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Is the Seveso II directive an improvement on its predecessor? A chemical industry safety professional's personal view

Richard Gowland

The Dow Chemical Company, PO Box 1310, Hazards Committee, C.E.F.I.C., 3000 BH, Rotterdam, Netherlands

Abstract

The paper addresses the 'state of play' in the implementation of the second version of the Seveso directive (Seveso II) from the viewpoint of someone who was involved in comment during the drafting of the directive, is involved through the work of some of the Technical Working Groups and will be involved as the Competent Authorities implement the national versions of the directive. The directive is seen as an improvement and a logical step from its precursor. The chemical industry sees its contribution as a positive one. The gathering of input for the directive as it was drafted is seen as partially successful. The work of the Technical Working Groups is supported with some recommendations about resourcing and the time realistically available for producing guidance in time for the individual states to implement. Two particular concerns remain. These are: (i) the detailed implementation at the establishment level where the individual states requirements do not always resemble each other well, (ii) the willingness of the states to resource the Competent Authorities to a level where a real partnership can flourish to the good of all. The conclusion is that the new directive is fit for its intended purpose, but will only be fully effective if it is implemented uniformly and well. © 1999 Elsevier Science B.V. All rights reserved.

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1. Introduction

This paper is written at a time when implementation of the directive is imminent. It may serve to remind us about some of the issues which crossed our horizon in the recent past. It could also be useful should there be another round of legislation in this area. It is the view of one person whose opinions will not be shared by all.

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The opinion of most informed and enlightened people in the chemical industry is that Seveso II is an improvement on its predecessor. The new directive's logic is better than before with the qualifying criteria reasonably related to risk. The fact that it may result in more operators needing to satisfy the requirements for a Safety Report or a Major Accident Prevention Policy may seem to be burdensome. In most cases, these are sensible requirements and all but the most foolhardy companies would agree that it is necessary to have and apply these disciplines. Among the uncertainties are criteria for 'Substances Dangerous for the Environment' and the originally stated aim of harmonisation which are addressed as possible challenges later in this article.

Many of the required disciplines are factors in the Environment, Health and Safety Management Systems being promoted by organisations like I.S.O., O.E.C.D. C.E.F.I.C. and the European Process Safety Centre. The concept of harmonisation is also supported by industry. This factor alone holds the prospect of reduced cost for the operators since there should ultimately be a common 'operating environment' which will allow common management systems. This contrasts with today's situation where a company operating in more than one state needs more than one type of management system and safety report. Speaking from the perspective of a 'multi-national' operation, being able to reduce the effort of understanding and creating a structure to meet an individual state's version will pay dividends.

During the period of drafting and amending the directive, comment was sought from industry groups such as C.E.F.I.C. and the individual national federations. As this process proceeded, feedback seemed to be lacking. The process could not really be described as a dialogue. However, the final results in the directive seemed to have taken account of the legitimate concerns of the chemical industry and the other stakeholders without undue 'horse-trading'.

In the pan European trade associations, the different legislative environments of the individual states caused some challenges. There were cases where a representative from one state had concerns about the consequences of the implementation of a particular clause which was not shared by others. The reasons for this varied from the interpretation of the English language to the more or less adversarial relationship with a state's Competent Authorities and even between ministries at government level.

Industry views its involvement in most of the Technical Working Groups favourably. The advantages include being able to share experience and best practice and to have an early understanding of the likely impact of guidance and implementation of the directive. It is hoped that the representatives of the states' legislators also see the advantages.

