

*Testimony of*

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*On behalf of*

IPC — Association Connecting Electronics Industries®

*Before the*

Subcommittee on Environment and the Economy  
Committee on Energy and Commerce  
U.S. House of Representatives

“Testing of Chemicals and Reporting and Retention of Information  
under TSCA Sections 4 and 8”

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Good day, my name is Dr. Brent Grazman and I am the Vice President – Quality, for Viasystems Group, a leading world manufacturer of printed circuit boards. Viasystems is headquartered in St. Louis, Missouri and employs approximately 2,150 people in the United States in manufacturing facilities located in Anaheim, Milpitas and San Jose, CA; Cleveland and North Jackson, OH; Littleton, CO; Forest Grove, OR; and Sterling, VA. Viasystems manufactures circuit boards used by some of the leading manufacturers of cars, telecommunications equipment, data storage systems, as well as industrial, medical and aerospace equipment.

I am also here to represent IPC —Association Connecting Electronic Industries®. IPC is a global trade association, which represents all facets of the electronic interconnection industry, including design, printed board manufacturing and electronics assembly. IPC has nearly 3,500 member companies, including more than 2,000 located in the United States. As a member-driven organization and leading source for industry standards, training, market research and public policy advocacy, IPC supports programs to meet the needs of an estimated \$2 trillion global electronics industry.

As a member of IPC's Government Relations Committee, I want to emphasize that IPC and its members, including Viasystems, strive to do the "right things." We are strong advocates for scientifically based environmental regulations that improve environmental conditions, protect human health, and stimulate the economy. IPC is heavily involved in a number of voluntary environmental initiatives including several of Environmental Protection Agency's (EPA's) Design for the Environment partnership projects and the development of the Electronic Product Environmental Assessment Tool (EPEAT) standard.

I am here today to encourage Congress to reauthorize the Toxic Substance Control Act (TSCA) in a manner that enables the EPA to better protect our nation's health and natural environment through focused, clear, and prioritized chemical regulations. In my testimony, I will highlight our concerns about TSCA regulation of byproducts and the negative effect that these regulations have on their recycling.

Under EPA's interpretation of TSCA, byproducts sent for recycling must now be listed on the TSCA Inventory and are subject to the full regimen of TSCA recordkeeping, reporting, and enforcement provisions as newly manufactured chemicals. While we teach our communities to reduce, reuse and recycle, this interpretation effectively discourages industry from doing the same thing, by subjecting us to complex, burdensome and unnecessary reporting.

While we understand the importance of environmental reporting, much of the data collected about byproducts under this interpretation of TSCA is already required by EPA under the Resource Conservation and Recovery Act (RCRA) and Emergency Planning and Community Right-to-Know Act (EPCRA). We believe that EPA should set priorities and gather only the data that is needed for specific purposes and programs, instead of collecting vast data sets for undefined future uses.

It is critical that Congress reauthorize TSCA in a way that directs EPA to focus and prioritize its regulation of chemicals. Selection of priority chemicals should be based on sound science, not the latest headlines. Substances that exhibit the greatest hazards, such as those known to cause cancer, developmental or reproductive harm; those that are persistent or bioaccumulate in the environment; and those that pose the greatest exposure to consumers and their families should

be given priority for review, testing and, as necessary, regulation. A targeted, prioritized approach will allow EPA and the affected industries to more effectively use our resources to ensure the utmost protection of both human health and the environment.

### ***EPA's Misguided Interpretation Requires the Reporting of Byproducts under TSCA Section 8***

One example of EPA's failure to prioritize chemicals regulation is their treatment of byproducts reporting. Although TSCA contains specific exemptions for byproducts, EPA's interpretation and guidance has been so narrow as to effectively eliminate any meaningful distinction between products and byproducts. Under its interpretation of TSCA Section 8, EPA requires reporting of byproducts unless they are landfilled or treated as inert. Consequently, materials which are already regulated under the RCRA, suddenly trigger reporting under TSCA, which was intended to regulate "new" chemicals. Under EPA's implementation of Section 8, a byproduct sent for recycling is considered a new chemical or "manufactured substance" unless its only commercial purpose is "use by public or private organizations that burn it as a fuel, dispose of it as a waste, or extract component chemical substances from it for commercial purposes."<sup>1</sup>

