

Center for Hazardous Substances in Urban Environments

Second Annual Progress Report

Reporting Period: October 1, 2002 to September 30, 2003

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Institutions

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University of Maryland
Morgan State University
University of Connecticut
New Jersey Institute of Technology

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MOTIVATION AND MISSION

The Center for Hazardous Substances in Urban Environments (CHSUE) completed its second year of existence under EPA's Hazardous Substances Research Centers program (October 1, 2002 to September 30, 2003). The CHSUE is a cooperative activity between Johns Hopkins University (lead institution), University of Maryland, Morgan State University, University of Connecticut, and New Jersey Institute of Technology and covers EPA Regions 1, 2, and 3. About 80 percent of the U.S. population live in metropolitan areas. These urban residents face a number of pressing environmental problems including exposure to toxic chemicals from contaminated sites, landfills, incinerators, abandoned industrial sites (Brownfields), industrial releases, lead, and pesticide use. In this context, EPA Regions 1, 2, and 3 have identified "Urban Livability" as a strategic priority. Focusing on the upper mid-Atlantic to the Northeast, the mission of the CHSUE is two-fold: (1) to promote a better understanding of physical, chemical, and biological processes for detecting, assessing, and managing risks associated with the use and disposal of hazardous substances in urban environments and (2) to disseminate the results of the research and provide technical expertise to various stakeholders including community groups, municipal officials, regulators, academia, and industry.

RESEARCH PROGRAM

Through a combination of laboratory- and field-scale research, the projects for the first two years of the CHSUE are addressing contaminants and sources that are known to be prevalent in urban environments. These include gas and particulate emissions of mercury, other toxic metals, and organic compounds from contaminated sites and hazardous waste incinerators; chromium, arsenic, nickel, zinc, and cadmium in waters and soils; and chlorinated solvents in waste site gases, soils, sediments, and groundwaters. The progress with the CHSUE's Research program is described in this section. The initial research projects are two-year projects with a start date of October 1, 2001 and end date of September 30, 2003. The CHSUE solicited new proposals in Spring 2003, and a set of new research projects will begin on October 1, 2003. The new projects are discussed in a subsequent section.

Initial Two-Year Research Projects and Participants

Risks to humans from toxic materials in urban environments come from contaminated groundwater and airborne particles and from direct or indirect exposure to contaminated soils. Several of the initial two-year research projects within this Center are aimed at better quantifying the sources and cycling of toxicants and exposure pathways. Improvements in characterizing the sources and pathways will, in turn, make it possible to determine whether exposure levels have been or will be high enough to cause adverse health effects. Improved exposure assessment can be used to determine priorities for risk management and for determining appropriate clean-up levels for contaminated sites.

Once the risks of exposure from urban sites are quantified, risk management will be implemented to prevent or control the impact of toxic materials on human health and ecological systems. Risk management decisions generally consider the technical feasibility of treatment methods along with societal values and economics. Some of the research projects that address

exposure pathways also provide information that can be used to assess the effectiveness of natural attenuation as a means to reduce risks at contaminated sites. One research project is developing an innovative treatment method for halogenated solvents in vapor waste streams.

Participants in the Research Program

The interdisciplinary and multimedia nature of urban environmental problems demand a diverse array of scientific talent and facilities. The affiliation and expertise of each Principal Investigator for the initial research program are detailed below:

Johns Hopkins University, Baltimore, Maryland (Lead Institution). Faculty from the Departments of Geography and Environmental Engineering (DoGEE), Mechanical Engineering (ME), and Chemistry at the Johns Hopkins University (JHU) are participating in the initial research projects:

Director: Edward Bower (DoGEE) (environ. engr., bioremediation, and engr. microbiol.)
Assoc. Director: Hedy Alavi (DoGEE) (environ. engr., haz. waste and solid waste management)
William Ball (DoGEE) (environmental engineering, contaminant fate and transport)
Howard Fairbrother (Chemistry) (surface spectroscopy and catalysis, and corrosion proc.)
Charles Meneveau (ME) (turbulence modeling, large-eddy simulation)
Charles O'Melia (DoGEE) (environmental engineering, colloid chemistry)
Marc Parlange (DoGEE) (environmental fluid mechanics)
A. Lynn Roberts (DoGEE) (environ. chem., zero-valent metals/contaminant reactions)
Alan Stone (DoGEE) (environmental inorganic chemistry)

University of Maryland. Faculty from the Center for Environmental Science, Chesapeake Biological Laboratory (CBL) (Solomons, MD) and the Department of Chemistry (College Park, MD) at the University of Maryland (UM) are participating in the initial research projects:

Joel Baker (CBL) (transport and fate of organic compounds in environmental media)
Robert Mason (CBL) (transport and fate of mercury in environmental media)
John Ondov (Chemistry) (movement and chemistry of aerosol particles)

Morgan State University, Baltimore, Maryland. The following three faculty from the School of Engineering at Morgan State University (MSU) are participating in an initial research project:

Guangming Chen (Industrial) (risk assessment, experimental design and statistics)
G.B. Oguntimein (Civil) (chemical engr., hazardous waste management, bioremediation)
Sedley Williams (Civil) (soil chemistry, water quality analysis, environ. assessment, GIS)

University of Connecticut, Storrs, Connecticut. Faculty from the Department of Civil and Environmental Engineering and Department of Chemical Engineering at the University of Connecticut (UConn) are participating in the initial research projects:

Joe Helble (Chem.E.) (air pollutants from combustion processes)
Allison MacKay (Environ. Engr.) (environ. organic chemistry, contaminant hydrology)

Barth Smets (Environ. Engr.) (contaminant biotransformations, microbial ecology)

Initial Research Projects

Seven research projects (RP) completed their second year of activity within the CHSUE. The title, list of collaborators, and brief summary of the goals and results for each RP are given below. An annual report summary for each funded project is attached in Appendix A to provide more details about the progress and future activities of each project (through no-cost extensions or continuation in funding).

- RP #1 and RP #2 are addressing potential exposure pathways from airborne particles.

RP#1. The Fate and Potential Bioavailability of Airborne Urban Contaminants. Robert Mason (UM), Joel Baker (UM), and John Ondov (UM). The goal of this project is to improve our knowledge of chemical properties of atmospheric particles. The effort will evaluate the importance of coarse particles entrained to the atmosphere from hazardous waste and Brownfields sites as a source of contaminants to surrounding waters, and to humans via inhalation. This project is quantifying the sources and cycling of airborne contaminants to better characterize sources, pathways, and bioavailability of these contaminants. Particles/aerosols are collected using an ultra high volume sampler (coupled to Supersite program). The particles contain elevated concentrations of Cd, Zn, Sb, and Pb with occasional peaks of Se and V. The relative abundances of these elements and wind directions suggest that these samples were influenced by the Baltimore municipal incinerator and Gould Street power plant. The particles/aerosols are currently being analyzed for Hg to estimate Hg emissions from these sources. The analytical method distinguishes elemental Hg (Hg^0) from reactive gaseous mercury (termed RGHg). The homologue distribution of PAHs on the collected particles will be used to estimate the size-distribution of diesel-derived soot and to further resolve primary and secondary sources of the various nitro-PAHs congeners in the Baltimore, MD atmosphere.

RP#2. Measurements and Large Eddy Simulations of Plume Dispersion in an Urban Boundary Layer. Marc Parlange (JHU), Charles Meneveau (JHU), Joseph Helble (UConn), and John Ondov (UM). The goal of this project is to determine how spatial variability of surface heat fluxes and topography, land-water contrasts, drainage flows at night, and weather patterns influence atmospheric particle transport. A combination of measurements and models are being used to describe the transport of aerosols in an urban setting. Regional-scale atmospheric turbulence is modeled by Large Eddy Simulation (LES). The LES modeling results for airflow around a representative building shape confirm that physically realistic flow patterns are obtained. The LES has permitted realistic high-resolution simulations of Atmospheric Boundary Layer (ABL) flow over heterogeneous surfaces. A parameterization for heterogeneous surfaces has been formulated to allow transport models with coarse resolutions to correctly parameterize the effect of sub-grid scale variations in surface roughness. The capabilities of the JHU lidar have been improved so that the features of the LES simulations (e.g., ABL entrainment) can be assessed along with measurement of aerosols transport patterns. Lidar aerosol profiles were measured during the Canadian forest fire event of July 7,

2002. These data confirm that the JHU lidar can be used to measure the transport patterns of aerosols and help validate the LES simulations. Future efforts will test the predictions of flow around building shapes with available data, and generalize to the case of several buildings to approach the level of complexity typically found in urban environments. The field data collected at the eastern Baltimore site will also be analyzed to identify Baltimore City and long distance sources of aerosols and their movement from point sensors and lidar measurements. Parallel work at UConn is understanding particle distribution functions and the particle-to-particle variations within that distribution which are important for determining potential health effects of urban aerosols. Ambient particles were collected using a Berner type low-pressure impactor. The log normal probability density functions of fractal dimension were generated. The data analysis will be completed in the coming year.

- RP #3 and RP #4 are addressing transport and fate issues for metal and organic contaminants in the subsurface in order to provide input on exposure pathways from contaminated groundwaters and soils. The research also involves reaction processes that are important in natural attenuation of contaminants. Therefore, these two projects also contribute to risk management issues.

RP#3. Geochemistry, Biochemistry, and Surface/Groundwater Interactions for As, Cr, Ni, Zn, and Cd with Applications to Contaminated Waterfronts. Allison MacKay (UConn) and Barth Smets (UConn). Many industrial and urban sites with subsurface contamination are characterized by shallow aquifers that discharge to nearby surface water bodies. The objectives of this research project are to identify and assess the relative importance of the complex, and potentially antagonistic, microbial and chemical processes that govern the retardation and migration of metals, specifically Cd, Zn, Ni, As, and Cr, from a reduced aquifer zone through the groundwater/surface water interface (GSI) into an adjacent surface water body. Field studies are being conducted at the former Auburn Road Landfill in Londonderry, NH. Pools of arsenic that would be most easily released back to the pore waters for discharge to a brook are located in the shallowest sediments. The field measurements have linked the sequestration of arsenic in the GSI to iron oxide formation in the Cohas Brook sediments. Laboratory studies with Cohas Brook sediments reveal that iron oxidation is observed when cell extracts from core solids were introduced into special microcosms with low, diffusion-limited concentrations of oxygen and ferrous iron. The estimated numbers of iron-oxidizing bacteria per g of soil decreased with depth in Cohas Brook sediments and were most abundant in sediments with high iron oxide contents. Future efforts will determine the key chemical and biological processes that control arsenic transport across the GSI using high resolution patterns of pore water chemistry and solid precipitates observed at Cohas Brook.

RP#4. Co-Contaminant Effects on Risk Assessment and Remediation Activities Involving Urban Sediments and Soils. William Ball (JHU) and Edward Bouwer (JHU). This project focuses on organic contaminant mixtures, with emphasis on improved approaches for modeling the combined effects of both sorption and biodegradation. Modeling has been conducted in order to better understand the role of nonlinear and nonequilibrium

adsorption on long-term desorption and biodegradation. Good fits of short-term rate data were possible in all model cases, but models based on erroneous isotherms (as based on uptake experiments characterized by premature termination or insufficient range of concentration) were shown to cause severe errors in the prediction of long-term desorptive mass fluxes and rates of biodegradation. Results also illustrated how short-term sorption experiments can seem to be at equilibrium, yet lead to adsorption/desorption results that would be misinterpreted as “hysteretic,” despite the intrinsic reversibility of the system. Some initial modeling was also conducted to illustrate how the desorptive fluxes could be integrated with fluid-phase biodegradation rates. Future modeling efforts will apply numerical models to evaluate the sensitivity of overall degradation rates to the presence of co-contaminants, with consideration of adsorption, diffusion, and biodegradation effects. Laboratory experiments were conducted with selected Baltimore harbor sediments to characterize their carbon content and type as well as their sorption behavior with respect to a probe nonpolar organic chemical (phenanthrene) in order to begin to assess the potential importance of sorption nonlinearity and competition in urban sediments. A two point test of phenanthrene sorption using sediments with a high fraction of soot carbon showed $\log K_{oc}$ slightly higher than would be expected for “normal” sediment organic matter. Additional studies with other sediments will be conducted to more fully investigate the potential importance of sorption nonlinearity and sorption competition.

- RP #5 is improving the method used for measuring the speciation of chromium so that we can more accurately assess its toxicity in all environmental media. The improved chromium speciation procedure will be used in subsequent chromium research within the Center.

RP#5. Speciation of Chromium in Environmental Media Using Capillary Electrophoresis with Multiple Wavelength UV/Visible Detection. Alan Stone (JHU) and Charles O’Melia (JHU). With chromium, it is widely accepted that the oxidation state is important for appraising extents of contamination, predicting future contaminant migration behavior, and devising mitigation schemes. The diphenylcarbazide test for distinguishing Cr(VI) from Cr(III) is most common, but is subject to interference problems. A capillary electrophoresis (CE) method is being developed for identifying and quantifying Cr(VI) and Cr(III) species. Capillary electrophoresis allows analytical separation based upon differences in the charge and hydrodynamic radii of analyte complexes. The results show that Cr(III)-containing low molecular-weight complexes can be efficiently resolved from one another and from the Cr(VI) species HCrO_4^- and CrO_4^{2-} . The detection limit is around 1 μM or 50 ppb. Aqueous samples collected from the field must be stored for hours or for days before analysis can be performed. Cr(III) complexes were not adversely affected by up to ten days of storage. With the CE method, it is possible to calibrate the electrophoretic mobility in terms of the molecular charge of the analyte. Consequently, the molecular charge of unknown peaks is readily obtained by CE. Future work will focus on natural organic matter (NOM)-rich surface waters to determine possible matrix effects from the presence of NOM.

