



**CONFERENCE SUMMARY
FOR**

**RESTORING GREEN SPACE:
USING ECOLOGICAL
ENHANCEMENTS AT
SUPERFUND, RCRA AND
BROWNFIELD SITES**

JULY 17 – 18, 2002

RENAISSANCE WASHINGTON DC HOTEL

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I

EXECUTIVE SUMMARY

The Wildlife Habitat Council's (WHC) 2002 Conference launched the Council and its partners into a strategy of specific activities that will increase ecological enhancement projects using innovative remediation technologies. The Conference provided the forum for developing an action agenda for WHC and its partners to tackle over the next three years. After identifying objectives and determining the actions necessary to achieve the objectives, the Conference participants decided to focus on these four "next steps:" (1) Facilitate the successful incorporation of ecological enhancements into land revitalization projects at three to five demonstration sites; (2) Create a new page on the WHC website and an electronic newsletter which provides current information on policy, technology, stakeholders, cost share programs and model projects; (3) Conduct regional workshops that provide EPA and State regulators, industry consultants and local landowners with information on ecological enhancements; and, (4) Sponsor a scientific symposium that produces a white paper on the latest innovative technology. The next steps will be implemented by a post conference steering committee of WHC and its partners that is currently being assembled.

WHC and its partners identified the list of next steps at the workgroup sessions that were held in the morning of the conference. The workgroups focused on a draft document entitled, *Objectives and Action Agenda for Implementing Ecological Enhancements*, which was prepared by WHC's steering committee prior to the conference. The draft document captured the essence of WHC's 2000 and 2001 conferences. As a result of the excellent workgroup discussions and comments received after the conference, the *Objectives and Action Agenda* was revised and calls on WHC and its partners to work on the following objectives: (1) Achieve Greater Regulatory Acceptance and Flexibility; (2) Develop a Strategy for Stakeholder Involvement; (3) Achieve Improved Environmental Management; and, (4) Promote Ecological Enhancements Through Effective Communications.

Each of the Conference's Plenary Sessions provided information from key federal, State and local leaders that helped the participants assess the status of programs designed to encourage innovative remediation techniques at superfund, RCRA and Brownfields sites. Stephen D. Luftig, Senior Advisor, Land Reuse, Office of Solid Waste and Emergency Response, US EPA, energized the audience by describing the Agency's new programs in his opening remarks entitled, *New Horizons in Restoration Ecology: What can we accomplish?* The following Plenary Session, which was a panel presentation by State and local officials was led by Secretary of the Delaware Department of Natural Resources and Environmental Control, Nicholas DiPasquale, and gave a detailed description of the highly successful project carried out at the Peterson Urban Wildlife Refuge in Delaware. The luncheon address was delivered by Denise Chamberlain, now Senior Environmental Counsel with Marasco Newton Group, and set out the important components and significant achievements of Pennsylvania's Land Recycling Program.

The conference participants used the information conveyed to them in the Plenary Sessions to identify the activities necessary to move from studying the issues to achieving concrete accomplishments.

In the afternoon, everyone attended one of nine workgroups that were all designed to provoke meaningful discussions on specific projects and issues. Five of the workgroups heard presentations on case studies that highlighted objectives in the *Objectives and Action Agenda*. The five case studies were Ford's Rouge River project; GM's Saginaw River and Bay City, Michigan project; BP Products' Lima, Ohio project; Bethlehem Steel Corporation's Commerce Center project in Bethlehem, PA; and, Bridgestone/Firestone's Oklahoma City project. The other four workgroups addressed the following issues targeted in the *Objectives and Action Agenda*: Regulatory Acceptance; Stakeholder Participation; Science and Technology; and, Real Estate Development. Each workgroup successfully identified both the positive and negative aspects of the program or project and discussed ways to build on the positives and fix the negatives.

The closing panel then provided food for thought when each panelist gave his or her perspective on the future of ecological enhancements. The panel members were J.P. Woodley, Asst. Undersecretary of Defense Department for Installations and Environment, Lee Botts, Citizen Activist and Lucinda Jackson, Team Leader of Biotechnology and Environmental Sciences, ChevronTexaco Research and Technology Company. They stressed that there are numerous opportunities to use innovative remediation technologies, an inclusive process is more likely to lead to a successful project and if adequately funded, science will make future efforts even more effective.

