

# RECENT FEDERAL LEGISLATION: ITS EFFECT ON US

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## ABSTRACT

Legislation, submitted to both the U.S. House of Representatives and the U.S. Senate, related to various environmental issues is examined for its potential effect on printed circuit board manufacturers. All such legislation, regardless of status in the legislative process, that was anywhere in that process around the first of December 1995 is considered. Special attention is paid to the most sweeping of that legislation including bills that threatened to, in the words of the press, "dismantle the EPA." In cases of extreme interest, the Congressional Record is consulted for the exact transcript of debate and discussion on the legislation. Based on this examination it is concluded that while the pace of environmental legislation may slow, "the environment" remains an "apple pie" issue. The best that the so-called "Republican Revolution" can do is to bring reason to the discussion. Therefore, it is imperative that manufacturers continue to practice good environmental citizenship, and remain active in the legislative and regulatory processes. It is also concluded that involvement in such issues on the state and local level is as important, or more important, than such involvement on the federal level.

## INTRODUCTION

Mere days before this author received the request for abstracts for this conference, the headlines screamed that the U.S. House of Representatives had voted to strip the E.P.A. of much of its power. Thus this paper was born. The author's intention was to research the legislation which proposed to do this radical thing, and interview people at that agency to find out how the legislation would be enacted. The intention was to develop information to make planning for the future easier.

The day after the letter notifying this author that this paper was accepted for presentation at this conference arrived, the lead headline in the Los Angeles Times read "HOUSE, REVERSING ITSELF, DROPS BID TO LIMIT EPA POWERS." Needless to say, correspondence with the I.P.C. ensued and this paper remained accepted in an altered form.

As this is being written, Congress and the President are debating a seven year plan to balance the budget and the government faces its second shutdown of 1995. By the time this paper is presented in March of 1996, the picture that is presented here may have once again changed radically.

That it is a time of great change in how we govern and regulate ourselves cannot be denied. How that change will manifest itself cannot yet be identified. This paper is as up-to-date on the debate as is reasonable at the time of writing, just before the new year. Every reasonable effort will be made so that the verbal presentation in

March will be even more up-to-date. Therefore, the presentation may depart radically from what is written in this document. Such are the eccentricities of dealing with a time sensitive subject and a fast moving legislative body.

Certain conclusions can be drawn about the future; conclusions that apply regardless of how the debate itself plays out; conclusions based on the nature of the debate rather than the substance of it. These are the conclusions that the author attempts to arrive at here -- in the hope that they are of more lasting significance than certain specific regulations, important though those specifics may be.

## A QUICK CIVICS REVIEW

Most manufacturers of printed circuit boards do not, on a day-to-day basis, deal with legislation. Furthermore, despite the common vernacular, PCB manufacturers rarely, if ever, are inspected by or interact with anyone from the "E.P.A." Rather, people deal with regulations, promulgated by any number of state and local agencies and authorities. A brief review of how we come to be regulated, and how those regulations are enforced, is in order. This will allow us to evaluate how actions in the federal legislature can affect us.

Figure 1 illustrates the overall system. Start with a simple fact. The breadth of control that our government has over activities in the United States is immense. The documents which describe what we can and cannot do, and how we can or cannot do them, is voluminous

almost beyond human comprehension. Certainly, no one person could read, let alone comprehend all of it. Under such a situation, it becomes reasonable to ask how we can expect our legislators to read and understand such documents sufficiently to cast a vote on it. The answer is that we cannot and do not ask that of our legislators.

Rather, our system is such that our legislators, set policy, usually in very general terms, and then authorizes and funds various agencies of the government to turn that policy into specific rules, known as regulations. That in itself seems reasonable enough, but the picture gets far more complex when one starts looking at the relationship between the federal and state or local governments. The picture is also complicated because Congress can, and sometimes does, enact very specific legislation.

