

January 13, 2006

Ms. Linda Travers, Acting Assistant Administrator
Office of Environmental Information
Environmental Protection Agency
Mail Code: 28221T
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Attn: Docket ID No. TRI-2005-0073

Re: Toxics Release Inventory Burden Reduction (Phase II) Proposed Rule; EPA Docket TRI-2005-0073; 70 Fed. Reg. 57822 (Oct. 4, 2005)

Dear Ms. Travers:

The Office of Advocacy of the U.S. Small Business Administration is submitting these comments on the Environmental Protection Agency's (EPA) Toxic Release Inventory (TRI) Burden Reduction (Phase II) proposed rule. Advocacy strongly supports the EPA proposal which provides significant paperwork burden reductions for small business reporters while maintaining the full integrity of the TRI database.

In 1991, the Office of Advocacy (Advocacy), by petition, initiated the rulemaking process that resulted in the promulgation of the Form A.¹ We are pleased that EPA created this form in 1994, which the agency estimated would result in several hundred thousand hours in annual paperwork savings. The Form A is essentially a short form version of the Form R, analogous to the IRS forms 1040 and 1040EZ, and just as with the tax forms, the short form is only available to a subset of filers with relatively uncomplicated filings. However, the current Form A is only available to a narrow subset of the reports and Advocacy applauds EPA for pursuing an expansion of eligibility for non-persistent bioaccumulative toxic (non-PBT) chemical filers from 500 to 5,000 pounds of "annual reportable amount" (ARA).² Further, Form A is currently unavailable to thousands of PBT chemical reporters. Advocacy endorses EPA's preliminary decision to extend Form A filing to PBT filers with zero total releases and less than 500 pounds (PRA).³

Advocacy was established pursuant to Pub. L. 94-305 to represent the views of small business before Federal agencies and Congress. Advocacy is an independent office within the U.S. Small Business Administration (SBA), so the views expressed by Advocacy do not necessarily reflect the views of the SBA or the Administration. The Regulatory Flexibility Act (RFA), as amended

¹ 40 CFR 372.95.

² The ARA is the total amount of a chemical reported by the filer including chemical releases, recycling activity, energy recovery, landfilling, or other disposal (sections 8.1 through 8.7 on Form R).

³ The PRA is the total amount of a chemical reported by the filer including chemical releases, recycling activity, energy recovery, landfilling, or other disposal, and includes one-time events (sections 8.1 through 8.8 on Form R).

by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), gives small entities a voice in the rulemaking process. The RFA requires Federal agencies, such as the EPA, to consider alternatives to avoid overly burdensome regulation of small entities.⁴ Advocacy is also required by Section 612 of the RFA to monitor agency compliance with the RFA.⁵

On August 13, 2002, President George W. Bush signed Executive Order 13272, requiring Federal agencies to implement policies protecting small businesses when writing new rules and regulations.⁶ Executive Order 13272 instructs Advocacy to provide comment on draft rules to the agency that has proposed a rule, as well as to the Office of Information and Regulatory Affairs (OIRA) of the Office of Management and Budget.⁷ Executive Order 13272 also requires agencies to give every appropriate consideration to any comments provided by Advocacy. Under the Executive Order, the agency must include, in any explanation or discussion accompanying publication in the *Federal Register* of a final rule, the agency's response to any written comments submitted by Advocacy on the proposed rule, unless the agency certifies that the public interest is not served by doing so.⁸

Introduction

In April 2004, the Office of Advocacy released a report by Jack Faucett Associates (JFA) that researched a number of reforms to the TRI program that would achieve the dual goals of streamlining reporting requirements, and preserving the integrity of TRI data. The report sought to identify reform proposals that would retain the Form R where needed to ensure the availability of useful public information while reducing burdens by moving reports of minimal interest to alternative reporting, such as the Form A. Among the recommendations made by that report was an expansion of Form A eligibility to a greater universe of current non-PBT filers, including consideration of a 5,000 pound annual reportable amount (ARA) threshold. Additionally, the report recommended expanding Form A eligibility to PBT filers under certain conditions. Advocacy is pleased that EPA chose to propose a rule that reflects some of the recommendations in that report, ensuring that small business will benefit from the reduction in paperwork requirements, and making TRI reporting more efficient for the reporters and data users.

EPA estimates the total annual cost savings of the proposed rule from the PBT and non-PBT Form A expansion at \$7.4 million.⁹ However, industry commenters have long contended that EPA has been underestimating the costs of complying with TRI, particularly in recent years. The Advocacy-sponsored JFA report cites costs of more than \$300 million annually for the TRI program.¹⁰ In addition, facilities bear substantial indirect costs from 'piggyback' requirements associated with a TRI listing, such as federal storm water regulations and other federal and state requirements (e.g., state pollution prevention requirements) triggered by TRI reporting.¹¹ Given

⁴ Pub. L. No. 96-354, 94 Stat. 1164 (1981) (codified as amended at 5 U.S.C. §§ 601-612).

⁵ 5 U.S.C. § 612.

⁶ Exec. Order No. 13,272 § 1, 67 *Fed. Reg.* 53,461 (Aug. 13, 2002) ("E.O. 13272").

⁷ E.O. 13272, at § 2(c), 67 *Fed. Reg.* at 53,461.

⁸ *Id.* at § 3(c), 67 *Fed. Reg.* at 53,461.

⁹ 70 *Fed. Reg.* at 57,845 (October 4, 2005).

¹⁰ "Proposed Reforms to the Toxics Release Inventory Program: Streamlining Reporting and Preserving Data Integrity," Jack Faucett Associates, April 2004, pp. 8-9.

