

**January 28, 2000**

***FY 1999 Accomplishments and Highlights:***  
*NIEHS/EPA Superfund Worker Training Program*

**Submitted by the  
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## **FY 1999 Accomplishments and Highlights: NIEHS/EPA Superfund Worker Training Program**

### **1 Introduction**

The Superfund Amendments and Reauthorization Act of 1986 (SARA) established an assistance program for training and education of workers engaged in activities related to hazardous waste removal, containment and emergency response. Grant recipients are non-profit organizations with demonstrated access to appropriate worker populations and experience in implementing and operating worker health and safety education training programs. The National Institute of Environmental Health Sciences (NIEHS) was given responsibility for establishing and managing this program through Interagency Agreements with the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE).

Through competitively awarded cooperative agreements, the NIEHS Worker Education and Training Program (WETP) has supported the development of curricula and initiation of training programs throughout the country to help employers meet OSHA requirements under 29 CFR 1910.120, Hazardous Waste Operations & Emergency Response. This model program encourages innovation for training difficult-to-reach populations by addressing issues such as literacy, appropriate adult education techniques, training quality improvement, and other areas un-addressed directly by the private sector. The program enhances rather than replaces private sector training responsibility by demonstrating new and cost-effective training techniques and materials.

New support has expanded the scope of NIEHS-supported training to include workers involved in transporting hazardous materials, a Minority Worker Training Program to serve urban youth, an initiative focused on job training for Brownfields cleanup sites, and a program targeted to workers involved in the cleanup of DOE nuclear weapons facilities.

### **2 FY 1999 Program Highlights**

WETP, through its EPA Superfund-supported programs, has established an effective national framework to develop and provide comprehensive training that is needed to address the complex needs of Superfund cleanups, chemical emergency response, RCRA corrective actions, and urban communities surrounding brownfields sites.

In completing the twelfth year of the Superfund WETP (FY 1987-1999), the NIEHS has successfully supported twenty primary awardees. These represent over ninety different institutions who have trained over 800,000 workers across the country and presented nearly 42,000 classroom and hands-on training courses, which have accounted for over 12 million contact hours of actual training (See Appendix 1).

Through an Interagency Agreement, NIEHS received \$26 million from the FY 1998 EPA appropriations, which provided funding to NIEHS awardees during the past year (FY 1999). Approximately, nineteen million one hundred thousand dollars of the FY 1998 funds were allocated to continue support of the Hazardous Waste Worker Training Program (HWWTP) to train hazardous waste workers and emergency responders. Three million dollars of the FY 1998 funds were allocated to continue support for the Minority Worker Training Program (MWTP). EPA transferred \$3 million to support Brownfields Minority Worker Training Program (BMWTP) and \$275,000 to support

Superfund Jobs Training Initiative (SuperJTI) activities, which provided additional funding to NIEHS MWTP awardees. As a result of the Interagency Agreements, NIEHS made the following awards (See Appendix 2):

- 17 EPA/HWWTP awardees received awards totaling \$19,044,000
- 6 EPA/MWTP awardees received awards totaling \$3,000,000
- 4 BMWTP awardees received awards totaling \$3,000,000
- 4 SuperJTI supplemental awards totaling \$275,000 under the MWTP and HWWTP programs

During the past year (FY 1999), training delivery has been carried out in all regions of the country to all relevant target populations regulated under 29 CFR 1910.120 (See Appendix 3). The seventeen primary worker training awardees, in conjunction with over seventy collaborating institutions, have delivered 3,980 courses, reaching 74,013 workers, which account for 954,935 contact hours of health and safety training. This training ranges from 4 hour refresher programs through more complex train-the-trainer courses lasting up to 120 hours in duration (See Appendix 4). Between September 1, 1998 and August 31, 1999, 56% of the training has been focused on delivering CERCLA cleanup worker training. This comprises 32,574 workers who received 80 hour training, basic 40 hour training, or 4-8 hour refresher courses out of the annual total of workers reached by the program (See Appendix 5).

### **2.1. Continuation of the Peer-Reviewed Worker Training Awards for Training of Hazardous Waste Workers, Emergency Responders and Minority Workers**

After the completion of the fourth program year on the projected five year long cooperative agreements to support worker training activities, 17 organizations submitted progress reports, training data, budget requests, and training plans on July 1, 1999. Budget adjustments in the proposed funding plan were based on the training needs of high-risk populations, national geographic coverage in training availability, and the published program priorities for training support. Awards were made on September 1, 1999 for each of the programs supported with EPA Superfund resources.

Highlights of the training activities carried out by the NIEHS/EPA Worker Training awardees include:

- The Detroit Water and Sewerage Department (DWSD) wastewater treatment facility is one of the largest water treatment facilities in the United States. Recently, Michigan OSHA (MIOSHA) cited the facility for a number of HAZWOPER and Lockout related violations. The City of Detroit asked the United Auto Workers (UAW) Health & Safety Department for assistance to abate the citations, as well as to provide expertise in planning for emergencies. UAW Locals 2342 and 2334 represent approximately 100 workers at the facility. Since the request for assistance, the UAW provided emergency response and Operations Level training to 33 employees, with a commitment from the City of Detroit to train over 100 DWSD employees over the course of the next year. A walkthrough of the facility was conducted, for the purpose of identifying Lockout concerns to be highlighted in a site-specific Lockout training program.
- Subsequent to a Lockout Train-the-Trainer program provided to New Mather Metals in Toledo, OH (UAW Local 12), the company and local union worked jointly to review and revise Lockout procedures for the plant and identified all energy sources. In addition, an opportunity arose to provide confined spaces training at the same location, and a UAW representative was asked to help the company evaluate a baghouse to determine whether it should be classified as a permit-required confined space.
- All 22 trainers (100 percent) in the two-week Hazardous Materials Training and Research Institute (HMTRI) Train-the-Trainer program felt the training was useful and contributed to their

knowledge and skills. The course was attended by instructors having an average 1-5 years experience and more than 16 years formal education. Fifteen (15) rated the course excellent; 6 very good; and 1 good. They all reported a gain in knowledge and skills in all 14 categories evaluated, with 25-63 percent improvement noted in knowledge and skills gained in Rules and Regulations, Chemistry Principles, Personal Protective Equipment, Emergency Response, Rights and Responsibilities, Decontamination, Monitoring Techniques, Work Practices, Hazard Control, Hazard Recognition, Safe Work Practices, Hands-on Applications, and Instructional Techniques.

- HMTRI was awarded \$50,000 in NIEHS supplemental funding to support two six-day Brownfields Train-the-Trainer Institutes, fondly referred to as BrownEST Institutes in FY 1999. The Institutes were held June 7-12 and June 21-26. Evaluations, although not compiled by the third party evaluator, were very positive. HMTRI will focus particular attention on developing the environmental, health and safety instructional capability of colleges serving EPA Brownfields Pilot Communities, National Priorities List (NPL) sites, and Superfund Job Training Initiative (SuperJTI) sites in FY 1999. Priority for Train-the-Trainer slots were given to colleges serving these priority sites. HMTRI has immediate access to these colleges through work they conduct for EPA OSWER and through the Partnership for Environmental Technology Education (PETE).
- A representative of Ford Motor Company wrote to the Midwest Consortium after the Rouge Power House explosion in Detroit. The company noted that "the training provided by Michigan State University enabled us to establish proper procedures for dress out, air monitoring, decontamination, and most importantly, incident command. Each of these components was critical to the success of our commitment to protecting the safety of all personnel who were on scene."
- The Springfield, IL Office of Public Utilities commented after an NIEHS-supported training session that "the training provided by the University of Illinois Institute of Labor and Industrial Relations has provided long-term benefits for City Water, Light, and Power. We have found that the trained employees and supervisors are more responsive to hazardous chemical spills. They are more aware of the risks. They tend to take more precautions and ask more questions when working with chemicals. This helps create a better working relationship between the Environmental Health & Safety Office and the Power Plant."
- The International Association of Fire Fighters (IAFF) implemented major advancements in its training technologies. Advancements included web page updates and enhancements, the release of a refresher training program, the release of new programs and case studies via the internet, and work towards updating and digitizing its First Responder course with active learning strategies and small group activities. IAFF plans on conducting Instructor Development Conferences (IDCs) to enable the IAFF to provide refresher training to its instructional team while updating them with new training approaches, skills, technological advancements, evaluation protocol, and administrative changes.

## **2.2. Minority Worker Training Program Development**

The MWTP completed its fourth year of training through six programs at the Center to Protect Workers' Rights (CPWR), Clark Atlanta University (CAU), Jackson State University (JSU), DePaul University (DePaul), Laborers-AGC Education and Training Fund (Laborers-AGC), and the University of Medicine and Dentistry of New Jersey (UMDNJ). The main goal of this program is to recruit young people of color and provide a vigorous training program that eventually leads to productive employment. Over the past four years 1,278 young minority adults have been successfully training in worker health and safety training for construction and environmental cleanup. These six programs during the period of September 1, 1998 to August 31, 1999 provided training to 360 students in the 18 cities. These cities are Atlanta, GA; Baltimore, MD; Chicago, IL;

Cleveland, OH; East Palo Alto, CA; Granite City, IL; Jackson, MS; Los Angeles, CA; New Haven, CT; Exton, PA; Memphis, TN; Newark, NJ; New Orleans, LA; New York City, NY; Minneapolis-St. Paul, MN; Oakland, CA; San Francisco, CA; and Washington, DC. Of those 360 students trained, 233 students are gainfully employed. The courses provided ranged from Life Skills to Environmental Technician training with a total of 196 courses offered representing 118,600 contact hours (See Appendix 6).

#### Demographics and Placement Data

Overall the job placement rate for training this year was 65 % with 233 students gainfully employed (See Appendix 7). With four years of training completed, trends have started to emerge to indicate that sustained employment is a direct result of strong training programs with support systems that continues providing tracking and job placement to all students regardless of whether they are current graduates or past graduates. This year due to aggressive partnering with organizations that represent Women- in-Trade organizations and woman working as mentors, there was an increase in females trained up to 18% (See Appendix 8). The diversity of courses along with the high quality of training provided by the Awardees has produced a cadre of workers that are functioning in various construction and environmental jobs across the U.S. (See Appendix 9). Those jobs are located in the communities where the training occurs and with concentrated efforts on training local residents for jobs in their communities. Specific characteristics from the training and progress report data indicate that the majority of jobs remain in the construction industry, this consistent with the redevelopment occurring in urban areas. As trainees develop specialized skills and with the extensive environmental training acquired in this program, long-term tracking has indicated that more workers are moving into jobs with an environmental focus. Specific grantees have job placement rates in the range of 80% and greater with many trainees in jobs reaching the prevailing wage rate for the specific trade organization they belong. Programs such as Laborers-AGC, DePaul University, and UMDNJ have exceptional job placement rates during this period (See Appendices 10 & 11).

UMDNJ Pre-Apprentice Environmental Worker Training Program (PETP) successfully recruited 30 students to begin pre-apprentice training. Of the 30 recruits, 24 completed the program, or 80%. Of those 24 students, 14 are employed roughly 60%. Of the remaining students, 9 are in the final stages interviewing to join either the Sheetmetal Workers Union, Stationary Engineer Union, Operating Engineers apprentice programs, and positions in environmental remediation and/or environmental assessment arena in the New York City area. According to UMDNJ, graduates have retained jobs in construction and environmentally related jobs with a plurality of employment positions. The type and frequency of jobs worked by PETP graduates indicated that of the 159 reported positions by student graduates, fully 89% have been in positions targeted by the training (See Appendix 12, Table A). Many improvements in training such as increased tracking and case management throughout the program helped to increase the success rate of training.

The UMDNJ program has developed a system of tracking graduates that analyzes hours worked, wage and earning data, title, and basic job description information (See Appendix 12, Table B). This data has been extremely beneficial to demonstrate the benefits of the training program. For example, their study determined that the 12 months following graduation, the two classes (graduates from 1996 and 1997) earned a combined pre-benefit total of \$385,606, about the total award for a single year of training for the UMDNJ consortium. In addition, data on full-time employment has provided some excellent background as to the long-term outcomes of training. For instance, on average full-time employment in construction is widely considered 1,400 annual hours of work. The last column in Table C recalculates the mean percent employed using 1,400 hours as a benchmark for full employment (See Appendix 12, Table C). Overall, the UMDNJ graduates have been employed an impressive 81% of full-time construction employment.

