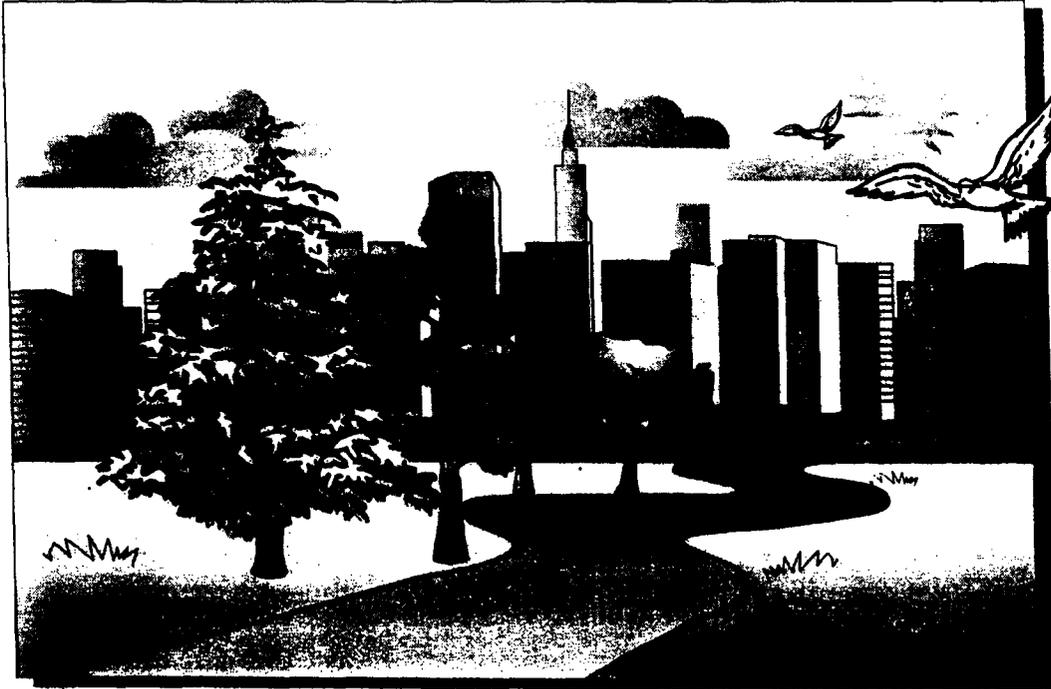


TECHNICAL WORKSHOP REPORT: Environmental Job Training for Inner City Youth



**Cuyahoga Community College
Cleveland, Ohio**

Sponsored by the
**National Institute of Environmental Health Sciences
Worker Education and Training Program**
in conjunction with
Cuyahoga Community College
and the
**National Clearinghouse for Worker Safety and Health Training
George Meany Center for Labor Studies**
April 17, 1995

**Environmental Job Training for
Inner City Youth:
Report of the Technical Workshop
January 5-6, 1995
Cuyahoga Community College
Cleveland, Ohio**

**Sponsored by the National Institute of
Environmental Health Sciences
Worker Education and Training Program
in conjunction with the
Environmental Equity Institute,
Center for Environmental Education and Training
Cuyahoga Community College and
the National Clearinghouse for Worker Safety and Health Training
George Meany Center for Labor Studies**

This report was compiled by Joyce Reimherr, Project Director, National Clearinghouse for Worker Safety and Health Training for Hazardous Materials, Waste Operations, and Emergency Response, George Meany Center for Labor Studies under contract #47651 with the National Institute of Environmental Health Sciences. It was produced under the direction of and with editorial guidance from Sharon Beard, Environmental Science and Management Fellow, Worker Education and Training Program, Division of Extramural Research and Training, National Institute of Environmental Health Sciences, who organized the workshop. Brenda Rutledge of the National Clearinghouse was responsible for the report's production and also assisted with both the editing and production of this draft. Mary Elizabeth Lewis, Clearinghouse technical information specialist, also assisted with editorial review.

**Environmental Job Training for Inner City Youth
Workshop Agenda**

Thursday, January 5, 1995

12:30 - 1:15 pm Registration

Introduction:

- 1:30 pm** Sharon Beard - Chairperson Technical Workshop, NIEHS
Dr. Marian Johnson-Thompson - Director, Office of Institutional Development, NIEHS
Dr. Terri Damstra - Acting Deputy Director, NIEHS
Remarks by:
Dr. Bailus Walker - Congressman Louis Stokes Office
- Mr. Timothy Fields - Deputy Assistant Administrator, OSWER/EPA
- Dr. Beverly Wright - Worker and Community Issues
- Sandie Crawford - Environmental Equity Institute, Cuyahoga Community College

Environmental Jobs: Labor Markets for the Inner City

- 2:20 pm** Chair, Mr. Denny Dobbin - Program Administrator, NIEHS
Worker Education and Training Program
- 2:30 pm** Ruth Ruttenberg/Yvonne Scruggs - Labor Market Study
- 3:15 pm** Break
- 3:30 pm** Chip Hughes, David Brown - RFA Announcements and Review Criteria, NIEHS

Perspectives:

- 3:45 pm** Chair, Dr. Gershon Bergeisen - OSWER/EPA
Labor: Bill Lucy - President, Coalition of Black Trade Unionist
- 4:00 pm** Government: HUD Lead Abatement Projects, Stuart Greenberg - Co-Director, Cleveland Lead Hazard Abatement Center.
- 4:15 pm** Contractor: EPA Superfund Projects, Peter Arrowsmith - Senior Vice-President, Brown & Root Environmental.
- 4:30 pm** Contractor: Mr. Michael Shannon - Associate Director of Training, National Association of Minority Contractors
- 4:45 pm** Historically Black Colleges and Universities and Minority Institutions: Dr. Robert Bullard - Director, Environmental Justice Resource Center, Clark Atlanta University
- 5:00 pm** Community Issues: Ms. Sandra Gover - Teacher-Four Winds Native American Magnet School and Mr. Tubal H. Padilla-Galiano - Director, (HOPE) Hispanic Office of Planning and Evaluation Resource Center
- 5:30 pm** Discussion

Workshop Agenda Continued

Friday, January 6, 1995

Current programs: (brief description, successes, barriers, evaluation)

Sharon Beard - Chair

- 8:00 am** Laborers-AGC/Clark Atlanta University - Haywood Turrentine and Bill Bergfeld
- 8:30 am** United Brotherhood of Carpenters - Kizetta Vaughn, Maurice Kane, Harry Melander and Ed Gorman
- 9:00 am** Alice Hamilton/Howard University/District of Columbia Housing Department
Brian Christopher and Linda Lewis
- 9:30 am** Business Development, Inc., Job Readiness Training Program
(Hunter's Point Clean-up) - Mr. Samuel Murray
- 10:00 am** Discussion
- 10:30 am** Break

Breakout Sessions

11:00 am Breakout Sessions (Identify issues and concerns)

- 1) Recruitment Issues - (Community Involvement)**
Facilitators: Donele Wilkins/Shi-King Alston
- 2) Training Issues - (Scholastic and Apprenticeship)**
Facilitators: Melissa Bakula/Deeohn Ferris/Sandie Crawford
- 3) Job Issues - (Placement and Retention)**
Facilitators: Yvonne Scruggs/Ruth Ruttenberg
- 4) Evaluation - (Training Effectiveness)**
Facilitators: Phil Berger/Bob Lofton

12:30 pm Lunch
Speaker - Dr. Robert Bullard - Environmental Justice

1:30 pm Breakout Sessions Repeated

3:00 pm Break

3:15 pm Breakout Session Report Back

- Recruitment Issues
- Training Issues
- Job Issues
- Evaluation

Discussion

Next Steps

5:00 pm Adjourn

Executive Summary

The National Institute of Environmental Health Sciences (NIEHS) workshop on "Environmental Job Training for Inner City Youth" brought community groups and environmental justice advocates together with occupational and environmental health and safety training providers to discuss ways to implement and develop programs to help young urban minorities enter the environmental job market. Under a congressional mandate, \$3 million was appropriated for the Superfund Minority Worker Training Program (MWTP) to establish a series of national pilot programs to test a range of strategies for the recruitment and training of young persons who live near hazardous waste sites or in communities at risk of exposure to contaminated properties for work in the environmental field.

These environmental career-oriented projects are to be developed within the context of other social and health needs of the community. The programs should provide pre-employment job training that addresses literacy deficits, life skill issues and general construction skills in addition to environmental worker training for hazardous waste, asbestos and lead abatement and the safety and health training that will protect them in that work.

In addition, training for the MWTP may also include enrollment in apprenticeship programs for construction and environmental remediation worker training and a program of mentoring. Projects should also enhance participants' problem solving skills, self-esteem and understanding of the need for team work in the application of technical knowledge to environmental and related problems. In this regard, the program should allow for partnerships or subagreements with academic and other institutions, with a particular focus on historically black colleges and universities/minority institutions, and public schools located in or nearby the impacted area to provide pre-math, science or other related education to program participants prior to or concurrent with entry into the training program.

Goals of the technical workshop were to develop information for the NIEHS minority worker training initiative by 1) bringing together leadership of programs which have demonstrated experience in providing worker health and safety, skills training, and employment for young adults in the environmental field; 2) having representatives of these groups present brief synopses of their program's content placing emphasis on successes and barriers; 3) establishing dialogue among leaders of these programs; and 4) providing the planning basis for a possible comprehensive workshop on this topic in 1996.

The workshop provided insight to participants on keys to successful programs. Participants identified issues and concerns that may affect the program's progress. The workshop was held on January 5-6, 1995 to be timely for NIEHS competition for Fiscal Year 1995, with Request for Applications due on February 17, 1995. NIEHS invited those with experience in training and finding sustained environmental clean-up jobs for minority youth in inner cities. Representatives were invited from building trade unions who have been working with the U.S. Department of Housing and Urban Development (HUD) on lead-abatement projects; contractor associations whose members have experience in this field; community colleges who have been conducting environmental training; community/grassroots organizations who have a vested interest in the development of urban youth; environmental justice advocates and governmental leaders supporting efforts in this arena.

The workshop was introductory so that interested parties could meet to exchange information and identify common concerns. While there was an attempt to introduce divergent ideas and representative approaches, the workshop organizers understood that the presentations covered only

a small part of the field. The workshop may be thought of as prelude to continuing and more extensive discussions in the future.

On the first day of the workshop, there were sessions on environmental jobs as labor markets for the inner city. Governmental and congressional leaders set the stage for the discussion with introductory remarks. Representatives of interested sectors including labor, contractors, other governmental agencies and communities responded with perspectives based on their experience and initiatives.

The second day, representatives from programs that feature aspects of community involvement, apprenticeship training programs, life-skills education, and job placement and retention program demonstrated their current efforts. Their presentations included brief descriptions of recruitment, training and subsequent job placement of inner city youth, measurement of successes, recounting of barriers and program evaluation approaches. The afternoon sessions were devoted to smaller breakout discussions to elicit and record issues and concerns that might affect programs such as these. A summary of each group's discussions and recommendations was presented to all in a closing plenary session.

