



U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF INSPECTOR GENERAL

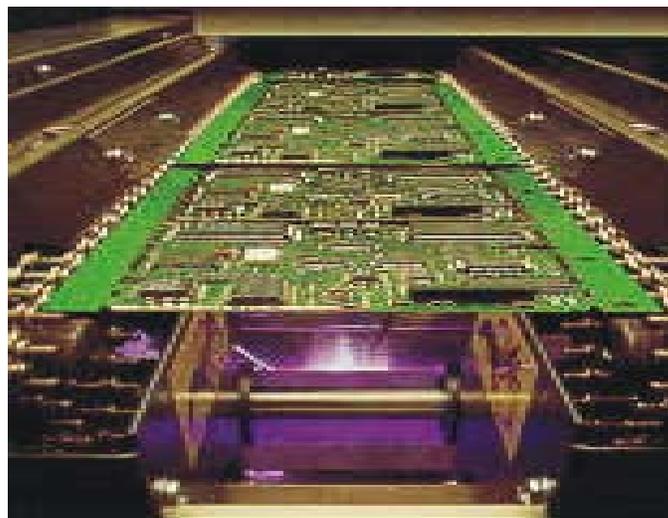
Catalyst for Improving the Environment

Audit Report

Measuring and Reporting Performance Results for the Pollution Prevention Program Need Improvement

Report No. 09-P-0088

January 28, 2009



Report Contributors:

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Abbreviations

| | |
|-------|--|
| EPA | U.S. Environmental Protection Agency |
| FY | Fiscal Year |
| OIG | Office of Inspector General |
| OMB | Office of Management and Budget |
| OPPTS | Office of Prevention, Pesticides, and Toxic Substances |
| P2 | Pollution Prevention |
| PART | Program Assessment Rating Tool |
| PIP | Program Improvement Plan |
| QAPP | Quality Assurance Project Plan |
| QMP | Quality Management Plan |

Cover photo: Within the Office of Pollution Prevention and Toxics' Design for the Environment Branch of the Economics, Exposure, and Technology Division, the Lead-Free Solder initiative works to phase out the use of lead-based solder in electronics. (EPA photo)



At a Glance

Catalyst for Improving the Environment

Why We Did This Review

The U.S. Environmental Protection Agency's (EPA's) Pollution Prevention (P2) Program was rated moderately effective by the Office of Management and Budget (OMB) in Fiscal Year 2006, receiving the third highest rating awarded to EPA programs using the Program Assessment Rating Tool (PART). We sought to verify the accuracy of P2 Program data provided for the PART assessment and determine what actions have been taken to address the recommendations in the PART program improvement plan.

Background

The Pollution Prevention Act of 1990 established policy for controlling industrial pollution at its source. EPA uses the P2 Program to facilitate adoption of source reduction techniques by businesses, EPA, and other federal agencies. EPA uses the P2 Program to accomplish this. PART is a diagnostic tool designed to assess the management and performance of federal programs.

For further information, contact our Office of Congressional, Public Affairs and Management at (202) 566-2391.

To view the full report, click on the following link:
www.epa.gov/oig/reports/2009/20090128-09-P-0088.pdf

Measuring and Reporting Performance Results for the Pollution Prevention Program Need Improvement

What We Found

The P2 Program's data provided in response to the OMB PART assessment generally addressed the PART questions and supported the moderately effective rating received. However, we noted several weaknesses:

- The P2 Program's Fiscal Year 2006 PART performance measures were not designed to report on the program's impacts to human health and the environment. P2 Program managers believed that reductions in discharges and emissions of pollutants represent the best measures that can be supported by data obtainable on a program-wide basis and acknowledge that additional outcome measures are needed to assess impacts on human health and the environment associated with hazardous materials reductions.
- The P2 Program's verification and validation procedures did not ensure the accuracy of performance data. P2 program managers had no assurance that performance results data obtained from voluntary partnerships with industry and other organizations were accurate. The Program's Fiscal Year 2006 performance results were not reported consistently and contain inaccuracies. Strengthening data controls would provide P2 managers with improved program performance data.
- While the P2 Program has completed several interim PART follow-up actions, some of its actions to address its program improvement plan have been slow. In addition, the plan did not address all deficiencies identified in the PART assessment.

What We Recommend

We recommend that EPA continue efforts to develop performance indicators that measure impacts on human health and the environment; require the development of a P2 Division Quality Assurance Project Plan for data collection and reporting; and develop a program improvement plan to address all deficiencies identified in the PART assessment. EPA concurred with our recommendations and has developed reasonable completion dates for each recommendation.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
INSPECTOR GENERAL

January 28, 2009

MEMORANDUM

SUBJECT: Measuring and Reporting Performance Results for the Pollution Prevention Program Need Improvement
Report No. 09-P-0088

FROM: *Melissa M. Heist*
Melissa M. Heist
Assistant Inspector General for Audit

TO: Jim Jones
Acting Assistant Administrator for the Office of Prevention, Pesticides,
and Toxic Substances

This is our report on the U.S. Environmental Protection Agency's (EPA's) Pollution Prevention Program's Fiscal Year 2006 Program Assessment Rating Tool audit conducted by EPA's Office of Inspector General (OIG). This report represents our final position on the subjects reported. It contains findings that describe the issues the OIG has identified and corrective actions the OIG recommends. This report represents the opinion of the OIG and does not necessarily represent the final EPA position. Final determinations on matters in this report will be made by EPA managers in accordance with established audit resolution procedures.

The estimated cost of this report – calculated by multiplying the project's staff days by the applicable daily full cost billing rates in effect at the time – is \$428,435

Action Required

In accordance with EPA Manual 2750, you are required to provide a written response to the findings and recommendations in this report within 90 days of the report date. You should include a corrective action plan for agreed upon actions, including milestone dates. We have no objections to the further release of this report to the public. This report will be available at <http://www.epa.gov/oig>.

If you or your staff have any questions regarding this report, please contact me at (202) 566-0899; or Patrick Gilbride, Director of Risk and Program Performance Audits, at (303) 312-6969 or gilbride.patrick@epa.gov.

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Chapter 1

Introduction

Purpose

Using the Program Assessment Rating Tool (PART), the Office of Management and Budget (OMB) assessed the U.S. Environmental Protection Agency's (EPA's) Pollution Prevention (P2) Program in Fiscal Year (FY) 2006. OMB found the program to be performing moderately effective, awarding the program the third highest rating (82 percent) among the 53 EPA programs assessed. Our objectives were to:

- verify the accuracy of the P2 Program's information/data provided in response to the PART assessment, and
- determine what actions the P2 Program has taken to address recommendations in the program improvement plan.

Background

The Pollution Prevention Act of 1990

The Pollution Prevention Act of 1990 established pollution prevention as the national policy reducing industrial pollution at its source – in other words, to keep pollutants from entering the environment. EPA, through its P2 Program, works to reduce pollution before it occurs by encouraging and supporting innovative changes in industrial production and use of raw materials. The following table shows FY 2006 actual expenditures and FY 2007 and 2008 President's Budget figures:

Table 1-1: Pollution Prevention Program President's Budget (Millions)

| Fund | 2006 Actual | 2007 Budget | 2008 Budget |
|--------------------------------------|-------------------|-------------------|-------------------|
| Environmental Program and Management | \$17,744.8 | \$21,292.4 | \$19,935.0 |
| State and Tribal Assistance Grants | 4,192.6 | 5,940.0 | 5,940.0 |
| Total | \$21,937.4 | \$27,232.4 | \$25,875.0 |

Source: FY 2008 Annual Performance Plan and Congressional Justification (EPA's Proposed Budget).

The Office of Pollution Prevention and Toxics, within the Office of Prevention, Pesticides, and Toxic Substances (OPPTS), is responsible for the P2 Program. One way the Office of Pollution Prevention and Toxics encourages industry and others to implement P2 activities is through voluntary programs. The voluntary pollution prevention activities (identified in the PART as "Centers of Results") include:

1. **Design for the Environment:** A partnership program that works with a broad range of stakeholders to use the unique tools and expertise of the New Chemicals Program to inform businesses of safer chemicals.
2. **Environmentally Preferable Purchasing:** A federal government-wide program managed by the Pollution Prevention Division that requires and assists federal agencies in the purchasing of environmentally preferable products and services.
3. **Green Chemistry:** A national Pollution Prevention Act and Toxic Substance Control Act based program that focuses on P2 through the environmentally conscious design of safer and economically competitive chemical products and processes. The program includes the Presidential Green Chemistry Challenge Awards for rewarding technologies that have demonstrated P2 benefits across the life cycle, including the design, manufacture, and use of chemical products.
4. **Green Suppliers Network:** A collaborative venture between industry and EPA that works with all levels of the manufacturing supply chain to achieve environmental and economic benefits.
5. **Hospitals for a Healthy Environment/Partnership for Sustainable Healthcare:** A program working with the healthcare industry to reduce its environmental impact. It became EPA's first voluntary program to become an independent non-profit organization in 2006. The program was initially named Hospitals for a Healthy Environment, but took on the new name Partnership for Sustainable Healthcare when the initial program became independent.
6. **Pollution Prevention Resource Exchange:** Provides national-level support and coordination of the Pollution Prevention Resource Exchange network through the provision of P2 information to facilitate State and tribal P2 technical assistance providers, and records the results of State P2 programs through a National P2 results system.
7. **P2 Program in EPA's 10 Regional Offices:** Report results from matching grants to State/tribal P2 programs, source reduction grants to promote P2 practices by industry, and direct regional efforts to facilitate business P2 practices and interstate coordination on promoting P2.

