Brownfields

Partnering For A Greener Tomorrow

Track One: Assessment and Cleanup

Purpose of the Track

The processes of site assessment and cleanup are changing more rapidly today than ever before. Keep up with the most current tools, information systems, techniques, and community-based risk management strategies. Learn from experts in the brownfields arena about a host of topics, ranging from the latest information on cutting-edge innovative technologies, such as phytoremediation and soil vapor extraction, to the most recent updates of risk-based corrective action policies.

(1A) Congratulations, You Just Got a Pilot!...Now What?
Thursday, September 4, 1997
3:00 p.m. - 5:00 p.m.

Description: Getting your brownfields program off to a strong start is important. Learn how to find technical assistance from federal and state agencies and how to build on the success of your pilot. These "how-to's" also will cover community involvement and issues related to sustainability and the environment.

Location: Room 1205

Speakers and Affiliation:

Mr. Robert C. Bobb (Moderator)	City of Richmond, Virginia
Mr. Michael W. Freimuth	City of Bridgeport, Connecticut
Ms. Wendy S. Saunders	City of Sacramento, California
Mr. William C. Trumbull	City of Chicago, Illinois

MR. ROBERT C. BOBB

Robert C. Bobb earned his bachelor's degree in political science from Grambling State University, and received a master's degree from Western Michigan State University. He also was a Joyce Foundation Fellow at Harvard University's John F. Kennedy School of Government (State and Local Programs) and recently served as a member of the Executive Alumni Council for the Kennedy School.

His contributions to urban government policy and management are particularly noteworthy. He has served as the city manager of three major urban cities: Kalamazoo, Michigan; Santa Ana, California; and presently, Richmond, Virginia. In each locality he distinguished himself in the areas of public finance, economic development and public safety. For his contributions to the profession in these areas, he has been a three-time recipient of highly coveted innovation awards from the International City Management Association, along with other honors.

In September 1993, Mr. Bobb was named by *City & State*, a newspaper for state and local government officials, as the Most Valuable Public Official among professional managers in local government in the nation. In November 1995, Mr. Bobb was elected a fellow of the National Academy of Public Administration (NAPA). NAPA is a private, non-profit corporation chartered by the Congress of the United States to improve governance at all levels - federal, state and local. Academy fellows are elected by their peers who include Cabinet members, governors, members of Congress, mayors and prominent business executives who have served in government, professional government managers, and scholars specializing in public affairs and administration.

He is a frequent speaker/lecturer on issues of the urban environment and was selected as a member of the U.S. delegation to China in 1990 to examine urban problems in that country.

MR. MICHAEL W. FREIMUTH

As director of Planning and Economic Development for Connecticut's largest city, Michael Freimuth has been managing the redevelopment of industrial and commercial property throughout Bridgeport for 12 years. Critical to the re-use of the sites is their environmental condition, an issue identified by the City/State Governmental Restructuring Task Force in 1989. Bridgeport received one of U.S. Environmental Protection Agency's (EPA) first three brownfields grants and has since been successful in securing additional funds from the State of Connecticut to clean sites identified as critical to the city's renewal.

Mr. Freimuth has a master's degree in public finance and a bachelor's degree in economics and has developed real estate as a banker, real estate developer and city official since 1979. He also served as a congressional assistant drafting urban legislation and has served on several municipal and state environmental policy committees and task forces.

MS. WENDY S. SAUNDERS

Ms. Saunders currently serves as Senior Management Analyst for the Sacramento City Manager. As a consultant to the City of Sacramento, Ms. Saunders assisted in the development of a series of mechanisms to facilitate redevelopment of Southern Pacific's Sacramento Railyard, a state Superfund site, including a Memorandum of Understanding with the California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control.regarding post-remediation responsibilities during the course of redevelopment.

Based upon issues drawn from the Southern Pacific experience, Ms. Saunders wrote the City of Sacramento's successful Brownfields Pilot Project application, and is responsible for its implementation.

Prior to work related to hazardous materials issues, Ms. Saunders served at the City of Sacramento's redevelopment agency as project manager for several catalyst downtown Sacramento redevelopment projects, including the $100 million downtown plaza renovation and the $40 million central library.

Ms. Saunders holds a master's degree from the University of California at Davis's Graduate School of Management.

MR. WILLIAM C. TRUMBULL

Bill Trumbull is the Assistant Commissioner in the Chicago Department of Environment responsible for the city's Brownfields Initiative. Prior to working for the city, he was a regulatory issues manager in the Environmental, Health and Safety Department of Amoco Corporation, focusing on petroleum transportation issues. A highlight of this effort was working with the U.S. Coast Guard to implement regulations under the Oil Pollution Act of 1990 to protect our shores from catastrophic oil spills. He began a career in the petroleum industry as an exploration geologist searching for oil and gas in the eastern Gulf of Mexico. Mr. Trumbull has a Bachelor of Science degree in geological sciences from Bradley University, and a Master of Science degree in marine sciences from the University of North Carolina.

DOCUMENTS THAT SUPPORT
PANEL 1A: CONGRATULATIONS, YOU JUST GOT A PILOT!...NOW WHAT?

Michael W. Freimuth
Director
Planning & Economic Development

CITY OF BRIDGEPORT
CONNECTICUT

BROWNFIELDS ECONOMIC REDEVELOPMENT PROJECT

EPA Pilot Program

The U.S. Environmental Protection Agency (EPA) has funded several two-year demonstration pilot programs, at $200,000 each, for the redevelopment of abandoned industrial lands. As one of the first three pilots, the City of Bridgeport's program will promote safe and appropriate redevelopment of "brownfields" by pulling together diverse individuals and groups and assembling a database of critical environmental and economic information. Through a cooperative effort, this project will demonstrate that it is possible to return contaminated urban industrial properties properties that had been written off as wasteland to productive uses that serve the community and not detract from it.

Bridgeport Brownfields Issues

Bridgeport is Connecticut's largest city, with a current population of 141,686, half of which are minority. The City has a long and distinguished heritage as a manufacturing center. Many businesses have left Bridgeport for the greener field found in the suburbs. Several hundred acres of formerly, prime industrial land lie derelict and abandoned today due to the presence of a variety of environmental contaminants. Federal and state environmental regulatory hurdles have created the impression that there are insurmountable obstacles to cleaning up and redeveloping contaminated sites. With a major portion of the City's 2,2000 acres of industrial-zoned land contaminated to some degree, the City acknowledged the need for a cooperative, public-private strategy to reclaim derelict sites in Bridgeport, providing local jobs and enhancing the local economy.

While Bridgeport has felt the downturn in the economy more than most communities and currently deals with double-digit unemployment rates, it has many assets that will form the foundation for its resurgence. The City has excellent access to New York City, Boston and all points throughout the northeast by land, air, rail, and sea (it has one of three ports in the State). Combining these assets with its highly trained workforce, Bridgeport only lacks developable land to complete the package.

The history of the City, and the future, resides in these properties as they await reclamation. The City will focus its efforts on three targeted areas of the city. These three areas were chosen because of the high concentration of industrial activity. These areas are also bordered by highly concentrated residential communities.

CLEAN Task Force

The City of Bridgeport assemble a community oversight committee to establish a strategic approach to the Brownfields dilemma. The oversight committee, the CLEAN (Community Linkage for Environmental Action Now) Task Force, is composed of representatives of affected neighborhoods, government officials, potential investors, educators, and business leaders. The Task Force will serve as a sounding board and informational resource for the consulting team that has been hired to establish an inventory of contaminated properties, collect environmental and economic data for the sites, and create redevelopment strategies for the selected pilot sites.

Scope of Work to be Performed by Consulting Team

The City entered into a contract with a multi-disciplinary consulting team which is headed by Roy F. Weston, a nationally known environmental management, engineering, and consulting firm with a local office in Rocky Hill, Connecticut. West is joined with TPA Design Group, a planning and development consultant located in New Haven, and Asset Management Solutions, a Bridgeport-based real estate development and marketing consultant. The mix of skills provided by the consulting team is important to achieve the goals of the Brownfields program.

The scope of services to be performed by the consulting team are as follows:

1. *Identify properties to be evaluated*
   Using City/State databases and advice from the City and CLEAN Task Force, the consulting team has developed a comprehensive list of properties (250 estimated) to be evaluated.
2. *Create an interactive database using planning, environmental, and economic information*
   Windows/GIS based database management system will be developed to input and store the planning, environmental, and economic data that is collected. Menu screens will be developed for easy input and reading of the data for each property. The database will be continuously updated and readily available to all users.
3. *Develop criteria and obtain initial screening information*
   Information and criteria will be identified to be used to screen the properties and determine those with the greatest redevelopment potential.
4. *Screen properties to develop a list of 25 sites with most redevelopment potential*
5. *Obtain detailed information on short list of properties*
   Among the information to be gathered for the short list of properties are: estimates of building rehab, remediation, demolition, and rehabilitation cost.
6. *Present detailed information on short list to CLEAN Task Force and City and finalize the selection of 2-6 sites.*
7. *Develop property remediation and redevelopment strategy and plans*
   Estimated costs of environmental remediation, rehabilitation and/or demolition will be developed and potential funding sources will be identified. Selective Phase II sampling will be performed at the properties as well.

Investor's Forum

As a means of enhancing the marketing potential of the database, the City intends to convene a series of Investor Forums, the purpose of which is to present and promote the research findings to potential investors and real estate interests within the local market and the TRI-state region. The City expects that the gathered information will demystify the negative perceptions of Bridgeport and inner-city development. At the time of the Investor Forums, the City hopes to be able to present case studies which demonstrate that site cleanup and reuse projects can make good economic sense, and the profitable, environmentally responsible uses can be achieved.

Lessons Learned

Although still in its infancy, the City of Bridgeport's Brownfields pilot project has demonstrated lessons that will help yield expanded benefit to the program. Among these lessons are:

- *Maintain a local focus*:
  Locally-driven strategies tailored to community needs are essential for successful implementation of Brownfields program.

- *Address issues comprehensively*:
  To invite additional players to participate in the program, consider and plan for related concerns, such as environmental technology job training, environmental awareness programs in the schools, recreation and park space development on derelict sites.

- *Pursue Other Federal Assistance*:
  Additional sources of potential funding from the U.S. Department of Housing and Urban Development (HUD), Economic Development Administration (EDA), National Park Service (NPS), among other departments, could be pursued to address the full range of brownfields issues.

BROWNFIELDS

RECYCLING LAND FOR CHICAGO'S FUTURE

CITY OF CHICAGO · RICHARD M. DALEY · MAYOR

Presenter: William C. Trumbull
Assistant Commissioner
Chicago Department of Environment

Prepared for: Brownfields '97
9/3-5/97

For more information about the Chicago Brownfields Initiative, please call the Chicago Brownfields Information Line at 312.744.8900.

Chicago Brownfields Initiative — Fact Sheet

DEFINITION & PURPOSE

The Chicago Brownfields Initiative links environmental cleanup and economic development. Brownfields are abandoned industrial properties where real or suspected contamination hinders redevelopment.

The City acquires, cleans up and prepares sites for redevelopment to create new jobs and tax revenues in the City's industrial areas. The Initiative encourages private sector development by improving and streamlining government regulations.

KEY DATES

1992: Mayor Richard M. Daley forms an interdepartmental task force on brownfields strategies. Daley proposes tax incentives for brownfields cleanup.

1994: Mayor Daley allocates $2 million for a pilot site program. City selects five sites.

1995: The City and the MacArthur Foundation sponsor Brownfields Forum, bringing 150 businesspeople, regulators, and activists together to discuss impediments to development. Forum develops sixty five recommendations for eliminating brownfields barriers.

1995: Scott Peterson Meats acquires a pilot site the City remediated. The company invested $5.2 million in its existing plant, hiring 100 new workers.

1996: Brownfields legislation creates the Illinois Site Remediation Program. "Risk based" cleanup objectives, take into account both contamination and future use of a site. City policies now support the program as institutional controls on land and groundwater usage.

1996: HUD announces $54 million loan guarantee to City for brownfields cleanup.

1997: Chicago chooses four sites for the new funding. These are more complex sites with greater redevelopment potential. Some require assembling large parcels of land.

1997: In the first federal-local project of its kind, Chicago begins administering a Supplemental Environmental Project on behalf of the US EPA and Department of Justice.

POLICY INITIATIVES

Tax Incentives: Chicago supports federal tax incentive proposals. Cook County and the state of Illinois now offer a property tax incentive for cleanup.

State Policy: A new bill authorizes Illinois cities to cleanup abandoned and unsafe property and place a lien on the property for cleanup costs. The same bill allows courts to discount the fair market value of condemned property for the cost of cleanup. Illinois now offers a grant program to municipalities for site investigation and cleanup plans.

National Policy: With the US Conference of Mayors and the National Association of Local Government Environmental Professionals, Chicago's experience is influencing the federal outlook on brownfields.

Chicago Brownfields Initiative Policy Update

May 1997: The Chicago Brownfields Initiative recently has advanced several brownfields policy initiatives. These measures will improve both public and private brownfields redevelopment by streamlining regulations and testing new practices.

MUNICIPAL ENVIRONMENTAL LIEN

A new bill authorizes Illinois cities to test and clean up hazardous conditions on unsafe and abandoned properties (tax delinquent at least 2 years) and to place a lien on the property for costs incurred. This builds on existing authority for unsafe buildings, recognizing that environmental hazards can present a serious danger to public health and safety and that cities need a tool for intervening in such cases.

FAIR MARKET VALUE

An amendment to the state's condemnation statute provides that environmental conditions can be considered in determining fair market value for eminent domain proceedings. Otherwise taxpayers could pay an inflated price for a condemned property and then pay again for its cleanup.

STREAMLINED SITE CLEANUPS

A new City ordinance assists property owners who clean up sites under the Illinois Site Remediation Program. The ordinance prohibits the installation of potable wells in the City. Groundwater "drinkability" is not an issue for most of Chicago, since the City's water comes from Lake Michigan. The Illinois EPA views the City's ordinance as an "institutional control" on persons being exposed to contaminants through groundwater. With this pathway eliminated, state-determined cleanup standards are based on potential exposure through the soil. Cleanup standards fully protect human health and the environment.

POLICY DEVELOPMENT GRANT

The US EPA has awarded the City $41,000 for two policy projects. First is an evaluation of the Chicago Brownfields Forum, a participatory problem-solving model that has been replicated by many communities. The Brownfields Forum made over 60 recommendations addressing the barriers to brownfields redevelopment. This project will evaluate progress on these activities and reconvene the Forum to share the results and plan the next steps.

The second project is enhancing community participation processes for several brownfields on Chicago's west side. The challenge is to introduce a "brownfields overlay" to existing processes, communicating environmental information and addressing economic development opportunities. Clean Sites will conduct research and outreach in developing and implementing community participation plans. The plans will be site-specific, but will yield a framework for future projects in Chicago and will contribute to the range of approaches being used in communities around the United States.

Chicago Brownfields Funding — All Sources

HUD Section 108 Loan Guarantee

- $54 million for site environmental investigation, acquisition, cleanup, and redevelopment.
- Four large redevelopment areas currently are being cleaned up and redeveloped as urban industrial parks (see fact sheet).

Supplemental Environmental Project (SEP)

- Chicago is administering a $950,000 SEP as part of a consent decree between Sherwin Williams Company, the US Environmental Protection Agency and the Department of Justice.
- This is the first intergovernmental arrangement to administer a SEP
- The funds will be used for site investigation, demolition, and cleanup on a portion of the West Pullman Industrial Park.

U.S. Army Corps of Engineers Partnership

- Chicago and the US Army Corps of Engineers are partners in the Corps' Planning Assistance to States Program.
- The $150,000 project (a 50/50 match) first funded a database search to identify potential brownfields opportunities. Several of the sites identified are in the Roosevelt & California redevelopment area. The Corps is now conducting a subsurface investigation on those sites.

U.S. EPA Regional Pilot Grant

- In May 1997, the City of Chicago was awarded $41,000 as a US EPA Regional Pilot (Region V).
- The City will evaluate progress on some 65 recommendations made by the Chicago Brownfields Forum in 1995.. Following the evaluation, Forum participants will be invited to reconvene, take stock of their accomplishments and plan for the future.
- A second project will develop and implement community participation plans for brownfield sites on the City's west side.

Illinois / Indiana Seagrant

- This $40,000 grant is to study opportunities to link brownfields cleanup and redevelopment with wetlands restoration in the Lake Calumet area of southeast Chicago.

SECTION 108 LOAN GUARANTEE

- Chicago's Site Redevelopment Program budget is $54 million, the largest city brownfields program in the United States.

- The funding is a Section 108 loan guarantee from the US Department of Housing and Urban Development (HUD). Section 108 lets the city leverage its Community Development Block Grant to finance near-term, high-impact projects.

- Funds, to be spent over three years, can be used for all site activities -- investigation, cleanup, acquisition, and marketing for redevelopment. This flexibility is important since Chicago is taking on sites that are environmentally complex and that require assembling large blocks of land for higher redevelopment potential.

SITES

The City now is working on the following sites with HUD Section 108 funds. $20 million is earmarked for the West Pullman Industrial Park. $30 million will be used for other sites. These will be chosen by criteria which include confirmed or suspected contamination, marketability and potential for job creation, and financial feasibility.

- West Pullman Industrial Park: 130 acres on the City's south side. The City is working with former owners to get some parcels cleaned up. Other parcels will be assembled and cleaned up by the City.

- Roosevelt & California: 70-acres on the west side. Currently zoned for mixed uses, the City plans an industrial park here.

- Kinzie Corridor: A one-mile strip of brownfields in a large industrial planning area.

- Roosevelt & Kostner: 17-acres. Criminal fly-dumping has long impeded redevelopment.

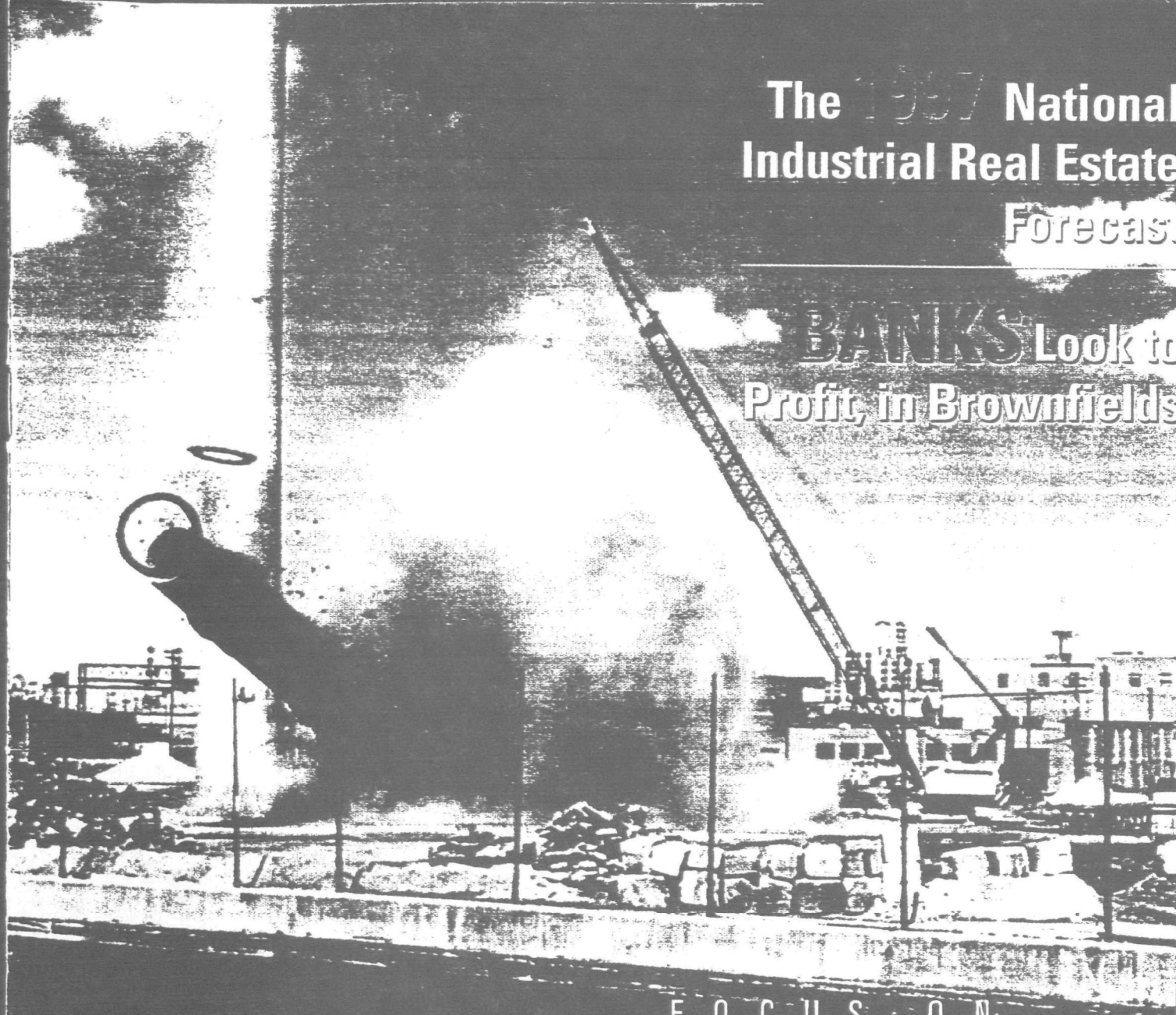
The sources of repayment are: tax increment financing (TIF) proceeds, the resale value of clean sites, cost recovery from the parties responsible for contamination, and interest earned on the loan drawdown prior to payout. The loan payback period is thirteen years for the $20 million loan and nine years for the $30 million loan.

LOOK WHO'S BUYING CONTAMINATED PROPERTY

BROWNFIELD BN NEWS

THE SOURCE FOR THE DISTRESSED PROPERTY MARKET

PREMIER ISS



The 1997 National Industrial Real Estate Forecast

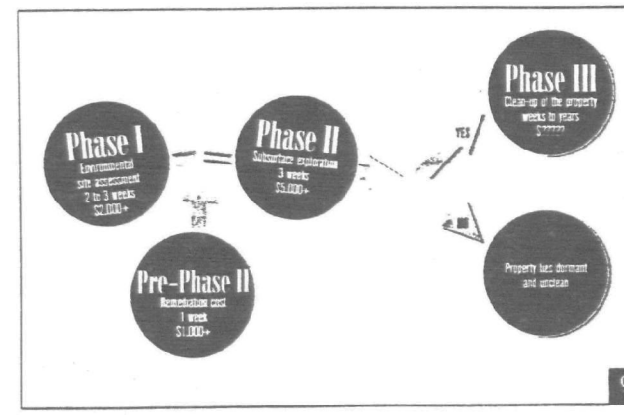
BANKS Look to Profit in Brownfields

FOCUS ON

CHICAGO

CHICAGO'S PUSH TOWARD BROWNFIELD DEVELOPMENT

BROWNFIELD NEWS
FEBRUARY/MARCH '97 ISSUE 1



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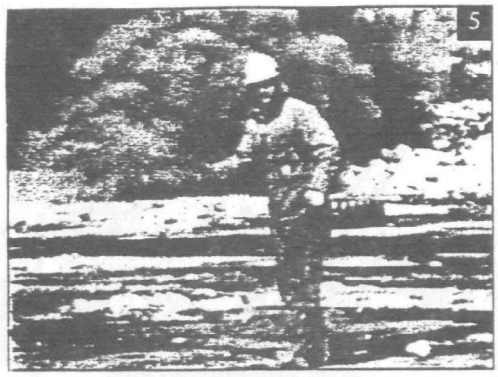
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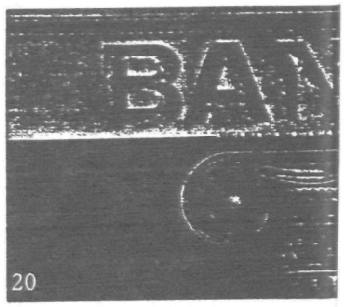

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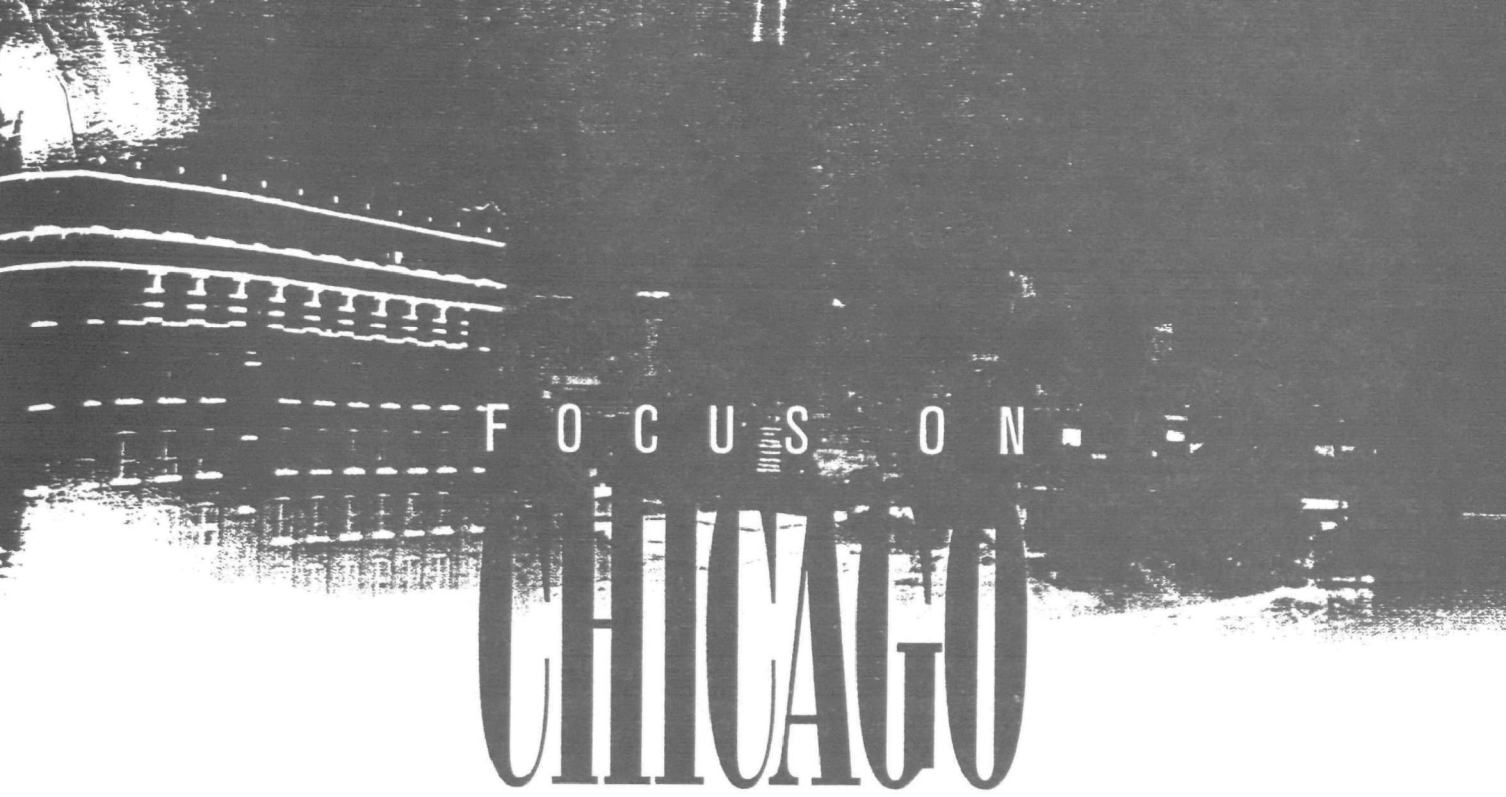
Cover Photo: Demolition of the Medill Incinerator Plant. Courtesy of Brandenberg Industrial Services.



