

US EPA ARCHIVE DOCUMENT

ENVIRONMENTAL MANAGEMENT SYSTEMS SUMMIT

DECEMBER 14, 2004

SUMMARY OF PROCEEDINGS

Summit Sponsors

USEPA Office of Solid Waste, National Center for Environmental Innovation,
Office of Water, Office of Air

April 2005

**SUMMARY OF PROCEEDINGS:
ENVIRONMENTAL MANAGEMENT SYSTEM SUMMIT
DECEMBER 14, 2004**

I. Introduction

U.S. Environmental Protection Agency officials and leaders from industry, States, local governments and public interest groups met in Washington, DC, December 14, 2004 to discuss how to jointly foster the continued use of quality Environmental Management Systems to bring about meaningful environmental improvements.

The Summit was conducted as part of the Agency's commitment to encourage adoption of EMSs in the public and private sectors. In May 2002, the Administrator signed EPA's Position Statement on EMSs (www.epa.gov/ems) committing the Agency to promote the voluntary widespread use of EMS, conduct research, build capacity within EPA and States, and implement EMSs at EPA facilities. In December of that year, EPA hosted an EMS Practitioners Forum that included environmental managers from various public and private organizations who have implemented an EMS. The purpose of the Practitioners Forum was to inform EPA and States on how to best promote the use of EMSs through their programs and policies.

Since the Practitioners Forum, experience has shown that EMSs can provide significant improvements in an organization's ability to manage their environmental responsibilities, but not all EMSs result in improved environmental performance. EPA has been working with researchers to identify the critical elements of an EMS that lead to improved performance. In addition, EPA released its April 2004 "Strategy for Determining the Role of EMS in Regulatory Programs" (www.epa.gov/ems), which says that EPA will work with States over the next few years to test whether and how, EMSs should be incorporated into regulatory programs.

To continue the conversation started by the Practitioners Forum, EPA hosted the EMS Summit. The purpose of the Summit was to bring together leaders from the public and private sectors to examine current approaches for fostering implementation of EMSs, as well as new ideas to further the Agency's commitment to support and embrace EMS as a tool for advancing environmental performance.

The Summit agenda and list of attendees are included as Attachments A and B.

II. Opening Remarks – Thomas Dunne, EPA Acting Assistant Administrator, Office of Solid Waste and Emergency Response

In his opening remarks, Mr. Dunne emphasized how well designed and implemented EMSs help organizations improve environmental performance, communicate with stakeholders, prevent pollution, become more efficient and reduce cost. From OSWER's perspective, old ways of thinking and patterns of behavior have to change if we want to

move towards the next level of environmental protection. The Agency will maintain and enforce regulations, yet a new strategic focus on materials use and management is needed. EMSs can be the driver for the next generation of environmental performance with their emphasis on materials use, stewardship, ability to help address problems more quickly and at lower cost, and ability to tackle difficult to regulate environmental challenges.

When it comes to material use, resource conservation and energy recovery, the future of environmental protection will depend on partnerships, and continued environmental improvement. Efforts are epitomized in the Resource Conservation Challenge, a major Agency effort to find flexible yet more protective ways to conserve our valuable resources through waste reduction and energy recovery activities.

A continuing need exists, however, to convince environmental managers that EMS represents a “positive shift” to the future. Accordingly, Mr. Dunne tasked the Summit participants to address three key questions ---

1. What are the key elements for implementing EMSs that deliver environmental performance?
2. How can the government help support implementation of EMSs in various organizations?
3. What is the next generation of initiatives, networks and partnerships that should be developed to foster quality EMSs?

III. Value of EMS; Experiences in EMS Implementation - Brian Borofka, Wisconsin Energy Corporation

Brian Borofka, a Principle Strategist with the Wisconsin Energy Corporation (WEC), was the morning keynote speaker. Mr. Borofka discussed how development and implementation of a WEC facility’s EMS provided the Wisconsin Department of Natural Resources with confidence in the plant’s environmental management program and provided a vehicle for cutting edge ideas and approaches.