¹¹ *Id.* at 8-9.

the underestimated costs of preparing the Form R, we believe that EPA has substantially underestimated the savings from the expanded use of the Form A.¹²

In October 2004, E.H. Pechan and Associates, Inc. (Pechan) completed a study for Advocacy that assessed a number of possible TRI reform proposals using a risk-based analytical method that married the EPA TRI database to the EPA Risk Screening Environmental Indicators (RSEI) Chronic Health Model.¹³ The Pechan report expanded upon the earlier JFA report by performing a more significant analysis on the identified reform proposals that examined effects on data quality and health risks to local communities in addition to burden reduction. The Pechan report endorsed a number of reforms, including an expansion of the Form A non-PBT threshold and the extension of Form A filing to a limited set of PBT reports. As discussed below, this report provides a health-based benchmark that validates the approach taken in the EPA proposal.

TRI Proposal Permits Greater Use of Form A Without Sacrificing Access to Data

Use of the Form A under EPA's proposal is designed appropriately for facilities that are zero or micro-releasers. EPA's reform proposal will still require detailed data for the reports that account for 99.9% of the production-related waste data.¹⁴ The establishment of Form A in 1994 successfully preserved access to information by allowing the use of a simpler form. The current proposal extends the same benefits to a larger number of facilities. The Form A will continue to inform communities.

With respect to the potential use of TRI data by emergency responders, the TRI data was designed only to inform the public about the risks to the community from the annual "releases".¹⁵ There is no relationship between the annual production-related releases from a factory and the environmental releases when a tank ruptures in the event of a hurricane, for example. Emergency responders want to know the identity, quantity and location of the chemical inventories, not the magnitude of annual releases. In contrast, the chemical inventory data reporting requirement, established in the same 1986 Emergency Planning and Community Right-to-Know Act (EPCRA)¹⁶ as the TRI, provides the identity, quantity and location of chemical inventories directly to state and local officials, and was designed specifically for the emergency responders. Indeed, local fire departments in the western Boston suburbs recently said that they rely on the chemical inventory data, not the TRI.¹⁷ EPA's current proposal does not affect the chemical inventory data used by first responders.

¹² EPA has not accounted for the Form A savings that would result from the reduction in the degree of precision of the engineering calculations needed to estimate a 5000 pound threshold, instead of a 500 pound threshold. In particular, estimating costs for facilities whose ARA is in the vicinity of 500 pounds or less can drop dramatically when the ARA threshold is raised to 5000 pounds, especially for the great majority of facilities that do not change operations substantially from year to year. Further, the costs of the recurring year Form A determination can be reasonable in comparison to the cost of the full Form R for facilities with an ARA that is a fraction of the threshold.

¹³ E.H. Pechan & Associates, Inc., "Risk-Based Analysis of Form A and Form NS Toxics Release Inventory Reform Proposal Alternatives, Final Report," prepared for U.S. Small Business Administration, Office of Advocacy, October 2004. The report employed data for reporting year 2000.

¹⁴ EPA uses the ARA data to define the production-related waste data.

¹⁵ Release is defined in the Emergency Planning and Community Right-to-Know Act ; 42 U.S.C. § §11001-11050 (2005).

¹⁶ 42 U.S.C. § §11001-11050 (2005).

¹⁷ "Proposal to ease EPA rule at issue," *Boston Globe*, January 5, 2006.

The Proposed 5000 Pound Threshold for Non-PBT Chemicals Is Based on a Review of 2002 Data Using the 1994 Final Rule Approach

The EPA is proposing to expand the Form A non-persistent, bioaccumulative, and toxic (non-PBT) annual reportable amount (ARA) threshold from the current 500 pounds to 5,000 pounds. EPA's choice of the proposed 5,000 pound non-PBT ARA threshold is based on several considerations that were first identified in the determinations made in the 1994 final rule establishing the Form A (59 Fed. Reg. 61488, November 30, 1994). As such, EPA is only recalibrating the 1994 ARA to a higher threshold, based on a review of more current data (2002, instead of 1992).

In 1994, the Form A, and the 500 pound threshold, were justified on the following three bases:

- (1) Chemical reporting on a substantial majority of the releases is maintained with the Form A;
- (2) Little production related waste information (approximately 0.1%) will be excluded from Form Rs; and
- (3) Each Form A would provide the public with a range report, that informs the public that total releases, as well as total production related waste is below a certain threshold.¹⁸

EPA used the same three criteria in determining and justifying the new 5,000 pound threshold. EPA asserts a strong factual and legal foundation for the new revisions by using the 1994 approach. An examination of how the above three findings apply to the new 5,000 pound threshold indicates the following. With regard to the first finding, chemical reporting on a substantial majority of releases is maintained by requiring the Form A certification as part of the reporting, just as in 1994.¹⁹ With regard to the second finding on the new threshold, Table 3 of the preamble to EPA's proposal shows that 99.9 percent of total production-related wastes will still be reported via Form R, even if all the eligible Form R non-PBT reporters switch to use of Form A.²⁰ The 5,000 pound threshold is simply a recalibration of the 500 pound threshold from 1994, based on the large number of new chemical reports introduced since 1994 and the continuing reduction in wastes handled by facilities. With regard to the third finding, Form A provides the identical range report information that the total production related waste is below a certain threshold. See Table 1 below for a comparison of the 1994 final rule and the 2005 proposal.

¹⁸ "1994 EPA Response to Comments Document, Establishment of Alternate Threshold," November 1994., at page 52.

¹⁹ See discussion November 1994 EPA Response to Comments Document, Establishment of Alternate Threshold, at page 54; and Letter to EPA from Office of Advocacy Chief Counsel, dated 09/02/03, Toxic Chemical Release Reporting; Alternate Threshold for Low Annual Reportable Amounts; Request for Comment on Renewal Information Collection: 68 Fed. Reg. 39071 (July 1, 2003), at page 5.

²⁰ Preamble Table 3, 70 Fed. Reg. 57843 (October 4, 2005).