Under the EPA TSCA Chemical Data Reporting (CDR) Rule, byproducts sent for recycling must now be listed on the TSCA Inventory and are subject to the full regimen of TSCA recordkeeping, reporting, and enforcement provisions as newly manufactured chemicals. For byproducts, these TSCA reporting and recordkeeping requirements are in addition to and in some cases contradict, RCRA and EPCRA reporting and recordkeeping requirements. The TSCA requirements include new chemical notification and significant new use restrictions under Section 5; restrictions under Section 6; reporting obligations under Sections 8(a), 8(d), and 8(e); recordkeeping under Section 8(c); reporting obligations under Section 12(b); and associated penalties or enforcement provisions. If the byproducts are not listed on the Inventory, recycling cannot lawfully occur. I would point out that all of these regulatory obligations arise solely because a manufacturer is trying to do the right thing by sending the waste byproducts for recycling rather than disposing of them in a landfill.

Current EPA regulations exempt byproducts if the manufacturer's only commercial purpose is to "extract component chemical substances from it." EPA has narrowly interpreted this byproduct extraction exemption (without benefit of notice and comment rulemaking) to apply only if the extracted chemical component in the byproduct is removed through a process that does not involve a chemical reaction. This interpretation requires byproduct manufacturers to have detailed knowledge on the molecular and atomic levels of all chemical reactions that occur during the recycling process after it leaves their hands.

This narrow interpretation means that the recovery of any waste metals like gold, tin or copper that are dissolved in Viasystems' byproducts cannot be exempted as byproducts if they are recycled—because the only way to recover them is through a chemical reaction.

We were shocked to discover that the CDR rule published by EPA in 2011 impacts us and probably every member of IPC. We manufacture electronics, not chemicals. We responsibly use chemicals in the manufacture of our printed circuit boards, and are already subject to multiple regulations. We certainly did not consider ourselves to be chemical manufacturers and therefore

<sup>1</sup>40 C.F.R. § 720.30(g).

subject to TSCA. IPC has vigorously opposed EPA's interpretation and engaged the Agency in multiple communications in order to convince them that their interpretation would discourage and reduce recycling.

We are in the business of manufacturing printed circuit boards, not byproducts such as spent plating baths and wastewater treatment sludge. Under EPA's interpretation, sending our waste byproducts for recycling would be considered the manufacture of a new chemical for commercial purposes – subjecting Viasystems to register and report our waste byproducts under TSCA.

EPA's narrow interpretation bases the applicability of notification and reporting requirements on the recycler's actions, yet requires the byproduct manufacturer to make this determination. When the byproduct manufacturer sends the byproduct for recycling, the byproduct manufacturer does not have the information needed to determine regulatory applicability. The byproduct manufacturer is simply sending the byproduct for recycling.

EPA's over-reaching interpretation affects far more facilities and companies than those represented by IPC. Manufacturers of all sorts, from almost every manufacturing industry, will now be further burdened by reporting their waste byproducts as new chemicals.

### ***TSCA Data Collection is Burdensome***

Compliance with Section 8 recordkeeping and reporting requirements imposes a significant burden on manufacturers. General reporting requirements under Section 8 include the volume of each chemical that is "manufactured," providing data on the downstream processing and use of the chemical (or byproduct in our case), and identifying consumer and commercial uses of the chemical (byproduct in our case).

The reporting of byproducts as new chemicals under TSCA Section 8 requires us to have very detailed knowledge about what will be done with, and to, our byproducts by the recycler after those materials have left our possession. A typical printed board factory uses more than 20 different manufacturing processes and has some 75 individual chemical tanks or process baths. Many of these chemical baths are composed of many separate ingredients, many of which are purchased from, and proprietary to, different suppliers, and each with its own material safety data sheet (MSDS). Many of these MSDSs identify between three and six separate chemical compounds in a single ingredient. So our database of chemicals contains well over 300 entries. In each of these process baths, a number of chemical reactions occur, generating temporary byproducts that appear for an instant and disappear as well as the long-lived species we want to send for recycling.

