National Pollution Prevention and Toxics Advisory Committee (NPPTAC)

July 15, 2005

Honorable Stephen L. Johnson
Administrator, U.S. Environmental Protection Agency
1200 Pennsylvania Ave. N.W.
Washington, DC 20460

Dear Administrator Johnson,

On behalf of the National Pollution Prevention and Toxics Advisory Committee (NPPTAC), I am pleased to present a three-part recommendation of the Committee regarding EPA's Pollution Prevention Programs for your consideration. The NPPTAC was established in September 2002 to provide EPA with advice, information, and recommendations on the overall policy and operations of programs undertaken by the Office of Pollution Prevention and Toxics (OPPT).

An important set of programmatic elements of OPPT are its Pollution Prevention Programs. The Pollution Prevention Programs work with a broad stakeholder base to facilitate reductions in exposure to chemicals of concern and promote source reduction. These programs provide recognition, and technical tools and expertise that act as incentives for businesses to reduce their environmental footprints.

The enclosed three-part recommendation proposes actions that the Committee believes senior Agency leadership and OPPT should take to enhance the effectiveness of the Agency's Pollution Prevention Programs. On behalf of the Committee, I thank you for the opportunity to participate in EPA's policy and program activities through the NPPTAC, and for considering this recommendation.

Sincerely,

Harry E. Gregori, Jr., AICP
Chair

Enclosure

Enclosure
cc: NPPTAC members

National Pollution Prevention and Toxics Advisory Committee (NPPTAC) Recommendation to the U.S. Environmental Protection Agency (EPA) on Institutionalizing Pollution Prevention Across EPA and Within OPPT

June 30, 2005

EXECUTIVE SUMMARY

The National Pollution Prevention and Toxics Advisory Committee (NPPTAC) began its pollution prevention (P2) work with a focus on P2 efforts within the Office of Pollution Prevention and Toxics (OPPT or the office). In so doing, it has determined that a broader management system approach is needed to support P2 integration, both within OPPT and across the Agency. NPPTAC recognizes that this is an important, but insufficient, first step towards P2 integration. This recommendation has an overarching P2 leadership component that has implications for the entire Agency, but its primary focus is how to better integrate P2 within OPPT. Specific examples of how the recommendation could be implemented are offered in the discussion section. It should be noted that this recommendation represents only initial NPPTAC discussion of P2 integration across EPA; subsequent recommendations are expected.

Introduction

Historical Context

P2 is an OPPT responsibility. The office's initial P2 approach was focused on implementing the Pollution Prevention Act of 1990 (P2 Act) and several P2 Executive Orders that followed. Early efforts included establishing regional P2 coordinators and state technical assistance providers who work directly with industry to engage in the practice of P2. At headquarters, the primary focus was on integrating P2 throughout all Agency programs. The EPA Office Directors' Multimedia Pollution Prevention Forum (M2P2) resulted from this work.

At the same time, the Design for Environment Program was developed to capitalize on a movement in business to design for qualities or traits that would reduce the environmental burdens and potential risks associated with certain products. As the practice of P2 began to spread, so did the need for more focused tools and practical guidelines, leading to the development of a diverse array of P2 programs focused both on specific chemicals (e.g., persistent, bioaccumulative and toxic chemicals, or PBTs) and broader opportunities aligned with the "greening" of purchasing behavior, buildings, and supply chains. These efforts have led to real successes and have created an infrastructure that can lead to significant environmental results in the future.

Background

While EPA and OPPT have had P2 strategies and policies in place since the early 1990s, over time implementation efforts across the Agency have waned, and important opportunities to use P2 as an effective risk reduction and environmental improvement tool have not been fully capitalized upon. One example of efforts falling short of their potential is the fact that P2 has not been successfully integrated into the media programs, which has limited the reach of P2 across the Agency. EPA's P2 vision and implementation strategy should be updated to reflect current conditions and challenges and to secure the support of current management. This

recommendation calls for modifications to both the OPPT and broader EPA management and promotion of P2 in order to catalyze the Agency's P2 efforts. Per its responsibilities under the P2 Act, OPPT has important roles to play both internally and across EPA.