- RP #6 is focusing on remediation of chlorinated solvents in vapors through an innovative technology that provides greater permanent risk reduction at potentially lower cost.

RP#6. Zero-Valent Metal Treatment of Halogenated Vapor-Phase Contaminants in SVE Offgas. A. Lynn Roberts (JHU) and Howard Fairbrother (JHU). Zero-valent metal technology has emerged as a highly promising approach for in situ treatment of groundwater contaminants, but its applicability to vapor phase contaminants is virtually unexplored. This research is exploring the use of zero-valent metals and biometallic reductants for treating vapor phase organohalides found in offgas from soil vapor extraction systems. The rates of reaction of cis-1,2-dichloroethylene (cis-DCE) with Ni/Fe, Co/Fe, Cu/Fe, and Fe alone were compared in batch studies. Among the three bimetallic systems, the reaction rates with Ni/Fe were significantly faster. Additional batch reactors were used to investigate the effect of nickel loading on the observed rates of reaction. At low Ni loadings, the rate of cis-DCE removal increases quickly with Ni concentration, but at higher Ni loadings the rate increases more slowly. Higher Ni loadings were also found to favor the generation of more fully dechlorinated products, and to result in a lower yield of vinyl chloride. Cis-DCE was introduced as a vapor into columns containing Fe or Ni/Fe to test the applicability to the treatment of gas phase contaminants. The Ni/Fe columns initially performed much better than the Fe columns, with 100% cis-DCE removal initially in the former and between 0 and 60% in the latter. Over time, the performance of all of the columns deteriorated. Eventually the performance of the Ni/Fe columns deteriorated to a level comparable to that of the Fe columns. The initial reactivity could largely be regenerated by passing a 1 M HCl solution through the columns, then rinsing them with deionized water.

- RP #7 is surveying selected Brownfield sites in Baltimore and developing a GIS inventory of environmental data and activities at these sites.

RP#7. Environmental Assessment and GIS System Development of Brownfield Sites in Baltimore. Guangming Chen (MSU), Gbekeloluwa Oguntimein (MSU), and Sedley Williams (MSU). The goals of this research project are (1) to work in collaboration with city, state, and federal partners to collect, analyze, and document the data on the locations, usage history, risk factors, and potential for remediation of selected existing Brownfield sites in the Park Heights community within Baltimore, (2) to develop a comprehensive Geographic Information System (GIS) inventory of environmental activities at these sites, and (3) conduct outreach activities that will provide community service, environmental education, and information through the creation of partnership with stakeholders impacted by Brownfields. The project team has completed environmental site assessments for three Brownfields sites in the area and completed an economic assessment of the community neighborhood. This information is useful for the baseline study of strategic planning for Brownfields redevelopment. A survey of auto body shops located in the Park Heights Reisterstown corridor was also completed. The survey information helped determine the occupational, safety practices, and environmental impact of the auto body shop operations. A GIS mapping of the Park Heights community using ArcGIS 8 was accomplished for the Brownfields sites and auto body shops. A one-day environmental education program was conducted at the Baltimore City High School.

Projects Selected for Funding in Year 3

The CHSUE issued a request for proposals in April 2003 for Years 3 and 4 funding within the Center's research program. Nine proposals were received from investigators representing each of the five partnering institutions. Written reviews of the nine proposals were prepared by members of our Scientific Advisory Committee. The SAC met on June 16, 2003 to discuss each proposal, update individual written reviews, develop consensus reviews, and make funding recommendations. The projects selected for funding with a start date of October 1, 2003 are listed below:

Transport of Hazardous Substances Between Brownfields and the Surrounding Urban Atmosphere. Baker (UMd), Mason (UMd), and Ondov (UMd).

Co-Contaminant Effects on Risk Assessment and Remediation Activities Involving Urban Sediments and Soils: Phase II. Ball (JHU), Bouwer (JHU), and Mackay (UConn)

Seasonal Controls of Arsenic Transport Across the Groundwater-Surface Water Interface at a Closed Landfill Site. MacKay (UConn), Smets (UConn), and Fairbrother (JHU)

Large Eddy Simulation of Dispersion in Urban Areas. Parlange (JHU) and Meneveau (JHU)

Solubilization of Particulate-Bound Ni(II) and Zn(II). Stone (JHU)

The SAC recommended funding a project that will ascertain the most pressing urban environmental problems in EPA Regions 1, 2, and 3. The Directors of the CHSUE have asked the researchers at Morgan State University to prepare a one-year study on the most pressing urban environmental problems in the Northeast. This activity may culminate with a regional workshop.

OUTREACH PROGRAM

The Center for Hazardous Substances in Urban Environments (CHSUE) Outreach Program is a collaborative effort between The Johns Hopkins University (lead institution), University of Connecticut (representing EPA Region 1), New Jersey Institute of Technology (representing EPA Region 2), and University of Maryland and Morgan State University (representing EPA Regions 3). The goal of the Outreach Program is to transfer knowledge and technology resulting from the research projects and expertise of the principal investigators and technical staff to communities with environmental contamination throughout the regions.

The Outreach activities being conducted by the CHSUE are distributed among the partnering institutions to more appropriately respond to the local needs across the large geographical area represented by EPA Regions 1, 2, and 3. The interdisciplinary and multimedia nature of Brownfields problems demand a diverse array of scientific talent and facilities. The affiliations and expertise of the participants in the Outreach Program are detailed below:

Johns Hopkins University, Baltimore, Maryland (Lead Institution) (EPA Region 3)

Director: Edward Bower (environmental engineering, bioremediation, and engineering microbiology)

Assoc. Director: Hedy Alavi (environmental engineering, hazardous waste and solid waste management)

Ralph Lightner (environmental restoration and waste management)

Erik Rifkin (human health and ecological risk assessment, risk communication)

University of Maryland School of Nursing, Baltimore, Maryland (EPA Region 3)

Barbara Sattler (environmental health nursing)

Robyn Gildea (environmental health nursing)

Morgan State University, Baltimore, Maryland (EPA Region 3)

Gbekeloluwa Oguntimein (chemical engineering, hazardous waste management, bioremediation)

Guangming Chen (risk assessment, experimental design and statistics)

Sedley Williams (soil chemistry, water quality analysis, environ. assessment, GIS)

Bheem Kattel (industrial engineer, occupational ergonomics and safety)

New Jersey Institute of Technology, Newark, NJ (EPA Region 2)

Director: Fred Ellerbush (environmental engineering, hazardous and solid waste management, risk assessment, and outreach)

Director: James Mack (environmental management, site, characterization and remediation)

Executive Director: Daniel Watts (environmental management and chemistry, green manufacturing, and sustainability)

Gerard McKenna (community outreach, characterization methods, technology transfer and training)

University of Connecticut, Storrs, CT (EPA Region 1)

Christopher Perkins (environmental monitoring and assessment, environmental toxicology and risk, risk communication)

Kevin Hood (public health, facilitation, community outreach)

Amine Dahmani (remediation, site assessment, Brownfields policy)

The principal efforts of the Outreach Program include two distinct, but interrelated, components: Technical Outreach Services for Communities (TOSC) and Technical Assistance to Brownfields Communities (TAB). The goal of TOSC is to provide technical assistance and education to communities affected by hazardous waste, and to assist them with the restoration of their environment and neighborhood. The objective of TAB is to assist municipal officials, developers, and community groups with meeting the challenges of sustainable Brownfields

redevelopment by providing education and technical assistance on the application of advanced science and technology.

The outreach activities during the period of October 1, 2002 to September 30, 2003 include 35 projects geographically distributed across EPA Regions 1, 2, and 3 (Table 1). Eighteen projects are allocated under TOSC, and 17 projects are allocated under TAB as shown in Table 1. The most updated information (latest quarter) on current outreach projects appears in tabular format in Appendix B. The tabular format encompasses items under the reporting requirements of the grant. The TOSC and TAB efforts include review of site characterization documents and remedial plans, review of hydrogeological data, workshops on Brownfields legislation and issues and remedial options for waste sites, training in redevelopment of Brownfield sites and former industrial areas, and communicating health effects for contaminants and information on health monitoring. Miscellaneous activities (latest quarter) in the support of the outreach efforts in these regions are presented in Appendix C.

Table 1. Center for Hazardous Substances in Urban Environment Summary of Outreach Projects October 1, 2002 to September 30, 2003			
EPA Region	TOSC	TAB	Total
I	4	5	9
II	8	5	13
III	6	7	13
Total	18	17	35

New Proposal. In September 2003, the CHSUE prepared a proposal to U.S. EPA which described a plan to provide additional Training and Technical Assistance to Brownfields (TTAB). Under training, efforts are proposed to provide knowledge on Brownfields issues to stakeholders through various methods, including class-room style training, workshops, conferences, roundtables, and internet communications. Under technical assistance, efforts are proposed to guide stakeholders through a particular process or help them understand complex Brownfields-related subject matter. Participants at each of the partnering institutions will contribute to the proposed TTAB efforts. In EPA Region 1, collaborators at the University of Connecticut propose the following TTAB projects: a) Ninigret Park (Charleston, RI), b) Mallory Hat Factory (Danbury, CT), c) Regional Growth Partnership (Bridgeport, CT), d) Redevelopment of Contaminated Land (Stamford, CT), and e) Hartford Police Shooting Range

(Rocky Hills, CT). In EPA Region 2, collaborators at the New Jersey Institute of Technology propose the following TTAB projects: a) Area-wide Assessment (Kingston, NY), b) Task Force Training (Lackawanna, NY), c) Institutional Controls Training (Newark, NJ), d) New Jersey Brownfields Development Areas, e) New Jersey School Construction, and f) New York State Department of Housing and Community Renewal. In EPA Region 3, collaborators at the University of Maryland and Johns Hopkins University propose the following TTAB projects: a) Community Leadership Training, b) Community Involvement Training, c) Health Care Provider Training, d) Workshops on Risk Communication, e) Workshops on Economics of Brownfields Cleanup and Redevelopment, and f) Technical Assistance and Technical Document Review. Collaborators at the Morgan State University propose to contribute to TTAB in EPA Region 3 via technical assistance to the Park Heights Reisterstown Road Corridor Coalition Community.

ADVISORY COMMITTEES

The CHSUE benefits from guidance supplied by two external advisory committees. Our Science Advisory Committee (SAC) is comprised of 16 representatives from EPA, industry, government offices and laboratories, and academia (Table 2).

Table 2. Members of the Science Advisory Committee

Name	Representation
Roberts, Paul; Chair	Emeritus Professor, Stanford University
DiCola, Ron	Asst. Director Environmental Affairs, Pfizer, Inc.
Grasso, Domenic	Rosemary Bradford Hewlett Professor and Chair, Smith College
Harris, Reginald	Senior Toxicologist, U.S. EPA Region 3
Inyang, Hilary	Duke Energy Distinguished Professor, The University of North Carolina-Charlotte
Johnson, James, Co-Chair	Dean and Professor, Howard University
Josephs, Jon	Hazardous Substances Liaison, U.S. EPA Region 2
Josephson, Jeff	Special Assistant to the Director, U.S. EPA Region 2
Krammer, Kurt	Environmental Manager, FMC Corporation
Kulujian, Norm	Superfund Coordinator, U.S. EPA Region 3
Linak, William	Chemical Engineer, U.S. EPA National Risk Management Research Laboratory Air Pollution Prevention and Control Division
Lorah, Michelle	Research Hydrologist
MacFarlane, Ian	Branch Manager, EA Engineering, Science, and Technology
Summers, Robert	Director, Waste Management Administration, Maryland Department of the Environment
Willey, Richard	Hydrologist, U.S. EPA Region 1
Yen, Chen	Vice President, Gannett Fleming, Inc.

Prof. Paul Roberts serves as Chair of the SAC. The purpose for the SAC is to assist the CHSUE in evaluating the merit, value, and contribution of research projects and the relevance and importance of individual organizational elements to accomplishing the overall goals of the

Center. Two SAC meetings were held in the second year of the CHSUE. The first SAC meeting was held on October 21-22, 2002 with the purpose of learning about the research program and providing feedback on specific research projects. The second SAC meeting was held on June 16, 2003 with the purpose of reviewing proposals and selecting new research projects for the CHSUE. At both of these meetings, the SAC provided some general advice on the mission and conduct of the CHSUE. A summary of the SAC comments is provided in Appendix D.

Our Outreach Advisory Committee (OAC) is comprised of 11 representatives from EPA, other government offices, industry, and the community (Table 3). The purpose for the OAC is to assist the CHSUE in the development, implementation, and evaluation of education, knowledge transfer, and outreach activities and to identify outreach funding opportunities. The first OAC meeting was held on November 7, 2002. A summary of the presentations and discussions at this OAC meeting appear in Appendix E. An important deliverable from this first OAC meeting is a Vision and Mission statement for the OAC and the Outreach Program (Appendix F). The next OAC meeting will take place on November 14, 2003 at the New Jersey Institute of Technology.