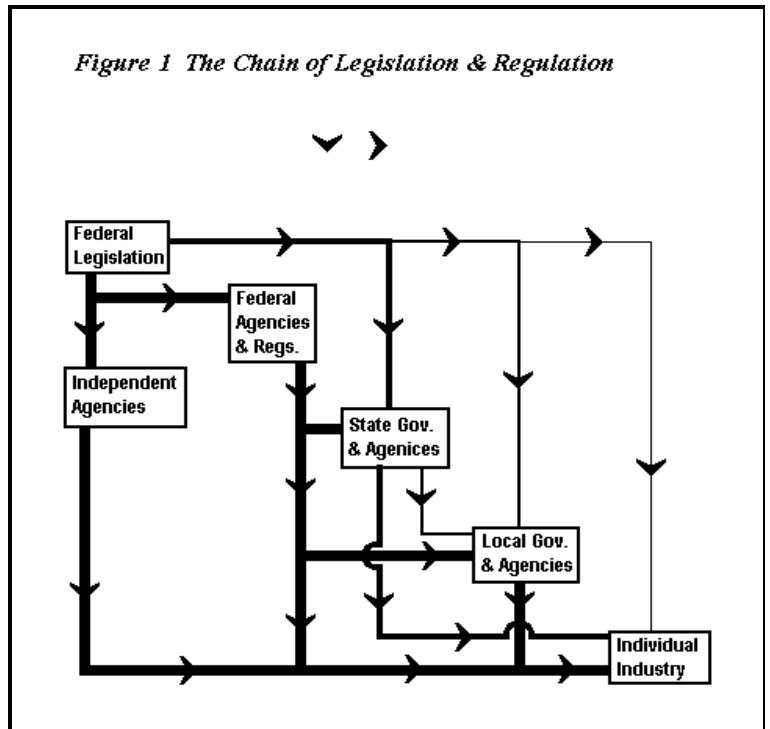
Particularly when it comes to environmental issues, the federal government can only exercise its power over certain things. For example, the federal government can exercise authority over what goes into a publicly held waterway, but it cannot directly do so over a municipally owned sewer system. However, since the municipality ultimately has outflow to a publicly held waterway, the federal government can tell the municipality a great deal about how to handle those entities which outflow to its privately held sewer system. Thus the federal government ultimately can control what an individual manufacturer, disposing of its wastewater into the local sewer, can do, but it does so, through a very circuitous route.

There are other scenarios that are interesting. Sometimes, the federal government mandates the formation of local agencies to promulgate and enforce regulations, in accordance with policy, tailoring those regulations to local conditions. This situation is interesting because the agency can be without any reasonable form of accountability. The federal government may also simply set standards which it mandates that state and local authorities meet. This scenario is interesting because the state or local authorities have the option to make the standards and rules even tighter than what the federal government may establish. California is a classic example of where this has happened in some instances.

These are just a few descriptions of how what happens in the federal legislature affects what happens to an individual PCB manufacturer, but it is far from complete.

After considering these few examples, it becomes apparent that studying what is happening in the federal legislature is worthwhile. In many cases, though not all, federal legislation has no direct affect on a business, but

it sets policy or standards that will radically affect an individual business. Equally, to concentrate one's efforts



solely on the federal, and particularly the legislative, level will produce an incomplete picture.

It has been said in regards to taxation policy that one never can truly own a business, one always has a partner - the government. This statement now applies far beyond the high percentage of cash the government helps itself to, it permeates through almost every aspect of doing business. If you have ever had a partner, you know that you must keep track of what your partner is up to. So it is with the government.

This paper attempts to get a read on one area of information coming from our mutual partner. Readers should be aware that it is not the complete picture. Because this paper is intended for a national audience, it necessarily focuses on the federal level. Readers are encouraged to find similar information on the regulatory, state, and local levels.

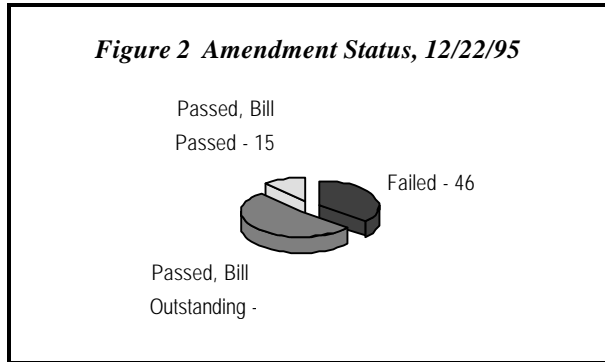
Hopefully, even given the very unresolved nature of activity on the federal legislative level, we can draw some conclusions on the mood and general direction future policy will take.

## METHODOLOGY

This paper owes much to that overly ballyhooed bit of technology known as the Internet. The 'Net, and specifically the "Gopher" site, accessible both as Gopher or on the Web, maintained by the U.S. House of

Representatives allows one to stay on top of what is happening legislatively like never before possible.

Prior to this new electronic service, one had to either be in Washington, or a C-Span addict to even come close to what is happening in the legislature. Even if you are a C-Span addict, that would only be useful if the particular debate you are interested in was being televised. Using the Internet services of the House one can find out the specifics of any bill, amendment, and debate in either the



House or any committee virtually the day after it happens. Actually this is available for both the House and the Senate and either one can be reached from the other. There is also a brief summary of what is happening right now available.

The fantastic growth of traffic on the 'Net has made using these services a little slower than one might hope, but in comparison to the alternatives, it is faster and easier than thought possible just a few years ago. Just a few years ago, one would have had to wait until the Congressional Record reached your local library to find out this kind of information. This would often be several weeks or months after the debate in which you were interested had occurred. Not only that, finding the specific information in the printed Congressional Record was, in and of itself, a difficult undertaking.

