

The State of the Cleaning Market

Or distrust, fear and confusion at the wash tank . . .

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We have become more skeptical. We say more situations disappoint us. Recently there have been: Congress and Bill Clinton, baseball and hockey players on strike, Chevy Chase and Star Trek-Generations, the new Denver Airport and airline first class service, and now it's the EPA/OSHA and manufacturers of cleaning stuff. Soon, the Pope will become a best-selling author.

OK, the subject of this article is not western civilization. It is what is going on in the industrial cleaning market and how that affects you the end-user customer, the manufacturer, and maybe the regulator too.

In mid-1994, I completed a multi-client marketing study. A pertinent conclusion was that more than half of those firms who have to convert from CFCs have not done so. From recent conversations with industry persons, I believe that to still be true.

So to paraphrase Mr. Stengal's question, ...American industry has been converting from ozone-depleting compounds (ODCs) for four to six years. How come we are only half finished with less than one year to go?

The choices one faces in replacing CFCs (and methyl chloroform) have been covered in a series of eight articles published in PRODUCTS FINISHING in 1994 and 1995. In this article, a continuation of that series, we'll examine the U.S. industrial cleaning market. We'll look at what choices end-users have made and see how well they have satisfied them. We'll look at what actions suppliers have taken and see how well their needs have been met. And we'll look at the decisions made by regulators and see how their goals have been met. Finally, we'll make some suggestions for all three groups:

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end-users, suppliers and regulators. After all, advice is worth what it costs..

The World According to End-Use Customers

If you are an end-use customer, none of this has been of your direct doing — unless we include all the ODCs you have been emitting for the last thirty years. If it's not our fault, is it the regulators' fault for creating the regulations, or is it the suppliers' fault for not having cheap direct replacements for ODCs?

Regulators didn't ask permission of end-users to ban chemicals that did exceedingly well what they were designed to do. But then regulators seldom do ask for permission.

Regulators were perceived to have lied by first creating the 1992 - 1993 labeling law to encourage compliance, and then gutting it in response to pressure from end-users. Regulators were unrealistic. They told us all problems could be solved by using water-based systems. Technical "gurus" echoed this as well.

Finally, regulators can't get their act together. EPA regulates mass flow of emissions to the environment. OSHA regulates concentration of emissions in the workplace. Why can't there be just ONE regulation that protects both the environment and workers? Maybe St. Newt can help!

Suppliers lied to us by telling us: "...we could just put it to the sewer,"... "why wouldn't it replace methyl chlo-

roform, it's just as good a solvent? (forgetting to mention that it dried like a slug)," and writing MSDS's that nearly claimed their products were holy water.

Suppliers were perceived to have made huge profits because of the high price of their equipment and cleaning agents. Most suppliers provided no service to integrate their products into a solution to our problems. Some suppliers did, but they were more expensive.

Finally, we were so insecure about the offerings from suppliers that we had to test each offering with all our parts.

The choices end-users have made have produced only fair results. Aqueous cleaning systems were the choice of two-thirds to three-quarters of those who have converted from ODCs. Many applications have been quite successful. But many users are reporting difficulties such as cycle times being too long, drying quality being poor, and parts having defects due to corrosion. And some aqueous users are properly concerned about the Metal Products Machinery rule which will require permits for nearly all water discharges.

Application of cleaning solvents such as hydrocarbons and terpenes has been limited to those areas where drying is not critical. Until recently, little attention was directed toward conversion to chlorinated solvents which are not ODCs (trichloroethylene, perchloroethylene, etc.). But that attention to chlorinated materials is

now starting to accelerate as interest in aqueous materials diminishes.

The World According to "Juice" and Equipment Suppliers

Hey, it's not our fault that more users haven't converted and are so dissatisfied. We are profit-making companies (at least that's what the boss says). We aren't psychologists, and we aren't philanthropists. We have spent vast sums of money trying to meet end-users' needs. All of them insist on testing our offering in our lab and our competitors' offerings in their labs. Developing new cleaning formulations, even if we make the feedstocks, means testing with hundreds of soils for cleaning power and dozens of substrates for compatibility.