This report documents the proceedings of the workshop and will be widely distributed. This will set the stage for future discussions that may be conducted in greater detail.

Themes and Recommendations

- * The environmental arena offers entrée into good jobs and excellent career development opportunities for inner city youth. While funding is available, inner city youth and their communities may want to take advantage of this opportunity because once these youth have received the training and certification, it is theirs to keep. Such training may secure them entrée to long-term employment through union affiliation or stimulate an interest in pursuing higher education leading towards professional employment.
- * Life skills training and social services are important for this target population of inner city minority youth between the ages of 18 - 25. Not only are developmental issues still prominent at this age, but social and personal problems related to poverty and discrimination may exacerbate normal adjustment difficulties and present obstacles to participation or completion of training. Life skills training and social services can help alleviate stress related to meeting basic needs, enhance social/personal development and improve subsequent job performance through exposure to work-related behavioral norms and remedial math and science education for those who need it.
- * Due to the inherently hazardous nature of environmental restoration and remediation work, training should not put the youth in a position where they will incur a higher health risk. Inner city youth may come to the training with some degree of skepticism. This can be healthy. Rather than being discouraged or suppressed, such attitudes should be addressed and guided into appropriate expression, i.e. towards recognition and rejection of unsafe work practices and conditions.
- * Health and safety must not be compromised in the name of career or economic opportunity, for either workers or the community. Trainees must be equipped to judge when a practice is dangerous, know the best way to correct it or protect oneself, and when to leave a job because health and safety practices are inadequate.
- * Trainees need a realistic appraisal of the employment and career ladder potential in this field. Depending upon the program, entrée can be relatively rapid, but unless skills are further developed and broadened, employment may be only temporary or intermittent. Trainees also need to know that this can characterize the construction field in general and that such jobs may also necessitate substantial travel and time away from home.
- * Partnerships between community groups, who have expertise in life skills training, social services including work readiness preparation and counseling/case management and academia, labor and industry who have trade and safety training expertise, can be very constructive and may be preferable to either group working independently. Each sector has a unique body of knowledge and experience. That expertise should be linked rather than duplicated.

I. Introduction

Purpose of the Workshop

The Worker Education and Training Program of the National Institute of Environmental Health Sciences sponsored a technical workshop on "Environmental Job Training for Inner City Youth" January 5-6 in Cleveland, Ohio at Cuyahoga Community College. The workshop was cosponsored by the Environmental Equity Institute, a component of Cuyahoga's Center for Environmental Education and Training. Representatives from labor, communities, educational institutions, governmental agencies, current grantees, contractors and other interested parties were invited to participate.

The purpose of the workshop was to coalesce the information and expertise necessary to develop program applications for the NIEHS "Minority Worker Training Program." Program personnel with demonstrated experience in providing worker health, safety and environmental skills training for minority and disadvantaged populations described these efforts, the successes achieved and barriers encountered. The workshop also afforded an opportunity for representatives from various sectors to explain their perspective on program challenges and to explore how collaborative efforts might maximize coverage and effectiveness in view of the limited funding.

Background on the NIEHS Worker Training Program

The Superfund Amendments and Reauthorization Act of 1986 (SARA), Section 126 (g), authorized an assistance program for training and education of workers engaged in activities related to hazardous waste generation, removal, containment or emergency response, and hazardous materials transportation and emergency response. Congress assigned responsibility for administering this program to NIEHS, an institute of the National Institutes of Health, within the Public Health Service of the U.S. Department of Health and Human Services. Congress authorized funds for the program for a five year period beginning in October, 1986. A three year extension was authorized in 1992. The original awardees reported training over 350,000 participants in the first seven years of the program.

In addition to the initial statutory authority established under Section 126 of SARA, two additional statutes reference the program authorities of NIEHS, thus supplementing the program created by the Superfund statute. Under Section 3131 of the National Defense Authorization Act for Fiscal Years 1992 and 1993 (P.L. 102 190; 105 Sta. 1571), an additional appropriation was authorized to support worker training for clean-up of Department of Energy (DOE) sites. An interagency agreement was executed between DOE and NIEHS for development of a model worker safety and health training program for workers involved in waste clean-up activities at the nuclear weapons facilities. Congress reauthorized the program to continue such activities in Fiscal Year 1995 and 1996. Similar provisions were included in reform of the Hazardous Materials Transportation Act (as the Hazardous Materials Transportation Uniform Safety Act of 1990). NIEHS was authorized to develop a new hazardous materials employee training assistance program for Fiscal Years 1993 and 94. The program was expanded in authorizing legislation for Fiscal Years 1995 through 1998.

Background on the Minority Worker Training Program

The NIEHS "Minority Worker Training Program" is a new initiative that builds on NIEHS-supported worker health and safety programs for hazardous waste operations and emergency response. It will begin a series of national pilot programs to test a range of strategies for the recruitment and training of urban youth for environmental jobs.

The program was prompted in part by an Executive Order 12898 on Environmental Justice issued by President Clinton on February 11, 1994. The order directed numerous federal agencies to assess their program and policies with respect to their impact on protecting disadvantaged communities from environmental health risks. The Executive Order 12898 requires that agencies conduct activities that substantially affect human health or the environment in a nondiscriminatory manner. Programs now must include plans for reaching underserved workers in the proposed target populations, especially those disadvantaged in education, language skills or limited in literacy. The order encouraged inclusion in program activities of institutions and organizations that have historical involvement and expertise in responding to environmental justice.

In line with this directive, the U.S. House of Representatives Subcommittee of Appropriations for HUD, VA and Independent Agencies added \$3 million to the \$20 million already appropriated for FY 1995 Superfund Worker Training to support development of a minority worker training program. The intent of Congress was explained in the conference report as follows:

The Committee recognizes that, as the demand for clean-up of the environment continues...in order to prevent disease, dysfunction and premature death and to protect the country's natural resources...there is a parallel demand for workers to perform the multiple tasks necessary to achieve environmental improvements. Assuring an adequate work force to perform these tasks will require an aggressive and coordinated program of recruitment, training and service delivery. The nature of these jobs...including an understanding of the behavior of certain environmental pollutants and of remediation technology...is such that they require [a] substantial level of training.

The Committee realizes that while efforts are underway to address these needs there is a growing consensus that these efforts are not adequate to meet current and projected needs for environmental workers. The scope of this need includes technicians, as well as doctoral-level physical and biological scientists. At the same time, the Committee is aware that there is a large population of males, ages 18-25, in urban communities impacted by environmental pollutants who are unemployed because they lack the skills and knowledge required for many of the available career opportunities.

The Committee urges EPA to evaluate the effectiveness of these pilot programs to determine the course of future funding priorities. This evaluation should give consideration to retention of participants in the training program, and longevity of post-training employment. None of the funds provided in this appropriation may go for supporting the post-training employment under this program. This program should be administered by NIEHS.

The full text of the conference report is included with this report as Appendix 6.

Minority Worker Training Program Requirements

On October 28, 1994, the National Institute of Environmental Health Sciences issued a "Request for Applications" (RFA: ES-95-001) for Hazardous Materials Worker Health and Safety Training." It invited applications for cooperative agreements to support the development of model programs to train and educate workers engaged in activities related to hazardous materials and waste generation, removal, containment, transportation, and emergency response.

The Minority Worker Training Program (MWTP) is one of four programs in the application. As described by NIEHS program staff Chip Hughes and David Brown, the review process is as follows. After a preliminary administrative review to determine if an application meets certain basic requirements of the RFA, it moves onto a "Triage Review" in which content experts select competitive proposals. These applications then undergo a full review. A primary and secondary reviewer is assigned to review and score each program within each application. These scores termed "descriptors" range from acceptable to outstanding. The descriptors are then weighed by the review committee and a priority score assigned the application as a whole. NIEHS program staff cautioned that each of the programs within a proposal must be strong since a weak score on one portion could lower the score for the entire application.

A "summary statement" which summarizes the review of the grant application is then developed. The summary statement includes a priority score (ranging from 100 to 500) that summarizes the overall merit of the application and each program of an application will be given a descriptor as described above. The summary statement also includes a narrative evaluation and comments on the budget. This report is used by the Program staff to assist them in making awards and funding decisions; it provides the applicant with a summary of the review, and it is available for the NIEHS Advisory Council, who provides a secondary review of the applications. The summary statements will be sent to the applicants prior to the Council meeting scheduled for September.

Applicants for the supplemental MWTP component of the application were asked to demonstrate the following criteria in addition to those general criteria required for all programs:

- Evidence and documentation of mechanisms for accessing minority worker trainees and creating employment linkages with environmental restoration contractors and hazardous materials employers.
- Ability to recruit workers from the target population for environmental clean-up jobs, specifically members of minority groups in the age range of 18-25 years old, who live in urban areas near hazardous waste sites or in communities at risk of exposure to contaminated properties, and are unemployed or underemployed because they lack the skills and knowledge required for many of the available career opportunities in environmental restoration. The EPA "Brownfields Programs" which have designated pilot programs in Cleveland, OH; Richmond, VA; and Bridgeport, CT, are examples of likely target communities for linkages with this program.
- Experience in conducting effective job skills training and worker health and safety training programs for environmental clean-up. This experience should include the ability to:

- conduct pre-apprenticeship and apprenticeship programs for construction and environmental remediation worker training;
- conduct mentoring programs aimed at assisting trainees in completing the training course;
- conduct basic construction skills training as well as specialized training related to environmental clean-up;
- conduct environmental worker training including hazardous waste, asbestos, and lead abatement training; and
- conduct basic worker health and safety training.

It had also been decided in conjunction with EPA that the Minority Worker Training Program should concentrate on "Brownfields" sites, i.e. contaminated properties within inner cities.

II. Sector Perspectives on the Minority Worker Training Program

Federal Government

National Institute of Environmental Health Sciences (NIEHS)

In opening remarks at the workshop, Dr. Marian Johnson-Thompson, Director, Office of Institutional Development at NIEHS, stated that the "Minority Worker Training Program" affords NIEHS the opportunity to address another area of grave societal concern: the education and employment needs of inner-city youth. It follows up on recommendations made at the first multi-agency/grassroots conference on environmental justice titled "Symposium on Health Research and Needs to Ensure Environmental Justice" held in 1994 to expand the NIEHS hazardous waste worker training program to include other workers and communities. NIEHS played the major organizing role in the conference, working with cosponsors that included the Office on Minority Health Research, NIH; Environmental Protection Agency (EPA), the National Institute of Occupational Safety and Health (NIOSH), Agency for Toxic Substances and Disease Registry (ATSDR), the Department of Energy (DOE); and the National Center for Environmental Health, Centers for Disease Control and Prevention. Another recommendation of the symposium called for establishment of partnerships among government agencies, labor, communities of color, Historically Black Colleges and Universities and other Minority Institutions, current grantees, educational and research institutions.