With the new on-line services, one can now know what happened in a specific debate yesterday and read transcripts of that debate from the Congressional Record on-line, and best of all one can find it by electronically searching the documents for the bill number or key words, or whatever is appropriate. What once took a trip to the library and several hours worth of work, after the fact, can now be done almost concurrently, from your office, and within a few minutes. The complete and current, as well as past, versions of bills and amendments are available at the click of a mouse.

The research for this paper used three basic approaches to determine trends and attitudes in environmental legislation. The first approach was a survey of all environmentally related bills and amendments introduced to Congress in the 104th session in 1995.

The second approach was an in-depth study of the debate and argument concerning the very headline - making attempts to reduce the power of the Environmental Protection Agency. The survey of all the bills and amendments was an effort to see if the radical changes in the composition of Congress resulting from the 1994 election would produce a rash of bills that would represent major changes in environmental policy or legislation. The second approach was intended to review the rhetoric from both sides of the aisle. Since this particular bit of legislation drew the biggest press attention, it undoubtedly attracted the most, and most heated rhetoric, and an examination of that rhetoric, can provide an useful window into the thinking and moods of the Congress on environmental matters in general.

The final research approach taken in the preparation of this paper was to attempt direct communication with several congresspersons. These attempts ranged from a personal conversation with the author's congressman in church, to sending faxes and e-mail to the Speaker and other key members. All such attempts proved to be fruitless.

In order to conduct the survey of all bills and amendments, keywords searches were conducted on the following terms: "Environmental Protection Agency," "environment," "pollution," "contaminant," "solid waste," "water," and "air." Once the list of bills and amendments accessed by these key terms was obtained, a status report for each such bill or amendment was downloaded and reviewed. Based on these reports, tables were compiled listing the bill or amendment, its sponsor, its status date, its status as of date, and a brief summary of the legislation. These tables were then used for compiling statistics, review, and decisions about further examination. These tables are not reproduced in this paper purely because of space restrictions. Even in greatly reduced type, the summary table for bills is fourteen pages long and the summary for the amendments is of similar length.

## RESULTS OF THE SURVEY

The search conducted in accordance with the method described in the previous section produced a listing of 195 bills and 129 amendments. The status date for the bills was December 1, 1995 and for the amendments it was December 22, 1995. As of those dates only eight(8) of the bills had become law and only fifteen(15) of the amendments had become law.

Many more than just fifteen(15) amendments were passed for addition to one bill or the other, but only the fifteen mentioned were attached to bills which then went on to become law. Figure 2 is a pie chart illustrating how many amendments were defeated out right, how

many were attached to bills which were either defeated or are still pending, and how many were attached to bills which did, in fact, become law.

The summary statement of each bill and amendment that was supplied by the government was examined and each piece of legislation was placed into one of six(6) categories for purposes of further consideration for this study. The six(6) categories are:

- Directly Impacts the PCB Industry(DI) - This category is reserved for any piece of legislation that would, upon passage and implementation impact the printed circuit production business either positively or negatively. Only three(3) bills and one(1) amendment were included in this category. As one example, H.R. 1047 provides that under certain circumstances, information voluntarily disclosed, and determined in an environmental self-evaluation, cannot be used to level penalties against the disclosing entity. This is an obvious direct impact since many companies I know have been placed in the dilemma of reporting an accident, at risk of penalty, or hushing it up.
- Indirectly Impacts the PCB Industry(IDI) - This category is reserved for any piece of legislation that would impact the printed circuit board production business through some sort of convoluted process. Nine(9) bills and two(2) amendments were included in this category. As an example, H.R. 1025 attempts to rescind the implementation plan which the EPA had promulgated for the Air Quality Districts of the South Coast, Ventura, and Sacramento areas of California. This bill would indirectly impact manufacturers in those areas because it would allow the air quality agencies in those areas to look at new and different regulations. Thus PCB manufacturer could work with that agency rather than simply suffer its wrath.
- Industrially Focused(IF) - This category is reserved for any piece of legislation which is obviously aimed at industry in general. There were fourteen(14) bills and eight(8) amendments which fell into this category. An example of legislation in this category is amendment HA 360 to bill H.R. 961 which directs the EPA to work with the SBA to develop a specific, legal definition of "small business." One can see that this amendment, while having a direct impact on business does not directly impact our industry, and that the impact is fairly diffuse.
- Agricultural, Land, and Water(ALW) - This category is reserved for legislation which is aimed specifically at agriculture, including general land and water issues. There were fifteen(15) bills and eight(8) amendments which fell into this category. This category begins to become much more diverse than the previous ones, but the attempt was made to keep it at least somewhat