Table 3. Members of the Outreach Advisory Committee

Name	Representation
Burke, Mike	Senior State Liaison Officer, U.S. EPA Region 3
Charles, Larry, Co-Chair	Director and Member, ONE/Chane and National Environmental Justice Advisory Committee
Harris, Elissa	Environmental Equity Coordinator, PA Department of Environmental Protection
Johnson, Stacey	Hartford City Program Manager, U.S. EPA Region 1 Urban Environmental Initiative
Murphy, Jim	RAA, U.S. EPA Region 1
Pitruzzello, Vincent	Chief, Program Support Branch, Emergency and Remedial Response Division, U.S. EPA Region 2
Rosso, Mary	Delegate, Maryland House of Delegates
Shaw, Judith, Co-Chair	Administrator, Brownfields Office, New Jersey Department of Environmental Protection
Whitman, Ira	President, Whitman Companies, Inc., East Brunswick, New Jersey
Wilson, Shari	Director of Policy Management, Maryland Department of the Environment
Yates, Harold	Senior Community Involvement Coordinator, U.S. EPA Region 3

OTHER ACTIVITIES

In addition to the Research and Outreach programs, the CHSUE participated in several other noteworthy activities in the past year.

TOSC/TAB/EPA Conference, March 4-6, 2003. The CHSUE hosted the annual TOSC/TAB/EPA conference at the Radisson Hotel in Baltimore, MD. The theme for this conference was Planning, Collaboration, and Sustainability. The two and half day conference covered sessions on self-sufficiency, collaborative partnerships including connecting with health

care providers, community visioning, multimedia information distribution, and a poster session to highlight recent accomplishments by all of the centers. The conference included two panels with speakers. One panel encompassed community, legislative, and developer's viewpoints (Larry Charles, Director of ONE/Chane and member of NEJAC, Mary Rosso, former Maryland State Delegate, and Josh Neiman, Struever Brothers, Eccles, and Rouse, Inc.). The second panel included presentations from several directors at EPA Headquarters (Steve Lingle, Director of Environmental Engineering Research Division for National Center for Environmental Research; Bob Springer, Director of Office of Solid Waste; Michael Cook, Director of Office of Emergency and Remedial Response; and Linda Garzynski, Director of Office of Brownfields Cleanup and Redevelopment). Johns Hopkins University also hosted a dinner at the Hopkins Club featuring a keynote address by Lois Gibbs, Executive Director of the Center for Health, Environment, and Justice. Pictures taken during the conference can be viewed at our website: www.jhu.edu/hsrc/2003toscpics.htm.

International Conference on PAH and BTEX Contamination. The CHSUE and NSF Industry/University Cooperative Research Program co-sponsored an International Conference on PAH and BTEX Contamination on June 2, 2003 at Johns Hopkins University. This conference provided a forum for interaction among researchers working on the topics of sorption and bioavailability. The speakers and titles of their presentations for this one-day conference are listed below:

Estimation of Anaerobic Biodegradation Rate Constants from Field Data at Six MGP Sites (G. Lewandowski, NJIT)

Bioavailability of Aromatic Hydrocarbons in Saturated Porous Media: The Effects of Contaminant Aging and Mass Transfer (E. Bouwer, Johns Hopkins)

Effects of Sorption on the Bioavailability of PAHs in Soils and the Formation of Bound Residues (R. Gourdon, INSA-Lyon)

Sorption of Hydrophobic Organic Chemicals by Soils, Sediments, and Rocks—The Role of Thermally Altered Carbon (W. Ball, Johns Hopkins)

Fate of Polycyclic Aromatic Hydrocarbons in Chalky Subsoil: Sorption and Biodegradation (R. Bayard, INSA-Lyon)

Chemical and Physical Controls on PAH Exposure to Estuarine Invertebrates and Epi-Benthic Fish (J. Baker, U. Maryland)

Diffusion as a Source of Confusion (I. Sabbah, Johns Hopkins)

Modeling DNAPL Dissolution and Chemotaxis (M. Hilpert, Johns Hopkins)

The above topics provided a blend of basic principles and practical applications. The total attendance numbered close to 30 with representation from government, industry, and academia.

Meeting on Superfund Research. William Ball, Ed Bouwer, Allison MacKay, and Barth Smets participated in the ORD/HSRC/OSWER Meeting on Superfund Research held August 26-27 in Cincinnati, OH. The purpose for this meeting was to promote better communication and interaction between EPA researchers and the research being conducted by the HSRCs. The following two presentations were given by the CHSUE members at this meeting:

Biogeochemical Characterization of the Ground Water/Surface Water Interface; Potential Effects on the Fate of Arsenic (Allison MacKay (speaker) and Barth Smets)

Co-Contaminant Effects on Risk Assessment and Remediation Activities in Urban Settings (William Ball (speaker) and Ed Bouwer)

Other Meetings and Seminars. Barbara Sattler (UMd), Robyn Gilden (UMd), Hedy Alavi (JHU), and Ed Bouwer (JHU) participated in the annual Director's meeting in Washington, D.C. on December 2 and 3, 2002. The CHSUE sponsored the following technical seminars at JHU during the past year:

Oct. 4, 2002	Prof. Barbara Sattler School of Nursing University of Maryland	Environmental Health's Interdisciplinary Team: A Focus on the Nursing Profession's Role
Nov. 1, 2002	Elie Bou-Zeid (RP#2)	A Lagrangian Dynamic SGS Model for LES: Applications to Heterogeneous Surfaces and Urban Areas
Nov. 15, 2002	Dr. Isam Sabbah (RP#4)	Diffusion as a Source of Confusion
Nov. 22, 2002	Rich Carbonaro (RP#5)	Cr(III) Oxidation by MnO ₂
Jan. 31, 2003	Dr. Molly McGuire (RP#6)	Surface Characterization of Iron and Bimetallic Reductants
Feb. 7, 2003	Thanh Nguyen (RP#4)	Adsorption of Organic Chemicals to Black Carbon: Method Development
Feb. 14, 2003	Dr. Ted Goldstein (retired chemist from Mobil)	Oil Formation
Apr. 11, 2003	David Cwiertny (RP#6)	Mechanistic Investigations of Granular Iron and Granular Iron-Based Bimetallic Reductants

Conference presentations on individual research projects are detailed in the attached Annual Report Summaries.

Future Internal Workshop for the Research Program. In January 2004, the CHSUE will sponsor an internal workshop at Johns Hopkins University to aid in knowledge transfer within the Research program. The principal investigators for each of the seven research projects will make presentations on their progress and future plans. This workshop will allow the principal investigators to (1) share research progress through presentations which will facilitate integration

of the information in future work, (2) discuss future research directions, (3) discuss the plans for a five Centers meeting, and (4) discuss plans for the next Science Advisory Committee meeting.

KEY PERSONNEL

Professor Edward Bouwer continues to direct the CHSUE. Dr. Hedy Alavi continues his role as Associate Director for the CHSUE. Two new staff members have joined the Johns Hopkins University this past year to assist the CHSUE. Ms. Jocelyn Bauer works part time (40% effort) to manage the budgets and contracts, assist with center communications (e.g., planned newsletter and website information), and assist Drs. Bouwer and Alavi with special projects. Ms. Bauer was formerly with the Sponsored Research Office at JHU and has extensive experience with academic grants management.

Dr. Ralph Lightner joined the staff at Johns Hopkins as an engineering resource person in support of the Outreach Program in Region 3. He provides technical advice, information, and insight to communities, working in close coordination with public health advisors from the University of Maryland School of Nursing. In addition, he works directly with center personnel to make the Outreach Program more accessible and effective within the region. Dr. Lightner is recently retired from the U.S. Department of Energy where he was an Office Director responsible for various environmental restoration and waste management projects directed to the cleanup of the nuclear weapons complex. Ralph has more than a dozen years of experience in dealing with citizen's advisory groups, state, local and national government agencies, and individual concerned citizens. This experience in dealing with a wide spectrum of environmental activities makes him an especially valuable addition to the Center staff.

EXPENDITURES

The Research and Outreach projects are progressing according to schedule. The second year funds have all been appropriated to the research and outreach projects.

QA REQUIREMENTS AND CONTROL OF DATA QUALITY

The Center prepared and submitted a Quality Management Plan in January 2002. Prof. William Ball serves as the QA/QC Manager for the Center. Prof. Ball has been working with the Principal Investigators to ensure that appropriate Quality Assurance Narrative Statements are developed for each research project and maintained in a central file. The quality management philosophy of the CHSUE is that each investigator is responsible for ensuring the quality of collected data, mathematical models, and all related technical analyses, and for ensuring that these data, models, and analyses are presented in such a manner as to convey their quality.

PUBLICATIONS

The CHSUE assisted with preparation of the 2002 Centerpoint issue (Volume 7, Number 1) that describes the Phase-Two HSRC grants. Publications pertinent to each research project are described in the attached Annual Report Summaries (Appendix A).

CENTER INTERNET WEBSITE

www.jhu.edu/hsrc/

Appendix A: Annual Report Summaries for Specific Research Projects

RP#1. The Fate and Potential Bioavailability of Airborne Urban Contaminants. Robert Mason (UM), Joel Baker (UM), and John Ondov (UM).

RP#2. Measurements and Large Eddy Simulations of Plume Dispersion in an Urban Boundary Layer. Marc Parlange (JHU), Charles Meneveau (JHU), Joseph Helble (UConn), and John Ondov (UM).

RP#3. Geochemistry, Biochemistry, and Surface/Groundwater Interactions for As, Cr, Ni, Zn, and Cd with Applications to Contaminated Waterfronts. Allison MacKay (UConn) and Barth Smets (UConn).

RP#4. Co-Contaminant Effects on Risk Assessment and Remediation Activities Involving Urban Sediments and Soils. William Ball (JHU) and Edward Bower (JHU).

RP#5. Speciation of Chromium in Environmental Media Using Capillary Electrophoresis with Multiple Wavelength UV/Visible Detection. Alan Stone (JHU) and Charles O'Melia (JHU).

RP#6. Zero-Valent Metal Treatment of Halogenated Vapor-Phase Contaminants in SVE Offgas. A. Lynn Roberts (JHU) and Howard Fairbrother (JHU).

RP#7. Environmental Assessment and GIS System Development of Brownfield Sites in Baltimore. Guangming Chen (MSU), Gbikeloluwa Oguntimein (MSU), and Sedley Williams (MSU).

Appendix B: Current Outreach Projects

Project/Community Name	<u>Aberjona River /Industri-Plex Superfund site</u>
City	Woburn
State	MA
EPA Region	Region 1
Community Contact	Anthony Imperioso/ Paul Maderios
State Contact	N/A
EPA Contact	<u>Joe Lemay</u>
Institution/Center	ERI/ UConn
Outreach Director/Manager	Christopher Perkins
Project Manager/Coordinator	Christopher Perkins
Allocation (TOSC, TAB)	TOSC
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: The Industri-Plex Superfund site is a 245-acre property located in a dense commercial and industrial area in Woburn, Massachusetts, a city 12 miles north of Boston. The site comprises both commercially developed and undeveloped property. Several ponds and wetland areas that support various fish, wildlife, and vegetation are located on or next to the site. In addition, two streams, including the Aberjona River, cross the property and eventually feed into the Upper Mystic Lakes, a popular recreation area located six miles downstream. EPA is finalizing both ecological and human health risk assessments associated with contamination of the Aberjona River. There is some skepticism from the City and community regarding these assessments.</p> <p>The USEPA Region 1 Administrator has sent a letter requesting that the City of Woburn and community groups make use of ERI under the TOSC/TAB program. EPA has said in conversations with TOSC and city council that health risk appear to be minimal, the council is very concerned that this will raise public concerns and diminish commercial and private property values. The City has requested our help in educating and explaining to concerned citizens the findings in terms of health risk.</p> <p>Activities: TOSC personnel have entered into a subcontract with Tufts University to provide support for the review of the Human Health Risk Assessment for the Aberjona River. Tufts University and TOSC personnel provided a comprehensive review of the human health and ecological risk assessment for the Aberjona River. Two reports were prepared, one each reviewing the human health and ecological assessments. Comments for the ecological risk assessment were submitted to EPA, to be incorporated into the formal comment process.</p> <p>Future Activities Planned: TOSC will continue to act as facilitators between EPA and the City and community groups. We will officially submit the reports and orally present our findings to the City Council during the next quarter. Additionally, we will set up an educational program for the council and public to present the findings in lay terminology, and answer any question regarding our interpretation and review of the assessment.</p>	

