

Reinventing Government Through Common Sense and Design

By Christopher Rhodes

Together, the U.S.
EPA's Common Sense
Initiative and the IPC-
EPA Design for the
Environment PWB and
Assembly Project
promise help for both
the PWB industry and
the environment.

Saving the environment requires hard work. Saving the environment while keeping the PWB industry competitive requires ingenuity and hard work.

Fortunately, a group of committed industry representatives and IPC members, public interest groups, and government employees are ingenious enough to figure out how to do both and they are willing to do the work. They are willing to do the work, but the rules won't let them. Environmental regulations often hinder innovative approaches. So first, we need to change the rules. Then we need to supply the right tools to do the job.

Changing the rules so we can use new tools is the fundamental idea behind the U.S. Environmental Protection Agency (EPA) Common Sense Initiative (CSI). Finding new tools to do the job of building PWBs efficiently and cleanly is the fundamental idea behind the IPC-EPA Design for the Environment (DFE) PWB & Assembly Project. Together, they just might help both our industry and our environment.

CSI is a departure from the old "command and control" approach, which is riddled with best available technology and maximum achievable control technology edicts that dictate how our industry should run its busi-

ness and how we should solve environmental problems. CSI is a move toward an innovative, flexible, results-oriented approach. If it lives up to its promise, then the PWB industry is fortunate to be one of the main CSI industry subsectors.

By now, you've probably heard the three words most commonly associated with CSI: cleaner, cheaper, smarter. In announcing the CSI program, EPA Administrator Carol Browner stated that, "All too often we've seen too little environmental protection at too high a price." PWB manufacturers wouldn't argue with that. Through the CSI, "Government officials at all levels, environmentalists, and industry leaders will come together to create industry by industry strategies that will work cleaner, cheaper and smarter to protect public health and our national resources." In short, Administrator Browner is proposing that EPA stop telling industry how to meet environmental goals, and start giving industry freedom to meet mutually agreed upon environmental goals in whatever way industry thinks best.

In July 1994, the electronics interconnection industry, including PWB manufacturing and electronic assembly, was selected to participate in the CSI as a subsector with-

Figure 1.

Steve Bold, Continental Circuits (standing) led one of the two DFE work teams at the DFE meeting last September. Lee Willmot (right) of Hadco, Chair of IPC's Environmental Subcommittee, and Anthony Gruebl, Cauldron Company, were part of this work team.

Inset Photos:

EPA and industry leaders at the first DFE kick-off meeting included (left to right): Kathy Hart, EPA; Debbie Boger, EPA; Gary Roper, HR Industries; John Lott, DuPont; Libby Parker, EPA; and Greg Pitts, MCC.



in the electronics industry sector. Cathode ray tubes and semiconductors are the other two industry subsectors besides electronic interconnections.

The six stated goals for CSI are as follows:

1. *Regulations.* Improve existing rules as well as future rule-making procedures through greater cooperation and coordination.
2. *Pollution Prevention.* Promote pollution prevention and other voluntary, environmentally sound practices.
3. *Reporting.* Simplify and improve the effectiveness of recordkeeping and reporting requirements.
4. *Compliance.* Undertake compliance and enforcement initiatives to provide greater predictability, better information, better compliance assistance and greater overall compliance.
5. *Permitting.* Streamline permitting procedures.
6. *Environmental Technology.* Promote innovative environmental technologies.

Following industry sector selection, the first broad CSI electronics sector stakeholder meeting was held in Virginia on September 26-28, 1994. IPC members Steve Bold (Continental Circuits), Russ Tremblay (M/A-COM) and Lee Wilmot (Hadco) represented independent PWB and contract assembly companies at this meeting. They were joined by other IPC OEM members as well as IPC staff. As a result of this meeting, specific regulatory issues or problems were identified along with possible solutions or approaches.

Each industry subsector developed its own list and then worked to combine common topics. Top priorities picked by the electronic interconnection industry include the following:

- Definition of solid/hazardous waste (categorical problems such as photoresist skins, "derived-from rule," de-listing barriers);
- Regulatory barriers to pollution prevention (restrictions regarding on-site regeneration, conflicts between CAA, CWA and RCRA);
- Extensive reporting burdens (multiple emergency response notification, duplicative general emissions reporting requirements, lack of electronic reporting);
- Small business compliance problems (tracking, interpreting and applying regulations, lack of compliance assistance);
- Permitting barriers (too slow, too inflexible, conflicting rules, and inadequate de minimis and permit-out options).

Before the CSI work teams can move ahead on these and other issues, however, the EPA must complete its task of appointing the Common Sense Initiative Council or CSIC (pronounced "seasick"), the governing body for this initiative, as well as the various industry sector steering committees. This should be completed early this year so that everyone can get down to work.

While the Common Sense Initiative is focusing on changing the rules to encourage technology innovation and new approaches, the IPC-EPA Design for the Environment (DFE) PWB & Assembly Program is concentrating on

Pitts of MCC.

There are seven major steps in this DFE project:

1. Identify use clusters
2. Score use clusters
3. Evaluate high score clusters for CTSA
4. CTSA identifies and evaluates alternatives
5. Disseminate results to industry and public
6. Implement options
7. Evaluate results of options

In DFE parlance, a "use cluster" is a set of chemicals, processes and technologies that can substitute for one another to perform a specific function. For example, at a working meeting in Washington on September 7-8, 1994, more than 50 industry representatives, EPA personnel and other parties selected four priority process steps or use clusters for further DFE assessment: innerlayer etching; outerlayer etching and plating; making holes conductive; and HASL.

A number of industry representatives have already voluntarily submitted chemical use data for these four use clusters, and the EPA is now completing use cluster scoring in order to rank each cluster for potential human health or environmental adverse effects. At the same time, IPC is developing the industry profile document while MCC is working on the use cluster profile.

The next step will be to select a use cluster for full CTSA evaluation, and begin that work. An industry-wide DFE meeting is scheduled for May 4, 1995, at the IPC Printed Circuits Conference and Exposition in San Diego,

Calif. Participants will be reviewing the industry profile and use cluster profile documents, as well as continuing work on the CTSA.

IPC welcomes support from any interested party on these important projects. If you would like more information or want to get involved, please contact either John Robison of the EPA CSI staff (202/260-3590), Debbie Boger of the EPA DFE staff (202/260-0880) or Star Summerfield at IPC (708/677-2850, ext. 347; fax 708/677-9570; e-mail summst@ipchq.com).

By working together, who knows what we might accomplish? **C**

Christopher Rhodes is the director of environmental, safety and government relations programs at the IPC.

Never tell people
how to do things.
Tell them what
you want them to
achieve and they will
surprise you with
their ingenuity.

— GENERAL GEORGE S. PATTON

identifying new technologies and materials that can be implemented as the rules are changed to allow it. These will be new tools that we can use to build circuit boards in better ways.

The IPC-EPA Design for the Environment (DFE) PWB & Assembly Project was started in May 1994 at the IPC Printed Circuits Conference and Exposition. The overall goal of this DFE project is to identify and evaluate alternative chemicals and technologies that can replace traditional PWB processes, and then disseminate the results of that evaluation to the industry through a Cleaner Technologies Substitutes Assessment (CTSA) document and other means. DuPont's Dr. John Lott is chairing this project with considerable help from other IPC members including: Michael Kerr of Circuit Center; Tim Scott of ADQ; Robin Sellers of EMPF; and Greg