Table 1. Comparison of 1994 Form A Final Rule and 2005 Form A Proposal

EPA Criteria	2005 Proposal 5,000 lbs Non-PBT	2005 Proposal 500 lbs PBT	1994 Final Rule 500 lbs Non-PBT
Substantial Majority of Releases Captured	Yes	Yes	Yes
99.9 percent of Waste Data on Form R	Yes	Yes	Yes
Form A – Range Report between Zero and Threshold Amount	Yes	Yes	Yes

Office of Advocacy Supports EPA Proposal to Increase Non-PBT Form A Reporting Threshold to 5000 Pounds

The change to a 5,000 pound reporting threshold would have little impact on the risk profile of chemicals reported on Form Rs. E.H. Pechan & Associates used a health risk-based analysis that takes into account chemical toxicity and affected population as well as volume of chemicals released (described earlier in this letter). The methodology, which relies on the use of EPA’s Risk Screening Environmental Indicators (RSEI) model, greatly enhances the ability to determine the value of TRI reports by measuring how risk levels change as reports are moved from Form R to Form A.²¹ The methodology computes the RSEI risk score associated with all TRI reporting facilities nationwide, using a variety of non-PBT reporting thresholds. By comparing these risk scores, it is possible to characterize the importance of the loss of Form R information associated with raising the ARA threshold.

The Change in Form A Reporting Threshold Will Not Have a Significant Impact on Right to Know at the Local Level

The true measure of impact however is whether such revisions represent significant changes in risks at the local level. To assess the local impact of alternative approaches on reported risks, in 2004 Pechan performed a risk score analysis for the 20 “worst case” counties using 2000 TRI data. Specifically, Pechan reviewed the RSEI score results for the top 20 U.S. counties (of 3,142

²¹ The RSEI is a peer-reviewed EPA computer model that uses TRI data inputs to analyze inhalation and ingestion exposure pathways and cancer/non-cancer health risks. The model uses the reported quantities of TRI releases and transfers of chemicals to estimate the risk-related impacts associated with each type of air and water release or transfer by every TRI facility. The risk-related impacts potentially posed by a chemical are a function of chemical toxicity, the fate and transport of the chemical in the environment after it is released, the pathway of human exposure, and the number of people exposed. This information is used to create numerical values that can be added and compared to assess the relative risk of chemicals, facilities, regions, industries, or other factors. These values do not provide absolute measures of risk and can only be interpreted as relative measures that are compared with other such values in a comparative analysis.

counties) experiencing the greatest change in RSEI scores from increasing the non-PBT ARA threshold (Pechan, 2004). Under the 5,000 pound threshold only one county, Cook County, Illinois, accounted for more than 5 percent of the total national change in risk score (with 6.7 percent of the total). Four other counties had between 2 percent of the total and 5 percent of the total and all other counties had less than 2 percent. The top 20 counties accounted for 42.8 percent of the total national change in Form R reported risk score. The results under the 2,000 pound threshold were qualitatively similar, with the top 20 counties accounting for 43.1 percent of total national reported risk change and no single county accounting for more than 5 percent.²² Under either threshold scenario, for 99 percent of all of the nation’s 3,142 counties the changes in reported risk are not significant. Thus, at the local level, a threshold revision to 5,000 pounds involves very little change in the potential risk associated with releases that are being reported on Form R.²³

While there has been concern expressed over EPA’s estimate (based on 2002 TRI filings) of the large number of zip codes for which Form R information will no longer be required, this does not take into account that the number of Form A eligible facilities is a direct reflection of their exemplary environmental performance – their status as zero/micro quantity releasers. The data indicates that a large number of manufacturing facilities have now achieved zero or very low releases, and, therefore, qualify for the new Form A. These facilities should be rewarded for their environmental performance via reduced reporting costs. As discussed below, our review of the Form R data that would no longer be reported indicates that this information is of negligible value, especially when compared to the value of the information that EPA will continue to obtain via the required Form R reporting.

Based on the 2002 TRI, Pechan has identified 663 zip codes for which all current Form Rs will become Form A eligible at the 5,000 pound ARA threshold.²⁴ It is first important to note that these estimates will overstate the actual impacts because many facilities will continue to use Form R regardless of a change in Form A eligibility. Also, the great majority of these zip codes involve reporting for only one or two Form Rs, and by definition, all of these involve very small quantities. As displayed in Table 2, 554 of the total 663 zip codes have only one or two Form Rs in the 2002 TRI. Thus, the large number of zip codes that can convert entirely to Form A is a truly a function of the fact that more than 550 zip codes have only one or two reports.

Table 2. Number of Form Rs Converting to Form As in Zip Codes Where All Form Rs Convert to Form As at the 5,000 Pound Threshold for Non-PBT Chemicals

Number of Form Rs Converted to Form A	Number of Zip Codes
1	451
2	103
3	55

²² See Tables IV-4 and IV-5 in Pechan, 2004.

²³ The national results are consistent with the local discussion above. For more details see Pechan, 2004.

²⁴ EPA’s proposal reports 665 such zip codes. Pechan’s analysis of a similar set of 2002 reporting year data found 663 zip codes. Comparisons between the two data sets are provided in the attached Pechan memorandum, “Additional Analysis of TRI Phase II Proposal,” dated January 12, 2006.

4	29
5	18
6	5
7	1
8	1

As an illustration, it is instructive to review one state’s data. In the case of Maryland, 15 of the state’s 47 zip codes would no longer have any Form R reports. However, based on 2003 TRI data, there were only 29 total Form R reports in these 15 zip codes, a majority of which reported either zero or very small releases (less than 50 pounds).²⁵

Expanded Form A Eligibility Would Not Result in a Loss of Valuable Data

Current TRI data users will be adequately served by the new Form A reports. Reporters of PBTs that had reported zero emissions into the environment using Form R are now able to convey that same information with the Form A. With regard to the non-PBT forms, despite the fact that the Form A has been in use for the last ten years, it is not surprising that we have not heard that the use of the Form A impaired any risk analysis by either citizens or state or Federal regulators studying toxics releases. Of course, the fact that TRI analyses naturally focus on the facilities with significant releases would explain why TRI analyses are not compromised by the replacement of the Form R data by the Form A range reports.