Efforts to date to fully integrate P2 into regulatory programs across the Agency have met with only partial success. The current P2 approach, though producing results on a number of programmatic fronts, is missing an important opportunity to focus P2 efforts and deliver compelling results that will catalyze P2 interest and experimentation across OPPT, EPA, the Regions, and industry more broadly. Other than the M2P2 and EPA's GPRA[1] reporting, there is no P2 "management system" in place that communicates and reinforces a P2-related vision, goals, and objectives across the offices and subsequently provides accountability through meaningful and rigorous metrics. Previous EPA P2 efforts did make progress, but as they did not require the integration of P2 into program requirements, they were of limited reach and impact Agency-wide. More can and should be done to ensure that the Agency's P2-related efforts have the greatest impact possible and to fully implement the spirit of the P2 Act across EPA.

Within OPPT, there is a need to:

- Ensure greater program accountability. Broader oversight is needed to ensure that the challenging tasks of focusing, integrating and measuring P2 programs are undertaken and completed;
- Use P2 as a tool to support the full range of office activities to better focus limited resources;
- Integrate the various P2 programs with one another and with Toxic Substances Control Act (TSCA) programs where appropriate. Connections should be strengthened between OPPT's programs that address TSCA and the P2 programs referenced above to ensure that the most appropriate and timely approaches are implemented; and
- Apply P2 in ways that will lead to more measurable results. OPPT's programs should produce measurable and verifiable results that support the full range of office activities.

In summary, a culture change is needed to better focus OPPT's P2 efforts, ensure P2 integration into OPPT's chemicals management work, and to provide OPPT with the leadership support it needs to carry forward a strengthened EPA commitment to P2.

Recommendation - Institutionalizing P2 Across EPA and Within OPPT

A number of voluntary P2 approaches have been used by OPPT and across the Agency with impressive results, but additional work is needed to institutionalize these successes. NPPTAC believes there is an opportunity to reinvigorate the EPA P2 program under a continuous improvement theme, by leveraging and replicating successful P2 approaches across the Agency. This approach needs to be integrated into EPA's decision-making process. Specific examples of how the recommendation could be implemented are included in the discussion section. NPPTAC recommends that OPPT:

[1] Government Performance and Results Act.

I. **Recommit to Institutionalize P2 Across EPA** – OPPT should take steps to develop a vigorous high-level Agency leadership commitment to P2. Thoughts and examples are highlighted in the discussion section of this document. Developing the commitment should include an Agency-wide P2 vision[2] and a revised P2 strategy consistent with the P2 Act, as well as the institutionalization of more rigorous evaluation practices concerning P2 results. OPPT should take a management system approach to its P2 activities (e.g., Plan-Do-Check-Act)[3]. OPPT should also use this approach to work with other offices across EPA and the Regions. These efforts should ensure that P2 is incorporated into measurable environmental goals, on-going evaluation is conducted, and outcomes are used to direct future work. Implementation will require action from the Administrator and other senior Agency leaders to oversee the execution of the P2 vision and revised strategy, as well as advocate for that vision and strategy at all levels of the organization.

II. **Conduct a P2 Option Review and Implement Strategy Within OPPT** – OPPT should increase P2 adoption within the office by establishing a process that promotes office collaboration so that P2 programmatic and policy approaches are considered in regulatory and voluntary activities on a more regular basis. OPPT should include a "P2 Option Review" as an element in its chemical decision-making to better integrate P2 approaches into chemicals management, either through application of regulatory authorities under TSCA, or by spurring innovation through creative uses of P2, such as targeted challenges and multi-stakeholder partnerships.

OPPT's P2 collaboration efforts should explore whether P2 programmatic and policy approaches to a chemical of interest[4] might be appropriate where it appears that existing risk management efforts are insufficient. The resulting process should make recommendations to senior leadership on which approach(es) would be most effective. OPPT should implement P2 programmatic and policy approaches using the Plan-Do-Check-Act management system approach described above. To the extent possible, the P2 Option Review and implementation process should draw on existing efforts within EPA and the public and private sectors to conserve resources and provide results in a timely manner.