Representing NIEHS Director Dr. Kenneth Olden at the workshop, Dr. Terri Damstra, Acting Deputy Director of NIEHS, affirmed the agency's total commitment to implementing a successful minority worker training program and the agency's enthusiasm for this exciting new venture to not only address environmental justice but address the needs of local communities as well.

She noted that although NIEHS has a long history in worker health and safety training—over seven years and training of close to 500,000 workers—none of these programs have been specifically targeted for minority populations. The \$3 million provided for this innovative pilot program under the leadership of Congressman Louis Stokes, has now made that possible. The workshop was an important first step in addressing how jobs, and job skills training, and health and safety training can

serve to recruit, train, place and keep inner city youth in environmental remediation jobs. The Institute's hope was that the free exchange of concerns and ideas would foster development of partnerships, and that coalitions would form so that all could work together to build a successful program.

Congress

Participants were welcomed to the 11th Congressional District by Dr. Bailus Walker from the office of Congressman Louis Stokes. Congressman Louis Stokes was instrumental in obtaining the appropriation needed to support this effort. Walker emphasized the high priority Congressman Stokes places on the program, arising from his desire to see environmental improvement efforts contribute economic and social benefits to affected communities as well as reducing toxic exposure. He sees environmental justice as a critical thread in the tapestry of complex issues related to environmental improvement.

According to Dr. Walker, the Congressman is proud of initiatives along these lines that are already underway in the 11th district. These include the Environmental Equity Project at Cuyahoga Community College and its training component to prepare workers for well-paying jobs in all aspects of waste management; a project at Case Western Reserve University aimed at identifying environmental priorities in the area; and an effort underway at Cleveland State focusing on justice, environmental justice and economic development.

Dr. Walker underscored that Congressman Stokes believes it is especially important to insure that the program leads toward long-term productive employment. When participants complete the program, he would like them to at least have the basic tools and skills needed to move into meaningful jobs, and hopefully to build a career in the environmental area.

Their office commends the National Institute of Environmental Health Sciences under Dr. Kenneth Olden, and the Environmental Protection Agency under Carol Browner, for the cooperative effort that has been waged to assure that the program will be productive.

Environmental Protection Agency

Tim Fields, EPA Deputy Assistant Administrator for the Office of Solid Waste and Emergency Response (OSWER), described the Minority Worker Training Program as a critical part of the agenda to marry environmental clean-up, job creation, job training and contract opportunities. This program presents an outstanding opportunity to explain how all the pieces fit together.

The employment and economic opportunities related to environmental clean-up are significant. In 1980 when the Superfund program began, no one realized that it would last as long as it has or grow so large, Fields indicated. There are now more than 1,300 sites on the National Priorities List (those deemed most hazardous and deserving of federal attention among those on the full Superfund list of uncontrolled hazardous waste sites) and that list is expected to grow as large as 3,500 to 4,000 sites over the next 15-20 years. Nor are Superfund sites the only toxic contamination requiring clean-up. GAO has estimated the universe of potential hazardous waste sites to range from 130,000 to 425,000 in number.

Residents who live near both types of sites want to be involved in their clean-up for employment and economic development as well as health reasons. To further these aims, EPA has funded three "Brownfields Redevelopment Projects" that will address such things as worker training, assessing the contaminated properties, dealing with the liability issues involved, and identifying the best technologies for site clean-up, said Fields. EPA wants to continue and expand such efforts, and

in so doing develop innovative clean-up remedies that can be replicated nationwide. By the end of FY 96, EPA plans to fund a total of 50 "Brownfields" pilots. Fields emphasized, "that it is integral to the job training effort, because when people are trained for jobs, work needs to be available when their training has been completed". On the other hand, without the appropriate training, local residents can not be hired for this work. The MWTP is a way to assure that local residents will be ready for environmental clean-up in their own communities and elsewhere.

EPA's involvement with the MWTP augments its work to support quality and appropriate training already underway on a number of levels. An EPA-Labor Task Force has been formed to deal with health and safety issues at Superfund clean-up sites, as well as how to better train local firefighters and others who need to respond to emergency situations. EPA itself has trained 6,000 workers per year for the past ten years on clean-up safety at Edison, NJ, and Cincinnati, OH, training facilities. 600 "On-Scene Coordinators" and "Remedial Project Managers" have been trained annually at EPA's North Carolina training site. In addition to working with NIEHS on worker training, the two agencies have also been collaborating on trying to assess work force needs five, ten and 20 years hence.

Gershon Bergeisen, M.D., also from OSWER, described several other EPA initiatives directed toward wedding environmental protection and economic development, especially for those disproportionately affected by toxic exposures. EPA has partnered with Housing and Urban Development (the Step-Up Program) to assist inner city residents near Superfund sites seeking to enter the construction and waste management trades. These residents will apprentice for a year with employment support services such as childcare and transportation stipends furnished through a Health and Human Services program. EPA has also partnered with the Historically Black Colleges and Universities/Minority Institutions to make environmental internships available for their students at EPA regional offices. Together with the Agency for Toxic Substances and Disease Registry (ATSDR) and NIEHS, EPA will sponsor seminars on environmental health issues for African-American and other minority physicians, and physicians caring for minorities. Physicians in many communities, not just in communities of color, have not been trained to effectively diagnose and treat patients suffering from environmental health problems. EPA is making a special effort to reach out to physicians in communities near Superfund sites to train the medical community in taking occupational and environmental exposure histories. A series of booklets has been developed for physicians to educate them on environmental health issues.

Community Groups

Dr. Beverly Wright, of the Deep South Center for Environmental Justice, Xavier University, spoke to the concerns and aspirations of environmental justice activists. Jobs remain as much of an issue as toxic exposure for this population. Disadvantaged and minority communities are asking why they must suffer an inordinate share of toxic exposures and yet have less than their fair share, if any, of the employment generated to remediate the problems.

An argument made against employment of the affected population has been that they do not possess the skills necessary to participate in environmental remediation. The MWTP is a groundbreaking initiative that can help put disadvantaged community residents on a par with other workers who would be hired for the clean-up.

Wright also urged attentiveness to the following:

- 1) Providing "culturally sensitive training programs." This means training materials that begin where the youth are, but which take them to a level of competence in a new skill area.
- 2) Making connections with labor and universities. It is vital for groups that have worked independently in the past to work together in the future.
- 3) Providing training for "real jobs." There have been many instances in which federally-funded job training programs trained workers for jobs that no longer existed by the time they completed their training.
- 4) Remaining serious about worker protection. Environmental clean-up is inherently hazardous. We should not be engaged in training disadvantaged populations for jobs that will put their health at risk.

Sandie Crawford, Director of the Environmental Equity Institute of Cuyahoga Community College's Center for Environmental Education and Training, which co-sponsored the workshop, reiterated that the program must not be one that targets disadvantaged youth for "the dirty work," but instead insures their safety as they pursue a career. She also urged commitment to developing programs that help trainees create a career for themselves, not just a job, whether it be ongoing work in the environmental industry and construction or higher education that prepares them for professional work in environmental science. The short-term training is also essential, however, to protect workers who are likely to encounter hazardous substances in their current employment.

The Environmental Equity Institute works at several levels simultaneously to promote environmental employment for disadvantaged youth. The Institute has developed a curricula for students K-12 to interest them in environmental issues, to hazards they may encounter in their daily lives, and ways they can contribute to a healthier environment. They have also conducted five-day institutes for teachers on ways to infuse environmental education into the overall curriculum.

For communities, the college has conducted workshops for housing project residents to heighten their awareness about lead contamination, "Brownfields," and how to prepare them to play a role in revitalizing their communities. A goal is to have people of color involved at every stage in the clean-up process, from initial decision-making through clean-up and economic redevelopment. They have also been able to help community groups strategize on ways to prevent new hazards from being introduced into their neighborhoods. With help from the Institute, one neighborhood was able to convince a local hospital not to build an incinerator.

The Institute has also sponsored train-the-trainer sessions so minority contractors can obtain the requisite environmental training for their employees to enable the firms to bid on environmental clean-up work.

Sandra Gover, a teacher at the Four Winds Native American Magnet School in Minneapolis, MN, described the process and problems involved with establishing a school that would respect and preserve its students' cultural heritage. Their efforts demonstrate how a community can organize to remove a hazardous condition in its midst (albeit in this case a social as opposed to chemical hazard) and replace it with something positive.

In her presentation, Gover used a legend about threats of destruction of the wolf population as a metaphor for what has happened to Native Americans. According to legend, the wolf population had been dispersed and thereby isolated, then poisoned. Native Americans have, likewise,

experienced such a diaspora and poisoning. Formerly, alcohol was the poison; today it is lead paint and hazardous waste.

Located in the Philips neighborhood of South Minneapolis, the school opened in September 1991 in the renovated first two floors of a former hospital. Since it had not been originally constructed as a school and hence had no playground facilities, school and community representatives sought to create such facilities in a small city park adjoining the site. The park had become a hangout for drunks and drug dealers because of a nearby liquor store. Through an organized campaign of letter writing, phone calls, and picketing, the liquor store was eventually closed and razed. Its corner lot was converted by school and community activists into the "Pathways Project," a multi-cultural outdoor art center with benches and a walkway showcasing student art. Stone mosaics designed by Four Winds School students were created that depict the five cultural groups represented in the Philips neighborhood.

From her experience with the project, presenter Sandra Gover was able to suggest approaches that might enhance the success of environmental training with disadvantaged, minority youth. She urged cooperation with schools and use of multidisciplinary environmental curriculums to interest students in the field. Students currently aspire to become doctors or teachers because they associate these professions with doing "good work," Gover observed. Exposing students to the contribution that can be made through environmental careers should foster their interest in this type of work. These youth are going to be heroes, she said, as others working in the environmental field are heroes. They will be doing work that not everyone can or is willing to do, and they should be valued and honored for that.

Mentorships and pre-apprenticeship programs can also be helpful, as can summer institutes such as those currently held by the University of North Dakota to interest students in medical careers. Related to this, Gover emphasized that students need to understand how this training can lead to long-term career opportunities, not just a single job.

Because young people have a strong desire for recognition, Gover urged programs to do things like using bright yellow caps for program participants that might read "Environmental Safety Corps" or "Get the Lead Out" and have them staff a booth in a mall or supermarket to inform the public about environmental restoration efforts and hazards.

Life skills training as well as technical skill development are crucial to program success. Gover made the point that if the energy required to survive the rigors of everyday living is too great, young people won't be able to concentrate on their present employment. Her final points were to never underestimate the power of an activated, energized community and that projects will have the greatest success when they work together in coalition with other groups.

Last on the program for the first day was Tubal Padilla Galiano, Director of the Center for Community Resources, Hispanic Office of Planning and Evaluation, Inc. He addressed two basic matters: (1) the question of recent immigrants and their expectations of a modern society, and (2) the need to recognize the limited institutional capacity of people of color community based organizations (CBOs) and the need for an affirmative commitment to work in building such capacity.