#### Program Changes and Accomplishments

Each year the MWTP enhances the way NIEHS and the Awardees developed their training programs. By focusing on results from outside evaluations, peer/student evaluations and NIEHS progress report reviews, the programs have continued to advance. There were significant improvements to strengthen recruitment strategies, increase mentoring/life skills enrichment, utilize lessons learned, enhance trainee tracking/job placement, infuse ancillary support services, to refine and increase the effectiveness of the training. Some examples of these enhancements are Promotion of Instrumental Enrichment Training, Utilization of Supportive Services and Fostering Relationships with EPA Regional Offices.

### **Promotion of Instrumental Enrichment Training**

Instrumental Enrichment (IE) is a component of DePaul's program on integrated educational and training models that promotes rigorous cognitive and affective engagement within the content and process of experience in hazardous waste training. Briefly the history of IE dates back to 1950 when Professor Reuven Feuerstein developed this technique. It has been used in 70 countries as a tool for the enhancement of learning potential in specially challenged individuals and those in high-risk environments. IE has been used to develop specific life skills curricula and other deductive reasoning skills in DePaul's hazardous waste worker training and minority worker training programs. The unique life skills component that bridged to the IE principles was conducted by DePaul with the assistance of community partners with expertise and knowledge of the specific target population from each of the minority worker training communities that they serve. These IE/life skills training placed great emphasis on developing interview skills, marketing one's training and skills, and resume development.

In particular, DePaul's integration of IE and Mediated Learning Experience (MLE) with hazwoper and lead abatement training was utilized extensively in the MWTP, BMWTP and SuperJTI training. The course content of environmental technician training comprises a set of subject matter elements, hands-on demonstrations, and field operations. The subject matter elements uniquely lend themselves to cognitive linkage with the principles that are introduced in IE exercises, mediating application of these principles, enhancing the cognitive functions, and promoting higher order, interdisciplinary, and analytic thinking. The "bridging" back and forth between cognitive principles introduced from the exercises in IE and subject matter elements form a powerful integration of cognitive enhancement and interdisciplinary learning techniques.

The integration of the IE components of the curriculum were designed to:

- Help students reduce or eliminate impulsive behavior and their trial-and-error approach to life;
- Help students develop within themselves the intrinsic motivation to become proactive learners, and critical independent thinkers;
- Provide students with the facility to engage in creative thinking and problem solving when dealing with job related, individual, family, and community challenges;
- Bring about motivational and attitudinal changes in students' approach to reality by encouraging their application of perceptual processes to develop cognitive strategies for addressing career development and a broad array of situations in life; and
- Enhance their self-esteem and build their feelings of competence and independence.

This training raised the level of self-reflection and evaluation for all trainees who has as a result of this training reduced the rate of student drop out for their program.

### **Utilization of Support Services**

Each Awardee worked to increase their knowledge and interaction with various support services for students enrolled in their programs. Linkages to Workforce Development Programs such as

One-Stop Centers in each city, Job Training Partnership Act (JTPA), Welfare to Work, School to Work, Housing & Urban Development, EPA Regional Programs, and other similar programs were instrumental in helping to provide additional support to students through each stage of the training program. Some of the major support services provided through these services were, general education degree (GED) training, child care provisions, life skills, resume development, job placement, mentoring, transportation subsidies, different skills training such as apprenticeship training, and longer term case-management/tracking.

An example of this collaborative approach to providing support services was the South Bend, IL SuperJTI program at DePaul. Through the local partners and supporting organizations such as the Charles Martin Youth Center (CMYC), Workforce Development Services, Opportunities Industrialization Center (OIC), South Bend Heritage Foundation, the Urban League of South Bend, and St. Joseph County, Inc., the project provided additional benefits to the students. The community partners, through existing alliances, grants, etc. provided funding to support items such as lunch, work clothing, bus fares, medical exams, etc. In many cases, these support services were essential to keep the students in class to complete the overall training program. Community partners along with EPA also took a lead role in raising funds and carrying out the graduation exercises and organizing and supporting job fairs.

Another excellent instance of partnering was the Laborers-AGC program in San Francisco, CA. The stakeholder partnering of Laborers-AGC, local training funds, local unions, colleges and/or universities, community-based organizations, and environmental/construction contractors resulted in an increased number of trainees entering the union. Moreover, 17 of the 21 individuals trained in their San Francisco program are indentured into the Construction Craft Laborers (CCLs) Apprenticeship Program, a comprehensive system that encourages lifelong learning and advancement. Referenced as a career path in the original application, this is the first year MWTP graduates have continued training and employment through the CCLs Apprenticeship Program.

In addition, expanded partnerships with other unions, local businesses, and government agencies were also a highlight of this program year. A pilot collaboration with the San Francisco MWTP and the Northern California Teamsters Apprenticeship Program produced two students certified in hazardous waste worker, hazardous materials transportation awareness, and received Class A Commercial Drivers License. Both students are employed as teamster apprentices. In addition, collaborations with local business and government agencies brought expanded funding for support services such as transportation, GED training, trainee supplies, and first source hiring in respective programs. Specifically, contributors included Hensel Phelps Construction Co., Bode Gravel Company, City of San Francisco, San Francisco Redevelopment Agency, Private Industry Council, San Francisco Building & Trades Council, and Bayview Hunters Point community. Using this model training in San Francisco, CA; New Haven, CT; and Exton, PA; the Laborers-AGC has trained 96 students with 80 of them employed.

### **Fostering Relationships with EPA Regional Offices and Other Federal Agencies**

By working in tandem with EPA regional offices and other Federal, State and local environmental agencies, several programs are on track to broaden professional licensing opportunities for students. By working with state and local agencies, programs have analyzed the job market in adjacent states to determine if graduates should be certified in specialized training such as lead and asbestos for multiple states. In the DePaul program in Chicago and South Bend, a rigorous curriculum was utilized to train participants in meeting licensing requirements for the states of Illinois, Indiana, Ohio, and Michigan. This licensing diversity broadened the scope of employment for trainees who are considered by various environmental firms in Michigan and Ohio. Working with EPA Superfund Community Involvement Coordinators and other EPA offices shaped more opportunities for learning for participants. New courses offered to students by EPA regional offices proved to be beneficial. In particular, the Superfund Overview course developed by Region

5 EPA in connection with the DePaul program was very informative for the students. The course gave an overview of the Superfund Program and covered such topics as assessing a Superfund site, community involvement and the cleanup of Superfund sites.

Other partnerships developed by Laborers-AGC in the New Haven, CT and the Exton, PA training provided significant support for the program. The Regional Growth Connection (RGC), a Regional Growth Partnership affiliate in New Haven, CT, committed transportation support for the second cycle of participants of the MWTP during their training period as a group. The commitment during the training period for one cycle alone represents a \$7,000 contribution. The RGC will also assist participants in getting to and from work for at least their first month of work as individuals. One of the understandings for providing transportation to and from work is that this ride to work is a temporary solution, and individuals must be actively engaged in securing transportation that will continue to support them after this subsidized transportation expires.

After some hard work and diligence, the community-based agency working with the Laborers-AGC in New Haven, the Greater Dwight Community Development Corp (GDCDC) secured Department of Labor (DOL) approval for the New Haven MWTP as a DOL-approved program. This entitles its qualifying participants to state reimbursement for childcare while they are in the program. Several participants in the program used this arrangement. This allowed GDCDC to expand the number of participants with dependents.

### 2.3. Superfund Jobs Training Initiative (SuperJTI)

NIEHS is in the second year of working with EPA to support the SuperJTI. This collaboration has allowed EPA and NIEHS to partner and provide much needed training particularly in disadvantaged communities to priority sites across the U.S. Some of the previous sites include: Agricultural Street Landfill, New Orleans, LA; Taracorps Site, Granite City, IL; AT&SF, Albuquerque, NM; and East Palo Alto, CA. In addition to the base training for the MWTP and the HWWTP, the awardees provided additional training under the SuperJTI. This training occurred at 5 locations, the Dutch Boy site, West Pullman, IL; Douglas Road/Uniroyal, Inc. site, South Bend, IN; Washington Naval Yard, Washington, DC; RSR Site, West Dallas, TX; and the MDI Site, Houston, TX. See table below. Under the program, 100 students were trained. For more information on the specific training accomplishments, please refer to Appendix 13.

<b>Superfund Jobs Training Initiative</b>			
<b>Awardee</b>	<b>Program</b>	<b>Site Name and Location</b>	<b>Number of students trained</b>
DePaul University in collaboration with Alice Hamilton Occupational Health Center	MWTP	Dutch Boy Site – Chicago, IL Douglas Road/Uniroyal, Inc. Site - South Bend, IN Washington Naval Yard Site – Washington D.C.	69
Clark Atlanta University in collaboration with Xavier University	MWTP	RSR Site –West Dallas, TX	3
Laborers-AGC	HWWTP	MDI Site – Houston, TX	28

### 2.4. Brownfields Minority Worker Training Program (BMWTP)

The NIEHS is committed to promote the President’s focus on the Brownfields National Action Agenda. As part of the Department of Health and Human Services commitment to the Brownfields National Partnership Agenda, the NIEHS has provided support for the establishment of the Brownfields Minority Worker Training Programs targeting the Showcase Communities. The strategy of this initiative is to broaden the NIEHS MWTP to include a new component on Brownfields Worker Training, addressing the

need for a more comprehensive training program to foster economic and environmental restoration of the identified brownfield sites. The NIEHS has awarded, through an interagency agreement with EPA, \$3 Million for the development of brownfields environmental job training programs targeting people of color at 11 of the 16 Brownfields Showcase Communities.

The BMWTP completed its first year of training. The four awardees, Center to Protect Workers' Rights (CPWR), Clark Atlanta University (CAU), DePaul University (DePaul), Laborers-AGC Education and Training Fund (Laborers-AGC) provided training to 406 local residents in the Brownfields communities as indicated below.

**Brownfields Minority Worker Training Program Awardees and Target Communities**

<b>Awardee</b>	<b>Brownfields Showcase Communities</b>
Center to Protect Workers' Rights	East Palo Alto, CA, Los Angeles, CA, Salt Lake City, UT, St. Paul, MN and Portland, OR
Clark Atlanta University	Eastward Ho, FL and Dallas, TX
DePaul University	Chicago, IL; Kansas City, KS/MO; and Baltimore, MD
Laborers-AGC Education and Training Fund	Lowell, MA

Each of the programs were successful in building strong collaborative relationships with the Brownfields Showcase Community and other organizations working within the Brownfields communities. A detailed description of each of the programs can be found at <http://www.niehs.nih.gov/wetp/bfield.htm>. In addition to the descriptions, specific data on program employment and contact hours are vital pieces of information to determine the effectiveness of the training programs (See Appendices 14 & 15). For the Brownfields program, approximately 187,989 contact hours of training was performed with 185 courses offered (See Appendix 16 & 17). Some of these courses were broader in scope than the MWTP with several programs offering 2 distinct tiers or tracks of training one in environmental technology and one in construction training. This diversity in training opportunities was powerful in assisting trainees to become more marketable in the environmental and construction community.

Training Accomplishments and Highlights

**Laborers-AGC Education and Training Program**

The Laborers–AGC program with the University of Massachusetts Lowell and its partners, the Coalition for a Better Acre (CBA) and the Cambodian Mutual Assistance Association (CMAA) named the Environmental Justice On Brownfield Sites in Lowell (Environmental J.O.B.S.) located in Lowell, MA utilized the two track training program, one in construction another in environmental technology. The Lowell program enrolled 20 participants selected out of a pool of 130 applicants, with 12 in construction and 8 in environmental technology. Fifteen students completed the 13-week program (9 construction; 6 environmental technicians). The trainees were offered 12 courses representing 6,219 contact hours of training. The program’s employment rate was excellent with graduates working in highly specialized environmental fields on various sites including Brownfields sites in Lowell. (See Appendix 18) Specifically 6 students are working in Lowell, with 4 of those at Brownfield sites. Three students are working at Treatment Storage and Disposal (TSD) sites. One was employed in the Superfund Technical Assessment and Response Team (START) program.