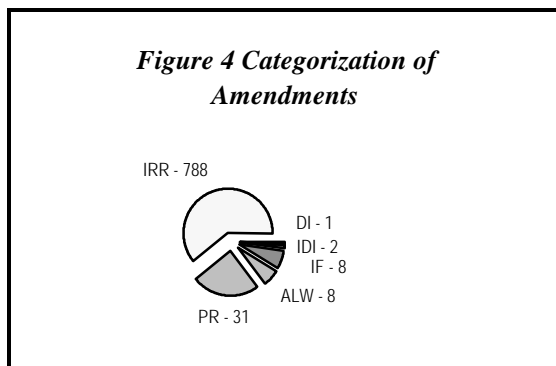
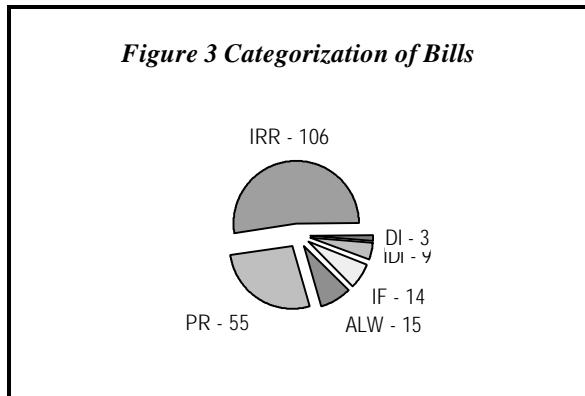
pertinent to issues at hand. For example, some bills in this category amend the Federal Water Pollution Control Act in ways which may have a very indirect affect on PCB manufacturers that discharge directly into public water ways. Other legislation in this category makes allowances for remediation of contaminated sites which could impact land holders of PCB production facilities.

- Policy Reform(PR) - This category is reserved for those pieces of legislation which are aimed at how the federal government does business with itself, other, lower governments, and the public. There were fifty-five(55) bills and thirty-one(31) amendments which ended up being assigned to this category. This category may be more interesting than it sounds. For example, there are bills in this category to force federal agencies to use risk assessment and cost-benefit analysis in the promulgation of regulation ( H.R. 690) and to "decentralize and reduce the power of the Federal Government." Some of the measures which cropped up in this category are those which have been drawing the greatest amount of press and those which stand the greatest chance to impact our industry. That impact will; however, be very indirect because they will represent large changes in how the government does things. The changes represented in such bills may also take a considerable period of time to reach the level of the individual business.

- Irrelevant(IRR) - This category is reserved for any legislative measure which has no bearing whatsoever on the discussion at hand. The search described produced 106 bills and seventy-eight(78) amendments which fit into this category. The nature of computers is such that they can do silly things. A search on the word "air," such as was done for this study, returns not only legislation on air pollution, but on the Air Force as well. Such extraneous legislation is one example of the kinds of things that ended up in this category. Another example is that there are countless environmental actions being taken solely by the armed forces and for their own benefit. Each such thing must be handled by federal legislation. Some bills are so specific that they can be considered irrelevant. Consider such a bill which mandates that a water quality study be made of Long Island Sound. This category proved to be interesting reading and a fascinating study in the arcane aspects of our government, but is of no consequence to the discussion at hand.

Figure 3 is a pie chart which shows how the bills produced by the search were divided into these categories. Each category is labeled by the two(2) or three(3) letter abbreviation which followed its name parenthetically in the descriptions above. Figure 4 is a similar pie chart addressing the amendments which were produced by the search.

All this analysis begs one simple question - Were any of the bills or amendments which became law by the status dates at all relevant to the business of building printed circuit boards? The answer is not really, though one amendment does have some nice affects for certain specific companies.



All of the eight(8) bills which became law were appropriations measures of one kind or another, with three exceptions. Those exceptions are notable in their complete irrelevance; two conveyed ownership of fish hatcheries to state governments, and one authorizes fee collection for fish hatchery inspections. The appropriations bills all supplied money to existing government activities.

The amendments, for the most part, were part of those appropriations bills and are similarly limited in scope. In general the amendments which became law were designed to precisely define the uses and limitations on the funds that were being appropriated in the bill. For example, one requires the Secretary of Transportation to conduct a study of air fares. Another limits the region in which funds for the Upper Mississippi Waterways can be used.

One amendment that became law may be of some interest to some PCB manufacturers. That is amendment HA 922 to bill H.R. 325 which became public law 104-70. This amendment repeals the "trip reduction

requirement" for employers in eleven(11) states. This is the requirement that employers hire people close to their place of business so that extensive driving will not be necessary, thus reducing air pollution. Anyone who has had to deal with this requirement knows it to be quite odious and painful since it may require forcing employees to move or firing them. Which eleven(11) states are affected was not determined, but everyone is encouraged to check to see if they are.