III. **Review and Evaluate OPPT's P2 Programs and Tools** - To begin to address the important question of how to better focus limited resources, OPPT should have its P2 programs and tools undergo an evaluation to assess their efficiency and effectiveness in addressing OPPT's and EPA's organizational priorities. In addition to evaluating the programs and tools individually, the analysis should explore opportunities for OPPT P2

[2] NPPTAC understands that OPPT and the Regions have been working on an office-wide vision for P2. Once NPPTAC and its P2 Work Group have the opportunity to review this document, they can determine how this vision might be used as a basis for the broader Agency-wide vision for P2 called for in this document.
[3] Plan, Do, Check, Act is a management system approach designed to drive continuous improvement. Plan = Identify the problem; Analyze the problem. Do = Develop Solutions; Implement Solutions. Check = Evaluate results; has the desired goal been achieved? Act = Standardize the solution; Capitalize on new opportunities.
[4] Chemical of interest can include any chemical managed by OPPT under TSCA. Chemicals of interest for P2 approaches can rise to OPPT's attention through a number of routes.

programs and tools to be mutually reinforcing, whereby successes in one program (e.g., Green Chemistry) could support goals and objectives in another program (e.g., Formulator Program, Green Buildings, Green Suppliers Network, etc.) and enhance risk reduction and pollution prevention. Certain programs may offer such opportunities when used in tandem. For example, science may not yet be adequate to support a "Green Chemistry solution" (e.g., a next generation chemical) for a given chemical of interest, but a green engineering solution may reduce environmental releases, or work with formulators may minimize use and human exposure to a chemical of interest.

A comprehensive review that examines program utilization, resource utilization, impact, outputs, synergies, and efficiencies among other factors will help OPPT understand the value that its P2 programs provide on both an individual and collective basis. Such an understanding will assist the office in focusing resources so that the P2 programs are better integrated into the full range of office activities.

OPPT is requested to report back to NPPTAC on efforts to implement this recommendation within one year and periodically to the public. At that time the Committee will consider if further advice is appropriate.

DISCUSSION SECTION

I. Recommit to Institutionalize P2 Across EPA

The P2 Act charges the Administrator with developing and implementing a 12-point strategy to promote source reduction. With this charge comes the leadership responsibility to promote the Agency's commitment to that strategy. OPPT is the office designated to carry out the Administrator's responsibilities under the P2 Act, and as such, has a duty to implement the P2 strategy with the goal of incorporating prevention as the principle of first choice into the mainstream work of the Agency. Additionally, OPPT co-chairs the M2P2 which was formed to coordinate multimedia P2 projects.

Much has been accomplished to advance the goals of the P2 Act. However, as the office charged with carrying out the Administrator's responsibilities under the Act, OPPT needs high-level support to ensure that the P2 strategy is implemented. OPPT leadership of the M2P2 is an important coordinating step, but senior management, including the Administrator, should demonstrate its ongoing commitment to the P2 strategy by personally overseeing its execution. Given that EPA's P2 Strategy was developed in the early 1990's, the NPPTAC's P2 Work Group believes that the leadership commitment to this strategy should be reinvigorated by the Administrator, OPPT, and the M2P2. Suggestions include:

- OPPT should work with the M2P2 to review and update the P2 strategy by:
  - Establishing a vision for the role of P2 in EPA's overall mission to protect the environment;
  - Developing measurable multimedia source reduction goals, objectives, and tasks necessary to achieve the vision;
  - Establishing dates by which the principal tasks are to be accomplished; and
  - Enumerating the required resources and organizational responsibilities, as well as the means by which progress will be measured and evaluated to ensure that the goals are being met and that when necessary, timely and informed adjustments can be made.
- OPPT should seek the Administrator's endorsement of this vision and strategy and share that endorsement with the rest of the Agency.
- Consistent with the concept of the P2 Option Review within OPPT described in this document, the Administrator should exercise oversight of the execution of the P2 vision and P2 strategy. Suggestions include:
  - Ensuring that all Headquarters and Regional staff are held accountable for the execution of the vision by including measurable P2 objectives in each of the media goals in the Agency's Strategic Plan which is currently under revision. The outcomes of these multimedia P2 integration efforts should be measured and compiled in an Agency P2 report;
  - Requiring that each Assistant Administrator and Regional Administrator report annually on how they incorporated P2 into every proposed/final rule or guidance document that they are asked to approve, where potential P2 opportunities exist; and
  - Requiring each Assistant Administrator and Regional Administrator to report its organization's regulatory and voluntary programs and other P2 programs and initiatives

annually. Because it was chartered with the authority to forward multimedia and P2 recommendations to the Assistant Administrators, the M2P2 might serve as a logical venue through which P2 measures are collected, reviewed, and transmitted to senior levels.