Students were exposed to various environmentally related careers such environmental technician training, wastewater treatment and sampling, environmental engineering, etc. Some of the specialized training represented a clear focus on promoting a hands-on culture with field trips to local brownfields sites, as well as groundwater treatment facilities and other contaminated sites in the Lowell area. Local organizations were instrumental in providing this hands-on training. In particular, a tour of Brownfield sites in Lowell was narrated by several local contracts including a

representative of the city's Department of Planning and Development, Lowell's EPA-assigned Brownfields Showcase Coordinator, and the project manager for the city's two major Brownfields rehabilitation projects (the Tsongas Arena and LeLacheur Stadium). A tour of a nearby Superfund site, Charles George Landfill in Tyngsboro, MA, included thorough descriptions of the site history, the remediation process, and the on going sampling monitoring program presented by the EPA and the U.S. Army Corps of Engineers. Additional field trips for the Environmental Technicians included visits to the EPA Laboratory, a private laboratory (Hygeia), a local Brownfield site to observe core drilling, and the City's wastewater treatment plant.

### **Center to Protect Workers' Rights**

The CPWR Program was conducted in five (5) cities: East Palo Alto, CA; Los Angeles, CA; Salt Lake City, UT; St. Paul, MN; and Portland, OR. The program provided pre-apprenticeship and environmental skills training in each of the five cities, connecting the training, trainees and program agencies with Brownfields agents and activities within each respective community. The four components in each program were life skills, construction skills, environmental or occupational health & safety, and job development and placement. Each city and their program partners provided all four components. During the first year, CPWR trained 270 trainees, offering 103 courses representing 148,094 contact hours of training. Of the 270, 168 trainees (60%) are currently employed with the majority of trainees working in construction.

Working with the different City Brownfields and redevelopment initiatives has been vital to the success of the CPWR training program. The East Palo Program shared a win-win relationship with City's First Source Hiring Program. First Source Hiring served as a valuable end user for the program and this program aided them in meeting their goals. Of the 54 trainees in the East Palo Alto training, roughly 50 of the program participants have gone to work in some aspect with the city's redevelopment. This program was the primary pool for hazardous abatement workers. As the redevelopment continues, the process will depend more and more on the trained work force developed through this training. In addition, this program is structured so those trainees who graduate and leave the program will be able to continue their studies of the environmental field at Mission College/REBRAC. By broadening the educational opportunities of the trainees, CPWR advocates that trainees move into higher levels of careers such as engineering and supervisor position.

### **DePaul University**

The DePaul consortium served a total of 75 trainees offering 18,208 contact hours with 48 courses offered ranging from Environmental Justice to Asbestos Supervisor. DePaul targeted the 75 trainees recruited from the 3 Brownfields Showcase Communities Chicago, IL; Kansas City, KS/MO; and Baltimore, MD. Of the 75 trainees, 62 are currently employed. This represents the largest successful training program with an excellent 83% job placement rate. DePaul heads this consortium with local partners working in each Showcase City. Along with DePaul and the Center for Workforce Education, two Kansas City partners, ERA Environmental and the Full Employment Council (FEC) have implemented this program in Kansas City. In Chicago, DePaul worked with the Chicago Department of Environment, Bethel New Life, One Stop Employment Center, and Center for Workforce Education. In Baltimore, DePaul University shared leadership of this training with the Alice Hamilton Occupational Health Center (AHOHC) and several community based organizations to include East Baltimore Career Center, Baltimore Works, Jubilee Baltimore, Gateway, and Plowshares. The wide range partners prepares them for some of the many challenges of the environmental work place.

One of the most significant alliances in this program is the relationship DePaul has cultivated in Kansas City, KS/MS with ERA Environmental and the FEC. FEC is a business-led, private, nonprofit corporation whose mission is to obtain employment for the unemployed and the underemployed in the Greater Kansas City Area. FEC accomplishes this goal by working in collaboration with

business, local units of government, educational institutions, and community-based organizations. FEC, through the empowerment zone initiative for Kansas City, provided numerous resources to the trainees that included transportation, additional stipends, physicals, and work equipment such as safety goggles, boots, etc. With the helpful guidance of FEC and ERA Environmental, seven of the trainees formed a partnership and incorporated their own environmental business. With much determination, they succeeded in launching their own company and are now legally known as the Brownfield Environmental Group, LLC. These graduates have completed their first local contract and are looking to bid on other environmental jobs. To keep their income flow consistent, the graduates who comprise the Brownfield Environmental Group are also employed by environmental contractors such as ERA Environmental and Major Abatement & Demolition while working on their next bid. As a result of participating in the productive alliances and the diversity of courses such as instrumental enrichment training, technical training and life skills training from DePaul and its partners, these graduates are well on their way as entrepreneurs in the environmental remediation field.

### **Clark Atlanta University**

CAU designed and implemented a comprehensive job training program in the Brownfields Showcase Communities of Eastward Ho!, FL and Dallas, TX. The Eastward Ho! Brownfields Partnership is a regional collaboration focusing on shared environmental restoration and urban revitalization efforts. As stated by EPA, the Partnership comprises local, state, regional, and Federal government agencies, as well as public, private, and non-profit community organizations in southeast Florida. The Eastward Ho! initiative was established in 1995 to direct future growth to the region's urban core and away from the threatened Everglades ecosystem to the west. Because contaminated lands are a significant barrier to redevelopment in the Eastward Ho! corridor, the identification, assessment, cleanup, revitalization, and redevelopment of brownfields on a regional scale is essential to the Eastward Ho! strategy. In Eastward Ho!, the BMWTP partners included the CPWR, United Brotherhood of Carpenters Apprenticeship Trust of Southeast Florida, Miami-Dade Community Action Agency, and the Bass-Dillard Neighborhood Issues and Prevention, Inc.

According to the EPA, Dallas has been involved in brownfields assessment, cleanup, and redevelopment for more than two years, and has identified more than 200 brownfields within the city. The city targets the area of West Dallas for brownfields redevelopment. West Dallas is an 11.45-square-mile, low-income, minority populated section of Dallas greatly affected by the presence of a Superfund site, a large public housing development, and industrial land use of approximately 26% of the area. The city is also targeting the 280-square-mile Southern Sector, which consists of 38% vacant land, to both address community need and take advantage of growth potential. Both targeted areas fall within Dallas' Federal Enterprise Community. In West Dallas, TX the BMWTP partners were Xavier University, Laborers-AGC, New Start for a Better Environment, West Dallas Multipurpose Center within the City of Dallas, West Dallas Neighborhood Development Center, and Mountain View College. Both Region 4 and Region 6 worked closely with CAU in creating and sustaining the partnerships within the program.

CAU trained 41 students and completed 48 courses representing 15,468 contact hours of training in the Eastward Ho! and Dallas communities. The specific communities targeted within the designated Brownfields communities were the Wynwood, Model City, Opa Locka, West Little River, and Overtown in Miami and Fort Lauderdale of Eastward Ho!, FL and West Dallas neighborhoods in Dallas, TX. Their strong local alliances represented by the contributions of the training partners have enabled the program to successfully provide jobs to these residents.

In the Eastward Ho! community though trainees are not working on specific Brownfields cleanup or redevelopment sites, 16 of the 20 individuals who completed the training program are working in the

following areas: 7 - construction; 5 - environmental; and, 3 - other industry. Fifteen of the 16 trainees working are working within designated Brownfields communities in Miami-Dade County.

## **2.5. Continued Operation and Support for a National Clearinghouse on Hazardous Waste Worker Training**

Technology continued to play a leading role in most of the work carried out by the Clearinghouse during contract year 1999-2000, its fifth year of activity on behalf of the NIEHS awardees and the WETP. On-line registration via the Web site, as well as a centralized database of contact names, helped to streamline organization of the October awardees meeting. New links were made between the Clearinghouse Web Page and several hundred health and safety Internet sites. In addition, NIEHS documents and reports were posted on the Web -- including workshop and awardee reports, the Y2K Handbook, and data to aid trainees in tracking. The on-line version of the curricula catalogue, introduced in November 1998, facilitated inquiry management and the order fulfillment process for awardee curricula. It has been updated continuously during the year, whenever new curricula are received. Throughout the year, the on-line version of the Newsbrief continued to generate time and cost efficiencies: because many readers now access the publication on-line, the mailing list has been streamlined, yielding savings in photocopying, postage, and handling costs. On-line power point presentations were added to the web -- for Y2K and 10 year accomplishments.

From August to October, an intensive effort -- via telephone, letter and e-mail -- was made to collect a full and up-dated set of curricula from all of the awardees. Special attention was given to ensuring that missing components and missing pages of stored curricula were supplied to the Clearinghouse. Thanks to timely responses from most awardees, the hard copy curricula catalogue was completed during September. A hard copy of the catalogue was distributed to each participant.

A continuously updated version of the catalogue is listed on the Web Page. Web posting of the catalogue has made the process of handling curricula inquiries simpler and faster: before, Clearinghouse staff often had to fax pages of the curricula catalogue to callers unsure about what to order; now, all inquiries regarding the catalogue are referred directly to the Web site.

## **2.6. Trainee Environmental Job Tracking Initiative**

In our request for continuation applications during May 1999, NIEHS again asked that each awardee propose a system to track trainees and collect post-training employment information. A number of the awardees have proposed approaches which build on existing trainee registrations, while others are creating innovative systems to catalogue employment experience through refresher training exercises. At a September 1998 all-awardees meeting, NIEHS and EPA staff discussed the various approaches which various awardees have proposed in their applications and initiated a process to set a "minimum criteria" for the collection of baseline employment information on trainees.

In addition, the Clearinghouse has been tasked with supporting this effort by providing technical assistance to awardees during this process. During the first six months of the contract year, the Clearinghouse helped coordinate and support several awardee pilots on trainee tracking. Significant attention will continue to be dedicated to trainee tracking during the second half of the contract year. Currently, the Clearinghouse is completing a technical report on trainee tracking which will evaluate the data which has been compiled and submitted by the awardees, as well as make recommendations to NIEHS for the format and critical data elements for tracking site worker Job occurrences in environmental remediation. As soon as this report is completed, it will be forward to EPA.

Examples of successful trainee tracking protocols such as Laborers-AGC have been utilized to exchange techniques among the Worker Training Community. Laborers-AGC has been developing a

new data base that will track training and trainee information for all Laborers-AGC affiliated training funds, including those that conduct courses under the NIEHS training program. The Laborers-AGC tracking database, when completed, will be provided to all Laborers-AGC training sites to track their training information. Information required by NIEHS will be provided to Laborers-AGC directly from the training funds through a network system. In addition to demographic and course data on trainees, Laborers-AGC will input data on work history that is obtained from the new refresher surveys. Other features will allow sites to track apprenticeship training, identify workers with various certifications, track refresher dates, create mailing lists, obtain individual trainee or class data, compare data sets, and create customized reports.

## **2.7. Worker Trainer Programs: Y2K Worker Awareness Handbook and Century Date Change (CDC) Preparedness**

NIEHS WETP staff and awardees have been active participants in addressing chemical safety concerns as a result of the Century Date Change (CDC) and has worked closely with EPA CEPP staff, EPA regional offices, and the President's Chemical Safety Board (CSB). NIEHS recently released the Y2K Worker Awareness Handbook and will be supporting training activities among high risk worker populations on duty during the millennium rollover period.

The course targets specific risks for workers in a variety of sectors including chemical and industrial facilities, the construction trades, the health care industry, hazardous materials related fields, and emergency response activities. The Y2K awareness materials include a handbook with an overview of who and what the Y2K problem could potentially impact, an update of the state of individual industries' Y2K compliance, an outline of how the problem might effect different workplaces, as well as measures workers can take to safeguard themselves, their facilities, and their communities. The NIEHS Year 2000 Worker Awareness Handbook and associated training resource materials are available for free download from the Internet at: <http://204.177.120.20/wetp/clear/y2k/y2kcourse/y2kcoursemain.htm>.

NIEHS has developed its materials in response to health and safety concerns raised during the past year by the President's Council on Year 2000 Conversion, the President's Chemical Safety and Hazard Investigation Board (CSHIB), the U.S. Occupational Safety and Health Administration (OSHA), and the EPA.