In order to report completely under current TSCA regulations, for each byproduct that we intend to send for recycling, we need to identify all chemical compounds or substances generated in each process, determine whether any chemical reactions will occur during the recycling process, determine the quantity of any chemical component that will be reacted, and compare the quantities of the any reacting chemicals to the TSCA reporting thresholds.

### ***Difficulties in Reporting Byproducts Will Affect the Quality of Data***

EPA's interpretation of TSCA Section 8, as it pertains to byproducts, requires the byproduct manufacturer to understand and report based upon each of the specific chemical reactions

that will occur during recycling. This information may be available to the recycler, however, the recycler usually considers it a trade secret and therefore withholds it from us. Furthermore, the recycler may use different processes at different times to recycle our byproducts, and we would have no way to know it. Each different process used results in the formation of different types and ratios of chemical substances that are beyond our knowledge or control. The result is regulatory policy that forces us to complete our EPA reports based on guesswork, ultimately compromising data quality.

TSCA originally only required the reporting of data that was known or “readily obtainable.” This standard protected reporters from requirements to extort proprietary information from their recyclers, or to engage in extensive and costly analysis when it was unwarranted. It also helped ensure companies submit accurate and useful data. Under TSCA’s revised reporting standard, all information considered “known or reasonably ascertainable by” a chemical user is required. This standard significantly alters the universe of data that must be submitted to EPA. Manufacturers are more likely to submit more data that is of lower quality because they must gather it from outside sources that may or may not be credible. Under this standard, the Agency is the ultimate subjective judge regarding what assumptions chemical users should or should not be making regarding how their chemicals react, what is being generated and how much, as well as what those users should or should not know about their recycled byproducts. The result is questionable data.

Review of the TSCA Inventory provides a further glimpse into the chaos. Some specific chemical compounds are listed three or four times under slightly different names. In addition, there are many listings for mixtures from specific processes — not named by chemical, but by the manufacturing process. This is because it is easier to file a Premanufacture Notice (PMN) for an entire mixture than to determine its exact composition. For example, the listing for our wastewater treatment sludge, which was required before we can send it for recycling of valuable copper byproducts, allows us to report just the gross total of the sludge. Therefore, I am not required to distinguish copper species, but it calls into question the usefulness of data submitted to EPA. When EPA lifted the reporting exemption for inorganic substances in 2002, the Agency knew that hundreds of inorganic substances were routinely used in commerce and were not yet on the TSCA Inventory. At that time, many chemical users faced reporting requirements for every one of these substances as if they were newly developed chemicals. This required manufacturers to submit PMNs for placing the chemical substance on the Inventory which is a huge burden, particularly for small companies that have never considered themselves to be chemical manufacturers and might not have a technical staff or a laboratory.

### ***Deterrent to Recycling***

We are succeeding in teaching our communities that “reduce, reuse, and recycle” are national goals. By requiring reporting and recordkeeping of byproducts that are sent for recycling, EPA undercuts these important goals.

We simply want to recover, or sell to have others recover, as much as possible from our byproducts and waste streams. Over the years, industry has increasingly and appropriately

developed recycling techniques to extract commercially valuable metals or other materials that previously were disposed of as waste. Such recycling practices have been encouraged by EPA as a means to reduce the quantity of waste generated, reduce the hazardous properties of such wastes when disposed of,<sup>2</sup> and “prevent pollution” as encouraged by Congressional policy underlying RCRA and the Pollution Prevention Act of 1990 (PPA).<sup>3</sup> Industry recycling practices have enhanced human health and environmental protection, while stimulating the economy, by encouraging the economic savings created by well-managed recycling and pollution prevention management practices.