Project/Community Name	<u>Ninigret Park</u>
City	Charlestown
State	RI
EPA Region	Region 1
Community Contact	Virginia Wooten
State Contact	N/A
EPA Contact	<u>N/A</u>
Institution/Center	ERI/ UConn
Outreach Director/Manager	Christopher Perkins
Project Manager/Coordinator	Kevin Hood
Allocation (TOSC, TAB)	TAB
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: The town of Charlestown, RI has requested TAB to assist them in understanding the implementation of the remediation plan of a former Naval Air Station located adjacent to Long Island Sound that has been turned over to the town by the Federal government. There are multiple contaminants of concern, including benzene, lead, and free phase gasoline. We will be working with the Ninigret Park Contamination Study Committee.</p> <p>Activities: TAB will bring in some expertise from the Conway School of Landscape Architecture to help the town and community undertake the visioning process for their park. The intention is to work this process and resulting design into their winter practicum. This process will result in a landscape blueprint that the stakeholders can then use to improve the quality of the park and minimize the potential exposure to contamination.</p> <p>We have attended three meetings with the committee to facilitate the follow up contaminant delineation activities.</p> <p>Future Activities Planned: Start the initial visioning process for the site design with the students of the Conway School. TAB will set up a series of meetings where all stakeholders can share their vision for the park and an overall site design concept can evolve.</p>	

Project/Community Name	Newhall Coalition
City	Hamden
State	CT
EPA Region	Region 1
Community Contact	Ann Altman
State Contact	Shannon Wyndish (CT DEP)
EPA Contact	<u>Jim Murphy</u>
Institution/Center	ERI/ UConn
Outreach Director/Manager	Christopher Perkins
Project Manager/Coordinator	Kevin Hood
Allocation (TOSC, TAB)	TOSC
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: The Newhall Coalition is a community group that represents a minority neighborhood that was in large part built over an industrial and municipal landfill. The Newhall Street neighborhood was built on a site where, for years, the Olin/Winchester chemical factory dumped ash, batteries, and chemicals. Polycyclic aromatic hydrocarbons, lead, and other heavy metals have been found in the soil of an adjacent middle school and on the properties of homes in the neighborhood. In February the CTDEP announced that an agreement has been reached to provide for the investigation and cleanup of contamination of the Newhall Street neighborhood</p> <p>The primary environmental issues are health and property concerns as a result of the landfill and any remedial activities that will occur. One key issue as it relates to the remediation plan, is the relocation of excavated landfill to the adjacent middle school.</p> <p>Activities: During this period, TOSC has been acting as a facilitator between the CTDEP and the Newhall Coalition regarding the remediation plan. We have attended 12 meetings during this quarter regarding this program. CTDEP has decided to go with an outside contractor to act as mediator for this program. TOSC will still provide technical support to the Newhall coalition.</p> <p>Future Activities Planned: TOSC will continue to act as facilitators between the Coalition and the CTDEP. TOSC representatives will attend the community meetings, both Newhall Coalition and the CTDEP led informational meetings. We will be reviewing future site assessment and remediation plan documents during the next quarter.</p>	

Project/Community Name	Mallory Hat Factory
City	Danbury
State	CT
EPA Region	Region 1
Community Contact	Jack Kozuchowski
State Contact	N/A
EPA Contact	<u>Jim Murphy</u>
Institution/Center	ERI/ UConn
Outreach Director/Manager	Christopher Perkins
Project Manager/Coordinator	Kevin Hood
Allocation (TOSC, TAB)	TAB
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: Danbury historically was the center of the New England hat making industry over the last 150 years. It is known that mercury was extensively used in the production of felt for hats and mercury was released to the Still River and groundwater in the area, and still present in sediments. Last summer, a professor from a University in Connecticut released information to the press regarding an independent study that he conducted on mercury contamination in Danbury. This has raised concerns in the community and forced the City of Danbury Health Department to respond to these concerns. This site is part of a Brownfields Assessment Pilot and the City is actively seeking redevelopment. The preliminary assessments completed (Phase I and II), if accurate, could minimize the ability to develop this property. This professor has also just announced his intentions to perform his own risk assessment study which will likely result in additional concerns for the community.</p> <p>Activities: We have recommended a baseline and periodic atmospheric mercury monitoring plan prior to the start of this remediation process to alleviate concerns regarding transpiration of mercury from the leaves. We worked with the City to design a pilot/ baseline monitoring program which will help alleviate some concerns regarding the potential for mercury to be emitted to the atmosphere during the transpiration process. In addition we are in the process of reviewing their quality assurance project plan (QAPP) and providing recommendations for improvement.</p> <p>Future Activities Planned: TAB will continue to act as facilitators between the City, community, and CTDEP. We will continue to work with the City and the community to assess data gaps and act as third part reviewers. The community and town have tabled the risk assessment, but this may be required in the future.</p>	

Project/Community Name	Massachusetts Military Reservation (MMR)
City	Cape Cod (several towns)
State	MA
EPA Region	Region 1
Community Contact	Richard Jugus and other community members of the Impact Area Review Team
State Contact	Len Pinaud (MA DEP)
EPA Contact	<u>Jim Murphy</u>
Institution/Center	ERI/ UConn
Outreach Director/Manager	Christopher Perkins
Project Manager/Coordinator	Kevin Hood
Allocation (TOSC, TAB)	TOSC
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: The primary environmental issue is the large-scale contamination of the Massachusetts Military Reservation with explosive and other contaminants and the migration of these contaminants into the surrounding residential areas via 19 individual contaminant plumes. ERI personnel and a subcontractor are technical representatives (TOSC) for the community as part of the Impact Area Review Team (IART).</p> <p>ERI TOSC personnel attend monthly IART community meetings on Cape Cod as well as Technical Team meetings. The TOSC members also review any appropriate documents generated during this study and provide technical input on behalf of the community.</p> <p>Activities: ERI TOSC personnel attended monthly IART community meetings on Cape Cod as well as several weekly Technical Team meetings during this reporting period. A total of 8 meetings have been attended by ERI personnel this quarter. We have met with the community members before the IART meeting to discuss key issues that need to be raised during the general meeting. The key issue that has continued to be raised during this quarter is perchlorate contamination and the fluctuating standards that are being proposed by EPA and the military. TOSC staff met with the military and their consultants during this quarter to discuss progress and future directions on their groundwater modeling.</p> <p>Future Activities Planned: Will continue to review documents as they become available. TOSC staff will continue to attend monthly IART meetings and weekly Technical Team meetings.</p>	

Project/Community Name	Regional Growth Partnership
City	New Haven
State	CT
EPA Region	Region 1
Community Contact	New Haven Regional Growth Partnership
State Contact	N/A
EPA Contact	<u>Jim Murphy</u>
Institution/Center	ERI/ UConn
Outreach Director/Manager	Christopher Perkins
Project Manager/Coordinator	Kevin Hood
Allocation (TOSC, TAB)	TAB
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: The Regional Growth Partnership (RGP) is a Brownfields Pilot recipient and also lead agency for a smart growth project that involves the Quinnipiac River Conservation and Development Corridor. A workshop was presented on Brownfields legislation and its impact on the liability framework and tools for managing liability. A follow-up to this workshop is planned for the summer to help the Board gain a better understanding of the decision-making process for acquisition of contaminated properties. It is planned that this session and research will help the Board create a model process to be used in its deliberations along the Corridor.</p> <p>Activities: There have been no new activities on this program over the last quarter..</p> <p>Future Activities Planned: TOSC/TAB will be closing this program during the next quarter.</p>	

Project/Community Name	Abbott School Districts
City	Statewide
State	NJ
EPA Region	Region 2
Community Contact	N/A
State Contact	Paul Hamilton, School Construction Corporation, NJEDA
EPA Contact	N/A
Institution/Center	Northeast Hazardous Substance Research Center – New Jersey Institute of Technology
Outreach Director/Manager	Fred Ellerbusch
Project Manager/Coordinator	Fred Ellerbusch & Jim Mack
Allocation (TOSC, TAB)	TAB
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: The New Jersey Supreme Court ruled in <i>Abbott v. Burke</i> that children in urban communities are entitled to a "thorough and efficient" education under the State Constitution. The ruling includes educational standards and quality teaching, health services, extracurricular programs AND safe and adequate school buildings. This last item has been translated into a multi-billion dollar upgrade program for school districts that have been identified as needing help to correct deficiencies. The majority of these districts are urban and because of scarce land availability, new school sites involve Brownfields.</p> <p>Activities: NHSRC continued extensive engagement with the School Construction Corporation, NJDEP, and NJDCA throughout the quarter. During the quarter we completed a site assessment using the Triad Approach project for the Dudley Avenue School site in Camden and demonstrated that accelerated characterization of the property can be achieved. A presentation and briefing document were prepared summarizing the Development of the Conceptual Site Model involved stakeholders leading to a Dynamic Work-plan and Field activities as well as results and conclusions. The executive summary revealed that the use of the Triad Approach demonstrated that site identification and field planning and mobilization activities can develop a robust data set for decision making. Currently, a paper is in development. We submitted a request for research funding last quarter but learned that we were not selected this round. A potential new school site in Newark has been identified that could further develop the technology and utility for stakeholders.</p> <p>Future Activities Planned: Frequent meetings will continue and we will continue to technical assistance to the SCC/stakeholders as funding allows.</p>	

Project/Community Name	Bloomfield, NJ
City	Bloomfield
State	NJ
EPA Region	Region 2
Community Contact	Mary Shaughnessy
State Contact	N/A
EPA Contact	N/A
Institution/Center	Northeast Hazardous Substance Research Center - New Jersey Institute of Technology
Outreach Director/Manager	Fred Ellerbusch
Project Manager/Coordinator	Fred Ellerbusch
Allocation (TOSC, TAB)	TOSC
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: In December 2002 NHSRC was requested to visit a housing development on a former mercury thermometer-manufacturing site. According to the neighborhood group the plan is to build 166 townhouses on two former industrial sites contaminated with mercury, lead, tetrachloroethylene, chloroform, benzene and pesticides. Both sites, which abut each other, are in a floodplain/wetlands; the 42-unit site will be capped; the 124-unit site is undergoing remediation. Surrounding neighbors are fearful of the ongoing work, poor information, and claimed lack of oversight.</p> <p>Activities: A site visit was conducted late last year to examine conditions and meet with a community representative. Additional meetings were planned for the first and second quarter to discuss next steps, but poor weather (1st quarter) and scheduling conflicts (2nd and 3rd quarter) postponed these events. However, in the interim the community continued to be actively involved in development issues and we expect to provide technical support in the future. Contacts with community representatives indicate continued interest in technical support; however, it has not resulted in any substantive requests this quarter. The community group is quite active and continues to generate interest in the press.</p> <p>Future Activities Planned: Continued contact will take place during the 4th quarter to discuss next steps and support activities.</p>	

Project/Community Name	Buzby Landfill
City	Voorhees
State	NJ
EPA Region	Region 2
Community Contact	KK Wu, Buzby Landfill Task Force
State Contact	Steve Kehayes, NJDEP
EPA Contact	Larry D'Andrea, USEPA
Institution/Center	Northeast Hazardous Substance Research Center - New Jersey Institute of Technology
Outreach Director/Manager	Fred Ellerbusch
Project Manager/Coordinator	Fred Ellerbusch
Allocation (TOSC, TAB)	TOSC

Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:

Project Description:

NHSRC provides technical assistance to the Voorhees Township Buzby Landfill Task Force. The Task Force is focused on the proposed clean-up of the Buzby Landfill, a site that had received industrial and municipal wastes and is located near a residential area. Technical assistance began during the third quarter 2002 to support the Task Force and Township vision of site redevelopment into recreational and office park land uses. The Responsible Parties (Township is a Responsible Party) reached a tentative agreement on the use of the landfill that would accommodate restricted access to the landfill - in order to keep the current institutional control solution scenario - and the new uses. Our involvement is focused on cap and sediment concerns as they relate to redevelopment of the site for commercial and recreational purposes. The Task Force is quite active, holding monthly meetings that are well attended by local stakeholders.

Activities:

During this quarter we met with community and technical representatives on several occasions to review documents submitted by responsible parties to NJDEP and respond with technical comments. Community concerns related to the industrial portion of the landfill, which produces methane that is either vented or destroyed using a thermal treatment system, were discussed at one of the meetings. We also attended a meeting with responsible parties to resolve open technical issues that were raised in comments made in the 2nd quarter relative to the decision logic of methane management as well as monitoring data quality. The community refined the conceptual plan for the landfill site and has begun to actively explore redevelopment funding sources.

Future Activities Planned:

Attendance at future Task Force meetings and additional document review and comment are expected. It is expected that based on community and responsible parties interest that we may support the evaluation on the use of methane for power generation or recovery for use as a fuel. In addition, it is expected that we will be asked to comment on future planning and design efforts.