- The Administrator, with support from OPPT, should advocate at all levels of the organization for the P2 vision. Suggestions include:
  - Allocating the resources and people needed to successfully implement the P2 strategy consistent with the P2 Act;
  - Rewarding "out of box" thinking on new ways of integrating P2 approaches. This should not be limited to the Agency's James Craig Pollution Prevention Award, which provides recognition at the highest level in EPA; and
  - Providing training to help apply the P2 strategy throughout Agency offices and Regions.

II. Conduct a P2 Option Review and Implement Strategy Within OPPT

A. Develop an Internal Process to Select, Apply, and Evaluate P2 Programmatic and Policy Approaches

Recognizing that P2 can be achieved using regulatory or voluntary approaches, the NPPTAC's P2 Work Group believes that OPPT should include members of its P2 management team (e.g., the Pollution Prevention Division and the Design for Environment Branch) in discussions about which options to pursue to achieve the appropriate risk management objective for a chemical of interest or other office activity. The Work Group calls this an OPPT P2 option review. P2 could be achieved via application of regulatory authority under TSCA, through the application of a voluntary P2 tool, or some combination of approaches.

OPPT's P2 collaboration efforts should explore whether P2 programmatic and policy approaches to a chemical of interest might be appropriate where it appears that existing risk management efforts are insufficient. The resulting process should make recommendations to senior leadership on which approach(es) would be most effective. OPPT should implement P2 programmatic and policy approaches using a Plan-Do-Check-Act management approach. To the extent possible, the P2 Option Review and implementation process should draw on existing efforts within EPA and the public and private sectors to conserve resources and provide results in a timely manner. This process would include:

- Review of OPPT chemicals of interest or other office activities;
- Evaluation of the regulatory, voluntary, or combined programmatic and policy approaches that could achieve the desired degree of risk reduction;
- Selection of approach(es). Flexible and creative approaches should be encouraged. For example, existing programs could be used creatively to challenge and reward innovations that address a particular OPPT chemical of interest or other office activity. Other OPPT programs such as the Formulator Program and the Green Engineering Program could also make use of priority-specific challenges when a specific need is identified as part of the P2 Option Review Process; and
- Implementation of the approach(es) and the monitoring of results.

The process could be modeled after the M2P2 and include management whose function relates to the implementation of the P2 Act, the design and implementation of voluntary programs, TSCA regulatory functions, risk assessment, hazard and exposure, and other functions as appropriate. Ideally, the process would be jointly led by regulatory and voluntary program managers within OPPT and convened on a regular basis to conduct reviews and monitor progress.

The NPPTAC's P2 Work Group recognizes that the P2 Option Review process will need to be well integrated and coordinated with a number of existing efforts underway at EPA. There should be regular communication between the OPPT P2 Option Review process and the M2P2 as well as specific offices within the Agency as needed. For example, OPPT should work with the Office of Research and Development to explore the potential for OPPT chemicals of interest to be designated as primary targets that researchers could address.

B. Use Multi-stakeholder Partnerships to Achieve P2 Objectives

The NPPTAC's P2 Work Group has observed that many of the P2 program successes have been achieved through the engagement of multi-stakeholder partnership programs and that such partnerships will be important to success moving forward. Such programs are a potential avenue for exploring innovative options and implementing P2 approaches. They can also be used to develop P2 dissemination strategies through supply chains, or on a regional basis to respond to geographic and ecological impacts. Similar approaches should be used to meet challenges when additional chemicals of interest emerge. The Furniture Flame Retardancy Partnership is a potential model. Such efforts could, for example, be one outcome of the internal OPPT P2 Option Review Process described above.

Establishing a multi-stakeholder partnership is a strategic decision for OPPT that should be informed by an assessment showing that broader external engagement is necessary to address a particular problem, and that a multi-stakeholder group is likely to be an efficient method of solving the problem. Multi-stakeholder partnerships to address P2 challenges and opportunities are more likely to succeed if issues such as market drivers, regulatory aspects (e.g., a regulatory backstop and/or flexibility as appropriate) and opportunities for recognition are included. OPPT can play various roles in these multi-stakeholder partnerships, including, but not limited to convener, facilitator, and/or technical support provider. OPPT can also be a participant in a stakeholder group that is organized by another organization.

