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To: John F. MorrallIII/OMB/EOP@EOP

cc:

Subject: Notice and Request for Comment on the Office of Management and Budget **Draft** Report to Congress on the Costs and Benefits of Federal Regulations

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Dear Mr. Morrall

The IPC - Association Connecting Electronic Industries - is pleased to submit the enclosed comments in response to the Notice and Request for Comment on the Office of Management and Budget Draft Report to Congress on the Costs and Benefits of Federal. IPC is the national trade association for the electronic interconnection industry, and represents more than 2,500 member companies.

We appreciate the opportunity to offer these comments. A complete set of our comments, including attachments is being sent to your office by courier.

Please contact me at 202-962-0460 should you have any questions.

Sincerely,

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Director of Environmental Policy  
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- OMB Cost Benefit comments.doc

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**RE: Notice and Request for Comment on the Office of Management and Budget Draft Report to Congress on the Costs and Benefits of Federal Regulations (67 FR 15013, March 28,2002)**

Immediate  
Past Chairman  
Ron Underwood  
Circuit Center Inc.  
Dayton, OH

The IPC - Association Connecting Electronic Industries - is pleased to submit the enclosed comments in response to the Notice and Request for Comment on the Office of Management and Budget Draft Report to Congress on the Costs and Benefits of Federal. IPC is the national trade association for the electronic interconnection industry, and represents more than 2,500 member companies.

We appreciate the opportunity to offer these comments. As requested, we are attaching copies of guidance documents on which we are providing comment. Due to the length of several of these guidance documents, we have attached only the relevant sections, along with complete references to the entire documents.

Please contact me at 202-962-0460 should you have any questions.

Sincerely,

Fern Abrams  
Director of Environmental Policy

President  
Dennis F. McGuirk

Chairman of the  
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## ATTACHMENTS

- Attachment A** Emergency Planning and Community Right-to-Know Act – Section 313; Lead and Lead Compounds: Guidance for Reporting Releases and Other Waste Management Quantities of Toxic Chemicals: Lead and Lead Compounds
- Attachment B** EPCRA Section 313 Questions and Answers, Revised 1998 Version
- Attachment C** Toxic Chemical Release Inventory Questions and Answers, Revised 1989 Version
- Attachment D** Toxic Chemical Release Inventory Reporting Forms and Instructions Revised 2001 Version
- Attachment E** Toxic Chemical Release Inventory Reporting Form R and Instructions, Revised 1991 Version

## I. Introduction

Printed circuit boards are used in a variety of electronic devices that include computers, cell phones, pacemakers, and sophisticated missile defense systems. The industry is vital to the U.S. economy. Without printed circuit boards, you would not be able to start your car, watch television, answer a telephone, turn on a light switch, or brew a cup of coffee. There would be no Internet, no e-mail, no VCRs or Nintendo. The industry employs more than 400,000 people and exceeds \$44 billion in sales. Industry members operate in every U.S. state and territory.

Although IPC members include electronic giants, such as Intel, Hewlett Packard, and IBM, sixty percent of IPC members meet the Small Business Administration's definition of "small business." The typical IPC member has 100 employees and has a profit margin of less than four percent.

IPC would like to commend the Office of Management and Budget (OMB) on the preparation of the Draft Report to Congress. IPC shares the administration's support for federal regulations that are sensible and based on sound science and economics. We further appreciate OMB's interest in improving the quality of information and analysis used and disseminated by agencies. Quite often, proposed regulations are based on inadequate analysis, poor data, or scientific methodologies that have not been validated by peer review. We hope that OMB guidelines for data quality will have a strong hand in preventing future regulation based on inadequate data. We remain concerned, however, that regulations and guidance already issued by EPA may not have been subject to the same standards of analysis and data quality. Often, these regulations increase the cost of manufacturing in the United States, without providing adequate public benefit. The Draft Report to Congress outlines the following criteria for regulations and regulatory guidance that should be reviewed by OMB:

- Reforms to existing regulations that, if adopted, would increase overall net benefits to the public, considering both qualitative and quantitative factors.
- Identification of specific regulations, guidance documents, and paperwork requirements that impose especially large burdens on small businesses and other small entities without an adequate benefit justification.
- Reviews of problematic agency "guidance" documents of national or international significance that should be reformed through notice and comment rulemaking, peer review, interagency review, or rescission.

IPC appreciates the opportunity to offer the following suggestions for review by OMB as meeting these criteria.

## 11. Regulatory Agency: Environmental Protection Agency

**Citation:** 66 FR 4500; January 17,2001; 40 CFR Part 372

**Authority:** Section 313 of the Emergency Planning and Community Right to Know Act; Lead and Lead Compounds; Lowering of Reporting Thresholds; Toxic Chemical Release Reporting

### Description of Problem:

On **January** 17,2002, The U.S. Environmental Protection Agency (EPA) published a final rule' lowering the Toxic Release Inventory (TRI) reporting threshold for lead and lead compounds from 25,000 pounds to 100 pounds. IPC members use tin-lead solder to connect components, such as computer chips, to printed circuit boards. As a result, the majority of IPC member companies are impacted by this rule.

In promulgating this rule, EPA failed to adequately assess the economic impacts of this regulation, especially the impacts to small businesses. In addition, the scientific criteria used in the rule were not peer validated.