Industry believes that its contribution was positive and helped the process without dilution of the desired outcome. However, this involvement has thrown some of the challenges into sharp relief. Most notable are the following: (1) It seems that the original avowed aim of advancing harmonisation through all the member states is unlikely to be achieved. (2) Each individual state's detailed intentions will only become clear when implementation is complete. There lingers the possibility that a state may wish to go considerably further than the guidance published since it feels entitled to continue working with a system it trusts more than the guidance, which by its nature they could see as a compromise or 'lowest common denominator'. The failure to advance harmoni-

sation is seen as a missed opportunity. (3) The performance of the Technical Working Groups is not as efficient as we should like. Some opportunities have been missed and the time taken could jeopardise the requirement for the states to pass the instrument through their legislatures within 2 years. This factor single-handedly seems bound to prevent any desired harmonisation from being achieved. The European Commission may have believed that the time, funding and other resources provided matched the scope of work. This has proved to be an unrealistic expectation. The delegates needed to communicate, research, gain approvals and formulate their detailed input. Occasionally, the Industrial delegates would feel that this process took too long since for them it was on an issue that was already decided within the established industry.

2. Addressing Technical Working Groups in general

There is certainly real value in this concept. However, to date, only a minority have completed their tasks and even those which have been completed need to be 'sold' to the states as 'fit for the purpose'. There is no guarantee that the result will look like 'harmonisation' although that would be helpful.

Occasionally, when a TWG is created, it seems that some legislators are sensitive to the 'taint' of industry and wish to see it avoided and therefore resist the presence of industry. After negotiating this obstacle, it is often found that the industry representatives are among the most constructive members of the working groups, able to give examples of working systems which will support the credibility of the guidance. It is not unusual to find that industry representatives are able to be more flexible in their thinking than representatives of the legislators who do not have the freedom to compromise on a previously instructed national position. It is good to see that in most cases, the requirements discussed are derived from best practice and not from some esoteric or political 'wish list'.

3. The chemical industry's involvement in Technical Working Groups

Through National and European Federations and Technical Organisations, industry has been a willing partner in Technical Working Groups which support the implementation of the Seveso directive. It is interesting to speculate why they are there.

Is it to: genuinely contribute to workable guidance which can help all industry to perform to a high standard which may be already attained by some or perhaps none as yet?

Most industry representatives strongly support involvement. In many cases, as a result of this they have been able to calm their own fears that the industry would become an endangered species or ejected from Europe as a result of the legislation. A sense of solidarity exists which sees that the poor performance of one company reflects on the whole industry. This generates a desire to share the best practice. Any assistance from legislation to get these best practices more widely used is welcome. There was little evidence of a concerted attempt to lower standards.

Is it to: create a harmonisation so that no state operates to a lower standard. This is an often stated aim. In practice, this has not happened yet! Again, industry supports the concept of harmonisation provided that it is not to one of the extreme ends of the 'spectrum' of today's practices. A benefit would be an easier understanding of what is expected everywhere in Europe. It can actually reduce industry's costs by eliminating effort which is specific to one state.

Or is it to: 'water down' legislation so that it has no adverse economic effects on the industry?

There seems to be little evidence of a concerted effort to do this.

Responsible industry has a real interest in making sure that we all perform well. A problem for one makes the image of all suffer. There is no real movement to avoid being regulated by sound law. The pattern of events since the first Seveso directive is that law has used the best industry practices as 'benchmarks' to elevate the performance of the whole industry in Europe.

The following are the negatives I see on the performance of the TWGs.

(1) Representatives of the different states' legislators frequently have widely differing views on most subjects. It is not unusual to find that the industry view is somewhere in the middle, almost to the point where industry tends to act as mediator. Over the years it can be seen that the consolidation and globalisation and sharing of experience and best practice has led to a raising of standards in the industry. This inevitably means that there is something resembling consensus on industry's part. A similar process may emerge on the legislators' part in the future but consensus is less likely given the competing political social and economic priorities. This is dealt with later in the remarks on benefits of the administrators, legislators and Competent Authorities sharing experiences and possibly, policies.

(2) TWGs progress is extremely slow. This is dictated by some justified issues like the need to consult back in the home environment. There are examples however, of delays because the members failed to meet agreed deadlines on producing documents or of the funding for the secretariat being unavailable. These items do not seem to fit with an orderly approach to the implementation of such important legislation. Industry's costs are not included in the equation, so this aspect of running the TWGs is clearly something that the EC needs to address. The resourcing and funding issues mentioned earlier are also a question mark.