Project/Community Name	Camden, NJ (Fettersville Community Organization/Macedonia Historical Association)
City	Camden
State	NJ
EPA Region	Region 2
Community Contact	Fred Martin, City of Camden
State Contact	Steve Kehayes, NJDEP
EPA Contact	Larry D'Andrea, USEPA
Institution/Center	Northeast Hazardous Substance Research Center - New Jersey Institute of Technology
Outreach Director/Manager	Fred Ellerbusch
Project Manager/Coordinator	Fred Ellerbusch
Allocation (TOSC, TAB)	TOSC
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: This community group is seeking support for the use of Phytoremediation/retreeing of a City owned Brownfield site using the Paulownia tree, which the community hopes will begin improving the neighboring properties of this disadvantaged community along the Delaware River. Fettersville has a rich history including serving as a key stop on the Underground Railroad. The community would like assistance in the form of a hydrologist and geologist on utilization of perched water as source for garden and tree plantings and assistance on the utility of phytoremediation for this type of property. A site visit was conducted during the 4th quarter of 2002 and 3rd quarter of 2003.</p> <p>Activities: Follow-up discussions with community members were scheduled and accomplished during the quarter. We met with community members and held discussion with City planners to explore the potential for phytoremediation/tree planting for the 80 block area. We toured the entire area to examine the neighborhood and discuss community objectives and goals, which need support at higher government levels. We have identified the technical resources to support the community's desire to embark on phytoremediation and tree planting.</p> <p>Future Activities Planned: Additional meetings will be attempted during the 4th quarter of 2003 to agree on specifics and identifying how objectives will be met. We will explore if there is an opportunity to link the Fettersville community efforts to those of the South Waterfront area of Camden.</p>	

Project/Community Name	Ft. Edwards, NY
City	Ft. Edwards
State	NY
EPA Region	Region 2
Community Contact	NG Kaul, USEPA
State Contact	N/A
EPA Contact	NG Kaul, USEPA
Institution/Center	Northeast Hazardous Substance Research Center - New Jersey Institute of Technology
Outreach Director/Manager	Fred Ellerbusch
Project Manager/Coordinator	Fred Ellerbusch
Allocation (TOSC, TAB)	TOSC
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: USEPA Region 2 Ft. Edwards Field Office requested TOSC community services support for the Fort Edwards Superfund project (website for the project is www.epa.gov/udson). NHSRC agreed that with the visibility of this Hudson River clean-up some support would be necessary, dependent on scope of services and funding availability. At this stage what distinguishes the community group from others is that this group had not believed that taking action, as outlined in recent project descriptions was needed. During the latter part of September, NHSRC was requested to prepare a collateral funding request for support of the Fort Edwards community; budget and scope were developed and submitted. This project is not only intriguing from an outreach perspective but also technically challenging given the scope and complexity of the cleanup.</p> <p>Activities: The scope of work was developed and agreement was reached with U.S. EPA Region 2 during the last quarter; funding was finalized during the 3rd quarter. During this quarter the Region also developed several extensive documents, including an outreach document that were reviewed in preparation for the start of the project.</p> <p>Future Activities Planned: The project will be kicked off during the 4th quarter of 2003 with a community and USEPA representative meeting at Ft. Edwards.</p>	

Project/Community Name	Heart of Camden
City	Camden
State	New Jersey
EPA Region	Region 2
Community Contact	Chris Auth and Father Doyle
State Contact	Judy Shaw
EPA Contact	Larry D'Andrea, USEPA
Institution/Center	Northeast Hazardous Substance Research Center - New Jersey Institute of Technology
Outreach Director/Manager	Fred Ellerbusch
Project Manager/Coordinator	Fred Ellerbusch
Allocation (TOSC, TAB)	TAB
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: NHSRC was requested to provide technical assistance to a South Waterfront Redevelopment Plan sponsored by the Heart of Camden, a community organization located in South Camden. The area has been plagued by encroachment of industrial uses and abandoned property including sites listed on the NJDEP Known Contaminated Site List, USEPA Superfund program and the target of NJDEP enforcement actions. The area is disadvantaged but with strong grassroots community involvement. Our assistance activities were focused on a technical evaluation of the <i>Environmental Risk Management Framework & Mitigation Strategies Interim Report</i> prepared by Vita Nuova LLC under funding by the Heart of Camden. We provide technical suggestions on land use issues and building design for Brownfields.</p> <p>Activities: During this quarter, our involvement with the community, leaders, City of Camden, NJDEP, and others continued to be extensive in order to achieve the community's redevelopment objective for the Waterfront South area. The environmental investigation was completed this quarter and presented to leaders. A NJDEP Air Toxics study was started during the 3rd quarter to assess land use impacts on the residential neighbor that was under study and targeted for revitalization.</p> <p>Future Activities Planned: Continued interaction with community is expected during the 4th quarter to determine if follow-up activities that were envisioned can be funded as well as to assist interpretative aspects of the NJDEP Air Toxics study.</p>	

Project/Community Name	Ironbound Community Corporation
City	Newark
State	NJ
EPA Region	Region 2
Community Contact	Nancy Zak and Joe Della Fave
State Contact	Steve Kehayes, NJDEP
EPA Contact	N/A
Institution/Center	Northeast Hazardous Substance Research Center - New Jersey Institute of Technology
Outreach Director/Manager	Fred Ellerbusch
Project Manager/Coordinator	Fred Ellerbusch
Allocation (TOSC, TAB)	TOSC
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: As a carryover from HSRC-1, NHSRC has had a long-standing involvement with the Ironbound Community Corporation; we continue to support the ICC on technical issues related to land reuse in the community. The ICC is the principal community group for the eastern section of Newark, called the Ironbound. The area was and remains home to most of Newark's industrial base and is also home to Superfund sites, treatment facilities including the County's solid waste incinerator, as wells as a growing demand for housing.</p> <p>Activities: During this quarter we were asked to review the results of the preliminary environmental investigation of the Murphy Varnish site prepared by consultants for the School Construction Corporation. The investigation focused on soil, groundwater and interior surfaces and air space of the city-block building. The community and school district had identified the property as a potential school site. The draft report of the investigation revealed that contamination in all media existed; we were asked to give our interpretation of the report and possible next steps. We also began to explore alternative site scenarios that would preserve or maximize open space in the area, which has been under intense redevelopment pressure. During the quarter, press and political coverage of the site continued but a site visit was conducted and a facilitated meeting with the community, school district representative, and SCC were held to review findings and explore alternatives.</p> <p>Future Activities Planned: Continued contact will take place during the 4th quarter to continue to explore alternatives and provide technical assistance.</p>	

Project/Community Name	Long Branch Coal Gasification
City	Long Branch
State	NJ
EPA Region	Region 2
Community Contact	Wyatt Kenoly, Long Branch Concerned Citizens Coalition
State Contact	Paul Smith, NJDEP
EPA Contact	Larry D'Andrea, USEPA
Institution/Center	Northeast Hazardous Substance Research Center - New Jersey Institute of Technology
Outreach Director/Manager	Fred Ellerbusch
Project Manager/Coordinator	Fred Ellerbusch
Allocation (TOSC, TAB)	TOSC
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: NHSRC was requested to assist community members with concerns over the cleanup of a former Coal Gasification site that is near a residential area; within 1/4 mile are about 500 people including 2 adjacent housing authority sites. This is a CERCLIS listed site but NJDEP lead cleanup that will be reviewed by ATSDR for potential health impacts. We conducted a site visit late 2002 to review cleanup activities. In the first half of 2003 press coverage increased due to indoor air quality concerns at the neighboring housing development.</p> <p>Activities: No activities took place this quarter.</p> <p>Future Activities Planned: We will attempt to make contact with community this quarter; if unsuccessful we will close the project due to inactivity.</p>	

Project/Community Name	Camden, NJ Martin-Aaron
City	Camden
State	NJ
EPA Region	Region 2
Community Contact	Fred Martin, City of Camden
State Contact	Steve Kehayes, NJDEP
EPA Contact	Larry D'Andrea, USEPA
Institution/Center	Northeast Hazardous Substance Research Center - New Jersey Institute of Technology
Outreach Director/Manager	Fred Ellerbusch
Project Manager/Coordinator	Fred Ellerbusch
Allocation (TOSC, TAB)	TOSC
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: Under the Superfund pilot project in the City of Camden, the 5.9 acre Martin-Aaron site has been identified by community members and industrial interests alike as potentially usable. The site was host to a former barrel recycler that has been subject to EPA and NJDEP removal actions. The community has developed a plan that calls for locating a farmers market on the site, while a neighboring industrial has expressed an interest to use the land for expansion. The City would like to use this project to not only arrive at a best use option but also to empower the community and create academic linkages. The City believes that community members would benefit from capacity building in the form of risk skills training modeled after the North Camden training conducted through NHSRC several years ago. The City also believes a planning (with economic/feasibility components) analysis would be useful to determine the viability and desirability of either or both land-use options. A final component will be facilitation related to redevelopment in a former industrial area. We are exploring with Rutgers University Bloustein School of Planning and Public Policy the potential to jointly provide a planning (with economic/feasibility components) analysis to determine the viability and desirability of either or both land-use options and the risk skills training.</p> <p>Activities: Additional discussion was held with a planning representative from Camden during the quarter to determine if the project remains viable. While the project is still viable the objective for the site uncertain, it appears that it may be used for industrial expansion. The site was identified in community redevelopment objectives that were not entirely consistent with city objectives. Funding for the project was also uncertain.</p> <p>Future Activities Planned: The scope of this project remains in flux, we will continue to seek clarification and refinement during the 4th quarter of 2003.</p>	

Project/Community Name	Ford Avenue Redevelopment Project
City	Milltown
State	NJ
EPA Region	Region 2
Community Contact	Denise Nickel, Middlesex County Improvement Authority
State Contact	Marie Franco-Spera, NJDEP
EPA Contact	Carl Struble, USEPA
Institution/Center	Northeast Hazardous Substance Research Center - New Jersey Institute of Technology
Outreach Director/Manager	Jim Mack
Project Manager/Coordinator	Jim Mack
Allocation (TOSC, TAB)	TAB
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: At the request of NJDEP, NHSRC provided technical support to facilitate the Systematic Planning and Work Plan preparation phases of the Triad Approach. The Ford Avenue Redevelopment Project is a former Michelin Tire manufacturing facility located on 20 areas of land in Milltown, NJ. The Ford Avenue Authority was created to provide a mechanism to redevelop this site into senior housing, market rate residential and mixed use commercial. The project involves coordination key stakeholders including Middlesex County Improvement Authority (MCIA), the NJDEP, the developer, USEPA Region II Brownfields, USEPA Region II Mobile Laboratory, the MCIA consultant, Argonne Labs and USEPA Technology Innovation Office.</p> <p>Activities: During the quarter we organized several systematic planning sessions with stakeholders, assisted the selected consultant in developing the Site Conceptual Model (SCM), and facilitated a series of Technical Subgroup meetings to focus on technical specifics of the Triad application.</p> <p>Future Activities Planned: Preparation a Work Plan with a Dynamic Work Strategy for implanting the Triad approach program.</p>	

Project/Community Name	New York State Department of Housing and Community Renewal
City	Statewide
State	NY
EPA Region	Region 2
Community Contact	N/A
State Contact	Barbara Wigzell
EPA Contact	N/A
Institution/Center	Northeast Hazardous Substance Research Center - New Jersey Institute of Technology
Outreach Director/Manager	Fred Ellerbusch
Project Manager/Coordinator	Fred Ellerbusch
Allocation (TOSC, TAB)	TOSC
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: The New York Department of Housing and Community Renewal is the responsible agency for funding and approving affordable housing projects in the state of New York. Under state law, an environmental review is necessary for a significant state action, similar to NEPA review under federal law. Often, new projects involve reviews which have land-based impacts such as soil contamination or groundwater contamination that could affect future residents. NHSRC and NYDHCR have begun discussion to determine if TOSC can provide technical support to the Environmental Analysis Unit of the Department. TOSC support could positively affect many communities and future residents that have been impacted by soil and groundwater contaminants.</p> <p>Activities: During the quarter NHSRC began exploration of TOSC support through phone conferences to determine extent and type of support to be provided.</p> <p>Future Activities Planned: During the 4th quarter a meeting with the Assistant Commissioner and staff of the Environmental Analysis Unit will be held to explore synergies and technical assistance opportunities.</p>	

Project/Community Name	Lamont – Riggs Park
City	Washington
State	DC
EPA Region	Region 3
Community Contact	Councilman Adrian Fenty
State Contact	Dr. Sreenivas, Deputy Bureau Chief, DC DOH; Dr. Koffy, DC DOH; Mick Butler, MDE
EPA Contact	Vance Evans, CIC; Marcus Aquino, OSC Superfund; Andrew Fan, Program Manager, RCRA; Joan Schaeffer, Communications Coordinator, RCRA; Lora Werner, ATSDR; Betty Ann Quinn, Toxicologist, RCRA
Institution/Center	University of Maryland School of Nursing
Outreach Director/Manager	Dr. Barbara Sattler
Project Manager/Coordinator	Robyn Gilden
Allocation (TOSC, TAB)	TOSC
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: In 1989 the Chevron Station reported a Leaking Underground Storage Tank (LUST) and Maryland Department of the Environment installed a pump and treat system with monitoring to remove the gasoline. In 2001 the gasoline plume was detected under Lamond – Riggs Park, a residential area in DC. EPA Region 3 was asked to take over the remediation since it crossed jurisdiction lines and EPA’s RCRA program became involved at the site. Recently EPA’s Superfund program has been included to help address some of the contaminants detected during sampling that are not coming from the gas station, mainly PERC. EPA Region 3 has recommended this site for TOSC assistance to help identify stakeholders, provide education and information, and create a venue where all voices can be heard.</p> <p>Activities: Outreach staff interviewed various members of the remediation team including representatives from DC DOH, MDE, EPA’s RCRA, EPA’s Superfund, and ATSDR to gather background information and perception of community needs. Outreach staff has begun interviewing community members via the phone and in person to gather their perception of issues and needs and to determine the most effective way to inform and engage the community at large. The Center is collaborating with Councilman Fenty’s Office as well. Staff will participate in an introductory meeting led by the Councilman’s office and EPA and will visit the site and surrounding community.</p> <p>Future Activities: The Center will continue identifying stakeholders and priority concerns. The Center will convene a listening meeting with all interested parties. The Center will participate in an EPA led public availability meeting.</p>	