For many recycling operations, and especially those containing metals, extraction of valuable chemical components can only be achieved through chemical reaction processes. Thus, manufacturers sending their byproducts for recycling operations would not be exempted under current EPA interpretation. For example, chemical reactions are necessary to reduce metal oxide pollution control dusts to metallic form, or when precipitation (e.g., formation of an insoluble salt) is used to recover metals from a solution of soluble metal compounds in wastewater. In many cases, the metals extracted from these processes are very valuable. Recycling these metals allows reduced need for further mining of raw ore, which again, supports the overall goal of sustainability.

We encourage Congress to directly exempt all byproducts, including those that are sent for recycling, in order to encourage material recovery and reuse, thus furthering EPA’s overall goals.

#### ***EPA Should Collect Only Necessary Data***

For the first 25 years of the TSCA program, inorganic chemicals, including the valuable metal salts contained in our byproducts and waste byproduct streams were exempted from reporting because the risks from these chemicals were correctly assessed as being relatively low.

EPA should set priorities and gather data that is needed for specific purposes and programs, rather than request vast data sets from which the Agency may pick and choose pieces for undefined future uses.

Much of the data collected about byproducts is already required by EPA under RCRA and EPCRA. Furthermore, the Occupational Safety and Health Administration (OSHA) has its own exposure standards for known inorganic toxins. Viasystems already complies with these regulations. We believe that EPA’s application of Section 8 reporting requirement to substances sent for recycling is duplicative of existing regulations.

For example, under EPCRA, the Toxics Release Inventory (TRI) program already requires manufacturers to report chemical release data to EPA. The release data provided in the TRI program is very similar to that required under the CDR. The TRI program requires reporting on substances with presumed or established environmental, health and safety risks. TSCA collects data on substances that may already have been reported through TRI.

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<sup>2</sup> See the Sustainable Materials Management (SMM), <http://www.epa.gov/smm>, a voluntary effort implemented by EPA’s Office of Solid Waste and Emergency Response, the EPA office that implements RCRA.

<sup>3</sup> 42 U.S.C. § 6901 et seq.; 42 U.S.C. § 13101 et seq.

Another example of duplicative reporting in the CDR rule is the requirement that manufacturers must report worker exposure data. OSHA collects extensive data on worker exposures through existing regulations and standards.

In the 2011 final *TSCA Inventory Update Reporting Modifications; Chemical Data Reporting*, EPA indicated a willingness to reexamine the applicability of the CDR rule on byproducts sent for recycling based on the data received during the 2012 reporting cycle, stating,

“The Agency intends to examine the collected information related to byproducts, recognizing the importance of recycling, to identify whether there are segments of byproduct manufacturing for which EPA can determine that there is no need for the CDR information for the 2016 or other future reporting cycles.”<sup>4</sup>

We ask that EPA follow through on the commitment to analyze the collected notification and reporting data pertaining to byproducts sent for recycling from the 2012 CDR reporting cycle, and provide an explanation of how the data is being used as well as a rationale for why this data continues to be needed.

### ***Additional Issues of Concern***

I would like to highlight a few other areas of concern to IPC members.

#### **Preemption**

We recognize that federal preemption is a challenging issue. As a practical matter, electronics companies cannot manufacture unique products for sale only in a particular state, nor do we, or our customers down the supply chain, sell products on a state-by-state basis. Unique state-specific chemical requirements are unworkable, so we urge Congress to protect interstate commerce which depends upon consistent regulation across all states.

#### **Reporting of Transitory Substances**

Whatever rule we end up with must retain strong provisions exempting the reporting of “transitory” substances. Appropriate regulatory controls must be focused on what is actually present in the materials being controlled at the time they might be exposed to the environment. We respectfully ask that temporary or transitory substances continue to be exempt from regulation. Industry is wasting time and resources in reporting about substances that have come and gone long by the time we are ready to send the byproducts for recycling.

#### **Treatment of Articles under TSCA Reform Legislation**

As printed circuit board manufacturers, we rely on our chemical suppliers to provide us with materials that are safe for us to use and for the environment. We believe that the focus of TSCA should remain on ensuring the safety of chemicals in commerce and that regulation of chemicals in articles should be limited.