It is important to reiterate that the greater use of Form A does not represent a loss of valuable information on chemical handling. Instead, Form A provides range estimates (currently less than or equal to 500 pounds) for the facility’s ARA of each subject chemical. In selecting the 500 pound ARA in 1994, EPA stated that certifications in Form A automatically ensure that the EPCRA “substantial majority” of releases requirement is being met, because the certification itself provides the information through range reporting (also allowed in Form R):

*EPA believes that the category and level established in this final rule are such that replacement of full Form Rs, for these eligible reports, with certification statements provides the public with an adequate level of information.*²⁶

EPA’s proposed rule indicates that 99.89 percent of the total production waste (sum of TRI sections 8.1 through 8.7) that is reported at a 500 pound threshold will continue to be reported at a threshold of 5,000 pounds.²⁷ Thus, using the new data to derive the new ARA, the new Form A will continue to provide the public with an adequate level of information.

²⁵ Nine of fifteen Maryland zip codes with all Form A-eligible data had total releases of under 50 pounds; three zip codes had under 1,000 pounds and the remaining three zip codes had under 2,500 pounds (half of the 5,000-pound threshold).

²⁶ “EPA Response to Comments Document, Establishment of Alternate Threshold,” November 1994. at page 54.

²⁷ As reported by EPA in Table 3 of the preamble, 70 Fed. Reg. 57822, 57843 (October 4, 2005).

EPA Proposal for PBT Form A Zero Release Reporters Is Consistent with the 1994 Form A Findings

The proposed rule provides relief for the first time to certain PBT chemical reporters. Given the thousands of PBT chemical reports with zero releases that have been filed every year since the 2001 reporting year, PBT reporting relief is a subject of great importance to a large number of TRI reporters. The PBT reporting requirement has long been a source of frustration for TRI reporters in that such a burdensome requirement exists for facilities with zero releases. Among certain metals sectors, reporting of zero releases for chemicals such as lead and lead compounds is routine. Although the EPA proposal for PBTs is limited to zero release reports, Advocacy supports the proposal and would suggest that EPA consider a revision of the PBT reportable amount (PRA).

Advocacy suggests that EPA consider a revision of the PRA from 500 pounds to 5,000 pounds.²⁸ In its proposal, EPA limited relief to zero releasers whose PRA is less than 500 pounds without analyzing the impacts of alternative PRAs. However, there are several hundred additional reports that would benefit from an increase in the PRA to 5,000 pounds. EPA can still make the critical third finding of leaving 99.9 percent of the total waste quantity reported on Form R (sum of data for sections 8.1 through 8.8), even with a PRA as high as 5,000 pounds.²⁹ EPA should make this revision because the agency can provide burden relief for another 477 Form Rs (making a total of 3180 eligible Form Rs) without compromising community right-to-know.

EPA's proposed PBT Form A is reserved only for facilities that have no releases to the environment, whether at the facility or off-site at another facility. In such cases, the PBT chemical has no effect on the environment. The EPA proposal provides relief for approximately 2,000 facilities with 2,700 PBT chemicals that are not released to the environment. As EPA notes, the proposal also provides the facilities with an incentive to reduce releases (this is also true for non-PBT chemicals). In the case of the PBT chemicals, the chemicals of highest environmental concern, the facility must achieve zero releases to qualify for Form A filing. Advocacy believes that the detailed long reports should not be required for facilities that have achieved zero releases at both the facility and any offsite waste handling facilities.

As addressed above, EPA makes the identical three findings regarding the non-PBT threshold in 2005 that it performed in the original promulgation of the Form A in November 1994 (59 Fed. Reg. 61488). See Table 1 for a comparison of the 1994 and 2005 findings. Similarly, in proposing the 500 pound PBT Reportable Amount (PRA),³⁰ EPA is able to establish the same three findings. We recount the three PBT findings here: First, since each qualifying report represents no release to the environment, there is no question that a substantial majority of the releases of PBT chemicals would be subject to reporting, as the statute requires, since 100 percent of all PBT releases are reported on the full Form R. Secondly, over 99.9 percent of all

²⁸ For the underlying analysis, see the attached Pechan memorandum, "Additional Analysis of TRI Phase II Proposal," dated January 12, 2006.

²⁹ *Id.*

³⁰ The PRA is defined as the total of the quantities in entries 8.2-8.8, as explained in the EPA preamble. 70 Fed. Reg. 57822 (October 4, 2005).

waste-related activity will continue to be reported on the Form R.³¹ Third, each PBT report provides information that total waste-related activity is less than the PRA of 500 pounds. As discussed above, we recommend that EPA adjust its PRA to 5,000 pounds, to be consistent with the proposed revised non-PBT ARA of 5,000 pounds.

Obviously, shifting to a simpler form will result in some data that is not reported. With respect to the Form R PBT data, none of the details involve releases to the environment, and thus, no information about community risk is missing. Secondly, the remaining Form R data, which primarily involve recycling data, makes up less than 0.1 percent of all recycling data for all PBTs. Thus, Form R would continue to provide information on 99.9 percent of PBT recycling activity nationwide. Additionally, these data have minimal risk consequences since current day recycling activities pose little risk to local communities.

Conclusion

We welcome EPA's proposal to provide significant relief to the small business community, while maintaining the integrity of a vital EPA program.

Sincerely,

Thomas M. Sullivan
Chief Counsel for Advocacy

Kevin L. Bromberg
Assistant Chief Counsel for Environmental Law

Attachment: Pechan Memorandum, dated January 12, 2006

³¹ For the underlying analysis, see the attached Pechan memorandum, "Additional Analysis of TRI Phase II Proposal," dated January 12, 2006.

