

**December 15, 1998**

***FY 1998 Accomplishments and Highlights:  
NIEHS/EPA Superfund Worker Training Program***

**Submitted by the  
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## **Table of Contents**

1	Introduction.....	1
2	1998 Program Highlights.....	2
2.1	Continuation of the peer-reviewed Worker Training awards for training of hazardous waste workers, emergency responders and minority workers.....	2
2.2	Minority Worker Training Program Development.....	4
2.3	Continued expansion of national training opportunities to under-served, low literate and non-English-speaking populations.....	8
2.4	Completion of National Labor Market Study of Brownfields Remediation.....	9
2.5	Publication of "Resource Guide for Evaluating Worker Training: A Focus on Safety and Health".....	9
2.6	Continued operation and support for a national clearinghouse on hazardous waste worker training.....	10
2.7	Trainee Environmental Job Tracking Initiative.....	11
2.8	Worker Trainer Programs: Guidelines for Success in hazardous waste operations and emergency response.....	12
2.9	Summary of the Environmental Job Training Summit in New Orleans, LA.....	12
2.10	The Brownfields National Partnership Agenda.....	13
2.11	EPA Regional and Local Coordination.....	13
3	Program Update for FY 1999 EPA-supported Worker Training Activities.....	13
3.1	Continuation Applications.....	14
3.2	Brownfields Minority Worker Training Program (BMWTP).....	14
3.3	Conference on Workplace Safety & Health Training.....	15
3.4	Guidelines for Training in Support of Workplace Safety and Health Programs.....	15
3.5	Technical Workshop on Virtual Safety and Health Training.....	17
3.6	RFA Development Process.....	17
4	Conclusion.....	18

## **List of Appendices**

Appendix 1: Eleven-Year Summary.....	19
Appendix 2: FY 97 Funding.....	19
Appendix 3: Course Data by EPA Region.....	21
Appendix 4: Total Training by NIEHS Awardee.....	22
Appendix 5: Target Populations.....	22
Appendix 6: Third Year Summary of Type and Number of Courses.....	24
Appendix 7: Demographics.....	25
Appendix 8: Three-Year Summary of Training.....	25
Appendix 9: Three-Year Summary of Training per Awardee.....	26
Appendix 10: Three-Year Summary of Employment per Awardee.....	27
Appendix 11: Superfund Jobs Training Initiative.....	28
Appendix 12: Samples of Awardee Job Tracking Pilots.....	34
Appendix 13: FY 98 Funding.....	42
Appendix 14: Brownfields Minority Worker Training Program Fact Sheets.....	43

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**1 Introduction**

Since the initiation of the Superfund Worker Training Grants Program in 1987, the National Institute of Environmental Health Sciences (NIEHS) has developed a strong network of non-profit organizations that are committed to protecting workers and their communities by delivering high-quality, peer-reviewed safety and health curriculum to target populations of hazardous waste workers and emergency responders.

The Worker Training Program was originally authorized for five years (FY 87-91) by Congress with the passage of Section 126 of the Superfund Amendments and Reauthorization Act of 1986 (SARA). The program is administered by NIEHS through an interagency agreement with EPA. During October 1990, Congress reauthorized the Superfund program for an additional three years (FY 92-94), which included an authorization of \$20 million per year for the NIEHS Worker Training Program. For FY 96, Congress provided \$18.5 million for the NIEHS Worker Training Program. EPA separately transferred \$2 million to support the continuation of an initiative for pilot project to train minority young adults for careers in the environmental restoration industry.

Through the encouragement of multi-state, university-based consortiums and the development of national non-profit organizations which have focused on specific workforce sectors, this NIEHS program has established technically-proficient curriculum materials and quality-controlled course presentations. These courses have been delivered to hazardous waste workers and emergency responders in every region of the country and have established new national benchmarks for quality worker safety and health training. The program also has represented a major prevention education activity for NIEHS as technical scientific and basic research information is delivered to target populations with high-risk toxic exposures.

During the first eleven years of the Superfund Worker Training Program (FY 87-98), the NIEHS has successfully supported twenty primary awardees. These represent over ninety different institutions who have trained over 730,000 workers across the country and presented nearly 38,000 classroom and hands-on training courses, which have accounted for over 11.0 million contact hours of actual training (See Appendix 1).