Looking to the future, a steering committee led by WHC, will implement the action agenda. The steering committee will work on the next steps, expand its partnerships, target specific sites and policies and share its experiences. From now through 2005, WHC will be advocating through its message and its actions the use of more innovative remediation techniques at Superfund, RCRA and Brownfield sites.

II NEXT STEPS

The most important goal of the 2002 conference was to identify a clear set of actions for WHC and its partners to carry out that will increase the number and quality of ecological enhancement projects, especially those using innovative remediation technologies. The job was to reach a consensus on objectives and then develop a strategy that would successfully achieve those objectives. This strategy, or *Action Agenda* as it became known, will be implemented by a post conference steering committee that is currently being assembled. To guide the implementation process, WHC and EcoLogix Group have developed the following list of next steps from the *Action Agenda* to be accomplished by the end of 2005:

1. Identify three to five pilot demonstration sites, selected in consultation with EPA's Office of Solid Waste and Emergency Response (OSWER), where ecological enhancements can be incorporated into land revitalization projects, with a goal of documenting the barriers and identifying the procedures for overcoming these barriers. After the sites are selected, WHC will notify the agencies having regulatory authority over the pilot demonstrations of the requirements that may inhibit the use of innovative or alternative treatment to see if flexibility is possible. WHC will also work with the Interstate Technology and Regulatory Council (ITRC) to develop a training module that can be used at the pilot demonstration projects.
2. Create a new page on the WHC website and periodically issue an electronic newsletter which provides current information on policy, technical information, potential partners, cost share programs, and other resources needed to enable ecological enhancements to be included in land revitalization projects. To encourage regulatory flexibility and innovation, WHC, in cooperation with the Environmental Council of the States, ITRC and the Association of State and Territorial Solid Waste Management Officials (ASTSWMO), will profile specific State regulatory approaches and success stories. The web page and newsletter will also provide regular updates on new technologies being considered by corporations. Additionally, the web page will publicize public involvement success stories, model projects, and available resources.
3. Conduct regionally focused workshops patterned after the highly successful WHC led conferences of 2000, 2001, and 2002. ITRC will be approached to be a potential cosponsor and the workshops will target EPA and State regulators and industry consultants, as well as local landowners with properties in need of remediation.
4. Sponsor a scientific symposium that produces a white paper on the latest innovative technologies and includes guidance materials on technical and critical

path information that can help landowners (and land buyers) integrate wildlife habitat enhancements into land revitalization programs.

III

OBJECTIVES AND ACTION AGENDA

A document entitled, *Objectives and Action Agenda for Implementing Ecological Enhancements* was the focal point of the conference and provided the foundation for determining the next steps set out in the previous section. The document has been revised a number of times and the current version incorporates the improvements recommended by WHC members and conference participants.

The first draft, developed by WHC, the Steering Committee and EcoLogix Group prior to the conference captured the findings and conclusions of WHC's 2000 and 2001 conferences and put a draft action plan on the table for discussion at the 2002 conference. At the conference, nine facilitated workgroups spent an hour and a half suggesting ways to strengthen this first draft. The following common themes emerged from those excellent discussions:

Objective #1 – Achieve Greater Regulatory Acceptance and Flexibility

- Cleanup is the means to an end – the objective is reuse of sites
- Need institutions which can transfer information to avoid reinvention of the wheel
- Term “regulatory acceptance” is confusing
- Need to showcase success stories
- A survey idea would not be useful, instead analyze existing information
- State and federal agencies should work to “bundle” similar projects under a single manager
- Reciprocal interstate agreements should be explored to benefit multi-site companies
- Need to be both “performance based” and “outcome-based”
- Need to provide training for project managers
- Need to identify problem areas and target them for the development of new pilot projects

Objective #2 – Develop a Strategy for Stakeholder Involvement

- To some, term “stakeholder” does not include state and federal agencies
- Stakeholders must include end users of the site
- Urge linking existing resources, rather than recreating new ones
- Need to clarify who is responsible for assuring stakeholder involvement
- As a performance measure, a scorecard was suggested as a way of measuring habitat improvement and ecological enhancements, to show how end users benefit
- Trust or lack of it is the underlying issue
- There have been many bad experiences with stakeholders; the process needs to be done right, which involves finding the right person to lead it