**A REVIEW OF THE BIG DEBATE**

Early in November, Congress debated in earnest funding for the E.P.A. E.P.A. appropriations are part of several appropriations bills, usually titled to fund some other agency. For example, there was a debate on November 28, 1995 about appropriations for the E.P.A. and the VA health programs. The E.P.A. appropriations in this debate was only for certain of their programs. Other programs were funded in other appropriations bills that are, at the time of writing, in various stages of passage.

The big headlines concerning E.P.A. came to a final head in very early November, and other headlines on the same issues were generated in early August. The key issue in that headline debate was a series of seventeen(17) legislative proposals, called "riders." Such riders are instructions to the agency being funded by an appropriations bill on how to spend the money it is being given. The proposed riders were designed to strongly limit the powers of the E.P.A. Just some of the proposed restrictions to the E.P.A.'s powers were:

Limit the wetlands protection program;

- Prevent the promulgation of new, tighter limits on pollutant discharge into waterways;
- Note: This rider could have had important affects on our industry!
- Prevent implementation of new controls on sewage overflows;
- Halt implementation of uniform standards for Great Lakes water quality;
- Exempt oil refineries from certain air toxic emission standards;
- Exempt cement kilns from certain air toxic emission standards;
- Prohibit issuance of new standards on arsenic and radon in tap water.

These riders were attached to the appropriations bill initially, killed in August, returned to the bill four(4) days later, and then killed again on November 2. Technically, the vote on November 2 instructed the House members in the House/Senate conference to reconcile their differing versions of the bill to ignore the

riders in the negotiations. The vote is non-binding, but given that they are largely not present in the Senate version, it is expected that they were effectively killed in the November 2 vote.

Congress	Bill	Sponsor	Status Date	Status	Summary
104	H.R. 1923	Solomon	11/20/95	Referred to House Subcomm - in June & July & still there	A bill to balance the budget of the United States Government by restructuring government, reducing Federal spending, eliminating the deficit, limiting bureaucracy, and restoring federalism
104	H.R. 2530	Orton	12/5/95	Referred to House Subcomm - in Oct. & Nov. & still there	A bill to provide for deficit reduction and achieve a balanced budget by fiscal year 2002
104	H.R. 690	Zimmer	12/5/95	Referred to House Subcomm - in Jan. & Feb. & still there	A bill to improve the use of risk assessment and cost-benefit analysis by Federal agencies
104	H.R. 9	Archer, DeLay, Saxton, Smith	11/20/95	Referred to Senate Comm	A bill to create jobs, enhance wages, strengthen property rights, maintain certain economic liberties, decentralize and reduce the power of the Federal Government with respect to the States, localities, and citizens of the United States, and to increase the accountability of Federal officials
104	S. 291	Roth	11/20/95	Placed on Calendar in Senate	An act to reform the regulatory process, to make government more efficient and effective, and for other purposes

**Table 1 - Summary of some of the bills in Congress worth following**

It is important to note that even with the riders defeated, the appropriations were significantly less than requested by the administration and a presidential veto has been threatened.

The debate concerning the riders is chosen for this careful examination primarily because of the huge amount of press that it generated. Such press generates a great deal of public opinion, much of it poorly informed. Such public opinion can; however, provide a great deal of information about the future directions of the government and its agencies.

The rider debate can best be described as "heated." It was emotionally loaded, particularly on the side of those who were against the riders. The opposition to the riders is best summed up in a quote from Representative Louis Stokes (D-Ohio) who said "These riders are poison.!"

The pro-rider sentiments can be summarized in a quote from Representative Jerry Lewis (R-California) who said. "there's little question... Uncle Sam has gone too far.... There is no doubt government has a role to play. But excessive regulation...is undermining public support for environmental concerns."

Down-sizing government and regulatory reform are cornerstones of the so-called "Contract with America" which was a big part of the major political shift that occurred in Congress in the last election. In the vote on the riders, sixty-three(63) Republicans voted with the Democratic side of the aisle thus defeating the riders.

## CONCLUSIONS

Several conclusions can be drawn based on the examination of legislation, pending and passed, in general, and the debate concerning the seventeen(17) riders on the E.P.A. appropriations bill.

Congress has not yet made up its mind on environmental issues. In an article on the future of the environmental industry, appearing in the December 1995 issue of

Pollution Engineering magazine Drew Williams and Cathryn Owano Hodson, Associate Editors, said "Smoke signals from Capital Hill make it clear the Environmental Protection Agency (EPA) will face serious cuts, but no one has a clear picture of tomorrow's Agency." An effort to cut appropriations for the Department of the Interior which would have had major environmental implications was defeated which would appear to be a mixed signal in light of the proposed cuts to the E.P.A.'s budget.

If a pattern can be seen, it is that the new Congressional focus is on reducing the size of government across the board and not on any particular aspect of government overburden. Thus they appear willing to cut budgets, but lack the will to make specific legislation or statements about specific issues.