#### 1. *EPA Failed to Involve Small Businesses Early in the Rulemaking Process, Jeopardizing the Validity of ~~its~~ SBREFA Determination*

The Small Business Regulatory Enforcement Fairness Act (SBREFA), as incorporated by the Regulatory Flexibility Act (RFA) of 1980 (5 U.S.C. § 601 et seq.), requires federal agencies to consider small business impacts during the proposal stage of the rulemaking process. Specifically, the statute requires federal agencies to actively involve small businesses early in the rulemaking process (i.e., pre-proposal) when proposed rules would have a significant economic impact on a substantial number of small entities.

Despite the intent of **SBREFA** and the agency's own internal guidance<sup>2</sup>, **EPA** failed to conduct any small business outreach before this rule was proposed. EPA's own economic analysis<sup>3</sup> concluded that a substantial number of small businesses (5,620 – more than 68.8% of the total impacted facilities) would be affected. Nevertheless, EPA limited their pre-proposal contact to approximately 7 trade associations, all of which represent large industry members.

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<sup>1</sup> 66 FR 4500; January 17,2001

<sup>2</sup>EPA's SBREFA guidance states, "EPA's success in carrying out its obligations under SBREFA requires early and continuing interaction with small entities throughout the regulatory development process." EPA's guidance further suggests that "it is important that outreach to small entities occur **as early as possible** in regulations development. Indeed, it will often be appropriate to start outreach before or concurrently with performance of a preliminary screening analysis [to determine the full extent of the rule's impact on small business]."

<sup>3</sup> EPA Docket No. OPPTS-400140, B.031.

Following significant complaint by small businesses, EPA met with the IPC and a representative from the metal finishing industry. Unfortunately, this meeting took place four months after EPA had completed the rule's economic analysis and nearly two months after EPA issued its proposal. EPA, therefore, completely missed the opportunity and ignored its obligation to gather the information needed to conduct a sound economic impact analysis and proper SBREFA determination. While EPA subsequently conducted a few small business outreach meetings before the end of the comment period, this outreach was "too little, too late."

Due to EPA's failure to contact small business sectors early in the rulemaking process, the assumptions on which EPA's SBREFA determination was based are significantly flawed. EPA concluded in its Economic Analysis that "none of the small entities will experience impacts greater than one percent."<sup>4</sup> EPA used that conclusion to assert that SBREFA's small business review provisions were not triggered because the proposed rule would not have a significant economic impact on a substantial number of entities (i.e., regulatory costs of less than one percent were insignificant).<sup>5</sup>

Unfortunately, EPA's conclusion was based on a number of erroneous assumptions. First, EPA seriously underestimated the number of first time filers that would result from the proposed rule. On page 3-2 of the Economic Analysis, EPA writes, "To generate an estimate of the number of first time filers in the manufacturing sector it is assumed that the distribution of reports per facility will not change after the lead rule is promulgated. It was further assumed that if a facility files a single report, and it is for lead and lead compounds, then the facility must be new to the TRI system. Therefore, the number of manufacturing facilities submitting reports for lead and lead compounds is multiplied by the percentage of reporters that filed only one report in 1996 (38.3 percent)."

According to EPA economist Cody Rice, 38.3 percent was chosen as an estimate of the number of new first time filers that would result from the rule because that was the percentage of new filers that resulted from an industry expansion rule in 1996. This is an improper assumption since the industry expansion rule did not lower TRI reporting thresholds. The rule lowers TRI reporting thresholds for lead and lead compounds from 25,000 pounds to 100 pounds – a 96% reduction! EPA's assumption that the number of first time filers would resemble the number of first time filers resulting from the 1996 rule expansion is illogical since the significant reduction in the TRI reporting threshold negates any parallels that could be drawn between the two rulemakings.

Prior to this rulemaking, approximately 10 percent of IPC members reported to the TRI and virtually none of the facilities reported for lead. Under the new threshold for lead, almost every member company is required to report – the

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<sup>4</sup> EPA Docket No. OPPTS-400140, B.031, page 5-18.

<sup>5</sup> 46 Fed. Reg. 42221, 42239.

majority of them for the first time. EPA, however, estimated that first time filers under the rule would increase current TRI filers by only 38.3%. For IPC members, virtually all member companies (approximately 80-90%) now have to report to the TRJ for the first time, illustrating the error of EPA's assumption.

Compounding its first error, EPA used its estimate of the number of new TRI filers to predict the small business impacts of the proposed rule.<sup>6</sup> Because EPA's estimate of new filers is severely underestimated, EPA's estimate of the proposed rule's small business impact is significantly underestimated.

Furthermore, when making its SBREFA determination, EPA assumed that for SIC codes 20-39, "manufacturing facilities expected to file for lead and lead compounds are similar to current reporters in terms of employment and revenues." This is an improper assumption given the fact that, prior to this rule, TRI filers were, for the most part, the largest members of their sectors. Because the proposed rule lowered the TRI reporting threshold for lead by almost 96%, EPA should not have used current TRI filers to model the impacts of a severely lowered reporting threshold.

To validate EPA's assumptions, IPC conducted an informal survey of its members. Of approximately 300 responses, more than 260 members stated that they were small business members who would be impacted by the rule. Of those, 5 stated that the proposal would impose costs greater than 1 percent of their annual sales. These results directly contradict EPA's conclusion that "none of the small entities" would incur regulatory costs greater than 1 percent of annual sales.