The WEC facility EMS was prepared under Wisconsin’s Green Tier Statute. The Green Tier Statute requires measurable performance beyond basic requirements in return for monitoring and reporting reductions, streamlined permitting, and an ability to recover materials (the critical “business” incentive for WEC). With the EMS as a primary indicator of the facility’s ability to manage complex environmental obligations, WEC was able to sign an environmental agreement with the State that allowed removal of ash from the old landfills for energy recovery.

Interest in EMS at WEC is also being driven by the need for better documented “internal controls” in accordance with new financial requirements under Sarbanes Oxley, SEC Bulletins, and shareholder resolutions.

Overall, the WEC case shows that proper implementation of EMS can:

- Achieve performance beyond regulatory compliance;
- Reduce the use of natural resources, provide economic and other benefits (\$12 million dollars saved); and,
- Identify and address business/environmental risk.

IV. Morning Panel Discussion - Implementing Effective EMSs and Achieving Improved Environmental Performance

The panel was comprised of two corporate and one public sector leaders on EMS. Each panel member spoke for 10-15 minutes about their organization's experience with EMSs. Their remarks focused on keys to maintaining a successful EMS, involvement with government programs promoting EMS, and measuring performance and utility of their EMS.

John Keith, Vice President, Environmental Health and Safety, Pfizer Global Manufacturing

For Pfizer, EMS is a valuable tool to support rapid change. Pfizer is subject to substantial global integration pressure requiring rapid new product introduction and manufacturing flexibility. EMS can support the meeting of environmental obligations in the context of this rapid change. The EMS can apply globally across their operations while being tailored to local concerns.

Within the Pfizer organization, EMSs are part of EHS management plans and must support connectivity to their line performance management processes. Health and safety considerations cannot be separated from environmental and public health considerations. The combined EHS has equal footing with product development, sales, and human resources.

EMS business benefits include cost reduction, competitive advantage, liability/risk reduction, community support, and attraction of investment (SRI funds). However, financial analysis of EMS is difficult, especially in the calculation of benefits and drawbacks.

John Cook, Assistant General Manager and Chief Engineer, Charleston Commissioners of Public Works

Mr. Cook discussed how EMSs provide organizations a competitive edge because they strive for continuous improvement. For Charleston Public Works, the EMS

provided benefits in liability risk optimization, organizational image and reputation, bond purchasing, operational control, preservation of institutional knowledge, consistent compliance and asset management.

The certification of their EMS was critical to success, providing impartial evidence to customers and stakeholders of the organization's commitment to good management and continual environmental improvement. Potential government incentives for local government organizations to adopt an EMS could include a "stamp of approval", favorable State Revolving Fund loan rate, and less frequent inspections and monitoring.

Scott Lesnet - Environment and Safety Manager, HNI Corporation

HNI Corporation adopted an Integrated Environmental Management System (IEMS) in lieu of a formal EMS-type management approach. Experience had shown that "systems" don't work since they are difficult to deliver to plant-floor level employees. The IEMS is "management of change" and focuses on making environmentally appropriate choices at the point of operation.

The company also adopted lean manufacturing processes; waste became anything that failed to add value to the product. Lean processes are at the core of everything the company does today. The IEMS provides the framework for lifecycle assessments of their production, creating opportunities for better, less polluting products.

Following the panel member presentations, Summit participants were asked to identify the key elements necessary for successful implementation of EMSs and continual environmental improvement. The discussion specifically focused on factors driving development and implementation of EMSs, how the performance and utility of the EMS is measured within the organization, and keys to successful, sustainable EMSs. Highlights from that discussion include the following:

1. Factors driving development and implementation of EMSs

- Support of the business system;
- "Green" reputation;
- Consumers;
- Notion that prevention is cheaper than correction;
- A need for alternative solutions and change in the company to grow and make profits; and
- Economic survival and cost reduction.

2. How the performance and utility of the EMS is measured

- Accountability within company – measures integrated at every level;

- EMS requires senior management support with objectives related to each manager, supervisor, etc. Just as cost and productivity are measured and monitored within a company, so should EMS objectives;
- Third party inspections/independent verification makes the system stronger, and gives the company more creditability and a higher quality system;
- External and internal information from customers (e.g., focus groups, surveys will give valuable information).