*Several measures pending can have radical affects and should be watched closely.* The statistical analysis presented above pointed out that few measures currently in Congress can have a direct affect on the printed circuit manufacturing industry. However, many of the measures in the "policy reform" category can radically change the government and the agencies, and therefore have big affects that would filter through to the industry. Some of the bills that are of potential import are:

> 104 H.R. 1923, 104 H.R. 2530, and a bunch of others by now. These are the bills to balance the budget. Such an action will, of necessity, make radical changes in how the government does business. How it will affect environmental issues and enforcement cannot be said at this point, but that it will affect them is without question.

> 104 H.R. 690. This bill is described as "A bill to improve the use of risk assessment and cost-benefit analysis by Federal agencies." This could radically change the pace and content of environmental regulation. Basically, this bill says that before promulgating a regulation or forcing a clean-up the E.P.A. will have to study if it will have a reasonable benefit to do so. This approach could potentially bring

to an end silliness like having effluent waste water that is cleaner than the influent.

- 104 H.R. 9 and 104 S. 291. These bills generally try to reduce the size and power of the federal government and improve the regulatory process. Much like the balanced budget bills, the exact affects of these and related measures cannot be determined at this point, but that the affects will be large cannot be denied.
- CLEAN WATER ACT reauthorization. Depending on who you talk to, this law will be up for reauthorization in 1996. Dawn Kristof, president of the Water & Wastewater Equipment Manufacturers Association has been quoted, "It's very possible that we'll have a reauthorized Clean Water Act [in 1996]." Steve Bagwell, manager of legislative affairs for the Water Environment Federation has said, "The Clean Water act will not be reauthorized this year [1995.] Reauthorization next year cannot be predicted at this point, but appears unlikely." This law is always being fiddled with and therefore always worth watching. The same is true for its cousin the CLEAN AIR ACT. There were numerous bills to amend the CAA that turned up in the search.

*Pro-environmental rhetoric remains very powerful.* The debate on the seventeen riders could be described as passion versus reason. Those against the riders were extremely passionate in their words. They talked of the health of children, the protection of our way of life, the beauty of our surroundings, and other important concerns. They failed to see what those promoting the riders pointed out -- that without any further regulation, the United States is the cleanest planet on earth. People in the United States live longer and better than at any time in history.

Clearly environmental issues have some "apple pie" aspects to them. That is they are issues which are so near and dear to the heart of the American people that they cannot be denied in any form. This conclusion points out a couple of very important facts. First, many of our representatives do not take the time to understand an issue fully - voting instead on the basis of a principal that may be sound at its base, but can result in unsound policy if not checked. Secondly, the environment is an issue more complex technically than any that has ever faced the nation and as such demands more from the public and the legislators than has ever been demanded from them.

*As an industry, we have a greater opportunity to impact these issues than ever before.* Everyone knows the old business adage that "change creates opportunity." That change is and will happen in the Federal government cannot be argued. The jury is still out; however, on how

fast that change will occur, how much change will happen, and in what direction the change will head. Those later questions create a window through which an industry can look and enter the process, influencing the outcome.

For the first time in decades a Congress has been elected that represents a fundamental, philosophical change on many levels. At writing, a partial government shut down has been in effect for more than two weeks, over the holidays. That action alone represents a resolve on the part of at least the House of Representatives to remain committed to the principals upon which it was elected. The primary of those principals is that the Federal government is too big. Reducing government can and should mean lower levels of intrusion into how we do business. The search produced literally dozens of bills that reflected that change.

*State and local government and agencies are as important as the Federal level.* The civics review that appeared earlier in this manuscript becomes important here. For many laws and regulations, changes on the Federal level may not have any effect on a specific company.

Consider the Resource Conservation and Recovery Act(RCRA) which has been on the books for quite some time. This is the law which established the procedures for permitting Treatment, Storage, and Disposal Facilities(TSDF). RCRA allows for state and local agencies to respond to the requirements created in a variety of ways. California, for example, has worked with the Federal government to become the lead enforcement agency for those regulations. In fact, California has done the Federal laws and regulations "one better," tightening the definition of hazardous waste, vastly increasing the number of facilities which are required to be permitted as TSDF. Other states simply passed laws which said "conform to Federal standards."

Consider now a thought experiment. The new Congress votes to repeal RCRA wholesale, and the President signs it. (The line between fantasy and thought experiment is very thin, but there is a point here.) In one of the states where the decision was to conform to Federal standards, such an event would bring about radical change. Almost anyone could get into the hazardous waste treatment business, with minimal capitalization, and minimal safeguards against further contamination. In California; however, nothing would change. Because of the state laws, including those which prohibit out-of-state shipments of hazardous waste except under very particular circumstances, the same level of permitting would be required as prior to the federal repeal.

The Federal government has definitely driven the huge increases in environmental legalism and regulation in the last few decades. Changing the tide on that level is only the beginning.