On June 4, 1999, officials from NIEHS, CSB, and 12 WETP awardee groups met in Washington, DC at Service Employees International Union (SEIU) headquarters to discuss training activities that could better prepare workers for possible Y2K-related emergencies. Dr. Gerry Poje, Chemical Safety Board, focused his comments on controls related to hazardous materials that could fail: alarms, computer motherboards, lighting, and pumps, to name a few. He warned that most of the current focus is on information technology, but an information technology officer is unlikely to be able to deal with embedded systems issues which are probably the greatest risks associated with chemical safety. The importance of inventory, assessment, and remediation was stressed.

## **2.8. Meeting on Environmental Jobs and Superfund Jobs Training Initiative in Estes Park, Colorado**

During the Bi-annual Awardee Meeting on April 19-20, 1999 at the YMCA in Estes Park, Colorado, a special session explored topics related to the SuperJTI. Specifically, it focused on MWTP and the partnership with EPA in developing the SuperJTI. While exploring opportunities, successes, and barriers that have occurred during the MWTP, as well as the unique challenges that have been faced during the past two years of this program incorporating the SuperJTI, over 150 individuals interacted at the workshop.

Creating smoother connections in the environmental cleanup industry and learning about different job training programs and success stories between government, trainers, employers, and communities was a primary goal of the workshop. Representatives from local, county, state, and Federal governments, community based organizations, labor, contractors, and training organizations that were working with various job-training programs participated. Among these representatives were 33 individuals selected by Superfund Community Involvement Coordinators from each region which NIEHS provided travel scholarships for them to attend.

Through a series of panels and breakout sessions, the workshop was successful in creating and sustaining a collaborative dialogue among the participants. This dialogue promoted the exchange of ideas and helped to establish a framework for strengthening the MWTP, the SuperJTI collaborative, and providing additional opportunities for growth for all worker training programs. A detailed summary of the meeting is available for review or download at <http://204.177.120.20/wetp/clear/resource/minimum.htm>.

## **2.9. EPA Regional and Local Coordination**

Under the EPA Brownfields Program and the SuperJTI Program, OERR and the Regional EPA offices, especially EPA headquarters, Regions 3, 4, 5, 6, and 9, were working with NIEHS to address specific projects. Some of those projects included the SuperJTI programs South Bend, IN; Chicago, IL; Washington, DC; Houston, TX; as well as the 11 sites of the BMWTP. In particular, the Showcase Communities coordinators in Lowell, MA; East Palo Alto, CA; and Chicago, IL were substantially involved with the development and implementation of the programs.

## **3 Program Update for FY 1999 EPA-Supported Worker Training Activities**

### **3.1. Continuation Applications**

Twenty million dollars of the FY 1999 funds were allocated to continue support of the Superfund Worker Training Program to train hazardous waste workers and emergency responders. Of the \$20 million, 3 supplemental awards were made, which included \$133,000 for SuperJTI, \$400,000 for Y2K Supplemental Training, and \$390,000 for Advanced Training Technologies (ATT). Three million dollars of the FY 1999 funds were allocated to continue support for the MWTP and \$3 million to support BMWTP. As a result of the Interagency Agreements, NIEHS awarded:

- 17 EPA/HWWTP awardees received awards totaling \$18,277,558
- 6 EPA/MWTP awardees received awards totaling \$2,990,000
- 4 BMWTP awardees received awards totaling \$3,010,000
- 2 SuperJTI awardees received awards totaling \$133,000
- 4 Y2K awardees received awards totaling \$400,000
- 4 ATT awardees received awards totaling \$390,000

See appendix 20 for awardee breakout of FY 1999 funds for the period of September 1, 1998 to August 31, 1999. Budget adjustments in the proposed funding plan have been based on the training needs of high-risk populations, national geographic coverage in training availability and the published program priorities for training support. Consideration has also been given to previous funding patterns, awardees' efforts to generate program income for independently continuing their programs, and the availability of unobligated balances from prior years, as well as other administrative considerations. Budget line items have been adjusted for each individual awardee to target training delivery to focused populations and assure that program costs are related to direct training support. Budget adjustments have been recommended which will assure that awardees will still be able to undertake the most critical parts of their proposed programs as outlined in their initial applications.

For each component of each awardees noncompeting reapplication, an analysis and review was carried out to evaluate the program progress during the current year, compliance with existing terms and conditions, measures of program effectiveness, and other quality assurance factors. For each awardee, individual progress report forms were developed, along with budget worksheets, in which targeted reductions were made in specific line item categories.

### **Advanced Training Technologies (ATT) Supplements**

NIEHS has awarded competitive supplements to encourage applications that pilot the use of advanced training technologies. The pilots focus on either improvements to the overall training infrastructure or on areas of content that might be delivered using advanced technology. NIEHS awardees created pilots to target improvements in the training infrastructure. These improvement included areas such as improving the overall ATT knowledge level of training developers, involving worker trainers or course instructors in the development technology-based course development, baselining the status of hardware and software across the health and safety training community, as well as researching and implementing a media selection model for use across an awardee, or group of awardees' health and safety training community.

Delivery pilots of health and safety content focus on new, technology-based methods for delivering training that improve learning, reduce costs, and can be demonstrated as effective for the specific content for a defined target population. These technologies include but are not limited to web-based, computer-based, televideo, virtual reality, and combinations of technology.

### **NIEHS Y2K Supplemental Training Awards**

As the Nation approached the turn of the Century, increasing attention has been devoted to matters associated with the "Year 2000 Computer Technology Problem," otherwise known as the Y2K problem. Of particular concern are commercial and industrial activities involving hazardous and toxic materials. The first two Hazwoper sectors, waste site operations and RCRA/TSD facilities are among those activities of particular concern owing to the nature of these operations. Emergency response activities are of even more concern, as the emergency response personnel, whether on-site or off-site, will be required to respond to any emergency arising from Y2K induced incidents which constitute an emergency.

NIEHS supported supplemental applications to provide additional resources to awardees for the purposes of responding to near-term training requests arising as a consequence of the Y2K problem. It is anticipated that such training will include special supplemental training involving new training objectives associated, for example, with manual process operations; focused refresher training; and Y2K problem awareness training. In addition, supplemental funds may be used to meet needs directly associated with responding to Y2K training issues such as travel to local, state, or regional meetings for contingency planning.

Supplemental grants were provided in order to avoid major impact on the awardees core program particularly in view of the near-term emerging need. This could include training facilities, attendance at Y2K pertinent local/State/Regional planning meetings, consultants to aid in training needs assessments, or training product development.

### **Superfund Jobs Training Initiative (SuperJTI) Supplements**

To continue the NIEHS commitment to SuperJTI training in collaboration with OERR for the period of September 1, 1999 to August 31, 2000, the NIEHS encouraged the MWTP awardees to use existing funds to apply for training at SuperJTI priority sites. While under the HWWTP program, NIEHS solicited responses to administrative supplements up to \$100,000 for focused training on the priority sites.

The following is the list of the priority sites for the September 1, 1998 to August 31, 1999 budget period as identified by the EPA. They are Washington Navy Yard, Washington, DC; American Bemburg, Elizabethton, TN; Region 4, Community Based Environmental Protection Site, West Louisville, KY; Wingate, Fort Lauderdale, FL; Tennessee Products, Chattanooga, TN; Dutch Boy, Chicago, IL; Fields Brook, Ashtabula, OH; (TBD) Denver, CO; Hunters Point Naval Shipyard, San Francisco, CA; and Tulalip Landfill, Marysville, WA. Each awardee received contact information on each Superfund Site. The contact sheets included EPA contacts, Community Representatives, and other organizations that have been involved at each specific site.

As a result of this solicitation, NIEHS made two new supplemental awards to HWWT awardees, DePaul University and International Chemical Workers Union (ICWU). DePaul University received a supplemental award to perform training of residents in 3 SuperJTI communities, Kerr-McGee Superfund Site, West Chicago, IL; Reilly Tar and Chemical, Indianapolis, IN; and the Washington Navy Yard, Washington, DC. ICWU received a supplemental award to provide training to residents of the Copper Hill community. Specific information on their training plans for September 1, 1999 to August 30, 2000 are found in Appendix 13.

### **3.2. Conference on Workplace Safety & Health Training**

With the involvement of the EPA/NIEHS Superfund WETP, an interagency effort was initiated to examine health and safety training. A National Conference on Workplace Safety & Health Training was held October 24-26, 1999 at the Henry VIII Hotel & Conference Center in St. Louis, Missouri, which was co-sponsored by the National Institute for Occupational Safety & Health, the OSHA, and the NIEHS. The conference brought together cross-sector representatives to look at the workplace of the future, plan new approaches to occupational safety and health training, evaluation strategies, and enabling policies to meet better the challenges ahead.

The conference was designed to be participatory and engage conference attendees in the process of planning for the future. Considering medical, insurance, lost-productivity, and personal costs, it was estimated that occupational injury and illness costs totaled \$171 billion/year in 1992 for the U.S. These great costs to industry, insurance, and society highlight the need for safety and health interventions in the workplace, and an important role for public health training and education professionals.

The conference participants discussed how changes in the nature of work and the makeup of the work force require changes in training and education programs; explored how training and education relate to other components of effective health and safety systems; identified new approaches and technologies that can enhance traditional teaching methods; and considered how to evaluate the impact of training and education programs as one component of many in the health and safety system. Also they discussed how to stimulate collaboration among business, labor, academia, professional associations, government agencies and others to identify additional resources and shape future directions for training and education.

### **3.3. Guidelines for Training in Support of Workplace Safety and Health Programs**

On November 12-13, 1998, a National Technical Workshop was held in Silver Spring, Maryland at the George Meany Center to develop a consensus document "*Guidelines for Training in Support of Workplace Safety and Health Programs.*" This Workshop was organized with the specific intent to develop consensus guidelines, based upon the unique experience of the participants and to provide guidance associated with the development of training programs in support of employer safety and health programs. OSHA recently announced, in the annual regulatory agenda for the Agency, the intention to promulgate a Notice of Proposed Rulemaking for a comprehensive Safety and Health

Program Rule. Training was proposed as a requirement in the draft rule. Yet, very little detail was included with regard to the development of training programs associated with the Program rule.

The Workshop focused on the development of guidelines for training programs to be used to support the training requirements within generic workplace safety and health programs. The guidelines addressed the development of state-of-the-art training programs from analysis through evaluation. In addition, factors, which were demonstrated to be of importance in enhancing the over-all effectiveness of workplace safety and health programs and site/facility-specific safety and health plans, were included. Such factors include worker participation, supervisor involvement, management commitment, and related matters. Guidelines directed toward criteria for training providers, training quality assurance, training for safety and health committee members, and training program certification/accreditation were also considered. The Workshop also presented suggestions for Implementation of the Guidelines. A number of appendices and an extensive list of references were included to serve as aids in the development of training programs.

The Guidelines developed in this Workshop and the resulting Guidance Document served as important resource to OSHA during the rulemaking process and to employers and trainers who seek to develop quality workplace training programs in support of their safety and health programs. The purpose of this guideline document, therefore, was to provide a comprehensive source of guidance and information to aid employers, trainers, training providers, and training program developers in the development, delivery, evaluation, and continual improvement of training to support and enhance workplace safety and health. These guidelines were based upon the extensive experience of the Workshop participants in occupational training and training associated with the OSHA Hazardous Waste Operations and Emergency Response standard specifically.

#### **3.4. Technical Workshop on Virtual Safety and Health Training**

Worker Training and the Internet: A Resource and a Training Medium was a technical workshop held during April 1999 in Denver, Colorado. Both computer-based training and on-line distance learning have become invaluable resources for hazardous waste and emergency response training information. Worker access to the Internet has provided quick information on locations of hazardous waste sites, types of chemical hazards, methods of accident and exposure prevention, details about choosing and using personal protective equipment, suggestions about monitoring and surveillance, and a myriad of other topics of critical importance to worker safety and health. Many of these Internet resources are linked to the NIEHS Clearinghouse Web Page. This technical workshop and companion research paper surveys resources currently available on-line to aid in hazardous materials training and will examine efforts to evaluate the effectiveness of these training methods and resources.