EPA should not have used current TRI filers as a representative cohort for new TRI filers since the 100-pound TRI threshold would pull in the smallest of the small facilities – those with revenues much lower than \$4 million per year. The rule's potential impact on small businesses, therefore, should not have been based upon its impact on current "small" TRI filers.

EPA also underestimated the potential scope of the rule by overlooking key industry sectors that may be impacted by the rule. Many small businesses use lead in their operations, yet were overlooked in EPA's economic analysis. For example, the metal finishing industry – a very large small business sector, does not use lead in its products, but uses anodes in its finishing process that may contain lead. This significant omission calls into question the validity of EPA's small business conclusions, raising concern that EPA significantly underestimated the proposed rule's potential cost and impact on small businesses.

Early small business outreach with small business trade associations would have helped EPA gather the information that it needed to make a proper determination

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<sup>6</sup> Economic Analysis, EPA Docket No. OPPTS-400140 B.031, Table 5-2, p. 5-10.

<sup>7</sup> Economic Analysis, EPA Docket No. OPPTS-400140 B.031, at p. 5-5.

of the proposed rule's impact on small businesses. Because the agency failed to conduct early small business outreach, the agency's assumptions on which its SBREFA determination were made are erroneous and, therefore, undermine the legitimacy of the agency's determination that "no small businesses are expected to bear annual costs over 1% of annual revenues."<sup>8</sup>\*

The Congressional Research Service (CRS) conducted an assessment of EPA's small business analysis and concluded that EPA's methodology may be flawed in two respects. First, CRS found that EPA's aggregation of SIC codes 20-39 could have resulted in biased results by combining industries that are unrelated in most aspects. Second, CRS found that EPA's use of current TRI filers as a representative cohort for estimating the proposed rule's small business impacts may not be a good way to determine small business impacts since current TRI filers may not be true representatives of new TRI filers. IPC agrees with both CRS criticisms of EPA's SBREFA analysis.

2. *The Lowered Reporting Threshold for Lead was based on the Un-Validated Application of PBT Methodology to Metals*

Many questions have been raised regarding the use of the Persistent, Bioaccumulative, and Toxic (PBT) methodology for evaluating the hazard of metals, including lead and lead compounds. This methodology was designed to assess bioaccumulation factors, toxicity, and the potential hazards posed from the emissions of organic chemicals based on their persistence. However, when applied to inorganic chemicals and metals, including lead and lead compounds, this criteria falls short of identifying true toxicity and hazards. Metals and other inorganic chemicals exhibit complex and highly variable toxicities and bioavailabilities based upon the individual chemical considered, specific environmental factors (e.g., temperature), and interactions with other commonly present chemicals in the environment such as oxygen, ligands, etc. The degree to which a metal is bioavailable is a more precise indicator of a metal's potential hazard to human and environmental health.

In EPA's Multimedia PBT Strategy, EPA took the appropriate position that PBTs must meet all three criteria in order to be considered PBTs. The approach recognizes that persistence and bioaccumulation together represent a greater potential for exposure, while individually they do not represent relevant exposure concerns. As EPA has stated, lead is by definition persistent – it is not destroyed in the environment. However, all lead and lead compounds do not meet the bioaccumulation criteria due to low bioavailability factors. This undermines the basis for the proposed lead rule.

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<sup>8</sup> 64 Fed. Reg. 42221,42239.

Numerous international organizations have also raised legitimate concerns regarding EPA's use of PBT criteria for accurately identifying the human and environmental health hazards of metals. For instance, the OECD Advisory Group on Harmonization of Classification and Labeling, which includes EPA participants, has concluded that "for inorganic compounds and metals, the concept of degradability as applied to organic compounds has limited or no meaning. Rather the substance may be transformed by normal environmental processes to either increase or decrease the bioavailability of the toxic species."<sup>9</sup>

EPA acknowledged the need for peer review of the methodology in the final rule, stating their intentions to submit the issue of applying the PBT methodology to metals to review by the EPA's Science Advisory Board. EPA Deputy Administrator Linda Fisher confirmed this in a December 19<sup>th</sup> letter.<sup>10</sup> This review is now underway and scheduled to be completed by December 2003. Unfortunately, this peer review is occurring after the effective date of the regulation. Surely this is not in keeping with the spirit of basing regulations on adequate, peer reviewed analysis.

### **Proposed Solution:**

The rule lowering the reporting threshold for lead should be suspended until the SAB has completed its review of the applicable science. Following that evaluation, should EPA deem it appropriate to lower the reporting threshold of lead from the original 25,000 pounds for 'manufacturing' and 'processing' and 10,000lbs for 'otherwise use,' EPA should follow the intent and spirit of SBREFA as well as the agency's own guidance and procedures by conducting early outreach with small businesses, reassess the assumptions made in the Economic Analysis, recalculate the cost estimates, conduct a new SBREFA determination, and repropose the rule or hold a SBREFA panel if warranted.

IPC hopes that a reassessment of the rule will convince the agency that lead exposure in the United States is no longer a [significant] public health threat and the proposal would do little, if anything, to improve the environment (discussed below under economic impacts). If EPA still concludes that the rule is warranted, **EPA** should adopt a much higher reporting threshold for lead and lead compounds that will balance the two goals of burden reduction on small facilities and providing meaningful right-to-know information to the public. Further, EPA should consider reinstating the burden reduction reporting exemptions (discussed below) that were eliminated for lead and compounds when the threshold was lowered.