FOCUS ON CHICAGO

THE SECOND CITY IS FIRST IN BROWNFIELDS

by Kellee Van Keuren

When it comes to brownfields, Chicago has 20/80 vision. "We used to go by an 80/20 rule, seeing brownfields as 80 percent an environmental problem and 20 percent an economic problem," says Ken Kastman, who works out of Woodward-Clyde Consultants' Chicago office to manage the company's National Brownfields Network. "Now we've learned the reverse is true—the problems are 80 percent economic and 20 percent environmental."

Kastman's view is not unique to Chicago's private sector. City officials h[illegible] a similar lesson over the pa[illegible] years, says Henry L. Henderson, commissioner of Chicago's Department of Environment. "Brownfields are complex real estate transactions, rather than environmental quagmires," Henderson says. "There are complicated ownership issues, complicated tax delinquency issues and marketing difficulties."

With this shift in vision, city officials are dreaming big. They talk of a future time in which everyone with a rol[illegible] fields will have the ultimate [illegible] in revitalization in mind—when an employee in the buildings department will think beyond "it's my job to tear down this building," and when new highways are planned based on the construction's impact on brownfields. A time when contaminated industrial properties can be quickly remediated for easily identifiable end users.

But moving from lofty talk to reality is not easy, and the stakes are high. In October 1996, the federal Department of Housing and Urban Development (HUD) approved a $50 million loan guarantee for the Chicago Brownfields Redevelopment Program, to be expended over a three-year period. The success of the program will likely ride on cooperation between government agencies, private companies, nonprofit organizations and community groups—essentially everyone with a hand in the brownfield process.

Richard M. Daley, Mayor of Chicago

The game plan

The city's strategy is to acquire, clean up and redevelop sites where contamination or ownership issues are too complex to warrant investment by the private sector, although not so contaminated as to be considered environmental disasters.

"We take into consideration job creation and revitalization of a community," Henderson says. "We are responsible for looking at that, while the private sector is charged with looking at the dollar value. If we break even on our investment, but create 100 new jobs, that's a huge return."

Using these criteria, city officials have selected four sites for redevelopment, one of which is a 140-acre area in the south part of Chicago known as Victory Heights/Maple Park. The city allocated $20 million of the HUD loan

FOCUS ON

CHICAGO

THE SECOND CITY IS FIRST IN BROWNFIELDS

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Rob May,
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312-939-7171 ext. 16

PETER J. SCHULZ, CITY OF CHICAGO

to this area because of its size and the difficult planning issues it presents.

A major part of the battle will be gaining control of the property, says John Kuhns, assistant commissioner for industrial development in the Commercial and Industrial Division of the Department of Planning and Development. Within the 140 acres, there are more than 120 parcels of land, each with an individual property index number. The city has obtained a few of the parcels through demolition lien foreclosures, but will have to contend for the others piece by piece. In addition to foreclosures, the city's current mechanisms for securing control of property are condemnation through eminent domain and no-cash bids for tax deeds on tax delinquent properties, a process that takes about 18 months.

Another key task for the city will be to find buyers for the properties once they have been obtained and remediated. The city considers the sites to be investments that must pay for themselves within the terms of the loan guarantee—and city officials are wagering their future Community Development Block Grant (CDBG) funds that the investments will pay off. In other words, the city's future CDBG—money which HUD provides for projects that benefit low and moderate income people—is serving as collateral for the loan.

This arrangement was secured under HUD's Section 108 loan guarantee program, which allows cities to borrow against future CDBG funds to undertake large-scale projects. The sources of repayment for both the principal and interest on the $50 million loan are the resale value of clean sites, tax increment financing (TIF) proceeds, interest earned on the loan drawdown prior to payout and cost recovery from the parties responsible for contamination. The loan payback period is 13 years for the $20 million loan and nine years for the $30 million loan, which is to be spent on the four remaining sites.

"We're a test case," says Bill Trumbull, assistant commissioner for the Chicago Department of Environment. "The funding is far beyond the scope of what's been done in the past." At first, the city had only asked HUD for $4 million to operate its brownfield program. But after a reevaluation, they upped the sum to $50 million.

"If you start a project on the scale of 130 to 160 acres, you need to have the money to complete it," says Jim Van der Kloot, brownfields manager for the Region 5 office of the U.S. Environmental Protection Agency (EPA). Van der Kloot spent three years on loan to the city to help develop its pilot brownfield program.

Jim Van der Kloot, EPA Region 5, brownfields manager

"The city budget office looked at the scale of projects we were investigating and decided to go for it," he says. And what convinced HUD to go for it too?

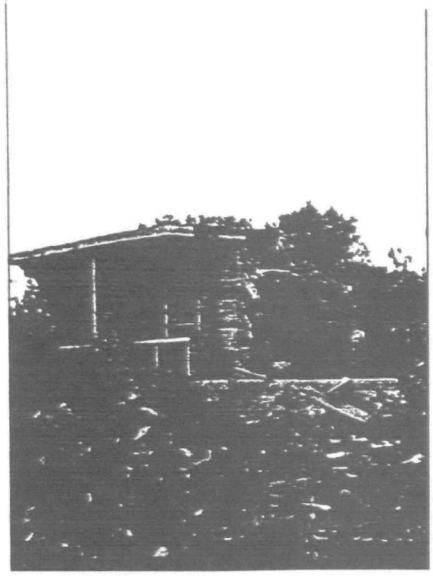
A chronology of Illinois state laws, regulations and bills that deal with the transfer of environmentally impaired property

RESPONSIBLE PROPERTY TRANSFER ACT
(Public Act 85-1228, effective Nov. 1, 1988).

– The purpose of the law is "to ensure that parties involved in certain real estate transactions are made aware of the existing environmental liabilities associated with ownership of such properties, as well as the past use and environmental status of such properties." The law establishes a mechanism and procedures for notifying buyers of the environmental conditions of properties.

PUBLIC ACT 88-438 (effective Aug. 20, 1993)

– Provides certain defenses from environmental liability for owners of real property. In the case of an individual owner, there is no liability unless the owner caused, contributed to or allowed the release or threatened release of a hazardous substance or pesticide. The law also allows purchasers of real estate to establish a rebuttable presumption against state claims and a conclusive presumption against private claims for a release of a hazardous substance on the property if specified environmental audits have been completed and recorded prior to acquisition.



DEPT. OF ENVIRONMENT, CITY OF CHICAGO

A brownfield site located in the Victory Heights/Maple Park area.

The city's past performance with brownfield redevelopment, Van der Kloot contends.

Building on the Past

In 1993, Chicago launched an interdepartmental effort to redevelop brownfields, involving personnel from the departments of Environment, Planning and Development, Law, Buildings, and the Mayor's Office. Armed with a $2 million budget—raised through general obligation bonds—the brownfields team selected five pilot sites. It anticipated the money would finance environmental testing on all five properties and remediation of two. Instead, the team was able to clean up all five for about $1.3 million, spending the remaining $700,000 on several other targeted sites. End users have been identified for two of the five original sites, while the other three are either in negotiations or being marketed for future use.

The city plans to grow the program beyond sites that have a demonstrated end user

To date, the program has created more than 100 new jobs and generated $1.4 million in annual property tax revenues, Henderson says.

By exceeding its goals *and* coming in under budget, the pilot program is a success story by nearly any measure. The question is whether it paints a realistic picture of what can be done with brownfields in the future. The city carefully selected each pilot site, choosing properties with a low likelihood of extreme contamination and with a likely end user—either because adjacent industries were interested in the property or because the location made it attractive to buyers. One of the sites was relatively clean, requiring only a Phase I environmental site assessment. Another had only minor contamination. Each of the sites was either abandoned or city owned, allowing the city to avoid sticky property control issues.

"We had to focus on quick kills, so we could have some successes and attract a bigger budget," Van der Kloot explains. "In an environmental situation, you can go through $2 million very quickly. We had to choose projects we could handle with that amount of money."

But as the city knows, not all brownfield transactions are quite so tidy. "We have to grow the program beyond sites that have a demonstrated end user," Henderson says. Without ignoring market forces—which will steer the city clear of any Superfund-style cleanups and properties with no industrial value—its challenge is to take on sites whose redevelopment is hindered by more complex marketing, planning, real estate and financing issues.

Rallying the troops

To their credit, city officials seem to recognize that cooperation will be a make-it-or-break-it factor in reaching their goals. And again, they point to past successes as indication that they're up to the challenge. First there was the interdepartmental effort that produced the pilot program. While the Department of Environment is still the only one with a dedicated brownfield division, the program gave other key personnel throughout the city a chance to tackle brownfield issues, preparing them for future run-ins with contaminated industrial properties.

Henry Henderson, commissioner of Chicago's Department of Environment

The pilot program also fostered some cooperation between city, state and federal agencies. The U.S. EPA Region 5 office lent Van der Kloot to the city for three years, along with two other people for six months each. Salaries were split between the two offices. The personnel loans facilitated unprecedented communication between city and federal officials, Van der Kloot says. "When I arrived, there was not a lot of contact between the

Source: Illinois Environmental Protection Agency Division of Legal Counsel and Legislative Liaison

PUBLIC ACT 89-431 (effective Dec.15, 1995)

– The purpose is to establish "the procedures for the investigative and remedial activities at sites where there is a release, threatened release, or suspected release of hazardous substances, pesticides, or petroleum and for the review and approval of those activities." The law also sets forth objectives to be used for site remediation, including establishing a risk-based system based on protection of the environment and future uses of the land and expedited alternatives for review of site remediation, including a privatized review process.

Currently pending TACO regulations submitted to the Illinois Pollution Control Board:

TACO (Tiered Approach to Cleanup Objectives)

–These regulations would implement one of the key objectives of Public Act 89-431: to set forth procedures to evaluate human health risks in relation to the planned use of the property. They include an option for exclusion of pathways from further consideration; use of area background concentrations as remediation objectives; and three tiers for selecting applicable remediation objectives. Tier 1 uses standard tables; tier 2 has equations and tier 3 is a full-blown risk assessment.

FOCUS ON

CHICAGO

THE SECOND CITY IS FIRST IN BROWNFIELDS

Continued from pg 11

two," he says. "But over time, a lot of expertise and creative ideas were shared. I was often on the phone a couple times a day with U.S. EPA people, just knocking ideas around."

Over the three years, the regional EPA office also spent $10 million of emergency response funds to remove contamination in the city that posed an immediate health threat. On the state level, the Illinois EPA administered a voluntary cleanup program that the city used to remediate its contaminated pilot sites. Illinois EPA officials also served as a resource for the city's site investigations.

And attempts at cooperation have not been limited to government agencies. Another prong of the pilot program was the Brownfields Forum, a group of more than 100 representatives from both the public and private sector who recommended 63 ways to chisel away the barriers to brownfield redevelopment in Chicago. These suggestions were consolidated into nine categories of action steps, each to be carried forward by a specific project team.

Sponsored by The John D. and Catherine T. MacArthur Foundation, a nonprofit grant-making institution, the Forum cost about $250,000, says Rebecca Riley, the foundation's vice president of civic affairs.

The practical results of the Forum are tough to measure. Some recommendations—such as creating a publicly available brownfields database—have been abandoned because they were either not feasible or not necessary. For some ideas that have been implemented, it's not clear how instrumental the Forum was in the process. But it did succeed in assembling an impressive array of experts for a dialogue on brownfields over the course of nine months. Participants included bankers, lawyers, environmental consultants, nonprofit organizations, real estate specialists, government officials and academics. There's some talk about the possibility of a reunion, at which they could review their progress on the recommendations, but no concrete plans have been made.

Supplying demand

Cooperation and cleanup will be two essential components of a successful brownfield program, but the ultimate test will be the city's ability to put the properties back into use. "The crux of the issue is that you have to have a demand," says Jan Sheinson, environmental risk manager for American National Bank & Trust Co. and participant in the city's Brownfields Forum. "There has to be a reason a company wants to stay in the city." But identifying why companies don't want to stay is tough, and addressing those concerns is even tougher. Property remains undeveloped because of transportation concerns, lack of community growth, poverty, tax issues and a myriad of other reasons. Because the city's older-style industrial development doesn't suit the needs of some companies, they look to the suburbs for expansion.

Brownfields Forum Recommendation Categories

1. Improving communications
2. Strengthening nonprofit capacity
3. Building city government capacity
4. Streamlining regulations
5. Encouraging private-sector investment
6. Improving public financing
7. Involving communities
8. Preventing pollution
9. Influencing regional planning

"In Chicago, properties were developed more like the 1800s industrial model: smaller properties where modern users need larger properties," says Kuhns of the Department of Planning and Development. "Even in the 1960s, people wanted five- to six-story warehouses. No one wants that anymore. Now people want single-story warehouses with high ceilings and plenty of loading docks. Instead of access to water, they want access to freeways. The challenge is to find a way to make these properties usable for modern industry."

In response to that demand, the city plans to focus its efforts on the parts of the city such as the Victory Heights/Maple Park area where it can assemble large chunks of property, Kuhns says. Also, through the Brownfields Forum, the city has enlisted the help of several organizations that are seeking to influence transportation and regional planning based on its effect on brownfields.

Nonprofit organizations are also getting into the game of finding end users for clean sites. The Chicago Association of Neighborhood Development Organizations (CANDO), an umbrella group for about 80 community organizations, conducts real estate market analyses on properties to determine which sites have the best market potential. Then they follow up with Phase I and Phase II site assessments on the most promising properties.

After they've created a portfolio of clean sites, they will approach possible buyers. "It's a community driven process, so we ask, 'What does the neighborhood need?'" says Rob May, associate director of industrial development for CANDO.

"Then we start to identify potential end users." The Forum also fostered a team of lawyers and lenders who sought to assist the financial side of the process, making brownfields more feasible for buyers. They developed a model lending package for banks that lack their own environmental experts. The package includes a checklist to help banks assess whether site investigations and remediations have been adequately conducted and recorded. Similar programs exist in Connecticut, Ohio, Michigan, Indiana and Minnesota.

"This is to keep smaller banks from being scared off by contamination," says

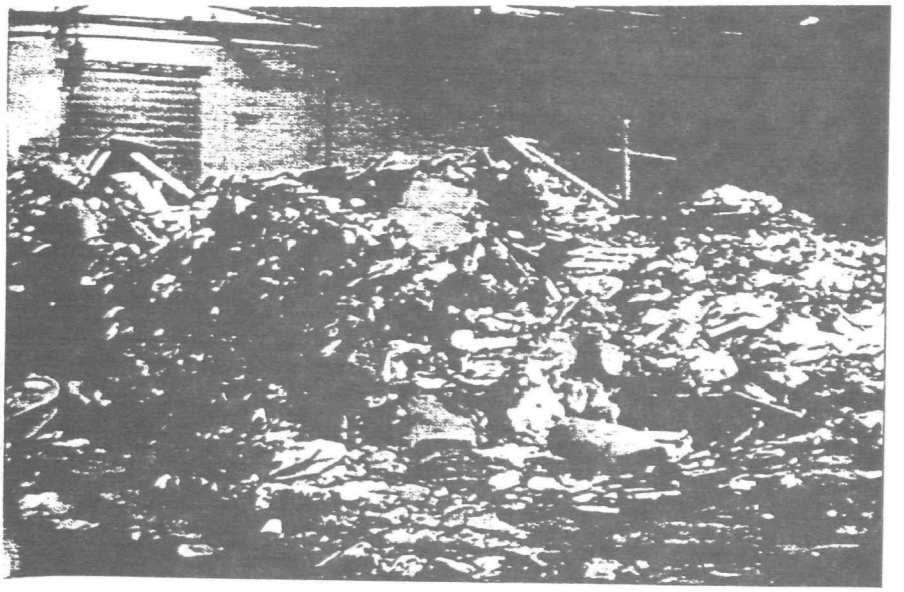


PHOTO: DEPT. OF ENVIRONMENT, CITY OF CHICAGO

Former Chicago motor-coach barn was discovered to be an illegal disposal site containing general and hazardous waste.

James O'Brien, a partner at Chapman and Cutler who helped prepare the package. "It's for financing the corner gas station as opposed to large industrial projects." Some lenders see a danger if banks rely too heavily on the package. "It tries to simplify a complicated process," Sheinson says. "It's good if you only look at it as a guideline, but you have to know when to ask for assistance." But O'Brien says that the design of the package eliminates this danger. "Part of the package is that in order to qualify, properties have to participate in the Illinois EPA cleanup program," he says. "The expertise is being supplied by the state agency. If developers can hoodwink the state EPA, then they could hoodwink the technical experts at the bank."

Creating carrots

Battles are also being fought on the legislative front to make brownfields more attractive to buyers and developers. Most proposals deal with the buyers' bottom line—reducing the cost of redeveloping brownfields to offset the lower wage costs and other monetary attractions of greenfields.

On the county level, officials have proposed a tax incentive for buyers who clean up contaminated properties through the Illinois EPA's voluntary cleanup program. The incentive reduces a property's assessment level from 36 percent to 16 percent of market value for up to three years during remediation and development, with up to two one-year extensions possible. For a site to qualify, it has to have been abandoned for at least two years and remediation costs must exceed $100,000 or 25 percent of the property's market value at the time of acquisition. Chicago Mayor Richard M. Daley's administration says it knows of at least 300 sites that could benefit from the tax break.

Tax incentive legislation is pending on the state level as well. The bill, proposed by Daley, offers a 25 percent tax credit against the state's personal income tax, corporate income tax and personal property replacement tax. Available to participants in the Illinois voluntary cleanup program who are not legally liable for their cleanup, the credit can be extended up to $25,000 over four years.

Senator Carol Moseley-Braun (D-Ill.) has also introduced federal tax legislation aimed at spurring brownfield development. The proposal would allow redevelopers to deduct the costs of cleanup in the same year the money is spent, rather than over a period of years. Moseley-Braun is optimistic that the legislation will be accepted by the Senate. "It combines environmental cleanup, urban redevelopment and tax relief for businesses," she says. "That puts together a broad constituency for this bill."

The tax incentive proposals can't hurt, but developers and lenders may hesitate to take advantage of them until some of the liability issues surrounding contaminated sites are solved. The state has taken some steps to addressing this problem by passing the nation's first proportionate-share liability law, in which parties are responsible only for the contamination they have caused. The bill replaces the usual strict "joint and several" liability, in which owners and secured creditors could be held liable for all cleanup costs, regardless of their contribution to the contamination.

The Illinois EPA is also helping ease developers' worries: The agency has established a memorandum of understanding with the U.S. EPA saying that if the state considers a property clean, so does the federal government. City officials hope to negotiate a similar agreement that extends to local regulators as well, says Trumbull of the Department of Environment. But fears persist. Many companies are waiting for the federal Superfund law to be rewritten, eliminating joint and several liability altogether.

Moving forward

In the meantime, the city is looking for ways to ease developers' anxieties. The Department of Environment is working to initiate a dialogue between the U.S. EPA and CEOs of local corporations concerning brownfields. Local organizations are planning community outreach events to educate the public about brownfields. City officials recognize that public support is vital, as the city moves from a $2 million pilot program to a $50 million ongoing brownfields effort.

"It's an aggressive transition," Trumbull says. "It remains to be seen how fast the changes can take place. There's nothing particularly innovative about the particular pieces of the program, but pulling the pieces together will be quite a feat." Regardless of how quickly city officials can make the transition, the attempt alone indicates that Chicago is on the nation's front line when it comes to tackling brownfield issues.

"The city is leading the way in many regards," says Kastman of Woodward-Clyde Consultants. "Its enthusiasm to move things forward has placed it years ahead of most of the country."

(1B) Tools for Innovative Assessment and Cleanup
Wednesday, September 3, 1997
3:45 p.m. - 5:15 p.m.

Description: Ensure the job is done right, within budget and on schedule! Experts will talk about the effective use of innovative technologies, such as high-resolution seismic reflection; airborne penetrating radar; sonic drilling; phytoextraction of lead in soil; soil vapor extraction (SVE); composting; land farming; and the innovative use of conventional technologies.

Location: Room 2210B

Speakers and Affiliation:

Mr. Michael L. Hurd (Moderator)	U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response
Mr. David Dunham	Central Massachusetts Economic Development Authority
Dr. William Librizzi	New Jersey Institute of Technology
Ms. Monica Smith	U.S. Environmental Protection Agency, Region 6

MR. MICHAEL L. HURD

Mr. Hurd is a chemist with the Office of Emergency and Remedial Response (OERR) (Superfund), U.S. Environmental Protection Agency (EPA). He received a Bachelor of Science in marine science from the University of Long Island at Southampton, and a Master of Science in chemical oceanography from the University of New Hampshire. Mr. Hurd serves as a Regional Coordinator for EPA Region 1 and provides assistance to the remedial project managers involved in Superfund hazardous waste cleanup operations. He is currently developing a guidance document entitled "Quality Assurance Requirements for Conducting Brownfields Site Assessments." Mr. Hurd has worked for the EPA for the last 10 years.

MR. DAVID DUNHAM

David J. Dunham, AICP, is the environmental director for the Central Massachusetts Economic Development Authority (CMEDA). Mr. Dunham has managed the environmental work at several brownfields sites in the Worcester, Massachusetts and central Massachusetts area. Mr. Dunham's most notable achievement is the cleanup of the Medical City site in downtown Worcester, which has been acclaimed as a national model for brownfields redevelopment. Mr. Dunham is presently working on the Route 146 Relocation Project and the Fisherville Mill site in Grafton, Massachusetts (an historic Blackstone Valley mill). Mr. Dunham is a part-time graduate professor in public administration at Clark University in Worcester, a commissioner on the Blackstone River Valley National Heritage Corridor, and is a candidate for licensed site professional under Massachusetts hazardous materials regulations.

DR. WILLIAM LIBRIZZI

As director of the Technology Applications and Community Assistance for Center Environmental Engineering and Science, New Jersey Institute of Technology, Dr. Librizzi is responsible for the design, development and administration of the Training and Technology Transfer Program including the demonstration of innovative characterization and treatment technologies for brownfields as well as education for urban/environmental justice communities. Dr. Librizzi is also actively involved in projects related to brownfields including the preparation of a brownfields guidance manual, development of a redevelopment decision model, chair of the Advisory Council for City of Trenton Brownfields pilot project and participant in the Newark Brownfields pilot.

Dr. Librizzi has over 22 years experience at the federal and state level in a variety of government activities including research, enforcement, field activities, toxic substances and hazardous waste. He has served as director of the Superfund program for U.S. Environmental Protection Agency (EPA) Regions 2 and 6 and as deputy assistant commissioner of the Hazardous Waste Program in the New Jersey Department of Environmental Protection. He also served as director of technical services for a large remediation company.

Ms. Monica Smith

Monica Smith is currently a brownfields project manager for the U.S. Environmental Protection Agency's (EPA) Region 6 in Dallas. She has been working in the Brownfields Program since the winter of 1995. Prior to working in the Brownfields Program, she was a remedial project manager in the Superfund Program. As a remedial project manager from 1989 to 1995, Monica oversaw the cleanup of hazardous waste sites on the National Priorities List. She earned her Bachelor of Science in petroleum engineering from Texas A&M University in 1987.

(1C) Cleaning Up for Reuse: The Best Remediation Options
Thursday, September 4, 1997
3:00 p.m. - 5:00 p.m.

Description: Land reuse is a crucial element that must be considered throughout the life cycle of a brownfields pilot. Panelists will explore the issue of "how clean is clean," given different reuse scenarios, and discuss the influence of zoning, master plans, and local ecology on land reuse decisions.

Location: Room 1203B

Speakers and Affiliation:

Ms. Joan Colson (Moderator)	U.S. Environmental Protection Agency, Office of Research and Development
Mr. Richard Gimello	State of New Jersey, Department of the Environment
Dr. William Librizzi	New Jersey Institute of Technology
Mr. Alan Mallach	City of Trenton, New Jersey

MS. JOAN COLSON

[Biography was not available at time of printing. Please refer to conference addendum.]

MR. RICHARD GIMELLO

[Biography was not available at time of printing. Please refer to conference addendum.]

DR. WILLIAM LIBRIZZI

As director of the Technology Applications and Community Assistance for Center Environmental Engineering and Science, New Jersey Institute of Technology, Dr. Librizzi is responsible for the design, development and administration of the Training and Technology Transfer Program including the demonstration of innovative characterization and treatment technologies for brownfields as well as education for urban/environmental justice communities. Dr. Librizzi is also actively involved in projects related to brownfields including the preparation of a brownfields guidance manual, development of a redevelopment decision model, chair of the Advisory Council for City of Trenton Brownfields pilot project and participant in the Newark Brownfields pilot.

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MR. ALAN MALLACH

[Biography was not available at time of printing. Please refer to conference addendum.]

(1D) Clean and Green: Ecosystem Enhancement at Brownfields Pilots
Friday, September 5, 1997
10:30 a.m. - 12:30 p.m.

Description: Green spaces provide health and ecological benefits and enhance the marketability of property. Panelists will discuss the benefits of including green spaces in your brownfields pilots to achieve improved quality of life, economic enhancement, and reduction in crime. Cost-effective tools for restoring green spaces also will be discussed.

Location: Room 2202

Speakers and Affiliation:

Mr. James Waddell (Moderator)	U.S. Army Corps of Engineers
Mr. Timothy E. Hayes	Joint Industrial Development Authority of North Hampton County, Virginia
Dr. L. Jean O'Neil	U.S. Army Corps of Engineers
Mr. David Vieau	Peer Environmental & Engineering Resources, Inc.

MR. JAMES WADDELL

[Biography was not available at time of printing. Please refer to conference addendum.]

MR. TIMOTHY E. HAYES

[Biography was not available at time of printing. Please refer to conference addendum.]

DR. L. JEAN O'NEIL

[Biography was not available at time of printing. Please refer to conference addendum.]

MR. DAVID VIEAU

Mr. Vieau is president of Peer Environmental & Engineering Resources, Inc. in Minneapolis, Minnesota. His experience includes both the geotechnical and environmental fields, having managed a wide variety of projects involving design and construction of foundations and infrastructure, landfills, and wastewater ponds, as well as remediation of contaminated sites under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA). Mr. Vieau is a national instructor of the Americal Society for Testing and Materials (ASTM) standards for environmental site assessment, and consults extensively in the areas of environmental due diligence and voluntary cleanup in connection with brownfields redevelopment. Mr. Vieau is principle-in-charge of the "PEER/Bridal Veil Collaborative" and is project manager for the alternative Urban Areawide Review of the Southeast Minneapolis Industrial Area, discussed at Brownfields '97.

DOCUMENTS THAT SUPPORT PANEL 1D: CLEAN AND GREEN: ECOSYSTEM ENHANCEMENT AT BROWNFIELDS PILOTS

ABSTRACT - BROWNFIELDS '97

Environmental Planning for Urban Ecosystem Rejuvenation

Owner:
Minneapolis Community Development Agency
105 5th Avenue South
Minneapolis, Minnesota 55401
Mr. Jim Forsyth (612) 673-5179

Presentor:
David D. Vleau
Peer Environmental & Engineering Resources, Inc.
7710 Computer Avenue, Suite 101
Minneapolis, Minnesota 55435
(612) 831-3341

A comprehensive environmental study is being undertaken which will in part determine the feasibility of reestablishing a water-based natural corridor through a major industrial "brownfields" area of Minneapolis. The corridor would unify transportation, environmental habitat, recreational and social land use functions with a green infrastructure incorporating a sophisticated overland storm water management system.