Program Assessment Rating Tool

PART, developed by OMB, is a diagnostic tool and management control process to assess program performance and drive a focus on results. PART is designed to provide a consistent approach to assessing and rating programs across the Federal Government. PART reviews overall program effectiveness, from how well a program is designed to how well it is implemented and what results are achieved.

PART uses a standard questionnaire. For each question, agencies provide short answers and a detailed explanation with supporting evidence. Once each assessment is completed, a rating is assigned and, if necessary, a program improvement plan is developed to monitor and improve program performance.

The P2 Program is one of 53 EPA programs assessed using the PART tool. It received a score of moderately effective based on a rating of 82 percent, the third highest among all EPA programs assessed. According to OMB, a program rated moderately effective has set ambitious goals and is well-managed. Moderately effective programs likely need to improve their efficiency or address other areas in the program's design or management to achieve better results.

Noteworthy Achievements

The Design for the Environment center, working with the automotive refinishing industry, developed best practices that help small businesses reduce emissions of toxic chemicals. Building on a successful approach, Design for the Environment worked collaboratively with EPA's Office of Air Quality Planning and Standards and EPA regional offices to base an area source regulation on this P2 program. The regulation became effective on January 9, 2008.

Hospitals for a Healthy Environment became EPA's first voluntary program to become an independent non-profit organization in 2006. Although the new entity, a 501(c)(3) non-profit organization, is totally independent and has no legal connection to the Agency, it retained the name and has an agenda and mission consistent with EPA's goals.

Scope and Methodology

We conducted our field work from October 2007 through April 2008 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

To accomplish our objectives, we reviewed the P2 Program's responses to the OMB PART questionnaire and analyzed the evidence the program provided in support of those responses. We reviewed the supporting evidence for each of the PART questions to ensure that it adequately supported the program's response and to determine whether it supported the OMB score received. In support of EPA's mission "To Protect Human Health and the Environment," we assessed whether the program's performance measures adequately measure progress toward protecting human health and the environment.

To test internal controls, we met with officials from each of the seven Centers of Results to identify their voluntary partners. For each center, we flow charted their organizational processes and documented their program data sources and uses. We obtained, analyzed, and traced the performance results to supporting documentation to verify and validate performance results reported for FY 2006. We met with the P2 coordinators for Regions 3 and 8 to obtain, review, and analyze the grantee data flow. We obtained the regional grantees' program performance reports and traced the program results to supporting documentation.

We reviewed the program improvement plan developed by OMB and the P2 Program and obtained and analyzed actions taken and planned to address the plan.

We briefed P2 Program managers on our preliminary results to obtain their feedback and ensure that we accurately and completely captured their P2 efforts.

Because we looked at the first PART review of the P2 Program, no follow-up was needed.

Chapter 2

PART Information Supports Rating

The P2 Program's data provided in response to the OMB PART Assessment generally addressed the PART questions and supported the moderately effective rating received. Moderately effective means the P2 Program has set ambitious goals and is well-managed. Despite receiving a moderately effective score, several internal control weaknesses were identified that need to be addressed.

Information Supports Rating

Our review of the P2 Program's responses and the supporting data for each of the four PART categories disclosed the following.

1. Program Purpose and Design: The program received a score of 100 points in this section. We reviewed the documents provided as evidence and found they support the OMB PART assessment score. The P2 Program has been designed to address the requirements of the Pollution Prevention Act.

2. Strategic Planning: The program received 88 out of 100 points in this section. We reviewed the documents provided as evidence and found they support the OMB PART assessment score. At 12 points each, no points were awarded for PART question 2.6, "Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need?" While the P2 program has conducted evaluations, including two conducted by EPA's Office of Policy, Economics and Innovation, they did not meet OMB's criteria for independence.

3. Program Management: The program received 70 out of 100 points for this section. We found that the quality of the data supporting the P2 PART performance measures impacts the program's performance measurement and accomplishment reporting. At 10 points each, no points were awarded for the following questions:

- "Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance?" (Question 3.1)
- "Are federal managers and program partners held accountable for cost, schedules and performance results?" (Question 3.2)
- "Does the program collect grantee performance data on an annual basis and make it available to the public in a transparent and meaningful manner?" (Question 3.CO3)

4. Program Results/Accountability: The program received 80 out of 100 points for this section. We found that the documents provided as evidence support the OMB PART assessment score in this section. At 20 points each, no points were awarded for question 4.5, “Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results?” OMB made a determination that the evaluations conducted by the program lacked sufficient independence to receive credit under the PART. As a result of our review, we believe P2 should take additional steps to demonstrate relative effectiveness of its results in protecting human health and the environment, as discussed later in this report.

Several Weaknesses Noted

In addition to reviewing the PART and the P2 Program’s evidence provided in support of its responses to the PART questions, we also examined the internal controls used to capture and report program accomplishments. Government Accountability Office *Standards for Internal Controls in the Federal Government* state that internal controls are an integral component of an organization’s management that provide reasonable assurance that the program operates effectively and efficiently. We found the following weaknesses:

- The P2 Program’s FY 2006 PART approved performance measures were not designed to report on the effects on human health and the environment.
- The P2 Program’s verification and validation procedures did not ensure the accuracy of performance data.
- The PART program improvement plan did not address all the deficiencies identified.

Details on our findings and recommendations for these three issues are in Chapters 3 through 5, respectively.

Chapter 3

Performance Measures Need to Better Address Impacts

The P2 Program's two FY 2006 PART-approved long-term performance measures are not designed to report on the program's impact to human health or environmental conditions. The two FY 2006 PART measures used by the P2 Program are:

- Cumulative pounds of hazardous materials reduced by P2 Program participants.
- Cumulative business, institutional, and government cost reduced by P2 Program participants.

According to the Chief, Planning and Assessment Branch, the lack of reliable data limits the P2 Program's ability to measure its impacts on human health and the environment. This limits EPA's ability to measure progress toward meeting the Agency's goal of protecting human health and the environment.

P2 Program Needs Better Performance Measures

Federal agencies are expected to demonstrate how their activities contribute to achieving agency or government-wide goals. The Government Performance and Results Act requires federal agencies to report annually on their progress in achieving their agency and program goals.

EPA categorizes its performance goals and measures in a framework known as the "hierarchy of indicators" (see Figure 3-1; Appendix A provides more details).

Figure 3-1: EPA Hierarchy of Indicators

| Level | | | | | |
|--|---|--|---|---------------------------------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| Actions by EPA, States, tribes, or other governmental bodies | Actions or responses by regulated parties | Discharges and emissions of pollutants | Concentrations of pollutants in the environment | Pollutants absorbed by the human body | Environmental risk or impacts to the ecology or human health and/or welfare |

Source: Government Accountability Office Report, GAO/RCED-00-77, *EPA Faces Challenges in Developing Results-Oriented Performance Goals and Measures*, April 2000