3. Keys to successful, sustainable EMSs

- Integration into daily work processes; not implementation as a separate system;
- Training; every employee needs to understand the new way of thinking and work together to be successful;
- The desire to focus on improvements -- both long and short term goals;
- Quantification of benefits to document EMS worth in savings/costs;
- Continued passion and desire to want to use the EMS;
- Transparency – EMS can provide the basis for better community engagement.

V. Opportunities and Future Directions – James Connaughton, Chairman, White House Council on Environmental Quality

Mr. Connaughton was the afternoon keynote speaker. He has been an active supporter of EMS for over 10 years, and helped shape the ISO 14001 standard and form the Multi-State Working Group on EMS.

Mr. Connaughton began his presentation by discussing implementation of EMSs at Federal facilities. Under Executive Order 13148, Federal agencies must have an EMS in place by December 2005. The government is now fully committed to EMS, with many agencies, and the military in particular, becoming leaders in EMS implementation.

In general, however, private and public sectors are not demanding EMSs. A strong foundation is needed to encourage organizations to “get on the bandwagon.” One key to successful widespread adoption of EMS is a partnership of private sector and government organizations working together such as Partners for Environmental Performance (PEP). Through PEP, for example, 3M has been acting as consultants to Fort Hood to help implement their EMS.

When enough sectors and organizations begin implementing EMSs, a different regulatory approach will be demanded. A “critical mass” of organizations adopting EMSs must be reached. Mr. Connaughton recommended that Summit participants discuss EMS concepts with ten people, spread the word, and help it multiply.

Internationally, the U.S is involved with the expansion of free trade with a strong commitment to labor and environment. EMS can help create the institutions that put the U.S. on a shared footing in the free trade arena. Some of the greatest progress is coming in those countries where trade relationships have been instituted and where a capacity to share technical and system standards have been established.

Domestically, approaches to encourage States to become more involved in promoting EMSs must be developed with systems that provide incentives for organizations to implement EMSs. Convincing organizations to adopt EMSs comes down to cost savings and compliance assurance. A retail case has to be made.

VI. Afternoon Panel Discussion: Next Steps in Use of EMS to Achieve Environmental Leadership

The afternoon panel was comprised of two corporate and one public sector leaders on EMS. Each panel member spoke for 10-15 minutes about their organization's experience with EMSs. Their remarks focused on what EPA can do to increase EMS adoption and where EPA and States should direct their EMS programs in the future.

Dennis Treacy, Vice President Environmental, Community and Government Affairs, Smithfield Foods

EMSs are the most important tool for reducing the environmental footprint of Smithfield Food operations because they enable the company to obtain objective information for decision making, target setting and for interested external stakeholders. For Smithfield Foods, certification of the organizations EMSs' was a critical component to its success.

In general, government needs to be very measured in their approach to promoting EMSs. EMSs should not be part of an enforcement tool or permit. Government's role should be to encourage EMSs through technical assistance and recognition of successful EMS programs.

EMS can be an important tool in tackling broader/regional environmental issues such as ozone pollution in the Richmond area. EMSs can also be useful for organizations striving to achieve regional environmental goals such as Businesses for the Bay, a voluntary team of businesses, industries, government facilities and other organizations within the Chesapeake Bay watershed.

**Sharon Baxter, Director, Office of Pollution Prevention, Virginia
Department of Environmental Quality**

Ms. Baxter discussed the Virginia Environmental Excellence Program which has approximately 150 members. The program encourages superior performance through environmental management systems and pollution prevention. The program includes two tiers. The first tier focuses on those facilities interested in starting an EMS, or are in the early stages of implementing an EMS and pollution prevention program and have a record of sustained regulatory compliance. The second tier includes facilities with a fully-implemented EMS and pollution prevention program. These facilities have documented results and a record of sustained compliance.

The program is predicated on a need to show progress and results. In Virginia's experience, EMS is rooted in pollution prevention. Other pollution prevention programs should/can be used as an on-ramp to an EMS.

Patti Carrier, New Hampshire Ball Bearings (NHBB)

NHBB used EMSs and a supplier program to manage business risk. The "Greening the Supply Chain" project looked to expand use of EMS throughout their supply chain. Suppliers were evaluated, and small businesses were offered assistance to help implement their EMS. Suppliers implementing an EMS under this program were granted "preferred status" by NHBB. EPA invested \$20k to provide training and technical assistance.