The project follows completion of a Master Plan for redevelopment of the Southeast Minneapolis Industrial Area (SEMI), 300-plus acres of older industrial lands and rail yards. Originally a vast wetland supporting Bridal Veil Creek, the intervening 100 years of infilling and industrial development have resulted in obliteration of original natural features, and many polluted sites. The SEMI area actually straddles the Minneapolis/St. Paul boundary and is surrounded by four neighborhoods and the campus of the University of Minnesota. The Master Plan calls for the creation of a major new industrial area that creates living-wage jobs, greatly enhances the tax base, is compatible with nearby neighborhoods and reestablishes key elements of the natural ecosystem.

The study, called an Alternative Urban Areawide Review (AUAR), is charged with assessing environmental impacts from implementation of the Master Plan, including transportation/traffic analysis, urban design and historical evaluations, and stormwater management and hydrology. Included in the study are plans to construct a wetland-pond complex, for which a special grant from the Minnesota Board of Water and Soil Resources has been awarded. Key to the analyses are how impacts from the numerous polluted sites known to exist within SEMI will bear on new development, and particularly stormwater quality.

The AUAR environmental review process is unique in its focus on various development scenarios framed by the Master Plan, from which key parameters for specific developments and mitigation measures will be established. It invites public participation throughout the process, and enables the City to integrate ecosystem enhancements with long term development plans and objectives.

(1E) Building a Winning Team: Brownfields Redevelopment
Thursday, September 4, 1997
8:00 a.m. - 10:00 a.m.

Description: Building high-performance technology teams of diverse stakeholders -- as well as fostering creative and cooperative work environments -- is essential for efficient and effective restoration of brownfields. Leaders will share experiences in building consensus to support effective assessment and cleanup efforts.

Location: Room 1201

Speakers and Affiliation:

Dr. C. Mark Dunning (Moderator)	U.S. Army Corps of Engineers
Mr. John M. Mullins	U.S. Environmental Protection Agency, Office of Human Resources and Organizational Services
Mr. Adrien Pilon	National Research Council of Canada

DR. C. MARK DUNNING

C. Mark Dunning is chief of the U.S. Army Engineer Institute for Water Resources' Program Analysis Division. His principle responsibilities include conducting and managing research and policy analyses on issues affecting the effectiveness of the execution of U.S. Army Corps of Engineers missions.

Dr. Dunning is a recognized expert in the area of applying cooperative problem-solving processes to resolve critical policy issues. He designed the workshop processes for the highly successful Army Senior Environmental Leadership Conferences I, III-V; was co-chair of the Defense Performance Review, Environmental Security Committee, Partnering Study Group and principal author of the study group report; and has designed and implemented conflict management processes for managing noise conflicts around military installations in the United States and Europe. For the past two years, Dr. Dunning has managed the development and implementation of results-oriented performance measures for the Army's Civil Works program. He has co-edited a book on collaborative planning; authored a manual on collaborative problem-solving for use by Army installations; and has managed the development of handbooks on public involvement and stakeholder involvement for the Army environmental community.

In addition to his professional interests within the Army, Dr. Dunning has taught graduate courses in conflict management programs at George Mason University and the University of Maryland. He is on the Board of Directors of the Northern Virginia Mediation Service, a community mediation service, and is also a certified mediator experienced in family and business mediation.

He received his doctorate degree in sociology from Washington University, St. Louis, Missouri.

MR. JOHN M. MULLINS

John M. Mullins has over 18 years of experience in organizational development, total quality and human resources management at the federal and local governmental levels. He has indepth experience in leading executive level teams, conducting inter-governmental reengineering efforts involving business and public interest groups and participating in government wide benchmarking activities. Recent accomplishments at the U.S. Environmental Protection Agency (EPA) include: principal author of the Customer Service Plan to the President, design team leader on the reinvention of the Office of Human Resources and Organizational Services, senior advisor to the reinvention team on Permits Improvement and team leader for Team EPA.

Mr. Mullins has an undergraduate degree from the University of San Diego and a master's degree in public administration from San Diego State University.

MR. ADRIEN PILON

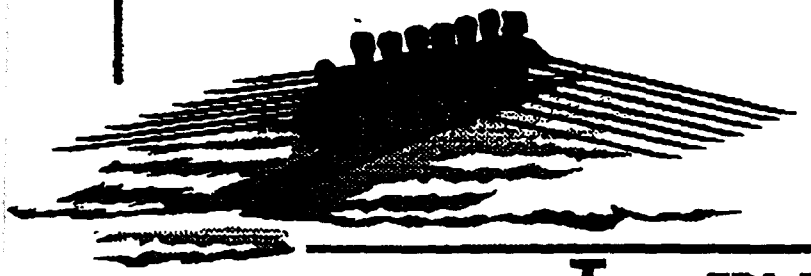
[Biography was not available at time of printing. Please refer to conference addendum.]

DOCUMENTS THAT SUPPORT
PANEL 1E: BUILDING A WINNING TEAM: BROWNFIELDS REDEVELOPMENT

Team EPA Presentation

Social/Technical dimensions to empowered teams

- Team definition
- Team types
- Social demension
- Technical demension
- Critical success factors for virtual teams
  - Access to information
  - People
  - Technology
  - Work

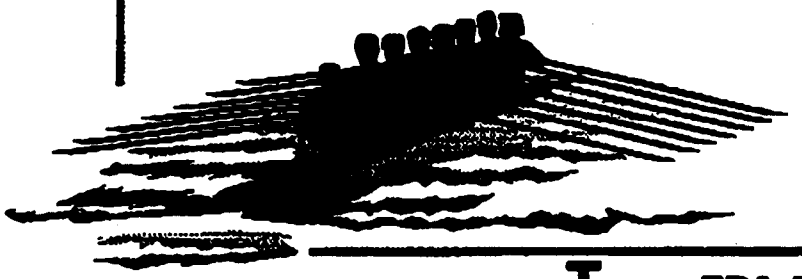


Team Definition

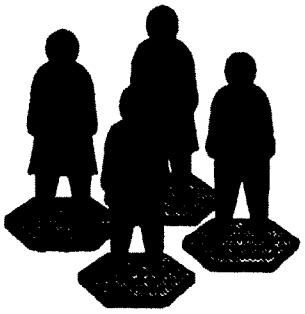
"An interdependent collection of individuals who share responsibility for specific organizational outcomes"

. . . in addition, members of highly effective teams exhibit

- Complementary skills
- Commitment to:
  - A common purpose
  - Performance goals
  - A common approach
  - Mutual support
  - Mutual accountability

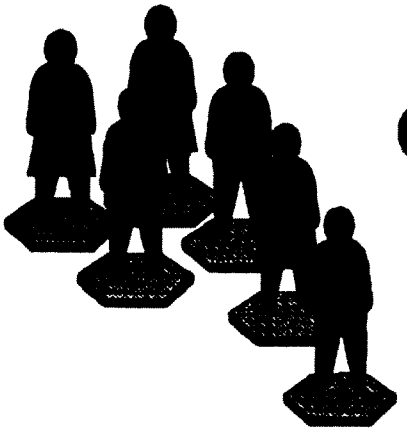


Team Types



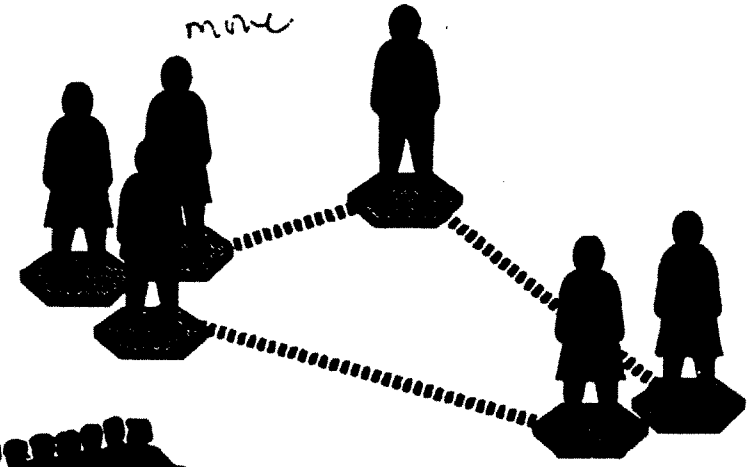
Functional

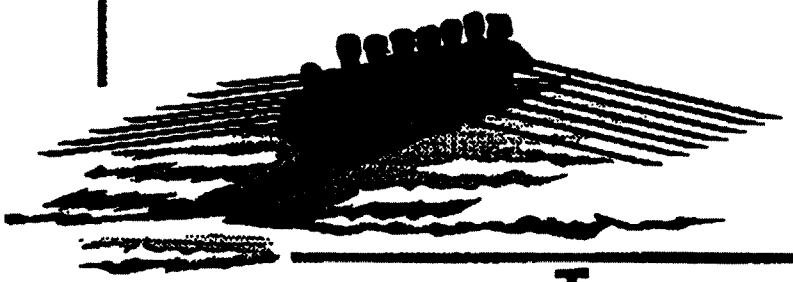
- Common goals
- Common work processes
- High task interdependence
- High outcome interdependence
- Functional orientation



Cross Functional

- Common goals
- Low task interdependence
- Seamless face to the customer
- Interdisiplinary orientation





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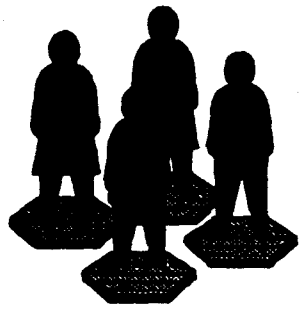

Functional

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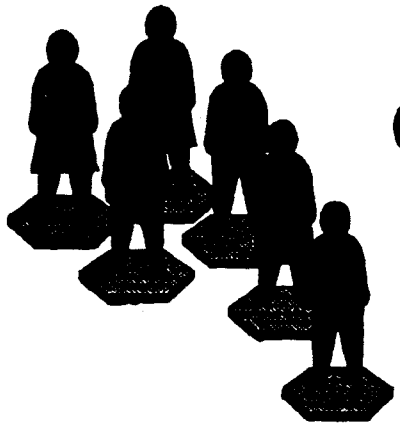
- Functional orientation



Cross Functional

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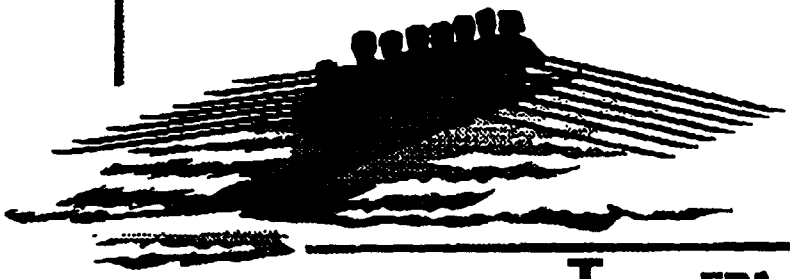
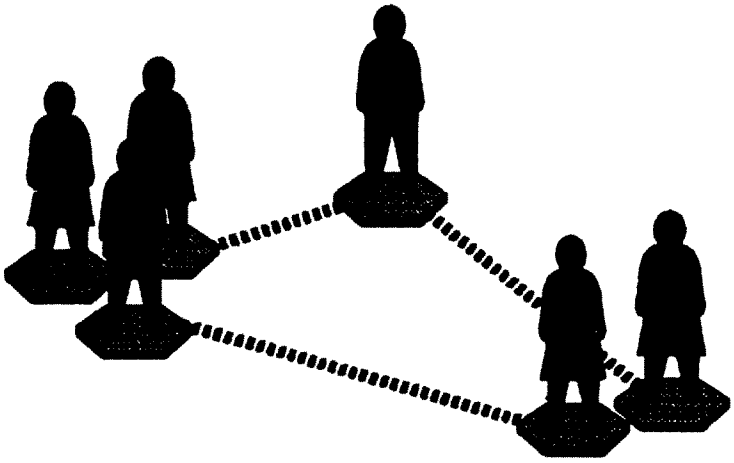


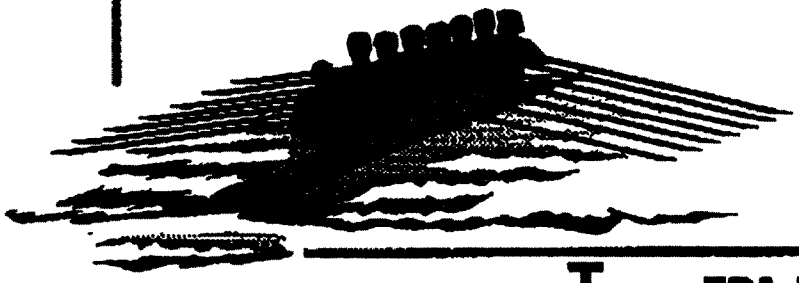
"Self managed knowledge work team with distributed expertise that forms and disbands to address organizational goals."

"The Virtual Team" A.L. Kristof, K.G. Brown, H.P. Sims Jr., and K.A. Smith



Characterized by:

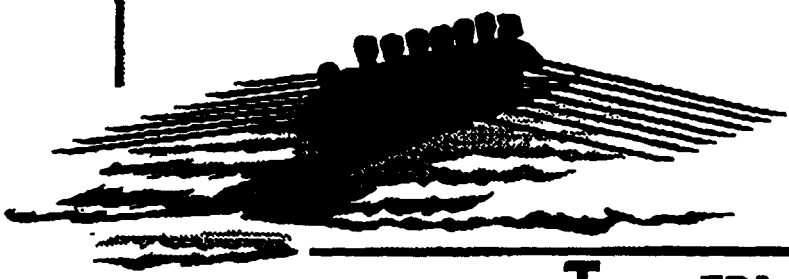
- Common goals
- Low task interdependence
- High outcome interdependence
- Fluidity of leadership
- Geographically dispersed
- Technology dependent



Social Dimension of Empowered Teams

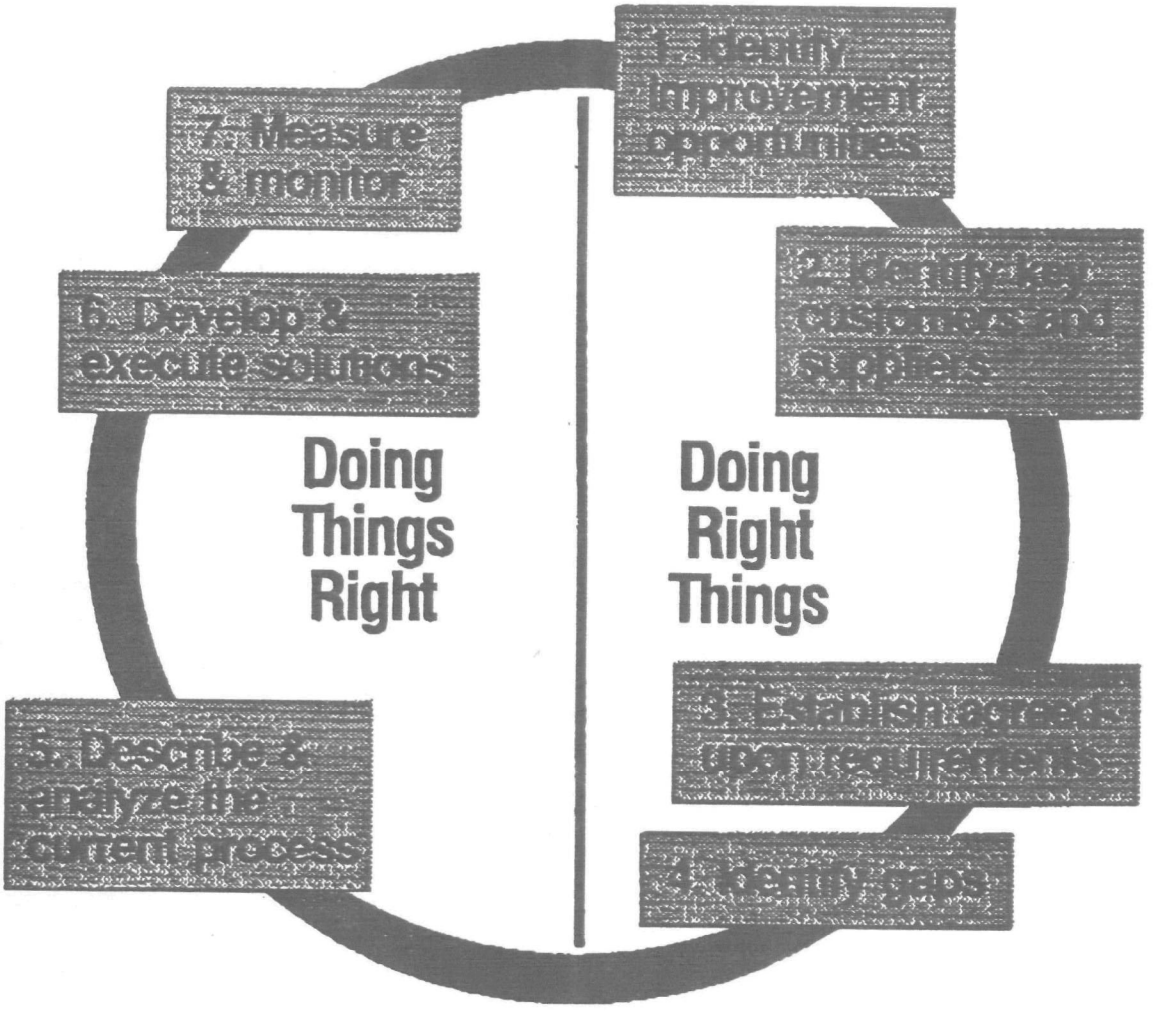
"Learning to work together"

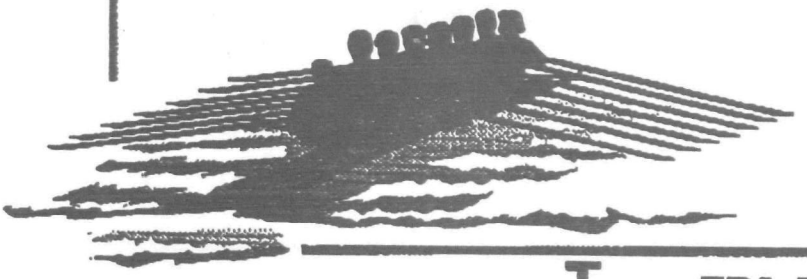
- Communications
- Ground rules
- Team stages of development
- Member roles
- Culture
- Decision making



Technical Dimension to Empowered Teams

Quality Improvement Process

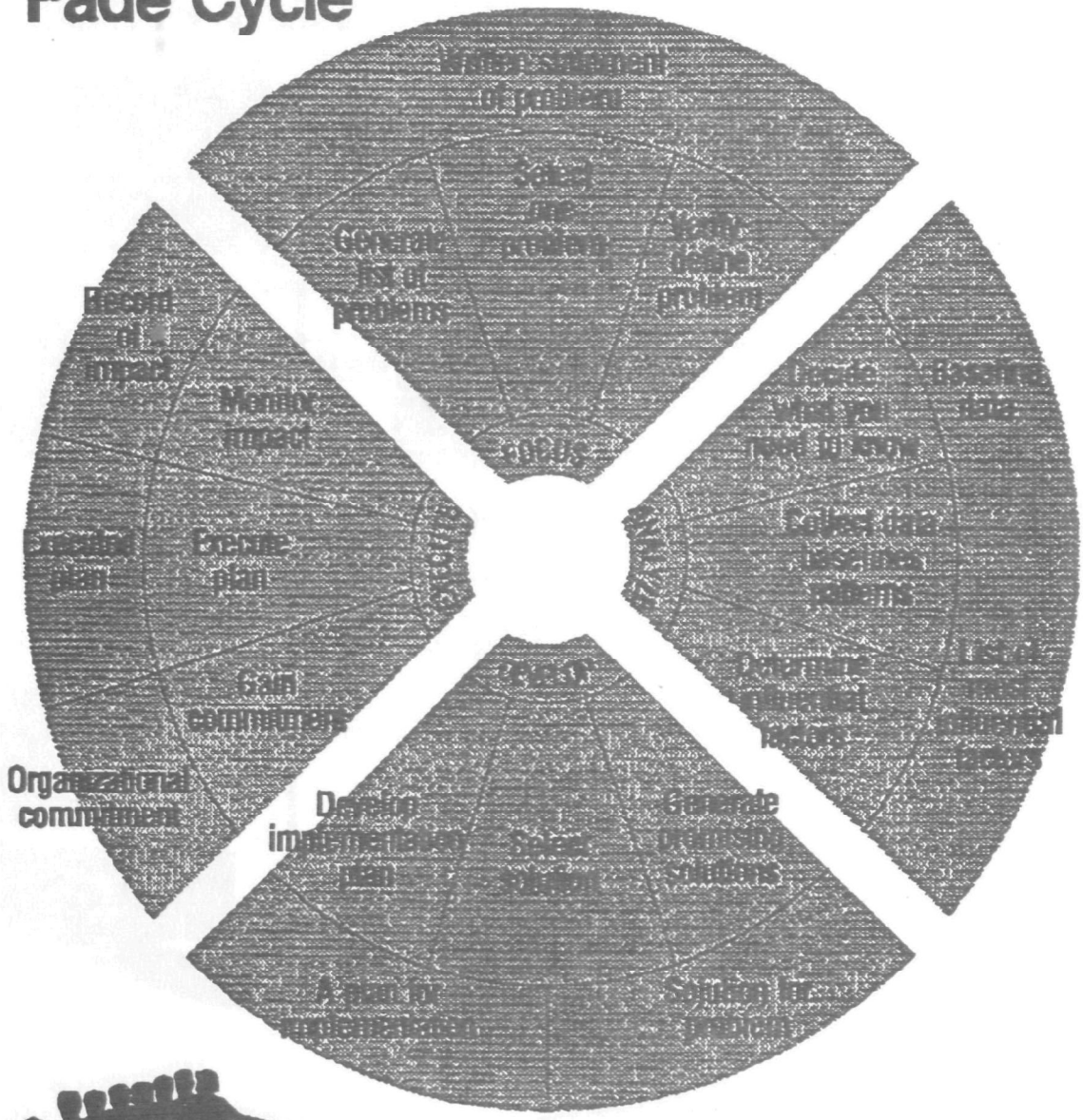


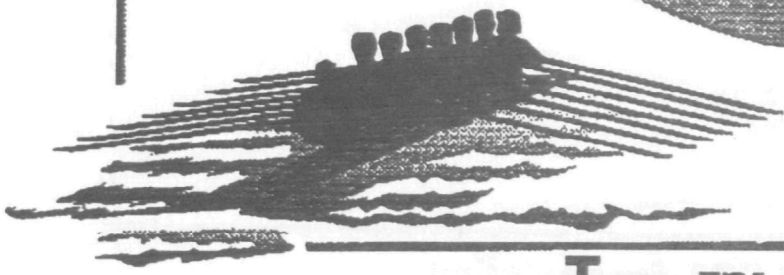


Team EPA Presentation

Problem Solving Methodology

Fade Cycle





Team EPA Presentation

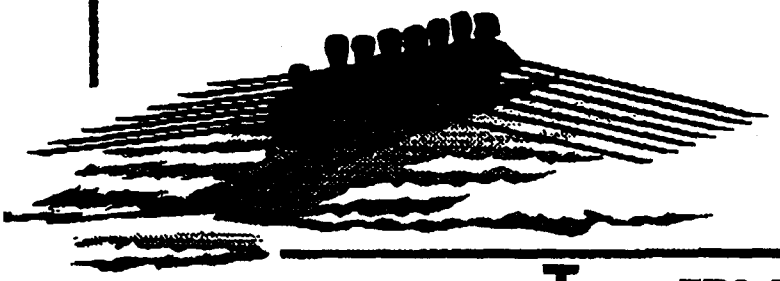
Critical Success Factors for Virtual Teams

- Access to information
  - Common data sources
  - Productivity quality
  - Sharing and reflection

builds trust and keeps team on track

- People
  - Functionally competent
  - Highly skilled in interpersonal group processes
  - Highly skilled in technical group processes
  - Proficient in the use of virtual team based technology

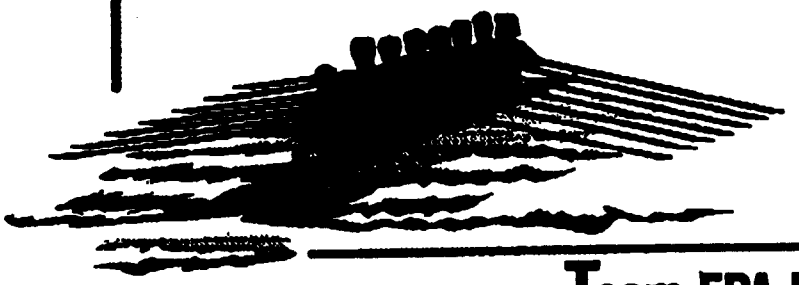
enhances self management



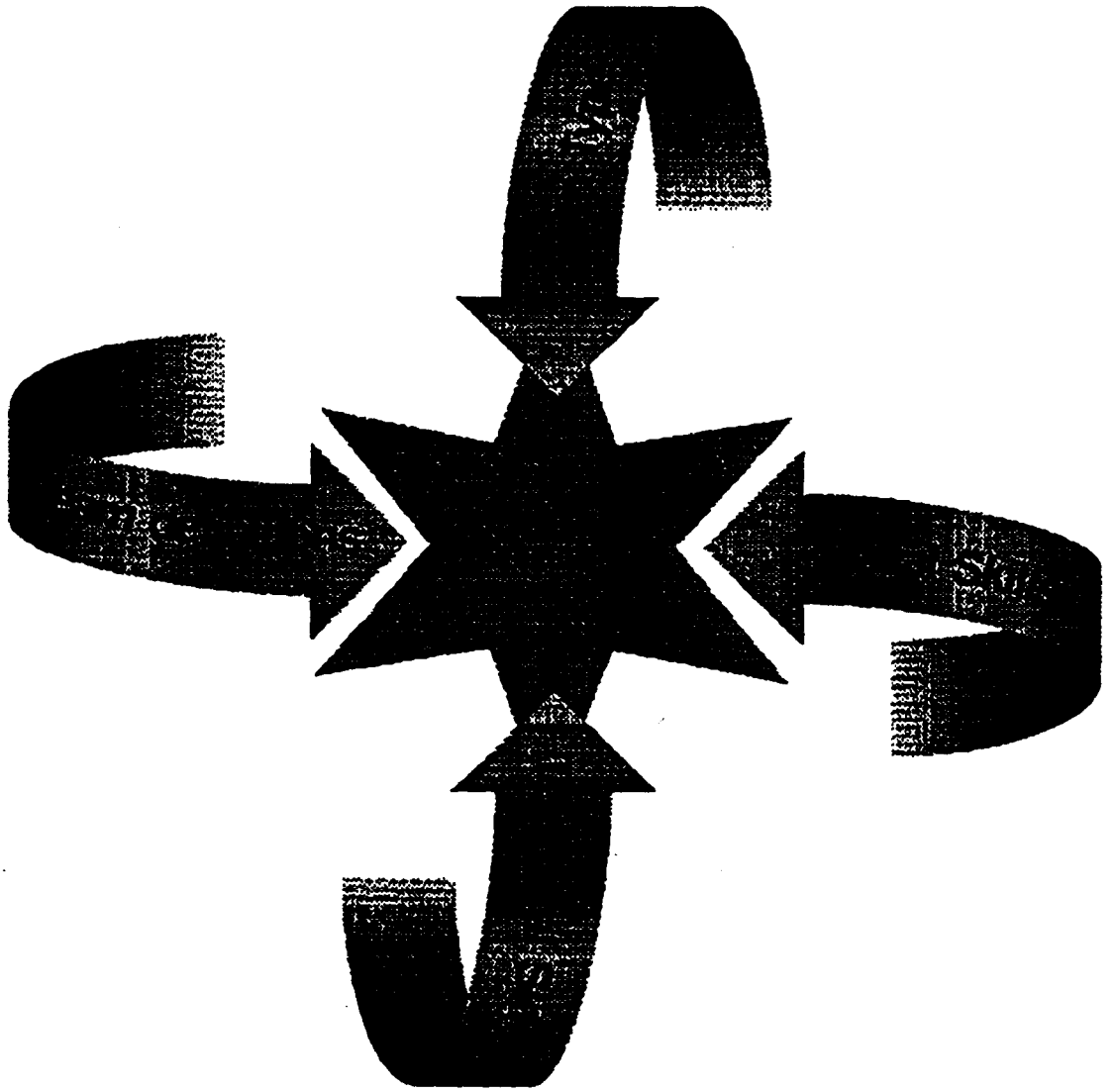
Critical Success Factors for Virtual Teams (cont.)