## IDEAS AND RECOMMENDATIONS

Given that change is definitely in the air, and that for the first time the discussion seems to include the possibility of a roll back in the levels of environmental legislation and regulation, how should the PCB industry react? How should that reaction be tempered given that Congress has failed to pass the kind of radical, specific change represented by the seventeen(17) riders to the E.P.A. appropriations bill?

The answers to such questions depends strongly on the particular concerns and viewpoints of the individual answering them. It is incumbent on anyone in the PCB industry to answer such questions, however. The last few decades of increasing legislation and regulation have shown that as an industry we cannot lay back and take what comes our way. As has been pointed out, like it or not, the government is our partner and we must learn to work with them. At the very least we need to be working to make the partner as silent as possible.

What follows are the ideas and thoughts of the author about how the industry can take advantage of the window of opportunity presented by the changes in Congressional make-up and focus. Other ideas and recommendations certainly exist and can be brought forth by others with other viewpoints. Those presented here are only a few and the author hopes that they will be a springboard for discussion and consideration. They are not presented as the final or best possible answers.

Most of the recommendations that are presented here can be summed up in one simple statement: Adopt A "Green" Attitude. This statement does not ask anyone to become a "tree-hugger." No one inside or outside our industry wants to be responsible for dumping pollutants into the environment that can cause damage to human or animal life. So why is it that we are so adverse to the legislation and regulation that has come our way? There are several reasons. None of us likes to be told what to do. The governmental intrusion makes an expensive proposition even more so with endless paperwork and pointless trivia. The regulations stifle rather than encourage our creativity and industry at devising means to not pollute. Examined closely, as an industry we are anti-regulation, not anti-environment. That is, in fact, a "green" attitude.

While considering the topic, are we anti-regulation? Chances are, most of us in the industry are not completely, truly libertarian, but welcome and appreciate

reasonable regulation. It cannot reasonable be argued that historically industry in general was irresponsible with its hazardous waste and that regulation has served to change that. The problem is not regulation, but that regulation has gone too far. Waste water restrictions pre-date the environmental movement because they were necessary for maintaining proper operation of the municipal sewage treatment facilities. They were a small price to pay for the convenience of the municipal facilities. A "green" attitude then, is for reasonable regulation.

There is one final note that needs to be made about a "green" attitude. When it comes to polluting emissions, how much is too much? Consider nuclear radiation -- Chernobyl was an environmental disaster of almost unimaginable proportions, making literally hundreds of square miles of land virtually uninhabitable. Nonetheless, the same radiation that permeates the Chernobyl exclusion zone is tremendously beneficial when used to take an x-ray. Dumping large amounts of 1,1,1-trichloroethane down the drain can cause significant damage when it eventually reaches public waterways. But, will the difference between a printed circuit board manufacturer having one(1) part-per-million(ppm) or one(1) part-per-billion(ppb) really make a difference? So a "green" attitude is really about reason, both in regulation and in emissions.

The world is full of new corporate attitudes that end up being so much paper and meetings. What actions can be taken with this new "green" attitude that will be positive for our businesses? The following are a few suggestions:

*Be mindful of ways to produce your product while economically making less emissions.* As has been stated, the changes pending in Congress are about reducing the size of government. The desire to do so is based on a simple assumption -- that each of us as citizens is smart enough and responsible enough to act like a good citizen. For a PCB manufacturer that means finding as many ways as possible to reduce emissions, in a cost-effective manner. Acting like a responsible environmental citizen will give Congress the ammunition, translate data, it needs to forge ahead with the legislative changes. Such corporate efforts at emission reduction can be big or little things. This is also a matter of attitude as well as action. The reduction of emissions should be a part of corporate goals and evaluation. Any good manager sets goals for productivity, goals for sales, and goals for profitability. Goals for emissions reduction should be a part of that package.

With such goals set it is possible that very creative and cost effective ideas can be discovered. Make these goals the reality that drives corporate actions, not responsiveness to legislation and regulation. This

change will greatly increase creativity. These goals should be adopted by not just engineers but by the purchasing department as well. Vendors of chemicals and chemical processing systems should be a partner in the effort to reduce emissions and it is up to the purchasing department to bring that pressure to bear. Buyers should also be looking for unique opportunities for recycling of the material which you must throw away. This author has been consistently amazed at how often there is someone out there who is willing to take a company's waste and use it. Needless to say, there can be regulatory complications to something like this, but this too is ammunition to create the necessary governmental change.

The sales department should not be neglected in this effort either. One of the greatest opportunities for emission reduction this industry has today is the elimination of solder plating/reflow, replacing it with tin plating/hot air leveling -- S.M.O.B.C. Lead is an extremely toxic metal, and it interferes with cost effective treatment of copper. The sales department needs to bring as much pressure to bear as possible on customers to eliminate requirements for solder plating and reflow.