In regards to expectations that recent immigrants have of a modern society, Padilla Galiano first pointed out that the prevailing attitude in society almost unquestionably accepts modernization as progress. There is a prevailing ideology that says "modern is better and safer." This attitude, true to society as a whole, may have an even stronger hold on recent immigrants coming from Latin America and other third world countries. Immigrants coming from these countries tend to believe that if it can be bought in a grocery store it is not dangerous. There is also an attitude, fostered from years of working in countries with little if any workplace health and safety regulations, that workers' health and safety is already taken care of by efficient plant managers and government regulators.

Furthermore, their experience with repressive governments and dictatorial employers, and their residency status are factors that constrain their ability to act even when aware of and concerned about health and safety matters.

Padilla Galiano pointed out that in designing training programs for recent immigrant workers the mind set and conditions discussed above must be a primary consideration. For these workers, it is not simply a matter of making the same materials and information available in Spanish, Laotian, or which ever other language. Training must start at an even more elementary level that stresses workers' right to a healthy and safe workplace and that demystifies modern science and technology as foolproof.

Padilla Galiano ended his intervention by pointing out that many of the people of color CBOs that will be responding to future RFPs will not have the institutional experience and capacity equivalent to the mainstream private and nonprofit organizations that may also respond. The competition will be among "unequals" and affirmative steps must be taken to level the field. While people of color CBOs will not have the length of experience or the large number of qualified staff that others may, they must be provided with the opportunity to build such experience and to develop their staffs' capacity.

Labor

Conflicts between organized labor and the environmental movement have been well-publicized. The reasons for such conflict are simple, explained Bill Lucy, secretary-treasurer of the 1,350,000-member American Federation of State, County and Municipal Employees, second largest affiliate of the AFL-CIO. Trade unions have a responsibility to protect and promote the interests of their members. Those interests may at times appear to be at odds with environmental interests. On the other hand, trade unionists need to understand that they are part of a broader movement whose mission is to uplift the well-being of all people in society and to create a safe environment in which all can live. Through involvement as a member and currently the President of the Coalition of Black Trade Unionists, which is by and large a community-based activist group of trade unionists, Lucy says he has come to see these issues from a community as well as a trade union perspective. He believes that organized labor cannot survive without an agenda that reflects the aspirations of the communities from which its members come.

Labor and community groups have numerous interests in common. Trade unionists need to be involved in economic development and job development so that members who have lost their jobs can become reemployed and so that growth and development is broad enough to bring others into the job market and unionized jobs. Budget-driven downsizing of municipal services is clearly impacting on solid waste removal and a whole host of other environmental problems in the urban community. Job training, affirmative action, environmental clean-up, and workplace health and safety are all being targeted by the new congressional leadership who believe such programs create undue burdens for American business and the American taxpayer. Another proposal would virtually bring the regulatory process to a halt, Lucy reported, despite the fact that environmental and workplace safety regulations are essentially the only things standing between common people and injury or illness on the job or as a result of the environment in which they live.

The trade union movement sees great opportunities for jobs, job training, and skill development in environmental clean-up of urban areas. Both communities and unions are on the threshold of creating some new and innovative programs, programs that have the potential of creating career ladders for inner city youth in good paying jobs in an industry that should experience growth. These jobs also offer skill building that can be transferrable to and support long-term employment.

The trade union movement has much to offer community groups as well as common interests. Trade unions would like to forge relationships through which they can be actively involved in sharing their skills and expertise with community groups. Trade unions can offer communities the kinds of bargaining skills, negotiating skills and political expertise in terms of knowing the relationship between governmental agencies responsible for environmental clean-up needed to develop environmental jobs and training programs in a community. There are thousands and thousands of communities that could benefit from a coalition of this type.

Minority and Other Environmental Contractors

Peter Arrowsmith, Senior Vice-President, of Brown and Root Environmental Engineering and Consulting, Inc. talked about the issue of minority employment from the perspective of a non-union contractor. Brown and Root has been in the contracting business since 1980 and manages first responder training programs in Cincinnati. Its annual revenues are approximately \$3.5 billion worldwide, about \$700 million of which is in government contracts. Arrowsmith concurred that this is a lucrative field, and that work is currently moving from the assessment stage into actual clean-up.

Brown and Root selects subcontractors, sometimes local firms, to carry out much of the work which they supervise. They maintain an aggressive program to meet small and disadvantaged subcontract goals. To support this, they organize local job and opportunity fairs, retain an advocate for small and disadvantaged business concerns, and operate a mentor-protégé program to help these firms qualify for contracts. The latter includes assisting with firm credit, project bonding, insurance (Brown & Root purchases a "wrap-around" liability policy for all its subcontractors), early program payment, and advice and training on health and safety, accounting and quality. They have also been working on development of a "Prequalification and Nationwide Skills Database" on small and disadvantaged contractors.

His advice to communities seeking employment on local environmental projects is to work on including provisions for local hires in the contract requirements and specifications. This assists contractors who wish to do so by insuring a level playing field for all bidders.

Mike Shannon, Assistant Director of Training Programs for the National Association of Minority Contractors, described what his association has been doing to promote environmental business for its members. The association has worked with Congressman Stokes and the Small and Disadvantaged Business Office of EPA in response to an expressed need for environmental training. After an initial pilot on asbestos abatement, they held workshops throughout the country on leaking underground storage tanks, radon, and hazardous waste issues. The training has been offered free and is OSHA and EPA approved.

Shannon cited a need for minority contractors to become more involved in developing specifications for environmental clean-up work. His advice to S/SDB contractors interested in environmental business opportunities was to find a niche and build upon it.

Historically Black Colleges and Universities/Minority Institutions

Dr. Robert Bullard, author of such books as *Dumping in Dixie: Race, Class, and Environmental Quality*, *Confronting Environmental Racism: Voices from the Grassroots*, and *Unequal Protection: Environmental Justice & Communities of Color* represented the perspective of the historically black colleges and universities/minority institutions. In addition to enrolling some 17% of the nation's African-American university students, these schools have also produced a significant proportion of the nation's black professionals.

The problem of environmental justice is a serious one for African-American communities. Besides health problems, contamination and the associated liability problems are also causing disinvestment in communities that sorely need the reverse. Nor is this a problem for only a small minority of the African-American population according to Dr. Bullard. As late as 1995, 82 percent of all African-Americans lived in neighborhoods where they are in the majority and, hence, probably not that far from potential contamination, in public housing and elsewhere. So it is important to build environmental awareness among the African-American community as a whole.

In Dr. Bullard's role as Executive Director of Clark Atlanta University, Environmental Justice Resource Center, he is trying to advance such goals. The center has developed a database on African-American professionals in such fields as toxicology, epidemiology, demography, law, economics, and medicine, particularly occupational and environmental medicine. These contacts can serve as resources when communities need information about toxic contamination, environmental regulation, and economic opportunities related to environmental clean-up. The African-American community has the necessary expertise, Bullard pointed out, but these resources need to be educated about their role in advancing environmental justice. This database also includes minority contractors so that ties can be forged and resources pooled to improve their competitive position when applying for environmental contracts.

He has also developed a directory titled *People of Color Environmental Group Directory, 1994-1995*, that identifies groups in the U.S., Canada, and Mexico who are working on environmental justice issues. In many instances, these groups are located near environmental hazards such as Superfund sites, lead-contaminated public housing, nuclear waste, or water problems. The directory is available free of charge by calling the Charles Stuart Mott Foundation at 810-766-1766. The Mott Foundation supported the project.

Dr. Bullard believes that communities themselves need to be the driver in empowerment and enterprise zone mechanisms and that health and the environment need to be integrated with the employment and economic development infrastructure within these zones.

He also states that it is imperative to achieve technology transfer via a vis the information superhighway. Minority and community groups need to develop the internal capacity to operate and communicate "on-line." Although children are highly receptive to these new technologies, those over 30, many of whom have never used a computer, also need to become comfortable with this technology so that all sectors of society move forward on an equal footing.

III. Work Force Analysis of Minority Employment in Environmental Remediation

In conjunction with EPA, NIEHS commissioned Ruth Ruttenberg & Associates, Inc. to conduct research on work force trends for hazardous waste clean-up. The study was a "microeconomic" analysis on the type and quantity of jobs on hazardous waste sites across the country. Extrapolation from this study is expected to provide insight into general work force requirements. An additional study, a needs assessment for HAZMAT training at U.S. Department of Energy (DOE) facilities, also provided some useful work force demographics.

Although investigating the status of minority employment had not been a specific objective in the original research plan, Dr. Ruttenberg's study was able to provide some information from their data that was relevant to this issue. Equal Employment Opportunity (EEO) data were available on minority employment at DOE sites, and data from the EPA/NIEHS (hereafter EPA) Labor Market Study, particularly the Lipari, New Jersey Superfund site, were developed to provide information about local employment at sites and commuting patterns. Dr. Ruttenberg, President of Ruttenberg

and Associates, Inc., reported on the findings together with Dr. Yvonne Scruggs, of the Urban Policy Institute, Joint Center for Economic and Policy Studies, who has also been involved with the project.

The DOE study performed by Ruth Rutenberg & Associates, Inc. looked at 28 of the nuclear facilities and projects scheduled or on-line for clean-up (see Figure 1). Since federal funding was involved, contractors were required to collect EEO data in nine categories. A comparison of the sites' EEO data and local demographics indicated that DOE has done a good job, for the most part, in terms of overall minority employment. The record appeared strongest, however, in relatively rural communities and those with the smallest minority populations. In terms of the nine major categories of employees who work on a site, seven of the 28 sites had an overall minority work force at least as high as the overall minority population in that county. But these sites were all in areas where the minority population was under ten percent. In larger cities the relationship between minorities employed and minorities as a percentage of the local population was not nearly as good. At the Fernald plant near Cincinnati, OH, for instance, the county in which the site is located has a minority population of 21 percent, but minority employment at the site was well below that, except in the lower paying jobs (see Figure 2).

The EPA Labor Market Study analyzed payroll records for ten clean-up sites and other less detailed data from a number of other sites. The data supported what other speakers had already stated, that the Superfund clean-ups involve "Good Jobs," i.e. jobs with good wages and benefits. (See Table D on comparisons of wage by job title and site.) The average wage was over \$20 per hour. For non-union jobs, the average wage was in the \$9 per hour range.

A major issue in analyzing the data is defining "local community." This can differ from site to site, but a local community is generally smaller than the relevant "labor market." At a Shiprock, New Mexico site, 96 percent of the work force was drawn from the Navajo Nation, though that included some workers who traveled from 50 or more miles away. The Navajo Nation was apparently successful in obtaining employment for its members.