Treatment of articles under TSCA reform legislation should be required to be consistent with existing policy to focus resources on chemicals in articles that pose the most risk to human health and the environment. TSCA reform legislation should require EPA to focus on articles that

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<sup>4</sup> 50832 Federal Register / Vol. 76, No. 158 / Tuesday, August 16, 2011 / Rules and Regulations.

consumers are most likely to be exposed to. In addition, EPA should be required to prove the need to regulate chemicals in articles by providing adequate scientific evidence that action on the chemical or mixture alone is not sufficient to adequately address human health and environmental concerns. EPA should also be required to prove that the presence of the chemical in a specific article would significantly contribute to human health and environmental risks within the U.S. before adding to the regulatory maze that already exists.

### **Restrictions of Substances**

The evaluation and prioritization of substances must be based on both hazard and exposure assessments in order to ensure a genuine benefit to human health and the environment. Hazard and exposure assessments are complementary and must both be evaluated in order to ensure that substances with the greatest impact are selected for further evaluation or restriction. Only by considering both the potential hazard of a substance and the potential for exposure can one properly understand the risk associated with the use of a substance. Consideration of both hazard and exposure when prioritizing substances will ensure that the substances selected for restriction will result in the largest possible reduction in risk to human health and the environment.

Furthermore, EPA should not be given the authority to restrict or ban a substance based solely on hazard information or without fully evaluating viable alternatives. The decision to restrict or ban a substance should not be undertaken lightly. Electronics manufacturers use specific materials because of their unique properties including energy efficiency, safety or performance characteristics. Commitment of scarce resources must be guided by the best available science. Otherwise resources will be wasted and the environment and human health will suffer as resources are squandered pursuing goals that do not provide an environmental or health improvement over the status quo. Elimination of specific substances requires a great deal of research and development of alternative substances, requiring the investment of time and resources by electronics manufacturers including their entire supply chain from the mine to the maker of the latest mobile devices. Similarly, implementing and enforcing regulations requires significant investment by authorities. It is essential that any substance restrictions be supported by strong scientific evidence in order to accomplish the goal of maximum human health and environmental protection.

The restriction of substances prior to evaluating alternatives can result in unintended consequences, leading to a net effect of no increased environmental benefit or even worse, an outcome that harms the environment and human health. As an example of the importance of considering alternatives, following the restricted use of lead in electronics under the European Union Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive, the U.S. EPA conducted a lead-free solder study<sup>5</sup> that evaluated the environmental impacts of tin-lead solder versus lead-free alternative solders. The study found that the increased energy use associated with the higher operating temperatures required for manufacturing lead-free soldered electronics would cause higher air pollution, acid rain, stream eutrophication and global warming impacts than tin-lead soldered electronics. EPA's study serves as an important reminder that there are environmental tradeoffs when substituting one substance for another.

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<sup>5</sup> U.S. Environmental Protection Agency. August 2007. Solder in Electronics: A life Cycle Assessment. Available at <http://www.epa.gov/dfe/pubs/solder/lca/lca-summ2.pdf>.

## **Lessons Learned from the EU REACH Regulation**

TSCA reform should seek to maintain an efficient process for the assessment and management of chemicals that allows the chemicals industry to provide manufacturers of articles with the materials we need on a timely basis.

The European Union Registration, Evaluation and Authorization of Chemicals (REACH) regulation is arguably the most comprehensive chemicals regulation across the globe. A separate agency, the European Chemicals Agency (ECHA), was formed in order to implement and enforce the regulation. TSCA reform legislation should aim to leverage existing information already gathered under REACH rather than attempt to replicate it. Using information already gathered will help minimize duplicative efforts and efficiently manage chemicals.

## ***Conclusion***

IPC supports cost-effective, science-based environmental regulations. As I have discussed, it is critical that Congress reauthorize TSCA in a way that directs EPA to focus and prioritize its regulation of chemicals. We believe that EPA's reporting requirements for byproducts sent for recycling are burdensome and unnecessary, and serve to discourage recycling. Congress must encourage EPA to set priorities and gather only the data that is needed for specific purposes and programs.

Thank you again for the opportunity to appear before you today. I would be happy to answer any questions you have.

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