**ADDITIONAL ANALYSIS
OF TRI PHASE II
PROPOSAL**

**TECHNICAL
MEMORANDUM**

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Work Assignment No. 046A

The Office of Advocacy, an independent office within the U.S. Small Business Administration, has primary responsibility for government-wide oversight of the Regulatory Flexibility Act of 1980 (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA). The principal goal of the RFA is to identify, and, if possible, lessen the burdens Federal regulations place on small entities. The Office of Advocacy sponsored this report under contract SBAHQ-03C0020. The statements, findings, conclusions, and recommendations found in this report are those of the authors and do not necessarily reflect official policies of the Office of Advocacy, the U.S. Small Business Administration, or the U.S. Government.

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I. OVERVIEW

A. TRI REGULATORY BACKGROUND

Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) requires facilities to report the quantities of routine and accidental releases, and releases resulting from catastrophic or other one-time events of subject chemicals, as well as the maximum amount of each chemical on-site during the calendar year, and the amount contained in wastes managed on-site or transferred off-site.

EPCRA Toxics Release Inventory (TRI) information is used by both the public and EPA. The public uses this information to understand who the largest toxic chemical emitters are in their local community, to estimate local health risks associated with these chemical releases, and to develop policies to reduce these risks. The EPA uses this information to track progress in reducing toxic chemical releases and to assist the Agency in determining the need for future regulations.

TRI reporting was initially required of facilities in the manufacturing sector (i.e., Standard Industrial Classification [SIC] codes 20-39) that have 10 or more full time employee equivalents and manufacture (including import), process, or otherwise use any EPCRA section 313 (TRI) chemical in calendar year quantities greater than the established thresholds.

As originally promulgated in 1988, the thresholds for manufacturing and processing were 25,000 pounds and the otherwise use threshold was 10,000 pounds. These thresholds were later modified for PBT (persistent, bioaccumulative and toxic) chemicals. In addition, the original rule provided for range reporting, instead of point estimates, for certain sections of the Form R report, as a means for reducing the burden of reporting small quantities of up to 1,000 pounds.

Section 6607 of the Pollution Prevention Act of 1990 expanded reporting requirements to include toxic chemical source reduction, energy recovery, recycling, and treatment data. In 1993, EPA expanded the list of covered chemicals for the first time. In 1994 it added 286 more chemicals and chemical categories. Also in 1994, EPA amended TRI regulations to permit facilities with low levels of waste to report via a shorter Form A Certification Statement, beginning in 1995. The Form A allows facilities that generate small quantities of chemical waste to file abbreviated annual reports, saving businesses millions of dollars every year. All other facilities continued to use the standard Form R.

A facility may currently use the Form A only if the total wastes do not exceed 500 pounds in a single year. In other words, the facility must count all releases, all transfers for treatment, disposal, and amounts recycled on- or off-site and amounts used for energy recovery. In order to qualify for the Form A, the facility must also process, manufacture or otherwise use less than one million pounds, which is the alternate threshold amount that applies to the Form A universe of reporters. The Form A provides the name of the chemical and some facility identification information, but no information regarding the disposition of the waste chemical (e.g. air or water release).

In 1999, EPA expanded the chemical list yet again and divided it into two categories: PBT (persistent, bioaccumulative and toxic) chemicals and non-PBT chemicals. PBT chemicals are subjected to stricter reporting thresholds and are currently ineligible for Form A. For PBT chemicals, the thresholds are 100 pounds for manufacture, process or otherwise use. The threshold for a subset of PBT chemicals found to be highly bioaccumulative and persistent was lowered to 10 pounds. For dioxin and dioxin-like compounds, the threshold was lowered further to 0.1 gram. Additionally, for PBT chemicals, the use of Form A, range reporting, and a *de minimis* concentration exemption are not available, thus increasing the burden of reporting for PBT chemical filings. In 2001, EPA added lead and lead compounds to the PBT chemical list, resulting in a fourfold increase in Form R filings for that chemical category (the number of filings grew from 2,025 in 2000 to 8,734 in 2001). Many of the new reports describe zero on-site releases whose right-to-know value to the public is questionable. Lead reporting in 2001 accounted for 59.3 percent of the total number of PBT reports (JFA, 2004).

The EPA committed to further reduce the burden of paperwork associated with reporting as far back as 1997 when it expanded the number of covered chemicals and industries. In its October 1, 1996, Terms of Clearance document for TRI data collection, the Office of Management and Budget (OMB) asked EPA to investigate changes, including specifically the adoption of a higher reportable amount for Form A eligibility. In 1998, the Toxics Data Reporting Subcommittee to the National Advisory Council for Environmental Policy and Technology (NACEPT) offered opinions on raising the alternate threshold, but the Subcommittee never filed formal recommendations and no action was considered by EPA. The OMB has continued issuing requests for burden reduction since 1996 as part of the Information Collection Request process.

On October 4, 2005, EPA proposed TRI reporting burden relief for both non-PBT and PBT chemicals (70 FR 57822, 2005). In addition to proposing an expansion of Form A eligibility to some "persistent, bioaccumulative, and toxic" (PBT) chemical forms, EPA proposed expanding the the Form A non-PBT annual reportable amount (ARA) threshold from the current 500 lbs to 5,000 lbs.¹

B. PREVIOUS ANALYSES OF TRI PHASE II REFORM PROPOSALS

In 2003/2004, the SBA's Office of Advocacy (OA) commissioned a study by Jack Faucett Associates, Inc., (JFA) titled "Proposed Reforms to the Toxics Release Inventory Program: Streamlining Reporting and Preserving Data Integrity" that evaluated TRI program reform proposals (JFA, 2004). This study analyzed a series of reform proposals with respect to: (1) the number of Form Rs qualifying for relief; and (2) the change in the quantity of toxic chemicals reported.