The Lipari Superfund site in New Jersey exemplifies some of the issues involved in defining local community. Data from the study were used to compare percentage of gross pay to the distance workers traveled to various job sites (see Comparison Chart E). For the Lipari site, it was evident that many workers were traveling more than 25 miles to work. It was later discovered that a substantial number of workers originated in Atlantic City, which has a significantly higher minority population than the county of Gloucester where Lipari is located. Another chart (5) reveals a disparity in wages between the site and surrounding communities based on percentage of non-white population. The higher the percentage of non-white population in a community, the greater the difference between what workers were paid on a site versus the average wage in their community of origin. This raises further questions about how community is to be defined if it is to benefit disadvantaged groups. Although total unemployment in the area is only five percent, some six communities in the area had unemployment rates exceeding seven percent and up to ten percent. Nineteen percent were living in poverty.

The issue about defining the boundaries of communities is consistent with theoretical conversations going on about a redefinition of regional economic markets, Dr. Scruggs reported. The model of the U.S. as a single economic market composed of many sub-markets that in turn are defined by political boundaries is no longer appropriate. Too often certain sub-markets have very little to do with or are minimally affected by the national picture. For example, while the national rate of unemployment is only 6 percent, in certain African-American communities unemployment is 15 percent. Among undocumented aliens, the unemployment rate would be much higher. Dr. Scruggs proposed that a more useful model might be to think in terms of regional economic markets and/or economic magnets. The outer circle of who responds to that economic magnet would be an

alternative means of defining the economic sub-market. If people are unaware of the economic magnets in their midst, however, because of the way such markets have been traditionally defined by political boundaries, they may fail to take advantage of important opportunities.

Dr. Scruggs suggested that this model may be useful in re-ranking the National Priorities List (NPL) sites for clean-up. Ideally it should be possible to clean up all of the most hazardous sites simultaneously. However, that is usually not economically feasible. So if there were some additional measures that include other values as well as severity of the hazard--such as levels of unemployment, low family median income and/or community involvement with issues of environmental equity--then it might be possible to rank order the clean-up in more realistic and affordable ways. Identifying where these aberrant demographic characteristics appear could give some options as to what sites would be selected next and even tie into such pragmatic opportunities as empowerment and enterprise zones.

The next stage, according to Dr. Scruggs, would be to pre-identify various permutations or combinations of job categories and when the jobs will be coming on-line; then to negotiate recruitment with identifiable leadership from the communities, both elected and institutional, especially those concerned with environmental equity issues, on training and hiring for these jobs.

In a lively discussion which followed, several points were made by workshop participants including the following.

1. A great deal of money is spent off-site as well as on-site on these clean-ups. It is important to assess the full range of economic activity they involve.
2. Not just "end of the pipeline," but hazardous waste generators also need to be looked at in terms of minority employment potential.
3. Blue-collar work is not the only type of employment associated with environmental clean-up. Other jobs are created as well--such as food service worker, lab technicians, etc. There are also opportunities for minority professionals such as architects and engineers.
4. Skills and tasks are phased in over a period of time which also affects employment potential and longevity. Some jobs seem to be more locally based. This may be why some trades seem to be concentrated in certain areas. Some of the major contractors bring subcontractors and employees along with them to a job. Subcontractors, however, seem less likely to bring employees with them and more likely to hire locally.
5. Some communities have been able to negotiate "local hire" agreements, most notably the Shiprock, New Mexico uranium mill tailings remediation project. Shiprock illustrates that local people can be trained for employment on these projects. Nevertheless, formidable barriers persist, including the recurring problem of racism. Also, many subcontractors and even contractors are family businesses which tend to hire family and friends, not persons from other communities, races or ethnic groups. Many minorities have also found it difficult to penetrate the union ranks.
6. Construction jobs tend to be intermittent. The hourly wage may be high, but the annual salary more modest.

**ENVIRONMENTAL JUSTICE
FERNALD**

<u>Contractor</u>	<u>County</u>	<u>Total Population Aged 18-64</u>	<u># Minority</u>	<u>% Minority</u>
Westinghouse	Hamilton, OH	525,872	111,187	21%

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SITE WORKFORCE

	<u># Employees</u>	<u># Minority</u>	<u>% Minority</u>	<u># To achieve equity*</u>
Official & Manager	215	21	10%	24
Professionals	498	56	11%	49
Technicians	108	8	7%	15
Office & Clerical	212	18	8%	27
Craftsmen	130	5	4%	22
Operatives	225	41	18%	6
Laborers	32	6	19%	1
Service Workers	69	18	26%	—
OJT White Collar	---	---	---	---
OJT Blue Collar	---	---	---	---
Apprentices	---	---	---	---
TOTAL	1,489	173	12%	na

FIGURE 2

Note: Population Data from 1990 Census. DOE facility from 1991 EEOC data, DOE Headquarters.
 * Only noted if % of minority workforce is less than % of minority population.

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**Table D for SITE COMPARISONS
Hourly Rates by Predominant Categories of Worker by Site**

Categories	Bog Creek	BROS	CASAAD	Grand Junction	HOLLI.	Lipari	Paducah	Rifle	Shiprock
Asbestos	-	\$24.81	\$10.69	-	-	\$22.15	-	-	-
Carpenter	\$25.05	\$24.70	-	-	-	\$23.21	\$19.81	\$16.38	\$16.19
Cement	\$21.64	-	-	-	-	\$22.26	\$19.17	\$17.66	\$14.21
Driver	\$14.30	\$18.52	\$26.72	\$12.40	-	\$17.76	\$16.53	\$16.60	\$13.51
Electrician	\$26.05	\$21.15	\$32.74	-	-	\$22.20	\$21.99	\$20.79	-
Iron Worker	\$24.02	\$22.02	-	-	-	\$21.72	\$22.08	\$17.60	-
Laborer	\$24.49	\$17.87	\$20.09	\$10.85	\$9.32	\$16.60	\$15.32	\$13.40	\$10.80
Mechanic	\$16.81	\$17.31	-	\$13.81	-	\$23.52	-	\$17.45	\$14.22
Operator	\$40.65	\$24.63	\$32.35	\$13.66	\$10.33	\$22.21	\$19.76	\$15.11	\$14.07
Average ¹	\$32.50	\$21.50	\$23.85	\$11.35	\$9.98	\$20.68	\$18.59	\$14.66	\$11.32

Note: Some numbers in comparison tables may differ slightly from number in site summary tables due to a minor variance in calculations. Any inconsistencies will be eliminated in the final report.

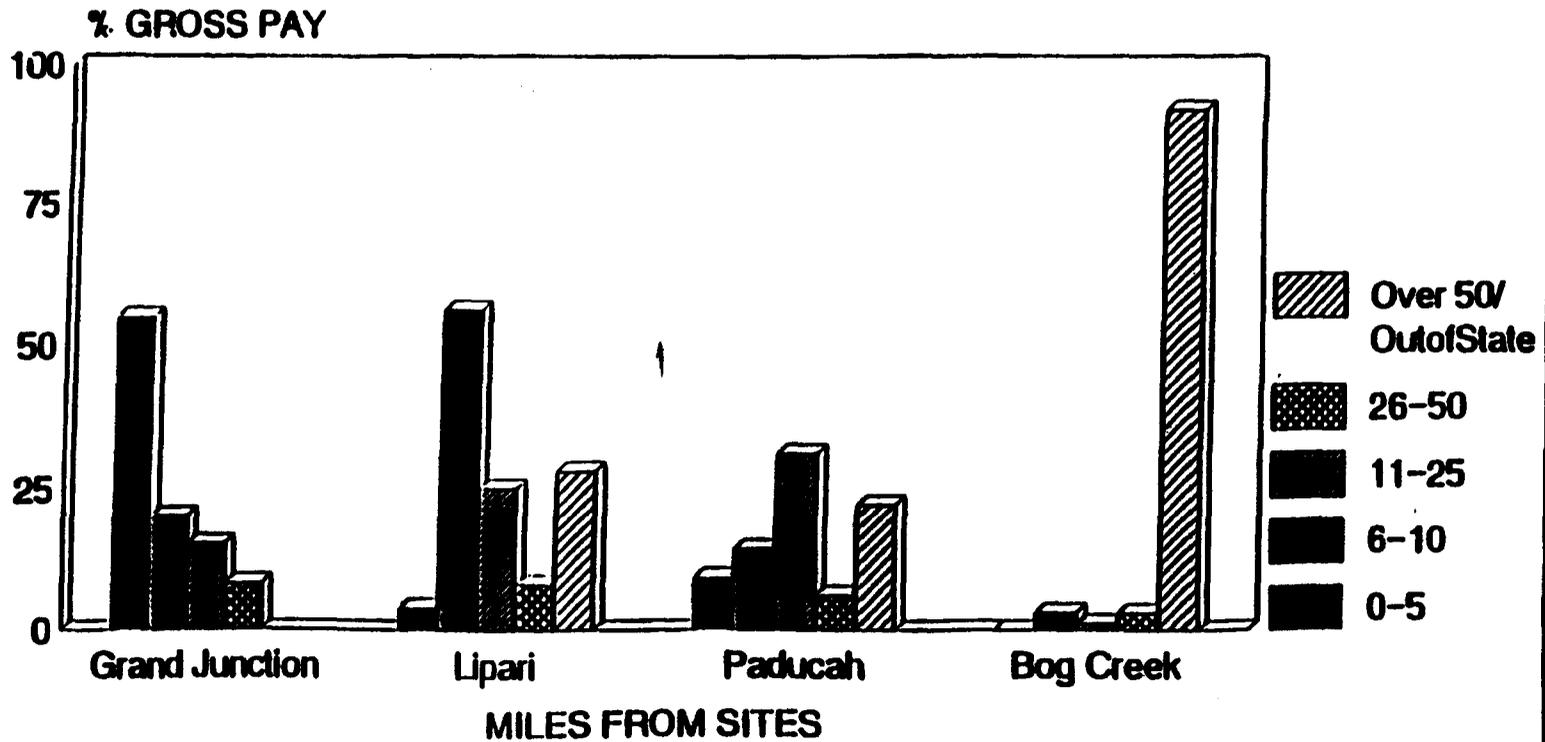
KEY:
 BROS Bridgeport Rental & Oil Services
 CASAAD Sacramento Army Depot
 HOLLI Hollingsworth Solderless Terminal Company

¹ Average is overall for all crafts, even those not included in this table. Bog Creek average is especially high due to issues of overtime and call pay.