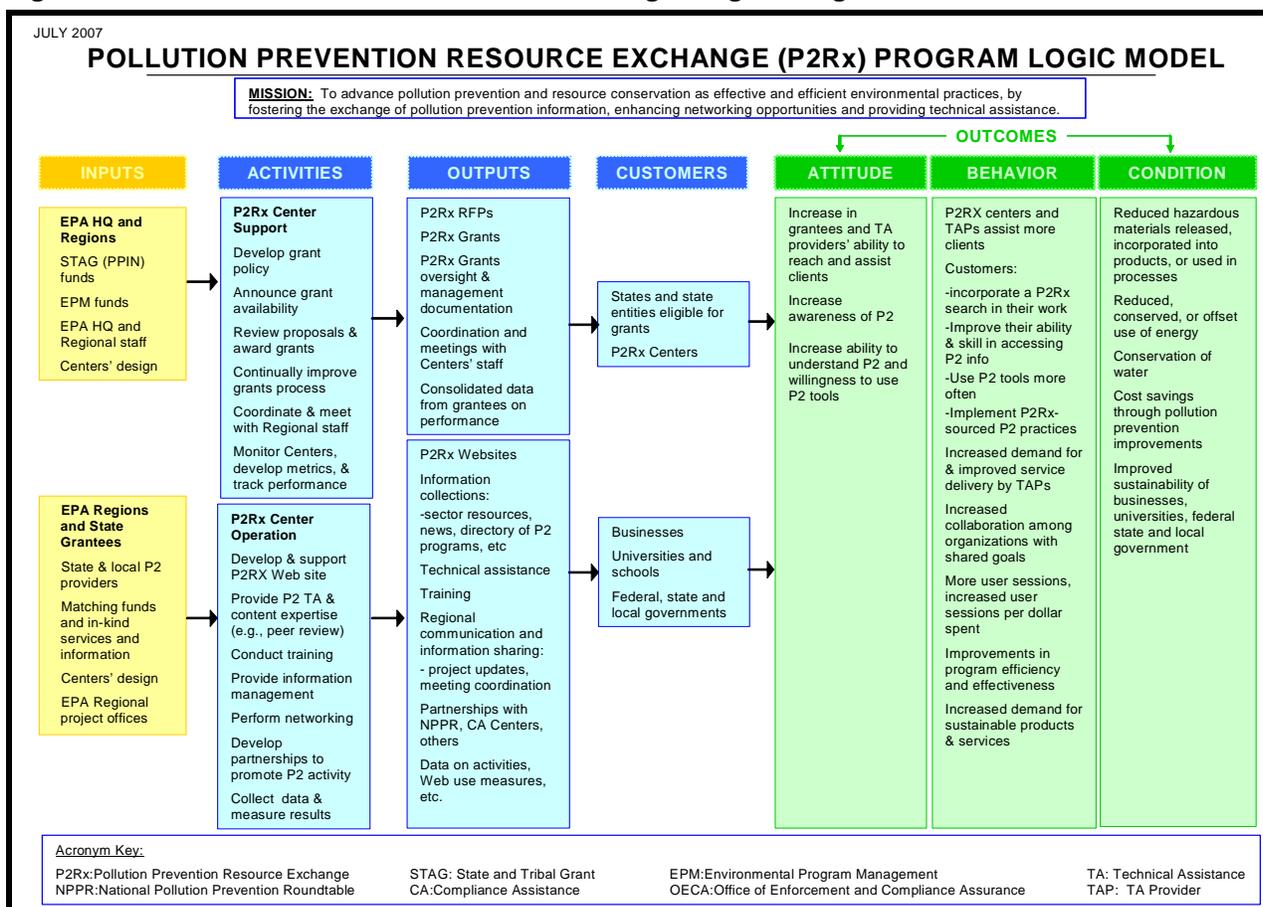
This framework ranks the performance goals and measures according to their impact on improving human health and the environment. At the top of the hierarchy, level 6 indicators are reductions of environmental risks or impacts to the ecology or to human health and/or welfare. Level 3 indicators are reductions in

discharges and emissions of pollutants. The P2 Program's two FY 2006 PART-approved long-term end outcome performance measures fall into the level 3 category, which limits the P2 Program's ability to relate program results to impacts on human health and the environment. P2 Program managers believe that the lower level outcome measures represent the highest level measure relating to the program's hazardous materials reduction mission that can be supported by data obtainable on a program-wide basis. However, the P2 Program does have two higher level Government Performance and Results Act performance measures (reductions in energy use and water use) that are included in the Program's annual President's Budget and Performance Accountability Report but were initially rejected as PART measures during the FY 2006 PART assessment. OMB approved the water savings measure and an additional higher-level measure "reductions in green house gas emissions" as PART measures in the 2008 PART Spring Update.

The seven Centers of Results logic models further illustrate that the P2 Program's FY 2006 PART measures were not designed to measure impacts to human health or the environment (see example Figure 3-2). A logic model is an evaluation tool used to describe a program's components and desired results. It explains the strategy or logic by which the program expects to achieve results. Logic models help articulate a program's expected outcomes by linking program resources and activities to program outcomes. While not inherently measurable, the centers' logic models do highlight movement towards sustainability through behavior change as well as within center mission and goal statements. We reviewed each of the logic models and found that none directly linked their resources to effectiveness in protecting human health and the environment. Instead they focused on hazardous materials reductions and cost savings, which equate to level 3 on EPA's hierarchy of indicators.

The Chief, Planning and Assessment Branch, told us that due to a lack of reliable and readily available data on a program-wide basis required to support higher level measures, level 3 measures are generally accepted by the P2 Program as the highest available for measuring results associated with the program's hazardous materials reduction mission. He indicated that while some P2 results centers such as Design for the Environment and Green Chemistry do have access to these data, obtaining them on a program-wide basis would be challenging and require OMB approval of Information Collection Requests and consent by voluntary partners and State P2 Programs to provide the data. The Chief further indicated that measuring improvements to health and ecological conditions is challenging because no methodology exists for modeling changes in these conditions based on reductions to any and all pollutants. Available methodologies are only equipped to measure hazard or risk change on a chemical-by-chemical basis where the chemical of concern is known. According to the Chief, additional methodologies and data are needed to establish a direct cause-and-effect relationship between the program's activities and the resulting changes in the environment and human health.

Figure 3-2: Pollution Prevention Resource Exchange Program Logic Model



Source: Chief, Planning and Assessment Branch, OPPTS

We recognize that the P2 Program's effectiveness in reducing human health and environmental risk associated with hazardous materials reductions is difficult to evaluate. The program nonetheless recognizes the value in doing so. As the former P2 Director stated, to evaluate program effectiveness, programs must be able to show the outcomes from their activities. That focus enables one to demonstrate changes in understanding and behavior of the target audience and, ultimately, quantify the effects on the environment and human health.

Defining a Universe of P2 Pollutants Difficult

The P2 Program measures hazardous materials source reduction progress in relation to targeted goals rather than the actual or estimated universe of pollutants to be addressed. According to the Chief, Planning and Assessment Branch, there is no known source of reliable information for the P2 Program to use that identifies the universe of hazardous materials generated and/or used in the United States, against which to demonstrate the program's relative effectiveness. We recognize that it may be difficult to identify a universe of pollutants across all media and uses. However, providing a complete picture of the program's

performance results could provide a better perspective of the P2 Program's effectiveness and progress in addressing source reduction.

We found that the FY 2006 P2 Program's PART results do not provide a complete picture of the program. Each of the seven Centers of Results focuses on particular chemicals and specified uses. They report program accomplishments based on those chemicals as they relate to the specified uses. For example, at the end of FY 2006, the Partnership for Sustainable Healthcare program reported actual results of 17.6 million pounds of regulated medical waste and hazardous waste reduced by hospitals participating in the program. However, the Partnership did not report 5.0 million pounds of the same wastes increased at those participating hospitals during the same reporting period as a result of increased production. The program should make it clear in its results reporting that it does not account for increased waste generation resulting from increased production levels.

As another example, the Design for the Environment program reported 124.7 million pounds of hazardous material reductions in FY 2006, representing approximately 33 percent of the year's total reductions. Program accomplishments were the result of its two sub-programs – Lead-Free Solder Initiative and Formulator. However, the Lead-Free Solder Initiative reported reductions of lead solder that make up a substantial portion of the Design for the Environment total. This accomplishment data is provided by a trade association and represents the amount of lead-free solder shipped globally during calendar year 2006. That amount, however, does not represent the amount of lead solder reduced; rather the program is using that amount as a conservative proxy for the amount of lead solder use actually reduced. Providing such information would give stakeholders an improved perspective of the extent of the threat that lead solder continues to pose.

Recommendations

We recommend that the Assistant Administrator for the Office of Prevention, Pesticides, and Toxic Substances:

- 3-1 Focus on the select P2 pollutants where health effects are known and develop higher level performance indicators that address reductions of environmental risks or impacts to human health.
- 3-2 Using the results of Recommendation 3-1, design a strategy for developing P2-wide PART higher level measurements that could be used as a model to further develop P2 Program-wide higher level measurements.

- 3-3 Report program accomplishments as they relate to the universe for the targeted chemical in the specified uses addressed by the P2 Program to provide a better perspective of the program's relative effectiveness.

Agency Response and OIG Comments

OPPTS concurred with all of our recommendations in this area.

