

EPA's P2 Program



2009 GLRPPR Summer Conference

June 4, 2009

Briefing Outline

- Landscape and Opportunities
- P2 Strategic Plan
- P2 Integration
- P2 Centers of Results
- Future Opportunities

Words to Live By

You have to recognize when the right place and the right time fuse and take advantage of that opportunity. There are plenty of opportunities out there. You can't just sit back and wait.

- Ellen Metcalf

Opportunity is missed by most people because it is dressed in overalls and looks like work.

- Thomas A. Edison (1847 - 1931)

Leadership Changes

- New Administration began January 20, 2009
 - EPA Administrator, Lisa Jackson, confirmed January 23, 2009

- Steve Owens (Arizona) nominated AA for OPPTS
 - Confirmation hearing occurred May 12
 - Expected to be on board in June

- Acting OPPT Office Director

Stimulus Bill

- \$787 B stimulus bill to jump-start the economy signed February 2009
 - EPA Administrator, Lisa Jackson:

*“As EPA works with our state and local partners to use these Recovery Act dollars in the most effective way, we must ensure a focus on the basic principles of **pollution prevention** and sustainability.”*
- \$78.61 B directly earmarked for green projects
 - Energy efficiency initiatives
 - Green jobs
 - Green buildings
 - Green transportation

Climate Change

- ❑ Responding to the threat of climate change is a high priority for this Administration
- ❑ Over 30 bills related to climate change are under consideration in Congress
 - Rep. Henry Waxman (Chairman, HR Energy and Commerce Committee) stated that passing climate change legislation is a top priority.
 - Cap and trade vs. carbon tax
- ❑ ACES (American Clean Energy and Security Act), ~650 pages
- ❑ Senate S.661

Seizing the Day

- Respond effectively to these changes
 - Movement to green economy = more P2 opportunities
- Think and act proactively
 - Leverage resources where possible
 - Focus on a few things to do well
- Enhance communication and collaboration
 - Jan 20, 2009 Memo from President Obama on Transparency and Open Government
 - Government should be transparent, participatory and collaborative
- Strengthen P2 to contribute to a sustainable society
 - Take advantage of opportunities with potential to make the greatest impact

Underlying Concerns

“Voluntary programs” . . .

- ❑ Being used inappropriately where mandatory regulation necessary
- ❑ Diverting resources from “core” work
- ❑ Not authorized
- ❑ Not producing environmental results
- ❑ Not well-managed

EPA’s Key Management Challenges for Fiscal Year 2009

4/28/09 Report from OIG:

“Voluntary programs can be an adjunct to regulatory programs. However, their effectiveness and impacts cannot be assessed without the collection of comprehensive, valid, and reliable performance data. In light of these systemic findings, EPA should determine the extent to which voluntary programs can effectively address its pressing environmental and human health challenges.”

P2 Strengths

- Demonstrated results
 - P2 Program rated 3rd highest among EPA Programs in OMB's PART
 - EPA's Science Advisory Board (SAB) recently described the P2 programs as "among the most forward-looking and important programs of the EPA."
- Measures are in place to assess progress
 - New MMTC02e FY 09 reporting measure
- Solid set of core programs advancing P2 nationally
 - 8 national P2 centers of results
- P2 is top priority for OPPT

Maintaining P2 Progress

- Merge environmental considerations with economic growth considerations to achieve sustainability
 - “sustainability” is more than “survivability”
- Strategic thinking and maximizing results are essential to maintaining an updated and relevant P2 program
 - P2 Strategic Plan opportunities
- Communication and collaboration are at the core of our success
 - P2 integration

You can never plan the future by the past.
- Edmund Burke (1729-1797)

P2 Strategic Plan

- 1.5 year effort to help guide our P2 program
 - Draft Plan issued in February 2009 for review and comment by stakeholders
 - Comments pointed to the need for a stronger plan that better reflected the changing times
- Initial draft Plan had 3 environmental outcomes
 - Reducing GHGs
 - Reducing toxic chemicals
 - Conserving natural resources