New equipment has to be different since there is so much competition in this industry. That takes engineering and development expense. And when our stuff works, in nine months we'll see the same formulation in our competitors' bottles because patents are so expensive in money and time.

New toxicology tests that are required to ensure products are safe take six months to five years to complete, and cost hundred of thousands of dollars. End-user customers should pay since they are the ones who benefit.

Only a few of our firms have gotten rich. Far more have been sold, including some firms with high-quality and long-standing reputations. And many firms are actively reorganizing right now.

End-users won't decide. We have been working with some of them since 1990, and they still haven't bought. We have to make a profit every year.

We like to meet the specifications of large, well-integrated customers, and then sell to their suppliers and customers based on meeting that spec. But they keep changing the specification after we meet it. And then, the competition can meet it.

Sales don't justify large staffs. Customers will have to learn to hold their own hands. No firm can afford to build a well-equipped test lab based on expected future sales.

This industry is so fragmented, and national firms lose business to smaller regional firms who can dedicate resources to targeted customers and know their needs better than the national firms. Regional firms find it difficult to grow out of their region due to high costs.

Regulators sometimes want it all! Offerings must be politically correct, or they just get ignored. We came up with perfluorinated materials (PFs) as wonderful drying agents. They're non-toxic, non-flammable and work well. But because one hundred times the global manufacturing capacity of PFs might produce a measurable change in the earth's temperature, the EPA will only support PFs for limited applications.

Regulators do things that just aren't consistent. On one hand we barely agree with the idea of banning ODCs that might cause an increase of skin cancer in 50 years. On the other hand,

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the regulators first tell us that replacement materials should be water-based, and later they recommend use of known carcinogens (perchloroethylene) and extremely flammable materials (acetone was just exempted as a VOC).

The labeling law was a disaster. Initially, in 1992, it encouraged compliance with the Montreal Protocol. Certainly, jewelers didn't want "harmful" labels on wedding rings. So we spent resources to meet what we thought would be a consistently large business volume. But, in early 1993 the EPA decided the label didn't have to be passed through to the ultimate purchaser. That ruling stifled interest in conversions from ODCs, and we had twice the level of staff we could afford.

Finally, the EPA limited interest in conversions by eliminating the tax on recycled methyl chloroform.

The World According to Regulators

We can't be all things to all people! It isn't our job to help all firms make money, though we are concerned about minimizing the economic impact of regulations on those who have to comply. Also, it isn't our job to make choices; it is our job to make sure good technology is available.

We do change with the times, as all organizations need to change. Since the Montreal Protocol was included in the 1992 Clean Air Act (for which we have enforcement responsibility), the EPA has changed in at

least five major ways. We have:

Recognized there wasn't an adequate supply of effective and "harmless" alternatives to ODCs. Consequently, we are broadening the range of solutions that we recommend as replacements for ODCs. We have changed our emphasis to recommend chemicals that have been proven to work, if there are sound engineering controls to control emissions and worker exposure.

Recognized that in stressing aqueous alternatives, the EPA has inadvertently allowed a trade-off of ozone-depletion potential for water pollution. Consequently, we are changing regulations to limit trade-off of one form of pollution for another. We call that a multimedia approach.

Recognized that the EPA's role is less that of enforcement and more of assisting with compliance. Consequently, we are changing our organizational approach and are willing to "make deals" to achieve the compliance the law requires in a reasonable time.

Recognized that there won't be adequate time and infrastructure available to complete the conversion from ODCs by 1996. That's why the EPA suggested the use of recycled methyl chloroform, believing it was exempted from the tax required of newly manufactured methyl chloroform. This was later learned to be not true. The point is that the EPA will provide technology, not punishment, because the phase-out can't be achieved as stated.

Finally, the EPA has recognized that

there must be a balance between the operational effect of regulatory proposal and its economic impact on industry. That's why we changed our emphasis in the 1992 labeling law. We agreed with industry's complaints that the law would invoke undue hardship and that using the label to inform the next user might not be an effective step. We elected to bet that interest generated by the law through 1992 would carry over to the next three years. Unfortunately, we were wrong.