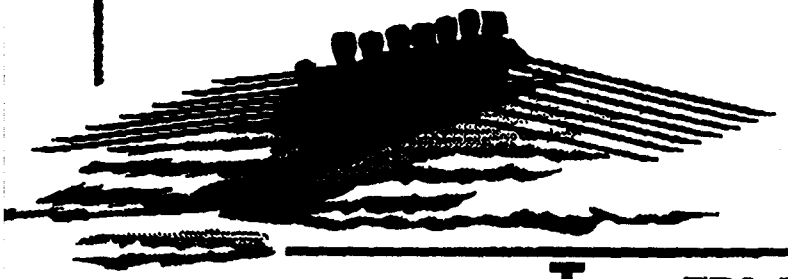
- Technology
  - Highly dependent
  - Increasing complexity

- Work
  - Higher need for clear performance goals
  - Higher need for work process measures
  - Clear understanding decision processes
  - Defined work boundaries
  - Accountability



Summary of Experienced Teams



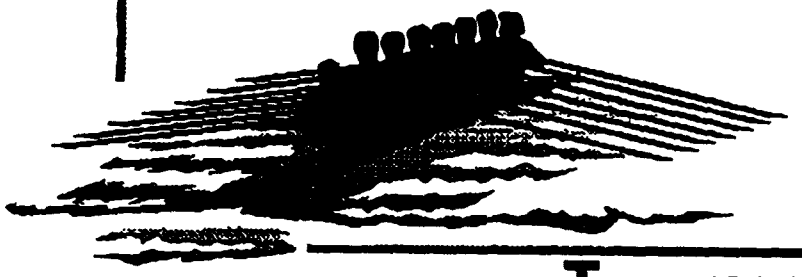


Team EPA Presentation

Team EPA Presentation

Social/Technical dimensions to empowered teams

- Team definition
- Team types
- Social demension
- Technical demension
- Critical success factors for virtual teams
  - Access to information
  - People
  - Technology
  - Work

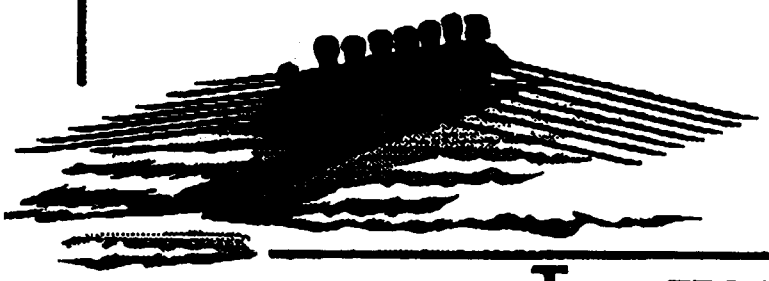


Team Definition

"An interdependent collection of individuals who share responsibility for specific organizational outcomes"

. . . in addition, members of highly effective teams exhibit

- Complementary skills
- Commitment to:
  - A common purpose
  - Performance goals
  - A common approach
  - Mutual support
  - Mutual accountability



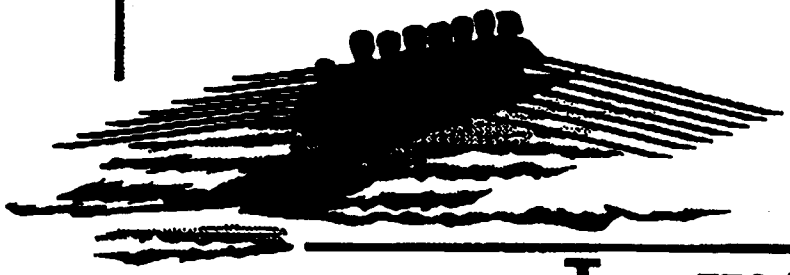
Team Types

Functional

- Common goals
- Common work processes
- High task interdependence
- High outcome interdependence
- Functional orientation

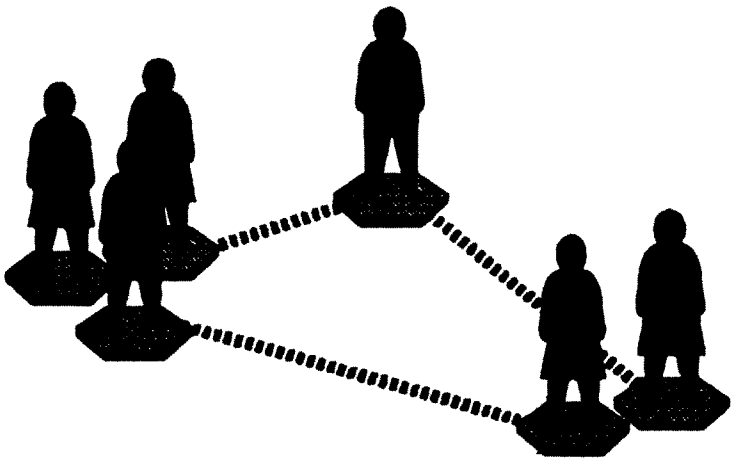
Cross Functional

- Common goals
- Low task interdependence
- Seamless face to the customer
- Interdisiplinary orientation



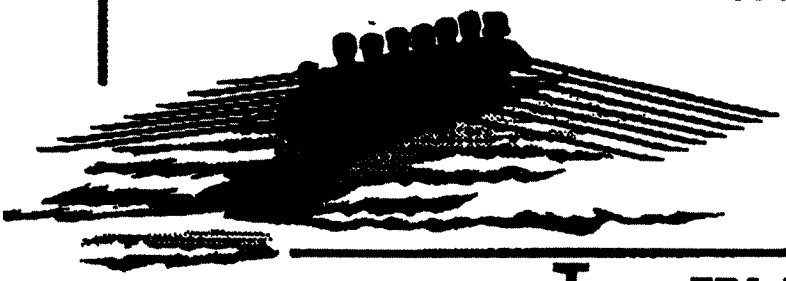
"Self managed knowledge work team with distributed expertise that forms and disbands to address organizational goals."

"The Virtual Team" A.L. Kristof, K.G. Brown, H.P. Sims Jr., and K.A. Smith



Characterized by:

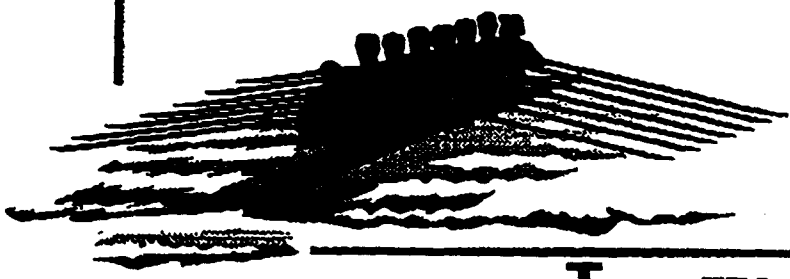
- Common goals
- Low task interdependence
- High outcome interdependence
- Fluidity of leadership
- Geographically dispersed
- Technology dependent



Social Dimension of Empowered Teams

"Learning to work together"

- Communications
- Ground rules
- Team stages of development
- Member roles
- Culture
- Decision making



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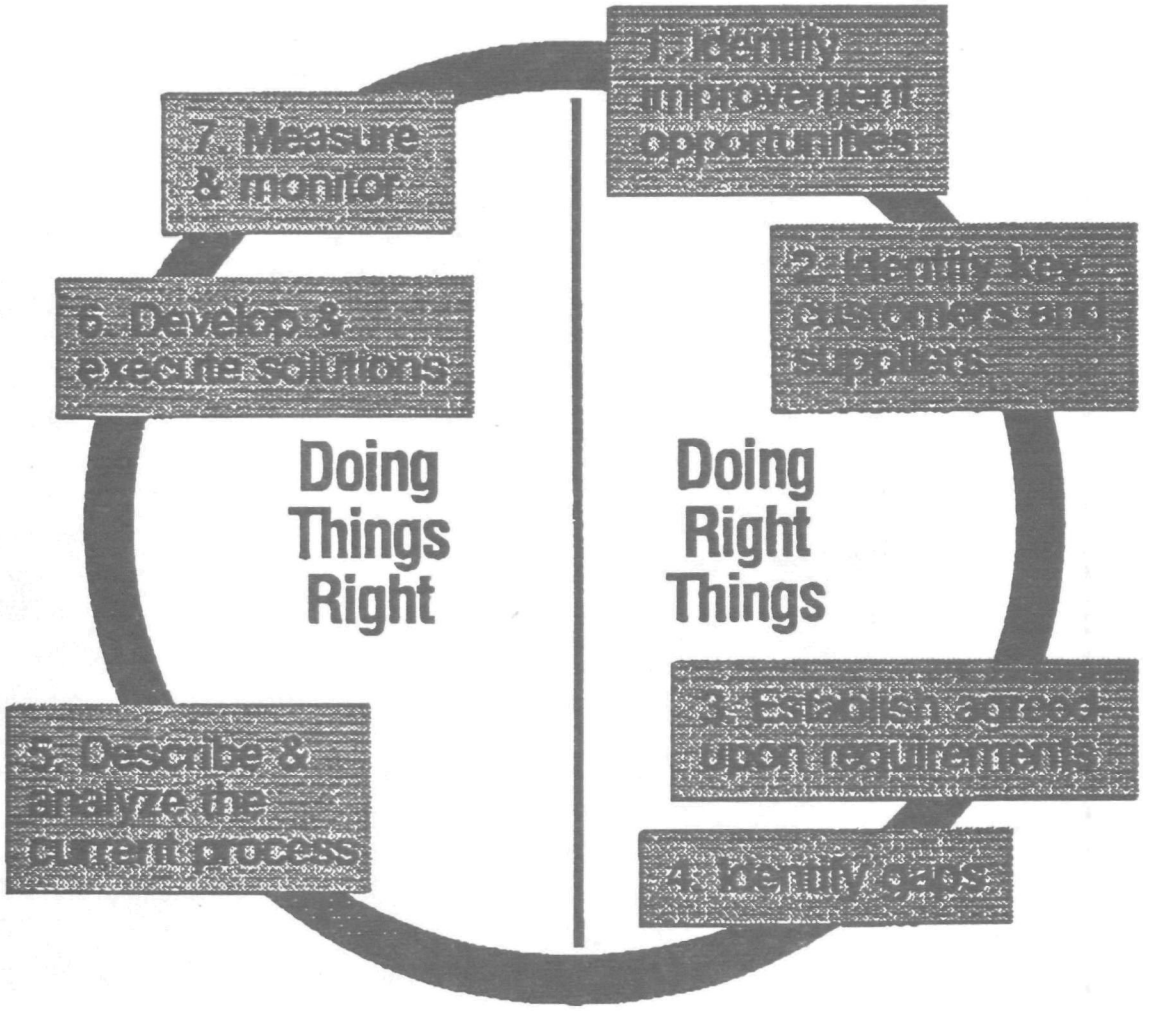

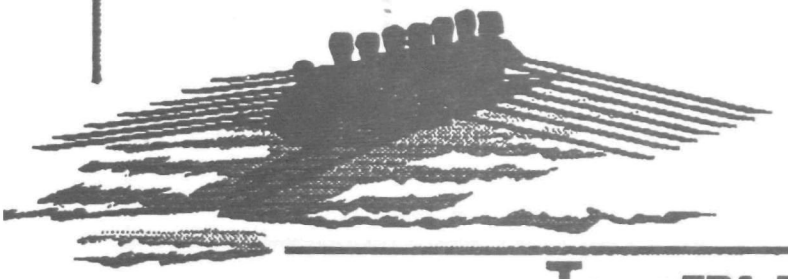

Team EPA Presentation

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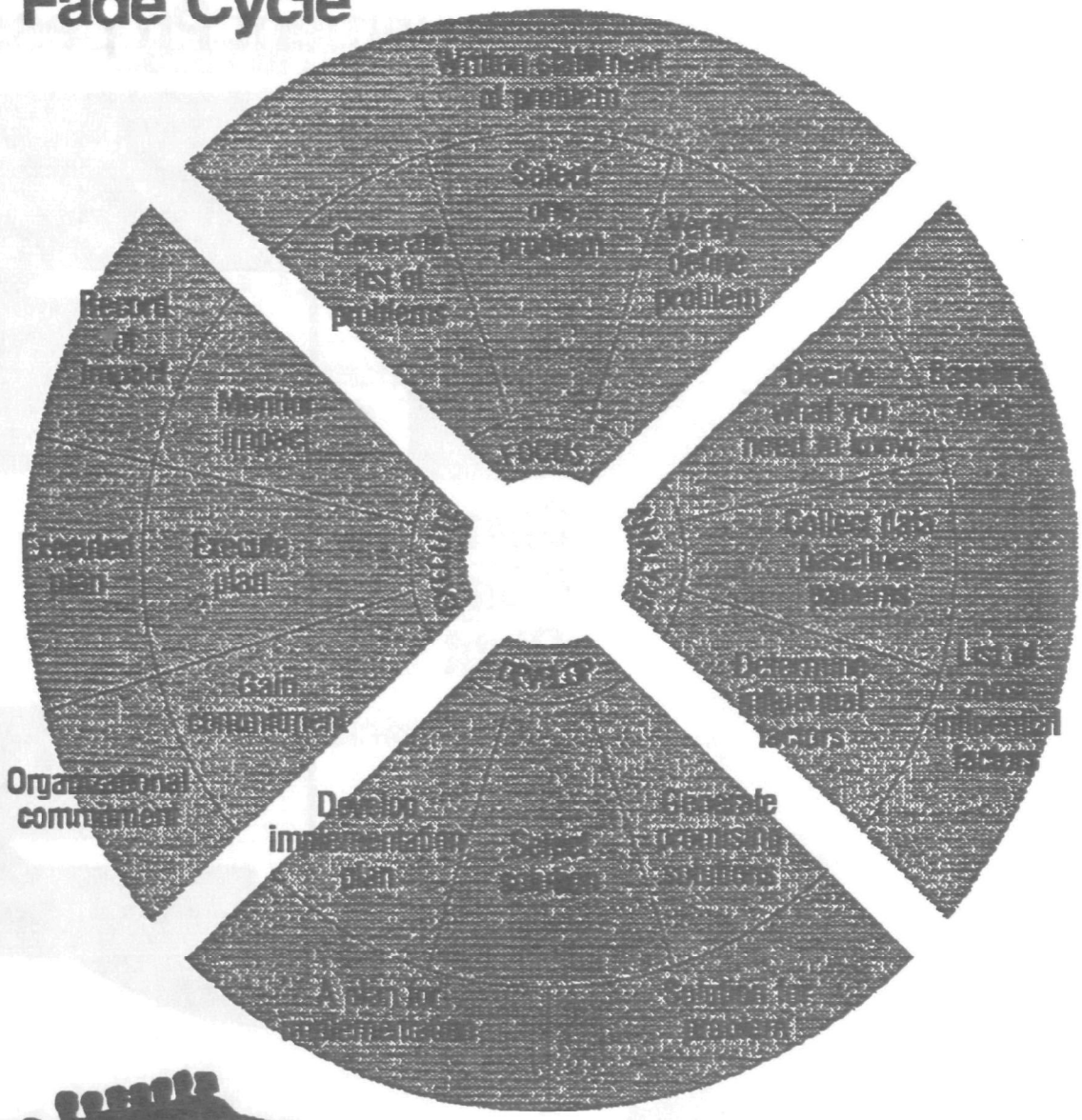

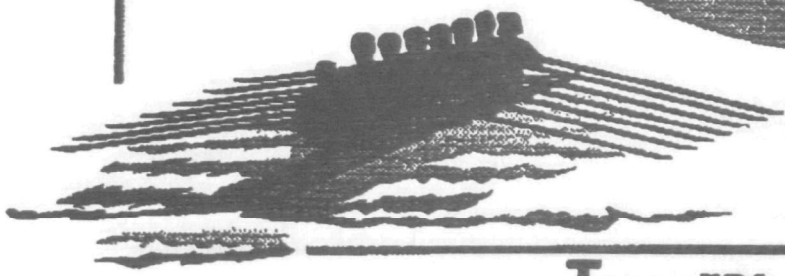

Team EPA Presentation

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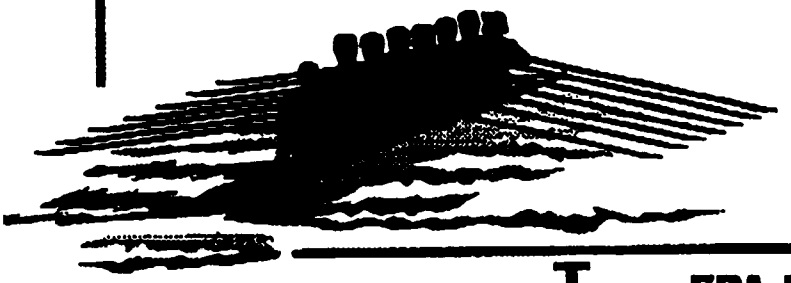

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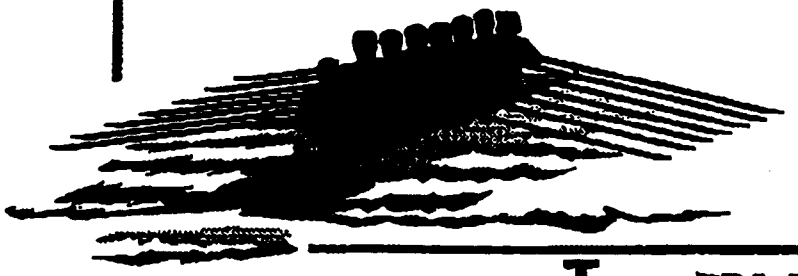

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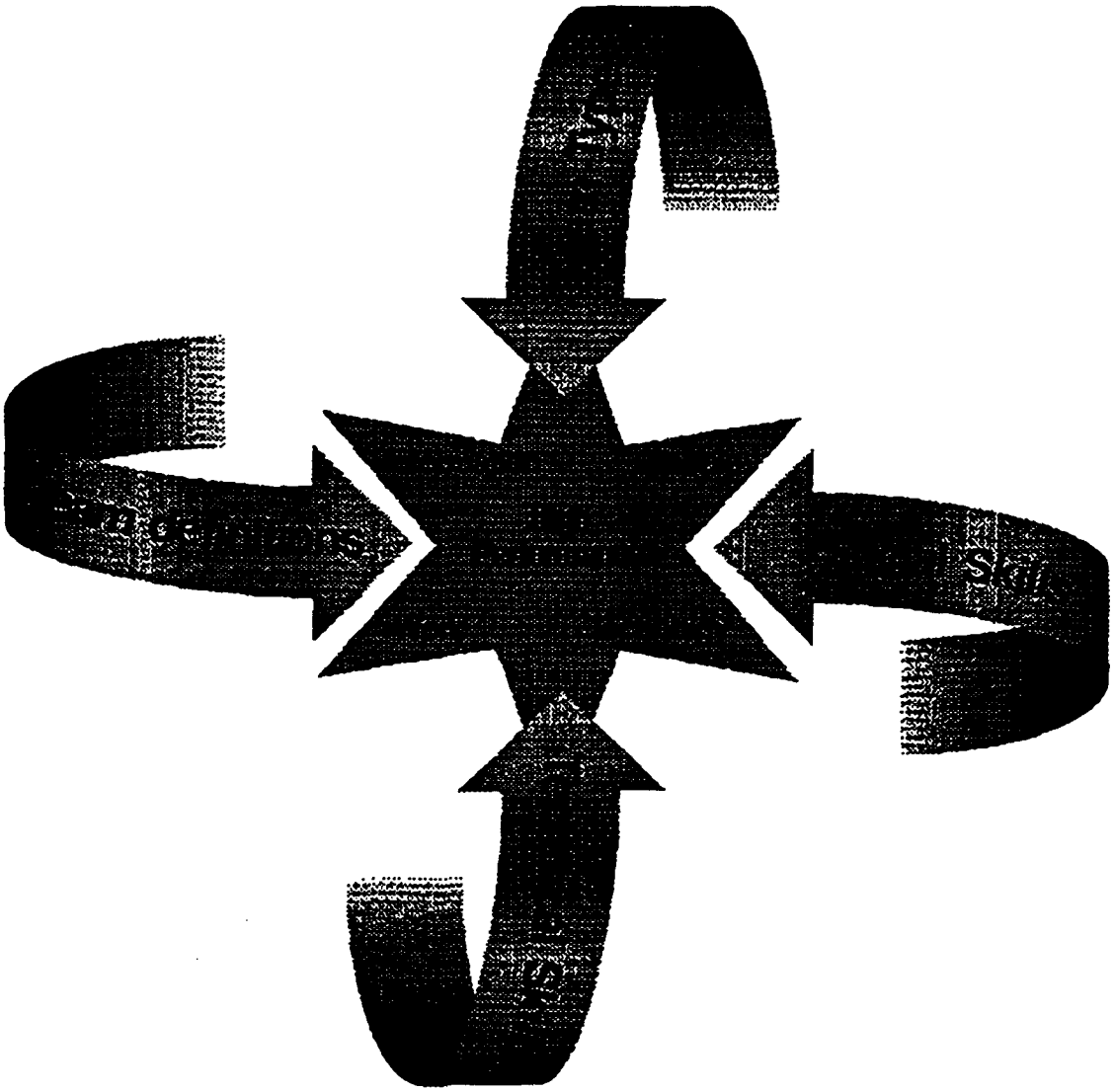
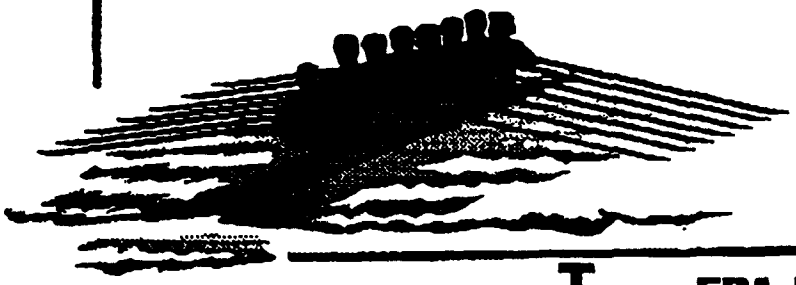




Team EPA Presentation

(1F) Transferring Federal Technology Resources to Brownfields
Thursday, September 4, 1997
10:30 a.m. - 12:30 p.m.

Description: Technology demonstrations, staff exchanges, and direct technical assistance are three ways in which the federal government can help local brownfields communities. Additional federal technology resources are available, and this panel will help you learn how to tap them.

Location: Room 2218

Speakers and Affiliation:

Ms. Rebekah J. Buckles (Moderator)	Institute of Environmental Solutions
Mr. Edwin F. Barth	U.S. Environmental Protection Agency, Office of Research and Development
Dr. Joyce A. Nagle	U.S. Army Cold Regions Research and Engineering Laboratory
Mr. Daniel M. Powell	U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response

Ms. Rebekah J. Buckles

Rebekah J. Buckles is the founder and president of the Institute of Environmental Solutions (IES). Established in 1991, IES was created to facilitate the productive recycling and sustainable reuse of rural, urban, federal, state, and local contaminated land. IES has gained recognition as a pioneer in the development and implementation of "life cycle systems approaches," which span the entire course of a land reuse project, from site identification, through project initiation, cleanup, closure, and the re-establishment of productive reuse. IES' initial land reuse program, the Cooperative Solution, was fostered through the continued involvement of a 35 member guidance committee that included regulatory, technical, legislative, legal, insurance, bankers, developers and re-developers, etc. For the next three years, this guidance committee, through a consensus process, built IES' Cooperative Solution Program (CSP) into a state model that gained recognition in Washington, D.C. The CSP formed one of the first interdependent life cycle systems approach for land reuse.

Predicated upon this systems approach, in 1994, Ms. Buckles successfully proposed and was awarded a five year cooperative agreement (FY94-FY99). This cooperative agreement was established through the U.S. Department of Energy (DOE), Office of Science and Technology. Day-to-day management has been provided through the DOE Oakland Operations Office. In 1994, LandTech was adopted as the program's name, with a mission to identify and deploy appropriate innovative approaches, resources and best available technology (BAT) in the cleanup of brownfields sites. In 1995, a new guidance committee was formed to address the need for a management system that could provide stakeholders a "roadmap" that would guide them through the complexities of "life cycle" brownfields reuse. The guidance committee selected the descriptive name of Integrated Management for Brownfields Reuse (IMBR). In 1995, the LandTech and IMBR teams merged and began the development of a worldwide web site that provides users identification of and access to the range of diverse resources, guidance, and tools that are needed throughout brownfields site cleanup. The LandTech/IMBR site will go online in September 1997.

Mr. Edwin F. Barth

Mr. Barth is an environmental engineer with the Site Management Support Branch of the Land Remediation and Pollution Control Division, National Risk Management Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency (EPA), in Cincinnati, Ohio. Mr. Barth has provided technical assistance on remediation technologies for over 100 Superfund, Resource Conservation and Recovery Act (RCRA) Corrective Action, federal facility, state, and private party sites and has served as an expert witness on several Superfund site litigation cases. Mr. Barth has an undergraduate degree from Miami University and a master's degree in environmental engineering from the University of Notre Dame.

DR. JOYCE A. NAGLE

As the manager of the Office of Research and Technology Applications at the U.S. Army Cold Regions Research and Engineering Laboratory (CRREL), Hanover, New Hampshire, Dr. Joyce A. Nagle is responsible for fostering and supporting the transfer of technology developed at the laboratory to non-federal users. She assesses technologies with potential commercial application, develops technology transfer agreements with state and local governments and the private sector, and negotiates patent license agreements.

Dr. Nagle is a member of the American Geophysical Union, the American Society of Photogrammetry and Remote Sensing, the Association of the U.S. Army, and Sigma Xi. She has 22 technical publications to her credit. She is currently the chair of a working group on technology transfer metrics for the Department of Defense Technology Transfer Integration Team and serves on the Federal Laboratory Consortium's Committee for State and Local Governments.