P2 Strategic Plan

- ❑ Draft Plan is being updated to make it more strategically-oriented
- ❑ Significantly shortening the Plan
 - Around 10 pages
 - Additional information/details in appendices
 - Activities will go in implementation plans
- ❑ Making it more readable and removing the minutia
 - More concise/succinct wording
- ❑ Identifying key strategies to achieve goals

P2 Strategic Plan

- The new Plan consists of 5 key goals
 - 1) Reduce GHGs
 - 2) Reduce use of toxic chemicals/haz materials
 - 3) Reduce the use of water/conserves nat resources
 - 4) Create business efficiencies
 - 5) Institutionalize and integrate P2
- Will serve multiple purposes
 - Providing direction for our P2 program
 - Raising awareness of opportunities
- Target for completion in June 2009
- Webinar planned for June 16

P2 Integration

- Completed a P2 Integration report in early 2009
 - Included short and long-term recommendations to improve P2 integration
- Considering in the context of our P2 Strategic Plan
- Exploring new opportunities to enhance P2 integration

P2 Centers of Results

- Green Chemistry
- Green Engineering
- Design for the Environment
- Regional Activities
- Pollution Prevention Resource Exchange Network (P2Rx)
- Green Suppliers Network
- Environmentally Preferable Purchasing
- Partnership for Sustainable Healthcare



Green Chemistry

- Annual **Presidential Green Chemistry Challenge Awards** Program recognizes innovations in greener chemical design, development, and implementation.
- The Green Chemistry Program promotes up-front design changes and substitutions to avoid downstream hazards associated with a chemical's lifecycle.



Awards



Green Chemistry

- ❑ Avoids costly and often problematic “command and control” actions by focusing on reducing risk by designing out inherent hazard and designing in inherent safety.
- ❑ Design, development, and implementation of technologies that are:
 - Technologically feasible and highly innovative;
 - Equal or improved in performance;
 - Cost competitive and often cost preferable;
 - Long lasting in lifetime and benefits; and
 - Transferable across sectors - Green Chemistry promotes technology transfer by posting abstracts of award winning and valid nominated technologies.



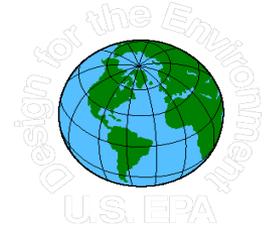
Green Engineering

- ❑ Green Engineering is the environmentally conscious design, commercialization and use of processes and products that are feasible and economical while minimizing the generation of pollution and risks to health and the environment.
- ❑ Leads and catalyzes efforts to incorporate green engineering approaches, techniques and tools into engineering curricula and industrial practices.
- ❑ Promotes and fosters research, development and implementation of green technologies, approaches, tools, and materials.



Green Engineering

- Partnership - Environmental Improvement in Pharmaceutical Manufacturing Processes
 - Pilot project with pharmaceutical facilities in Region 2, 3 and 5 to identify and implement approaches to eliminate/recycle/reuse solvents. Partners include pharmaceutical companies, EPA Regions, and experts from academia, NIST, and ORCR.
- Textbook - “Green Engineering: Environmentally Conscious Design of Chemical Processes”, in its third printing.
 - Widely used in the US as primary textbook for Green Engineering and Sustainability courses.
 - Engineering students apply their knowledge in designing and development of green processes and products.



Design for the Environment

- Conducts Multi-stakeholder Partnerships
- Focuses on Office & Agency Priority Chemical Issues
- Uses OPPT Technical Tools & Expertise in every project
 - Key to informing substitution to safer chemicals
 - Makes DfE partnerships valuable to industry & NGOs
- Reduced the use of 335 million pounds of chemicals of concern last year.