The Internet is also being used increasingly as a training provider. Many colleges and universities are on-line to provide a variety of academic and technical courses. Some of these courses are of a correspondence nature, and students can contact a faculty member and submit papers by email. Some courses provide chat room and live-on line interaction. Some courses provide interactive curricula on-line complete with videos and self-testing. This technical workshop will survey the state-of-the-art of virtual training, with a focus on safety and health training, and a further focus on HAZMAT training.

The final version of the Report: "Computer and Internet-Based Learning Methods for Safety and Health Training," from the Spring NIEHS Technical Workshop in Estes Park, CO (April 20-21, 1999) is now available on the Clearinghouse web page at: <http://204.177.120.20/wetp/clear/resource/minimum.htm>. The final report integrates the HAZWOPER-specific training issues that need to be addressed when considering the application of ATT to such training. The report also includes a summary of the workshop breakout team issues, along with a summary of the issues agreed upon by the workshop participants in the closing plenary.

### **3.5. Request for Applications (RFA) Development Process**

After substantive meetings with a number of EPA program office staff during the past year, NIEHS released the next formal program announcement for the WETP requesting applications to support training activities over the next five year period (FY 2000-2004). The Request for Applications (RFA) included three distinct components for EPA supported programs: the Superfund Worker Training Program, the Minority Worker Training Program, and the Brownfields Minority Worker Training Program.

During August 1999, the NIEHS released the formal program announcement which described the hazardous waste worker training program and its specific objectives, delineated grant application procedures, defined characteristics of the programs to be funded and established review criteria and procedures. In its announcement, the NIEHS specified a deadline in November 19, 1999 for grant applications from qualified non-profit organizations to support curriculum development, direct training delivery and program evaluation. A briefing was held in Research Triangle Park, NC for all potential applicants during September 1999.

The NIEHS announcement specifically stated that proposed training activities and curricula will be required to meet OSHA regulations, as NIEHS has significantly expanded the proposed target populations for OSHA-required training. This OSHA-required training includes workers involved in waste site investigations and assessments, transportation, generation of hazardous waste; and groups facing potential health risks that are similar to cleanup workers and emergency responders.

The NIEHS requested that potential grant applicants demonstrate the following: the ability to describe, access and train identified target populations; to assemble an experienced program staff with adequate technical expertise to work under a qualified training director and to provide appropriate training facilities and equipment for implementing a multi-year worker training program. The NIEHS also required that grant applicants submit a detailed training plan with numerical goals and objectives, as well as develop an independent board of advisors with appropriate training and expertise to evaluate and oversee the proposed worker training program. Each applicant also will be required to develop a proposed training program quality control and evaluation plan. Consortium arrangements were encouraged to minimize duplication of efforts, to provide wide geographic coverage, and to reduce administrative costs.

#### **WETP Staff Activities**

The WETP staff is very active in exploring new areas of workplace safety and health training related to the mission of the program. The staff has been involved in a number of activities to stimulate interest in, and knowledge about, the NIEHS and the WETP. The staff has continued to make presentations at various conferences and meetings on the success of the program and have participated in outreach activities with EPA regional offices and other federal agencies. For a complete list of activities please see Appendix 21.

### **4 Conclusion**

The EPA/NIEHS WETP continues to play a critical role in assisting the EPA in implementing its primary objective of reducing and controlling risks to human health and the environment at hundreds of hazardous waste sites across the nation. NIEHS has made significant contributions to the achievement of outcome measures in numerous EPA GPRA sub-objectives, including: training of workers for RCRA Subtitle I programs in underground storage tank remediation, for hundreds of remedial action construction activities of National Priority List sites, for cleanup activities at DOE and DOD contamination sites and facilities; and for hundreds of workers and professionals for state-lead, tribal and Brownfields-related contaminated sites. New data collection requirements are being

implemented to capture site-specific data on the nature of employment of trainees of the NIEHS programs. These will supplement the current rigorous data collection efforts which document specific measurable outcomes of HAZMAT training and which verify the retention of curricula learning objectives.

Since the beginning of the program, data have been collected to document the training accomplished, as well as to document the outcome and performance measures that have resulted from training delivery. The WETP has utilized "Cost per contact hour" as an important programmatic and fiscal yardstick to gauge the cost-effectiveness of awardee training delivery. Throughout the life of the program, the costs of training delivery have been driven down significantly. To assure compliance with the GPRA, the WETP will continue to supplement its program accomplishment measures with an ongoing analysis of training delivery costs.

### Appendix 1: Twelve-Year Summary

<b>EPA HWWTP 12 YEAR TRAINING SUMMARY</b>			
<b>YEAR</b>	<b>TOTAL COURSES</b>	<b>TOTAL WORKERS</b>	<b>TOTAL CONTACT HOURS</b>
1988	623	12,319	261,542
1989	1,353	29,827	551,832
1990	5,142	123,358	2,120,390
1991	2,731	58,637	878,673
1992	2,973	65,000	1,100,381
1993	2,651	56,000	789,226
1994	4,025	65,716	1,101,758
1995	4,667	81,245	1,391,107
1996	4,752	73,724	1,087,297
1997	4,212	79,976	1,041,279
1998	4,810	84,261	1,090,790
1999	3,980	74,013	954,935
<b>TOTAL</b>	<b>41,919</b>	<b>804,076</b>	<b>12,369,210</b>

### Appendix 2: FY 1998 Funding

**EPA/NIHS WORKER EDUCATION AND TRAINING AWARDS  
FOR BUDGET PERIOD 09/01/1997-08/31/1998  
FY 1998 FUNDS**

EPA HWWTP			EPA MWTP					
AWARDEE	HWWTP 9/98 AWARD	SJTI 9/98 AWARD	TOTAL 9/98 AWARD	MWTP 9/98 AWARD	SJTI 9/98 AWARD	Brownfields 9/98 AWARD	TOTAL 9/98 AWARD	9/98 TOTALS
University of Alabama Birmingham	450,000		450,000					450,000
International Chemical Workers Union Council	1,700,000		1,700,000					1,700,000
International Association of Fire Fighters	550,000		550,000					550,000
George Meany Center for Labor Studies	520,700		520,700					520,700
University of Massachusetts, Lowell	700,000		700,000					700,000
University of California at Los Angeles	958,176		958,176					958,176
Laborers-AGC Education and Training	5,329,999		5,329,999	691,948		390,000	1,081,948	6,411,947
Paper, Allied-Industrial, Chemical and Energy Worker International Union	783,000	50,000	833,000					833,000
HMTRI Kirkwood Community College	350,000		350,000					350,000
Service Employees International Union	550,000		550,000					550,000
University of Medicine & Dentistry of New Jersey	711,682		711,682	483,916			483,916	1,195,598
International Union, United Auto Workers	625,000		625,000					625,000
International Union of Operating Engineers	1,133,000		1,133,000					1,133,000
University of Cincinnati	1,400,000		1,400,000					1,400,000
Center to Protect Workers' Rights	1,855,442		1,855,442	575,000	15,000	1,350,000	1,940,000	3,795,442
Jackson State University				174,136			174,136	174,136
AFSCME Training and Education Institute	653,001		653,001					653,001
Clark Atlanta University				525,000	150,000	590,000	1,265,000	1,265,000
DePaul University	774,000		774,000	550,000	60,000	670,000	1,280,000	2,054,000
<b>TOTAL</b>	<b>19,044,000</b>	<b>50,000</b>	<b>19,094,000</b>	<b>3,000,000</b>	<b>225,000</b>	<b>3,000,000</b>	<b>6,225,000</b>	<b>25,319,000</b>

**Appendix 3: Course Data by EPA Region**

<b>EPA HWWTP COURSE DATA BY EPA REGION 09/01/1998 - 08/31/1999</b>			
<b>EPA REGION</b>	<b>COURSES COMPLETED</b>	<b>WORKERS TRAINED</b>	<b>CONTACT HOURS</b>
Region 1	180	3,221	48,325
Region 2	968	18,736	209,451
Region 3	257	5,661	79,856
Region 4	341	5,835	89,204
Region 5	835	17,082	202,847
Region 6	140	2,495	33,098
Region 7	370	6,984	73,929
Region 8	191	2,037	31,150
Region 9	535	9,611	148,023
Region 10	148	1,928	33,839
Other	15	423	5,213
<b>TOTAL</b>	<b>3,980</b>	<b>74,013</b>	<b>954,935</b>

**Appendix 4: Total Training by NIEHS Awardee**

<b>EPA/NIEHS WORKER EDUCATION AND TRAINING AWARDS TOTAL TRAINING FOR BUDGET PERIOD 09/01/1998-08/31/1999</b>			
<b>AWARDEE</b>	<b>COURSES COMPLETED</b>	<b>WORKERS TRAINED</b>	<b>CONTACT HOURS</b>
University of Alabama Birmingham	146	4,618	44,307
International Chemical Workers Union Council	198	5,040	50,825
International Association of Fire Fighters	28	596	14,508
George Meany Center for Labor Studies	47	614	8,512
University of Massachusetts, Lowell	39	569	10,184
University of California at Los Angeles	151	2,961	39,923
Laborers-AGC Education and Training	477	7,248	171,915
Paper, Allied-Industrial, Chemical and Energy Worker International Union	39	947	10,184
HMTRI Kirkwood Community College	714	11,096	129,174
Service Employees International	42	841	9,064
University of Medicine & Dentistry of New Jersey	594	11,469	113,872
International Union, United Auto Workers	84	1,823	15,927
International Union of Operating Engineers	703	15,591	199,268
University of Cincinnati	283	3,933	52,926
Center to Protect Workers' Rights	242	3,299	52,352
AFSCME Training and Education Institute	119	2,194	16,705
DePaul University	74	1,174	15,289
<b>TOTAL</b>	<b>3,980</b>	<b>74,013</b>	<b>954,935</b>

### Appendix 5: Target Populations

<b>EPA HWWTP TARGET POPULATIONS FOR BUDGET PERIOD 09/01/1998-08/31/1999</b>						
<b>TARGET POPULATIONS</b>	<b># COURSES COMPLETED</b>	<b>% COURSES COMPLETED</b>	<b># WORKERS TRAINED</b>	<b>% WORKERS TRAINED</b>	<b># CONTACT HOURS</b>	<b>% CONTACT HOURS</b>
CERCLA Cleanup <sup>1</sup>	1,885	47%	32,574	44%	529,619	56%
Emergency Response	777	20%	17,270	24%	187,954	20%
Other Safety and Health	742	19%	14,484	20%	118,207	12%
Hazmat Transport	105	3%	1,549	2%	13,308	1%
RCRA/Industrial	433	11%	7,574	10%	96,989	10%
Asbestos Abatement	16	0%	280	0%	5,138	1%
Radiation	12	0%	140	0%	1,176	0%
Lead Abatement	7	0%	73	0%	2,200	0%
Educational Enhancement	3	0%	69	0%	344	0%
<b>FY 1999 TOTALS</b>	<b>3,980</b>	<b>100%</b>	<b>74,013</b>	<b>100%</b>	<b>954,935</b>	<b>100%</b>

<sup>1</sup>The overall majority of training remains in the CERCLA Cleanup training.