(3) The composition of the TWGs does not always represent the best knowledge available. Logically, all the member states need to have a presence, but this does not mean that all will take part in both attending and contributing. The industry federations want to be included also. This does not guarantee the best solution. As always with committees and working groups, bigger is not necessarily better. There are no easy answers to this, but it would be an area for improvement if the process is used again.

(4) If the directive needed to be amended, the TWG approach could be made to work, but not in its present form. As a foundation, it is good.

(5) Some states' Competent Authority representatives have seen their involvement in Technical Working Groups as an opportunity to choose a well-ordered management system to implement guidance where they have none themselves. Since states with developed systems seem to want to continue with them undisturbed, without imposing

them on others (or even strongly recommending them), this must be a very difficult task in this forum.

In particular, addressing the Technical Working Groups 2–7.

4. Technical Working Groups 2–7

4.1. TWG2: inspection systems

Industry experience is useful. Most want to continue to work directly with the Competent Authorities or with their existing mandated agents. They are reluctant to see a greater involvement with consultants. The external view provided by the inspections from Competent Authorities is a very important feature of plant management. The concept of inspecting to make sure that the systems described in the Safety Report have been implemented and are healthy, is one that industry can only support since it is in line with modern auditing techniques which are commonly practised via I.S.O. (To date, the guidance from this Technical Work Group has not been completed despite being started quite early in the timetable.)

Proper funding of the Competent Authorities should be a high priority for the European Union. Since the ongoing impact of Seveso II will be felt most at the establishments where inspections take place, this is an arena where the directive will succeed or fail. If the Competent Authorities regularly shared experience and best practice as industry does, more harmonisation could emerge whereby judgments and advice given would be devised to manage risk consistently, independent of location.

This sharing should be a part of the mature process to meet the individual state and its industry needs without creating another layer of control at Brussels.

4.2. TWG3: Safety Reports

There is no doubt in my mind that the requirement to produce Safety Reports and MAPPs has been a beneficial incentive to make sure that industry has this discipline. In the past, much of this information and the systems supporting it, for example training, have existed but in a somewhat fragmented form. The requirement to bring it all into one document so that it may be published becomes auditable. In this sense, it makes the adoption of I.S.O. systems much easier. This aspect of legislation makes it possible to meet several objectives whilst creating the systems for a single requirement such as the Safety Report.

There remains sufficient flexibility in the guidance to make sure that such items as Quantitative Risk Assessment and the more deterministic approaches to co-exist when states have a system based on one or the other which works well for them. In my opinion, this is correct, but needs to be carefully watched—particularly in other areas of guidance such as land use planning where large differences state to state have appeared. When this happens, harmonisation becomes little more than a pipe dream.

4.3. TWG4: Safety Management Systems

There is a strong movement here to build on the best practices in industry. This aspect of the work has dominated to such an extent that it has generated some concerns in some states. The concern centres on 'industry getting off lightly'. In fact, there are other driving forces at work here. Among theses are I.S.O. with their Quality and Environmental management systems C.E.F.I.C., E.P.S.C., E. and P. Forum Safety Management Systems. The present globalisation forces within much of the chemical industry is actually forcing operators to create a corporate EHS management system and to abandon the regionalised and somewhat fragmented systems they had in the past. The guidance from TWG4 is sound and has arrived at an ideal moment. It is much easier to implement at a time when such changes are 'de rigeur' for industry's own reasons.

4.4. TWG5: land use planning

Here the work has proceeded slowly. A degree of harmonisation could be on the agenda and could be in the interests of all. A majority of states have appropriate but distinctly different policies. Industry is not in any way a leader in this group since the policies are owned by the Competent Authorities. The possibility of harmonisation of methodology and decision making seems extremely remote since there is no common ground on risk management methods. The most obvious divergence is between the deterministic and probabilistic approaches. It is interesting to note that the decisions made about such items as safety distances do not always vary greatly from state to state. There are extremes where either: the industry feels like an 'endangered species' as a result of very large safety distances being demanded or there is a risk that unrealistically small safety distance will allow development in industrial areas which will lead to dissent.