Design for the Environment

- Safer Product Labeling: Allows use of DfE recognition (label) on over 1000 products (~ 240 million pounds of safer chemicals), up from < 400 a year ago.
- Leveraging through 3rd parties has made this growth possible, and has made OPPT tools more broadly available and used.
- Enhancing Transparency through screens that define safer chemicals by functional class
 - Multi-stakeholder input & RAD technical support is critical
 - General Screen – Complete
 - Solvents Screen, phase I – Complete
 - Surfactants Screen (includes stringent criteria for direct release) – Complete
 - Fragrances Screen – under stakeholder vetting
 - Chelating Agents Screen – 8/2009
 - Solubility Enhancers (small amines) Screen – 10/2009
 - Polymers Screen 12/2009



Design for the Environment

- Best Practices to reduce exposure to key asthmagens—
Collaboration with OAQPS/CARE/EJ:
 - DfE conducted 31 workshops in 8 Regions for over 1000 auto refinishers in 2008; results included potential reductions of 112,000 lbs of VOCs and HAPs, 180,000 lbs particulates, and potential savings of \$2 million in material costs
 - Major east-coast paint supplier is helping its 2,000 customer shops evaluate/implement best practices
- 40 SDSI Champions have eliminated problematic surfactants from all their products
- Alternatives Assessment
 - Replaced 65 M lbs of lead in solder
 - Replaced 19 M lbs of Flame Retardants of concern
- DfE-Industry partnerships reduced more than 335 million pounds of chemicals of concern in 2008

EPA P2 Regional Activities



- ❑ Consistent with P2 statutory authority, EPA Regions provide grants used to build and maintain a vital state P2 infrastructure which supports and provides needed technical assistance for local businesses.
- ❑ Grants have contributed to broad scale changes in small businesses such as auto refinishers, metal and print shops.
- ❑ Grants also help keep numerous state leadership programs in operation & investing in new P2 approaches.
- ❑ FY 09 funds: Approx. \$4.2 million (STAG); \$1.4 million (EPM)
- ❑ Regions also provide direct P2 technical assistance.

Green Suppliers Network



- ❑ EPA established the GSN to help small/medium-sized suppliers to large manufacturers reduce their impact on the environment while staying competitive and profitable.
- ❑ Collaborates with the Department of Commerce's National Institute of Standards and Technology (NIST) through the Manufacturing Extension Partnership (MEP) program.
- ❑ Through on-site reviews, suppliers learn ways to increase energy efficiency, optimize resources and technologies to eliminate waste, and identify cost-saving opportunities.
- ❑ Over 90 suppliers have had GSN on-site reviews - pace of assessments in 2009 is accelerating.

Green Suppliers Network

- ❑ Columbus, Ohio & San Antonio, Texas “E3 Catalyst” projects:
 - Lean, clean, energy efficiency and carbon footprint
- ❑ Suppliers’ Partnership for the Environment:
 - Materials Assessment Program (Chemicals in Products)
 - Greening North American Automotive Supply Chains working with the Commission for Environmental Cooperation
- ❑ Interagency Collaboration with the Manufacturing Sector:
 - OPPTS/MEP/DOE
 - Sustainable Manufacturing Initiative
 - Interagency Network of Enterprise Assistance Providers (INEAP)

Pollution Prevention Resource Exchange (P2Rx)



- ❑ National web-based network of eight regional P2Rx information centers reach P2 Technical assistance providers (TAPs) at the State, Federal and local levels, plus businesses and nonprofit organizations.
- ❑ P2Rx information centers:
 - Disseminate P2 information
 - Provide networking opportunities for sharing P2 expertise and strategies
 - Leverage resources, increase efficiency, and avoid duplication of effort.
- ❑ A recent P2Rx program evaluation (sponsored by OPEI) confirmed the effectiveness of this network in adding to the value and efficiency of state programs.

Environmentally Preferable Purchasing

- ❑ EPP meets distinct obligation under the PPA and EO 13423 -- to harness the purchasing power of the federal government (# 1 purchaser globally) to stimulate national demand for greener products and services.
- ❑ Program has evolved from the collection and dissemination of green contract language and standards (EPP Database) to leadership in the development of voluntary consensus standards for environmentally sound products and services (via ASTM, IEEE, NSF).

EPP Sectors

Electronics

- ❑ Federal Electronics Challenge (FEC) -- provides technical assistance and awards to federal agencies for purchasing green electronics, reducing their impacts during use, and managing their disposal responsibly.
- ❑ Electronic Products Environmental Assessment Tool (EPEAT) – helps purchasers buy greener electronics by creating voluntary environmental performance standards with stakeholders and a registry of products that meet these standards. Program covers computer desktops, laptops, and monitors, and is expanding to cover imaging equipment, televisions, servers, and cell phones. Over 40% of computers bought in 2007 were EPEAT-registered products.