The OA later asked E.H. Pechan & Associates, Inc. (Pechan) to extend the chemical quantity-based reform proposal analysis conducted in the JFA study to a risk-based analysis. Using estimates of pounds of chemical releases to investigate potential impacts on the right to know of local communities and the ability to model health and environmental impacts is limited by the assumptions that all chemicals are equally toxic and all people are equally exposed.

¹ Note that EPA's proposal also requested comment on the desirability of ARA thresholds of 1,000 and 2,000 lbs.

Although formal risk assessments are more accurate than the screening analysis conducted in the Pechan study, they are complicated and time consuming to prepare, requiring detailed data that are not always available, and the results are typically limited in scope and geographic area.

In its risk-based study (Pechan, 2004), Pechan augmented estimates of pounds released with toxicity and exposure considerations via use of the most current EPA's Risk Screening Environmental Indicators (RSEI) Chronic Health Model that was available at the time (EPA, 2002). Although the RSEI model does not address all of the potential factors that a full risk assessment would include, the RSEI model is designed to conduct comparative analyses. For the purpose of this study, the RSEI model approach was valid for determining the relative magnitude of the impact of each reform proposal on the ability to characterize chronic health risks.² The study used data for the 1999 and 2000 reporting years, with a special data set provided in April 2004 by EPA (Antisdell, 2004), and data in Version 2.1 of the RSEI model (EPA, 2002).³

C. PURPOSE AND ORGANIZATION

The purpose of this technical memorandum is to first present the results of new TRI reform proposal analyses that Pechan performed in 2005 at OA's behest. Where EPA conducted similar analyses to those performed by Pechan, this memorandum discusses the results of both sets of analyses.

Section II of this document presents analyses of non-PBT reform proposals. Section III describes analyses conducted of PBT reform proposals. Section IV identifies the references consulted in preparing this document.

² The results of this analysis for a limited geographic area could be further evaluated through a formal quantitative risk analysis that would yield estimated changes in health risks (e.g., increases in cancer incidence) associated with each reform proposal.

³ The RSEI is a peer-reviewed EPA computer model that uses TRI data inputs to analyze inhalation and ingestion exposure pathways and cancer/non-cancer health risks. The model uses the reported quantities of TRI releases and transfers of chemicals to estimate the risk-related impacts associated with each type of air and water release or transfer by every TRI facility. The risk-related impacts potentially posed by a chemical are a function of chemical toxicity, the fate and transport of the chemical in the environment after it is released, the pathway of human exposure, and the number of people exposed. This information is used to create numerical values that can be added and compared to assess the relative risk of chemicals, facilities, regions, industries, or other factors. These values do not provide absolute measures of risk and can only be interpreted as relative measures that are compared with other such values in a comparative analysis.

II. ANALYSIS OF ALTERNATIVE NON-PBT ARA THRESHOLDS

This section describes analyses performed on the following alternative non-PBT ARA thresholds: 1,000 pounds (lbs); 2,000 lbs; and 5,000 lbs. Subsection A reports estimates of the percentage of total waste that will continue to be reported on Form R at higher ARA thresholds. Subsection B discusses estimates of the impact of alternative reforms at the zip code level.

A. PERCENTAGE OF WASTE REPORTED ON FORM R

As part of an economic analysis performed in support of EPA's proposed TRI reporting burden reduction regulation (70 FR 57822, 2005), EPA computed estimates of the percentage of production waste that would be reported on Form R if all current Form Rs that are eligible for Form A reporting based on the 500 lb ARA threshold criterion utilize Form A.⁴ EPA also calculated estimates of the percentages of total waste currently reported on Form R that would continue to be reported on Form R based on ARA thresholds of 1,000; 2,000, and 5,000 lbs. To support a similar independent analysis of the percentage of waste that would continue to be reported at higher ARA thresholds, Pechan obtained a database of reporting year (RY) 2002 and 2003 TRI data from EPA (Antisdell, 2005). As noted below, Pechan performed some quality assurance before utilizing the EPA data to determine Form A eligibility.

1. TRI Database Quality Assurance

The non-PBT ARA is defined as the sum of the quantities reported in the following TRI Form R sections:

- 8.1 – Quantity released;
- 8.2 – Quantity used for energy recovery onsite;
- 8.3 – Quantity used for energy recovery offsite;
- 8.4 – Quantity recycled onsite;
- 8.5 – Quantity recycled offsite;
- 8.6 – Quantity treated onsite; and
- 8.7 – Quantity treated offsite.

Beginning with the 2002 TRI, section 8.1 is also to be reported by subsection:

- 8.1a – Onsite contained releases;
- 8.1b – Onsite other releases;
- 8.1c – Offsite contained releases; and
- 8.1d – Offsite other releases.

Therefore, the value reported for section 8.1 should equal the sum of the values for each of the section 8.1 subsections. As a quality assurance (QA) check, Pechan compared these two values

⁴ Note that Form A eligibility also requires handling of 1 million or fewer pounds of the particular chemical. Because this information is not available from the TRI, this criterion was not evaluated.

for each non-PBT record. In some instances, Pechan identified records with zero values for section 8.1, but positive values in one or more of the four 8.1 subsections. In these instances, Pechan replaced the existing 8.1 value with the sum of the 8.1 subsection values.

Section 5 of Form R is designed for reporting the quantity of toxic chemicals released onsite; these releases are also included within Form R section 8.1. Transfers to publically owned treatment works (POTWs) are reported in section 6 of Form R (portions of Section 6 are also included as parts of sections 8.1, 8.3, 8.5, and 8.7). By definition, for a given Form R, the sum of section 5 quantities plus section 6 quantities should be less than or equal to the total quantities reported in sections 8.1 through 8.8. Therefore, it is possible to QA the sum of the quantity values reported in sections 8.1 through 8.8 using the values reported on Form R for sections 5 and 6. Given that sections 5 and 6 are used to report releases/transfers rather than other forms of chemical handling, Pechan decided to use the sum of the section 5 and 6 quantity values to represent the ARA rather than the sum of sections 8.1 through 8.7 in cases where the sum of the section 5 and 6 quantities was greater than the sum of the section 8.1 through 8.8 quantities. We chose this conservative assumption to ensure that this analysis does not treat suspect Form Rs as eligible for Form A reporting.