The project helped suppliers experience reductions in energy use, water use and solid waste generation, resulting in an estimated annual cost savings of \$280,000, from an original investment of \$20,000.

From NHBB's perspective, the proper approach for government is to ask an organization if it would like to implement an EMS and then offer support and technical assistance.

Following the panel member presentations, Summit participants were asked if government is effectively supporting the development and continued implementation of effective EMSs; and what are the next generation of initiatives, networks and partnerships that should be developed to foster quality EMSs. Highlights of the discussion follow.

- The multitude of voluntary government programs can be in competition with EMS; integration of these programs should be considered wherever possible.

- State approaches for encouraging adoption of EMSs vary widely. Generally, States don't have the resources and leadership. EPA should look for a State model that could be translated to others.
- Current regulatory approaches can impede holistic thinking; they are "speciated" and narrowly focused. Organizations would rather spend effort on a more holistic look and invest in innovation.
- Collaborative approaches are critical; companies do not want to fear going to the EPA. One hundred percent compliance as a goal may not be obtainable, but a climate of continual improvement must be fostered. A culture of change is needed at EPA with a process that doesn't penalize organizations for their disclosure of non-compliance.
- Some organizations primarily focus efforts on managing regulatory requirements, while others manage the broader environmental footprint. Organizations tended to broaden the scope of their EMS as they mature. EPA should recognize the more sophisticated and mature EMSs, and encourage more profound environmental results.
- The European Union's approaches for obtaining compliance are more collaborative; open dialogue is an integral part of these programs. EPA can learn from the EU example.
- Organizations need to be rewarded for an EMS. "A bean needs to be counted." If not, EMS will not be a high priority for the company or the government.

VII. Recommendations for Further Action

Outlined below is a summary of the recommendations for further action that were presented throughout presentations and participant discussions.

- Evaluate the EMS role in supporting EPA Regional strategic plans. Strengthen relationships with States; align State - Federal agreements to encourage EMSs and provide further incentives.
- Further evaluate the role of EMS in addressing broad environmental issues and goals (e.g., cleanup of Chesapeake Bay).
- Examine financial institutions' lag in understanding of EMSs; examine improved credit rating/loan rate for State Revolving Fund utilities with EMSs.

- Examine how EPA should recognize the extent to which EMSs incorporate health and safety issues. Should government EMS promotion programs (e.g. Performance Track, Sectors Strategies, and Small Business) include health and safety considerations?
- Conduct analyses of regulatory permit, compliance and EMS programs in the European Union. Participants noted that EU systems such as integrated permitting are more collaborative in nature. These systems tend to foster and support environmental improvements while US systems may pose barriers.
- Examine connections between EMS and Sarbanes-Oxley as more attention is now focused on management identification of business risks and the control of those risks.
- With broad agreement that 3rd party verification of EMSs tend to lead to more tangible results, explore ways in which to encourage and support 3rd party verifications, but provide flexibility/innovation for small businesses.
- In light of successful long-term EMS programs in organizations such as Pfizer, City of Charleston, and Smithfield Foods, how can EPA recognize the more sophisticated and mature EMSs and encourage more profound environmental results?
- Examine integration of government EMSs with ongoing pollution prevention programs and use of P2 programs as a springboard to EMSs.
- Further evaluate EMS as a framework and vehicle for conducting lifecycle assessments of products and production.

IX. Conclusions

Open dialog, networking and information sharing such as the EMS Summit will continue to be critical tools in identifying the path forward. EPA invites participants and others to provide further comments on the questions raised at the Summit.

EPA intends to use the recommendations to plan our future EMS programs and policies. EPA's current EMS policies are supported by an infrastructure of programs and forums with the shared goal of promoting EMSs both within and outside of the Agency. These forums include the EPA Innovation Action Council, the Office Directors Policy Council and initiatives related to the April 2004 EPA "Strategy for Determining the Role of Environmental Management Systems in Regulatory Programs". Many of the recommendations will be implemented through these existing groups and resources. Others will be most appropriately addressed through individual EPA Office efforts to promote EMSs within their programs.