Green Meetings

- ❑ OPPT leads EPA in the development of a voluntary consensus-based standard for green meetings and events. Expected to be completed in 2010, this initiative may include: specifications for hotels, convention centers, transportation and food and beverage services. OPPT is also working with GSA and OFEE towards government-wide adoption of the completed standards for not only meetings and conferences, but possibly federal travel.

EPP Sectors (cont'd)

Green Buildings

- ❑ OPPT co-chairs the Agency's GB Workgroup and is a major contributor to meeting the goals of the EPA GB Strategy
- ❑ Federal Green Construction Guide for Specifiers – an award-winning tool assisting both federal and private sector construction and renovation projects in greening products and practices
- ❑ ASTM International – OPPT is the vice-chair of the new Sustainability Comm. Developing standards including “minimum performance requirements” for sustainable building among others
- ❑ NSF International – OPPT is actively participating in the development of sustainability standards for carpet, furniture, resilient flooring, wall coverings, and roofing, and is co-chairing the committee developing a sustainable textiles standard.

Partnership for Sustainable Healthcare

- PSH is a voluntary program to help health care facilities become better environmental stewards.
- This program began as a partnership between EPA, American Hospital Association, and Health Care Without Harm, and was called Hospitals for a Healthy Environment (H2E).
 - H2E migrated from EPA to a fully independent non-profit organization in 2007.
 - Prior to that, the H2E program had over 7,000 partners (3000 hospitals, plus clinics, nursing homes, and assisted care facilities).

Partnership for Sustainable Healthcare

- PSH now has two major program emphases:
 - 1) Continues to provide P2 technical support to the health care sector, and helps other program offices on work with this sector:
 - ORCR Universal Waste Rule revision
 - OW Pharmaceutical Waste Rule data collection
 - OECA Compliance Assistance Center for health care
 - 2) Provides international leadership in reducing mercury use in the health care sector
 - Pilot program with China completed in 2008
 - Pilot programs on-going in Mexico, Argentina, Costa Rica
 - NPCD-funded cooperative agreement will support additional programs in Latin America
 - Negotiating pilot in India

P2 Performance Measurement

- Outcome Measures and Targets in 2006-2011 EPA Strategic Plan
 - 4.5 billion pounds of hazardous material reduced
 - 31.5 trillion British Thermal Units (BTUs) reduced
 - 19 billion gallons of water conserved
 - \$791.9 million saved through the adoption of P2 practices.

P2 Performance Measurement

- Outcome Measures and Targets in Draft 2009-2014 EPA Strategic Plan
 - 6.5 billion pounds of hazardous material reduced
 - 10 million metric tons of carbon equivalent (MMTCO₂e) reduced
 - 50 billion gallons of water conserved
 - \$2 billion saved through the adoption of P2 practices.

Growing Areas of Demand

- E3 Projects – several more states showing interest to start pilots
- Standards –growing consumer interest in product standards and criteria to help them make “green” choices
- P2 calculators – PPD released new GHG emissions and P2 cost calculators in mid-May

Future P2 Opportunities

- ❑ Emphasize GHG reductions as a priority co-benefit to hazardous chemicals reductions.
- ❑ Leverage P2 opportunities with OPPT programs, EPA offices and other federal agencies.
- ❑ Promote the development of voluntary consensus standards to advance P2 practices.
- ❑ Strengthen state and local infrastructure by providing resources (\$ and technical) for state TAPs.
- ❑ Increase collaboration with DOE's Industrial Technologies Program to weave energy efficiency technical assistance into the GSN model.
- ❑ Promote nanoscale innovation, especially in the area of safer chemical building blocks and GHG reduction.
- ❑ Identify alternatives to chemicals of concern such as diisocyanates, phthalates, BPA, etc.
- ❑ Work with federal partners to create and promote "greener jobs" – e.g., the auto industry, building retrofits, chemical engineering.