Dr. Nagle received her Bachelor of Science with Honors in botany from the University of Michigan (1978); her master's degree in water resources and environmental engineering from the University of Michigan (1982); and her doctorate in engineering sciences from Dartmouth College (1987). She is a graduate of the Office of Personnel Management's FY94 Women's Executive Leadership Program and is currently enrolled in the Army Management Staff College's Non-Residential Program.

Dr. Nagle was born August 2, 1954. She and her husband, Chuck, live with their three children (under the age of 30 months) in Hanover, NH.

MR. DANIEL M. POWELL

[Biography was not available at time of printing. Please refer to conference addendum.]

DOCUMENTS THAT SUPPORT PANEL 1F: TRANSFERRING FEDERAL TECHNOLOGY RESOURCES TO BROWNFIELDS

EPA

Superfund/RCRA/Brownfields Engineering Support Activities

June 1996

SITE MANAGEMENT SUPPORT BRANCH
LAND REMEDIATION AND POLLUTION CONTROL DIVISION
NATIONAL RISK MANAGEMENT RESEARCH LABORATORY (NRMRL)
U.S.EPA, CINCINNATI, OHIO

Providing support to REGIONAL SUPERFUND and RCRA CORRECTIVE ACTION program offices, as well as StateBrownsfields programs (in cooperation with Region).

*ENGINEERING TECHNICAL SUPPORT CENTER (SUPERFUND AND RCRA)

*SUPERFUND TECHNICAL ASSISTANCE RESPONSE TEAM (START)

*TREATABILITY STUDY ASSISTANCE PROGRAM (TSAP)

*TECHNOLOGY TRANSFER PROGRAM

ASSISTANCE REQUESTS:
Ed Barth (513)569-7669

BARTH.ED@EPAMAIL.EPA.GOV

SUPERFUND/RCRA ENGINEERING SUPPORT ACTIVITIES

EPA's National Risk Management Research Laboratory (NRMRL) offers four engineering technical assistance programs:

****Engineering Technical Support Center
****Treatability Study Assistance Program
****Superfund Technical Assistance Response Team
****Technology Transfer Program

The Engineering Technical Support Center (ETSC), Treatability Study Assistance Program (TSAP) and the Superfund Technical Assistance Response Team (START), all handle site-specific remediation engineering problems for RPMs. The ETSC also provides site-specific assistance to the Regions' RCRA Corrective Action programs. The Technology Transfer Program is intended to enhance the RPMs knowledge of treatment technologies through documents and data bases.

NRMRL offers expertise in contaminant source control structures; materials handling and decontamination; treatment of soils, sludges, and sediments; and treatment of aqueous and organic liquids. The following are examples of the technical assistance that can be obtained through NRMRL:

* Screening of treatment alternatives
* Review of RI/FS treatability studies workplans and final reports
* Conduct and oversight of treatability studies
* Assistance with studies of innovative technologies
* Assistance in full-scale design and start-up

ENGINEERING TECHNICAL SUPPORT CENTER

The Engineering Technical Support Center supplies quick-response technical assistance to Remedial Project Managers, on focused, site-specific problems on Superfund and RCRA sites. Support is provided through the use of technology teams from NRMRL. The following is a list of the technology teams:

For Soils.....
1. Thermal Combustion
2. Solidification/Stabilization
3. Biotreatment
4. Chemical Treatment
5. Extraction/Separation
6. Materials Handing

For Aqueous.....
7. All Ex-Situ Aqueous Technologies

For Mining.....
8. All Mining

SUPERFUND TECHNICAL ASSISTANCE RESPONSE TEAM

The Superfund Technical Assistance Response Team (START) will provide technical support on Superfund site remediation from the point of initial site evaluation through post-ROD design phases of remedial actions. START provides a long-term commitment of ORD engineering expertise as part of the technical assistance team for remediation of a particular site. Sites to receive START assistance are identified by Regional management.

TREATABILITY STUDY ASSISTANCE PROGRAM

The Treatability Study Assistance Program consults on and conducts treatability studies for Regional Remedial Project Managers. TSAP's Remedial Screening Level Treatability Study Laboratory (on-line late FY94) provides preliminary assessment of technologies for remediation. The technology-specific protocols can be customized to specific site needs. These studies are conducted directly through ORD contracts, which are closely monitored by EPA Project Officers. Workplans and conclusions are reviewed by ORD employees, many of which are also conducting state-of-the-art research in their particular specialty. Consequently an independent non-biased atmosphere is maintained. TSAP also conducts document reviews, pre-screening indicator tests, remedy selection and remedy design treatability studies.

Guides for Conducting Treatability Studies Under CERCLA:

- Aerobic Biodegradation Remedy Screening
- Soil Vapor Extraction
- Soil Washing
- Chemical Dehalogenation
- Guide for Conducting Treatability Studies Under CERCLA (Update)
- Solvent Extraction
- Thermal Desorption
- Biodegradation Remedy Selection

TECHNOLOGY TRANSFER PROGRAM

The Technology Transfer Program offers the following types of technology support:

Bulletins:

- Solvent Extraction Treatment
- Mobile/Transportable Incineration Treatment
- Chemical Dehalogenation Treatment: APEG Treatment
- Slurry Biodegradation
- Soil Washing Treatment
- In-Situ Steam Extraction
- In-Situ Soil Vapor Extraction Treatment
- In-Situ Soil Flushing
- Air Stripping of Aqueous Solutions
- Control of Air Emissions from Materials Handling During Remediation
- Granular Activated Carbon Treatment
- Chemical Oxidation Treatment
- Supercritical Water Oxidation
- Rotating Biological Contactors
- Slurry Walls
- Technology Preselection Data Requirements
- Pyrolysis Treatment
- Selection of Control Technologies for Lead Battery Recycling Sites
- Design Consideration for Ambient Air Monitoring at Superfund Sites
- Air Pathways Analysis
- Landfill Covers
- Solidification/Stabilization of Organics and Inorganics
- Thermal Desorption II
- In-Situ Biodegradation
- Solvent Extraction
- In Situ Vitrification Treatment

Issue Papers:

- Issues Affecting the Applicability and Success of Remedial/Removal Incineration Projects
- Treatment of Lead-Contaminated Soils
- Technology Alternatives for Remediation of PCB Contaminated Soils

Selected Site Remediation Documents:

- Construction Quality Management for Remedial Action and Remedial Design Waste Containment Systems
- Selection of Control Technologies for Remediation of Lead Battery Recycling Sites
- Contaminants and Remedial Options at Wood Preserving Sites
- Considerations for Evaluating the Impact of Metals Partitioning During the Incineration of Contaminated Soils from Superfund Sites

(1G) Promises Kept: The Importance of Land Use Control
Friday, September 5, 1997
8:00 a.m. - 10:00 a.m.

Description: Institutional controls ensure that the decisions communities make about land use are enforced. The need for such controls and the role federal, state, and local governments play in imposing and maintaining them will be a focal point of this discussion.

Location: Room 2218

Speakers and Affiliation:

Ms. Elizabeth M. Osenbaugh (Moderator)	State of Iowa, Office of the Attorney General
Mr. Gary P. King	State of Illinois, Environmental Protection Agency
Mr. John A. Pendergrass	Environmental Law Institute
Mr. Roger D. Schwenke	Carlton Fields
Mr. George B. Wyeth	U.S. Environmental Protection Agency, Office of General Counsel

MS. ELIZABETH M. OSENBAUGH

Elizabeth Osenbaugh (or "Bess") is Solicitor General of Iowa. She helped draft an amendment to strengthen institutional controls in S.F. 528, the new Iowa "brownfields" or voluntary clean-up legislation, by creating a statutory environmental protection easement to enforce land use restrictions included in a voluntary clean-up agreement.

From February 1994 to July 1996, Ms. Osenbaugh was counselor for State and Local Environmental Affairs in the United States Department of Justice Environmental and Natural Resources Division. She served as the Justice Department representative on the Defense Environmental Response Task Force, a congressionally chartered commission that reviewed environmental clean-up at closed military bases. The Task Force examined institutional controls to restrict future land use.

MR. GARY P. KING

Mr. King works for the Illinois Environmental Protection Agency (EPA) in its Bureau of Land. He is the senior manager for the Illinois EPA site cleanup programs: the voluntary cleanup program, the federal and state Superfund cleanup programs, the Department of Defense (DoD) cleanup program and the Leaking Underground Storage Tank (LUST) program. Mr. King began the development of the Illinois EPA's Brownfields Initiative in 1993 and has overseen the creation of one of the best programs in the country. He has been the state's team leader for numerous legislative and regulatory initiatives, including the state's recently adopted risk based cleanup objectives program -- TACO, or "Tiered Approach to Corrective Action Objectives." He has been a frequent speaker on brownfields topics on behalf of the Illinois program.

MR. JOHN A. PENDERGRASS

Mr. Pendergrass joined the Environmental Law Institute (ELI) as a Senior Attorney in July of 1988. He is Director of ELI's Center for State, Local and Regional Environmental Programs. He has conducted numerous studies of state environmental programs and has written extensively about state programs and the state-federal relationship. His research and writing has covered a variety of topics, including land use, Superfund, state hazardous substance cleanup programs, brownfields and institutional controls. Mr. Pendergrass was a member of the Study Committee on Hazardous Wastes in Highway Rights-of-Way of the National Research Council. He received his Juris Doctorate from Case Western Reserve University School of Law and a Bachelor of Science in environmental science from Michigan State University.

MR. ROGER D. SCHWENKE

[Biography was not available at time of printing. Please refer to conference addendum.]

MR. GEORGE B. WYETH

Mr. Wyeth is an attorney in U.S. Environmental Protection Agency's (EPA) Office of General Counsel, where he has worked on hazardous waste and cleanup matters under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA) since 1989. He chairs EPA's workgroup on institutional controls, and provides legal counseling on institutional controls to the Superfund and RCRA corrective action programs. He received a Bachelor of Arts from Lawrence University, a master's degree from the University of California, Berkeley, and his Juris Doctorate from Yale Law School.

DOCUMENTS THAT SUPPORT
PANEL 1G: PROMISES KEPT: THE IMPORTANCE OF LAND USE CONTROL

Illinois
Environmental
Protection Agency

Bureau of Land
2200 Churchill Road
Springfield, IL 62794

February 1997

Tiered Approach to Corrective Action Objectives (TACO)

Fact Sheet 4: Institutional Controls

What are institutional controls?

Institutional controls are legal mechanisms for imposing restrictions and conditions on land use. These restrictions and conditions are contained in an Illinois EPA No Further Remediation (NFR) letter, and may include:

- Restrictive covenants and deed restrictions
- Negative easements
- Ordinances adopted and administered by a unit of local government
- Agreements between a property owner and a highway authority

Why are institutional controls required?

Land use restrictions and conditions are necessary when remaining (post remediation) contaminants pose a risk to human health or the environment.

Institutional controls protect people from harmful exposure to contaminants that are left in place. For example, the conditions of an institutional control may prohibit groundwater beneath a site from being used as drinking water, or require the maintenance of an engineered barrier to prevent exposure to contaminants. Violation of these conditions could pose an unacceptable health and safety risk.

How will I know if my site needs an institutional control?

You will need an institutional control when the remediation objectives used at your site are based on any of the following:

- Industrial/commercial land use
- Engineered barriers
- Pathway exclusion
- The point of human exposure is located at a place other than at the source
- Any combination of the above

You will <u>not</u> need an institutional control if your site meets the residential remediation objectives.

How do institutional controls work?

The language of the institutional control(s) is found in the NFR letter *(see Fact Sheet 3)*. The NFR letter may include copies of ordinances and deed restrictions in addition to maps showing the areas where remaining contaminants exceed the residential remediation objectives.

After approval by the Illinois EPA, the NFR letter must be filed by the site owner with the local county recorder's office to be effective. By indexing the letter to the property, users of the property will be made aware of contaminants left in place. This ensures current and future users of the property will be informed of the conditions of the institutional controls and/or protected from unwitting exposure to environmental health risks.

Are institutional controls permanent land use restrictions?

Yes. However, the site owner may conduct additional investigative and/or remedial activities in the future to reduce or eliminate the remaining contaminants posing a risk to human health or the environment. Once such work is completed, a request can be made to the Illinois EPA to obtain a new NFR letter.

What conditions may be imposed by institutional controls?

Conditions imposed by institutional controls could:

- restrict land use to industrial/commercial,
- prohibit installation of potable wells on site,
- require three feet of clean cover to remain over contamination left in place,
- require a site safety plan to be implemented if any intrusive activities occur in a contaminated area, and/or

- require maintenance of a parking lot or other engineered barrier.

The conditions or restrictions found in institutional controls all serve to prevent human exposure to remaining contaminants, but are site-specific and depend on multiple factors. These factors include:

- amount of contamination left behind
- location of contamination
- nature or type of contamination
- potential migration pathways or routes of exposure
- geology of the site
- location of site and population at risk

The Bureau of Land (BOL) can assist you in identifying your site's options.

My property is already zoned commercial, so do I need an institutional control from the Illinois EPA restricting the property to commercial/industrial use?

An institutional control from the Illinois EPA is not the same as a local commercial zoning ordinance. Local zoning does not offer the same health protection because residential use of commercially zoned property is not necessarily prohibited. Restricting the land use to commercial/industrial property under TACO means that the property cannot be used for residential purposes.

TACO defines "residential property" as any real property that is used for habitation by individuals or properties where children have the opportunity for exposure to contaminants through ingestion or inhalation at educational facilities, health care facilities, child care facilities or playgrounds.

Contaminants from my site migrated to an adjacent property. I want to resolve any concerns about off-site contamination. If I need an institutional control for my property, does that mean my next door neighbor's property needs one too?

Yes, if the levels off-site exceed residential remediation objectives and your neighbor agrees to the land use restriction.

What if my neighbor will not accept an institutional control?

Without your neighbor's consent, the Illinois EPA will not issue the NFR letter specifying off-site institutional controls. You must either re-negotiate with your neighbor to gain consent, or clean up the off-site contamination to residential remediation objectives.

I heard that if a city ordinance limits the community's drinking water source to a public water supply, then the ordinance can serve as an institutional control. Is this true?

Yes, it can serve as an institutional control if the ordinance effectively prohibits the use of private wells for drinking water, and the procedural requirements specified in 742.1015 are met.

One condition of my institutional control requires three feet of clean soil to be placed over the contamination. However, I need to put in a foundation for a new office building which will disturb the three feet of cover. What can I do?

A building foundation can be constructed, but the construction workers must be adequately protected from exposure to the contaminants pursuant to OSHA regulations and safe worker practices. If contaminated soil is to be excavated as part of the foundation construction, it must be managed accordingly. Contaminated soils not excavated or disturbed still require an equivalently protective cover.

If my contamination extends beneath a highway, what can I do?

Since roadways can be acceptable engineered barriers, a site owner can enter into an agreement with the highway authority (state, county or local) for the purposes of developing remediation objectives. This agreement can then serve as an institutional control.

Point of Human Exposure

Essentially, the risk is at the point of human exposure, because without exposure there is no risk. In TACO, it is assumed that the point of human exposure, i.e., the risk, is at the contaminant source. If, however, an institutional control or an engineered barrier is in place, the point of human exposure is moved to the edge of such controls.

The Tiered Approach to Corrective Action Objectives (TACO) Fact Sheet 4, based on 35 IAC Part 742, Subpart J, is for general information only and is not intended to replace, interpret, or modify laws, rules or regulations.

Illinois
Environmental
Protection Agency

Bureau of Land
2200 Churchill Road
Springfield, IL 62794

February 1997

Tiered Approach to Corrective Action Objectives (TACO)

Fact Sheet 5: Engineered Barriers

What is an engineered barrier?

An engineered barrier as defined in TACO limits exposure and/or controls migration of contaminants. A barrier may be natural or human-made, but its effectiveness must be verified by engineering practices.

For an exposure (and therefore, a risk) to occur, three factors must be present:

1. Contaminants;
2. An exposure route; and
3. A receptor.

The purpose of an engineered barrier is to limit exposure by "cutting off" the route. The use of an engineered barrier is an option required only in situations where remediation objectives exceed residential remediation objectives.

The type of barrier used is based on the exposure route being intercepted and the barrier's effectiveness in doing so.

Requirements

Engineered barriers are factored into developing a remediation objective in exposure route evaluations and Tiers 2 and 3. Tier 1 makes no provisions to adjust the objectives due to the use of an engineered barrier.

If an engineered barrier is used, it must be accompanied by an institutional control (*see Fact Sheet 4*) which assures the proper maintenance of the barrier. This institutional control is transferrable with the property and must provide procedures to be followed if intrusive work (breaching of the barrier) is necessary.

An engineered barrier will only be approved by the Bureau of Land (BOL) if the barrier as part of the final corrective action is intended to be permanent. That is, barriers will not be approved as part of the final corrective action if they are only intended for temporary use.

Examples of systems not acceptable as engineered barriers include natural attenuation, fencing, and point of use water treatment.

Migration to Groundwater Barriers

For the migration to groundwater route, the goal of a barrier is to prevent the leaching of contaminants out of the soil and into the groundwater. The two types of barriers discussed in TACO are caps and permanent structures.

A cap is a horizontal barrier that covers the entire area of contamination to prevent infiltration of water. A cap must be constructed of compacted clay, asphalt, concrete, or other materials capable of producing similar results.

Permanent structures are acceptable barriers due to their capping effects. A roadway, for example, may represent an adequate cap, as could a building.

Soil Ingestion and Inhalation Barriers

For both the soil ingestion and inhalation exposure routes, barriers can prevent human exposure to contaminated media.

The two types of barriers acceptable for both of these routes are caps and permanent structures. A clean soil cover is also acceptable for the soil ingestion route.

Caps used to prevent soil ingestion and/or inhalation are similar to those required for the migration to groundwater pathway, and may be constructed with

the same materials. Caps for this use, however, are intended to prevent the upward migration of soil and vapors instead of the downward infiltration of water.

Permanent structures may provide adequate protection from contamination in instances where the contaminants have migrated beneath the structure or when a structure is built above the contamination.

A clean soil cover may be used to prevent the ingestion of contaminated soil provided that the clean cover is at least three feet thick. Clean cover consists of materials that have contaminant levels not exceeding the applicable Tier 1 residential remediation objectives.

Ingestion of Groundwater Barriers

For the ingestion of groundwater route, two barriers accepted under TACO are slurry walls and hydraulic control of groundwater.

A slurry wall is a vertical barrier constructed of a material that will prevent or impede the horizontal movement of soil or groundwater contamination. A slurry wall may be used in conjunction with a cap to prevent the migration of the contaminated groundwater.

Hydraulic groundwater control is used to:

- prevent groundwater from coming in contact with contaminated soil, and
- prevent contaminated groundwater from migrating.

Other Proposals

The engineered barriers discussed here are all acceptable options. TACO, however, also allows the proposal of other types of barriers. Other barriers will be considered by the BOL if it can be demonstrated that the proposed barrier is as effective as those discussed herein.

Point of Human Exposure

For both carcinogenic and non-carcinogenic contaminants, it is important to identify the location of the risk on a site. Essentially the risk is at the point of human exposure, because without exposure there is no risk. In the TACO procedure, it is assumed that the point of human exposure, i.e., the risk, is at the contaminant source. If, however, an institutional control or an engineered barrier is in place, the point of human exposure is moved to the edge of such controls.

The Tiered Approach to Corrective Action Objectives (TACO) Fact Sheet 5, based on 35 IAC Part 742, Subpart K, is for general information only and is not intended to replace, interpret, or modify laws, rules or regulations.

EXAMPLE OF No Further Remediation Letter

(217)782-6761

August 28, 1996

Mr. Bob Smith
ABC Utility
100 Gaslight St.
AnyCity, IL 62222

Re: *1234567890 – Cook County*
AnyCity, Illinois/ABC Utility
Site Remediation/Technical

Dear *Mr. Smith*:

The Remedial Action Completion Report (entitled "*We are Done*", dated *01/12/96*, log number *96-01*) for the *ABC Utility* property has been reviewed by the Illinois Environmental Protection Agency (Illinois EPA) and demonstrates that the remedial action was completed in accordance with the Remedial Action Plan (dated *01/01/96*, log number *95-99*). The property is located in the *southwest 1/4 of Section 34, Township 39 North, Range 14 East, Cook County,* Illinois; and is commonly known as *325 East 35th Street; AnyCity*, Illinois. Pursuant to Section 58.10 of the Illinois Environment Protection Act ("Act") (415 ILCS 5/58.10), your request for a no further remediation determination is granted under the conditions and terms specified in this letter.

Issuance of this No Further Remediation Letter (Letter) signifies a release from further responsibilities under the Act in performing the approved remedial action and shall be considered prima facie evidence that the remediation site described in the Environmental Notice (Attachment 1) and shown in the Site Base Map (Attachment 2) does not constitute a threat to human health and the environment and does not require further remediation under the Act if utilized in accordance with the terms of this Letter. Pursuant to Section 58.10(d) of the Act, the No Further Remediation Letter shall apply in favor of the following persons:

1. The *name of Remediation Applicant or other person to whom the letter was issued*;

2. The owner and operator of the remediation site;

3. Any parent corporation or subsidiary of the owner of the remediation site;

4. Any co-owner, either by joint-tenancy, right of survivorship, or any other party sharing a relationship with the owner of the remediation site;

5. Any holder of a beneficial interest of a land trust or inter vivos trust, whether revocable or irrevocable, involving the remediation site;

6. Any mortgage or trustee of a deed of trust of the owner of the remediation site or any assignee, transferee, or any successor-in-interest of the owner of the remediation site:

7. Any successor-in-interest of the owner of the remediation site;

8. Any transferee of the owner of the remediation site whether the transfer was by sale, bankruptcy proceeding, partition, dissolution of marriage, settlement or adjudication of any civil action, charitable gift, or bequest;

9. Any heir or devisee of the owner of the remediation site;

10. Any financial institution, as that term is defined in Section 2 of the Illinois Banking Act and to include the Illinois Housing Development Authority, that has acquired the ownership, operation, management, or control of the remediation site through foreclosure or under the terms of a security interest held by the financial institution, under the terms of an extension of credit made by the financial institution, or any successor in interest thereto; or

11. In the case of a fiduciary (other than a land trustee), the estate, trust estate, or other interest in property held in a fiduciary capacity, and a trustee, executor, administrator, guardian, receiver, conservator, or other person who holds the remediated site in a fiduciary capacity, or a transferee of such party.

This Letter, including all attachments, must be filed as a single instrument with the *Office of the Recorder or Registrar of Titles* of *Cook* County within 45 days of its receipt. This Letter shall not be effective until officially recorded by the *Office of the Recorder or Registrar of Titles of Cook* County in accordance with Illinois law so that it forms a permanent part of the chain of title for the *ABC Utility* property. Within 30 days of this Letter being recorded by the *Office of the Recorder or Registrar of Titles* of *Cook* County, a certified copy of this Letter, as recorded, shall be obtained and submitted to the Illinois EPA. For recording purposes, it is recommended that the SRP Environmental Notice attached to this Letter be the first page of the instrument filed.

A No Further Remediation Assessment Fee, in the amount of the lesser of $2,500 or an amount equal to the costs incurred for the remediation site by the Illinois EPA for review and evaluation

services shall be delivered or mailed to the Illinois EPA at the following address:

Illinois Environmental Protection Agency
Division of Administration
Fiscal Services Section #2
2200 Churchill Road
P.O. Box 19276
Springfield, IL 62794-9276

The No Further Remediation Assessment Fee shall be made payable by check or money order to **"Treasurer - State of Illinois for Deposit in the Hazardous Waste Fund"**. The check or money order shall identify the Illinois Inventory I.D. Number for the remediation site and the federal employer identification number or social security number of the RA. Request for final payment for the No Further Remediation Assessment Fee will be included with the final billing statement.

CONDITIONS AND TERMS OF APPROVAL

LEVEL OF REMEDIATION AND LAND USE LIMITATIONS

1 (Option 1) The remediation objectives for the remediation site described in the Site Remediation Program Environmental Notice (attached) and shown on the Site Base Map (Attachment 2) of this Letter are:

Chemical	Concentration	Media
Benzene	*1 mg/L*	*GW*
Lead	*410 mg/kg*	*Soil*

(Option 2) The level of remediation objectives have been established in accordance with an industrial/commercial land use limitation.

2 In accordance with Section 58.8(c) of the Act (415 ILCS 5/58.8(c)), the remediation site described in the attached SRP Environmental Notice and shown on the Site Base Map (attached) of this Letter shall not be used in a manner that is inconsistent with the following land use limitation: *industrial/commercial.*

3. The land use limitation specified in this Letter may be revised if:

a) Further investigation or remedial action has been conducted that documents the attainment of objectives appropriate for the new land use; and

b) A new Letter is obtained and recorded in accordance with Title XVII of the Act and regulations adopted thereunder.

PREVENTIVE, ENGINEERING, AND INSTITUTIONAL CONTROLS

4 [*Description of any preventive, engineering and institutional controls required in the approved Remedial Objectives Report/Remedial Action Plan*]

Preventative: *(Example) A safety plan for this remediation site is recommended to be implemented in accordance with the Occupational Safety Health Administration, to address possible worker exposure, should any future excavation and construction activities occur within the contaminated soil.*

[*monitoring requirements, if any*]

Engineering: *(Example 1) A six (6) inch asphalt barrier is described in the Response Action Plan. This engineered barrier is to remain over the contaminated soils, as outlined in Figure #4 of the Response Action Completion Plan. This asphalt cap is to be properly maintained in the future as a engineered barrier to inhibit inhalation and ingestion of the contaminated media, as well as impede contaminant migration to the groundwater.*

(Example 2) Pavement or buildings, as described in the August 5, 1996 Supplemental Information on Groundwater Conditions and Risk Assessment, will be placed over the contaminated soils. The parking lot surface is to be properly maintained in the future as a engineered barrier to inhibit inhalation and ingestion of the contaminated media, as well as impede contaminant migration to groundwater.

Institutional: *(Example 1) IDOT agrees, through the use of a Highway Authority Agreement (attached), to allow contaminated groundwater to remain beneath its highway right-of-way immediately south of the remediation site and agrees not to allow the use of that contaminated groundwater as a potable or other domestic supply of water.*

(Example 2) This Letter shall be recorded as a permanent part of the chain of title for the remediation site.

[*elements related to issuance of a groundwater monitoring zone*]

5. Failure to manage the controls in full compliance with the terms of the Remedial Action Plan may result in voidance of this Letter.

OTHER TERMS

6. [*any other provisions agreed to by the Illinois EPA and the RA if only remediation site or only selected regulated substances at the remediation site were the subject of corrective action*]

(Example) Those areas of the Remediation site not outlined as areas of concern, from Figure #4 of the Response Action Plan, are not subject to any other institutional or engineered barrier controls.

7 Further information regarding this remediation site can be obtained through a written request under the Freedom of Information Act (5 ILCS 140) to:

Illinois Environmental Protection Agency
Attn: Freedom of Information Act Officer
Bureau of Land #24
2200 Churchill Road
P.O. Box 19276
Springfield, IL 62794-9276

8. Pursuant to Section 58.10(f) of the Act (415 ILCS 5/58.10(f)), should the Illinois EPA seek to void this Letter, the Illinois EPA shall provide notice to the current title holder and to the Remediation Applicant at the last known address. The notice shall specify the cause for the voidance, explain the provisions for appeal, and describe the facts in support of this cause. Specific acts or omissions that may result under Section 58.10(e)(1)-(7) of the Act (415 ILCS 5/58.10(e)(1)-(7)) in the voidance of this Letter include, but shall not be limited to:

a) Any violation of institutional controls or the *industrial/commercial* land use restrictions;

b) The failure to operate and maintain preventive or engineering controls or to comply with any applicable groundwater monitoring plan;

c) The disturbance or removal of contamination that has been left in place in accordance with the Remedial Action Plan;

d) The failure to comply with the recording requirements for the Letter;

e) Obtaining the Letter by fraud or misrepresentation;

f) Subsequent discovery of contaminants, not identified as part of the investigative or remedial activities upon which the issuance of the Letter was based, that pose a threat to human health or the environment;

g) The failure to pay the No Further Remediation Assessment Fee within 45 dyas after receiving a request for payment from the Illinois EPA;

h) The failure to pay in full the applicable fees under the Review and Evaluation Services Agreement within 45 days after receiving a request for payment from the Illinois EPA.