**Appendix 6: Total Training by MWTP Awardee**

<b>EPA/NIEHS MINORITY WORKER TRAINING PROGRAM WORKER EDUCATION AND TRAINING AWARDS TOTAL TRAINING FOR BUDGET PERIOD 09/01/1998-08/31/1999</b>			
<b>AWARDEE</b>	<b>COURSES COMPLETED</b>	<b>WORKERS TRAINED</b>	<b>CONTACT HOURS</b>
University of Medicine & Dentistry of New Jersey	16	30	21,834
Laborers-AGC Education and Training	45	96	23,460
Center to Protect Workers' Rights	46	100	34,100
DePaul University	39	69	14,740
Jackson State University	15	20	6,104
Clark Atlanta University	35	45	18,362
<b>TOTAL</b>	<b>196</b>	<b>360</b>	<b>118,600</b>

**Appendix 7: Four-Year Summary of Training**

<b>NIEHS/EPA MINORITY WORKER TRAINING PROGRAM FOUR-YEAR SUMMARY OF TRAINING</b>			
<b>YEAR</b>	<b>STUDENT TRAINED</b>	<b>PLACE IN JOBS</b>	<b>PERCENTAGE OF STUDENTS PLACE IN JOBS</b>
FY 1996	368	246	67%
FY 1997	310	193	62%
FY 1998	240	154	64%
FY 1999	360	233	65%
<b>TOTAL</b>	<b>1,278</b>	<b>826</b>	<b>65%</b>

**Appendix 8: MWTP Demographics**

<b>NIEHS/EPA MINORITY WORKER TRAINING PROGRAM: DEMOGRAPHICS FOR BUDGET PERIOD 09/01/1998-08/31/1999</b>								
<b>STUDENTS</b>	360							
<b>AGE</b>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>23</u>	<u>24</u>	<u>25</u>
	39	32	71	30	40	45	42	61
<b>ETHNICITY</b>	<u>BLACK</u>	<u>HISPANIC</u>	<u>ASIAN</u>	<u>NATIVE AMERICAN</u>		<u>PAC. ISLANDER</u>		
	322 (89%)	36 (10%)	2 (1%)	0 (0%)		0 (0%)		
<b>GENDER</b>	<u>MALE</u>			<u>FEMALE</u>				
	296 (82%)			64 (18%)				

**Appendix 9: MWTP Summary of Type and Number of Courses**

<b>NIEHS/EPA MINORITY WORKER TRAINING PROGRAM SUMMARY OF TYPE AND NUMBER OF COURSES FOR BUDGET PERIOD 09/01/1998-08/31/1999</b>	
<b>COURSE NAME</b>	<b>NUMBER OF COURSES</b>
Adult CPR	4
Asbestos Abatement Supervisor	3
Asbestos Abatement Worker Basic	20
Asbestos Abatement Worker Refresher	1
Basic Construction Skills	15
Basic Electrical Training	1
Basic First Aid	4
Basic Math Skills	12
Basic Reading/Writing Skills	8
Basic Superfund Site Worker	22
Confined Space	5
Environmental Justice	7
Environmental Preparation	5
Environmental Sampling	2
GED Training and Certification	1
General Construction Safety	7
Lead Abatement Supervisor	3
Lead Abatement Worker Basic	22
Lead Abatement Worker Refresher	1
Life Skills	27
Mentoring/Career Guidance	13
Physical Fitness	7
Scaffold	4
Site Worker Refresher	1
Underground Storage Tank Basic Worker	1
<b>TOTAL</b>	<b>196</b>

**Appendix 10: Four-Year Summary of Student Trained per Awardee**

<b>NIEHS/EPA MINORITY WORKER TRAINING PROGRAM: (FOUR- YEAR SUMMARY OF STUDENT TRAINED PER AWARDEE)</b>					
<b>AWARDEE</b>	<b>FY 1996 STUDENT TRAINED</b>	<b>FY 1997 STUDENT TRAINED</b>	<b>FY 1998 STUDENT TRAINED</b>	<b>FY 1999 STUDENT TRAINED</b>	<b>TOTAL</b>
University of Medicine & Dentistry of New Jersey	26	25	25	30	106
Laborers-AGC Education and Training	50	41	32	96	219
Alice Hamilton Occupational Health Center	46	20	0	0	66
Center to Protect Workers' Rights	60	139	126	100	425
DePaul University	70	34	22	69	195
Jackson State University	86	27	0	20	133
Clark Atlanta University	30	24	35	45	134
<b>TOTAL</b>	<b>368</b>	<b>310</b>	<b>240</b>	<b>360</b>	<b>1,278</b>

**Appendix 11: Four-Year Summary of Employment per Awardee**

<b>NIEHS/EPA MINORITY WORKER TRAINING PROGRAM: (FOUR- YEAR SUMMARY OF EMPLOYMENT PER AWARDEE)</b>					
<b>AWARDEE</b>	<b>FY 1996 TOTAL EMPLOYMENT</b>	<b>FY 1997 TOTAL EMPLOYMENT</b>	<b>FY 1998 TOTAL EMPLOYMENT</b>	<b>FY 1999 TOTAL EMPLOYMENT</b>	<b>TOTAL</b>
University of Medicine & Dentistry of New Jersey	16	12	18	14	60
Laborers-AGC Education and Training	27	25	28	80	160
Alice Hamilton Occupational Health Center	38	11	0	0	49
Center to Protect Workers' Rights	54	85	63	45	247
DePaul University	56	26	21	48	151
Jackson State University	39	17	0	19	70
Clark Atlanta University	16	17	24	27	74
<b>TOTAL</b>	<b>246</b>	<b>193</b>	<b>154</b>	<b>233</b>	<b>826</b>

## Appendix 12: MWTP Job Training Characteristics

**Table A: Type, Frequency of Jobs Worked by PETP Graduates (All Cycles)**

Title	Number of Students who have Worked in this Title
Administrative/Clerical Assistant	3
Asbestos Handler	9
Asbestos Restricted Handler	6
Carpenter Apprentice	16
Carpenter's Helper	5
Construction Helper	4
Dock Builder	5
Driver	1
Electrician	1
Environmental Technician	12
Filter Plant Operator	1
Hazardous Waste Operations	6
Laborer	11
Lead Inspector	13
Lead Paint Handler	4
Millwright	1
Mover	3
Painter's Helper	2
Plumber/Pipefitter	1
Retail Sales	4
Security Guard	7
Sheetmetal Worker	4
Site Technician	4
Waste Transfer Technician	6

## Appendix 12: MWTP Job Training Characteristics Cont.

While the nature of construction work may be widely known, new titles emerging in environmental fields may be less known. Table IV, below, describes the nature of some of these titles.

**Table B: Environmentally Related Work by Program Graduates**

Job Title	Type of Work
Hazardous Waste Operations	Assessment, cleanup, treatment of hazardous materials, or non-cleanup work on a designated hazardous waste site.
Asbestos Handler	Safe removal of asbestos-containing material from homes, workplaces, environment.
Lead Paint Inspector	Inspecting for presence of lead-based paint in housing, on infrastructure and in the environment.
Lead Paint Remover	Safe removal of lead-based paint to prevent childhood lead poisoning.
Asbestos Restricted Handler	Carpentry work setting up critical barriers prior to asbestos removal.
Environmental Technician	Inspects for presence of hazardous materials, compliance with worker and environmental safety regulations.
Waste Transfer Technician	Sorting, packaging, compliance verification of solid municipal waste for transfer to off-site landfills and recycling plants.

**Table C: Percent Employment of Graduates**

Training Cycle Start Date	Maximum % Employed	Mean % Employed	Mean % Employed Compared to "Full-Time Construction Hours"
12/95 (n=17)	134	54	77
1/97 (n=18)	108	54	77
1/98 (n=21)	114	61	87
1/99 (n=24)	102	58	83

### **Appendix 13: Superfund Jobs Training Initiative**

Training from September 1, 1998 to August 30, 1999

#### **Laborers-AGC Education and Training Fund**

Laborers-AGC under the Hazardous Waste Worker Training Program conducted special training for minority residents living near the Many Diversified Interests, Inc., (MDI) Superfund site in Houston, TX. Laborers-AGC received no supplemental funds but re-budgeted existing funds to provide the training. EPA Region 6 requested a total of 240 hours of training in general construction, hazwoper, asbestos, and lead abatement for potential workers at the site. In partnership with EPA Region 6, Make Ready, Inc., SEARCH Inc., and the Texas Natural Resources Conservation Commission, Laborers-AGC was able to train 28 students with 21 completing all courses. While none of the trainees were actually employed at MDI site, job placement was successful. To date job placement is as follows:

<b>Number Of Students</b>	<b>Employer or Superfund Site</b>	<b>Location of Site/Employer</b>
1	Bonfuca Superfund Site	Madison, LA
1	Tetra Tech	Houston, TX
4	Brown and Root - NASA Site through Laborers Local #80	Houston, TX
2	Waste Management	Houston, TX
3	On Site Temporary Placement	Houston, TX

#### **Clark Atlanta University/Xavier University (CAU/XU)**

CAU was awarded a \$150,000 supplement to respond to the educational and training needs of the West Dallas community affected by the RSR Corporation lead smelter. XU a sub-contractor of CAU took the lead in training at RSR. XU, in partnership with New Start for a Better Environment, and the Laborers-AGC, received supplemental funding from NIEHS and EPA-Region 6, to conduct the West Dallas training this past year. In addition to the NIEHS funds, this program was scheduled to receive funds from the principal responsible party (the RSR Lead Smelter Company, formerly known as Murph Metals), however, the court awarded funds of \$72,000 have not been released and are apparently being protested in the judicial system.

For recruitment and intake, a one-week long testing/interviewing/orientation program was conducted. Ten students (6 males, 4 females) were recruited for the RSR training program. The basic academic skills training began on April 19, 1999 and ended May 28, 1999. The basic academic skills component included math; reading; study skills; basic computer skills; worker health and safety; environmental awareness; fitness-for-duty; life skills; group and individual counseling; and job development and job placement assistance. Of the 10 trainees enrolled in the program, 8 trainees completed the basic academic skills training and enrolled in the technical training program conducted by the Laborers-AGC.

Of the 10 trainees initially enrolled in the training program, 8 trainees completed various components of the of the technical training program (8 – lead abatement; 8 – asbestos abatement; 7 – construction; and, 7 – hazmat). The technical training program was conducted in Livonia, LA at the Laborers-AGC training site. The technical training consisted of 80 hr hazardous waste worker training, 40 hr asbestos abatement training, 40 hr lead abatement training, and 80 hr construction skills training.

Due to scheduling at the Livonia Training Site, trainees experienced a month-long gap between the basic academic skills training and the technical training. During this month, trainees were

provided with several days of activities including an environmental justice seminar and job readiness training (interview skills, videotaped mock interviews and interview critique). XU staff conducted the seminars. In addition, the instructors and counselors from West Dallas and key members of the advisory board identified temporary jobs for all participants to help with their finances until technical training begins.

Of the eight trainees who were graduates from this program, five of them succeeded in obtaining employment. Two job placements were obtained through the local Laborers union. Of the three remaining graduates, one had medical problems and is now able to seek employment; two are pending employment on the lead smelter dismantling. At the time of this report, final numbers of workers trained can not be verified due to discrepancies in recruitment strategies by CAU. According to NIEHS analysis of CAU progress reports, only 3 students were qualified for entry in the program. More information about the RSR training is forthcoming.

### **DePaul University**

This year the MWTP at DePaul focused its efforts on education and training at the Douglas Road/Uniroyal Superfund site in South Bend, Indiana, the Dutch Boy Superfund site in the West Pullman area of South Chicago and the Washington Naval Yard in Washington DC. The SuperJTI program at DePaul University operates through and within the framework of the MWTP. DePaul supports the SuperJTI premise that although the SuperJTI program itself is not authorized to perform job training activities, it can use its considerable community outreach mechanisms to create partnerships with local businesses, community organizations, and develop and support job training simultaneously. For this program year approximately 14,740 contact hours were delivered with 39 course offered to 69 trainees by DePaul and the Alice Hamilton Occupational Health Center (AHOHC). Forty-eight (48) of the 69 students are currently employed with 32 in environmental and 16 in construction/other jobs.

The MWTP/SuperJTI program at DePaul was highly effective this year due to a number of unique and productive elements. These special elements were: 1) diverse and aggressive partnering; 2) a dynamic outreach-retention approach; 3) implementation of their integrated educational and training model that promoted rigorous cognitive and affective engagement with the content and process of experience; 4) a novel approach and modality for delivering life skills training; 5) an on site job fair that interfaced the trainees with environmental contractors as an integral part of the training schedule curriculum; 6) a graduation ceremony that highlighted accomplishments of the trainees which catalyzed and enhanced further with combined support from all constituencies in the community, as well as contractors, officials in the United States Environmental Protection Agency Region 5 Superfund program, politicians and the media.