*Be a good neighbor.* Ignorance is one of the greatest enemies of reasonable environmental legislation, regulation, and citizenship. In an era of overwhelming amounts of information, how can anyone be ignorant? The answer is often animosity. In the areas where we conduct business, many of our neighbors, whether residential, commercial, or industrial have decided, for reasons of their own, that a business with all the chemicals that a PCB manufacturer has must be an "evil polluter." Operating under such a damning presupposition, such people refuse to learn the information that makes for reason.

How can such prejudice be overcome? In the author's experience, common neighborliness often helps. Such prejudice can never be truly overcome, but playing to it can help smooth the waters with nearby residents and businesses. For example, drums, even empty and clean ones, can strike an unreasonable fear into such prejudiced individuals. If you have to store drums in a visible manner, one good investment might be to erect the necessary structures to hide them. This could be as simple as putting blinds into a chain link fence. The concept is not unlike keeping your lawn neat and trimmed. Your neighbors like you a great deal better if you do. In general, it is a good practice to keep your facility neat -- if it looks good, people will be less likely to have an expectation of problems.

Responsiveness to neighbors is another key factor. Neighbors often have questions about your business and

you should be willing to answer them straightforwardly and rapidly. Courtesy is a minimum requirement. When one of those hysterical, fear-filled types communicates a concern to you, fight the impulse to treat them similarly and respond in a courteous and reasonable manner. The more information you can supply anyone, the better the chances that they will find out that you are a good environmental citizen.

*Become active in the legislative and regulatory processes, applying reason not rhetoric.* This paper is being written for the proceedings of an organization that does an excellent job of working on the Federal regulatory level to ensure that the voice of this industry is heard. Opportunities such as the Washington Day that was run this last year also helps bring considerable influence to bear on the legislative process as well. Such organization by industry or other interest group is vital to being a part of the governmental process. The efforts of the I.P.C. on the Federal level must be encouraged and promoted, even expanded.

Such organization should also be formed on the state and local levels as well. The efforts on the part of the California Circuits Association in the debate over the so-called Tiered Permitting regulations is an excellent example of what can be done more locally. Such efforts on all governmental levels should be a matter of constant activity and not simply rise up in response to an issue. The more a group is involved in governmental activity, the more their input will be valued and accepted. Vigilance is also necessary, because legislation or regulation may be put forth and promulgated before you even know about it.

Operating in an interest group fashion is vital, but so is personal and corporate involvement. There may be times when a particular issue is of greater concern to a single business than it is to the industry group. As an individual or company, it is more reasonable to be responsive rather than proactive. Staying up-to-date on regulation and legislation is becoming a fairly simple matter. Most agencies, particularly local ones maintain mailing lists that they use for distributing proposed regulations for public comment. Usually a phone call or two can get some one on the list. When things arrive, it takes a matter of seconds to review the summaries and decide if it is necessary to read further. There is generally a public comment period for regulation, and if it is important enough a personal appearance at such a meeting can be very forceful.

Legislation has become almost as easy to follow as regulation. This manuscript is testament to that fact. Most states as well as the Federal government now have an Internet presence which allows one to see, what is happening. The Conclusions section of this paper has

pointed out several pieces of legislation that are worth watching and backing. 104 H.R. 690, if properly passed and executed, could be the key to introducing the reasonableness that is the key to this issue.

*Promote your Green business.* By now almost everyone has seen the advertisements that the Chemical Manufacturers Association is running which highlights their recycling activities. Ads like that work well at letting the world know about the change in attitude and priorities for a company. Those ads have been very effective in pointing out that companies like Monsanto or DuPont are active in seeking ways to make their products which the public wants in a way that minimizes damage to the environment, which the public also wants.

The I.P.C. is a very effective organization, but does it have the resources of a CMA? Are we willing to pay the price for that kind of national advertising campaign. Is that even what would be most effective for this industry? -- We are not in the public eye like the big chemical manufacturers. What steps can we take, on a smaller scale, that can be as effective?

We are all aware that there are several requirements for the disclosure of information to the public, Form R, Right-To-Know, things of this sort. These can be used effectively to promote the fact that your business is a green business. If your Form R reflects a significant decrease in the amount of material released to the environment, this is an occasion for a press release. Summarize the data from the Form R and send it to the press, maybe even send it in a letter to your neighbors.

Your Right-To-Know efforts are an opportunity for education and promotion. You must maintain documents that the public can review to learn about your chemicals and hazards. Why not make sure that document reflects your efforts to minimize emissions and reduce hazards? Rather than simply make it available, why not hold an open house, and let the people in the area see what you are doing to protect them? The author has attended such open houses at gold mines. These are extremely hazardous operations in which cyanide is sprayed onto gigantic piles of ore, and collected in ponds. Such an open house can bring in people from miles around and most leave with their minds at ease because of the excellent safety measures such operations take, and because of their willingness to show them to the public.