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Comparison Chart E

% Gross Pay by Residence of Worker Grand Junct., Lipari, Paducah, Bog Creek



KeyChart 2000

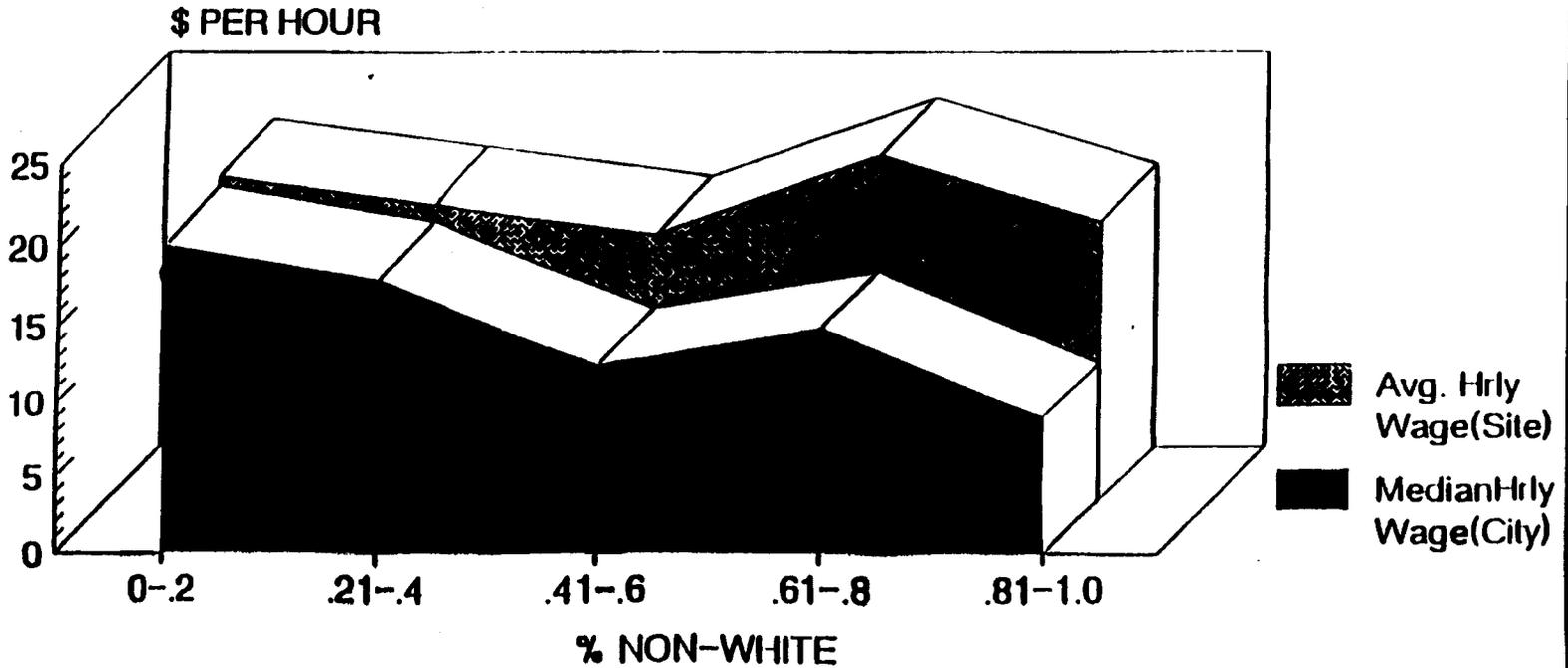
COMPAREE

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CHART E

Chart 5 for LIPARI LANDFILL

Community Income & Site Wages Compared by Grouping of Percent-Non-White for Cities of Workers at Lipari



KeyChart 2000

COMPARE

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CHART 5

IV. Current Programs to Involve Minorities in Environmental Work (Brief Description, Successes, Barriers, Evaluation)

Cleveland Lead Hazard Abatement Center

In terms of seriousness, extent of the problem, number of people affected and the certainty of human health effects, lead is the most significant hazardous waste problem Cleveland faces at present, contends Stuart Greenberg, Co-Director, Cleveland Lead Hazard Abatement Center. The Lead Hazard Abatement Center is a partnership between "Environmental Health Watch," a small, non-profit environmental group and the Cleveland Department of Public Health.

The Center is active in several areas. It offers training that combines skill development with work experience and is funded by federal job training monies. The Center also offers short courses on lead hazard abatement through its affiliation with an EPA regional Lead Training Center at the University of Cincinnati. The Center also operates crews that do lead paint abatement in the homes of lead-poisoned children. The work is supported through the city government and community development block grants. They have also been engaged in research on these issues with support from the Centers for Disease Control and Prevention.

A major aim of the project has been to offer people from the area who have been negatively impacted or even poisoned by lead exposure the opportunity to obtain a job through the clean-up. After visiting lead-based paint abatement projects around the nation, the Center designed a program comprised of EPA's five-day course, spread out over a two to three week period to make possible inclusion of workshop and hands-on activity. Their perspective is that trainees are better able to assimilate the classroom material if it is spread over a couple of weeks and interspersed with hands-on skill training. Upon completion of the classroom instruction and workshop skills training, trainees participate in paid work experience, working on the Center's lead hazard control projects. Trainees receive a minimal stipend during the first two weeks and then are paid an hourly wage for the workshop and work experience training, starting at \$6.00 per hour and rising to \$8.00 per hour.

Enrollees are not exclusively young people, and the mix of ages--from 20 to 55--seems to be beneficial to all. The training emphasizes understanding the reason things are done in a certain way on a lead hazard control job. Whether it is safety, effectiveness, regulations, insurance requirements, or cost, if the trainees understand the rationale, they are in a better position to exercise good judgment on the job. A focus on the exposure pathways of lead poisoning for both children and abatement workers makes clear the relationship between a safe job and an effective job.

Most employment in the lead hazard control field is in public housing and in HUD-subsidized lead abatement projects in private housing. There is very little work in the unsubsidized, private market. Lead abatement work is not likely to have much potential for long-term employment as a free-standing specialty. Therefore, lead abatement training should be integrated into both the housing renovation and environmental remediation fields where trainees can learn broader and more marketable skills.

Greenberg pointed out that many small contractors have work skills and experience that could transfer to lead abatement--painting, carpentry, cleaning, landscaping--but face difficulty in meeting HUD, EPA, OSHA, and other safety and environmental regulations. The Cleveland Lead Hazard Abatement Center and Cuyahoga Community College will be providing technical assistance to low-income and minority contractors who can hire training program graduates to work on HUD and public housing projects.

Training resources recommended by Greenberg were the *EPA Model Worker Course for Residential Lead-Based Paint Abatement* produced by the Alice Hamilton Occupational Health

Training Center, the training guide *Protecting Workers and Their Communities from Lead Hazards* by the Society for Occupational and Environmental Health, and the network of NIOSH-funded Educational Resource Centers.

Laborers-AGC Education and Training Fund: Youth Apprenticeship Program

Bill Bergfeld, Assistant Director for Environmental Programs, and Haywood Turrentine of the Laborers-AGC, described a collaborative effort between the Philadelphia Housing Authority, Youth Services Corps, and Contractors' Association funded under Housing and Urban Development' Youth Apprenticeship Program. The program's aim is to create solid training and employment opportunities for young adults leading to full union membership and the opportunity for long-term employment in the construction industry and related fields. The program offers at-risk youth a structured program of physical training, personal growth and development activities, academic enhancement, career development and job readiness training and work/service experience. In the process, the trainees will rehabilitate 1000 units for the Housing Authority. Additional funds should be forthcoming for further hazard abatement work in Philadelphia public housing. Specifications for the work will be written to require hiring of these trained local personnel.

The Laborers-AGC and its local training affiliates develop training plans that include training workers in basic construction, lead and asbestos abatement skills, OSHA health and safety training, tool and material recognition, first aid, and traffic control among other subjects.

The program began with service to displaced military personnel, with the American Legion providing intake and screening. Later, the program expanded into training and placement for displaced minority workers in collaboration with the Historically Black Colleges and Universities.

The full range of construction trades, besides the Laborers' union, will be able to participate in the program if they commit to reserving a certain number of apprenticeship slots and new hires reserved for public housing residents.

United Brotherhood of Carpenters and Joiners of America: Education and Training Institute

The United Brotherhood of Carpenters and Joiners of America Education and Training Institute (CETI) was originally established in 1982 as the Century Freeway Pre-Apprenticeship Program. It currently enrolls youth and adults in 280 to 320 hours of basic construction training. CETI participants are prepared for post training employment through a program that emphasizes the work ethic and stresses punctuality, positive attitudes, attendance, and job performance. In reviewing the program at the technical workshop, Maurice Kane, Executive Director of CETI, emphasized that trainees are taught "quality" and how to "do the job right." At the same time, however, CETI seeks to make the training no longer than necessary, instead training as closely as possible to contractors' actual requirements. The primary focus of CETI's construction pre-apprenticeship training is to establish trainees as apprentices so that those interested can move into a construction career.

A remedial education program is offered to upgrade participants' basic reading, writing, and numeracy skills. A physical conditioning program is also offered to prepare participants to withstand the physical rigors common to construction work. Participants acquire hands-on construction training by performing duties relevant to their selected construction career interest on actual projects. There is also a social services component to provide help with job placement, individual problems, and other employment-related needs.

Over 4,000 trainees, 85 percent of whom are minorities, have been placed in jobs through this program. Seven of CETI's instructors have been trained to deliver lead paint abatement courses. This training is being added to the CETI curriculum. Hazardous waste training will also be included.

Working Together for Jobs

The United Brotherhood of Carpenters and Joiners and the International Brotherhood of Painters and Allied Trades are involved in another multi-union collaboration with the Sheet Metal Workers International Association, the Plasterers' and Cement Masons' International Association, the International Union of Operating Engineers and the United Union of Roofers, Waterproofers and Allied Workers that involves an agreement to offer apprenticeship and training to public housing residents. This agreement followed a call from Secretary Henry Cisneros, of the department of Housing and Urban Development (HUD), for partnerships and cooperation on HUD's effort to:

- Restore and revitalize the communities and neighborhoods of urban America;
- Preserve and rebuild our public and assisted housing stocks, and;
- Create ladders of economic opportunity for residents in the process.

Agreements have already been signed in San Francisco, St. Louis, and Cincinnati among other cities. Lead abatement training for public housing residents is already underway, enabling them to remove lead paint from their own housing facilities as well as providing them with new career opportunities.

Edward Gorman of the UBC Health and Safety Fund and Mike Andrews of the International Brotherhood of Painters and Allied Trades were instrumental in developing this program. The presentation was made by Kizetta Vaughn, Environmental Justice Coordinator for the Carpenters' Health and Safety Fund.

Weatherization Research and Production, Step-Up Program, and Project for Pride

The "Weatherization Research and Production" project was created through transformation of a community action agency into a private, non-profit organization. In existence since 1986, it has trained and placed 170 people. After training, participants spend two years in employment with the agency itself, then are spun off into employment with private contractors.

The program seeks to use the environmental training to create entry level employment. They are now moving from weatherization projects into lead-based paint abatement as a precursor to more broad-based employment. In introducing these Minneapolis, MN based programs, project director Harry Melander of the United Brotherhood of Carpenters, emphasized the danger of training and career opportunities being so short-term that they only serve to further frustration.

Their group also participates in the "Step-Up Program" which seeks to bring new populations into construction apprenticeship. The "Step-Up" program is a new employment and training initiative to provide a ladder from hopelessness to self-sufficiency for those who have not had access to mainstream work opportunities. Step-Up provides residents of public and Indian housing and other low-income persons with real work and real wages while they learn marketable job skills. It can also play a key role in an empowerment zone or enterprise community as a strategy to promote economic development, neighborhood revitalization, and stability. Its objectives are to:

- Promote career development through apprenticeship;
- Spur local public-private partnerships;
- Concentrate policy and decision-making at the local level; and
- Build a foundation for long-term employment and self sufficiency.