Objective #3 – Achieve Improved Environmental Management

- Many suggested this objective be combined with the communications objective or some other one
- It should be about learning, knowledge and performance
- The concept of “pristine” is not realistic
- Must include human health
- Must be able to demonstrate benefits and risk reduction based on science
- It would be useful to identify specific technologies that are proven and highlight where they might be applicable
- The idea of fostering champions was appreciated, but many didn’t know what it is that creates the willingness to do something different
- Those who liked the idea of providing recognition said that it must come from the highest level

Objective #4 – Promote Ecological Enhancements Through Effective Communications

- Highlight success stories
- Success comes from not only good technology but also from having the right critical path in decision making
- A white paper on how to do communications would be useful
- Regulators need to be educated on the value and importance of communication
- A dedicated media campaign focused on success stories could be helpful
- Need to identify existing organizations and efforts
- In summary – “it’s all about communication”

The comments above were incorporated into a second draft of the *Objectives and Action Agenda*. The most significant change was to drop the objective on improving environmental management and include it in the other objectives. The second draft was emailed to everyone who attended the conference. The document on the next page reflects the comments received after the conference and is the latest version.

OBJECTIVES AND ACTION AGENDA FOR IMPLEMENTING ECOLOGICAL ENHANCEMENTS

Using natural resource-based approaches in remediation/reuse/redevelopment projects can often achieve significant cost-savings and improve the social, economic and environmental value of sites. While many opportunities to use ecological enhancement techniques exist today, there remains a substantial need to foster implementation of this approach in remediation/reuse/redevelopment projects. To that end, the Wildlife Habitat Council (WHC) and a Conference Steering Committee, relying upon their extensive experience and information developed during two prior ecological enhancement conferences, developed a draft list of objectives and an action agenda designed to increase the use of ecological enhancements. The vetting and revision of this document served as the main focus of WHC's Year 2002 conference, "Restoring Green Space: Using Ecological Enhancements at Superfund, RCRA and Brownfields Sites."

This resulting *Objectives and Action Agenda* will now be implemented by multiple parties involved in the site remediation and enhancement process throughout the country, guided by the Year 2002 Post-Conference Steering Committee, and assisted by WHC. This *Objectives and Action Agenda* will also be used to directly facilitate more effective use of ecological enhancements at pilot sites selected by the Post-Conference Steering Committee.

OBJECTIVES

- **REMOVE REGULATORY OBSTACLES TO ECOLOGICAL ENHANCEMENTS** – Regulatory approaches that do not adequately consider potential ecological enhancements often lead to increased costs, longer timelines, and greater uncertainty for corporations, communities, and developers. Many of these obstacles can be mitigated within the existing legislative framework by focusing regulatory responses on reuse as well as environmental remediation, improving coordination among various federal requirements and between local, state, and federal agencies. By increasing the emphasis on ecological reuse, we are more likely to achieve outcomes that are performance based, rather than process driven.

Action Items:

1. Identify and describe success stories that illustrate how innovative regulatory approaches can facilitate reuse activity.
2. Identify approaches to incorporating ecological enhancements into the regulatory programs, such as promoting consistent permitting decisions among states for similar remedial activities.
3. Identify and describe ecological enhancement approaches, such as wetland creation techniques or phytoremediation that have been successfully employed.

4. Improve outreach on ecological enhancement techniques and success stories to project-level personnel in US EPA and state regulatory agencies and work to have reuse outcomes incorporated into their agency performance measurement and reward systems; and
 5. Implement some of the identified approaches, such as techniques for coordinating among multiple regulating agencies, at a series of pilot sites identified by the Post-Conference Steering Committee.
- **DEVELOP APPROACHES FOR OBTAINING CONSTRUCTIVE & MEANINGFUL STAKEHOLDER INVOLVEMENT** – Reuse projects that successfully incorporate ecological enhancements require the participation of a broad array of stakeholders including landowners, developers, lenders, federal and State regulators, land planners, local communities, NGOs (e.g. urban redevelopment groups, land trusts, advocacy groups, conservancies), and local government. Ensuring that all of these groups are engaged early in the planning process helps to identify preferred outcomes, fosters trust and allows each to develop a stake in the successful completion of the project.