We evaluated the program's planned actions for each recommendation and concluded that, if implemented according to their descriptions, they could reasonably be expected to correct the concerns we identified. We also analyzed the corresponding planned completion dates and similarly found them to be reasonable.

In response to Recommendation 3-1, OPPTS indicated its intention to develop an initial indicator tracking one or more health effects associated with at least one chemical that the program is currently focusing on by March 2009, and subsequently begin gathering data to support tracking the indicator on an annual basis.

In response to Recommendation 3-2, OPPTS indicated its intention to include in EPA's September 2009 submission to Congress of its 2014 Strategic Plan at least one new higher-level Strategic Measure and associated long-term performance targets. OPPTS will propose adding the new Strategic Measure and associated annual performance targets to the 2009 Fall PART Update and assess opportunities for developing additional higher-level measures and targets in future years.

In response to Recommendation 3-3, OPPTS indicated that in September 2008, it included a proposed new Pollution Prevention Program Strategic Measure in EPA's 2014 Strategic Plan Change Document (circulated for public comment). The proposed strategic measure tracks the program's results in reducing production and use of a priority set of hazardous chemicals which will enable the program to define associated universe(s) that will provide the recommended perspective on the program's relative effectiveness. In spring 2009, OPPTS and Office of the Chief Financial Officer will determine whether to include the proposed measure in public comment drafts of the Strategic Plan and whether to submit to OMB as formal PART measures.

Chapter 4

P2 Program Needs to Strengthen Internal Controls over Data Collection

The P2 Program needs to strengthen internal controls over data collection and reporting of accomplishments. OPPTS's Quality Management Plan (QMP) requires meeting quality standards and establishing acceptance criteria. In addition, Government Accountability Office internal control standards require relevant, reliable, and timely data. The P2 Program had established quality assurance procedures and policies governing its contractor and grantee supported collection and use of environmental data, but had not established similar procedures and policies governing work performed by EPA staff. While the Office of Pollution Prevention has established broad controls through the QMP, it did not develop a Quality Assurance Project Plan (QAPP) that would have included data quality objectives. As a result, EPA did not have assurance that performance results were accurately reported and EPA had limitations on demonstrating program effectiveness. According to the P2 Program, they have a QAPP that is currently being used in at least one region. However, the program acknowledged that QAPPs are not in place in all regions.

Collecting Data from Multiple Sources Challenging

OPPTS's QMP states that all environmental data activities generated by or for OPPTS shall meet quality standards, and that appropriate acceptance criteria will be established prior to any environmental data activity. In addition, the Government Accountability Office's *Standards for Internal Control in the Federal Government* states that for an entity to run and control its operations, it must have relevant, reliable, and timely communications relating to internal as well as external events. It further states management should ensure there are adequate means of communicating with, and obtaining information from, external stakeholders that may have a significant impact on an agency achieving its goals.

The Office of Pollution Prevention and Toxics relies on voluntary programs to encourage and carry out pollution prevention activities. The seven Centers of Results work in partnership with a broad range of stakeholders to reduce risk by preventing pollution at its source. The Centers collect and aggregate performance data from voluntary partners at other federal agencies, States, tribes, and industry.

- P2 Programs in EPA's 10 regional offices collect and aggregate performance data from States, tribes, and academia (typically grantees), as well as through direct interaction with entities implementing pollution prevention activities.

- Partnership for Sustainable Healthcare performance data are manually extracted from hospitals' recognition award applications.
- Green Chemistry extracts performance data from award nomination packages. Data is reported for the winners of the awards.
- Pollution Prevention Resource Exchange collects performance data from State technical assistance providers who submit performance data to the eight P2 resource regional exchange centers.
- Environmentally Preferable Purchasing electronically extracts performance data from the Federal Electronics Challenge partners and Green Electronics Council trade association data which is run through a peer reviewed Electronics Environmental Benefits Calculator.
- Design for the Environment, through its partnerships with industry representatives and environmental groups, manually collects, aggregates, and calculates performance results data. Performance data are also gathered from trade associations.
- Green Suppliers Network, through a partnership with the National Institute of Standards and Technology, extracts performance results from surveys of companies that the institute reviews for lean manufacturing processes.

Each of the seven Centers of Results aggregates its P2 performance results data from these sources and submits the data to Office of Pollution Prevention and Toxics' Planning and Assessment Branch for consolidation and reporting. In addition, the Branch annually extracts from the Agency Commitment System direct contributions to pollution prevention from EPA's regional offices.

Inconsistent and Inaccurate Reporting of Results

We found that the P2 Program had not established controls for the consistent reporting of State and tribal program results through its regional grant programs. We met with two regional P2 coordinators to discuss and review their data sources used in reporting grant results and found that there was no consistent format for reporting grant results. Also, verification and validation procedures did not ensure the accuracy of grantee results submitted by the States or the facilities claiming the accomplishments. The P2 Program has indicated they are taking steps to improve the consistency and transparency of annual regional results, including: development of QAPP guidance currently being used by several regions; issuance of new guidance to grant applicants on measuring and reporting the results from grant awards; standardization of a model spreadsheet for reporting outcome performance results; and posting of performance results on the P2 Website.

In the spring 2007 PART update to the program improvement plan, the P2 Program reported that each region will use a standard spreadsheet beginning in 2008 to display grant and direct project annual results by measure. Implementing a standard format for reporting, along with procedures, should facilitate consistency in reporting regional P2 annual results.

The P2 Program’s Partnership for Sustainable Healthcare reported \$6.3 million in business, institutional, and government costs reduced by P2 program participants. We were unable to substantiate these cost savings from the documents provided as support. The partnership’s cost savings are manually extracted from the participating hospital’s recognition award applications. The P2 Program does not have written procedures for its EPA staff for extracting cost savings from the participating hospitals’ award applications. We randomly reviewed 11 (23 percent) of the 47 award applications that reported cost savings, and were unable to arrive at the cost savings reported by the P2 Program for seven of the applications. According to a program manager, limited resources and short reporting timeframes affect data quality.

At the end of FY 2006, P2 reported actual program results of 383 million pounds of hazardous materials reduced and \$85.7 million in cost reductions by program participants (see Figures 4-1 and 4-2).

Figure 4-1: FY 2006 Hazardous Materials Reductions

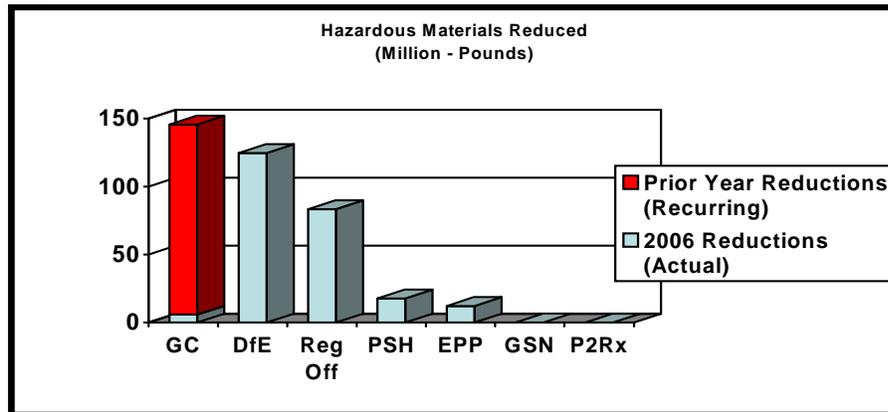
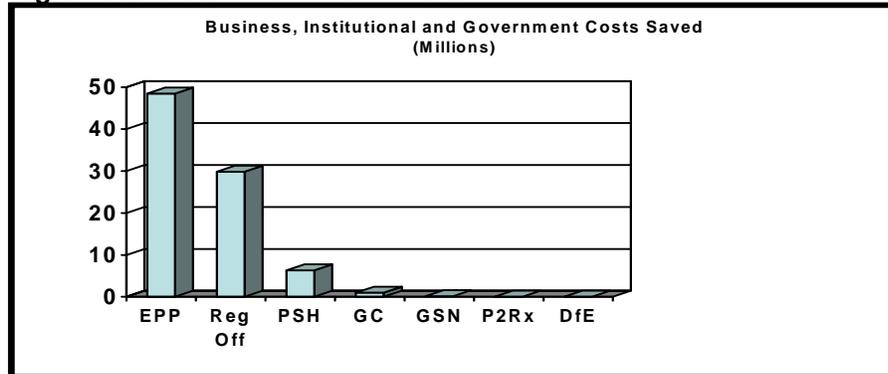