AGENDA

ENVIRONMENTAL MANAGEMENT SYSTEMS SUMMIT

**DECEMBER 14, 2004, 8:30AM TO 3:30 PM
HYATT REGENCY WASHINGTON AT CAPITOL HILL
CONGRESSIONAL ROOM A**

Sponsored by EPA Office of Solid Waste and Emergency Response, Office of Water, National Center for Environmental Innovation, and Office of Air and Radiation

8:30 REGISTRATION AND COFFEE

9:00 **WELCOME AND OPENING REMARKS**

Thomas Dunne, Acting Assistant Administrator, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency

Stephen Johnson, Deputy Administrator, U.S. Environmental Protection Agency

9:30 **VALUE OF EMS; EXPERIENCES IN EMS IMPLEMENTATION**

Brian Borofka, Principal Strategist, Wisconsin Energy Corporation

10:00 **PANEL DISCUSSION: IMPLEMENTING EFFECTIVE EMSs AND ACHIEVING IMPROVED ENVIRONMENTAL PERFORMANCE**

John Keith, Vice President Environmental Health and Safety
Pfizer Global Manufacturing

John Cook, Charleston Commissioners of Public Works, South Carolina

Scott Lesnet, Environment and Safety Manager, HNI Corporation

- What are the factors driving development and implementation of EMSs?
- How do government programs help/hinder EMS efforts?
- How is the performance and utility of the EMS measured internally?
- What are the keys to successful, sustainable EMSs?

12:00 LUNCH

1:00 **OPPORTUNITIES AND FUTURE DIRECTIONS**

James Connaughton, Chairman, White House Council on Environmental Quality

1:30 **PANEL DISCUSSION: NEXT STEPS IN USE OF EMS TO ACHIEVE ENVIRONMENTAL LEADERSHIP**

Dennis Treacy, Vice President Environmental, Community and Government Affairs, Smithfield Foods

Sharon Baxter, Director, Office of Pollution Prevention, Virginia Department of Environmental Quality

Patti Carrier, Environment- Facilities Manager, New Hampshire Ball Bearings

- How do organizations continue to maintain successful EMSs over the long term?
- How can EMS use be expanded to other organizations and sectors?
- What is the role of government in these efforts?
- What specific investments can EPA make to increase overall EMS adoption?

3:00 **OBSERVATIONS/PERSPECTIVES FROM EPA INNOVATION ACTION COUNCIL**

Mike Shapiro, Deputy Assistant Administrator, Office of Water
Ira Leighton, Deputy Regional Administrator, EPA Region 1

3:15 **SUMMATION AND CLOSING**

Charles Kent, Director, Office of Business and Community Innovation

Attachment B

Speakers and Roundtable Participants

Sharon Baxter
Virginia Dept. of Environmental Quality
skbaxter@deq.virginia.gov

Bob Benson
EPA National Center for Environmental Innovation
benson.robert@epa.gov

Brian Borofka
Wisconsin Energy Corporation
brian.borofka@we-energies.com

Patti Carrier
New Hampshire Ball Bearings
pcarrier@nhbb.com

Stephen Cobb
Alabama Department of Environmental Management
sac@adem.state.al.us

John Cook
City of Charleston, Commissioners of Public Works
cookJB@charlestoncpw.com

Jill Cooper
Colorado Dept. of Public Health and Environment
jill.cooper@state.co.us

Thomas Dunne
EPA Office of Solid Waste and Emergency Response
dunne.tom@epa.gov

Robert Eanes
Chesterfield County, Virginia
beanes@rcc.com

George Faison
EPA Office of Solid Waste
faison.george@epa.gov

Brent Fewell
EPA Office of Water
fewell.brent@epa.gov

Nancy Girard
Conservation Law Foundation
ngirard@clf.org

Rob Greenwood
Ross and Associates
Rob.greenwood@ross-assoc.com

Matt Hale
EPA Office of Solid Waste
hale.matt@epa.gov

Bob Hall
EPA Office of Solid Waste
hall.robert@epa.gov

Bill Hanson
EPA National Center for Environmental Innovation
hanson.bill@epa.gov

Shana Harbour
EPA National Center for Environmental Innovation
harbour.shana@epa.gov