2. Results of Analysis

Table 1 displays a comparison of EPA's estimates of the percentage of production waste that is Form A eligible with estimates developed by Pechan. Note that because EPA only reported the quantity of waste that would no longer be reported on Form R at each ARA threshold, Table 1 does not display EPA estimates for total Form R waste quantities. As indicated by Table 1, Pechan's estimates of the percentage change in total waste reported at each ARA threshold are similar to the estimates reported by EPA. For EPA's proposed 5,000 lb ARA threshold, both Pechan and EPA estimate that 99.89 percent of the production waste that is required to be reported on Form R at a 500 lb threshold will continue to be reported on Form R.

Table 1 also reports the estimated number of non-PBT Form Rs that will become eligible for Form A reporting at each alternative ARA threshold. It is important to note that a substantial number of facilities that handle non-PBT chemicals with an ARA of less than 500 pounds currently choose to report these chemicals on Form R. In reporting year 2000, 13,209 actual Form As were submitted to EPA (EPA, 2003). Based on available year 2000 Form R data, an estimated 9,878 additional Form Rs were eligible for Form A reporting (Pechan, 2004). Some facilities that are eligible to use Form A may choose to use Form R because they manage multiple chemicals and find it easier to use a consistent reporting system. Others may want to be viewed as a "good corporate citizen" or consider Form R reporting as consistent with corporate environmental goals/policies. It is likely that many of the facilities that continue to use Form R are larger firms that can more easily absorb the burden of preparing Form R. It is expected that continued use of Form R reporting will occur if the ARA thresholds are raised, thereby, reducing their impact with respect to TRI data that will no longer be reported on Form R.

Based on the information in Table 1, Pechan recommends that SBA consider support of a non-PBT ARA of 5,000 lbs. A 1,000 lb ARA is associated with a relatively small increase in burden reduction relative to full Form A reporting at the current 500 lb threshold. However, increasing the ARA to 5,000 lbs would provide significant burden reduction that will likely fall

disproportionally on small businesses, while maintaining more than 99 percent of the total waste reported under the current ARA. At an ARA of 5,000 lbs, use of Form A will result in a modest percentage change in ability to characterize chronic health risks, even if reporters fully utilize their Form A eligibility. Based on actual Form A reporting experience over the last decade, however, it is anticipated that actual Form A reporting will be considerably less than estimated in Table 1. Table 2 displays estimates associated with each ARA assuming that the proportion of actual Form A reports to Form A eligible reports will be the same as that demonstrated by actual 2000 year TRI data. It is further important to emphasize that loss of Form R reporting is not equivalent to loss of all toxic chemical information as Form A represents a form of range reporting.

Table 1. Comparison of Form A Non-PBT Regulatory Alternatives Based on Reporting Year 2002 TRI Data

ARA Threshold	Pechan Estimates						EPA Estimates		
	# of Form Rs	# of Form Rs Newly Eligible for Form A	% Change in Form Rs	Production Waste Reported (lbs)	Change in Production Waste Reported (lbs)	% Change in Waste Reported	# of Forms Rs Newly Eligible to be Form A	Change in Production Waste Reported (lbs)	% Change in Waste Reported
500 lbs	56,778	--	--	25,031,382,980	--	--	--	--	--
1,000 lbs	53,305	3,473	-6.12	25,028,829,946	2,553,034	-0.01	3,184	2,332,935	-0.01
2,000 lbs	49,429	7,349	-12.94	25,023,227,059	8,155,921	-0.03	6,838	7,649,086	-0.03
5,000 lbs	43,911	12,867	-22.66	25,005,041,626	26,341,354	-0.11	12,201	25,369,199	-0.11

Table 2. Comparison of Form A Non-PBT Regulatory Alternatives Based on Reporting Year 2002 TRI Data - Assumed Actual Form A Reporting

Annual Reportable Amount (ARA) Threshold	Estimated # of Form Rs Newly Using Form A	% Change in Form Rs	Change in Production Waste Reported	% Change in Production Waste Reported
<i>Values From Table 1 with Assumption that 57% of Total Eligible Form As Actually Use Form A</i>				
1,000 lbs	1,980	-3.49	1,455,229	-0.01
2,000 lbs	4,189	-7.38	4,648,875	-0.02
5,000 lbs	7,334	-12.92	15,014,572	-0.06

B. ZIP CODE ANALYSIS

Based on 2002 TRI data, Pechan identified 663 additional zip codes for which all current Form Rs will become Form A eligible at the 5,000 lb ARA threshold. It is important to note that these estimates overstate actual impacts because many facilities will continue to use Form R regardless of a change in Form A eligibility. Also worth emphasizing is the fact that the great majority of these zip codes involve reporting for only one or two Form Rs, and by definition, all of these involve very small quantities. As displayed in Table 3, Pechan estimates that 554 of the total 663 zip codes have only one or two Form Rs in the 2002 TRI.

The EPA performed a similar zip code level analysis to that prepared by Pechan. In this analysis, EPA identified 665 additional zip codes for which all current Form Rs will become Form A eligible at a 5,000 lb ARA threshold (EPA, 2005a). As indicated by Table 4, EPA's distribution of number of Form Rs lost is considerably different from the distribution calculated by Pechan. To try and determine the cause for the discrepancies, Pechan conducted a review of EPA's data for the zip codes for which Pechan's analysis indicated that (1) all Form Rs become Form A eligible; and (2) more than four Form Rs become Form A eligible.