Figure 4-2: FY 2006 Cost Reductions



Source: OIG analysis of P2 FY 2006 results data

- DfE: Design for the Environment Center of Results
- EPP: Environmentally Preferable Purchasing Center of Results
- GC: Green Chemistry Center of Results
- GSN: Green Supplies Network Center of Results
- P2Rx: Pollution Prevention Resource Exchange Center of Results
- PSH: Partnership for Sustainable Healthcare Center of Results
- Reg Off: Regional Offices’ Direct Contributions

Representing approximately 38 percent of the total 383 million pounds of hazardous materials reduced in FY 2006, the Green Chemistry program reported 145.6 million pounds reduced. We reviewed documentation supporting Green Chemistry's 145.6-million-pound annual reduction claimed in FY 2006 and found that only 5.8 million pounds were actually reduced by the 2006 Presidential Green Chemistry Award winner in 2006. The remaining 139.9 million pounds were reductions realized as far back as 1996 and projected through FY 2011 – the end of the Agency's 2006-2011 strategic planning cycle. For example, the 5.8 million pounds of hazardous materials reductions reported by the 2006 award winners will be reported as reductions every year through FY 2011. Green Chemistry projections include a company's annual reductions in subsequent years as current year reductions rather than reporting actual annual accomplishments. We did not test the soundness of this recurring results methodology for projecting annual program accomplishments out for approximately 15 years. We were advised by P2 that they conducted a consultation with EPA's Science Advisory Board on September 3, 2008 to obtain input on their methodology for measuring program results, and are awaiting the Board's formal communication of recommendations.

Data Quality Requirements Not Met

The ultimate success of a program or project depends on the adequacy, sufficiency, and quality of the environmental data collected and used in decision making. EPA Requirements for Quality Management Plans (March 2001) states that EPA organizations are required to establish, implement, and document their quality system in a QMP. The QMP is supported by project-specific QAPPs, which require all work performed by, or on behalf of, EPA involving the collection of environmental data be implemented in accordance with an Agency-approved QAPP. A QAPP defines and documents how specific data collection activities shall be planned, implemented, and assessed during a particular project.

We reviewed OPPTS's QMP for the Pollution Prevention Division (June 2003), and found that P2's activities involved the collection and analysis of environmental data as well as analyzing environmental data previously collected. At the time of our review, we did not find that a QAPP was developed for P2 projects. Developing and implementing an effective QAPP may have prevented many of the data quality issues we identified with the P2 Program. Although OPPTS has developed a broader QMP, we found it was not being fully implemented by all P2 Centers. Further, more detailed procedures, which would be included in a QAPP, were not developed. As a result, P2's and the program partner's verification and validation procedures did not ensure the accuracy of performance data used for reporting on program accomplishments.

As P2 performance data is communicated internally and externally to Congress and other stakeholders, the data should be relevant, reliable, and timely. The Pollution Prevention Division needs to implement the requirements of the QMP to ensure the quality of its environmental data.

Recommendations

We recommend that the Assistant Administrator for the Office of Prevention, Pesticides, and Toxic Substances:

- 4-1 Revise the P2 Program procedures for calculating program results to collect and use current year data from its voluntary partners to calculate annual program results.
- 4-2 Require the development of QAPPs for collecting environmental data.
- 4-3 Implement controls to ensure full implementation of the Pollution Prevention Division's QMP.

Agency Response and OIG Comments

OPPTS concurs with all of our recommendations in this area.

We evaluated the Program's planned actions for each recommendation and concluded that, if implemented according to their descriptions, they could reasonably be expected to correct the concerns we identified. We also analyzed the corresponding planned completion dates and similarly found them to be reasonable.

In response to Recommendation 4-1, OPPTS indicated it met with EPA's Science Advisory Boards in September 2008 to obtain advice on how to more fully reflect its benefits by measuring its recurring as well as new annual results and is developing measures that clearly distinguish the two.

In response to Recommendation 4-2, OPPTS explained that although the development of QAPPs for contractors and grantees has been a tenet of the OPPTS Quality Assurance policy for a number of years and all P2 Program Centers have been in compliance with this policy, outside organizations that voluntarily submit data to the Program have generally not submitted associated QAPPs. We maintain that at the time of completion of our audit we had not received evidence that any QAPPs were in effect for the Program whether for contractors and grantees, regions or centers, or voluntary partners. In response to our draft report issued to the P2 Program on November 3, 2008, we received from OPPTS a document entitled "QAPP Lite" which was reportedly in place for at least Region 1. This document, in our opinion, did not approach the purpose and standards prescribed by the QMP. The P2 Program also contends that two of its centers have data validation procedures for information submitted by partners and in nominations for program awards. These procedures are not, however, a substitute for a high quality QAPP.

In response to Recommendation 4-3, OPPTS indicated it is in the process of developing a set of Standard Operating Procedures to ensure implementation of the QMP.

Chapter 5

Program Improvement Plan: Progress Slow and Not All Weaknesses Addressed

While P2 has completed many of its interim actions to address the program improvement plan (PIP), the plan did not address all the deficiencies identified during the PART assessment. The P2 Program received a PART score of zero on critical questions regarding program evaluations, data quality, and management accountability during its FY 2006 PART assessment. Nonetheless, no actions were identified to correct these shortcomings. To maximize the effectiveness of the PART tool and ensure the P2 Program is operating efficiently and effectively, the PIP should address the cause of the deficiencies identified during the assessment process.

Progress to Address PIP Slow

In response to each of the PART areas assessed, the program office and OMB identify actions to improve the program's performance through a PIP. Agency steps to complete these actions and improve performance are tracked through the President's Management Agenda scorecard for the Performance Improvement Initiative, as well as through PART updates. As a result of the 2006 PART assessment, OMB examiners and P2 Program managers developed the following activities for the P2 Program:

- Evaluate Science Advisory Board report recommendations for improving performance measures to better demonstrate P2 results.
- Identify and reduce barriers associated with core EPA activities that limit implementation of pollution prevention practices by industry.
- Develop additional P2 Program efficiency measures to expand the portion of the program's resources that are addressed.
- Fully implement GranTrack and P2 State Reporting System. Obtain consistent 2007 results from regions.

We reviewed the P2 Program's 2007 PART spring PIP update and discussed the actions taken with P2 Program managers. Although the P2 Program has completed many of its interim actions to address the PIP, 2 years later only one of the corrective actions had been fully completed and implemented. Details on what we found for each of the four activities listed above follow.

Evaluate Science Advisory Board report recommendations for improving performance measures to better demonstrate P2 results

Although the P2 Program initiated actions to secure a commitment with the Science Advisory Board in FY 2006 for assistance in making improvements in reporting accomplishments and developing measures, an actual commitment was not received until April 2008 for a September 2008 consultation, almost 2 years later.

On June 14, 2006, the P2 Program provided the Science Advisory Board an overview on the program and the measurement issues they face. They also provided questions for the Science Advisory Board to consider pertaining to projecting recurring results, capturing the impact of indirect assistance, and using environmental calculators. In the 2007 PART spring update, the P2 Program indicated it had received a commitment from the Science Advisory Board to assess and review P2 Program performance measures. However, we found that due to scheduling problems with the Science Advisory Board and the P2 Program Division Director's retirement, the P2 Program had not received assistance from the Science Advisory Board.

In April 2008, the P2 Program and the Science Advisory Board were able to schedule and subsequently conduct a consultation to assess the methodology surrounding the use of recurring results in performance measurement and to explore the feasibility of adding higher level indicators (4, 5, or 6) from the Agency's Hierarchy of Indicators. According to the P2 Program the Science Advisory Board also examined how to measure outcome data from indirect program interventions. Indirect interventions are not on-site and include dissemination of P2 information through various means. The program anticipates formal recommendations from the Board to be provided to the EPA Administrator before the end of 2008, and causing a further extension of the associated PART PIP to evaluate those recommendations until the 2009 spring PART update.

Identify and reduce barriers associated with core EPA activities that limit implementation of pollution prevention practices by industry

The Pollution Prevention Division conducted a self assessment and developed a draft report, "Evaluation of EPA Efforts to Integrate Pollution Prevention Policy throughout EPA and at Other Federal Agencies" (dated March 27, 2008). The evaluation assessed the current state of P2 integration within EPA programs, including barriers and Toxic Release Inventory source reduction reports. The evaluation focused on Pollution Prevention Act provisions that address integrating P2 policy into federal programs authorized under other statutes. The P2 Program concluded that most of the Agency's program activities and efforts to promote P2 among other EPA programs and at other federal agencies are in basic conformity with the Act's provisions for P2 integration but there is clearly room for improvement. The reported recommendations were:

- Take short-term action on several steps to improve the implementation of pollution prevention policy;
- Review the Agency's information collection practices pertaining to P2, with the aim of improving overall ease of data collection, coordination between systems, and availability of information once collected;
- Address the need for meaningful P2 guidance in the Agency's Economic Impact Analysis Guidance;
- Begin in the short term two processes for more thoroughly improving implementation of pollution prevention policy; and
- Begin longer-term processes for addressing more far-reaching positive improvements in the implementation of pollution prevention policy.