Project/Community Name	Hamilton Park
City	New Castle
State	DE
EPA Region	Region 3
Community Contact	Elder Louis McDuffy, Council Chair
State Contact	Lisa Riegel, DNREC
EPA Contact	Vance Evans
Institution/Center	University of Maryland School of Nursing
Outreach Director/Manager	Dr. Barbara Sattler
Project Manager/Coordinator	Robyn Gilden
Allocation (TOSC, TAB)	TOSC and TAB
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: The community has multiple concerns related to sites of former tanneries, defunct foundries, nearby Superfund sites (NPL and State), and currently operating facilities. The neighborhood, made up of 106 residences built in 1900- 1950's, is contaminated with arsenic and lead, along with various other toxics. The Hamilton Park Advisory Council is seeking guidance on understanding the site-related data and documents and the possible health effects of exposure as well as education on possible remediation technologies.</p> <p>Activities: 7/11/03 – Received phone call from Elder McDuffy regarding the Standard Chlorine of Delaware, Inc. (Metachem) Superfund Site in Delaware City. He expressed concerns over a EPA model used to predict leaking of chlorobenzenes from storage tanks and rail cars left onsite when it was abandoned in May 2002. He requested the Center work with Michael Towle, EPA Region 3, in determining the appropriateness of the model. Outreach staff called Mr. Towle and left a voice message offering assistance on the matter.</p> <p>Future Activities Planned: The Center will follow-up with Mr. Towle and also seek out other members of the community near the site to assess their interest (Mr. McDuffy lives about 15 miles from the site).</p>	

Project/Community Name	Metachem
City	Delaware City
State	DE
EPA Region	Region 3
Community Contact	
State Contact	Charles Bussey
EPA Contact	Trish Taylor, Michael Towle
Institution/Center	University of Maryland School of Nursing
Outreach Director/Manager	Dr. Barbara Sattler
Project Manager/Coordinator	Robyn Gilden
Allocation (TOSC, TAB)	TOSC

Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:

Project Description:

The Standard Chlorine of Delaware, Inc. produced chlorinated benzene compounds on-site from 1966 to 2002. The 46-acre site was listed on the NPL in 1987 due to chlorobenzene spills in 1981 and 1986. Chlorobenzenes have been found in the ground water, soil, sediments, and surface water. People may be exposed to the chemicals by direct contact with contaminated soil or accidentally ingesting contaminated soil or water. About 152,000 people draw ground water from public and private wells within a three-mile radius of the site. Approximately 30 people reside within a mile of the site. Wetlands near the site are threatened. Chlorobenzenes have been found in tissue of fish obtained from Red Lion Creek.

In May 2002 the U.S. Environmental Protection Agency (EPA), in coordination with the Delaware Department of Natural Resources and Environmental Control (DNREC), initiated an emergency response following the abrupt closure, bankruptcy, and abandonment of the plant by its owner, Metachem Products, LLC. EPA and DNREC are performing a number of immediate actions to stabilize the site. Such actions include maintaining security and stabilizing the site, operating the wastewater treatment plant, re-activating the groundwater pump-and-treat system, and securing chemicals left in tanks and rail cars. Due to its bankruptcy, Metachem will be unable to perform further cleanup, so EPA will complete the remainder of the original cleanup, including the completion of a groundwater barrier and pump-and-treat system and thermal treatment of contaminated soils. EPA will evaluate the need for additional cleanup resulting from the abandonment of the plant.

Activities:

The Center received a call from Elder McDuffy, a concerned citizen that lives about 15 miles from the site. He requested that the Center call EPA to work with them on the Emergency Removal actions. Outreach staff performed search and reviewed site related documents available on the Internet. Staff spoke with Michael Towle, EPA Emergency Removal OSC for the site, to gather information about current status and activities. The Center offered assistance for community outreach and he indicated he would pass it along to the CIC team. Outreach staff left a message for Elder McDuffy informing him of the conversation. Staff also spoke with Trish Taylor, EPA CIC for the site, about a letter they had received from Elder McDuffy. She requested input on a response to the letter and coordination of

community involvement around the site.

Future Activities:

If requested, community members around the site will be identified and the Center will help organize a listening session to identify concerns and questions. The Center will assist the community with informational and technical needs as asked for.

Project/Community Name	Highway Petroleum Abandoned Gas Station
City	Cumberland
State	MD
EPA Region	Region 3
Community Contact	
State Contact	Karl Kalbacher, MDE
EPA Contact	
Institution/Center	University of Maryland School of Nursing
Outreach Director/Manager	Dr. Barbara Sattler
Project Manager/Coordinator	Robyn Gilden
Allocation (TOSC, TAB)	TAB
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: This site is part of the MDE Brownfield Assessment Grant application to EPA. This site was a former gas station and convenience store, abandoned since 1993. The USTs on site still contain product and the tank fill pipes are unlocked. Leaking from the tanks is suspected since odors are present in two observation wells.</p> <p>The Center has been contacted to perform community involvement related to the assessment project. In preparation of the grant submission, the Center began meeting and interviewing key informants to identify all possible stakeholders. The grant was awarded to MDE on 6/20/03. The Center will continue to identify interested parties and conduct outreach activities based on specific needs.</p> <p>Activities: Outreach staff contacted various community members that had been interviewed originally to inform them that the grant was awarded and a timeline would be discussed shortly outlining the assessment project.</p> <p>Future Activities: Once the grant is processed, the Center, in conjunction with MDE, will hold meetings, workshops, and focus groups, and disseminate information about the project and its progress in a variety of formats.</p>	

Project/Community Name	Former Baltimore Transformer and Coil Brownfield
City	Elkridge
State	MD
EPA Region	Region 3
Community Contact	Lindsay Turner, Community Law Clinic
State Contact	
EPA Contact	
Institution/Center	University of Maryland School of Nursing
Outreach Director/Manager	Dr. Barbara Sattler
Project Manager/Coordinator	Robyn Gilden
Allocation (TOSC, TAB)	TAB
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: The Baltimore Transformer and Coil Company, located on ½ acre at 5859 Washington Blvd, has been closed for about 4 years but is now being renovated. Community members have expressed concerns about the possible contamination on site from a former TCE spill and the possible presence of PCBs.</p> <p>The community has contacted the Community Law Clinic for help in obtaining documents, particularly the EPA PCB Inspection Report, related to the site. The Clinic requested the Center’s help in reviewing the document and providing interpretation and comments to the community.</p> <p>Activities: The Center received a call from Lindsay Turner at the Community Law Clinic requesting technical assistance on behalf of her client, a resident near the site in Elkridge. Both the project manager and engineering consultant reviewed the PCB inspection report as well as other engineers associated with the Center. Feedback was provided to the community member through the Community Law Clinic. No further requests for assistance have been expressed.</p> <p>Future Activities: None at the present time.</p>	

Project/Community Name	East St./Carroll Creek Brownfield Sites
City	Frederick
State	MD
EPA Region	Region 3
Community Contact	
State Contact	Karl Kalbacher, MDE
EPA Contact	
Institution/Center	University of Maryland School of Nursing
Outreach Director/Manager	Dr. Barbara Sattler
Project Manager/Coordinator	Robyn Gilden
Allocation (TOSC, TAB)	TAB
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: This site is part of the MDE Brownfield Assessment Grant application to EPA. There are about 8 sites proposed for assessment all within the downtown commercial district of East St. and Carroll Creek.</p> <p>The Center has been contracted to perform community involvement related to the assessment project. In preparation of the grant submission, the Center began meeting and interviewing key informants to identify all possible stakeholders. The grant was awarded to MDE on 6/20/03. The Center will continue to identify interested parties and conduct outreach activities based on specific needs.</p> <p>Activities: Outreach staff contacted various community members that had been interviewed originally to inform them that the grant was awarded and a timeline would be discussed shortly outlining the assessment project.</p> <p>Outreach staff attended the EPA's press event awarding the check to MDE at one of the Brownfield sites in Frederick.</p> <p>Future Activities: Once the grant is processed, the Center, in conjunction with MDE, will hold meetings, workshops, and focus groups, and disseminate information about the project and its progress in a variety of formats.</p>	

Project/Community Name	Central Chemical Superfund Site
City	Hagerstown
State	MD
EPA Region	Region 3
Community Contact	Kathleen Maher
State Contact	Andy Zahrins, Jim Richardson
EPA Contact	Eric Newman, Carrie Deitzel
Institution/Center	University of Maryland School of Nursing
Outreach Director/Manager	Dr. Barbara Sattler
Project Manager/Coordinator	Robyn Gilden
Allocation (TOSC, TAB)	TOSC
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: Central Chemical is on the NPL and is still waiting to finish assessment and begin remediation. The Hagerstown Planning Department received a Superfund Redevelopment Initiative grant and formed a Future Land Use Committee to decide on reuse priorities. The PRP group has also formed a Community Liaison Panel to oversee the RI/FS process. Both groups would like TOSC to help review any existing documents held by either MDE or EPA, provide guidance on interpreting the environmental issues, to review redevelopment strategies suggested by the planning committee, and provide information on health effects related to contaminants. Contaminants of concern include arsenic, lead, mercury, benzene, benzo(a)pyrene, aldrin, a-chlordane, g-chlordane, DDD, DDE, DDT, dieldrin, and methoxychlor. The contamination is believed to impact on-site soil, ground water, surface water, sediment, and fish caught downstream.</p> <p>Activities: Outreach staff participated in a session led by the consultant team on Superfund Reuse that highlighted the Hagerstown site at EPA’s National Community Involvement Conference and Training in Philadelphia. Staff also attended the debriefing session for the Reuse Project. Outreach staff attends the Community Liaison Panel monthly meetings providing technical assistance and data review as information becomes available. Staff has reviewed preliminary Phase I sampling data and the screening assessment technical memorandum. Comments will be provided to the community, EPA, and the PRP group.</p> <p>Future Activities Planned: Will continue to review Phase I sampling data, continue participating in community meetings, and develop educational materials where appropriate.</p>	

Project/Community Name	Superfund and Brownfield Sites in Herring Run Watershed
City	Baltimore
State	MD
EPA Region	Region 3
Community Contact	Darrin Crew, Herring Run Watershed Association (HRWA); Lynn Ward, Armistead Gardens Homes Corporation
State Contact	
EPA Contact	Matt Mellon, Amelia Libertz, Carrie Deitzel
Institution/Center	University of Maryland School of Nursing
Outreach Director/Manager	Dr. Barbara Sattler
Project Manager/Coordinator	Robyn Gilden
Allocation (TOSC, TAB)	TOSC/TAB
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: There are multiple Brownfield sites and one Superfund site of concern in this community. <u>68th St. Proposed NPL Site:</u> The HRWA has been awarded a TAG grant for this site. The Center will assist the community until they are able to hire a technical advisor with this funding. The Center will also provide guidance in areas that are not covered by the TAG. The site, covering 235 acres, was initially proposed to the NPL in 1999 and is now re-proposed after EPA collected more supporting data. The site consists of several former landfills and contamination includes metals, PCBs, and PAHs. There are offsite impacts to local waters including the Herring Run, Moore’s Run, and Redhouse Run leading into the Back River and Chesapeake Bay.</p> <p><u>Lower Herring Run Park:</u> This former landfill currently owned by Baltimore City, is for sale and the city is considering a nine-hole golf course proposal. The Community, particularly Armistead Gardens, would like the Center to review the Preliminary Assessment/Site Investigation Report conducted by an EPA contractor.</p> <p>Activities: Community members attended a Risk Communication Workshop sponsored by ICMA and UMBSON, where Outreach staff presented information on communication techniques. Other activities were not planned because the leadership of HRWA has undergone some changes and they are in the process of reorganizing.</p> <p>Future Planned Activities: The Center will continue to review documents related to the Brownfield sites and continue to advise the community in general on Environmental Health issues. The Center will remain involved with the 68th St. Site until a technical advisor is secured via the TAG.</p>	

Project/Community Name	Brown Derby Abandoned Gas Station
City	Princess Anne
State	MD
EPA Region	Region 3
Community Contact	
State Contact	Karl Kalbacher, MDE
EPA Contact	
Institution/Center	University of Maryland School of Nursing
Outreach Director/Manager	Dr. Barbara Sattler
Project Manager/Coordinator	Robyn Gilden
Allocation (TOSC, TAB)	TAB
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description:</p> <p>This site is part of the MDE Brownfield Assessment Grant application to EPA. The Brown Derby is an abandoned gas station that has been vacant for 10-15 years. The USTs and fuel pumps are still present on site as well as propane tanks and evidence of a former dry cleaning business. A creek that drains into the Manokin River and a new housing development, Somerset Landing, borders the site.</p> <p>The Center has been contracted to perform community involvement related to the assessment project. In preparation of the grant submission, the Center began meeting and interviewing key informants to identify all possible stakeholders. The grant was awarded to MDE on 6/20/03. The Center will continue to identify interested parties and conduct outreach activities based on specific needs.</p> <p>Activities:</p> <p>Outreach staff contacted various community members that had been interviewed originally to inform them that the grant was awarded and a timeline would be discussed shortly outlining the assessment project.</p> <p>Future Activities:</p> <p>Once the grant is processed, the Center, in conjunction with MDE, will hold meetings, workshops, and focus groups, and disseminate information about the project and its progress in a variety of formats.</p>	