Action Items:

1. Develop training tools and a resource directory (printed or on-line at WHC's web site) that will assist in obtaining constructive and meaningful stakeholder involvement and facilitate the use of regulatory approaches and ecological enhancement techniques.
 2. Enhance stakeholder involvement at specific sites by applying a documented approach to specific sites, using techniques such as fact sheets, site-specific web sites, stakeholder meetings, and charrettes.
- **ENSURE SOUND SCIENTIFIC & TECHNICAL SUPPORT FOR ECOLOGICAL ENHANCEMENT PRACTICES** – There is a continuing need to ensure that ecological enhancements, remediation techniques, and other innovative approaches are based on sound science, incorporate appropriate standards for levels of ecological and health risk, and are comprehensively monitored and documented. Good information is needed on performance and life-cycle costs of various approaches to ensure long-term stewardship and help document benefits to surrounding communities.

Action Items:

1. Identify and work with existing scientific and technical forums, such as the EPA Technology Innovation Office and the Interstate Technology and Regulatory Council (ITRC), to broaden stakeholder interaction, participation and learning.
2. Facilitate coordination, maintenance and distribution of existing scientific and technical information on ecological enhancements to stakeholders via electronic links and other means of publication; and
3. Identify one or two specific technologies for demonstration at a series of pilot sites.

- **PROMOTE THE VALUE OF ECOLOGICAL ENHANCEMENTS** - There is a continuing need to build greater support and promote more frequent use of ecological enhancements on private and public lands. A communication and marketing strategy is needed to educate stakeholders, foster champions, highlight successes, and identify opportunities.

Action Items:

1. Identify and catalogue the existing organizations and initiatives that support the objectives of this *Action Agenda* or otherwise seek to promote ecological enhancements at private and public properties.
2. Drawing from the information obtained in #1, develop a communication and marketing plan to promote and market the value of ecological enhancements in reuse activities to key stakeholders such as regulators, developers, elected officials, NGOs, the regulated community and appropriate associations.
3. Identify and support leaders within stakeholder groups who can serve as champions for each of the pilot sites identified by the Post-Conference Steering Committee; and
4. Establish a WHC annual awards program to recognize and publicize the successful use of ecological enhancement techniques in reuse projects.

IV PLENARY SESSION SUMMARIES

A

OPENING REMARKS - NEW HORIZONS IN RESTORATION ECOLOGY: WHAT CAN WE ACCOMPLISH?

STEPHEN D. LUFTIG, Senior Advisor - Land Reuse, Office of Solid Waste and Emergency Response, US EPA.

Summary of Mr. Luftig's Opening Remarks

Today's conference provides a valuable opportunity to share information on green space and ecological reuse. Land revitalization enhances land values, creates jobs, provides recreational opportunities, and restores the environment. EPA is committed to working with all parties to overcome the remaining institutional, technical and social barriers that impede the ecological reuse of contaminated properties.

EPA is currently drafting a blueprint entitled "The Land Revitalization Agenda" that identifies over 60 steps that can address these barriers and help make land reuse an integral part of cleanup projects. The agenda also promotes partnerships with the Wildlife Habitat Council and EPA intends to continue to support the Council's work.

Other EPA programs and initiatives will also be used to help foster the productive reuse of land. Examples include: the "One Cleanup Program" initiative, which attempts to harmonize all of EPA cleanup programs; planned "Ready for Use" certifications, which will be issued in conjunction with state cleanup partners when remediation is complete; prospective purchaser agreements and comfort letters that address liability issues; guidelines on reusing portions of a site even if the entire site is not cleaned up; Urban Rivers Revitalization pilot projects; real estate training programs for federal and state project managers; and, economic and environmental revitalization projects that are administered through the Interagency Working Group on Environmental Justice.