The P2 Program provided the draft report to the States and noted in its response to our draft report that it had received feedback in the summer 2008. The P2 Program plans to incorporate key recommendations into its strategic plan.

Develop additional P2 Program efficiency measures to expand the portion of the program's resources that are addressed

According to the Chief, Planning and Assessment Branch, the P2 Program has developed a revised Design for the Environment efficiency measure which increased the scope of the program in the fall 2007. Another measure, assessing the efficiency of the Environmentally Preferable Purchasing program, will be introduced in the fall 2008. These measures will cover more of the P2 Program's resources, as recommended by OMB.

Fully implement GranTrack and P2 State Reporting System. Obtain consistent 2007 results from regions

GranTrack is a Web-based tool designed to help EPA regional and headquarters project officers manage grants and access information on pollution prevention projects around the country. According to the Chief, Planning and Assessment Branch, GranTrack is one of several options currently being assessed to track P2 results from State Technical Assistance Grants and Source Reduction Assistance Grants. While the Fiscal Year 2006 PIP recommendation was to obtain consistent 2007 results from the regions, a decision on whether GrantTrack will be used had not been made as of fall 2008.

The State P2 Reporting system, "P2 Results," has been fully implemented. The first report using performance information from this system has been compiled and is planned for release in the summer 2008. These data come from States and businesses through Pollution Prevention Resource Exchange centers and the report will be issued by the National Pollution Prevention Roundtable.

To obtain consistent 2007 results from regions, the program initiated a reporting methodology in a standard spreadsheet. Beginning in 2008, each P2 region will be required to use a standard spreadsheet in addition to P2 results to display grants and project annual results by measure.

The Program also issued guidance, “Draft 2008 Measurement Guidance for EPA P2 Coordinators,” on developing FY 2008 commitments to EPA’s Agency Commitment System, to further ensure consistency in reporting results. While labeled draft, the Chief, Planning and Assessment Branch, indicated the guidance is a “living document,” and as new and better ways are discovered to improve measurement methodologies they will be incorporated into the measurement guidance. P2 Program managers met with regional P2 coordinators in May 2008 and plan to issue a final version of the guidance incorporating feedback from the P2 coordinators in the fall 2008.

Additional Program Improvements Needed

The PIP developed by OMB and the P2 Program following the P2 PART Assessment did not address all the deficiencies identified. The PART tool is used to assess the program’s performance and drive improvements. Therefore, to maximize its effectiveness, the PIP should address the deficiencies identified during the assessment process. Correcting the deficiencies for the critical questions that scored zero in the PART assessment can help improve the P2 Program’s overall performance. Details are in Table 5-1.

Table 5-1: P2 Program’s FY 2006 PART Questions Receiving a Score of Zero

| Question # | PART Questions | Critical Areas |
|------------|---|---------------------------|
| 2.6 | Are independent evaluations of sufficient scope and quality conducted on a regular basis or as needed to support program improvements and evaluate effectiveness and relevance to the problem, interest, or need? | Program Evaluations |
| 3.1 | Does the agency regularly collect timely and credible performance information, including information from key program partners, and use it to manage the program and improve performance? | Data Quality |
| 3.2 | Are Federal managers and program partners held accountable for cost, schedules and performance results? | Management Accountability |
| 3.CO3 | Does the program collect grantee performance data on an annual basis and make it available to the public in a transparent and meaningful manner? | Data Quality |
| 4.5 | Do independent evaluations of sufficient scope and quality indicate that the program is effective and achieving results? | Program Evaluations |

Source: OIG review and analysis of the P2 Program’s FY 2006 PART Assessment

Recommendations

We recommend that the Assistant Administrator for the Office of Prevention, Pesticides, and Toxic Substances:

- 5-1 Have the P2 Program plan and schedule periodic evaluations of its pollution prevention efforts to identify areas where program improvements are needed and implement needed corrective actions.
- 5-2 Develop actions to address the PART questions where the P2 Program was not awarded any points during the FY 2006 PART Assessment and include the PIP in the next PART update to promote continual P2 Program improvements.

Agency Response and OIG Comments

OPPTS concurs with all of our recommendations.

We evaluated the program's planned actions for each recommendation and concluded that, if implemented according to their descriptions, they could reasonably be expected to correct the concerns we identified. We also analyzed the corresponding planned completion dates and similarly found them to be reasonable.

In response to Recommendation 5-1, OPPTS reiterated that it has conducted two extensive program evaluations addressing two of its Centers of Results that were completed on schedule and within budget. We maintain that the P2 Program could benefit from planned and scheduled evaluations of their voluntary programs.

In response to Recommendation 5-2, OPPTS indicated it will ensure that all proposed replacements for completed follow-up actions are targeted at unaddressed weaknesses identified in the Pollution Prevention Program PART Assessment until all weaknesses have been fully addressed or, in the case of the PART requirements for independent program evaluations, addressed to the extent deemed practicable given program resource allocations and influence over decisions made by independent evaluating entities.

Status of Recommendations and Potential Monetary Benefits

| RECOMMENDATIONS | | | | | | POTENTIAL MONETARY BENEFITS (in \$000s) | |
|-----------------|-------------|--|---------------------|--|-------------------------------|--|---------------------|
| Rec. No. | Page No. | Subject | Status ¹ | Action Official | Planned Completion Date | Claimed Amount | Agreed To Amount |
| 3-1 | 10 | Focus on the select P2 pollutants where health effects are known and develop higher level performance indicators that address reductions of environmental risks or impacts to human health. | | Assistant Administrator, Office of Prevention, Pesticides, and Toxic Substances | March 2009 and ongoing | | |
| 3-2 | 10 | Using the results of Recommendation 3-1, design a strategy for developing P2-wide PART higher level measurements that could be used as a model to further develop P2 Program-wide higher level measurements. | | Assistant Administrator, Office of Prevention, Pesticides, and Toxic Substances | Fall 2009 | | |
| 3-3 | 11 | Report program accomplishments as they relate to the universe for the targeted chemical in the specified uses addressed by the P2 Program to provide a better perspective of the program's relative effectiveness. | | Assistant Administrator, Office of Prevention, Pesticides, and Toxic Substances | Fall 2009 | | |
| 4-1 | 16 | Revise the P2 Program procedures for calculating program results to collect and use current year data from its voluntary partners to calculate annual program results. | | Assistant Administrator, Office of Prevention, Pesticides, and Toxic Substances | Fall 2009 | | |
| 4-2 | 16 | Require the development of QAPPs for collecting environmental data. | | Assistant Administrator, Office of Prevention, Pesticides, and Toxic Substances | 2009 | | |
| 4-3 | 16 | Implement controls to ensure full implementation of the Pollution Prevention Division's QMP. | | Assistant Administrator, Office of Prevention, Pesticides, and Toxic Substances | 2009 | | |
| 5-1 | 22 | Have the P2 Program plan and schedule periodic evaluations of its pollution prevention efforts to identify areas where program improvements are needed and implement needed corrective actions. | | Assistant Administrator, Office of Prevention, Pesticides, and Toxic Substances | Spring 2009 | | |
| 5-2 | 22 | Develop actions to address the PART questions where the P2 Program was not awarded any points during the FY 2006 PART Assessment and include the PIP in the next PART update to promote continual P2 Program improvements. | | Assistant Administrator, Office of Prevention, Pesticides, and Toxic Substances | Spring 2010 | | |