Project/Community Name	Lester's Garage Abandoned Gas Station
City	Salisbury
State	MD
EPA Region	Region 3
Community Contact	
State Contact	Karl Kalbacher, MDE
EPA Contact	
Institution/Center	University of Maryland School of Nursing
Outreach Director/Manager	Dr. Barbara Sattler
Project Manager/Coordinator	Robyn Gilden
Allocation (TOSC, TAB)	TAB
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description:</p> <p>This site is part of the MDE Brownfield Assessment Grant application to EPA. This site is a former Getty service station and auto repair shop with UST's still present. Old cars and debris are on site and there is possible media contaminated with petroleum. The station has been abandoned for about 15 years, but the property appears to be in use. A day care center and older residences border the property.</p> <p>The Center has been contracted to perform community involvement related to the assessment project. In preparation of the grant submission, the Center began meeting and interviewing key informants to identify all possible stakeholders. The grant was awarded to MDE on 6/20/03. The Center will continue to identify interested parties and conduct outreach activities based on specific needs.</p> <p>Activities:</p> <p>Outreach staff contacted various community members that had been interviewed originally to inform them that the grant was awarded and a timeline would be discussed shortly outlining the assessment project.</p> <p>Future Activities:</p> <p>Once the grant is processed, the Center, in conjunction with MDE, will hold meetings, workshops, and focus groups, and disseminate information about the project and its progress in a variety of formats.</p>	

Project/Community Name	Woodberry Land Trust
City	Baltimore
State	MD
EPA Region	Region 3
Community Contact	Jan Danforth
State Contact	Evans Paul (Baltimore City)
EPA Contact	Lorie Baker
Institution/Center	University of Maryland School of Nursing
Outreach Director/Manager	Dr. Barbara Sattler
Project Manager/Coordinator	Robyn Gilden
Allocation (TOSC, TAB)	TOSC
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>Project Description: The site under investigation was formerly 2 landfills, one of which was uncontrolled. An EPA preliminary assessment conducted and reported in December 2001, shows presence of various VOCs, SVOCs, pesticides, and PCBs. Full site assessment was completed 4/15/02 and the Center is reviewing the summary documents. Loyola College has permission from the city council to buy the land for development into a stadium complex and practice fields. A final land agreement between Loyola and BDC is pending. The community requests help interpreting results of EPA's testing and providing training on various options for remediation and health effects associated with contaminants at the site.</p> <p>Activities: The Center received a phone call from Jan Danforth requesting information on the public health risks of prions that may be found in sewage sludge used to cover the landfill. Outreach staff conducted a literature search and spoke with engineers at JHU. No information on any health threats related to prions in sludge cover could be found. Staff referred community to two other possible sources of information. Community members also attended a Risk Communication Workshop sponsored by ICMA and UMBSON, where Outreach staff presented information on communication techniques.</p> <p>Future Activities Planned: Center staff will attend a meeting with City Council President, Sheila Dixon, regarding the sale of the property and outstanding questions about site safety. The meeting is proposed for sometime this fall.</p> <p>The Center will continue to review documents as they become available and will provide workshops on remediation options and health effects as requested by the community.</p>	

Project/Community Name	Pen Argyl
City	Pen Argyl
State	PA
EPA Region	Region 3
Community Contact	Judy Piper
State Contact	William Tomyako, PA DEP Northeast Region Waste Management, Senator Lisa Boscola
EPA Contact	
Institution/Center	University of Maryland School of Nursing
Outreach Director/Manager	Dr. Barbara Sattler
Project Manager/Coordinator	Robyn Gilden, Erik Rifkin
Allocation (TOSC, TAB)	TAB
Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:	
<p>The community of Pen Argyl is concerned about possible health effects from an existing landfill and the further effects of a proposed 27-acre expansion of the site. They requested information on possible health effects related to living near a landfill and guidance on developing a health study. They are also interested in the fate of a vacant industrial complex adjacent to the landfill, which is unoccupied for various reasons including perceived contamination, and blights the community. In addition to the Center's assistance, Barbara Brady, a nurse researcher, and Erik Rifkin, an Environmental Risk Management Consultant has also aided the community. Ms. Brady has consulted on the design of the community health registry survey and performed data analysis, interpretation, and developed a summary report. Mr. Rifkin reviewed the proposed risk assessment work plan from the landfill operators, along with other communications, and provided guidance to the community on their responses and further questions.</p> <p>Activities: 3rd QRTR 2003</p> <p>The final report from the health registry will be delivered to the community. Discussions are being held on the best approach to follow-up the results and empowering the community to stay involved in redevelopment and environmental health issues.</p> <p>Community members were invited to attend a Risk Communication Workshop sponsored by ICMA and UMBSON, where Outreach staff presented information on communication techniques. Unfortunately, their representative had to cancel at the last moment. They will be provided with the materials from the conference.</p> <p>Future Activities Planned:</p> <p>The Center will continue to provide technical assistance related to the Brownfield site and advisement on community survey result dissemination.</p>	

Project/Community Name	Brook-Hancock-Jefferson Metropolitan Planning Commission
City	Weirton
State	WV
EPA Region	Region 3
Community Contact	Doris Davis
State Contact	
EPA Contact	Kristeen Gaffey
Institution/Center	University of Maryland School of Nursing
Outreach Director/Manager	Dr. Barbara Sattler
Project Manager/Coordinator	Robyn Gilden
Allocation (TOSC, TAB)	TAB

Project Environmental Issues, Center Commitments (MOU), and Activities Conducted:

Project Description:

The Brooke-Hancock-Jefferson Metropolitan Planning Commission was selected to receive a Brownfield Assessment grant. The commission has targeted about 30 potential brownfields in two rural counties in the northern panhandle of West Virginia, also known as Appalachia. Most of the brownfields are the result of the demise of steel and other industries in the region. A 70 percent reduction in jobs has occurred from the loss of the steel industry alone. Hancock County has the slowest growth rate of all West Virginia counties, and per capita income in the two counties is lower than the national average. Assessment and cleanup of targeted areas will encourage redevelopment of properties, create greenspace, and address health concerns in a region with one of the highest cancer rates in the country. A task force created by the commission will continue to reach out to community-based organizations to involve citizens in assessment and reuse issues.

The BHJ MPC has requested assistance from the Center for community outreach and technical assistance during the 2-year project.

Activities:

Center staff met with Doris Davis, of BHJ MPC, to discuss community outreach for the proposed assessment sites. A proposal was submitted by the Center for review and revision.

Future Activities:

The Center will assess community information and outreach needs by identifying key stakeholders and forming a planning committee. The Center, BHJ MPC, and the stakeholder group will develop outreach activities according to priority needs.

Appendix C: Miscellaneous Current Outreach Activities

The following section provides information on miscellaneous activities conducted in the support of the outreach efforts in EPA Regions 1, 2 and 3, apart from the community specific projects described above.

University of Connecticut Principal Projects in EPA Region 1

- Passamaquoddy Tribe at Pleasant Point (Perry, ME): Outreach staff (in conjunction with Mr. Charlie Zimineski, a former Connecticut Department of Environmental Protection employee) conducted a two-day educational session to address the environmental training needs of the Passamaquoddy tribe. The participants included representatives from the tribe, Maine Department of environmental Protection, U.S. Coast Guard, and the U.S. Navy. The purpose of this training was to build better communications and relations between the tribe and local authorities. Naragansett and Wampanoag tribes in New England have indicated interest in this course as well. The Center is also assisting the tribe with their lead (Pb) contamination program by providing them with relevant documents and informational materials.
- Stamford, CT: Outreach staff had preliminary discussions with the representatives of the City of Stamford Land Use Bureau concerning the use of a parcel of land that is contaminated with coal tar residues (used as fill material). This land is planned for use as a commuter-parking garage and a new interstate off ramp. The surrounding community has raised health concerns regarding the proposed disturbance of the old deposits. The Center will develop an assistance plan for this project.
- Conway School of Landscape Architecture: Staff conducted further planning with the faculty at Conway School to integrate the Ninigret Park site TAB project into the school's practical design curriculum. One focus of this project is to integrate landscape designs into Brownfields sites to minimize exposure through passive recreation. Environmental and community educational elements will be included in the design.

New Jersey Institute of Technology Principal Projects in EPA Region 2

- Continued implementation of projects outlined in the collateral funding received from U.S. EPA Region 2, these included:
 - Continued to develop the Expert System Decision Model logic and outputs
 - Started the planning process for stakeholder outreach meetings
- Continued discussions with the Port Authority of New York and New Jersey on possible collaboration for dredge spoil staging and subsequent land use planning for staging properties,

- Completed planning for a conference on Cleaning Up Contaminated Properties for Reuse and Revitalization focused on effective technical approaches and tools which was held on July 22 to 24, 2003. NHSRC co-sponsored the U.S. EPA Technology Innovation Office RevTech conference. NHSRC played a leadership role on three fronts: coordinating a technology fair, a panel on area wide site assessment, identifying and assisting the panel leader on uncertainty and insurance, and identifying and assisting the panel leader on uncertainty and banking. We also fielded follow-up requests from press.
- Began the planning process for a Superfund Site Redevelopment Workshop in Region 2, tentatively targeted for the first quarter of 2004,
- Prepared a technical memorandum on the findings of a study on the use of the Triad Approach for a school based Brownfields reuse scenario.
- Began planning and implementation activities associated with the USEPA-NJIT cooperative agreement to study the use of the Triad framework in the Assessment and Community Assistance using an Areawide Approach.
- Developed TAB related proposed activities and projects for the USEPA funding cycle announced during the quarter.
- Explored potential NIEHS environmental justice funding to leverage outreach activities in the South Camden area of New Jersey.
- Developed a project proposal to support the Hudson County Area Wide Assessment Grant with technical assistance for an Area Wide Investigation.
- Developed a project proposal to support the New Jersey Meadowlands Commission Paterson Plank Road Brownfields Redevelopment Area with technical assistance for site assessments.
- Began exploring how NHSRC can support or participate in the New Jersey Brownfields Development Areas that were recently designated by NJDEP.
- Specific activities conducted by NHSRC staff during the quarter that are not detailed in Part B (TOSC and TAB Project summaries) included:
 - 7/2-15/03 – Participated in an innovative site characterization technology transfer event held in Romania
 - 8/6-7/03 – Participated in a USEPA Peer review of Research and Development grant applications for solid waste recycling
 - 8/18/03 - Participated in TOSC outreach activities focused on USEPA staff not familiar with TOSC activities or services
 - 9/4//03 – Presented case studies of the Triad Approach in a day long NJDEP sponsored seminar
 - 9/8/03 – Participated in a conference call with Headquarters and HSRC representatives on expansion of outreach efforts to include all media
 - 9/13/03 - Explored site assessment technology transfer opportunities with the Government of Korea consulate
 - 9/22/03 - Responded to inquiries regarding topics for the 2004 TOSC conference

Two parallel efforts continue to occur:

- 1) Assessment of funding to support TAB and TOSC programs within Region 2; and

- 2) Fielding expressions of interest from communities that are seeking support for either TOSC or TAB assistance. We continue to work through scope clarification or development as well as resource estimates.

University of Maryland Principal Projects in EPA Region 3

- Outreach staff, partnering with the International City and County Managers Association, is assisting in planning, presenting, and hosting several Risk Communication workshops for communities and local governments that are faced with contaminated site issues, the first of which was September 4 and 5 at the University of Maryland. Several community members attended from groups currently receive assistance from the TOSC/TAB program in Region 3.
- Program Manager is chair and Outreach Director is a member of the Community Health and Protection subgroup of the Governor's Commission on Environmental Justice and Sustainable Communities working to ensure communities have access to information and resources related to environmental health issues.
- Outreach Director is a commissioner and program manager attends the Governor's Commission on Environmental Justice and Sustainable Communities, assisting to highlight and address EJ issues in Maryland communities. They are also participating in Environmental Equity forums sponsored by the commission to assess regional community concerns in Maryland.
- Outreach staff is participating in planning meetings for MD DHMH and MDE's CDC health tracking grant. Staff will provide input on utilization of databases and access to information for communities.
- Program Manager and Outreach Director presented a session on *Connecting with Health Care Providers* at EPA's National Community Involvement Conference and Training in Philadelphia.
- Outreach staff and Region 3 EPA community involvement office are organizing a regional community involvement conference for state and local government and communities.
- Program Manager and Outreach Director are working collaboratively with the Health Sciences/Human Services Library at UMB and the National Library of Medicine to develop an online repository of environmental health materials that can be used for community education and outreach.
- Program Manager and Outreach Director are collaborating with Regional Administrator Donald Welsh and his staff on improving utilization of public health professionals in environmental protection activities.
- Outreach staff is advising two Baltimore Communities on applying for the EPA EJ Collaborative Problem-Solving Grant.