A minority of states has no discernable policy relating to 'hazardous' industrial development beyond the concept of nuisance. They would be greatly helped in the unlikely event of harmonisation. The outcome is most likely to be a 'shopping list' of possible policies from which these states could choose. The others could politely ignore this list because their policies already work well for them and the industry understands and accepts them.

4.5. TWG6: dispensation or derogation

The concept of derogation is conceived to eliminate establishments from the directive if they are incapable of causing an off-site hazard. This makes sense and the work done so far continues this common sense.

Chemical industry feels that it would not benefit from a series of 'loopholes' or 'escape clauses' and so does not present a defensive attitude.

4.6. TWG7: substances dangerous for the environment—threshold quantities

The work of this group is not complete. It has the potential to make a dramatic increase in the number of establishments covered by the directive. If this is realised,

there will be a severe impact on the workload of many small and medium enterprises and the Competent Authorities resources.

5. Finally—conclusions

Is the guidance fit for the purpose? The verdict of industry is generally—yes.

Will it lead to an improved major accident performance? This is not an easy question to answer. The history of major accidents in the chemical industry since the first Seveso directive is mixed. They were certainly not eliminated by the directive.

I believe that the situation was improved by the directive for the following reasons: (1) it led to industry organising itself better, in particular in risk management; (2) it forced a dialogue with the emergency authorities and the community. Many organisations like the fire services were already prepared, however, local authorities in some states certainly were not; (3) land use planning in the region of Major Hazards were better handled; (4) responsibilities were more widely understood, both in the establishments and in the communities potentially affected; (5) it provided (ultimately) a framework of management systems which was auditable; and (6) detractors may be critical of the effects of Seveso.

Did we expect too much? Probably. After all, legislation does not eliminate errors and in the wider world it does not eliminate crime. I hear much debate about improving the law, but no one denies the need to have it. Most citizens like the idea of having laws to outlaw activities they disapprove of. Is it really surprising that industry has no real objection to good law being applied to itself? Self regulation is often quoted as an option, but applies predominantly in technical areas.

A question worth pursuing would be: If fully and uniformly implemented, would the Seveso directive's impact have been more beneficial? A possible answer would be to look at the root causes of those major accidents which occurred after the Seveso directive was implemented and ask: 'Would they have happened if everyone had assessed the possible (or even the probable) risks at the establishments and had a system to assure that control methods were complied with 100% of the time?' (essentially what we are required to do under the legislation).

This would make us all think. I believe that in some cases, the answer would be—No. So my contention is that implementation and compliance are as important as or more important than the detail of the legislation or its guidance. Management systems all have a section which urges the operator to have a strong self audit process which addresses this. The inspection requirement has an opportunity to assure this implementation.

Are there benchmarks? In the USA, there is legislation such as OSHA PSM and EPA RMP. These two requirements cover much of the same ground as Seveso. However, there is some overlap and even some conflict between the two. The Risk management concepts of Seveso encompass the scenarios needed for land use planning and for emergency planning. It seems to me that the USA approach is more cumbersome.

The Australian, South African and many Asian approaches seem to mirror that of Europe.

Will Seveso II bring an improvement? The law has become clearer and in many cases more logical. It has the benefit of experience of implementation of the first directive. Much of industry has experience and systems which allow them to meet the new requirements in an appropriate way. SMEs drawn into the process are being helped by the guidance and by industry bodies such as C.E.F.I.C. and E.P.S.C. Land use planning issues are being addressed. There is better guidance for those establishments which have operations which require them to produce a Major Accident Prevention Plan. The concept of Technical Working Groups and their output (with some reservations) is a positive influence.

It is much easier to turn the question round and ask: Has it made matters worse? Here, I believe that the answer is a categorical no.