¹ O = recommendation is open with agreed-to corrective actions pending

C = recommendation is closed with all agreed-to actions completed

U = recommendation is undecided with resolution efforts in progress

Appendix A

EPA's Hierarchy of Indicators

| Level | Description of Indicator | Type of performance goal and measure generally associated with the indicator | Example of performance goal | Example of performance measure |
|----------------|---|--|--|--|
| 6 | Environmental risk or impacts to the ecology or human health and/or welfare | End outcome | Restore watersheds to their designated uses | Number of river miles, lake acres, and estuary square miles that will be restored to their designated uses |
| 5 | Pollutants absorbed by the human body | End outcome | Reduce pesticide poisonings by 5 percent | Pesticide poisonings will be reduced by 5 percent |
| 4 | Concentrations of pollutants in the environment | End outcome | Maintain healthy air quality for levels of carbon monoxide, sulfur dioxide, nitrogen dioxide, and lead | All areas currently meeting national ambient air quality standards will continue to maintain healthful standards for carbon monoxide, sulfur dioxide, nitrogen dioxide, and lead |
| 3 | Discharges and emissions of pollutants | End outcome | Reduce discharges of toxic air pollutants by 4 million pounds per year | Discharge of toxic air pollutants will be reduced by 4 million pounds per year |
| 2 | Actions or responses by regulated parties | Intermediate outcome | At least 100 drinking water systems eligible for Drinking Water State Revolving Funds will have initiated operations that protect human health and welfare | At least 100 eligible drinking water systems will initiate operations to protect human health and welfare |
| 1 | Actions by EPA, States, tribes, or other governmental bodies | Output | Prepare final rules for disposal of lead-based paint debris and establish standards regarding hazardous levels of lead in paint, dust, and soil | The lead debris disposal rule and lead hazardous standards rule will be completed by September 30, 2000 |
| R ¹ | Research and development | Output | Develop a conceptual model for developing watershed assessment techniques that would assist local, regional, and national environmental decision-makers in maintaining the ecological integrity of a watershed | A model to assess the exposure of wildlife to multimedia environmental contaminants (i.e., in the soil, water, food, and air) will be released |

Source: Government Accountability Office Report, GAO/RCED-00-77, *EPA Faces Challenges in Developing Results-Oriented Performance Goals and Measures*, April 2000

¹ Level "R" was established for research and development efforts to differentiate from other types of environmental activities.

Appendix B

Agency Response to Draft Report

December 4, 2008

MEMORANDUM

SUBJECT: Draft Audit Report: *Measuring and Reporting Performance Results for the Pollution Prevention Program Need Improvement*
Assignment No. 2007-00087

FROM: James B. Gulliford
Assistant Administrator

TO: Patrick Gilbride, Director
Risk and Program Performance
Office of Inspector General (OIG)

Thank you for providing an opportunity to review the Draft Audit Report: *Measuring and Reporting Performance Results for the Pollution Prevention Program Need Improvement* and for your consideration of the comments we offered on the prior Discussion Draft.

As noted in our previous comments, we appreciate the quality and extent of OIG's work in researching the Pollution Prevention (P2) Program. While the requests for information were extensive, we recognize that these requests reflected the depth of the inquiry and diligence in pursuing issues to proper conclusion.

We appreciate and concur with OIG's overall finding that the P2 Program is deserving of the high rating it received from the Office of Management and Budget (OMB) in its Performance Assessment Rating Tool (PART) assessment, which as you know ranks as the third highest rating received among all 53 EPA programs evaluated by OMB to date. OPPTS values OMB's PART assessments as opportunities to collaborate in assessing and improving the soundness of our programs' design and management and their ability to deliver meaningful and important results. In my view, this result, in combination with OMB's similarly high ratings for the Office of Pollution Prevention and Toxics' (OPPT's) Lead Risk Reduction Program and Chemical Risk Review and Reduction Program PARTs – also among the top five EPA-rated programs – is reflective of OPPT's long-standing commitment to and recognition of the importance and value of results-oriented program design and management. We have developed a strong portfolio of quantifiable, results-oriented Government Performance and Results Act (GPRA) and PART performance measures. We were early embracers of program Logic Modeling, with models developed for all of our programs. We believe in the value of program evaluation, having been selected for four of the Office of Policy, Economics and Innovation's (OPEI) annual Program Evaluation Competitions, including two evaluations of elements of the P2 Program.

We don't do these things simply to achieve good PART ratings. We do them because we genuinely believe that they make our programs better and more effective. Similarly, we believe that our engagement with your auditors and the resulting Audit report will contribute significantly towards our goal of continuous program improvement.

We also concur with many of your more detailed findings, and believe that implementing all of your recommendations will contribute significantly to the improvement of the P2 Program's ability to measure and report on its important results. We appreciate your incorporation of many of our comments on the Discussion Draft, and find the quality of this Draft Report to be much improved. We continue to have concerns, however, with the way some information is presented in the Draft Report. Our concerns again fall into three categories:

- Some minor editorial corrections are needed;
- Some factual information (data references and explanations, etc.) and statements ascribed to individuals or program managers in general need correction;
- We disagree with some of your interpretations and associated findings.

To assist you in finalizing the report, we've again compiled a Track Changes version showing all of the corrections we think are needed as well as our remaining suggestions for further improvement (see *P2 PART.Draft OIG Audit Report.OPPTS Suggested Changes.12-04-08*). We continue to recognize that this is OIG's report, not an OPPTS report, but hope you can give additional consideration to this final set of priority concerns in finalizing the report. We're attaching a document providing explanations for all of our substantive concerns/suggestions to help you assess them (see *P2 PART.Draft OIG Audit Report.OPPTS Change Explanations.12-04-08.doc*).

Per your request, we are also providing an attachment indicating our concurrence with each proposed recommendation, including planned completion dates for all recommendations and corrective actions already initiated or planned (see *P2 PART.Draft OIG Audit Report.OPPTS Concurrences & Schedules.12-04-08.doc*).

In the case of one of the concerns we communicate in the Track Changes and Change Explanations documents, regarding your report's suggestion on page 11 that increased waste generation resulting from production/service level increases should count against the program's hazardous materials reduction results, we state that this proposed approach:

"completely distorts the public benefit obtained through the investment of public resources. Reviews of performance measurement literature and practices by other programs, governments and industry support the P2 Program's approach on this issue and do not support the approach suggested in your language. This issue is critically important in supporting sound and cost-effective public policy and investment decisions. If you continue to disagree with us on this point, I recommend we conduct an in-person discussion and include representatives from other EPA programs that would be negatively impacted by the adoption of your suggested approach."

Since your report's suggested approach is not manifested in any of its formal recommendations, we are not deterred from concurring with them. But we do believe that publication of this measurement approach in an OIG Final Report would have negative consequences for many EPA programs and believe the issue merits being raised up the management chain if we are unsuccessful in resolving it at this stage.

OPPTS again expresses appreciation for the quality work that went into this report and values all of the recommendations. My staff and I are available to assist in further refinement of the report into its final form. Please contact Mike Burns (202-564-8273) if additional assistance is needed.

Attachments:

P2 PART.Draft OIG Audit Report.OPPTS Suggested Changes.12-04-08.doc

P2 PART.Draft OIG Audit Report.OPPTS Change Explantions.12-04-08.doc

P2 PART.Draft OIG Audit Report.OPPTS Concurrences & Schedules.12-04-08.doc

P2 Regional Offices.Region 1 QAPP.10-30-07.doc

cc: Jim Jones
Charles Auer
Wendy Cleland-Hamnett
Bruce Berkley
Thomas Tillman
Robert Lee
Barbara Cunningham
Mike Burns

**Draft Office of Inspector General Audit Report:
Measuring and Reporting Performance Results for the Pollution Prevention Program Need
Improvement**

Assignment No. 2007-00087

OPPTS Concurrences with Recommendations and Proposed Implementation Schedules:

As noted in the OPPTS memorandum responding to Patrick Gilbride, Director, Risk and Program Performance, Office of Inspector General (OIG), OPPTS concurs with all of OIG's recommendations presented in its Draft Audit Report: *Measuring and Reporting Performance Results for the Pollution Prevention Program Need Improvement* (Assignment No. 2007-00087), and believe that implementing them will contribute significantly to the improvement of the Pollution Prevention (P2) Program's ability to measure and report on its important results.

Specific responses and implementation schedules for each recommendation are provided below.

3-1: Focus on the select P2 pollutants where health effects are known and develop higher level performance indicators that address reductions of environmental risks or impacts to the ecology or human health.

OPPTS concurs with this recommendation:

- By March, 2009, the P2 Program will develop an initial indicator tracking one or more health effects associated with at least one chemical that the program is currently focusing on. Likely candidates for this initial indicator development are diisocyanates used in auto refinishing operations. Diisocyanates are the leading cause of occupational asthma and also a skin sensitization concern. The P2 Program is already tracking reductions in the use of these chemicals in these settings under its current Level 3 outcome measure targeting reductions in pounds of hazardous materials.
- Commencing in 2009 after the initial higher level indicator is developed, the P2 Program will gather data to support tracking the indicator on an annual basis.
- In future years, the program will explore whether other higher-level could also be developed based on this model.

3-2: Using the results of Recommendation 3-1, design a strategy for developing P2-wide PART higher level measurements that could be used as a model to further develop P2 Program-wide higher level measurements.