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<sup>9</sup> OECD, Harmonized Integrated Hazard Classification System for Human Health and Environmental Effects of Chemical Substances at **57**.

<sup>10</sup> Linda J. Fisher to Fern Abrams, December 19, 2002.

## **Estimate of Economic Impacts:**

### *A. EPA Grossly Underestimated the Costs of the Proposed Rule*

Because EPA underestimated the number of new TRI filers that would result from the rule (see above), EPA's cost estimate for the rule is severely underestimated. EPA also grossly underestimated the cost of the rule by failing to completely account for costs that small businesses would likely incur.

For example, the rule eliminated the current *de minimis* provision for lead and lead compounds, which allows companies to exclude from TRI reporting the amount of TRI chemicals that are present in a mixture or trade name product which is processed or otherwise used if its concentration is less than 0.1 percent for a carcinogen or less than 1 percent for all other chemicals. EPA's cost estimates, however, do not account for the costs that would result from that regulatory change.

EPA claims that the increase in burden resulting from the *de minimis* exemption would be limited because TRI does not require additional monitoring or sampling in order to comply. However, EPA's requirement for facilities to report to the nearest tenth of a pound also imposes significant costs and burdens on small facilities. Previously, TRI allowed the use of range reporting. Requiring facilities to report to the nearest tenth of a pound would force industry to submit reports that could be erroneous or misleading. To avoid these errors, many companies would be forced to conduct analytical testing, further increasing the cost for manufacturers. EPA's presumption that manufacturers have the knowledge for accurate reporting is erroneous.

While requiring facilities to report lead to a precision of 0.1 lbs (see discussion of the Lead and Lead Compounds: Guidance for Reporting Releases and Other Waste Management Quantities of Toxic Chemicals: Lead and Lead Compounds below), the rule does not change the requirements that exempt suppliers from notification for chemicals present at less than 1%. The preamble to the rule states, "EPA did not propose, however, to modify the applicability of the *de minimis* exemption to the supplier notification requirements" because the Agency believed there was sufficient information available." EPA fails, however, to identify the source of this information in either the preamble to the rule or in the compliance guide.

To guarantee compliance with the law and to protect themselves from citizen suits and bounty hunters, facilities are being forced to conduct costly analytical testing to assess the lead content of their raw materials, since Material Safety Data Sheets would not contain such information.

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<sup>11</sup> 40 CFR 372.45(d)(1).

Because lead is contained as a trace contaminant in many commercially available products, particularly metals, and even process water, elimination of the de minimis exemption, triggers reporting requirements for facilities that were not identified in EPA's Economic Analysis, such as animal feed processors and metal finishing operations. EPA's failure to identify these industries and assess their compliance costs underscores the inadequacy of EPA's Economic Analysis.

Without a de minimis exemption and the current "rounding" rule, the costs imposed on regulated entities will be far greater than EPA's estimates of \$7416 for the first year and \$4132 for subsequent years due to the need for analytical testing to guarantee compliance and forestall enforcement actions and citizens suits. The proposed rule would also force some small facilities to hire more staff to ensure compliance.

Many industrial facilities have environmental permits that require further action, at increased effort and expense, if they are required to file the Superfund Amendment Re-authorization Act (SARA) 313 TRI Form R. For example, many general National Permit Discharge Elimination System (NPDES) permits for stormwater runoff require monitoring only if the facility is required to file a SARA 313 TRI Form R. Quarterly or semi-annual sampling of stormwater is a very burdensome requirement, especially for a small business. It is imperative, therefore, that OMB require EPA to take into account the domino effect of reducing the reporting threshold for lead. The cost impacts of the rule are not restricted to the direct costs of recordkeeping and report preparation for the Form R submittal. EPA should account for those costs.

*B. EPA Overestimated the Benefits of the Proposed Lead Rule*

According to EPA, "The information reported to TRI increases knowledge of the levels of toxic chemicals released to the environment and the potential pathways of exposure, improving scientific understanding of the health and environmental risks of toxic chemicals; allows the public to make informed decisions on where to work and live; enhances the ability of corporate leaders and purchasers to more accurately gauge a facility's potential environmental liabilities; provides reporting facilities with information that can be used to save money as well as reduce emissions; and assists federal, state, and local authorities in making better decisions on acceptable levels of toxics in the environment."<sup>12</sup>

Unfortunately, none of these goals will be accomplished through the lowered reporting threshold of 100 lbs for lead and lead compounds. Successful lead elimination programs have reduced the use of lead in gasoline and paint, which

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<sup>12</sup>Economic Analysis, EPA Docket No. OPPTS-400140B.031, p. 6-1.

have been the primary source of almost all lead exposures. As a result, lead exposure is no longer a public health threat in the United States. EPA failed to show how the increased lead reporting would result in a minimization of environmental harm since blood lead levels in the United States continue to decrease despite an increased use of lead.