Both projects use the Urban League for recruitment and individual counseling. They also contract with the Urban League for provision of essential supportive services that are often neglected in other programs, such as transportation and daycare stipends. The program also provides remedial help with basic skills as well as exposure to the construction trades.

A third program is "Project Pride" in which people from one disadvantaged city neighborhood are placed directly into construction apprenticeship programs. These apprentices have been involved in rehabilitating 12 "clean houses" which are used to house families whose properties have been condemned until alternative space can be found.

Job Readiness Training Program: A Comprehensive Pre-Apprenticeship Training Program

This training program based in the Bayview-Hunter's Point community of San Francisco, is a collaborative effort between Business Development, Inc., acting as the primary liaison, in conjunction with the City and County Public Works Departments. Other groups involved in the training program include Young Community Developers, Inc., Southeast Community College, Labor Training Facilities, Association of General Contractors, San Francisco Building and Construction Trades Council, and others.

Business Development, Inc. is a construction and engineering consulting firm with years of special service and experience in the field of construction management. The program targets its training for youth from the ages of 18-25 from designated areas and seeks to equip them with the personal maturity and professional pride necessary to enter the world of building and trade construction. Training plans also include building and construction trade skills, life skills and esteem building, health and safety training, hazardous waste handling training, and drug and alcohol awareness.

Samuel Murray, who provided an overview of the program at the technical workshop, cited as one example of the social service support the project provides, its partnership with a local non-profit foundation to appropriately resolve the penal records for some trainees. They also collaborated with community colleges to make it possible for interested trainees to continue study in the environmental sciences.

To foster employment opportunities for their trainees, the company has established good relationships with various prime and subcontractors. Making job blueprints available for minority contractors to review in preparation for bidding is one method they have used to build such relationships.

The project seeks to instill positive work habits and realistic expectations about the world of work, i.e. that construction workers frequently have to work outside their communities; that work starts early, usually at 6 a.m., and employees are expected to be on time.

The project is currently funded by HUD, the Federal Highway Administration and five out of the eight local Private Industry Councils. The project also maintains a general contractor's license so it can do small jobs such as assisting groups like "Habitat for Humanity," and thereby give the trainees real-life work experience. Not only are their graduates actually working in construction, but many are moving beyond that into college programs. This program showed them that they were more than they thought they were and that they could overcome some of the obstacles in their lives.

Alice Hamilton Occupational Health Center: Environmental Sites Training Support Project (ESTS)

ESTS was initiated in 1993 by the District of Columbia Department of Housing and Community Development and funded for operation at the Alice Hamilton Occupational Health Center with grants from EPA and HUD. The purpose was to appropriately train minority and low income residents of disadvantaged communities for career tracks in environmental remediation. The ESTS project focused on areas of lead-based paint and asbestos product abatement in Ward 8 of the District of Columbia.

Local and community/advocacy groups assisted in a variety of ways including identifying potential applicants for the training. Life skills training was included in the program and designed to overcome obstacles to success such as finding appropriate and affordable childcare or public transportation, dealing with the lack of job experience, and crisis management. Health and safety training included asbestos and lead paint abatement, first aid and CPR conducted by AHOHC, and trade and field training conducted by the International Association of Heat and Frost Insulators and Asbestos Workers. The union connection proved invaluable since it was through the union that trainees achieved long-term employment. Training was provided in English and Spanish.

Project leadership, Linda Lewis and Brian Christopher, provided a helpful assessment of the problems such programs can encounter. A clear and realistic explanation of program goals is essential, they found. Because the program purpose had not been clearly defined and articulated at the outset, early recruits came to the classes expecting to learn enough to open their own environmental remediation firms. This was not a realistic outcome and contributed to a higher attrition rate among the earliest classes.

Sixty people enrolled in the program and 52 actually completed it, most obtaining employment as soon as they graduated. The intermittent nature of the employment remained a problem, however. It had to be impressed upon graduates that they would need to be persistent about calling in for work. Another problem was that the local housing authority had made a commitment to obtain jobs for the graduates and had not done so. To track employment, each group developed a phone/contact tree through which employment status updates could be reported to the Center. This was particularly important since some of the students were, in fact, homeless.

The high motivation and interest of the trainees proved inspirational. In the process of training for jobs, they became committed to improving the environmental health within their own neighborhoods and communities. In addition, the need for crisis management should not be underestimated with severely disadvantaged populations, they emphasized. Several of the trainees were exposed to violence during the course of training, and on more than one occasion, classes were interrupted for prayer. One participant, who had been especially helpful in terms of building group cohesion, died shortly after graduation. The Center developed an award in his honor for the trainee in each class who contributed the most to supporting full participation and cooperation by everyone in the class. The awardee is chosen by the students in each round, and the presentation is made at the graduation ceremony.

V. Discussions and Recommendations from Breakout Groups

Breakout Session 1: Recruitment Issues-Community Involvement

Facilitators: Donele Wilkins, Director of the "SET" Program, SEMCOSH (Southeast Michigan Coalition on Occupational Safety and Health/Midwest Consortium)
Sha-King Alston, New England Consortium.

Discussion Questions:

- 1) How should communities be involved in recruitment issues?
- 2) As far as community involvement, what already established organizations and groups could be contacted to help support the minority worker training program?
- 3) Who are the major players in the community that can be instrumental in the success of this type of training program?
- 4) How will recruitment of youth from effected communities be accomplished?

Report Back Summary:

The group felt it was imperative to involve community groups in the recruitment process and the training effort from beginning to end. Applicants were also urged to include some youth representation in planning their projects.

Youth councils and organizations, rehabilitation centers, probation officers and organizations, housing agencies, and recreation departments were some local contact points to work with on recruitment. The community groups are also knowledgeable about resources in the community that can help solve problems. Public officials remain key players because they are often able to mobilize collective action. Media may also play a helpful role. The affected population needs to be involved to some extent in program evaluation in order to assure that the community's needs and interests are met.

Breakout Session 2: Training Issues-Scholastic and Apprenticeship

Facilitators: Melissa Bakula, International Brotherhood of Teamsters
Deeohn Ferris, Washington Office of Environmental Justice
Sandie Crawford, Director, Environmental Equity Institute, Center for Environmental Education, Cuyahoga Community College
William Bergfeld, Director, Environmental Programs, Laborers-AGC

Discussion Questions:

- 1) What does life skills training include?
- 2) How long will the training program last?
- 3) Who will administer the life skills and pre-math and science education?
- 4) What will be the role of public schools and HBCUs/MIs in the program?
- 5) How in-depth should the mentoring role be in the program?
- 6) Will the apprenticeship component of the program occur simultaneously or after the educational and life skills training?

Report Back Summary:

There are special issues that if addressed will result in a greater likelihood of success with this population. For instance, as young adults, developmental issues are more prominent than they would be for a group of middle-aged displaced workers.

Self-esteem problems may be an issue. As one group member noted, a predictable and probably healthy skepticism will question whether people want to recruit minorities for these environmental jobs. The training has to convince them that technology and work practices exist that will protect them while they, in turn, are protecting and cleaning-up the environment.

This target population is also likely to experience high levels of disruption in their personal lives. Violence in the home and community, as well as problems related to drug/alcohol abuse, can contribute to problems during training. Transportation and childcare arrangements can be cumbersome and undependable. It was generally agreed that programs need some means for helping trainees to get and keep their lives sufficiently organized to allow them to take advantage of the program. Such "life-skills training" should be provided prior to the apprenticeship component of the training program, however. The consensus seemed to be that dealing with these issues "up-front" would be the best way to improve participants' chances for successfully completing the apprenticeship program.

The special demands of environmental work also necessitate some unique work readiness skills. In construction-related environmental work, the day begins early and the work is hard. Certain math, science and reading skills can be important as is the ability to work in teams. Small group methods that have been well-developed by NIEHS health and safety training providers foster this work style. The recommendation on pre-math and science education was that it should be administered by an educational institution whose mission is to provide high quality, accessible and affordable educational opportunities and services to a diverse, multi-cultural community. Sensitivity to learning styles must also be considered in the actual delivery of training.

This training and related employment can also positively affect trainees' self-esteem if the mission and its importance are properly explained. The fact that a young person could go as far as they want in life professionally in this field and benefit from the training and experience each step of the way is also encouraging.

Breakout Session 3: Job Issues-Placement and Retention

Facilitators: Dr. Ruth Ruttenberg, Ruth Ruttenberg & Associates, Inc.; Dr. Yvonne Scruggs, Vernon Associates; Cheryl Johnson, People for Community Recovery (Report Back)

Discussion Questions:

- 1) How can grantees establish ties with contractors to help ensure jobs for trainees?
- 2) How can mentoring be used to effectively prepare trainees for placement into jobs?
- 3) Should contractors and potential employers be involved from the onset of the training?
- 4) Is there a need for professional job interview skills during training?

Report Back Summary:

One recommendation was to develop "job banks" of prospective employers with whom the training providers can develop a rapport in order to secure employment opportunities for the trainees when they graduate. It is also essential to include training in job interview skills for the target population to help them take advantage of these opportunities. Community groups need to acquire information about when various types of work will be phased in over the course of the clean-up so the right number of people will be ready for employment when needed.

Although this training is, for the most part, short-term, it is important that it be skill-oriented, transferrable, and linked to long-term opportunities. Ways need to be found to help individuals expand their job horizons, e.g., offering the opportunity for lead abaters to become lead educators. The institutions with which these trainees affiliate need to help minority youth retool and retrain for broader opportunities and career fields.

Communities need to clarify the contracting mechanism for projects in their area and write in "local hire" provisions. It may be useful to examine the "Community Working Group" models that have been developed around DOE and DOD sites. Breakout group members expressed some concerns, however, about effectively identifying legitimate community representatives who truly represent the disadvantaged population.

Aside from the economic and employment needs of local residents, another reason to use the affected population on remediation projects is that they are more motivated to do a good job since it is they who will be returning to the area and buildings being restored. In addition, when working with members of a community, it is important to keep in mind varying education levels and limited exposure to the field of environmental clean-up in terms of using acronyms and "shop talk."

Breakout Session 4: Training Effectiveness and Evaluation

Facilitators:

Philip Berger, Midwest Consortium for Hazardous Waste Worker Training and Martin School of Public Administration, University of Kentucky.

Robert Lofton, Jr., Division 2 Rep., HAZMAT Trainer, Oil Chemical & Atomic Workers, International Union, Local 7-1, Inc.

Discussion Questions:

- 1) Are evaluations to be of each component of training or overall effectiveness of the training program?
- 2) Are evaluations of the effectiveness of the program limited to the fact that the trainees get jobs after completion of the program?
- 3) Will there be evaluations preformed by NIEHS of each program funded?