OPPTS concurs with this recommendation:

- The P2 Program will include in EPA's September, 2009, submission to Congress of its 2014 Strategic Plan at least one new higher-level Strategic Measure with an associated long-term performance target, drawing on the information developed in support of the higher level indicator to be developed under Recommendation 3-1 above.
- The P2 Program will subsequently propose adding the new Strategic Measure as a PART Long-Term measure in the 2009 Fall PART Update, and propose associated Annual performance targets needed to achieve the Long-Term target.
- In future years, the P2 Program will expand existing performance targets to reflect expanded implementation across the program's Centers, and assess opportunities for developing additional higher-level measures based on this model.

3-3: Report program accomplishments as they relate to the universe for the targeted chemical in the specified uses addressed by the P2 Program to provide a better perspective of the program's relative effectiveness.

OPPTS concurs with this recommendation, having previously at our own initiation commenced taking steps towards its implementation:

- September, 2008: OPPTS included a proposed new Pollution Prevention Program Strategic Measure in EPA's 2014 Strategic Plan Change Document, circulated for public comment, tracking the program's results in reducing production and use of a priority set of hazardous chemicals which, once defined through EPA's Chemical Assessment and Management Program (ChAMP) and other priority-setting mechanisms, will enable the program to define associated universe(s) that will provide the recommended perspective on the program's relative effectiveness.
- Spring, 2009: OPPTS/OCFO will determine whether to include the proposed measure in public comment drafts of the Strategic Plan and whether to submit to OMB as formal PART measures, making necessary refinements as understanding improves regarding the priority setting processes and the measurement mechanics.
- September, 2009: Final Long-Term Measures will be included in the Final EPA 2014 Strategic Plan submitted to Congress.
- Fall, 2009: Final Long-Term and Annual Measures will be submitted to OMB for incorporation as formal PART Measures

4-1: Revise the P2 Program procedures for calculating program results to collect and use current year data from its voluntary partners to calculate annual program results.

OPPTS concurs with this recommendation, having previously at our own initiation commenced taking steps towards its implementation:

- September 3, 2008: Conducted consultation with EPA's Science Advisory Boards' Environmental Engineering Committee to obtain advice on how to more fully reflect the Pollution Prevention Program's benefits by measuring its recurring as well as new annual results.
- October/November, 2008: Developing proposed Pollution Prevention Program Strategic Measures for consideration for inclusion in the EPA 2014 Strategic Plan and as Long-Term and Annual PART Measures, clearly distinguishing measures tracking new annual results from measures that include recurring results stemming from prior years' program interventions.
- Spring, 2009: OPPTS/OCFO will determine which of the above measures to include in public comment drafts of the Strategic Plan and which to submit to OMB as formal PART measures.
- September, 2009: Final Long-Term Measures will be included in the Final EPA 2014 Strategic Plan submitted to Congress.
- Fall, 2009: Final Long-Term and Annual Measures will be submitted to OMB for incorporation as formal PART Measures.

4-2: Require the development of QAPPs for collecting environmental data.

OPPTS concurs with this recommendation, having previously at our own initiation commenced taking steps towards its implementation:

- OPPT's Pollution Prevention Division (PPD) recently revised and updated its Quality Management Plan to document the procedures they have implemented, in part, to respond to the PART assessment's findings. While not officially completed at the time of the OIG audit review and unavailable for distribution, it has now been officially approved by the Agency.
- A number of P2 programs use and report performance results data generated by organizations outside EPA. To prevent inappropriate and inconsistent use of these data, OPPT is in the process of developing data quality criteria that will be provided to those organizations to ensure that future data submitted to EPA comply with these requirements and that the data can appropriately be used by EPA. The development of QAPPs for contractors and grantees which engage in environmental data activities has been a tenet of the OPPT Quality Assurance policy for a number of years and all P2 Program Centers have been in compliance with this policy. However, outside organizations that voluntarily have submitted data to the P2 Program have generally not submitted associated QAPPs, which document the procedures they followed to collect, use and report results, with these data. OPPT is currently developing procedures (see response to Recommendation 4-3) to ensure these organizations provide the appropriate documentation with the data for future submissions. For example, the FY 2009

P2 Grant Program is establishing “appropriate means for measuring the effectiveness of the P2 Grant Program by promoting the use of source reduction techniques by businesses.” To qualify for a grant, applicants must provide qualitative and quantitative estimates of expected outcomes and outputs of project activities through an approved plan. This will comply with EPA Policy Order # 5700.7 (Environmental Results Policy).

- The Design for Environment and Green Chemistry Centers have data validation procedures for information submitted by partners and in nominations for program awards. For the Green Chemistry Awards, nominations are peer reviewed by an independent panel for formal judging. This panel identifies data that need further verification and validation by EPA prior to the award. In addition, those who apply for and receive awards are required to follow a set of procedures to ensure the quality of the information submitted by the nominees. The program will continue these effective procedures in future years. As noted in the response to Recommendation 4-3, Standard Operating Procedures (SOPs) and QAPPs as warranted will be developed to specifically address areas where additional data verification and validation are needed and will be in place for the next round of awards in 2009.

4-3: Implement controls to ensure full implementation of the Pollution Prevention QMP.

OPPTS concurs with this recommendation, having previously at our own initiation commenced taking steps towards its implementation:

- As noted in Recommendation 4-2, the new PPD QMP is now officially approved. However, implementation of the QMP has been ongoing and is well underway. To ensure that the procedures documented in the QMP are properly followed, OPPT is in the process of developing a set of Standard Operating Procedures (SOPs). These procedures are analogous to QAPPs for routine or repetitive activities conducted by an organization, that will specify the data quality objectives, data standards, including reporting formats, and data assessment procedures that EPA needs for its use of data for performance measurement and reporting and, as warranted, for dissemination to the public. These SOPs will be used in developing program specific QAPPs that will include data assessment and validation procedures to ensure that the data that are submitted comply with these requirements.
- OPPT will work closely with grantees and voluntary submitters of performance results data to ensure that these data are appropriate for their intended use and are accompanied by documentation that addresses the procedures followed to collect, use and report them. These procedures will be in place for the next round of awards or data submission cycle in 2009.

5-1: Have the P2 Program plan and schedule periodic evaluations of its pollution prevention efforts to identify areas where program improvements are needed and implement needed corrective actions.

OPPTS concurs with this recommendation, having previously at our own initiation commenced taking steps towards its implementation:

- The P2 Program has conducted two extensive program evaluations addressing two of its Centers of Results over the past three years. Both evaluations were sponsored by EPA's Office of Policy, Economics and Innovation (OPEI) through its annual Program Evaluation Competition. The first focused on the Hospitals for a Healthy Environment Program, the forerunner to the Partnership for Sustainable Healthcare, and was completed in May 2006. The second focused on the Pollution Prevention Information Network Grant Program, which supports the Pollution Prevention Resource Exchange (P2Rx) centers, and was completed in August 2008. Both evaluations were completed on schedule and within budget, producing reports documenting program effectiveness and conveying recommendations for program improvements.
- Fall 2008: OPPTS is currently assessing the recommendations from the report evaluating the P2Rx program to determine which recommendations to implement and in what priority.
- Winter/Spring 2009: OPPTS will begin implementation of recommendations from the P2Rx evaluation.
- Spring 2009: OPPTS will target another one of its Centers of Results to submit an application for consideration under OPEI's Program Evaluation Competition.

Note: Since the OPEI-sponsored evaluations are not conducted by entities considered independent of EPA, OMB criteria do not allow the evaluated programs to receive credit for them as program evaluations in PART assessments. However, the cost of conducting an independent program evaluation that meets OMB's criteria is prohibitive for the P2 program, and OPPTS believes it has obtained the full benefits offered by program evaluations in its two previous EPA evaluations.

5-2: Develop actions to address the PART questions where the P2 Program was not awarded any points during the FY 2006 PART Assessment and include the PIP in the next PART update to promote continual P2 Program improvements.

OPPTS concurs with this recommendation, having already addressed some of the identified weaknesses under previously completed or currently active PART Follow-Up Actions. Commencing with the 2009 Spring PART Update, OPPTS will ensure that all proposed replacements for Completed Follow-Up Actions are targeted at unaddressed weaknesses identified in the Pollution Prevention Program PART Assessment until such time that all such weaknesses have been fully addressed or, in the case of the PART

requirements for independent program evaluations, addressed to the extent deemed practicable given program resource allocations and influence over decisions made by independent evaluating entities.

- Spring, 2009: Propose replacement Follow-Up Action for current to-be-completed Action #1.
- Fall, 2009: Propose replacement Follow-Up Actions for current to-be-completed Actions #5.
- Spring, 2010: Propose replacement Follow-Up Action for future to-be-completed Actions.

Appendix C

Distribution

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