Four of EPA's key messages concerning land revitalization are: (1) cleanup and reuse are mutually supportive goals; (2) property reuse should be an integral part of the way EPA does business at both the headquarters and regional levels; (3) emphasizing reuse does not mean lowering cleanup standards; and, (4) reuse issues should be discussed as early in the process as possible.

The new brownfields legislation will significantly add to EPA's ability to promote reuse. It defines brownfields broadly and authorizes EPA to issue new grants of \$200,000 for cleanups and \$50 million annually in grants to support state and tribal response programs. Petroleum releases are now eligible for funding and mine scarred lands are now eligible properties. The law exempts certain contiguous property owners and operators and

prospective purchasers from CERCLA liability and clarifies the innocent landholders defense, which should virtually eliminate the need for Superfund prospective purchaser agreements. It provides CERCLA liability relief for persons who conduct or have completed response actions under a state response program and includes a federal safety net. The President's FYU 2003 budget proposal to Congress doubles the money presently being spent on brownfields to \$200 million.

The new legislation enables EPA to build on its experience with existing innovative initiatives including the Brownfields Redevelopment Initiative, RCRA Brownfields Prevention Initiative and OSWER's Brownfields Technology Support Center.

EPA will be using all of these tools to increase the number of productive green space and reuse projects at cleanup sites. The goal is to have more successful projects like these past success stories: (1) the Anacostia Watershed project, where a natural environment is being re-established in an urban setting; (2) the Leadville Superfund Site, where part of the cleanup involves a 20-mile bike trail carved through the Rockies; (3) the Bunker Hill Superfund Site where compost has been specifically designed for barren hillsides near an abandoned smelter and mining site; and, (4) the Aberdeen Proving Ground, where promising groundwater remediation results are being seen from phytoremediation.

EPA invites the conference participants to share their ideas and insights on how to develop the Revitalization Blueprint and increase the number of successful reuse projects.

B

PANEL PRESENTATION: EXAMPLES OF SUCCESSFUL PROJECTS AND PROGRAMS: THE PETERSON URBAN WILDLIFE REFUGE IN DELAWARE

PANELISTS:

NICHOLAS A. DiPASQUALE, Secretary, Delaware Department of Natural Resources and Environmental Control.

MICHEAL HARE, Deputy Director, Riverfront Development Corporation of Delaware.

JOHN DEMING, VP, Government Relations, Ciba Specialty Chemicals, North America.

A Summary of the panel presentation

The panel provided a detailed description of the challenges they faced in working on the Peterson Urban Wildlife Refuge Project. The site, which is located along the Christina River, has an industrial legacy. It was home to a shipyard, a number of tanneries, and a coal gas manufacturing facility, among others.

The vision for the project came from the Governor's Task Force on the Rivers. This task force consisted of the Riverfront Redevelopment Corp, the County, the Utility, the Railroad, the public, the City of Wilmington, and the Department of Defense. The vision

included rowing clubs, restaurants, a minor league baseball stadium, a contemporary arts center, the first USA Arts Center, and retail outlet stores.

The key partners in the project were Ciba Specialty Chemicals Corporation, Delaware Ornithological Society, Christina Conservancy, Delaware Nature Society, Woodlawn Trust, American Waterfowl Management Plans, Atlantic Coast Joint Venture, Russell W. Peterson Urban Wildlife Refuge Environmental Education Center and the Longwood Foundation.

A number of impediments needed to be tackled in order to start down the path toward realizing the vision. These impediments included bureaucratic inertia, fears of environmental liability, Department of Defense concerns, and development issues. Progress was made once the environmental assessment and biological resources inventory provided an accurate picture of the conditions of the natural resources on the property. The commitment of Governor Peterson, Ted Turner and the Refuge Committee was also instrumental, especially in the initial stages.

The support of Ciba, the corporate partner, was essential. Ciba supported the project for a number of reasons. Ciba felt that playing a key role was the right thing to do because it is the largest and oldest industry on the river and the company had been one of the leaders of the Riverfront Development Task Force. Additionally, Ciba and the community were being asked to support an \$180,000,000 site modernization investment and the company recognized that the landowners needed incentives.