EPA claims that the additional information provided by lowering the TRI reporting threshold for PBT chemicals, including lead and lead compounds, “will be valuable to communities and will significantly enhance their knowledge about toxic chemical releases and other waste management activities that may be of concern to them.”<sup>13</sup> In reality, requiring industrial facilities to report on the waste management activities associated with the use of lead and the manufacture of lead compounds in amounts as low as 100 pounds will provide the public with virtually meaningless information. EPCRA categorizes off-site transfers of TRI reportable chemicals to POTWs and TSDFs as “releases,” even when no release to the environment actually occurs. This provides the public with an exaggerated, distorted, and inaccurate picture of how TRI reportable chemicals are managed and the **risks** they pose. Finally, IPC believes that the lowered reporting threshold will result in the reporting of so much inconsequential data that the TRI would become a tool of little use to scientists, the public, companies, and regulatory agencies.

**111. Regulatory Agency:** Environmental Protection Agency

**Citation:** Emergency Planning and Community Right-to-Know Act – Section 313; Lead and Lead Compounds: Guidance for Reporting Releases and Other Waste Management Quantities of Toxic Chemicals: Lead and Lead Compounds, EPA Office of Environmental Information, December 2001, EPA 260-B-01-027. Presented as Attachment A.

**Authority:** Section 313 of the Emergency ‘Planning and Community Right to Know Act; Lead and Lead Compounds; Lowering of Reporting Thresholds; Toxic Chemical Release Reporting

**Description of Problem:**

The EPA has promulgated guidance that expands the requirements of the TRI far beyond the statutory intent of the regulation. In the guidance document<sup>14</sup> for the lowered reporting threshold for lead, EPA states, “When expressing release and other waste management quantities of lead and lead compounds, on a Form R, the level of precision one should use is one-tenth of a pound.” This guidance is overly

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<sup>13</sup> 64 Fed. Reg., 42221, 42224.

<sup>14</sup> Emergency Planning and Community Right-to-Know Act – Section 313; Lead and Lead Compounds: Guidance for Reporting Releases and Other Waste Management Quantities of Toxic Chemicals: Lead and Lead Compounds, EPA Office of Environmental Information, December 2001, EPA 260-B-01-027

burdensome and in direct conflict with both the legislative and regulatory intent as originally promulgated:

“In order to provide the information required under this section, the owner or operator of a facility may use readily available data (including monitoring data) collected pursuant to other provisions of law, or , where such data are not readily available, reasonable estimates of the amounts involved. Nothing in this section requires the monitoring or measurement of the quantities, concentration, or frequency of any toxic chemical released into the environment beyond that monitoring and measurement required under other provisions of law or regulation”<sup>15</sup>

“If the owner or operator knows the specific chemical identity of the toxic chemical, does not know the specific concentration at which the chemical is present in the mixture or trade name product, has not been told the upper bound concentration of the chemical in the mixture or trade name product, and has not otherwise developed information on the composition of the chemical in the mixture or trade name product, then the owner or operator is not required to factor that chemical in that mixture or trade name product into release calculations for that chemical.”<sup>16</sup>

The flawed guidance results in facilities expending significant extra effort in completing TRI Form R. In addition, these facilities could be open to EPA or citizen suit enforcement for failure to properly report under the TRI if their ‘estimate’ is not accurate and precise to one-tenth of a pound.

### **Proposed Solution:**

**EPA** should correct the flawed guidance or issue supplementary guidance clarifying simplified compliance requirements that are in accord with the legislative intent of TRI.

### **Economic Impact:**

While difficult to quantify in its first year of applicability, it is expected that this faulty compliance has resulted in significant labor expenditures on the part of facilities attempting to complete Form R. Compliance with this guidance requires facilities to expend time researching lead levels in the broad number of materials this naturally present metal is found. In addition some facilities, lacking adequate sources of information, may go so far as to conduct analytical testing in order to quantify metals levels to the specified precision.

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<sup>15</sup> USC Title 42 Chapter 116 Subchapter II Section 11023(g)(2)

<sup>16</sup>40 CFR Chapter I ~~Part~~ 372.30

#### IV. Regulatory Agency: Environmental Protection Agency

**Citation:** EPCRA Section 313 Questions and Answers, Revised 1998 Version, EPA Office of Pollution Prevention and Toxics, December 1998, EPA 745-B-98-004. Presented as Attachment B.

**Authority:** Section 313 of the Emergency Planning and Community Right-to-Know-Act (USC Title 42 Chapter 116 Subchapter II Section 11023).

#### Description of Problem:

The EPA Guidance in several instances contradicts the regulatory intentions of the Emergency Planning and Community Right to Know Act. In many places it also contradicts regulatory language.<sup>17</sup> In other instances it attempts to expand the requirements of the regulation beyond the original intent by changing or expanding upon earlier agency guidance.

Questions 114 and 137 of the 1998 Q&A represents a fundamental shift in EPA guidance on the counting of non-isolated intermediate compounds. While Question 138 in the original 1989 Q&A<sup>18</sup> stated,

“A facility uses a chrome anode in an electroplating bath of sulfuric acid to plate chrome onto fabricated metal. Chromium compounds are generated in the bath and some chrome is deposited onto the fabricated metal part. The unutilized compounds are sent to the facility’s waste treatment process, where hexavalent chromium is reduced to trivalent chromium. How are these reduced compounds counted for section 313 threshold determination? The threshold determination for chromium compounds is based upon the amount of chromium compounds generated in the plating bath. Any subsequent transformations of hexavalent to trivalent chromium compounds as a result of waste treatment does not affect the threshold determination. To do so would involve *double counting*.” (Emphasis added)

By contrast, the 1998 Q&A expands the universe of reporting entities by requiring double, triple, or even quadruple counting. The original Question 138 has disappeared and is replaced by Question 137 which requires that 15,000 lbs of copper be counted four times during electrolytic plating: 15,000 lbs of copper processed to manufacture 37,000 pounds of copper sulfate, and 37,000 lbs of copper sulfate are processed to manufacture 15,000 lbs of elemental copper.