If you have any questions regarding this correspondence, you may contact the Illinois EPA project manager. *John Doe* at (217) ###-####.

Sincerely,

Lawrence W. Eastep

Lawrence W. Eastep, P.E., Manager
Remedial Project Management Section
Division of Remediation Management
Bureau of Land

Attached: SRP Environmental Notice
Site Base Map
InstitutionalControl

(1H) On the Waterfront: Contaminated Sediments and Redevelopment Issues
Wednesday, September 3, 1997
3:45 p.m. - 5:15 p.m.

Description: The need to deal with contaminated sediments has become a crucial and controversial factor in the cleanup and revitalization of waterfront brownfields. The role of the federal government, port authorities, and other stakeholders in remediation of contaminated sediment will be explored, along with project coordination and cost sharing. Technologies for cleaning up sediment and current sediment and redevelopment projects will be highlighted.

Location: Room 2217

Speakers and Affiliation:

Mr. Thomas J. Chase (Moderator)	American Association of Port Authorities
Mr. Jan A. Miller	U.S. Army Corps of Engineers
Mr. David Petrovski	U.S. Environmental Protection Agency, Region 5

MR. THOMAS J. CHASE

Mr. Chase advises members of the American Association of Port Authorities (AAPA) on environmental, port development, and navigation issues affecting ports. He also represents the interests of the U.S. public ports before Congress, the Administration, and federal agencies on legislative and regulatory issues. He joined AAPA in April 1997. Previously he was an environmental engineer at U.S. Environmental Protection Agency (EPA) headquarters, where he worked on dredged material management, provided technical and policy support for regulations, and facilitated discussions with other agencies. Presently, Mr. Chase is involved in the development of a strategy to promote the use of dredged material for redevelopment of brownfields sites and for other beneficial purposes.

MR. JAN A. MILLER

Mr. Miller has been the U.S. Army Corps of Engineers liaison to the U.S. Environmental Protection Agency (EPA) for support of the Assessment and Remediation of Contaminated Sediments (ARCS) Program, and support of the Remedial Action Plans at Great Lakes sites. He authored and was technical editor of several guidance documents on contaminated sediment remediation. Mr. Miller is a member of several committees and working groups dealing with sediments and dredging, including the Great Lakes Dredging Team and the International Joint Commission's Sediment Priority Action Committee.

MR. DAVID PETROVSKI

[Biography was not available at time of printing. Please refer to conference addendum.]

(1I) Getting Community Stakeholders Involved in Technology Decisions
Thursday, September 4, 1997
8:00 a.m. - 10:00 a.m.

Description: Effective community involvement and decision-making are based on a clear understanding of complex environmental issues. The panelists will discuss why and how to involve the community in technology decisions related to brownfields and identify ways to make complex technical information more "user-friendly."

Location: Room 2210B

Speakers and Affiliation:

Mr. Daniel M. Powell (Moderator)	U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response
Mr. Thomas Dunlop	City of Aspen, Colorado
Mr. J. Patrick McDonald	Great Plains/Rocky Mountain Hazardous Substance Research Center
Ms. Brenda Lee Richardson	Women Like Us

MR. DANIEL M. POWELL

[Biography was not available at time of printing. Please refer to conference addendum.]

MR. THOMAS DUNLOP

Tom Dunlop has been involved with the Smuggler Mountain Superfund site since 1982. His primary role with this program is as technical advisor to the citizens and elected officials of the City of Aspen and Pitkin County, Colorado. He has managed the daily complexity of tasks associated with ensuring clear communication of scientific study, compliance with pertinent regulation, and interpretation of settlement language to the community. Through Mr. Dunlop's leadership the Aspen/Pitkin Environmental Health Department has remained neutral in many politically sensitive situations and stayed focused on facts surrounding identification of public health risk. He has been a strong proponent of citizen involvement in creating problem-solving strategies. This effort has resulted in settlement conditions acceptable to those most impacted, those living on the Superfund site.

MR. J. PATRICK MCDONALD

Pat McDonald is coordinator of the Technical Outreach Services for Communities (TOSC) program at the Great Plains/Rocky Mountain Hazardous Substance Research Center, which serves the U.S. Environmental Protection Agency (EPA) Regions 7 and 8. Prior to joining the TOSC program, he was a project manager with EPA Region 7. He holds a Master of Science degree in chemical engineering.

MS. BRENDA LEE RICHARDSON

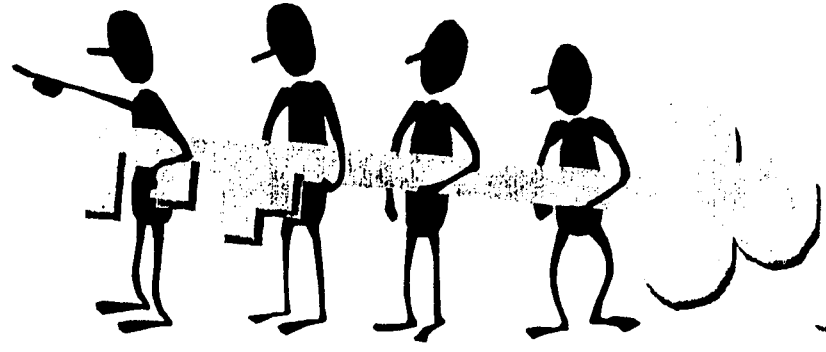
Brenda Lee Richardson is a graduate of the University of Michigan in Ann Arbor with a Bachelor of Arts in political science and the University of Maryland in Baltimore with a master's degree in social work. She is the president of Women Like Us, a consulting firm that specializes in community development, communications, public relations, strategic planning, conference planning and training. Ms. Richardson is currently working specifically in the areas of welfare reform and environmental justice. Ms. Richardson, a resident of Anacostia in the District of Columbia, has been an environmentalist working on environmental justice issues in urban communities for the past 10 years. Ms. Richardson has a longstanding relationship with local and national environmental groups such as the Sierra Club, the Earth Conservation Corps, the Anacostia Watershed Society, and the Young's Memorial Community Development Corporation. She has recently started working on a brownfields project in Washington, D.C. called "Anacostia Brownfields Consortium" (ABC). This project is designed to spur economic development in distressed communities for welfare recipients. Ms. Richardson is motivated to protect the community's interests as well as to

ensure good environmental stewardship on critical environmental issues. It is critical that the community is supportive of this Brownfields Initiative as an active participant in fulfilling the mission of the ABC. Women Like Us is committed to ensuring both heightened environmental awareness and hands-on involvement in the protection of two of this country's most threatened resources - the disadvantaged and the environment.

DOCUMENTS THAT SUPPORT PANEL 1I: GETTING COMMUNITY STAKEHOLDERS INVOLVED IN TECHNOLOGY DECISIONS

ANACOSTIA BROWNFIELDS CONSORTIUM

- ▲ Creating Jobs
- ▲ Protecting the Environment
- ▲ Revitalizing Neighborhoods



CONTACT INFORMATION

- Brenda Richardson
- Women Like Us
- 3008-24th Place, SE
- Wash.DC 20020

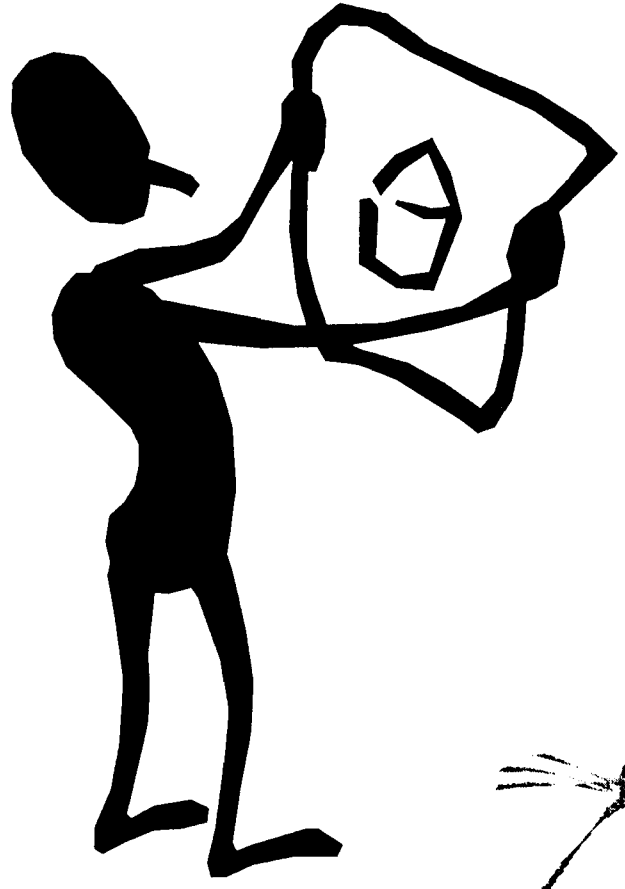
- (202) 678-1978 (o)
- (202) 678-5381 (f)

WRITTEN EPA STATEMENT

- I, Brenda Lee Richardson, the President of Women Like Us, do hereby give my permission for the U.S. Environmental Protection Agency to reproduce this paper on the "Anacostia Brownfields Consortium" for the Brownfiields '97 binder.

Brenda Lee Richardson

Brenda Lee Richardson, MSW
President



INTRODUCTION

The Anacostia Brownfields Coalition (ABC) has been formed among concerned citizen's groups, churches, businesses, government, academic and other public institutions to create jobs, protect the environment and revitalize Anacostia and its surrounding area neighborhoods. The Coalition believes in the importance of community based solutions, citizen empowerment and the power of individuals working together. The partnership is an example of a plan that ties environmental stewardship with environmental justice.

BACKGROUND

ABC grew from meetings between the George Washington University's (GWU) Institute for the Environment chartered between GWU and the U.S. Environmental Protection Agency as a unique public/private partnership. Brenda Lee Richardson of Women Like Us, a member of the Institute for Environmental Advisory Board and head of a citizen empowerment group that includes First Baptist Church, Young's Memorial CDC, Ward 8 Forum on Education, the Earth Conservation Corps, City Councilmember Sandy Allen and the Environmental Law Institute presented the brownfields idea to the Institute and the group. The group's initial meetings focused on the development of an eco-industrial park project and brownfields. Those discussions led to a larger concept of "demand-side" brownfields development to answer the imperative of job creation in light of the onset of welfare reform.

The formation of the Anacostia Brownfields Coalition is the realization of those discussions. The Coalition seeks to interact with the community to identify business opportunities suitable for location in Anacostia and then focus on available former industrial or commercial sites that will best meet those needs. Sites for brownfield development will be screened in terms of suitability for the logistics of the business venture and availability of workforce, and then balanced by considerations of property contamination. In the ABC's vision, most property can easily be made available for re-use with only a very limited risk of harm from contamination, that can be more

than offset by improvements in health and well being that come through constructive employment opportunities. In developing these concepts, ABC is working closely with a number of its partnering institutions: Mitretek, the highly talented not for profit research and development organization that specializes in environment and information technology and George Washington University with its Institute for the Environment and schools of Public Health, Engineering, Business and Public Management, and Law School among other strengths. On the other hand, the community has solicited support from such businesses as Cushman & Wakefield, Greater Washington, BOSCART Construction and the Office of Economic Development for the District of Columbia.

The purpose of ABC is to develop brownfields based projects that will create a job market for Temporary Assistance to Needy Families (TANF) recipients who are moving from welfare to work and give other area residents an opportunity for meaningful private sector employment. In spite of the fact that there are many jobs in the growing D.C. metropolitan area, TANF customers and many other area residents are unable to access those jobs due to transportation and skills development issues. On the other hand, business in the greater Washington, D.C. area do not have access to a skilled and reliable labor pool that can fill all the vacant positions for technically trained individuals that they have available. ABC provides a creative mechanism to meet this regional need for supply and demand.

CURRENT PROJECTS

The ABC is currently working on two brownfields concepts:

Telecommuting Center and Tek-Aid Training Concept

The purpose of the telecommuting center is to create a central employment site in the District of Columbia and convenient to the workforce to perform for technology firms at or outside the

beltway. Combined with the community development of Women Like Us, life skills development of the Young's Memorial CDC, job readiness training of the Ward 8 Forum on Education, recruitment development of First Baptist Church and the Earth Conservation Corps, and the Tek-Aid skills development program it provides a vehicle for livable wages and permanent employment in a community practically devoid of economic activity.

The Tek-Aid Program is a public/private partnership aimed at providing the training and upward mobility of certain welfare clients and other disadvantaged populations (handicapped, displaced workers, etc.) to work in the computer programming field, while simultaneously contributing to the labor pool addressing the Year 2000 problem and the more general need for additional technology workers. The Year 2000 problem is the software maintenance challenge facing the world as a result of the historical use of two-digit dates in computers. Unless the software is changed, when the Year 2000 arrives, many critical computer systems will incorrectly believe it is 1900, adversely affecting almost every calculation dealing with time. It is estimated that over 180,000 additional technologists will be required to address the Year 2000 problem in time. Separately, we are facing a severe technologist shortage in the Washington metropolitan area as tens of thousands of technologists vacancies go unfilled and technology salaries skyrocket.

The Tek-Aid Program, proposes to screen targeted individuals for their aptitude to learn and perform computer software manipulation tasks, train those found likely to succeed in the skill areas they will need to function, and place them initially at a telecommuting site developed on an Anacostia brownfield to be linked through high capacity communication networks to governments and companies that have need for their computing related services. Tek-Aid participants can also be placed directly with companies in need of similar entry-level technologists. Tek-Aid envisions a close partnership with the D.C. schools in with the Ward 8 Forum on Education to identify and prepare D.C.'s youth for high technology centers, much like the successful model that is already working at Ballou Senior High School in Anacostia.

This approach proposes to add the concepts of Apprentice-Journeyman-Master to the job of Programmer. Upon completion of the initial Tek-Aid training, apprentices will work under the close supervision of Master Programmers. As they gain experience and additional technical training, the apprentices may transition into the Journeyman and Master Programmer roles. Other limited non-technical job skill training (how to dress in an office environment, how to deal with a supervisor, etc.) will be integrated with the technical program. Once individuals have transitioned into the technical workplace, their new employers will offer additional formal training to maximize their chances of establishing a lasting career.

This project is definitely community driven. There is often this perception that the work and funds go the university and the businesses. However, this particular endeavor is much different. The citizen empowerment group has an equal role in this process as it relates to decision making, responsibilities and equal access to the funds available to make this project happen. Each organization's role is clearly defined in this process.

Women Like Us is a consulting firm that specializes in community development, communications, public relations, strategic planning, conference planning and training. The company is currently working in the areas of welfare reform and environmental justice. Women Like Us works with welfare recipients in the District of Columbia. Brenda Lee Richardson has been a community activist and eco-feminist for the past ten years. Inasmuch as the work of Women Like Us is motivated to protect the community's interest as well as to ensure good environmental stewardship on critical environmental issues, this company has made a commitment to heighten environmental awareness and hands-on involvement in this brownfields project through community development.

The Earth Conservation Corps works with community leaders and environmental groups to develop a natural partnership between youth and the environment. High visibility projects provide

maximum benefits to young people, the environment and the community. Inner city at-risk youth, ages 18-25, gain an opportunity to devote their time and energy to cleaning up the environment. Corps members earn stipends and open savings accounts, many for the first time in their lives. They also keep daily journals, practicing literacy skills as they think about their feelings and experiences. Corp members also benefit from weekly "TEACH" days (Training, Employment, Academics, Culture, History). Participants are encouraged to take vocational training and to finish school and earn GEDs. Many of the Corp members are TANF recipients. The ECC's role in this process will be to recruit ready to work candidates to qualify for employment opportunities at the telecommuting center.

The Young's Memorial Community Development Corporation is a nonprofit organization whose mission is to educate and empower the disadvantaged in the areas of homeownership, economic development, public health, welfare reform and environmental justice. The Young's Memorial CDC is a certified site in the District of Columbia for work experience for TANF recipients who have an interest in daycare. This faith-based organization has a vested interest in making sure that daycare is available to the parents that work at the telecommuting center. Their role in this process is to provide training for daycare opportunities and life skills development training. This component will be done in partnership with the First Baptist Church as well as the Ward 8 Forum on Education.

First Baptist Church has a long history of working with the community. The pastor of the church clearly recognizes that there is a connection between welfare reform and environmental justice in this project. Inasmuch as they are providing counseling to welfare moms, they would like to take this responsibility on in the project and work in partnership with the Earth Conservation Corps in the recruitment process.

The Ward 8 Forum on Education is also important to this project. This allows us to connec' .ɔ all the schools in Ward 8 at the elementary, junior and senior high levels. The School Board Representative for the Ward operates this program that has an excellent reputation for training in career development. The Forum on Education is committed to this effort and will provide the job readiness training.

ECO-INDUSTRIAL PARK

This project is aimed at reforming D.C.'s recycling system from a supply side to a demand side model. The Washington D.C. solid waste stream will be analyzed from an available resource perspective. This will concentrate on identifying those components of the waste stream that can serve as economically viable feedbacks for manufacturing recycled content products. Based on that effort ABC will work with the city government to rewrite the D.C. recylcing law to also focus on these waste streams. ABC will identify a brownfield site suitable for locating a recycling center as the heart of an Eco-Industrial Park.

Among other businesses in the eco-industrial park will be privately own manufacturing operations that can use the waste feedstocks from the recycling center to manufacture products the Federal government has designated for purchasing under the affirmative procurement provisions of the Resource Conservation and Recovery Act. Other business ventures will be sought for the park that are logical extensions of the operations of the "resource to recovery" theme of the park.

As with Tek-Aid a core concept of the park is structured job creation and training. This concept envisions moving workers from basic task jobs in the recyling center to more sophisticated operations in the manufacturing businesses.

This initiative would not be successful without the support of the not only the community but the Councilmember for Ward 8, Sandy Allen. Councilmember Allen is very supportive of this initiative. Both of these projects have the core themes of creating jobs, protecting the environment, and

revitalizing neighborhoods through maximum productive use of Anacostia's Brownfields. A current list of ABC's partners and supporters is listed below:

Women Like Us

Young's Memorial CDC

First Baptist Church

Ward 8 Forum on Education

Cushman & Wakefield

Councilmember Sandy Allen

BOSCART Construction

Institute for the Environment/GW University

Earth Conservation Corps

Global Green, U.S. affiliate of Green Cross International

Mitretek

Office of Economic Development

Greater Washington

Brownfields redevelopment certainly symbolizes the importance and significance of community building in its simpliest form. The community must have a vested interest in a project of this nature in order for it to be successful.

(1J) GIS Applications in Brownfields: Interdepartmental Coordination, Site Selection, and Marketing
Thursday, September 4, 1997
8:00 a.m. - 10:00 a.m.

Description: Try out geographic information systems (GIS) and geographic plotting systems (GPS), such as LANDVIEW and ARCVIEW. Local governments use them to provide sophisticated mapping of brownfields sites for marketing plans, and so can you! Panelists will outline steps in selecting a GIS system and share success stories. GIS demonstrations will allow you to test various systems.

Location: 2210A

Speakers and Affiliation:

Mr. James Maas (Moderator)	U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response
Mr. Dick Burk	U.S. Department of Housing and Urban Development
Mr. Gary Ellsworth	County of Cuyahoga Planning Commission
Mr. Patrick Garvey	U.S. Environmental Protection Agency, Envirofacts Warehouse
Mr. John Martin	U.S. General Services Administration
Mr. Ed Terry	U.S. Environmental Protection Agency, Chemical Emergency Preparedness and Prevention Office

MR. JAMES MAAS

[Biography was not available at time of printing. Please refer to conference addendum.]

MR. DICK BURK

[Biography was not available at time of printing. Please refer to conference addendum.]

MR. GARY ELLSWORTH

[Biography was not available at time of printing. Please refer to conference addendum.]

MR. PATRICK GARVEY

Patrick Garvey is the director of the Envirofacts Warehouse under the Chief Information Officer of the U.S. Environmental Protection Agency (EPA). Mr. Garvey has also worked in Enterprise Information Management Division, the Hazardous Waste Division, the Denver regional office, and in state government. Mr. Garvey holds a master's degree from the Lyndon Baines Johnson School of Public Affairs at the University of Texas at Austin.

MR. JOHN MARTIN

[Biography was not available at time of printing. Please refer to conference addendum.]

MR. ED TERRY

Mr. Terry worked five years in U.S. Environmental Protection Agency's (EPA) Office of Science and Technology developing effluent guidelines for industrial point sources. Prior to coming to EPA as a chemical engineer, he worked as a pharmacist in Oklahoma. He has worked the last three months in EPA's Chemical Emergency Preparedness and Prevention Office, supporting the development of electronic submission of the Risk Management Plan mandated by Section 112(r) of the Clean Air Act. In addition, he is involved with the development of current and future versions of Landview.

(1K) A Tree Grows in Trenton: A Look at Phytoremediation
Thursday, September 4, 1997
3:00 p.m. - 5:00 p.m.

Description: Phytoremediation is a promising, but still experimental, remediation method that uses plants and trees to absorb and break down contaminants. Phytoremediation has captured broad interest because of its low cost and high level of community acceptance. Experts from organizations that have successfully used the technology will share their experiences.

Location: 2210A

Speakers and Affiliation:

Dr. Walter Kovalick, Jr. (Moderator)	U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response
Mr. Stephen A. Rock	U.S. Environmental Protection Agency, Office of Research and Development
Dr. Jerold L. Schnoor	University of Iowa
Ms. Karen Waldron	City of Trenton, New Jersey

DR. WALTER W. KOVALICK, JR.

Dr. Kovalick manages an office chartered to act as champion for the introduction of more innovative remediation technologies in the clean-up of abandoned waste sites under Superfund and corrective action under the Resource Conservation and Recovery Act. Formed in 1990, his office is providing policy leadership and technology information within U.S. Environmental Protection Agency (EPA) and enabling the broader use of innovative technologies through other federal agencies, states, consulting engineers, technology vendors and by other countries.

Dr. Kovalick holds a Bachelor of Science in industrial engineering and management science from Northwestern University and a master's degree in business administration from Harvard Business School. He holds a doctorate degree in public administration and policy from Virginia Polytechnic Institute. He is a recipient of the President's Meritorious Executive Award and EPA Bronze and Silver Medals for Superior Service. In February 1990, he was named by *Engineering News-Record* magazine as one of their "1990 Marksmen." In 1997, he received the Fitzhugh Green Award for contributions to EPA's international programs over twenty years. He has served on a subcommittee of the National Research Council and a subcommittee of the Department of Energy's Environmental Management Board, both of which advise the Department on technology development issues. He is a member of the American Society for Public Administration and the Academy of Management.

MR. STEPHEN A. ROCK

[Biography was not available at time of printing. Please refer to conference addendum.]

DR. JEROLD L. SCHNOOR

[Biography was not available at time of printing. Please refer to conference addendum.]

MS. KAREN WALDRON

Ms. Waldron has an undergraduate degree in environmental planning and design and a graduate degree in public administration. She has worked in both the public and private sectors in the fields of planning, engineering, site development and environmental protection. Ms. Waldron is currently a Project Manager for the City of Trenton's Department of Housing and Development and also acts as the city's Brownfields Coordinator. She has actively promoted the city's involvement with field trials involving innovative remedial technologies and helped spearhead the phytoremediation project currently underway at the city's Magic Marker site.

(1L) The Brownfields Information Highway: The Two-Way Street
Friday, September 5, 1997
8:00 a.m. - 10:00 a.m.

Description: Information is essential if local stakeholders are to make a brownfields deal happen. In addition, information about the effects of the Brownfields Economic Redevelopment Initiative is essential to federal and state policy makers. Key stakeholders, such as real estate developers, financiers, and government officials, will discuss the information they need to support their decision-making and report successes. Panelists also will discuss computer system options that can support information sharing.

Location: Room 2217

Speakers and Affiliation:

Mr. Stephen R. Wassersug (Moderator)	Global Environmental and Technology Foundation
Mr. Michael DuBrow	SelecTOWN
Mr. Charles Epperson	State of Texas, Natural Resource Conservation Commission
Dr. Paul S. Fischbeck	Carnegie Mellon University
Mr. Stan Hitt	U.S. Environmental Protection Agency, Region 6
Mr. James Maas	U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response
Mr. David A. Newton	Marasco Newton Group

MR. STEPHEN R. WASSERSUG

Mr. Wassersug is currently the president of the Global Environmental and Technology Foundation, a not-for-profit organization committed to the development and use of technology and information systems to achieve environmentally sustainable development. Mr. Wassersug served for 26 years with the U.S. Environmental Protection Agency (EPA) at senior executive levels. The last 12 years with EPA included management of Superfund and Resource Conservation and Recovery Act (RCRA) programs at both EPA regional and headquarters levels. From 1990-1994, Mr. Wassersug was assigned to Hungary by the U.S. government to establish the Regional Environmental Center for Central and Eastern Europe in conjunction with other governments and organizations from within and outside the region. The successful Center now has offices in seven countries of the region, serves 13 total countries from the Baltics to Albania and has been instrumental in the development of policies, programs, and legislation. The Center also provides vital support to the development of the Environmental Action Plan of the Ministers which contains the broad strategy and action framework for policy reform, institutional strengthening, and investment.

Mr. Wassersug has also worked as an international waste expert with international organizations including OECD, UNEP, UNDP, ILO, IMO, World Bank, and UNIDO. Prior to assuming his position with the Foundation, Mr. Wassersug worked as director of International and Federal Programs for Jacobs Engineering, one of the world's largest engineering and hazardous waste remediation firms. He has authored a number of publications on remediation, risk assessment, and international environmental policy.

MR. MICHAEL DUBROW

[Biography was not available at time of printing. Please refer to conference addendum.]

MR. CHARLES EPPERSON

Charles Epperson is the manager of the Voluntary Cleanup Section in the Pollution Cleanup Division of the Texas Natural Resource Conservation Commission (TNRCC). He manages voluntary cleanup project managers and administrative staff who oversee the cleanup of more than 450 sites in Texas. Prior to his current duties, Mr. Epperson has worked for TNRCC and its predecessor agencies for ten years as a Resource Conservation and Recovery Act (RCRA) field investigator and as a remedial project manager and unit manager in the Superfund program.

Mr. Epperson participated in the writing of the Texas Voluntary Cleanup Program law and the Texas Voluntary Cleanup Program rules. He has lectured extensively on administrative and technical issues regarding the Texas Risk Reduction Rules and the Texas Voluntary Cleanup Program. Mr. Epperson attended Southwest Texas State University where he received his bachelor's and master's degrees in biology.

He is a member of the Association of State and Territorial Solid Waste Management Officials Voluntary Cleanup Task Force.