## **South Bend – Douglas Road/Uniroyal**

The city of South Bend is in proximity to the 30-acre Superfund Douglas Road/Uniroyal site. The cleanup work has two primary components: 1) construction of a landfill cap over the 16-acre property and 2) construction of a wetland at the site to treat contaminated ground water pumped from beneath the site. Sixteen (16) ethnic minorities of age's 18-25 years who lived in South Bend, IN received critical thinking skills development, employability skills development, and environmental technician training. The training in South Bend took place at the Charles Martin Youth Center near the Douglas Road/Uniroyal Superfund site. Utilizing lessons learned from the Granite City Project, over 40 hours of Instrumental Enrichment (IE) were provided and a job fair was developed that brought environmental contractors to the training site. The trainees took the technical training course offerings including Superfund Site Worker, Lead Abatement, and Asbestos Abatement. Trainees are being licensed in both the state of Illinois and Indiana as asbestos abatement workers and in the states of Illinois as lead abatement workers (the state of Indiana's lead program is not in effect at this time). The double licensing for asbestos enhances each trainee's employability and regularity of work.

The Charles Martin Youth Center (CMYC) provided excellent instructional, hands-on, and support facilities that were well maintained by a conscientious custodial staff. For a modest rental fee, the training program staff was given access to a boardroom, classrooms, a gymnasium with a well-equipped kitchen attached, equipment and supplies storage areas, and access to telephones and a facsimile machine. Life skills training and was given by DePaul/OAI in conjunction with the CMYC and the South Bend Heritage Foundation. A unique life skills component that bridged to the IE principles was conducted on site by community partners with unique expertise. This component placed great emphasis on developing interview skills, marketing one's training and skills, and resume development. Without any additional cost, CMYC provided lunch for trainees and DePaul staff during the first two weeks of training, doughnuts, coffee and lunch for the job fair, and a full buffet dinner for the graduation. Other partners included Workforce Development Services, Opportunities Industrialization Center, South Bend Heritage Foundation, Urban League of South Bend and St. Joseph County, Inc., and a number of individuals who became very committed to the success of the project.

The job fair was a great success with attendance from such contractors as CH2M Hill and Kelchner, Inc., who are the contractors for the Douglas Road Superfund Site. Other local environmental companies were also in attendance and trainees were able to engage in one on one interviews with each of the contractors. Of the 16 trainees, 10 are employed performing environmental work.

## **Chicago – Dutch Boy (International Harvest Site)**

The second site located in the West Pullman area and contiguous to the Dutch Boy Site is the International Harvester Site (IH), known as the Former West Pullman Works Site. IH, which was enrolled into the Illinois EPA's Voluntary Cleanup Program by Navistar, is a 21 acre area formerly owned by Navistar for the production of machine tools and now owned by the Better Living Foundation (associated with CHRIST Universal Temple). The Dutch Boy facility was used originally by the Dutch Boy Paint Company to produce lead-based paints. The building, the basement, and the surrounding grounds were contaminated with lead, and perhaps-other paint-related products. In previous sampling conducted at the Dutch Boy Site, total lead was detected at concentrations ranging as high as 50,000 milligrams per kilogram.

DePaul partnered with a community based organization known as the Committee for Economic Recovery (CER) with the training located in the Rectory of Seven Holy Founders in Calumet Park, Illinois. This facility is very close to the Dutch Boy Site and is near the boundary between the

African American and Latino communities. Although the actual Dutch Boy Site is a Superfund Site, many 21 trainees were drawn from communities that extend well beyond the adjacent area but exist in the larger brownfield context. Thus, DePaul approach of implementing this training within the MWTP framework addresses the SuperJTI and the MWTP objectives that so strongly connects with the environmental justice issues.

CER recruited 21 residents for the program and DePaul provided the bulk of the environmental that included superfund site worker, risk assessment overview, asbestos abatement Training, instrumental enrichment, lead abatement training, and soil and water sampling training. The life skills component was delivered by Joseph Collins, a local consultant who is affiliated with CER. In an effort to keep trainees involved in the training, CER provided lunches and minimal transportation during the first few weeks of training, which was an excellent means of maintaining student retention. EPA Region 5 provided the Superfund Overview Training and provided support for the Job Fair and Graduation. After graduation, 9 of the 21 trainees are employed.

### **Washington, DC – Washington Naval Yard**

DePaul and Alice Hamilton Occupational Health Center (AHOHC) offered in-depth training at the Washington Naval Yard site near Washington, D.C. AHOHC along with community-based organizations Bridges to Friendship (B2F) conducted three cycles of training, one for Latino workers and two for English speaking workers. A total of 32 minority students were trained in a broad range of environmental, technical, and life skills courses. B2F is an intricate collaboration of governmental and non-governmental agencies working together to assure community input and residential employment in the renewal of the Greater Southeast Washington, DC area. Initiated by the Naval District Washington, a recently designated Superfund site, B2F partners include US Environmental Protection Agency, US Department of Labor, Housing & Urban Development, General Services Administration, DC Department of Employment Services, Friendship House, AHOHC, Covenant House Washington, and Ellen Wilson Redevelopment Corporation.

AHOHC trained eleven students in its Latino MWTP. Of those eleven, three are working in the environmental field and one is employed in the construction industry. Of the remaining seven, four work in other fields and three are currently seeking employment. The outreach and recruitment for the Latino MWTP was conducted by Casa del Pueblo and other members of the Latino MWTP Advisory Board. In addition to recruitment, Casa del Pueblo also provided academic training in English and mentoring. The class consisted of six females and five males and all eleven were Hispanic. Only three students were without a high school diploma or GED. The remaining seven students all possessed high school diplomas.

B2F program combines the support services of the community-based partners, Friendship House and Covenant House Washington with the extensive B2F network and environmental trainings of AHOHC. There were two cycles of B2F training provided between October 1998 and June 1999. The B2F Youth Outreach mailing list was activated by AHOHC to inform those identified youth of the Environmental Restoration Training. The need for trained workers for the Andrews Air Force Base Hangers, as identified by the B2F Jobs Training Career Group and the Friendship House set the time frame for this first cycle of training. Friendship House and Covenant House provided assessment of skills and talents, life skills training, case management and job readiness training.

In the first English cycle, environmental preparation information was provided by AHOHC at the Friendship House and Covenant House with additional training by AHOHC in Lead Abatement, Asbestos Contractor, Life Skills, and Superfund Site Worker. While Life Skills classes were provided by Friendship, Confined Space, Scaffold training, First Aid and CPR took place at

AHOHC in Silver Spring, MD. Mentoring and Career Guidance was also provided with graduation on January 22, 1999.

During the second cycle of training a new partner, the Greater Washington Urban League from AHOHC's Advisory Board participated. The assessment of skills and talents, life skills training, case management and job readiness training was provided by Friendship House, Covenant House Washington and the Greater Washington Urban League. All eleven participants were black males. Three had completed high school, five had completed their GED and three were non-graduates. All were unemployed at the start of the program.

Environmental preparation information was provided by AHOHC with the same training as the first cycle at the Friendship House and Covenant House. This group was unique in a number of ways. Eleven community members joined trainees for this cycle. In addition, eight private sector contractors were enrolled in either the asbestos or lead classes.

The BF2 Collaboration, particularly the Jobs Training Committee, assisted the program in the provision of an impressive Jobs Fair held at AHOHC on June 15, 1999. At this fair there were three employers interviewing for a total of 35 positions to be placed by July 15<sup>th</sup>, 1999. At the conclusion of the program year, AHOHC trained 32 individuals with 29 of them working primarily in the environmental field. Local firms such as Delaware Cornerstone working at Boiling Air Force Base doing Asbestos removal and Horn Engineer performing soil testing hired many trainees. The Washington Navy Yard hired two participants with intentions to hire more. Speakers from USEPA and the Washington Naval Yard, as well as the community-based organizations and most importantly, the participants, attest to the importance of the program. Many participants spoke about the unity they felt with each other, both youth and adults. This provides more evidence that the program works.

## **Administrative Supplements for the Period of September 1, 1999 to August 30, 2000**

### **International Chemical Workers Union (ICWU) Training**

The goal of the ICWU SuperJTI program is to train workers, supervisors, and others in the Copper Hill community Hazardous Waste Worker Responses training including (40 hr hazwoper, collateral duty emergency response and RCRA TSD activities). With these skills, the workers will be able to conduct work as determined by the EPA site evaluation and cleanup plan. ICWU will utilize the training facility at ICWUC Local 401 and will use the equipment from Oak Ridge for all classes and hands on activities. It is anticipated that half the trainees will be from Local 401 and half from the community as identified by EPA and Local 401 community contacts. The training is intended to enable workers and community to prevent injuries and illness by teaching the workers the skills to conduct remediation activities safely for themselves and the community. This will be accomplished by increasing the communities' ability to obtain work in the evaluation of hazards and cleanup of environmental damage and hazards in their communities. Every effort will be made to determine with EPA, the State of Tennessee, and the communities in the Copper Hill area the needs for training in terms of skills and numbers to be trained. Local organizations will be utilized including the use of a local physician to perform medical screening for trainees to ensure safety for don and doffing the equipment and that physician will teach the toxicology module. In addition, the ICWU will use the Trainer Development program to identify and develop two trainers – one from Local 401 and one from the community with a preference to select the members from Local 401 who have already completed the 5 day train-the-trainer class. There is support from Region 4 of the EPA as well as letters of support from the City of Copperhill and Polk County Executive.

### **DePaul University**

DePaul received a supplemental award to perform training of residents in 3 SuperJTI communities of the following sites, Kerr-McGee Superfund Site, West Chicago, IL; Reilly Tar and Chemical, Indianapolis, IN; and the Washington Navy Yard, Washington, DC. The training plan is to recruit and train 60-64 (20-22 at each site) minority students primarily African-Americans and Hispanics who are residents surrounding the following three SuperJTI sites:

- **Kerr-McGee Superfund Site, West Chicago, IL** – These sites are located in West Chicago, Illinois (approximately 30 miles west of Chicago), which consists of four different sites throughout the city. In 1932, the Lindsey Light Chemical Corporation built a factory in West Chicago to extract thorium and other elements from ores that were shipped to the Kerr-McGee facility. Thorium was used to make parts for gaslights and lanterns, as well as, being used by the federal government for nuclear research projects. In October 1984, EPA proposed four separate sites for the National Priorities List (NPL) in order to bring them under the Superfund program for investigation and cleanup. These sites include: (1) Residential Areas Superfund Site; (2) Reed Keeper Park Superfund Site; (3) Kress Creek/West Branch of the DuPage River Superfund site; and (4) Sewage Treatment Plant Superfund Site.
- **Reilly Tar and Chemical, Indianapolis, IN** - The site is located at 1500 S. Tibbs in Indianapolis, Indiana. Reilly Tar is a 120-acre property divided by Minnesota Street. The Oak Park property is located north and occupies approximately 40 acres and Maywood property is located south occupying 80 acres. Both EPA and Indiana Dept. of Environmental Management are overseeing cleanup activities. EPA entered in to a Consent Decree with Reilly who agreed to perform the remedy for OU2 at the site in 1995. Industrial development started at the site in 1921 with a coal tar refinery and a creosote wood treatment operation. The environmental problems at the site are related to the management and disposal of creosoting process wastes and to wastes associated with and substances used in the process of manufacturing custom synthesized specialty chemicals. The community has requested job training and offers for employment in the past. Much of the work at the site has been or is currently underway, however, there are substantial opportunities for environmental employment in the Indianapolis area, particularly with Brownfields. The City of Indianapolis is a recipient of a \$200,000 Brownfields Assessment pilot and was awarded \$350,000 for a Brownfields Revolving Loan Fund. The site is located within an environmental justice area, including both low-income and minority populations.
- **Washington Navy Yard, Washington, DC.** – The community involvement at the site is through the B2F, that is a collaborative effort among community, non-governmental, District of Columbia and federal agencies (including EPA Superfund) in Southeast and Southwest DC. The effort sprang from environmental justice concerns in Southeast, DC and the opportunities created by Washington Navy Yard Base Realignment and Closure redevelopment and environmental remediation. B2F is an evolutionary step in reinventing government, a step that takes a "systems integration" approach to link and leverage existing expertise and resources to make government work better without making more government.