Appendix D. Feedback from the Scientific Advisory Committee (SAC)

Suggestions from the October 21-22, 2003 SAC Meeting

- "The function of this Committee is to assist in evaluating the merit, value, and contribution of research projects, and the relevance and importance of individual organizational elements to accomplishing the overall goals of the Center." Quoted from EPA ORD Guidance Document entitled "Programmatic Terms and Conditions for Centers and Consortia, 7/31/2001.
- The Science Advisory Committee believes that this HSRC's leadership and research investigators have done very well in establishing the scope and direction of the Center as well as in choosing the first round of research projects. The SAC sees this Center as being unique in its focus on urban environmental problems arising from hazardous substance use and disposal, as well as in its breadth of coverage of environmental media (land, air, water), processes (physical, chemical, biological and contaminant classes (organic, inorganic). The HSRC's efforts in the first year have achieved a remarkable breadth and balance, while generally maintaining high standards of technical merit at the level of the individual research projects. In the limited time available in its meeting on October 21-22, 2002, the SAC concentrated mainly on evaluation of the seven individual research projects funded during the Center's first year. In general, the SAC believes that the current projects are well conceived on a scientific/technical basis and show promise of achieving results significant to the Center's mission. (See the summary of our evaluation criteria below.) Nonetheless, the SAC urges the HSRC research personnel to maximize opportunities for synergistic interaction among project teams by selecting contaminant groups that match across project boundaries where possible. If the SAC is to play a proactive role in setting priorities for the next round of proposals, we need to establish a modus for doing so.
- The SAC appreciates this HSRC's broad scope: air, water, land; whole scope of contaminants.
- Encourage communication between research/outreach, involving all university partners
- Enhance synergism among project teams by selecting similar contaminants across project boundaries
- Attract other stakeholders/funds from private sector (i.e., industrial partners)
- Consider expanding knowledge transfer component by means of coops + standard training
- Additional role of SAC – advise center on business aspects of achieving long-term sustainability (?)
- To foster synergism among projects and investigators, it would be helpful for the HSRC to stage a meeting of the full cast of Center participants, including research students, if resources permit.

- Need to define the SAC's role in setting priorities for the next round of proposals; if SAC is to engage proactively in this regard, we need to establish the ways and means for doing so.

Suggestions from the June 16, 2003 SAC Meeting

- Some suggestions and observations to improve the Center's operation were discussed. One of the principal recommendations is to develop more projects with multi-institutional and interdisciplinary teams. A summary of the discussion is included below:
 - For the most part, the PIs are well qualified;
 - Proposals should be tied to real problems and situations;
 - HSRC must identify the most important risk issues;
 - Proposal format should require the relevance of the project to urban environmental problems; and
 - The submission of more proposals should be encouraged.
- The SAC recommends considering the Center funding a project to ascertain the most pressing urban environmental problems in EPA Regions 1, 2, and 3. This can be done via a workshop attended by EPA, State, and local agencies, and potential PIs. A background paper prepared as a preconference read ahead of time is also suggested.
- Strategies to encourage more proposals and improving the quality of proposals include requiring interdisciplinary, multi-institutional projects or requiring comprehensive proposals around focus areas. In addition, all proposals should be required to demonstrate synergy with Center activities. The PIs for the projects recommended for funding should specify how they will respond to the SAC comments.

Appendix E. Minutes from the Outreach Advisory Committee meeting held on November 7, 2003.

The OAC annual meeting was held from 9:00 a.m.- 4:00 p.m. on Thursday, November 7, 2002 in the Shriver Hall Board Room, at Johns Hopkins University, Homewood Campus. Following are the minutes of the meeting. Please see our website at http://www.jhu.edu/hsrc/oac_110702.htm for the group picture and PowerPoint presentations.

- In attendance: Ed Bouwer, Jennifer Browne, Mike Burke, Larry Charles, Fred Ellerbusch, Gbekelolouwa Oguntimein, Robyn Gilden, Kevin Hood, Greg Jordan, Ralph Lightner, Chris Perkins, Vincent Pitruzzello, Erik Rifkin, Barbara Sattler, Judy Shaw, Hal Yates, and Hedy Alavi.
- Absent: Elissa Harris, Stacey Johnson, Jim Murphy, Mary Rosso, and Shari Wilson.
- Recorder: Robyn Gilden
- Greeting by Ed Bouwer
- Group introductions
- Greg Jordan, US EPA Brownfields
 - Description of Technical Assistance for Brownfields (TAB), definition of Brownfield
 - EPA view on how valuable the program is, HSRC support is important for communities. EPA has given \$750,000 annually to HSRC's over past years, has maintained that level of support because program is seen as important. Linda Garzynski, EPA Director of Brownfields is committed to TAB and would like to see it continue.
 - Grants from EPA to communities to begin or accelerate Brownfield projects has totaled > 400.
 - Has funded 1000 targeted Brownfield assessments
 - Program has created 20,000 jobs and provided \$4.6 billion for clean up
 - New emphasis on Brownfields from congress. In January 2002 – Small Business Liability Relief and Brownfields Revitalization Act was signed.
 - Increases support to communities
 - Supports states and tribal Brownfield programs
 - Increases number of candidates for HSRC assistance
 - Different from Superfund funding, less strings attached to money – next year TAB will be able to support petroleum sites, controlled substance contaminated sites, and mine scarred lands
 - Complementary of the smooth transition from old to new centers
 - Would like to see continued building of partnerships to help communities
 - Looking forward to celebrating successes over the coming next year
- Questions for Greg Jordan:
 - Can money be used for overall capacity building of community?
 - One overall string on federal money – Federally appropriated money cannot be transferred to another “pot” to supplement other funding streams without permission of congress.

- Most Brownfield money goes directly to communities for site assessment and cleanup, but other creative options for capacity building could be considered.
 - Is there a list of criteria of what EPA sees as a success?
 - No. EPA does not direct the centers' specific support activities. There are no EPA performance criteria other than general grant requirements.
 - The Brownfields office at EPA headquarters is refining its indicators of success for its program. These indicators could be considered by the centers.
 - The centers have been discussing and developing a system of self-evaluation for the last year. EPA views this as a positive effort by the centers to address the question of "What constitutes success and how are we doing?"
 - With the job training grants for community skills development, can it be used to train state workers (such as in local Health Department)?
 - Most training has been for entry-level jobs, but it is a good idea, new concept to be considered.
- Jennifer Browne, US EPA Superfund Community Involvement
 - Definition of Technical Outreach Services for Communities (TOSC)
 - Housed within EPA Office of Solid Waste and Emergency Response, which includes Superfund, Emergency Response, Oil, and TOSC/TOSNAC.
 - Community Involvement and Outreach funding has been \$1.325 Billion, which has maintained a steady level over the past 3-4 years, even with budget cuts
 - Jennifer Browne is the Program manager for TOSC and oversees national issues with the program. She does not manage the grant money. Office of Research and Development under Mitch Lasat handles that piece and supports grantees.
 - Other offices provide money to the TOSC program including Oil, Resource Conservation and Recovery Act, and Federal Facilities. They are trying to increase support from other programs as well.
 - TOSC was created in 1996 and usually assists sites not on NPL because they are not eligible for help from Superfund.
 - US EPA expects HSRC's to find communities, provide assistance, communicate with EPA Headquarters and Regions, share knowledge, publicize success and experiences, and to evaluate work.
 - This is the first time nationally that Outreach Advisory Boards are being included as a separate advisory body.
 - Offers congratulations on surviving the first year
- Overview of Research Center – Ed Bouwer
 - See PowerPoint presentation
- Overview Outreach (OR) – Hedy Alavi
 - Goal of OR
 - Review of TOSC and TAB
 - Principles –
 - Center is not stakeholder, neutral
 - Outside decision making process
 - No advocacy

- No organizing
 - Separate issues of science and policy
 - University well suited to conduct outreach
- Functions
 - Community empowerment
 - Workshops
 - Document review
 - Educational materials/training
- Outreach Advisory Committee was selected from community representatives, US EPA, and States
 - Provide oversight, vision, and perspective
 - Assist in the development, implementation, and evaluation of outreach projects
 - Identify additional outreach funding
- Selection criteria for projects
 - Threshold criteria
 - Hazardous contamination, toxic contamination, Brownfield redevelopment
 - Balancing Criteria – more likely to be selected
 - Environmental justice issue
 - Human health protection
 - Community is organized and highly motivated
 - Multiple sources of request
 - Will provide benefit to the community
 - Assistance will be early in the process and have greater chance of meaningful impact
 - Balancing Criteria – less likely to be selected
 - Community has access to other support (i.e. TAG)
 - Low community interest
 - Polarization community or pending law suits
 - Involvement comes too late in the process to have meaningful impact
- Memorandum of Understanding
 - Identifies Community needs
 - Identifies Center and Community contacts
 - Outlines roles of all participants
 - Describes mutual termination agreement
 - Describes evaluation process
 - Outlines time frame of services
- 2002 Outreach Activities – covered later by region
- General activities
 - Presentations
 - Center for Health Environment and Justice collaboration for School Siting meeting
 - Region 2 Brownfield Pilot Stakeholder meeting
 - General community meetings

- Region 2 – Fred Ellerbusch
 - See PowerPoint presentation
- Region 1 – Chris Perkins
 - See PowerPoint presentation
- Region 3 – Robyn Gilden
 - See PowerPoint presentation
- Morgan State University – Gbemeloluwa Oguntimein.
 - See PowerPoint presentation
 - Is there a list of BF sites in MD, Baltimore?
 - Need better inventory of Brownfields to facilitate cleanups. Perhaps need a better working definition of a Brownfield
- Community perspective - Larry Charles
 - See PowerPoint presentation
 - Environment is not high on community concern list – survival issues come first
- Open Discussion
 - What have barriers been that we could use advisement on?
 - Legal issues/law suits – What do you do when advice from lawyers is to limit publicity of issues?
 - What is real issue for community?
 - Communities tend to make it a political issue first because do not have access to legal or technical help
 - Legal strategy around country hardly ever gets the community the results they want – lack of data, long end point, expensive
 - Recommend using legal threat as a scare tactic to encourage settlement
 - Title VI is not enforceable, lacks strength
 - Fine line between protecting human health and selling out human health
 - Step back from a process that has turned litigious, inform community of Center limitations and concerns
 - Keep communication open and honest with community related to technical information. Give them the information they request, it is up to them what they do with it.
 - How do we get the word out at the grassroots level about Center services? (Drum up business).
 - Inform other existing groups doing community empowerment
 - Connect with EPA staff person
 - Country-wide HSRC/TOSC booth at conferences
 - Center directors meeting in December – publicize program to EPA department heads
 - Send out information in University news letter
 - Post on websites
 - Continual reminders
 - Find out who all the Community Involvement Coordinator's are for NPL sites, get their contact list and outreach plan for each site

- Connect with Religious organizations – may be social center of community
 - How and where do we articulate common themes we are beginning to identify?
 - How can we connect communities with similar problems so they can learn from each other?
 - Identify projects within regions that are similar and connect them
 - Common adversity builds bonding
 - Center credibility increased
 - How can we assist in improving community infrastructure in order to get them ready for our assistance?
 - Important to include wide net of stakeholders
 - Focus group on all issues facing community and discuss where Superfund/Brownfields fit in with their concerns
 - Snowball technique to gather appropriate group
 - Find one person/entity to engage with and move from there
 - How to measure success?
 - Perception of capacity building
 - Market research – customer satisfaction
 - Needed: third party, money, large population, repeated surveying to show trends
 - Evaluation tool
- Chair selection: Co-chairs Judy Shaw and Larry Charles
- Vision statement/Role of OAC/Guiding Principles
- Follow-up
 - Larry Charles will edit vision statement and principles
 - Hedy Alavi will email document to OAC for revision and comments
 - Revisions should be mailed back to Hedy Alavi
 - Center will schedule conference calls to discuss final draft and periodically to check in and gather OAC input.

Appendix F. Vision statement developed by the Outreach Advisory Committee

**Vision Statement
Outreach Advisory Committee
Center for Hazardous Substances in Urban Environments**

VISION: With assistance from the Outreach Advisory Committee, the Center shall share its technical and research capacity to help affected communities:

- Understand the technical and scientific issues involving contaminated hazardous waste sites in their locale
- Improve their participation in the processes involved in remediation, permitting, redevelopment and reuse
- Build a mutually respectful partnership to insure an on-going capacity to advance local visions for a economically viable and sustainable future
- Participate in a continuous improvement process

MISSION: The mission of the HSRC Outreach Advisory Committee is to provide guidance to the Center through evaluation and critique of the interactions of the Center with communities; recommendation of improvements in the Center's outreach activities and liaison with external organizations in matter of outreach

SCOPE: The HSRC Outreach Advisory Committee addresses all aspects of the Center's relationship with supported communities. It identifies necessary or desirable improvements by focusing on key areas such as:

- Research relevance
- Policy issues
- Resource priority
- Leverage of resources
- Availability of expertise
- Selection of projects
- Definition of the customer base
- Community empowerment
- Accountability to and of communities
- Completion criteria
- Measures of success
- Disengagement strategies
- Emerging issues
- Periodic briefings and recommendations
- Wealth building within the community