than in any other industrial sector; maybe the rules and regulations are interpreted "creatively" and somehow, ever so slightly manipulated to make the offer on the table seem the most attractive.

Rightly or wrongly *caveat emptor* will remain the overriding principal — the emphasis resting upon the operator to extract (written?) guarantees of both performance and long term compliance before committing to a significant investment. He should also carefully consider the full cost of ownership over the lifetime of a particular installation. Maybe seemingly minor considerations such as energy consumption, disposal costs including chemicals/waste stream/abatement media, are pushed into the background as he is being pushed inextricably by Local Authorities towards a decision he is reluctant to make anyway?

Legislation is the driver — but can we rely on those who implement it?

So what is so special about replacement cleaning and degreasing? For the moment lets put aside the argument that correctly specified and implemented modern technology can offer so much more in terms of performance, operating costs, health and safety, PR etc. Let's be honest here, so many operators out there are currently still using open top 'trike' systems and are only considering replacement because legislation so dictates. So who do they look to for truly independent advice? Surely the trusted people policing the entire implementation of the legislation know "what's what".

Sadly, no. The experiences of the writer suggest that so many Local Authorities have not yet grasped even the fundamentals of legislation which include the *Solvent Emissions (England & Wales) Regulations 2004* and Standards such as *EuroNorm EN12921/4*.

Of course, specific cases cannot be discussed (read: divulged) within the confines of this article — likely there would be enough to fill the pages of this entire edition.

Consider the fabricator to the aerospace industry, who has been directed by his Local Authority Environmental Health Officer that he must make the change from vapour degreasing with trichloroethylene to "an aqueous process". One could understand a misinterpretation of the SER, which requires that a move away from the more onerous classifications such as R45 must be made "...at the earliest opportunity". But to be specifically directed away from possibly ideal alternatives such as perchloroethylene or modified alcohols cannot be considered independent and impartial advice.

Opposing interpretations

We also have the example of two companies, with seemingly very common circumstances, who are being given totally opposing interpretations of the SER by their local Environmental Health Officer.

On the one hand there is the company with two systems operating with methylene chloride and one utilising trichloroethylene — all within the same building in "technically connected" processes, in total operating at above the threshold consumption of one tonne per annum. Wrongly, the advice from the Local Authority has been that each machine has to demonstrate consumption less than one tonne. In fact each methylene chloride (R40) system must demonstrate mass flow losses <100 gm/hr and the trichloroethylene system (R45) has to achieve <10 gm/hr.

In contrast, we can also look at the aerospace manufacturer utilising two hermetically sealed systems in two separate buildings in diverse (non-technically connected) applications. Operating with perchloroethylene, each system can immediately demonstrate Compliance with losses <100 gm/hr. However, over both facilities consumption greater than one tonne and the operator is wrongly being advised that he requires authorisation and the appropriate 'Permit to Operate'.

But, perhaps, the most extreme travesty is the actual misuse of the PPC Permit to Operate. The writer knows of many instances where existing users of older, inherently non-compliant systems are being issued with (and charged for) Permits to Operate based on the premise that the operator is over "the one tonne threshold limit" — in the grand scheme of things we are really talking here about users of R40, R45 and R60 solvent species and, in the UK, particularly trichloroethylene in tank-based systems.

Understandably the operator is led, and eager, to believe that he can remain fundamentally within the law in acquiring such a permit. He is not. The permit is not a "get out of jail free card" and the SER governs how we must now utilise volatile organic solvents in surface cleaning in a "hierarchical" approach.



The author of this article, Glenn Greenlees, is the marketing director of Standard Industrial Systems, an independent distributor "dedicated to offering the world's best in both aqueous and solvent cleaning technologies."

Glenn believes that with the many changes in environmental legislation, solvent classification together with a strong drive towards health and safety improvements it is vital that potential investors are given the facts regarding the technologies available along with the relevant legalities.

Let's look once again at the route to achieving compliance:

1. Maintaining the annual consumption (in tonnes per location) below the quoted threshold value for the solvent species concerned in technically connected processes.
2. If the above is exceeded by maintaining the mass flow rate (in gm/hr per installation) below the quoted threshold value.
3. If the above is exceeded by continuous abatement of exhaust stack concentrations (in mg/m³) below the quoted threshold values (plus meeting fugitive loss limits).

The Permit to Operate is designed for those installations where consumption is, in fact, over the applicable threshold limit but still compliant by conforming to the further requirements of the SER.

In fact it is surely not the fault of the individual EHO. This is largely because (generally) they only have experience of "open top" tank degreasing systems and have little or no knowledge of modern technology such as introduced many years ago into mainland Europe. Furthermore, their remit often extends so widely from inspecting the high street chip shop for small crawling things to such critical areas as dictating how parts of flying machines can, or cannot, be cleaned during the manufacturing process.

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