DR. PAUL S. FISCHBECK

Paul S. Fischbeck is an associate professor in the Department of Engineering and Public Policy and the Department of Social and Decision Sciences at Carnegie Mellon University, Pittsburgh, Pennsylvania. He is a graduate of the University of Virginia (Bachelor of Science in architecture), the Naval Postgraduate School (Master of Science in operations research and systems analysis), and Stanford University (doctorate in industrial engineering and engineering management). His general research involves incorporating uncertainty about probability (ambiguity) into normative risk analysis. Past and current research includes a risk comparison of two reactor safety systems, a large-scale probabilistic risk assessment for National Aeronautics and Space Administration (NASA) on the space shuttle's tile protection system, and the actual and perceived risks of mine subsidence in western Pennsylvania. He is a co-director of The Brownfields Center at Carnegie Mellon University and is currently developing RISES (Regional Industrial Site Evaluation Systems), a geographic information system (GIS) designed to evaluate the environmental risk and economic potential of abandoned industrial sites.

MR. STAN HITT

Stan Hitt is presently the brownfields' coordinator for U.S. Environmental Protection Agency's (EPA) Region 6 in Dallas. He has been in the coordinator's position for three years and with the Agency for 15 years. Prior to working on brownfields, Mr. Hitt was a remedial project manager and a section chief in the Superfund Program. As a remedial project manager from 1982 to 1985, and later as a section chief to a staff of remedial project managers for 10 years, he oversaw the cleanup of hazardous waste sites on the National Priorities List. Prior to starting work at EPA, Mr. Hitt attended the University of Arkansas and Texas Tech University where he received his Master and Bachelor of Science degrees, respectively.

MR. JAMES MAAS

[Biography was not available at time of printing. Please refer to conference addendum.]

MR. DAVID A. NEWTON

Mr. Newton is Marasco Newton Group's executive vice president, founder, and chief financial officer. He has an impressive record of service to the federal government supporting the U.S. Environmental Protection Agency (EPA), the Department of Labor, the Department of Transportation, the Department of Defense, and the U.S. Army Corps of Engineers (USACE). For more than 30 years, he has directed management studies, organizational analyses, information management studies and strategies, and projects involving computer systems development and implementation.

Mr. Newton's consulting career focus has been primarily in support of Superfund, the EPA's program for cleaning up the nation's worst hazardous waste sites. He assisted Superfund program offices in the requirements stage and field implementation of numerous Superfund Information Systems (SIS), and helped design reports used by both USACE and Superfund regional managers to negotiate all planned remedial actions at Superfund sites.

DOCUMENTS THAT SUPPORT PANEL 1L: THE BROWNFIELDS INFORMATION HIGHWAY: THE TWO-WAY STREET

The Brownfields Information Highway: The Two-Way Street

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The Brownfields Information Highway: The Two-Way Street

Today, we face new environmental challenges that are more diffuse than those of the past and demand different approaches and innovative solutions. Problems on global, regional, and local scales have emerged which will require original solutions. Interaction required for success between different stakeholders is vital to solve current environmental problems. Key stakeholders in the Brownfields National Action Agenda such as real estate developers, financiers, government officials and the local community are sharing information to assist in their decision making and to report lessons learned. New positive shifts are taking place in the 1990s on how we protect and manage our environment and natural resources. EPA's innovative and highly successful Brownfields program requires that we make full utilization of current and expanding technologies to inform and communicate. This presentation will identify some of the tools, how they are being used in the Brownfield community, and their potential impact on our future – how we remediate, invest, do business, and assure that risks are acceptable, etc.

As stewards of our environment, timely access to information and ability to communicate must occur to make us aware of the environmental impacts of any decision we make. Environmental concerns and information should be fully integrated into the fundamental design of both the Brownfield program and site opportunities. If this happens, we will be able to provide more effective solutions while decreasing environmental risks that reduce requirements for energy and natural resources, and further re-contamination. Most importantly, the opportunity to participate on a regular basis with all stakeholders will expedite acceptable decisions.

Communication Between Federal Agencies

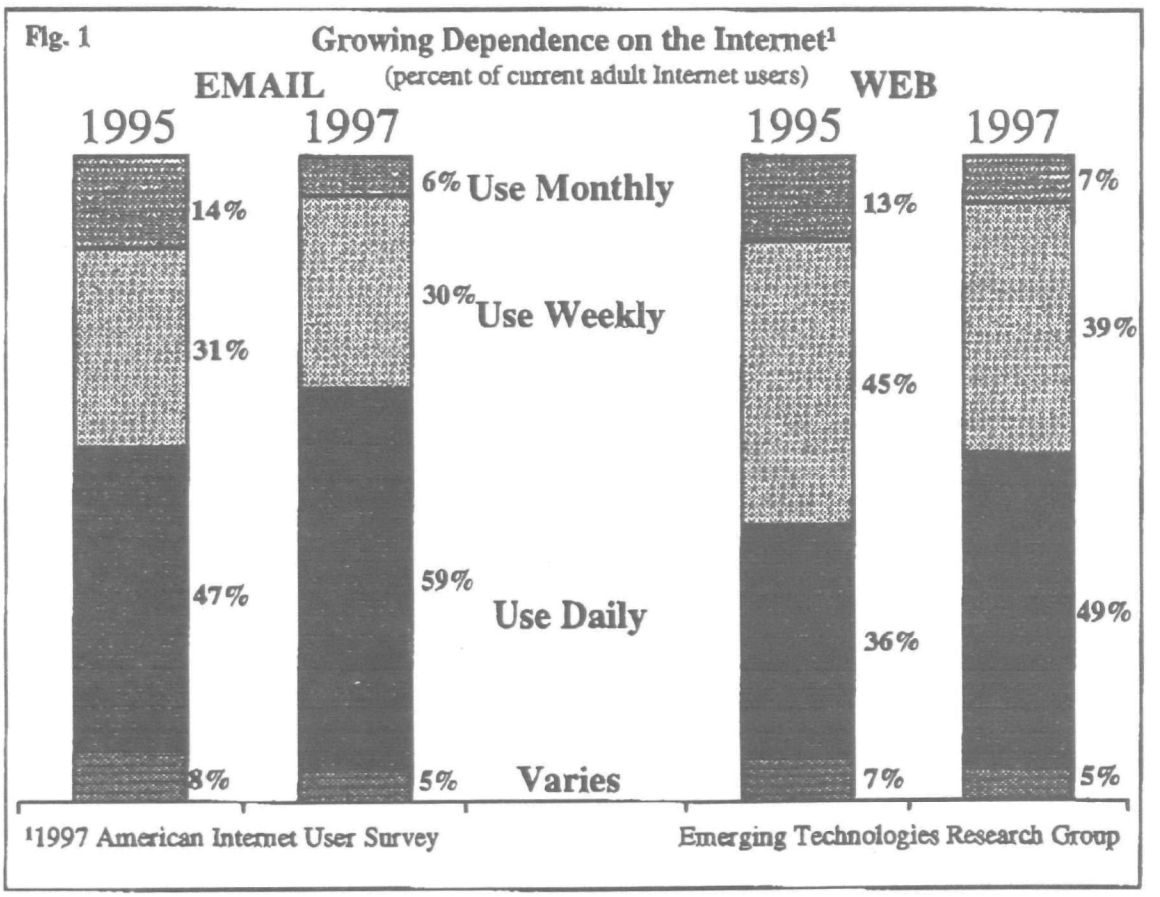
Federal interagency programs, such as the Brownfields National Action Agenda, often face numerous obstacles that inhibit the efficient exchange and dissemination of information. Some of these obstacles include but are not limited to physical distance, incompatible hardware and/or software, as well as idle time wasted during document/information exchange.

Information Flow

Information flow is central to integrating and leveraging advancements in management effectiveness and sustainable development. In order for a Brownfield project to be successful, necessary information must be given to local stakeholders. Additionally, information on the effects of the Brownfields Initiative is essential to National and State policy makers. Well-designed and flexible interactive networking capability allows one to access state-of-the-art knowledge, realize economic opportunities, and respond quickly to environmental realities. The World Wide Web (www) is already providing a variety of dynamic information exchange centers.

The Internet as a Solution

Developed over 25 years ago, the Internet is a global "network of networks" that allows any computer attached to the network to talk to any other attached computer virtually anywhere in the world. The Internet provides organizations and individuals with a dynamic new platform for commerce; internal communications; advertising; business-to-business and business-to-consumer transactions; customer support; electronic publishing and services; and entertainment and product marketing. The Internet is experiencing tremendous growth, providing businesses and organizations, of all sizes, with increasingly expanded opportunities to improve their communications, distribute information, lower operating costs, and re-engineer operations. (See Fig. 1)



The Internet, more specifically the World Wide Web (www) is an ideal medium for the dissemination of information that can be locally, regionally, or nationally focused. The Web provides an unprecedented capability for interaction and information exchange, with little barrier of entry for the end-user.

EPA's Brownfields Internet homepage (www.epa.gov/brownfields) went on-line in January 1996. EPA developed the Brownfields homepage to maximize distribution of Brownfields information, increase the timeliness of this information, and reduce document distribution costs. The homepage is a vehicle for providing local governments, businesses, affected community members, and other Brownfields stakeholders with access to the Brownfields information and tools they need to become involved in local Brownfields decisions. The true value of the World Wide Web, however, is further realized with the integration of applications, or programs, that are specifically designed for the Web's open-system architecture.

An Internet Web publishing server enables organizations to deliver dynamic content and extend true value-added functionality over the World Wide Web. This new category of software products provides the integrated framework that anyone needs to deploy open and scaleable applications and information services over the Internet and Intranet. For example, today as a property developer you can post (1) your needs to bulletin boards, (2) promote an event to explain your property situation, (3) a press release to a new database and other data with only a browser through community sites like Earth Vision.

Networks that Meet Environmental Needs

A number of web-based Information systems currently provide stakeholders with environmental information and the opportunity to reach an extensive community. Those based on the Global Network of Environment and Technology (GNET™) platform are summarized on Figure 2.

Fig. 2	Information Management Systems
Title:	**Function:**
GNET (www.gnet.org) – The Global Network of Environment & Technology.	GNET™ provides timely and relevant information to all environmental stakeholders on environmental topics.
TechKnow™ is an environmental technology database residing on GNET™	TechKnow™ allows users to search for timely information, as well as add and update their information in a password-protected environment. TechKnow™ creates a virtual Website for your technology free of charge.
globeNet™ (www.iso14000.net)	globeNet™ provides timely, relevant information and discussion facilitation of Environmental Management Systems on the Web.
ETI (www.gnet.org/eti) – The Environmental Technology Initiative (ETI) Database.	The Environmental Technology Initiative (ETI) Database is an internal project management tool developed for the Environmental Protection Agency (EPA), public dissemination and project coordination.
Brownfield Network (Intranet under development for EPA).	Under development for the EPA, the Brownfield Network is a private network that allows federal agencies to share and process policies and guidelines.
WeNet (www.wenet.org) – World Engineering Network	Developed for the World Engineering Partnership for Sustainable Development (WEPSD), WeNet allows decision makers on a global basis to share information, create relationships, promote global ethics and advance leaderships.
RCI (rci.gnet.org) – Rapid Commercialization Initiative	The Rapid Commercialization Initiative is a cooperative effort between federal agencies and states to provide internal communications on testing, methodology, data and public dissemination.
ITRC (www.gnet.org/gnet/gov/interstate/itrcindex.htm) – Interstate Technology and Regulatory Cooperation Working Group	The Interstate Technology and Regulatory Cooperation Working Group provides internal communication among members, as well as outreach to interested environmental communities.
The Chattanooga Intranet	The Chattanooga Intranet provides community-wide coordination and collaboration on the City's strategy for revitalization.

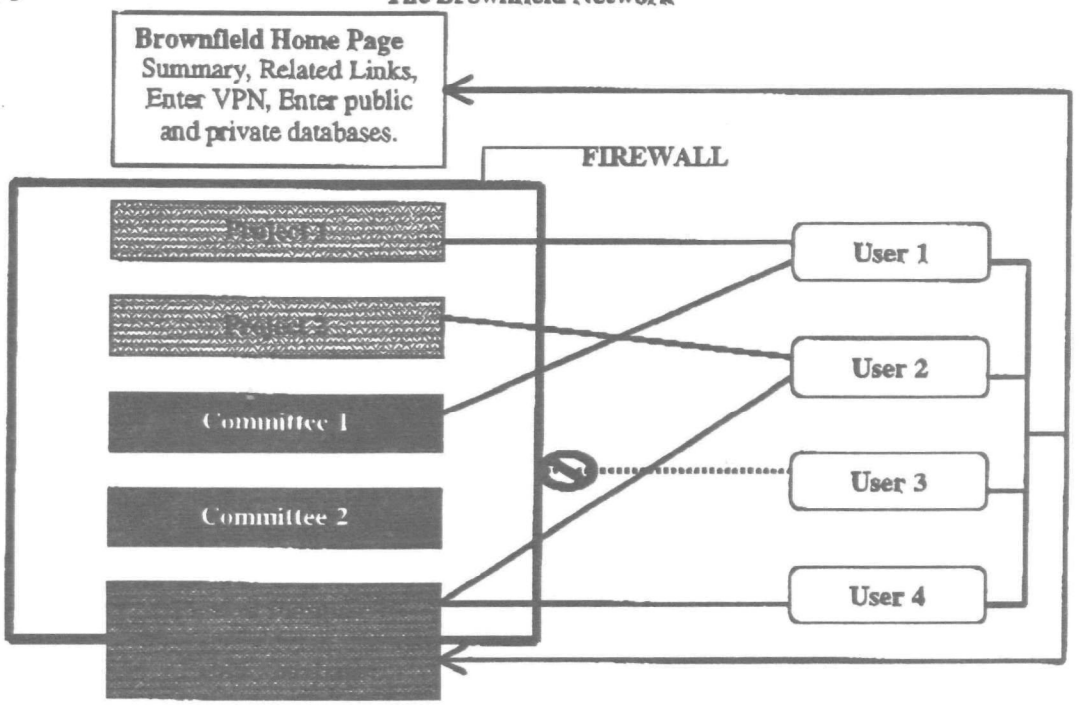
The Global Environment & Technology Foundation (GETF) provides information services to many cooperative federal and state programs through the GNET™ (www.gnet.org) information system. The system was developed for the U.S. Department of Energy to meet environmental needs and is free for any user. This on-line network has the ability to provide private communications to groups for specific projects and programs. GNET™ provides a two way interactive means of communication that can be effectively used to convey information and identify problems. GNET™ information that is designed to meet the needs of the environmental community provides timely information on government programs, policy and law, and current industry and other news, environmental products and services, marketing opportunities, contracts and business and other stakeholder assistance. GNET™ will soon assist the EPA" Brownfields Economic Redevelopment Initiative in meeting its outreach needs and serve as a communications hub through forums and the creation of private networks.

GNET's™ powerful, dynamic Web site management and application assembly platform, Empire Server, is available for complete Web site management. Empire Server integrates with industry-standard Web servers and databases to create a complete Web site management package that delivers secure, highly available, dynamic content and extended business application functionally via the Internet. User restrictions can also be imposed that protect sensitive information as well as allow the user to modify information within the site.

Brownfield Network

Using the Empire Server, a comprehensive electronic communications Internet-based information network for the Brownfield initiative has been developed. The Brownfield Virtual Private Network (VPN) or Extranet will be a secure, private World Wide Web site designed for working group communication and collaboration. Using a standard Web browser, VPN members can access the VPN from anywhere in the world via an Internet connection. Once inside the VPN, members can communicate with each other and collaborate on projects by using Web conferences, search tools, and file libraries. VPNs provide powerful, state-of-the-art, collaborative online workspaces built for private communication and information exchange. (See Fig. 3)

Fig. 3 **The Brownfield Network**



Initially, the VPN will support the Interagency Brownfields Working Group members (over 10 Federal Agencies) and provide them instantaneous access to documents, pictures, files and any other content form via the World Wide Web. This Extranet offers unprecedented networking and group working capabilities that bypass conventional hardware and software incompatibilities and provide a globally secured, accessible medium for information dissemination and exchange.

A second tool, which will be utilized for exchanging and disseminating information, will be the Brownfields database. The database will collect and organize appropriate Brownfields information. This database will use dynamic architecture consisting of Summary Query Language (SQL) tables using templates that utilize private and public views. Users with privileged access will be able to edit data directly to the SQL tables, which enables the next user to view the updated information instantaneously. The Web interface requires no additional software. Portions of the database information can be secured for internal management, as well as external information dissemination. Through user specified restrictions the database will be used for internal management, as well as selective external information dissemination.

The Environmental Technology Initiative (ETI) and Relationship to Brownfields

EPA is using an Internet based information system for both internal management, as well as selective external dissemination, developed through the GNET™ architecture. Information contained within the database includes specific details of the projects, such as partners, amount funded, and project purpose, but also includes the benefits of the project. Benefits are defined in terms of the larger goals of ETI and EPA's mission to protect public health and environmental quality. Specifically, the program is defined in Fig. 4.

Fig. 4 Environmental Technology Initiative (ETI) Information System

- Manage the gathering, analysis, and dissemination of information on ETI funded projects;
- Assess the benefits of each project, identify key audiences and beneficiaries of each project and vehicles for reaching them;
- Identifies incentives and opportunities to enhance stakeholder involvement in ETI activities;
- Provides a system to measure program accomplishments and the environmental results that are achieved in various projects;
- Provides a conduit for exchanging information within synergistic ETI programs and externally funded programs;
- Identifies strategic partnerships within the ETI program, as well as with other public and private entities, to diffuse the use of innovative technologies and the attainment of associated benefits;
- Answers Frequently Asked Questions (FAQs) through query system. This user-friendly interface queries the database with minimal user effort. For example, "What are the projects that have invested in my state?"

The ETI system and its platform are uniquely positioned to develop, achieve and sustain an information network for the Brownfields Initiative. The proposed system will empower States, localities, and other agencies to work together in a timely manner to prevent, assess, safely clean up and promotes sustainability reuse Brownfields. The proposed system's architecture would be leveraged from the existing ETI database resulting in significant cost savings. The system will be capable of generating high quality data useful to Brownfield stakeholders. The system will provide quality assured data collected under a prescribed set of operating conditions that is reported at the highest level of credibility, based on published approaches and procedures.

The information system envisioned for the Brownfields National Action Agenda (BNAA) will be a compilation of a World Wide Web site, a database(s) and a Virtual Private Network. Through these Internet tools, all information/communication relevant to Brownfields can be disseminated/exchanged. Recommended functionality is included in Fig. 5.

Fig. 5 Brownfields National Action Agenda (BNAA) Functionality

- General Posting of Information – Documents, files, pictures, publications, and other content. Content regularly updated for participants.
- User Authentication – Site or designated areas protected from public view through user id and password authentication.
- Secure Full Text Search – All information fully searchable. Site content captured and indexed through the Fulcrum search engine, returning ranked search results.
- E-mail/Listserv – E-mail capabilities integrated allowing users to send e-mail messages to individuals or pre-defined groups through the Web. E-mails automatically generated through according to defined events or according to the requirements of BNAA group.
- File Libraries – Upload or download files directly. File Library allows users to upload or download electronic files for all users to access.
- Document Revision Control –users "tag" designated documents with "check-in/check-out" feature that restricts access to one user at a time. Previous versions made accessible for review or modification. Actively exchange documents through any standard browser
- User-directory – Members included in an on-line member directory: lists contact information, links to e-mail accounts, includes picture of each VPN participant. Made accessible only to members of the network, and can be updated immediately.
- Archive/Reference Information – Reference information, documentation, links or other content posted and searched.
- Links – Link other related sites within the network. Can develop table enabling links to be searched, updated and found.
- Private Workspaces – Individualized workspace containing information, links, preferences, documents, conferences or other content/capabilities for the BNAA network. Function as a customized "launch screen" to user-defined areas.
- BNP Implementation Status Area – Internal area for Brownfields National Partners (BNP) to report status and progress on commitments. Postings made as they happen, on a regularly scheduled basis, or when a special need arises.
- BNP Comment Area – EPA, as the BNP Network administrator, will post documents, files, graphics, publications and any other content to the BNP Network for review and comment. Used to develop proposals, policies and draft documents. Serves as administrative deliberation, comment and consensus building area. Once finalized, it is posted to the BNP Library and to other public Web sites.
- BNP Conference Area – Unstructured "chat" venue. Members ask questions and post opinions. Provides ability to post message, respond, search and track conference dialogue. Can house files, documents or other content. Messages listed by author or date, and other advanced functions such as searching and message threading. May host scheduled "virtual meetings"
- BNP Member Directory – Lists contact information and links to each e-mail account. Only accessible to members.
- BNP Network Search – Search for materials posted in all areas. Captured, indexed and ranked by relevance to the user.
- On-line Instruction Manual – Links included throughout the manual, users research within a topic to achieve full understanding of the options and features.
- Other capabilities – Advantage of the GETF solution is its ability to be customized to best meet the requirements of the BNAA's growing and changing user community.

Working group sessions between end-users and system developers are mandatory prerequisites for the development of any information network. Only through these sessions can developers truly understand end-users needs so that the system can fulfill all end-user requirements in the most efficient way.

The BNP Network will serve the interests and objectives of the Brownfields stakeholders. With a secure authentication and authorization process, members will be granted special access to what they are able to see or do. The BNP Network will increase the efficiency of the Interagency

Working Group by providing unprecedented response and flexibility. It will permit quick, controlled access of working documents and position papers, allowing interaction and coordination using the information architecture of the World Wide Web.

Through the development of VPN(s) with the following capabilities, Brownfield stakeholders will be kept informed of the latest issues surrounding Brownfields and will be capable of interacting with other stakeholders as well as commenting on different Brownfield documents. This will be crucial to the success of the Brownfields Initiative because of its broad-based contingency.

Using the power of the Internet to meet environmental objectives and promote global sustainability is a reality. The vision for the future is built on more effective, open, and productive collaboration and information exchange among stakeholders. Initiatives must allow a two-way exchange and not force-feed or dictate policy. These collaborative efforts will require new models of gathering, sharing, and analyzing information; coordinating work; and education and training professionals, policymakers, and the public at large as we travel the information highway to sustainable development. These tools exist today for on-line communities to be built by the <u>members</u>, through the open and more readily accessible Internet.

Meditations on the Internet

prepared for

Brownfields '97 --
Partnering for a Greener Tomorrow
Kansas City, Missouri
September 3-5, 1997

by

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On the Impact of Technology and the Internet

- Technology, and especially the Internet-driven multimedia revolution, is changing the way the business world thinks, how businesses, organizations, and communities market themselves, how they sell, and, most importantly, how they provide value to their constituencies. It's chaotic, complicated and lots of people find it uncomfortable. No one truly understands where this revolution is taking us, reliable guides are hard to find, yet no one can go it alone.

- The Internet is changing so fast that communities, businesses and people don't really have time to grasp their significance. On the other hand, those that disregard these "megaleap," that get frustrated with the continuous learning process, are likely to end up feeling disenfranchised; and once they fall behind in the endless race to know, catching up will require tremendous determination, perseverance and resources.

- Technology is forcing communities to reinvent themselves. Stakeholders, including business, government, and citizenry, must recognize that information and learning are valuable processes that contribute to the overall growth and sustainability of the community.

- There are old ways and new ways of accomplishing particular tasks, and the transition between the two. We are in transition and the tension is high.

- We are living in incredible times. The Web is giving everyone the opportunity to redefine their roles. It's not often that just anyone can influence their environment; most of the time we fill prescribe roles.

- The Internet alters the *process* of economic development; not its purpose. Purpose has to do with vision. Without vision, information is mere data.

- The payoff comes not from focusing on the end result but from paying close attention to the way things done. People who work directly with the Internet know that making assumptions about where it will lead wastes time and usually results in unsound business decisions.

On Web Site Design

- Creating a Web site is only a first step. Business attraction is incredibly competitive. Urban centers with large marketing budgets and small rural communities with volunteer economic development staffs can now vie for the same relocator via the Web. Communities that use the Internet to provide valuable information, visual richness, and establish relationships will be the clear winners.

- When designing a Web site, ask yourself: What is valuable? What is usable? What is better?

- The biggest challenge is not in mastering Internet technology; the challenge is to introduce order and opportunity into the chaos of multiple mediums and breakneck development.

- Web design needs to be focused on building a dynamic system rather than grouping static parts. When the pace of change speeds up, people tend to get more small things done, but the result is a lot of disconnected pieces - more of the same, not something better. Its working with the whole that adds value.

- What's makes a great Web site? Passion, thoughtfulness, truth and accuracy.

- The goal of a Web site, as of any communication, is to evoke a response; good design turns thought into action.

- Web site creation involves three disciplines: *identity design, information design, and interactivity design.*

- *Identity design* is about who your community is, its vision of itself and its intent. You can see in a Web's site visual appeal: consistent layout, overall theme or look, icons and logos, even its backgrounds and use of blank space. Identity design synthesizes all the things that make up a community's interaction with the rest of the world. Good identity design on the Web articulates a community's goals and character consistently; it creates a framework through which the community finds a cohesive voice, while reflecting cultural, social and business changes.

- *Information design* gives data its context. It brings focus and order to the content and the media expressing it. On the Web, good design results in navigability: a logical yet non-linear structure, home page table of contents, page IDs, and anything else that best illuminates the information's overall structure and the relationship among its components.

- *Interactivity design* requires looking at how people interact with computers and content; quantitative and qualitative behavior. Avoid slow load graphics, test your Web site with different browsers, use audio, video and animation only when you can answer the question: why is this better?

- A picture is worth a thousand words; but not if it takes more than 30 seconds to download.

On Promoting Your Web Site

- A common myth about the creation of Web sites is, "If you build it, they will come." I can tell you, they won't.

- You spend a lot of time and resources putting together your Web site. But how is anyone going to find your site among the 85,000 new Web pages posted each month?

- Create a proactive outbound marketing plan for your Web site. Eight strategies that should go in the plan for promoting your Web site are:

  - ☐ Register your site on the top search engines and indexes
  - ☐ Use newsgroups, emailed newsletter, and subscribe to discussion forums that reach your target market
  - ☐ Get on somebody's "What's Cool" lists and win an award
  - ☐ Build links from Web sites that attract similar audiences
  - ☐ Append a mini-billboard to all of your outbound email messages
  - ☐ Send out press releases to Internet media publishers
  - ☐ Create incentives for viewers to sign your guestbook
  - ☐ Integrate real world marketing strategies with your Web-based strategies

  [Detail at http://www.selectown.com]

- The key to exploiting marketing opportunities on the Web is through combining content and communication; build in the content your target audience is looking for, then communicate it clearly through good design.

- Advertise your Web address in all your print media: business cards, letterhead, return addresses, brochures, advertisements, promotional items.

- The best way to promote a Web site is through word-of-mouth. Of course, the only thing that travels faster than word of a good site, is word of a bad one. Don't make promises you can't keep.