The goals of regulators have been partially met. Half of the U.S. firms are still using ODCs. But much more than half of the ODC volume has been converted to replacement materials. Sampling by satellites has recently confirmed the mechanism of ozone destruction by finding fluorine and chlorine in the earth's upper stratosphere.

The main goal is being achieved. Observations and sampling show ozone depletion has peaked. The ozone layer appears to be at the point where it can replenish itself.

There is confusion in the market now, and desirable changes made by the EPA are responsible for some of that confusion.

The Meaning of Life

What does this all mean? It means that the U.S. industrial cleaning market can be characterized by two words: distrust and fear.

End users distrust suppliers whom they feel have lied to them, and regu-

lators who have not been consistent. They fear making a mistake, or a choice that will only last until the next regulation.

Suppliers don't trust that end users will accept their offering even when it appears to meet their stated needs. They fear to commit resources in new developments which may be rejected. Firms wait to see how the developments of others are received before they initiate their own.

Regulators don't trust that their plan to convert U.S. industry by 1996 will be successful. They know they have protected the ozone layer, but fear that the availability of recycled materials will extend the conversion period.

Hud, Deja Vu

Do you remember this line from Paul Newman's 1960s movie *Hud*? "*What we have here is failure to communicate.*" Does it seem that line also applies to the U.S. industrial cleaning market in the 1990s?

Communication among end-users, suppliers, and regulators is difficult in this industry because there is no industry trade association. The logical channel of communication for suppliers is advertising. EPA's communication channels are written by lawyers.

Good communication can and has occurred in meetings, conferences and trade shows. Probably the best way for industry-wide communication to occur is through journals such as this one.

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Actions and Answers

Don't despair if you are an end-user (you can make good choices and not waste money), a supplier (there is good business to be had if you have listened and produced an alternative offering users value), or a regulator (the conversion can be completed without major economic dislocation).

Market forces and existing regulations will cause the phase-out of ODCs to be complete by approximately the year 2000. ODCs won't be manufactured in the US after 1995. They aren't being manufactured in Europe now. And they won't be manufactured in developing countries for internal use after 2010.

The phase-out is inescapable. Don't make plans based on any other outcome.

If you are an end-use customer, here is how you can make a choice that will work, not waste money, and last beyond the next regulation.

Use recycled material after 1995 to extend the time you need to make and implement a good decision. Stockpile material as you feel your working capital is justified.

Get good unbiased information. It's worth whatever it costs compared to the cost of mistakes. Try state technical agencies, consultants, or current publications. Don't waste time on political correctness.

Consider engineering controls that can contain chlorinated solvents (the EPA has a standard for such controls). This can give you a solution which works similar to ODCs.

Spend your time on implementing a well chosen solution obtained through unbiased information, rather than testing every supplier's offering. Testing everything to exhaustion diverts your resources from the critical step of making your choice work.

If you are a supplier, here is how you can still make a good return on your efforts:

Temporarily forget your core strengths. Focus on what customers say they want: solutions to their problems. The solutions are well known and include the following elements: cleaning, rinsing, drying, and recycle/disposal. Forget features and benefits.

Select the approach to solving customer's problem that best fits your corporate core strengths. Keep the unit cost down; plan on getting your return through volume.

Your marketing program should be based on one concept such as demonstrations. Get video tapes showing your products working to customers through your distribution channels.

Partner with those who are basic in areas where you are not, so that you still solve the customer's problem. If your plan does not solve the problem stated above, consider another business opportunity.

If you are a regulator (EPA or OSHA), here is how you can achieve your prime goal to implement regulations.

Congratulate yourself, you have

done a lot of things well. But you have much to do, and have made some serious mistakes.

Nurture and retain the attitude that you want to work with end-users and suppliers. Make deals to implement regulations.

Foster interagency cooperation where your customers (those whom you are regulating) must deal with multiple agencies. “Tiger teams” can be the best approach here.

With everyone working together in good faith — suppliers, end-users and regulators — the objectives implicit in the Montreal Protocol will be realized. **PF**

Sidebar:

“...Can’t anyone here play this game?...” Casey Stengel, New York Mets Manager, 1962.

“...We have met the enemy, and it is us.” Walt Kelly, in the comic strip Pogo, 1936.