Likewise, Question 162 in the 1998 Q&A requires that the conversion of chromium III compounds in refractory brick be considered manufactured when they are

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<sup>17</sup>40 CFR Chapter I Part 372

<sup>18</sup>Toxic Chemical Release Inventory Questions and Answers, Revised 1989 Version, January 1990, EPA 560/4-90-003. Excerpts are presented as Attachment C.

converted to chromium IV compounds, in direct contrast to the earlier guidance that opposed this type of *double counting*.

In Question 114 of the 98 Q&A, the agency states that a covered facility owner/operator would need to consider, “the quantity of non-isolated reaction intermediates manufactured, processed, or otherwise used at the facility when determining thresholds and releases and other waste management activities for EPCRA Section 313. There is no exemption for non-isolated intermediates under EPCRA Section 313.” This represents the first instance in which the agency attempts to count a compound that is never truly manufactured, as it exists only for a brief second as a reaction intermediate.

The responses to these questions represent an attempt by EPA to promulgate new regulatory requirements by guidance.

**Proposed Solution:**

EPA should promptly withdraw the flawed guidance or issue supplementary guidance clarifying compliance requirements.

**Economic Impact:**

While difficult to quantify, it is expected this faulty compliance results in significant labor expenditures on the part of facilities attempting to complete Form R. Compliance with this guidance requires facilities to expend time researching all possible transitory intermediates in complex chemical mixtures such as electroplating baths or other reaction vessels. Many of these intermediates are not isolatable and exist for only a few microseconds. Expertise in this type of advanced reaction chemistry may not be present at most facilities and could require the retention of highly trained consultants and research chemists. In addition, this guidance has the effect of radically expanding the universe of regulated entities. Facilities that introduce only a small fraction of a regulated chemical into their process may discover that through several intermediary chemical reactions, they’ve exceeded the reporting thresholds.

**V. Regulatory Agency:** Environmental Protection Agency

**Citation:** EPCRA Section 313 Questions and Answers, Revised 1998 Version, EPA Office of Pollution Prevention and Toxics, December 1998, EPA 745-B-98-004.

**Authority:** Section 313 of the Emergency Planning and Community Right-to-Know-Act (USC Title 42 Chapter 116 Subchapter II Section 11023).

**Description of Problem:**

The EPA's 1998 Q&A Guidance in several instances contradicts the regulatory intentions of the Emergency Planning and Community Right to Know Act. In the Section 313 Questions and Answers (1998 Q&A) EPA refers in numerous places to the 25,000 lb threshold for the manufacture or processing of lead and lead compounds and the 10,000lb threshold for otherwise use of lead and lead compounds.<sup>19</sup> This is in direct conflict with the January 17<sup>th</sup> rule lowering the reporting threshold for lead and lead compounds to 100lbs.<sup>20</sup> This guidance is still posted on EPA's website and is in fact referenced by the compliance guide for compliance with the lowered reporting threshold for lead.<sup>21</sup>

**Proposed Solution:**

EPA should withdraw the flawed guidance immediately until it can be updated to reflect current regulations.

**Economic Impact:**

While difficult to quantify, it is expected this faulty compliance could result in significant confusion on the part of small business attempting to comply with the TRI, particularly the lowered reporting threshold for lead.

**VI. Regulatory Agency:** Environmental Protection Agency

**Citation:** Toxic Chemical Release Inventory Reporting Forms and Instructions Revised 2001 Version, United States Environmental Protection Agency. February 2002 Environmental Protection EPA 260-B-02-001. Presented as Attachment D.

**Authority:** Section 313 of the Emergency Planning and Community Right-to-Know-Act (USC Title 42 Chapter 116 Subchapter II Section 11023).

**Description of Problem:**

Directive #7 in the 1989 Q&A<sup>22</sup> clearly states that TRI chemicals in materials shipped off-site for reuse or recycling are similar to products distributed in commerce and do not have to be reported as off-site transfers:

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<sup>19</sup> Questions 193,354,375,421

<sup>20</sup> 66 FR 4500; January 17,2001

<sup>21</sup> Emergency Planning and Community Right-to-Know Act – Section 313; Lead and Lead Compounds: Guidance for Reporting Releases and Other Waste Management Quantities of Toxic Chemicals: Lead and Lead Compounds, EPA Office of Environmental Information, December 2001, EPA 260-B-01-027

<sup>22</sup> Toxic Chemical Release Inventory Questions and Answers, January 1990, EPA 56014-90-003

“Do Not Report Amounts Sent Off-Site for Reuse or Recycling as Off-Site Transfers. If a toxic chemical is sent off-site for purposes of reuse or recycling, the location does not have to be reported on form R as an off-site transfer. EPA requires the identification of all other toxic chemicals in wastes that are transferred off-site for final disposal. Off-site reuse or recycling activities, however are more closely related to facility products distributed in commerce.”