Report Back:

Philip Berger of the Midwest Consortium for Hazardous Waste Worker Training and Martin School of Public Policy and Administration, University of Kentucky, supplied participants with a basic list of references on program evaluation (See Appendix 1). Evaluation of the Minority Worker Training Program is likely to be fairly complex since many diverse interventions could be involved

including literacy education, pre-employment job training, life skills education, a variety of hazardous materials training, partnerships and referral networks. Because of its complexity, there will be a number of "stakeholders" who also have an interest in the program and demand an accounting on its performance. Good evaluation supplies the paper trail that is needed to comply with these expectations.

Berger also introduced the "User-Focused Evaluation Planning Process" (See Appendix 2) and a series of questions about program service to structure the evaluation process in order to assess intervention outcomes in concrete and measurable terms (See Appendix 3). With another handout, he made the distinction between monitoring and evaluation-oriented questions. Monitoring involves determining whether the program is complying with the administrative intent in terms of rules and regulations. Evaluation assesses how effectively and efficiently (in terms of cost) a program is achieving its goals. A chart was also provided to demonstrate how outcome measures could be formulated and evaluated (See Appendix 4).

Evaluation needs to involve the local people and to include some mechanism for longer-term follow-up on the results achieved. The need for creating linkages between this training and a solid career path was emphasized in this group as it was in the others. Trainees need to hear success stories from graduates to convince them that this type of training can lead to expanded opportunities. The group also underscored the importance of working with local community groups or networks of such groups on outreach to the target populations.

All participants recognized the need to focus on formative evaluation activities as new programs are initiated and develop. Notions of community awareness and acceptance were discussed as important aspects as new programs are developed. Participants stressed that focusing on outcomes like job creation and work experience may be inappropriate measures of newly evolving programs. Participants recognized that evaluation criteria change as training programs become more mature and better established.

APPENDIX

Resource Material

There are many texts and articles dealing with program evaluation. The references listed below should be thought of as places to start reading about evaluating programs that are as complex as the Superfund Minority Worker Training Programs promise to be. Employment interventions that involve such diverse elements as literacy education, pre-employment job training, life skills education, a variety of hazardous materials training, partnerships and referral networks, contain all the ingredients for extremely challenging program delivery and evaluation efforts.

Although many of these sources use examples of, or actually evaluate, employment interventions for AFDC eligible persons, there is much to be learned from them about monitoring your intervention, selecting and measuring appropriate outcomes, research design, and analysis of data for the Superfund Minority Worker Training Programs.

Berk, Richard & Rossi, Peter (1990). Thinking about program evaluation. Newbury Park, CA: Sage Publication. [A brief, but highly informative, description of issues you will need to think about in planning an evaluation]

Blalock, Ann (Ed.) (1990). Evaluating social programs at the state and local level: The JTPA evaluation design project. Kalamazoo, MI: W. E. Upjohn Institute for Employment Research.

Friedlander, Daniel, Riccio, James, & Freedman, Stephen (1993). GAIN: Two-year impacts in six counties. Manpower Demonstration Research Corporation. [3 Park Avenue, NY:NY 10016; 212-532-3200 or 88 Kearny St. #1650, San Francisco 94108, 415-781-3800]

Greenberg, David & Shroder, Mark (1991). Digest of the social experiments. Institute for Research on Poverty Special Report #52. Madison Wisconsin: Institute for Research on Poverty, University of Wisconsin.

Miller, Thomas & Miller, Michelle (1991). Citizen surveys: How to do them, how to use them, what they mean. Washington, DC: International City Management Association.

Schalock, Robert & Thornton, Craig (1988). Program evaluation: A field guide for Administrators. New York: Plenum Publishing.

Steps in the User-Focused Evaluation Planning Process

Preliminary Planning for a User Focused Evaluation

- Identifying users and their information needs.
- Assessing the organizational supports to and constraints on the evaluation process.
- Making a preliminary assessment of resources required.
- Developing a beginning support network for the evaluation.

Developing a Specific Evaluation Strategy

- Identifying users' key evaluation issues and questions.
- Determining the feasibility of the questions.
- Choosing a manageable set of researchable questions.
- Selecting an appropriate evaluation approach and feasible methodology.

Planning for the Implementation of the Evaluation

- Developing an implementation plan.
- Assessing the resources needed and their costs.
- Developing a staffing strategy.
- Acquiring the necessary resources.

Implementing the Evaluation

- Collecting and analyzing data.
 - Developing conclusions and recommendations.
 - Disseminating the evaluation information to users.
 - Utilizing the evaluation information for decision making.
-

APPENDIX 3

Table 3.3. Interrogatories concerning the Setup and Marshalling the Evidence

Interrogatory	The setup	Marshalling the evidence
Who	Persons served	Can you describe who was served by the program under the study? What are their characteristics and how were they selected to be in the program?
What	Intervention/services received	Can you describe the intervention provided to these persons, including its intensity and duration?
	Outcomes from services/status quo	Can you describe the outcomes that resulted from the provision of services and the outcomes that would have occurred if the services were unavailable?
Where/when	Evaluation context	Can you describe the context in which the intervention was fielded?
How/why	Details of the intervention/services provided	Can you describe how the intervention took place and why it had the effects you claim it did?
	Rationale linking services to outcomes	

**Chart 1.2
Monitoring vs. Evaluation**

Monitoring Questions

Evaluation Questions

Is the program complying with the way administrators interpret its intent through rules and regulations? That is, is the program consistent with its intent regarding:

- How funds are to be spent
- The selection of the target group
- The way the program is to be organized
- The services to be provided
- The service delivery process to be used
- The way outcomes are to be measured and reported

Are the following in conformance with these rules and regulations:

- The target group served
- The services provided
- Client outcomes
- Program organization
- Costs

Is the program meeting its broader legislative intent *efficiently in terms of cost, and effectively in terms of achieving program goals?*

- What is the scope and range of outcomes, positive and negative?
- Were the outcomes those intended for the people expected to benefit?
- Were the outcomes significantly different for participants than for similar individuals not receiving the program's services, and in what way?
- Did the implementation features that distinguish the program from previous strategies work as intended?
- What influence did these organizational and service delivery features seem to have in producing the outcomes?
- What was the tradeoff between program costs and benefits?

Table 8.1. Estimated Program Impacts on Key Outcome Measures^a

Outcome measures	Month 6			Month 15			Month 22		
	Experimental group mean	Control group mean	Estimated impact	Experimental group mean	Control group mean	Estimated impact	Experimental group mean	Control group mean	Estimated impact
Employment									
Employed in regular job (%) ^b	11.8	10.7	1.1	26.2	16.8	9.4**	31.0	19.1	11.9**
Employed in any paid job (%)	67.8	45.2	22.6*	44.8	43.6	1.2	44.7	43.7	1.0
Average weekly earnings in regular job	\$11.81	\$9.81	\$2.00	\$26.90	\$16.31	\$10.59**	\$36.36	\$20.55	\$15.81**
Average weekly earnings in any paid job	\$52.39	\$25.93	\$26.46**	\$37.91	\$26.48	\$11.43**	\$40.79	\$28.41	\$12.38**
Training and schooling									
In any training (%)	61.7	40.6	21.1**	20.60	28.4	-7.8*	16.6	29.1	-12.5**
In any schooling (%)	7.5	15.7	-8.2**	6.2	10.1	-3.9	8.0	11.4	-3.4
Income sources									
Receiving SSI or SSDI (%)	26.3	31.0	-4.7	33.1	40.7	-7.6**	34.9	40.2	-5.3
Average monthly income from SSI or SSDI	\$66.41	\$74.59	-\$8.18	\$91.35	\$109.65	-\$18.30	\$99.27	\$120.03	-\$20.76
Receiving any cash transfers (%)	31.7	43.1	-11.4*	44.5	51.5	-7.0*	49.6	52.0	-2.4
Average monthly income from cash transfers	\$80.23	\$99.98	-\$19.75	\$114.78	\$138.72	-\$23.94	\$126.53	\$136.08	-\$9.55
Average weekly personal income ^c	\$71.72	\$50.94	\$20.78**	\$67.22	\$59.67	\$7.55	\$71.59	\$62.39	\$9.20

Note. These results were estimated through ordinary least squares techniques.

^aAdapted with permission from Kerachuk et al. (1985).

^bRegular jobs are those that are neither training/work-study nor workshop/activity center jobs.

^cPersonal income includes earnings, cash transfer benefits (AIDC, general assistance, Supplemental Security Income, and Social Security Disability Insurance), and other regular sources of income.

*Statistically significant at the 10% level, two-tailed test.

**Statistically significant at the 5% level, two-tailed test.

Conference Report 103-311
U.S. House of Representatives
SubCommittee of Appropriations for HUD, VA and Independent Agencies
Superfund Minority Worker Training Program

\$3,000,000 added for a minority worker training program. The Committee recognizes that, as the demand for cleaning up the environment continues--in order to prevent disease, dysfunction and premature death and to protect the country's natural resources--there is a parallel demand for workers to perform the multiple tasks necessary to achieve environmental improvements.

Assuring an adequate workforce to perform these tasks will require an aggressive and coordinated program of recruitment, training, and service delivery. The nature of these jobs--including an understanding of the behavior of certain environmental pollutants and of remediation technology--is such that they require substantial level of training.

The Committee realizes that while efforts are underway to address these needs, there is growing consensus that these efforts are not adequate to meet current and projected needs for environmental workers. The scope of this need includes technicians, as well as doctoral-level physical and biological scientists. At the same time, the Committee is aware that there is a large population of males, ages 18-25, in urban communities impacted by environmental pollutants who are unemployed because they lack the skills and knowledge required for many of the available career opportunities.

The Committee urges the agency to establish a series of national pilot programs to test a range of strategies for the recruitment and training of young persons, who live near hazardous waste sites or in the community at risk of exposure to contaminated properties, for work in the environmental field. These environmental career-oriented projects should be developed within the context of other social and health needs of the community. The program should provide pre-employment job training, including literacy, life skills, environmental preparation and other related courses construction skills training; environmental worker training including hazardous waste, asbestos and lead abatement training; and safety and health training. Training may also include enrollment in apprenticeship programs for construction and environmental remediation worker training. Training may also include a program of mentoring. The Committee intends that these projects should enhance the participants problem solving skills, their understanding of self-esteem and team work in the application of technical knowledge to environmental and related problems, in this regard, the program should allow for partnerships or subagreements with academic and other institutions, with a particular focus on historically black colleges and universities, and public schools located in or nearby the impacted area to provide pre-math, science or other related education to program participants prior to or concurrent with entry into the training program.

The Committee urges EPA to evaluate the effectiveness of these pilot programs to determine the course of future funding priorities. This evaluation should give consideration to retention of participants in the training program, and longevity of post-training employment. None of the funds provided in this appropriation may go for supporting the post-training employment under this program. This program should be administered by NIEHS.

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