Pechan obtained two tables from the EPA docket that contained the number of Form Rs by zip code for a 500 lb and a 5,000 lb ARA threshold (EPA, 2005b and 2005c). For zip codes for which Pechan estimated loss of more than four Form Rs, Pechan subtracted EPA's number of Form Rs reported at a 500 lb threshold from EPA's number of Form Rs reported at a 5,000 lb threshold. This step yielded the number of newly eligible Form As as calculated from EPA's zip code data. As indicated by Table 5, these EPA data-derived estimates match Pechan's estimates for every zip code except 75207. In addition, EPA's data indicated that zip code 35214 contained two fewer Form Rs eligible for Form A reporting at both the 500 and 5,000 lb ARA thresholds.

For zip codes 75207 and 35214, Pechan next compared EPA estimates of the releases that would no longer be reported at a 5,000 lb ARA to estimates Pechan derived from the TRI database. As with the earlier comparison, zip codes 35124 and 75207 were the only ones for which EPA data indicated different release totals than Pechan had calculated. A review of Pechan's TRI database for these zip codes uncovered one or two Form Rs whose releases equal the zip code level discrepancy between EPA's release estimate and Pechan's release estimate. Therefore, it appears that the TRI database that Pechan has access to contains additional Form Rs that may not have been included in the database that EPA used to perform its analysis.

Table 3. Pechan Estimate of Number of non-PBT Form Rs Converting to Form As in Zip Codes Where All Form Rs Convert to Form As at a 5,000 lb Threshold

Number of Form Rs Converting to Form A	Number of Zip Codes
1	451
2	103
3	55
4	29
5	18
6	5
7	1
8	1

Table 4. EPA Estimate of Number of non-PBT Form Rs Converting to Form As in Zip Codes Where All Form Rs Convert to Form As at a 5,000 lb Threshold

Number of Form Rs Converting to Form A	Number of Zip Codes
1	584
2	66
3	14
4	1

Table 5. Comparison of Pechan and EPA Data for Select Zip Codes For Which All non-PBT Form Rs Will Become Form A Eligible at a 5,000 lb ARA Threshold

Zip Code	EPA Estimates		Pechan Estimates		Releases (lbs)		
	# of Form Rs at 5,000 lbs	# of Newly Form A Eligible Form Rs at 5,000 lbs	# of Form Rs at 5,000 lbs	# of Newly Form A Eligible Form Rs at 5,000 lbs	EPA	Pechan	EPA - Pechan
43204	15	8	15	8	3,644	3,644	0
48083	8	7	8	7	8,433	8,433	0
17057	13	6	13	6	10,389	10,389	0
47724	6	6	6	6	1,092	1,092	0
55101	6	6	6	6	929	929	0
63102	9	6	9	6	10,688	10,688	0
95482	9	6	9	6	3,587	3,587	0
02568	5	5	5	5	1,469	1,469	0
12202	7	5	7	5	14,927	14,927	0
15644	5	5	5	5	241	241	0
19047	5	5	5	5	1,158	1,158	0
19518	10	5	10	5	505	505	0
32920	7	5	7	5	8,010	8,010	0
35016	7	5	7	5	1,241	1,241	0
35124	14	5	16	5	11,004	11,093	-89
37818	6	5	6	5	509	509	0
38106	15	5	15	5	6,353	6,353	0
43004	13	5	13	5	8,756	8,756	0
60402	6	5	6	5	1,265	1,265	0
62882	6	5	6	5	13,950	13,950	0
67661	7	5	7	5	14,641	14,641	0
74148	5	5	5	5	6,060	6,060	0
75146	5	5	5	5	6,840	6,840	0
75207	10	4	11	5	6,315	7,106	-791
85041	8	5	8	5	7,424	7,424	0

III. ANALYSIS OF ALTERNATIVE PBT ARA THRESHOLDS

EPA is proposing to allow use of Form A for PBT chemicals when the Form R values indicate a PBT Reportable Amount (PRA) (sum of sections 8.2 through 8.8) of no more than 500 lbs, zero release and disposal quantities within 8.1a through 8.1d, and zero release quantities within 8.8 (one-time events not associated with production processes). EPA estimates that an additional 2,703 Form Rs would be eligible for Form A reporting under its PBT reporting reform proposal. EPA also estimates that 1.0 percent of total PRA waste would no longer be reported on Form R under their proposal (EPA, 2005d).

A. PERCENTAGE OF WASTE REPORTED ON FORM R

Because of the likelihood that many PBT Form Rs are associated with zero release quantities, but higher PRA quantities, Pechan performed PBT analyses of both EPA's proposal and of alternative higher PRA thresholds. Table 6 displays the results of these analyses.

As indicated by Table 6, Pechan's estimate of the number of Form Rs that become Form A eligible for Form A is very similar to EPA's estimates (2,876 vs. 2,703 from EPA). However, Pechan's estimated percentage of current Form R PRA waste that continues to be reported on Form R is significantly higher than the value estimated by EPA (99.99 versus 99.0). EPA has reported this error in an email communication to the OA, but has not yet corrected this error in the record to our knowledge. As displayed in Table 6, Pechan estimates that EPA can still retain 99.9 percent of total PRA at a PRA threshold of 5,000 lbs.

Table 6. Impacts Associated with Alternative Form A PBT Thresholds Based on Reporting Year 2002 TRI Data

	# of Form Rs	Form Rs Eligible to be Form A	% Change in Form Rs	PRA Waste Reported	Change in PRA Waste Reported	% Change in PRA Waste Reported
Actual 2002	15,990			821,169,068		
500 lbs	13,114	2,876	17.99	821,081,087	87,981	0.01
1,000 lbs	12,944	3,046	19.05	820,957,211	211,857	0.03
2,000 lbs	12,780	3,210	20.08	820,722,034	447,034	0.05
5,000 lbs	12,637	3,353	20.97	820,282,474	886,594	0.11

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