Beginning with the 1991<sup>23</sup> reporting instructions and continuing to the current instructions, EPA has expanded the reporting requirements for TRI beyond the original legislation and regulation by inappropriately revising the instructions in order to include materials sent off-site for recycling. For example the 2001 directions for reporting<sup>24</sup> state,

“In Section 6.2 enter the EPA Identification Number, name, and address for each off-site location to which your facility ships or transfers wastes containing the reported EPCRA section 313 chemical for the purposes of disposal, treatment, energy recovery, *or recycling.*” (Emphasis added).

This changing of the reporting directions represent an attempt by EPA to expand the reporting requirements of TRI without subjecting the changes to the rigorous analysis and public comment required for regulations.

**Proposed Solution:**

EPA should revise its instructions to exclude the reporting of materials sent off-site for recycling or reuse. This would greatly improve the quality and utility of the reported data to the public by focusing attention on wastes actually being released to the environment .

**Economic Impact:**

Difficult to quantify as EPA has declined to monetize the value of information provided by the TRI.

**VII. Regulatory Agency:** Environmental Protection Agency

**Citation:** EPA Final Rule, “Response to Court Order Vacating Regulatory Provisions,” 67 FR 11251, March 13,2002

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<sup>23</sup> Toxic Chemical Release Inventory Reporting **Form R** and Instructions, Revised 1991 Version, US Environmental Protection Agency, Office of Pollution Prevention and Toxics, May 1992, 700-K-92-002.

<sup>24</sup> Toxic Chemical Release Inventory Reporting **Form R** and Instructions, Revised 1991 Version, US Environmental Protection Agency, Office of Pollution Prevention and Toxics, February 2002,260-B-02-001. Excerpts presented as Attachment E.

**Authority:** Resource Conservation and Recovery Act, Hazardous wastes from non-specific sources, 40 CFR Part 261 Subpart 31

**Description of Problem:**

EPA recently announced their intention to remove regulatory barriers to the recycling of metal containing electroplating sludge. This intention was discussed in the EPA Final Rule, “Response to Court Order Vacating Regulatory Provisions.”<sup>25</sup> IPC members strongly support the proposed measure and commend the EPA for taking this forward reaching step. We are extremely interested in economically sound measures that will reduce the environmental impact of printed circuit board manufacturing, and we hope EPA will move quickly to propose the referenced regulatory improvement.

While discussion in the Federal Register specifically references the metal finishing industry, these sludges are also generated through the treatment of wastewater produced during the production of printed circuit boards. Under the Resource Conservation and Recovery Act (RCRA), these metal precipitate sludges are considered an F006 listed hazardous waste when a manufacturing facility ships them off-site for metals recovery. This hazardous waste designation only serves to discourage reuse, recycling and reclamation by greatly increasing the cost of recycling these valuable materials. This results in a large quantity of valuable metal bearing sludges being disposed of in hazardous waste landfills rather than being recycled. The 1998 Metal Finishing Common Sense Initiative F006 Benchmarking Study found that landfilling was the dominant choice for final disposal of F006.

Printed circuit boards manufacturers are concerned about the environment and the communities in which their employees work and live. Many companies choose, despite economic disincentives, to recycle electroplating waste sludge. However, many of the smaller companies landfill electroplating waste sludge because it is not possible to spend the extra money required for metals recovery and reclamation.

Wastewater treatment sludges from electroplating operations, predominantly from the metal finishing and printed circuit boards industries, represent one of the largest sources in the United States of untapped metal-bearing secondary material amenable to metals recovery. Many of these sludges have potential economic value as a raw material to copper recovery facilities because of their high metals concentration. For instance, raw copper ore normally contains less than one percent copper, where copper precipitate sludges from the printed circuit board industry average 10% to 15% copper.

A number of regulatory and economic factors have resulted in relatively low recovery rates for metal bearing sludges when compared to the over 80% recovery

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<sup>25</sup> 67 FR 11251, March 13,2002

rate for other metal-bearing wastes such as spent lead-acid batteries. Reducing regulatory barriers will encourage more facilities to reclaim F006, reducing landfill volumes and decreasing the environmental impact of metals mining.

In addition, the limited number of facilities in the United States that can accept electroplating waste sludge for recovery or reclamation further impedes F006 recycling opportunities. Many potential facilities that could recycle electroplating wastewater sludge through metals recovery have been driven away from recycling by regulatory requirements that result in higher operating costs for facilities that accept F006.

Reclamation of F006 materials by smelters does not handicap their ability to comply with environmental regulations. Recovery and reclamation facilities are already regulated and must continue to handle materials in a way that is protective of the environment regardless of the RCRA status of printed circuit board electroplating sludge being recycled. With or without a hazardous waste designation, the handling of the sludge will be subject to the full spectrum of OSHA and EPA standards protecting worker health and safety and the environment.

Allowing wastewater treatment sludge from the electroplating process to undergo metal recovery at facilities, which are not regulated as hazardous waste treatment facilities, would substantially lower the cost of recovery by increasing the number, type, and geographical distribution of metals recovery facilities to which electroplating wastewater sludge may be sent. By increasing the number of facilities allowed to perform metal recovery, capacity for metals recovery will increase, with a resultant decrease in disposal charges levied upon printed circuit board facilities.