Jim Horne
EPA Office of Wastewater Management
horne.james@epa.gov

Gary Hunt
North Carolina DENR
hunt.gary@ncmail.net

Alister Innes
Minnesota Pollution Control Agency
alister.innes@pca.state.mn.us

John Keith
Pfizer Inc.
john.keith@pfizer.com

Chuck Kent
EPA National Center for Environmental Innovation
kent.chuck@epa.gov

Peter King
American Public Works Association
pking@apwa.net

Ira Leighton
EPA Region 1
leighton.ira@epa.gov

Scott Lesnet
HNI Corporation
lesnet@HNICORP.com

Caroline Petti
EPA Office of Enforcement and Compliance Assurance
petti.caroline@epa.gov

Madeline Snow
University of Massachusetts-Lowell
madelinesnow@rcn.com

Robert Stephens
UNEP Best Practices Network
robt.stephens@sbcglobal.net

Dennis Treacy
Smithfield Foods Inc.
dennistreacy@smithfieldfoods.com

Eric Uram
Sierra Club Midwest Office
eric.uran@sierraclub.org

James Wallace
BP Group Environmental Management Company
wallacJC@BP.com

John Wilkins
Eli Lilly and Company
wilkins_john_r@lilly.com

Tim Williams
Water Environment Federation
twilliams@wef.org

George Wyeth
EPA National Center for Environmental Innovation
wyeth.george@epa.gov

Observers

Greg Allen
EPA Region 3
allen.greg@epa.gov

Karen Bandhauer
EPA Region 5
bandhauer.karen@epa.gov

Rick Brandes
EPA Office of Solid Waste
brandes.william@epa.gov

Ted Cochlin
EPA Office of Policy, Economics and Innovation
cochin.ted@epa.gov

Lisa Comer
EPA National Center for Environmental Innovation
comer.lisa@epa.gov

Martha Curran
EPA Region 1
curran.martha@epa.gov

Nolean Deskins
EPA Office of Solid Waste
deskins.nolean@epa.gov

Steven Donohue
EPA Region 3
donohue.steven@epa.gov

Tracy Fisher
Green Business Network
tracy@greenbiz.com

Will Garvey
Federal Facilities Enforcement Office
garvey.will@epa.gov

Beth Graves
North Carolina DENR
beth.graves@ncmail.net

Shari Grossarth
EPA National Center for Environmental Innovation
grossarth.shari@epa.gov

Mimi Guernica
EPA Office of Solid Waste
guernica.mimi@epa.gov

Glynis Hill
EPA Office of Solid Waste
hill.glynis@epa.gov

Kim Katonica
EPA Office of Solid Waste
katonica.kim@epa.gov

Marilou Martin
EPA Region 5
martin.marilou@epa.gov

Paul Matthai
EPA Office of Pollution Prevention and Toxics
matthai.paul@epa.gov

Hetal Mehta
EPA National Center for Environmental Innovation
mehta.hetal@epa.gov

Margery Moore
BNA, Inc.
mmoore3@bna.com

Neil Morgan
City of Newport News
nmorgan@nngov.com

Vern Myers
EPA Office of Solid Waste
myers.vern@epa.gov

Laura Nazef
EPA Office of Pollution Prevention and Toxics
nazef.laura@epa.gov

Tara O'Hare
EPA Office of Pollution Prevention and Toxics
ohare.tara@epa.gov

Roy Prince
EPA Office of Administrative Services
prince.roy@epa.gov

Tim Rehder
EPA Region 8
rehder.timothy@epa.gov

Sonya Sasseville
EPA Office of Solid Waste
sasseville.sonya@epa.gov

Ron Servis
EPA Office of Air and Radiation
servis.ron@epa.gov

Julie Shannon
EPA Office of Pollution Prevention and Toxics
shannon.julie@epa.gov

Anthony Shelton
EPA Region 4
shelton.anthony@epa.gov

Jon Silberman
EPA Office of Enforcement and Compliance Assurance
silberman.jon@epa.gov

Jenny Stephenson
EPA Office of Solid Waste
stephenson.jenny@epa.gov

Stephanie Thornton
EPA Office of Water
thorton.stephanie@epa.gov

Shannon Tocchini
Louisiana-Pacific Corporation
shannon.tocchini@LPCorp.com

Gail Wray
EPA Office of Administrative Services
wray.gail@epa.gov

Megan Zadecky
American Public Works Association
mzadecky@apwa.net