TEXAS VOLUNTARY CLEANUP PROGRAM'S

DATABASE INFORMATION MANAGEMENT PROJECT

Chuck Epperson
Manager, Voluntary Cleanup Section, Texas Natural Resource Conservation Commission
P.O. Box 13087, MC-221
Austin, Texas 78711
(512)239-5891

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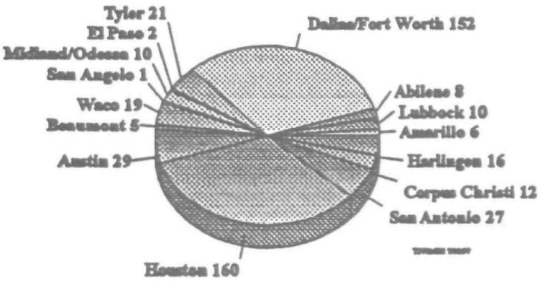
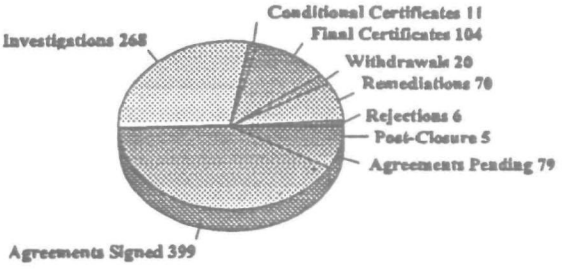
Voluntary Cleanup Program - 6/97

Applications by TNRCC Region (478 Sites)



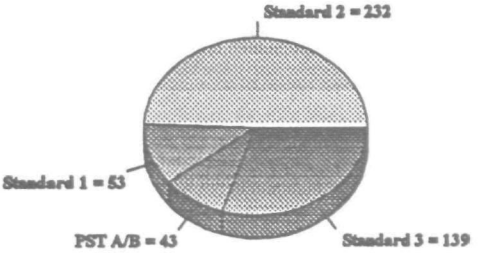
Voluntary Cleanup Program - 6/97

Phases of Projects (478 Sites)



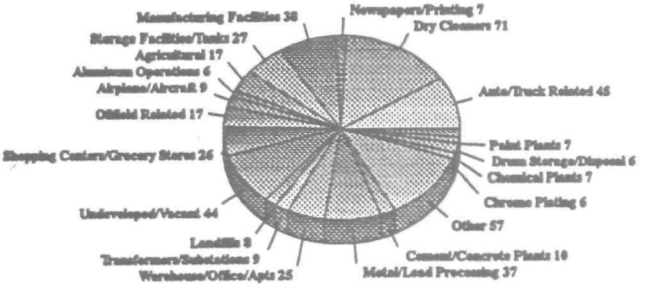
Voluntary Cleanup Program - 6/97

Applicable Risk Reduction/PST Rules (478 Sites)



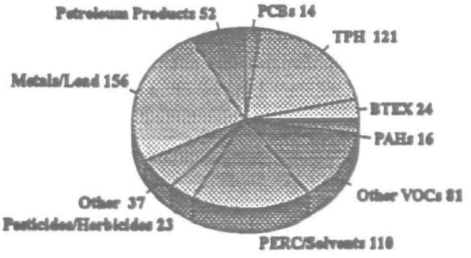
Voluntary Cleanup Program - 6/97

Types of Facilities (478 Sites)



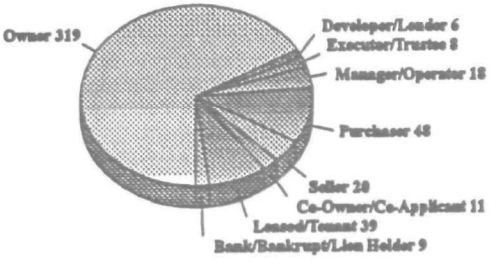
Voluntary Cleanup Program - 6/97

Contaminant Categories (478 Sites)



Voluntary Cleanup Program - 6/97

Applicant Type (478 Sites)



VOLUNTARY CLEANUP PROGRAM DATABASE

This list (data dictionary) is a guide to the Voluntary Cleanup Program's Database on the Internet located at http://www.tnrcc.state.tx.us/waste/pcd/vcp. If you have any questions please contact Tammy Svjagintsev at 512-239-5891 or the TNRCC Help Desk at 512-239-0911. This database on the Internet is zipped using PKZIP software. The original software for the VCP Database is Paradox 5.0 for Windows. The database has been converted into ASCII delimited for your use to convert into any software program.

1. Date Revenues Recvd (date application received at Cashier's Office)
2. Date App Recvd (date application received at the VCP office)
3. Site (where the site is located)
4. Type Lead (owner, lender, purchaser, bank, etc.)
5. PCA No. (Program Cost Account Number)
6. VCP ID (number assigned by VCP for recordkeeping)
7. Project No. (another number used by TNRCC Finance Division)
8. Project Manager (Who was assigned the project)
9. Phase (Investigation, Remedation, Post-Closure, Complete)
10. Site Address (Where site is located)
11. Lat (Latitude of site), Long (Longitude of site)
12. Acres (Number of acres at the site)
13. Site City (City where site is located)
14. County (County where site is located)
15. Region (TNRCC Region depending on county)
16. Type Facility (car dealership, dry cleaners, tile manufacturing, electroplating, etc.)
17. Contaminant Categories (PERC, BTEX, PCBs)
18. Contaminants Identified
19. Media Affected (soils, groundwater)
20. Off-Site? (Contaminants are migrating off-site, yes, no or suspected)
21. Applicant (Person submitting application)
22. Applicant First (applicant's first name)
23. Applicant Last
24. Applicant Title
25. Applicant Address
26. Applicant City
27. Applicant State
28. Applicant Zip
29. Applicant Phone
30. Applicant Fax
31. Billing Company (For TNRCC Financial Purposes)
32. Billing c/o Name
33. Billing Address1
34. Billing Address2
35. Billing City
36. Billing State
37. Billing Zip
38. Billing Phone
39. Consultant/Attorney (applicant's attorney or consultant)
40. Cons/Att First
41. Cons/Att Last
42. Cons/Att Title
43. Cons/Att Address
44. Cons/Att City
45. Cons/Att State
46. Cons/Att Zip
47. Cons/Att Phone
48. Cons/Att Fax
49. SW No. (TNRCC Solid Waste Registration No.)
50. LPST No. (Leaking Petroleum Storage Registration Tank No.)
51. EPA TXD/CERCLIS (EPA Texas ID/CERCLIS Registration No.)
52. RCRIS No. (EPA Registration No.)
53. Date/Agreement (Date the agreement was signed by applicant)
54. Rules (Risk Reduction or Petroleum Storage Tank)
55. Standards (Risk Reduction 1, 2, 3, PST Plan A or Plan B)
56. Final Rpt Rcvd (Date of Final report received from applicant)
57. Cert Issued (Date of Certificate of Completion when issued)
58. C or F? (Type of Certificate Issued either Conditional or Final)
59. Type Remedy? (Remediation Type, Vapor, Excavation, Cap, Pump and Treat)
60. Comments (Any comments on particular site, per project manager)
61. Media (Microfilmed or Paper)
62. File Location (office or central records)

Texas VCP/Brownfields Survey

Site Name: _____

Site Address: _____

Contact Person/Phone #: _____

Survey Date: _____ **Certificate of Completion Issuance Date:** _____ **VCP ID #** _____

1. **Is a property transaction anticipated, pending, or completed for the site?**

   YES **NO**

2. **If no, describe the primary incentive(s) for entering into the VCP: (skip to #15)**

   _____

3. **If yes, what was/will be the date of the property transaction and what was/will be the sale price (or estimated property value)?**

   _____

4. **Would the sale of this property have likely occurred (or will occur) <u>without</u> the existence of the VCP?**

   YES **NO**

5. **If no, please explain the importance of the VCP Certificate of Completion issuance in buying/selling the property:**

   _____

7. **Is additional development or redevelopment planned for the property?**

   YES **NO**

8. **If no, what will occupy the existing site? (skip to #11)**

   _____

9. **If yes, what development or redevelopment is planned and what are the projected costs?**

   _____

10. **What is the schedule for redevelopment (start/finish)?**

    _____

11. **If an out-of-state business will occupy the property, were the incentives offered by the VCP important in the decision to move to Texas?**

    YES **NO**

12. **What has been or is anticipated to be the net increase in permanent <u>jobs</u> within two years after receiving the Certificate of Completion?**

    _____

13. **What has been or is anticipated to be the net increase in the appraised property value within two years after receiving the Certificate of Completion?**

_____

14. **What other economic impact or community benefits are occurring to the surrounding city neighborhood or community which may be attributable to this property's development? (e.g. initiation of other redevelopment, creation of community redevelopment action groups, etc.)**

_____

15. **Check the following Brownfields characteristics which apply to this property:**

____ **Abandoned _____ months/years prior to transaction**

____ **Within designated Empowerment Zone or Enterprise Community**

____ **Past underutilization, list past uses:_____**

____ **Past tax delinquency ($_____)**

____ **Past tax idled (_____ months/years prior to transaction)**

16. **Indicate the most important benefits for you to enter the VCP and receive a Certificate of Completion for this site, numbered in the order of importance:**

____ **Liability release for future lenders and landowners**

____ **Protection from TNRCC enforcement actions**

____ **Federal assurances provided by the EPA/VCP Memorandum of Agreement**

____ **Timely review by the VCP**

____ **Clearly described checklist approach to determine cleanup requirements provided by using Guidance for Initiating & Reporting Response Actions Conducted Under the VCP**

____ **Filing of only the Certificate of Completion when the cleanup achieves the appropriate health-based level (no separate deed recordation as per the risk reduction rules)**

____ **VCP remediation requirements which supersede the risk reduction rules (e.g. standard 3 corrective measure study or response action work plan focused on a selected remedy rather than comparison of numerous remedies)**

____ **Other benefits_____**

17. **Please describe any areas within the VCP administrative or technical review process where you believe improvements should be made:**

_____

18. **We would like to track both the short and long term success of sites remediated through the VCP. May we contact you in the future to request additional information regarding measurable economic and community successes (e.g. increased number of jobs, increased property value) realized since the issuance of the VCP certificate of completion?**

YES **NO**

Date Recvd :	10/28/96
Site Name :	Jefferson @ the North End
VCP ID :	161
Property Trans? :	Y
Trans. Sale Price :	$5,000,000.00
Sold w/wo VCP? :	N
Importance of COC (1-5) :	5
Property Redeveloped? :	Y
What Cost? :	50,000,000.00
Jobs :	250
Increase in Prop. Value :	75,000,000.00
Most/Least Benefits (1-7) :	[redacted]
Liability :	1
Protection -Enforcement :	4
EPA/VCP MOA :	5
Timely Review :	2
RG-215 Checklist :	6
Filing of COC :	3
VCP vs RRR :	7
Can VCP Contact? :	Y
Comments :	Entire deal was predicated upon receipt of COC. Apartment project will be constructed on the site. Applicant thinks that an annual review would be recommended. In other words, contact the applicant annually about this site.

Date Recvd :	11/19/96
Site Name :	Former Mobil Service Station
VCP ID :	174
Property Trans? :	N
Trans. Sale Price :	
Sold w/wo VCP? :	
Importance of COC (1-5) :	
Property Redeveloped? :	
What Cost? :	
Jobs :	
Increase in Prop. Value :	
Most/Least Benefits (1-7) :	
Liability :	
Protection -Enforcement :	
EPA/VCP MOA :	
Timely Review :	
RG-215 Checklist :	
Filing of COC :	
VCP vs RRR :	
Can VCP Contact? :	Y
Comments :	Mobil leased property. Upon termination of lease, Mobil removed USTs and demolished station. Property owner requested that Mobil enter VCP for his protection in future transactions. [redacted]

Date Recvd :	11/19/96
Site Name :	Lockheed Tract/Bayport Property
VCP ID :	231
Property Trans? :	Y
Trans. Sale Price :	
Sold w/wo VCP? :	N
Importance of COC (1-5) :	5
Property Redeveloped? :	Y
What Cost? :	
Jobs :	150
Increase in Prop. Value :	
Most/Least Benefits (1-7) :	
Liability :	2
Protection -Enforcement :	3
EPA/VCP MOA :	4
Timely Review :	1
RG-215 Checklist :	
Filing of COC :	
VCP vs RRR :	
Can VCP Contact? :	Y
Comments :	Vitamin E Manufacturing Facility - Construction to begin early 1997/Japanese Ownership. You may contact applicant at any time, but applicant would have more information at the end of 1997.

Date Recvd :	11/19/96
Site Name :	Lot 37, Brazoria County
VCP ID :	209
Property Trans? :	Y
Trans. Sale Price :	
Sold w/wo VCP? :	N
Importance of COC (1-5) :	4
Property Redeveloped? :	N
What Cost? :	
Jobs :	
Increase in Prop. Value :	
Most/Least Benefits (1-7) :	
Liability :	2
Protection -Enforcement :	3
EPA/VCP MOA :	1
Timely Review :	5
RG-215 Checklist :	6
Filing of COC :	4
VCP vs RRR :	
Can VCP Contact? :	Y
Comments :	Lending agencies indicated a willingness to finance with VCP COC. Land to be developed in the future. VCP may contact 6 to 12 months (Spring, 1997)

Date Recvd :	12/3/96
Site Name :	Harwood Hills Village
VCP ID :	182
Property Trans? :	Y
Trans. Sale Price :	12,600,000.00
Sold w/wo VCP? :	N
Importance of COC (1-5) :	4
Property Redeveloped? :	Y
What Cost? :	
Jobs :	40
Increase in Prop. Value :	
Most/Least Benefits (1-7) :	
Liability :	1
Protection -Enforcement :	2
EPA/VCP MOA :	3
Timely Review :	5
RG-215 Checklist :	4
Filing of COC :	6
VCP vs RRR :	7
Can VCP Contact? :	Y
Comments :	VCP permitted the acquisition with seller maintaining the cleanup risk and not the buyer. VCP may contact applicant in early 1998.

Date Recvd :	12/3/96
Site Name :	Lubbock "Loop" Property
VCP ID :	127
Property Trans? :	Y
Trans. Sale Price :	
Sold w/wo VCP? :	N
Importance of COC (1-5) :	5
Property Redeveloped? :	N
What Cost? :	
Jobs :	
Increase in Prop. Value :	
Most/Least Benefits (1-7) :	
Liability :	1
Protection -Enforcement :	3
EPA/VCP MOA :	6
Timely Review :	2
RG-215 Checklist :	5
Filing of COC :	4
VCP vs RRR :	
Can VCP Contact? :	Y
Comments :	Buyer would not accept transfer of the property until they received a COC. You may contact applicant at any time.

Date Recvd :	1/24/97
Site Name :	Hutchison Hayes International
VCP ID :	387
Property Trans? :	Y
Trans. Sale Price :	
Sold w/wo VCP? :	Y
Importance of COC (1-5) :	
Property Redeveloped? :	Y
What Cost? :	
Jobs :	100
Increase in Prop. Value :	
Most/Least Benefits (1-7) :	
Liability :	3
Protection -Enforcement :	4
EPA/VCP MOA :	6
Timely Review :	2
RG-215 Checklist :	1
Filing of COC :	5
VCP vs RRR :	
Can VCP Contact? ;	Y
Comments :	Property located next to buyer's existing facility. Property to be used for expansion purposes. The buyer is out of state and viewed the incentives offered by the VCP as very beneficial. Strengthens the presence of a nationally recognized company (Caterpillar) in the local community The VCP may contact applicant semi-annually.

Date Recvd :	1/30/97
Site Name :	W. J. Holland Survey
VCP ID :	168
Property Trans? :	Y
Trans. Sale Price :	$490,000.00
Sold w/wo VCP? :	N
Importance of COC (1-5) :	5
Property Redeveloped? :	Y
What Cost? :	
Jobs :	
Increase in Prop. Value :	
Most/Least Benefits (1-7) :	
Liability :	1
Protection -Enforcement :	
EPA/VCP MOA :	
Timely Review :	
RG-215 Checklist :	
Filing of COC :	
VCP vs RRR :	
Can VCP Contact? :	?
Comments :	The interested parties would not take on the responsibility or liability of contamination so the VCP in this instance was very helpful.

Date Recvd :	2/12/97
Site Name :	Muehlstein Houston Plastics Plant
VCP ID :	346
Property Trans? :	Y
Trans. Sale Price :	
Sold w/wo VCP? :	Y
Importance of COC (1-5) :	
Property Redeveloped? :	N
What Cost? :	
Jobs :	
Increase in Prop. Value :	
Most/Least Benefits (1-7) :	
Liability :	3
Protection -Enforcement :	2
EPA/VCP MOA :	
Timely Review :	1
RG-215 Checklist :	
Filing of COC :	
VCP vs RRR :	
Can VCP Contact? :	Y
Comments :	VCP was used as a means to expedite the environmental closure process. The VCP worked very efficiently. Staff may contact at any time. Applicant stated that he would not have much more useful information, since this site will remain a plastics manufacturing site without much change in operations.

Date Recvd :	2/14/97
Site Name :	Gainesville Municipal Airport
VCP ID :	254
Property Trans? :	Y
Trans. Sale Price :	$79,039.59
Sold w/wo VCP? :	N
Importance of COC (1-5) :	5
Property Redeveloped? :	Y
What Cost? :	$800,000.00
Jobs :	20
Increase in Prop. Value :	$1,000,000.00
Most/Least Benefits (1-7) :	
Liability :	1
Protection -Enforcement :	4
EPA/VCP MOA :	2
Timely Review :	3
RG-215 Checklist :	6
Filing of COC :	5
VCP vs RRR :	7
Can VCP Contact? :	Y
Comments :	The area is being planned for an Industrial Park which includes infrastructure improvements worth about $8,000,000. There is an opportunity for out of state companies to locate at this location. Having VCP in advance will make marketing efforts much more beneficial. VCP may contact applicant each January.

Brownfield Data: Collection, Analysis, and Impact

Based on a set of in-depth interviews, an interactive workshop with interested stakeholders, and the statistical analysis of a site-ranking survey, a detailed guide book and computer database on how to collect and display relevant data about brownfield sites was developed. A summary of our research process, including techniques for developing integrated web-based information fact sheets using GIS/DSS software, GPS technology, and digital photography, and a discussion of the multi-faceted applications of the guide book will be presented.

Joshua Donner & Paul Fischbeck
The Brownfields Center
Carnegie Mellon University
Pittsburgh, PA 15213-3890

412-268-3240
412-268-6938 (fax)

Abstract
Stan Hitt

Landview & BRIMS

Geographic Information Systems (GIS), such as ArcView, provide valuable means to organize data and understand their association to physical locations, called spatial relationships, however the cost of the basic programs along with the necessary data layers can be very expensive; plus development of specific applications must still be done by a knowledgeable person.

There is a program in the public domain, and therefore free from license fees, named LandView which provides many of the features of the more sophisticated GIS programs. It comes complete with demographic data, roads, streets, railroads, creeks, rivers, and water bodies, as well as seven layers of EPA environmental data and it can run on older computers.

LandView II is currently a DOS program, but is in the process of being upgraded to run in Windows. These programs are based on TIGER map files which are also used by several of the expensive commercial GIS programs.

LandView allows the creation of customized layers of spatially related data. Municipalities, developers, realitors, bankers, lawyers, as well as community groups might find this program helpful with regard to data related to the Brownfields Initiative.

EPA Region 6, based in Dallas, Texas, is developing a front-end module to allow non-programers to easily generate layers containing Brownfields site-specific data called the Brownfields Redevelopment Information Management System (BRIMS). The system is inthe prototype stage and allows input of data related to brownfield sites. A video form allows easy data entry. When data input is complete, the program does, in the background, things beyond the grasp of the average user, i.e., creating the database, indexing the files, and making the hooks to LandView.

Migration of BRIMS into the Windows version of LandView is underway. LandView III will allow photographs, sketches, or other documents to be linked to site information via Object Linking and Embedding (OLE), as well as export to the Internet.

(1M) Solve the RBCA Puzzle
Friday, September 5, 1997
10:30 a.m. - 12:30 p.m.

Description: Get the latest update on risk-based corrective action (RBCA) and its tools. Learn from those involved in RBCA at the policy and practical levels. Obtain insights on how stakeholders help shape and support RBCA policy development and implementation.

Location: Room 1204A-B

Speakers and Affiliation:

Mr. Steven D. McNeely (Moderator)	U.S. Environmental Protection Agency, Office of Underground Storage Tanks
Mr. Jan P. Mazgaj	HDR Engineering, Inc.
Mr. Gerald W. Phillips	U.S. Environmental Protection Agency, Region 5
Mr. William C. Trumbull	City of Chicago, Illinois

MR. STEVEN D. MCNEELY

Steven D. McNeely is an environmental protection specialist with the U.S. Environmental Protection Agency's (EPA) Office of Underground Storage Tanks (OUST). During his ten years in OUST, he has served as liaison officer for EPA Regions 4, 5, 6, and 8, and is currently coordinating with Region 2 to develop their state UST programs. As a member of OUST's Corrective Action Technologies Team (CATT), he has fostered a wide range of projects to improve the understanding and use of alternative remedial technologies (e.g., alternative to the automatic selection of pump-and-treat for contaminated groundwater, and excavation-and-removal for contaminated soil) applied at petroleum release sites. He also serves as the project officer managing EPA's Risk-Based Corrective Action (RBCA) Training Cooperative Agreement with the American Society of Testing and Materials (ASTM).

On February 26, 1997, Mr. McNeely received a Gold Medal from EPA Administrator Carol Browner for managing the Partnership in RBCA Implementation (PIRI) - a public-private partnership which fosters RBCA training and implementation in state UST programs.

MR. JAN P. MAZGAJ

[Biography was not available at time of printing. Please refer to conference addendum.]

MR. GERALD W. PHILLIPS

Mr. Phillips has worked in Region 5 since 1976, and has experience in the Clean Water Act, the Hazardous Waste Program, the Underground Storage Tank Program and the Solid Waste Program. He has a bachelor's and a master's degrees from the University of New Mexico in Architecture. Mr. Phillips has been active in the development of risk based decision making tools such as the American Society for Testing and Materials' (ASTM) risk-based corrective action (RBCA) standards. He also regularly represents the Region on issues related to the redevelopment of brownfields properties.

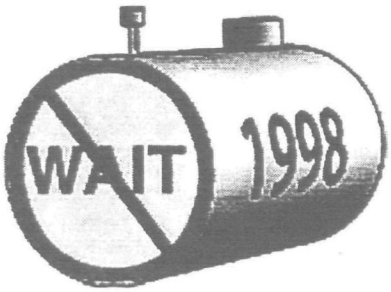
MR. WILLIAM C. TRUMBULL

Bill Trumbull is the Assistant Commissioner in the Chicago Department of Environment responsible for the city's Brownfields Initiative. Prior to working for the city, he was a regulatory issues manager in the Environmental, Health and Safety Department of Amoco Corporation, focusing on petroleum transportation issues. A highlight of this effort was working with the U.S. Coast Guard to implement regulations under the Oil Pollution Act of 1990 to protect our shores from catastrophic oil spills. He began a career in the petroleum industry as an exploration geologist searching for oil and gas in the eastern Gulf of Mexico. Mr. Trumbull has a Bachelor of Science degree in geological sciences from Bradley University, and a Master of Science degree in marine sciences from the University of North Carolina.

DOCUMENTS THAT SUPPORT PANEL 1M: SOLVE THE RBCA PUZZLE

U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Underground Storage Tanks



Our Goal: Good Tank Management is Common Business Practice

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URL: http://www.epa.gov/OUST/index.htm

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EPA's Office of Underground Storage Tanks is "on the-Web"...

Come to OUST's Home Page on the World Wide Web. Our Internet address is:

http://www.epa.gov/OUST/

The OUST Home Page can help you:

- Find answers to frequently asked questions
- Discover what's new at OUST
- Access publications about USTs...read them online, download them, or order copies
- Explore the compliance requirements for meeting the 1998 deadline
- Cover the latest information on cleaning up UST releases, from riskbased decision-making to brownfields to pay-for-performance cleanup agreements
- Check on private sector activities
- Refer to federal UST laws and regulations
- Get information on EPA Regional UST offices and state, Local, and Tribal Government programs

There's much more on OUST's Home Page. See the back of this sheet for a view of the home Page...then come explore our Web site!

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(1N) A National Vision of Public Health at Brownfields Properties
Thursday, September 4, 1997
8:00 a.m. - 10:00 a.m.

Description: Come discuss a public health approach to the Brownfields Redevelopment Initiative. Representatives of public health organizations will discuss their perspectives on brownfields and health issues.

Location: Room 2218

Speakers and Affiliation:

Dr. Barry Johnson (Moderator)	U.S. Public Health Service
Ms. Ilisa M. Halpern	American Public Health Association
Dr. Robert R. Jacobs	University of Alabama
Ms. Martha R. Walters	City of San Francisco, California

DR. BARRY JOHNSON

Dr. Johnson serves as the assistant administrator of the Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Public Health Service, Atlanta, Georgia. ATSDR is one of the 8 agencies that constitute the Public Health Service. The Agency's mission is to prevent or mitigate adverse human health effects as a consequence of exposure to hazardous substances in the environment. As assistant administrator, Dr. Johnson is responsible for the Agency's programs and overall direction. He holds the rank of assistant surgeon general in the Public Health Service. Prior to assuming his current position in 1986, he was director of the Division of Biomedical and Behavioral Science at the National Institute for Occupational Safety and Health (NIOSH), located in Cincinnati, Ohio. His NIOSH responsibilities included research programs in the areas of toxicology, ergonomics, physical agents, and occupational stress.

Dr. Johnson's professional contributions have been in the areas of neurotoxicology, ergonomics, environmental toxicology, and environmental policy. He is a member of the editorial boards of *Archives of Environmental Health, NeuroToxicology*, *Toxicology and Industrial Health*, *Contaminated Soils*, and *Journal of Clean Technology and Environmental Sciences*. He has co-edited four books concerning neurotoxicology and environmental health. Dr. Johnson is a member of the Governing Council for the Society of Occupational and Environmental Health and is a consultant to the World Health Organization on neurotoxicology and environmental science. He received his doctorate in biomedical engineering from Iowa State University. He is the recipient of various medals for Distinguished Service, Meritorious Service, Outstanding Service, and Commendation. He is currently working on a book about public health and hazardous waste.

MS. ILISA M. HALPERN

[Biography was not available at time of printing. Please refer to conference addendum.]

DR. ROBERT R. JACOBS

[Biography was not available at time of printing. Please refer to conference addendum.]

MS. MARTHA R. WALTERS

[Biography was not available at time of printing. Please refer to conference addendum.]

DOCUMENTS THAT SUPPORT PANEL 1N: A NATIONAL VISION OF PUBLIC HEALTH AT BROWNFIELDS PROPERTIES

A FEDERAL PUBLIC HEALTH PERSPECTIVE ON BROWNFIELDS. Barry L. Johnson, Ph.D., Assistant Surgeon General, Assistant Administrator, Agency for Toxic Substances and Disease Registry, Atlanta, Georgia 30333.

Uncontrolled hazardous waste sites in general represent a threat to human health, according to over a decade of data collected by the Agency for Toxic Substances and Disease Registry (ATSDR). The degree of hazard varies according to each site's environmental conditions, and therefore each site must be evaluated on its individual characteristics. As developed and practiced by ATSDR and state health departments, the public health assessment of hazardous waste sites effectively joins environmental and human health evaluations of sites. Moreover, experience in working with communities impacted by hazardous waste sites shows the importance of community involvement in matters of site assessment, remediation, and monitoring. Local health departments are essential resources to communities, providing services that include prevention of infectious diseases to environmental health inspections. Local public health officials are uniquely positioned to provide health assessments of brownfield sites and coordinate local community involvement. There is already a small database which is based on public health experience that identifies local health departments as essential partners in Brownfields actions and decisions. Instances will be described for which brownfield-like community actions occurred in the absence of local public health involvement. Some such examples ultimately required a public health response when hazardous substances were subsequently found to present a threat to community health. From a federal public health perspective, brownfield programs should engage local health departments in decision-making on matters of site characterization, remediation, risk communication, and monitoring. A plan that incorporates federal, state, and local health agencies to assure adequate training, education, and resources for local health departments will be described.