**As** a result of the designation of metal bearing electroplating sludge as a RCRA hazardous waste, many potential recyclers in the United States have instead chosen **to** work with less regulatory burdened raw ore. Many of the printed circuit board facilities that recycle their scrap or waste products are forced by capacity and economic issues to ship these valuable recyclable materials out of the United States for recycling. At the same time, environmentally destructive mining operations continue in the United States. Extraction and beneficiation of copper ore can have disastrous environmental impacts including acid mine drainage, erosion and sedimentation, chemical releases, fugitive dust emissions, smelter emissions, habitat modification, direct wildlife mortality, surface and groundwater impacts, disturbance of archaeological sites, subsidence, and decreased aesthetic appeal.

The original listing for F006 was made in 1980. The listing determination was based on the fact that wastewater treatment sludges from electroplating operations was known to contain a variety of metals, namely chromium, cadmium, nickel and complex cyanides. Under the Land Disposal Restrictions of 1986, additional treatment was required to immobilize metal constituents prior to landfilling.

Because landfilling and associated treatment are generally less expensive than metals recovery, a significant quantity of F006 solids are landfilled.

Many of the original conditions upon which this listing was based no longer exist in the industry. For example, although chromic-sulfuric acid etchant was widely used in the printed circuit board industry in the mid-1970s, its use waned in the late 1970s and early 80s. It now has been completely replaced with non-chrome etchants. The use of cyanide plating in the industry has also been sharply reduced. It is no longer accurate to say that all F006 waste contains hazardous levels of cyanide, cadmium, and chromium.

Testing conducted to date in two EPA projects - Hadco Corporation's Project XL Initiative and the Metal Finishing Common Sense Initiative F006 Benchmarking Study - have demonstrated that the key factors that originally triggered the sludges listing are no longer applicable for the majority of wastewater treatment sludges from printed circuit board facilities.

#### **Proposed Solution:**

IPC supports the EPA's intentions to improve the RCRA program by reducing the regulatory barriers to recycling. In particular, regulatory flexibility for electroplating wastewater treatment sludge would increase the quantity of metal precipitates that are recycled through metals reclamation, thus conserving valuable metal resources and better protecting the nation's environment.

#### **Economic Impact:**

The costs of managing electroplating sludge as a hazardous waste are significant. According to the IPC 2001 Environmental benchmarking survey, small PCB facilities spent an average of \$24,896 for disposal of electroplating sludge, while large facilities spent \$54,004 on the average.

An additional cost of managing electroplating sludge as hazardous waste is the need to secure licensed hazardous waste transporters for shipping. In contrast to the millions of pounds of hazardous materials moved throughout the country annually by common carriers, F006 materials are solid, inert, non-reactive, and non-corrosive. Because of the materials hazardous waste designation, transporters carry additional insurance. These costs are passed back to the generators.

The recycling of electroplating treatment at facilities which are not regulated as hazardous waste treatment facilities, would substantially lower the cost of recovery by increasing the number, type, and geographical distribution of metals recovery facilities to which electroplating wastewater sludge may be sent, decreasing both recycling/treatment costs, but lessening transportation costs as well.

## VIII. Conclusions

IPC appreciates the opportunity to provide comments on the cost and benefit of federal regulations and regulatory guidance. IPC understands and supports the need for cost effective, science-based regulations that are protective of the public well being. The regulations and guidance discussed in our comments have a significant effect on the cost of manufacturing electronics in the United States, without providing corresponding benefit.

We commend EPA on their intentions to propose changes to the RCRA in order to make it more cost-effective while continuing to protect the environment.

Unfortunately, EPA continues to promulgate regulations and guidance, particularly under the TRI program, which are not cost effective. The cost of compliance with many of the regulations promulgated by the EPA under the TRI program have been significantly underestimated, while the benefits remain nebulous and non-monetized. The cost-effectiveness of the TRI regulations have been further eroded through the issuance of guidance which expands the reporting requirements and associated costs, without proper analysis of what additional benefits, if any, are accrued by the public. We urge OMB to consider review and modification of this program so that it's costs do not continue to exceed its benefits.

We appreciate the opportunity to offer these comments. Please contact me at 202-962-0460 should you have any questions.

Sincerely,

Fern Abrams  
Director of Environmental Policy

## **Attachment A**

Emergency Planning and Community Right-to-Know Act – Section 313; Lead and Lead Compounds: Guidance for Reporting Releases and Other Waste Management Quantities of Toxic Chemicals: Lead and Lead Compound

Available on the Internet at [http://www.epa.gov/tri/guide\\_docs/2001/lead\\_doc.pdf](http://www.epa.gov/tri/guide_docs/2001/lead_doc.pdf)

**Attachment B**

EPCRA Section 313 Questions and Answers, Revised 1998 Version

Available on the Internet at [http://www.epa.gov/tri/guide\\_docs/1998/1998qa.pdf](http://www.epa.gov/tri/guide_docs/1998/1998qa.pdf)

**Attachment C**

Toxic Chemical Release Inventory Questions and Answers, Revised 1989 Version

January 1990  
**EPA 560/4-90-003**

**Attachment E**

Toxic Chemical Release Inventory Reporting Form R and Instructions, Revised  
1991 Version

US Environmental Protection Agency, Office of Pollution Prevention and Toxics  
February 2002  
260-B-02-001