In return for its support, Ciba hoped that the project would be a catalyst for moving ahead with its site modernization plans. Ciba also sincerely wanted to provide a home for a wildlife refuge that the community could be proud of and one that would significantly improve the Christina River watershed. Finally, Ciba wanted others to see its commitment to the River, the community, and the environment.

Funding came from numerous sources. A key source was through a NAWCA grant in which the Migratory Bird Conservation Commission played an important role. The grant was approved for \$891,000 for a 200-acre restoration project that was part of a 10,000-acre NDWRP. NDWRP includes 32 wetland sites and 12 restored sites of 2,855 acres with the restored marshes to be managed by DNREC. These wetlands support 136 bird species.

In summary, the lessons are to always keep the big picture in the forefront, engage as many partners as possible, pursue non-traditional funding sources, build consensus, and take time to enjoy the successes.

C

LUNCHEON ADDRESS: THE PENNSYLVANIA LAND RECYCLING PROGRAM

DENISE CHAMBERLAIN, Senior Environmental Counsel, Marasco Newton Group.

Summary of Denise Chamberlain's remarks

I applaud the Wildlife Habitat Council's conference today and the decision to focus on developing an action agenda to significantly increase the use of ecological enhancements in site remediation and redevelopment projects. I also welcome the opportunity to tell you about the Ridge administration's program to improve the way we use our land in Pennsylvania.

We started this process by first acknowledging the problems created by our land use patterns. In Pennsylvania, developed land has increased by 56% in the past 20 years, farmland has decreased by 42% since 1950 and 156 species of plants and animals have been lost since the 1700s. After acknowledging these problems, Pennsylvania set out to: promote responsible land use; conserve natural resources; build opportunities for teamwork; and, continue to closely measure environmental progress.

As Deputy Secretary, I focused on site remediation through the PA Land Recycling Program. Over 1200 sites have been cleaned up in six years and 3500 acres of wetlands have been restored in the last ten years. The average brownfield redevelopment site in Pennsylvania is between 20 and 50 acres.

We have many specific examples of the Program's success. In Pittsburgh, a vibrant waterfront has replaced the old steel mills, Washington's Landing now has numerous walking trails, a marina, tennis courts, and a rowing club and the City's Southside is filled with housing, green spaces, offices and retail stores.

Other notable successes of the program include: (1) a 1.7 acre park and greenspace area on one of PECO Energy's manufactured gas plants; (2) a walking and biking trail on a portion of a 68 acre site that once served as home to steel foundry plants in Johnstown; (3) a 90 acre park created by PPG Industries in partnership with the Wildlife Habitat Council in Ford City, which is using phytoremediation to eliminate surface water contamination and is being enhanced with native plants and over 8,000 trees; and, (4) plans to turn 110 acres at a former Bethlehem Steel plant into a natural habitat area.

These projects were possible because Pennsylvania's Land Recycling Program allows for regulatory flexibility and is risk-based rather than process oriented. Under the program, a combination of clean up standards may be used to accomplish the remediation. A technical guidance manual was developed that references the appropriate standards, provides information on different remediation strategies and links to clearinghouses for innovative technologies. The program also includes an ecological screening process, which determines whether the site is a source of substantial ecological impact requiring

further environmental assessment or not. Workshops are held to educate all interested parties on program details.

Another important component of the Pennsylvania program includes its ability to address multiple sites owned by the same entity. The State has entered into a multi-site agreement with the military that encompasses over 1000 sites and encourages innovative technologies. BP Amoco also has a multi-site agreement with Pennsylvania that promotes innovative technologies and it has led to the incorporation of greenways and green building concepts into the company's renovation projects.

In conclusion, creating an action agenda that builds on successful programs and our collective experiences will increase the use of ecological enhancements and innovative technologies and help us better preserve our natural resources.

D

CLOSING PANEL: DIFFERENT PERSPECTIVES ON THE FUTURE OF ECOLOGICAL ENHANCEMENTS

J.P. WOODLEY, Asst. Undersecretary of Defense Department for Installations and Environment.

LEE BOTTS, Citizen Activist.

LUCINDA JACKSON, Team Leader of Biotechnology and Environmental Sciences, ChevronTexaco Research and Technology Company.