The specific goals of DePaul's SuperJTI program are to: promote environmental protection, economic redevelopment and community revitalization through assessment, cleanup and sustainable reuse of Superfund sites; to link Federal, State, and local and non-governmental action supporting community efforts. The focus is to assist the community to restore and reuse Superfund sites and to development national models demonstrating the positive results of public and private collaboration addressing Superfund sites and its surrounding communities. The objective of this project is it to improve employment opportunities for at-risk residents of Chicago, Washington, Baltimore, and Indianapolis in a growing field with high paying jobs that can realistically lead towards economic self-sufficiency. At the conclusion of the program, DePaul intends to place at least 15 of the 22 trainees at each site into environmental remediation industry. The training plan is to:

- Provide solely the technical and environmental training to participants, specifically the hazwoper, lead, asbestos, environmental sampling and environmental assessment at all sites. In addition, AHOHC will also provide first aid, CPR, confined space training, and environmental justice/environmental awareness training.
- Provide educational and supportive training to participants through the MWTP to include outreach/recruitment, intake/assessment, life skills, critical thinking/Instrumental Enrichment (IE), mentoring /career guidance and job placement/tracking.
- Recruitment will be coordinated with different organizations at each site:
  - Kerr-McGee – DePaul will work with EPA Regional V with plans to establish cooperative relationships with the local Human Services office service Welfare-to-Work, One-Stop Career Center, the Thorium Action Group and the Laborer’s Union Local 225.
  - Reilly Tar & Chemical – DePaul will work with EPA Regional V and the Opportunities Industrialization Center (OIC)
  - Washington Navy Yard – AHOHC will work with organizations in the Bridges to Friendship alliance.

**Appendix 14: BMWTP Demographics**

<b>NIEHS/EPA BROWNFIELDS MINORITY WORKER TRAINING PROGRAM:                      DEMOGRAPHICS                      FOR BUDGET PERIOD 09/01/1998-08/31/1999</b>							
<b>STUDENTS</b>	406						
<b>AGE</b>	<u>18-25</u> 133	<u>26-35</u> 130	<u>36-45</u> 91	<u>46-55</u> 46	<u>56-65</u> 2	<u>66+</u> 0	<u>N/A</u> 4
<b>ETHNICITY</b>	<u>BLACK</u> 247 (61%)	<u>HISPANIC</u> 102 (25%)	<u>ASIAN</u> 26 (6%)	<u>NATIVE AMERICAN</u> 21 (5%)		<u>PAC. ISLANDER</u> 10 (2%)	
<b>GENDER</b>	<u>MALE</u> 348 (86%)			<u>FEMALE</u> 58 (14%)			

**Appendix 15: Brownfields Summary of Training**

<b>NIEHS/EPA BROWNFIELDS MINORITY WORKER TRAINING PROGRAM SUMMARY OF TRAINING BY AWARDEE FOR BUDGET PERIOD 09/01/1998-08/31/1999</b>		
<b>AWARDEE</b>	<b>STUDENT TRAINED</b>	<b>PLACE IN JOBS</b>
Center to Protect Workers' Rights	270	166
Clark Atlanta University	41	20
DePaul University	75	62
Laborers-AGC Education and Training	20	15
<b>TOTAL</b>	<b>406</b>	<b>263</b>

**Appendix 16: Total Training by BMWTP Awardee**

<b>EPA/NIEHS BROWNFIELDS MINORITY WORKER TRAINING PROGRAM TOTAL TRAINING FOR BUDGET PERIOD 09/01/1998-08/31/1999</b>			
<b>AWARDEE</b>	<b>COURSES COMPLETED</b>	<b>WORKERS TRAINED</b>	<b>CONTACT HOURS</b>
Center to Protect Workers' Rights	103	270	148,094
Clark Atlanta University	22	41	15,468
DePaul University	48	75	18,208
Laborers-AGC Education and Training	12	20	6,219
<b>TOTAL</b>	<b>185</b>	<b>406</b>	<b>187,989</b>

**Appendix 17: Brownfields Summary of Type and Number of Courses**

<b>NIEHS/EPA BROWNFIELDS MINORITY WORKER TRAINING PROGRAM SUMMARY OF TYPE AND NUMBER OF COURSES FOR BUDGET PERIOD 09/01/1998-08/31/1999</b>	
<b>COURSE NAME</b>	<b>NUMBER OF COURSES</b>
Adult CPR	8
Asbestos Abatement Supervisor	4
Asbestos Abatement Supervisor Refresher	1
Asbestos Abatement Worker Basic	10
Asbestos Inspector Certification	1
Basic Construction Skills	13
Basic First Aid	6
Basic Math Skills	12
Basic Reading/Writing Skills	9
Basic Superfund Site Worker	17
Confined Space	6
Environmental Justice	4
Environmental Preparation	5
Environmental Sampling	3
Environmental Technician	2
Fall Protection	1
GED Training and Certification	3
Gen. Industry Safety	1
General Construction Safety	10
HazMat Training for Infectious Diseases	1
Hazard Communication	1
Lead Abatement Supervisor	1
Lead Abatement Worker Basic	13
Lead Awareness	1
Life Skills	22
Lockout/Tagout	4
Mentoring/Career Guidance	10
Physical Fitness	7
Scaffold	4
Underground Storage Tank Basic Worker	5
<b>TOTAL</b>	<b>185</b>

**Appendix 18: Laborers-AGC –Lowell, MA (Environmental J.O.B.S.)  
Job Placement Characteristics**

<b>No. Students</b>	<b>Company</b>	<b>Salary</b>	<b>Job Title</b>	<b>Type of Work</b>
1	ACT Abatement	\$41,820 (20.50/hr)	Laborer (LIUNA Builders and Wreckers Local 1421)	Asbestos (Brownfield, Lowell), Boston Public Housing
3	Air Safe, Inc.	\$42,983 (\$21.07/hr)	Lead Abatement Workers	Lead Abatement from public housing, schools
2	Alpine Environmental	\$22,440	Lead Abatement Technicians	Lead Abatement
4	CDW Environmental	\$27,040	Environmental Technician	Water supply, sewer testing
2	ETI/Safety Kleen	\$26,520	Hazardous Waste Technician	Cleaning, loading processing hazardous waste containers, Lawrence
1	Joan Fabrics	\$19,380	Quality Control Technician	Product quality control, Lowell
1	Jones Environmental	\$20,400	Warehouse Technician	Hazardous Waste Storage and Transportation, Lowell
1	Onsite Environmental/Safety Kleen	\$24,480	Hazardous Waste Technician	Cleaning, loading processing hazardous waste containers
1	Roy F. Weston, Inc.	\$20,400	Environmental Technician	EPA START program, field monitoring, CAD imaging
1	UBC Local 111	\$22,950	Carpenter Apprentice	Lowell Superior Courthouse (Brownfield)
2	University of Massachusetts Lowell	\$30,052	Junior Environmental Health and Safety Research Technician	Monitor/inspect Lowell Brownfield site cleanup, assist with lab safety, hazardous waste compliance

**Appendix 19: FY 1999 Funding**

**EPA/NIEHS WORKER EDUCATION AND TRAINING AWARDS  
FOR BUDGET PERIOD 09/01/1998-08/31/1999  
FY 1999 FUNDS**

AWARDEE	EPA HWWTP					EPA MWTP			
	HWWTP 9/99 AWARD	Y2K 9/99 AWARD	ATT 9/99 AWARD	SJTI 9/99 AWARD	TOTAL 9/99 AWARD	MWTP 9/99 AWARD	Brownfields 9/99 AWARD	TOTAL 9/99 AWARD	9/99 TOTALS
University of Alabama Birmingham	450,000				450,000				450,000
International Chemical Workers Union Council	1,700,000	100,000		55,000	1,855,000				1,855,000
International Association of Fire Fighters	550,000	100,000			650,000				650,000
George Meany Center for Labor Studies	440,700		100,000		540,700				540,700
University of Massachusetts, Lowell	700,000	100,000			800,000				800,000
University of California at Los Angeles	960,176				960,176				960,176
Laborers-AGC Education and Training	5,000,000				5,000,000	694,500	400,000	1,094,500	6,094,500
Paper, Allied-Industrial, Chemical and Energy Worker International Union	683,000				683,000				683,000
HMTRI Kirkwood Community College	300,000		100,000		400,000				400,000
Service Employees International Union	500,000				500,000				500,000
University of Medicine & Dentistry of New Jersey	711,682				711,682	483,916		483,916	1,195,598
International Union, United Auto Workers	625,000		100,000		725,000				725,000
International Union of Operating Engineers	1,133,000	100,000	90,000		1,323,000				1,323,000
University of Cincinnati	1,400,000				1,400,000				1,400,000
Center to Protect Workers' Rights	1,800,000				1,800,000	475,000	1,350,000	1,825,000	3,625,000
Jackson State University						300,000		300,000	300,000
AFSCME Training and Education Institute	550,000				550,000				550,000
Clark Atlanta University						525,000	590,000	1,115,000	1,115,000
DePaul University	774,000			78,000	852,000	511,584	670,000	1,181,584	2,033,584
<b>TOTAL</b>	<b>18,277,558</b>	<b>400,000</b>	<b>390,000</b>	<b>133,000</b>	<b>19,200,558</b>	<b>2,990,000</b>	<b>3,010,000</b>	<b>6,000,000</b>	<b>25,200,558</b>

## Appendix 20: WETP Staff Activities

### Joseph Hughes

- Participated in the NIOSH Hazardous Substance Training and Hazardous Substance Academic Training Program Joint Annual Meeting.
- Participated on the Institute of Medicine NAS Panel to discuss training needs for Occupational Health and Safety Professionals regarding NIEHS approaches to training.
- Participated in the American Public Health Association 127<sup>th</sup> Annual Meeting and Exposition
- Attended a White House Meeting on Y2K and Chemical Safety

### Sharon Beard

- Participated in the review of the EPA Brownfields Job Training Demonstration Pilots
- Completed the orientation and the five core curriculum training courses for the Extramural Science Administrator Training Program. The goal of the ESA Training Program is to assure that every employee performing extramural science administrator responsibilities acquires a specific knowledge base and an opportunity to broaden and strengthen his/her perspectives on job-related issues through continuing education.
- Appointed as a member of the Technical Program Committee for the upcoming **International Symposium on Occupational Exposure Databases and Their Application for the Next Millennium** sponsored by American Conference of Governmental Industrial Hygienist (ACGIH) in collaboration with the American Industrial Hygiene Association, United Kingdom Health and Safety Executive and the British Institute of Occupational Hygienist. Responsibilities on the Technical Program Committee included the review of submitted abstracts, plenary session co-chair and alternate session co-chair, and manuscript peer-reviewer of conference proceedings.
- Participated in the **International Symposium on Occupational Exposure Databases and Their Application for the Next Millennium** held in London, England. The Symposium was convened to further the development of consistent, compatible, and interchangeable occupational exposure databases worldwide. This conference also focused on sharing experiences in occupational exposure database development and practices, application in exposure assessment, and on facilitating the harmonization of parallel development efforts throughout Europe and North America.
- Received a Quality of Work Life award for efforts to develop a standing DERT committee, the Community Builders Committee (CBC).
- Participated in the EPA National Community Involvement Conference/Training to continue the outreach activities with the EPA Office of Emergency Response and Remediation.
- Attended the American Industrial Hygiene Conference and Exposition
- Represented NIEHS at the Brownfields '98 Conference – Basics and Beyond -- Showcasing Successful Partnerships

- Represented NIEHS at the Brownfields '99 Conference — Alliances for 21st Century Livability — Environmental Challenges and Solutions

### **Patricia Thompson**

- Participated in the American Public Health Association 127<sup>th</sup> Annual Meeting and Exposition

### **All Staff**

- NIEHS sponsored a meeting/workshop in partnership with EPA in Estes Park, Colorado. Present at the meeting were representatives of the 21 NIEHS Awardee organizations, as well as representatives of the EPA, the DOE, community activists and environmental justice workers from all over the United States. Topics covered included the enhancement of the Minority Worker Training Program, the development process for new curricula for environmental remediation and other types of training, the use of apprenticeship and pre-apprenticeship programs, as well as specific environmental remediation programs underway at Superfund sites in several states under the auspices of the Superfund Job Training Initiative (SuperJTI) program.
- NIEHS (through the Worker Education and Training Program) co-sponsored a National Conference on Workplace Safety & Health Training. Other sponsors were the National Institute for Occupational Safety and Health and the Occupational Safety and Health Administration. The conference brought together cross-sector representatives to look at the workplace of the future, and plan new approaches to occupational safety and health training, evaluation strategies, and enabling policies to meet better the challenges ahead.