III. Review and Evaluate OPPT's P2 Programs and Tools[5]

OPPT has developed a variety of tools and programs that integrate P2 solutions into various chemicals management activities (Appendix B). Examples include the Formulator Program, the Furniture Flame Retardancy Partnership, Green Chemistry, Hospitals for a Healthy Environment (H2E), Sustainable Futures, etc. OPPT has also developed a number of P2 tools and programs to

[5] The NPPTAC's P2 Work Group understands that there are several existing evaluations of EPA's P2 programs, including the programs housed within OPPT. The Work Group requests that OPPT identify these evaluations and summarize their outcomes for the Work Group.

address P2 objectives more broadly. Examples of these programs include Environmentally Preferable Purchasing, Green Buildings, and the Green Suppliers Network.

Some of OPPT's programs are focused on a particular issue (e.g., H2E and mercury). Others are currently more broadly focused in their deployment. Examples of programs that are not now but could also be applied to OPPT chemicals of interest include the Presidential Green Chemistry Awards, the Formulator Program, and the Green Suppliers Network. While each of these programs has significant merits, OPPT should consider how they could be augmented to serve as alternatives and/or complements to traditional regulatory approaches. As referenced in Section II.A., the Formulator Program could be directed toward an OPPT chemical of interest. The program could work with industry to build a broad stakeholder coalition with an interest in finding an environmentally preferable and functionally effective way of fulfilling the need. The program could serve as a convener and facilitator and bring OPPT expertise, tools, and models to bear in solving the problem.

To begin to address the important question of how to better focus limited resources, OPPT should have its P2 programs undergo an evaluation to assess their efficiency and effectiveness. In addition to evaluating the programs individually, the analysis should explore opportunities for its P2 programs to be mutually reinforcing, whereby successes in one program (e.g., Green Chemistry) could support goals and objectives in another program (e.g., Formulator Program, Green Buildings, Green Suppliers Network, etc.). A comprehensive programmatic review will help OPPT understand the value that its programs provide on both an individual and collective basis and this information will assist OPPT in focusing resources so that the P2 programs better address chemicals of interest and other office activities.

This evaluation could be conducted using internal OPPT staff or a third-party, whichever seems most appropriate and affordable. Information collected about the programs should be consistent with the National P2 Measures and also include the following:

- **Program Utilization** – How many companies/institutions are participating in a program or using a tool? What is their combined market share?
- **Resource Utilization** – What is the annual cost of the program? Is it garnering in-kind support from participants? Is it leveraging the resources of other programs?
- **Impact** – How are these programs having an impact on OPPT chemicals of interest and other program activities? Are they effective in addressing the intended public health or environmental problem with appropriate metrics to measure such impact?
- **Outputs** – What are the programs and their participants producing? What feedback do past and current program participants have about program effectiveness? Are program outputs being adequately measured? Do program metrics make a meaningful contribution to OPPT's GPRA goals and if so, how?
- **Synergies –** How does the program or tool support other OPPT efforts, both within the P2 programs and more broadly? Are there opportunities to use the programs in a series to achieve better outcomes?
- **Efficiency** – Is the program or tool being used with enough frequency to merit being maintained? Is there another organization that might be able to take the program to the next level of implementation? What organizational efficiencies does the review suggest?

Such an evaluation is needed to effectively redirect the P2 programs and their associated resources toward OPPT chemicals of interest and other office activities. Without such an evaluation, the NPPTAC's P2 Work Group can only hypothesize about how OPPT's P2 programs could be better integrated and utilized. The Work Group understands that OPPT's P2 programs will begin a Performance Assessment Rating Tool (PART) analysis in early 2006, but such an analysis may not be the best vehicle for examining each program or for informing how OPPT's programs might be enhanced and best utilized. The analytic framework OPPT employs should be broader than a PART analysis.

List of Appendices

- Appendix A – The Pollution Prevention Act of 1990 and Implementation History
- Appendix B – Pollution Prevention (P2) Matrix