Summary of Closing Panel Presentation

John Paul Woodley -- contaminated military properties offer unique "opportunities" for wildlife habitat creation within the context of military installation conversion and redevelopment. He described the issue of unexploded ordinances at these properties as being one of the challenges but also one of the areas where innovative remediation technologies have been successful.

Lee Botts – It is extremely important to involve all stakeholders early in the process. Every effort should be made to be inclusive and open. Although able to litigate when forced, most citizen groups find it much better to work together with industry and government toward a shared vision that everyone had a hand in creating. EPA and industry should do everything in their power to promote this kind of inclusive approach.

Lucinda Jackson – Stakeholders need to recognize that science is not at the level yet where it has all the answers to the questions being asked about phytoremediation and bioremediation. More research needs to be done and there needs to be a clearinghouse for this information. As for individual projects, stakeholders should enter the process with the goal of achieving a net environmental benefit and establish ways to measure these benefits.

V CASE STUDIES AND ISSUE WORKGROUPS

During the afternoon session everyone attended one of nine workgroups. Five of the workgroups heard presentations on a specific case study that highlighted objectives in the *Objectives and Action Agenda*. The remaining four workgroups addressed an issue targeted in the *Objectives and Action Agenda*.

The five case studies were Ford's Rouge River project; GM's Saginaw River and Bay City, Michigan project; BP Products' Lima, Ohio project; Bethlehem Steel Corporation's Commerce Center project in Bethlehem, PA; and, Bridgestone/Firestone's Oklahoma City project.

Jerry Amber led the presentation on the Ford experience at the nationally renowned Rouge River remediation and green building project. George Chmael from EcoLogix Group facilitated the discussion. The presentation stressed the importance of having a Memorandum of Understanding with the regulatory agencies, utilizing multiple remediation techniques including phytoremediation, obtaining special regulatory permission for the project and having flexibility in the implementation schedule.

Joe Medved, Mike Tomka and Lisa Williams discussed General Motor's Saginaw River and Bay City, Michigan innovative project, which was part of a natural resource damage settlement. Adam Saslow from Consensus Solutions facilitated the discussion. The speakers all believed that frequent communications created trust and promoted strong coordinated leadership during the entire duration of this project. They encouraged others who may be thinking of implementing similar projects to involve local managers and regulators sooner rather than later and they recommended focusing on common goals rather than getting bogged down on process issues.

Joe Sontchi of BP America, Inc. highlighted the unique aspects of BP's RCRA corrective action at its Lima, Ohio site. Peter Roberts, Esq., form Patton Boggs, LLP facilitated this workgroup and the following three important points emerged: (1) regulatory acceptance is easier to achieve if a common vision for the property is established early in the process; (2) it is a good idea to involve ecological risk expertise as soon as possible, as well; and, (3) keeping the same corporate and regulatory personnel involved throughout the process avoids misunderstandings.

Bethlehem Steel Corporation's Commerce Center in Bethlehem, PA was part of a RCRA Corrective Action that included closing one of the Corporation's steel mills. Ed Wilson led the presentation and Scott Rifkin from Arc Environmental facilitated it. Their presentation, as did others, stressed the importance of involving the neighboring community early on and establishing a good working relationship with the regulatory agencies.

Tim Bent led the discussion on Bridgestone/Firestone's RCRA final closure project in Oklahoma City. Carin Bisland from EPA's Chesapeake Bay Program Office was the facilitator. The presentation stressed the common theme that was reinforced in all of the case study workshops: building a trusting relationship with the regulatory agencies is the best way to avoid obstacles. The presentation also encouraged project sponsors to identify champions within the corporation and the agencies. Ending on a note of encouragement, Mr. Bent stated that there is always room for innovation.

The remaining four workgroups addressed issues relating to regulatory acceptance, stakeholder participation, science and technology, and real estate development.

Charles Johnson, Environmental Specialist on regulatory issues with the Colorado Department of Public Health and Environment, led the discussion, which highlighted the work of the Interstate Technology and Regulatory Council (ITRC). Bob Hoyt from EcoLogix Group was the facilitator. Charles described the many ITRC fact sheets and training modules that can help landowners comply with regulations when using innovative remediation technologies. The workgroup made the collective observation that sufficient flexibility exists within current regulatory structures to use innovative technology and recommended against attempting to change the regulations.

The panel on Stakeholder Participation consisted of Lee Botts, who is a nationally known citizen activist and Terry Harris, Esq., President of the Cleanup Coalition in Baltimore, MD. Fran Flanigan facilitated the discussion. The workgroup was left with these three important messages for avoiding the pitfalls of inadequate citizen participation: (1) community stakeholders need to be involved from the very beginning of the project so they can help design it; (2) a "cookie cutter" approach to implementing projects should be avoided because every site is unique; and, (3) communicating information on environmental and human health risk is difficult but essential.

Dr. Lucinda Jackson, Team Leader of Biotechnology and Environmental Sciences at ChevronTexaco Research and Technology Company and Dr. Kathy Banks, Director, Hazardous Substance Research Center, Purdue University were the panelists for the Science and Technology discussion. Jon Kallen, from Arc Environmental, Inc. facilitated. This panel made the point that scientists are beginning to look more at the ecosystem as a whole when assessing remediation techniques, which is allowing for more phytoremediation and bioremediation considerations and opportunities. The panel observed that unfortunately funding for innovative technology research has recently dropped off significantly. On a positive note, both panelists stated that having partnerships that include academics as well as industry and regulators improves the chances of finding opportunities to use innovative technologies.

The Developers' Issues panel consisted of Chester C. Burley, III, President & CEO, Maritime Trust Company, Darien, Connecticut; Howard M. Ziperson, President, Continental Realty Advisors, Inc., Ocean Grove, New Jersey; and, Stephen D. Luftig, Senior Advisor for Land Reuse, U. S. EPA, Office of Solid Waste and Emergency Response. Marie Halka, MWH Global facilitated the discussion. The three take home

points from this session were: (1) it is essential to involve the community early in the process; (2) development projects often move more quickly if portions of the site that are less contaminated can be developed before the more contaminated areas are addressed; and, (3) developers face risks when using phytoremediation and therefore, often need assurances from the regulatory agencies before they will move forward.

VI

APPENDIX A – CONFERENCE PARTICIPANTS

<i>Name</i>		<i>Company/Organization</i>
Jerry	Amber	Ford Motor Company
Mike	Ander	URS Corporation
M. K.	Banks	Purdue University
Tim	Bent	Bridgestone/Firestone Americas Holding
Gregory R.	Biddinger	Exxon Mobil
Carin	Bisland	Chesapeake Bay Program
Michael	Blaylock	Edenspace Systems Corporation
Pieter	Booth	Exponent
Lee	Botts	Gary, Indiana
Carol	Brown	Purdue University
Steve	Brown	Rohm and Haas Co.
Chester	Burley	Maritime Trust Co.
Mary Jane	Calvey	Oklahoma Department of Env. Quality
Dorreen	Carey	City of Gary
Tracy	Carter	Kerr-McGee Corp.
Jean	Caufield	General Motors Corp.
Denise	Chamberlain	Marasco Newton Group
George	Chmael	EcoLogiz Group, Inc.
Richard J.	Claytor	Defense Supply Center
Jason	Coccia	The Conservation Fund
Derrick L.	Coley	United States Conference of Mayors
Gerard	Coscia	Langan Engineering and Environmental Services
Erica S.	Dameron	VA DEQ
Dom	DeAngelis	ExxonMobil
John D.	Deming	Ciba Specialty Chemicals
Paul	Deutsch	Geomatrix Consultants, Inc.
Bonnie	DeVos	Marasco Newton Group
Nicholas A.	DiPasquale	Delaware Dept. of Nat. Res. & Env. Control
Steve	Duda	Earth Tech
Stephen A.	Elbert	BP–Atlantic Richfield Company
T.G. (Tuss)	Erickson	Philips Petroleum Co.
Mark	Evans	Tetra Tech EM Inc.
Melissa	Friedland	US EPA
De	Ferguson-Southard	MD Department of the Environment
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John	Harris	U.S. EPA/OSWER
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Joe	Naccache	BP America Inc.
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Maria	Parisi Vickers	U.S. EPA Region III
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Dottoe	Pipkin	U.S. EPA
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