Through an Interagency Agreement, NIEHS received \$21,456,455 from the FY 97 EPA appropriations, which provided funding to NIEHS awardees during the past year (FY 98). Approximately nineteen million two hundred thousand dollars of the FY 97 funds were allocated to continue support of the Superfund Worker Training Program to train hazardous waste workers and emergency responders. One Million two hundred thousand dollars of the FY 97 funds were allocated to continue support for the Minority Worker Training Program (MWTP) with \$256,589 to support Superfund Jobs Training Initiative (Super JTI) activities, which provided additional funding to NIEHS MWTP awardees. As a result of the Interagency Agreements, NIEHS awarded three programs (See Appendix 2):

- 17 EPA/HWWT awardees received awards totaling \$19,194,866
- 6 EPA/MWT awardees received awards totaling \$1,200,000
- 2 Super JTI awardees received awards totaling \$256,589

During the past year (FY 98), 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 4,810 courses, reaching 84,261 workers, which account for 1,090,790 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, 1997 and August 31, 1998, 54% of the training has been focused on delivering CERCLA cleanup worker training. This comprises 34,537 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 FY 1998 Program Highlights**

During FY 98, (September 1, 1997 – August 31, 1998) major program accomplishments of the Superfund Worker Training Program include:

### **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 third program year on the projected five year long cooperative agreements to support worker training activities, 17 organizations submitted progress reports, training data and budget requests and training plans on July 1, 1997. 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, 1997 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:

#### **United Auto Workers Union**

As a result of one Health & Safety Representative's training received at this year's United Auto Workers refresher program, a site visit and walkaround were requested at ITT Automotive, UAW Local 1686, in New Lexington, OH. The walkaround indicated needs for improvement in Emergency Response capabilities at the plant, such as purchase of new response equipment (SCBAs and other PPE), and especially a need for training for all plant employees in Emergency Response Awareness, and for a smaller group of workers for Operations Level IER training. An IER Awareness Level program has been completed with 700 attendees.

#### **University of Cincinnati**

A trainee of the NIEHS-supported Midwest Consortium reported that a major warehouse operation had an early morning fire at one of their facilities late last fall. First-on-the scene was their Facility Maintenance Chief who had completed emergency response training provided by the Midwest Consortium during the previous summer. He grabbed

his response kit and briefed each arriving municipal response team on the physical layout of the facility to include the locations of hazardous materials, confined spaces, process system control points, and evacuation routes. He said it was his emergency response training that taught him the importance of emergency response planning and saved his company from losing a multi-million dollar facility. Local municipal responders credited his detailed knowledge of the potential hazards in his facility with enabling them to react quickly and effectively in bringing the situation under control.

### **University of Medicine and Dentistry of New Jersey**

In a summary report covering over 10,000 trainees for the past year, UMDNJ reports that in written examinations administered in several training courses, sixty five percent of trainees passed the written exam with a score of 80% or higher; 85% passed with a score of 70% or higher. NIEHS guidelines call for proficiency assessment of trainees, which can include a combination of written and demonstrated items. Proficiency assessment includes a skills demonstration against a checklist of procedures for equipment handling and mock decontamination, as well as skills related to specific target audiences. In additional follow-up course surveys, ninety one percent of trainees responded by stating that the course objectives were completely met and 96% believed the level of technical instruction they received was on target.

### **George Meany Center for Labor Studies**

George Meany Center for Labor Studies, eight rail unions, the AFL-CIO Department of Occupational Safety and Health, and the AFL-CIO Transportation Trades Department has developed training program for rail workers involved in the transportation of hazardous materials and hazardous waste. This year, their Union Pacific peer instructors trained over 2,300 rail workers responsible for car inspection, car repair and wrecking activities. The eight-hour training addresses the objectives required by OSHA 1910.120(q)(6)(I) for the awareness level and DOT in 49 CFR 172, Subpart H, for awareness, safety and function-specific training.

### **DePaul University**

Because of the specific hazards at the Dial Tool Company in the northern suburbs of Chicago, DePaul University/OAI offered a course in Hazardous Materials Awareness and a Lock-out/Tag-out class. The students reacted very well to the courses, and after the training the safety director noted that their employees now clearly understood how to read and interpret the MSDS's for the products at the site. The company has implemented a hazardous materials response team to evaluate any accidents and handle them, if they can do so safely. Since the training, there has been only one situation that necessitated emergency response, which was a partial degreaser shutdown with trichloroethylene.

### **University of Medicine and Dentistry of New Jersey**

Six-months post course, the UMDNJ administered a follow-up mail survey to a sample of 210 trainees from all training agencies in New York and New Jersey, comprising three major target audiences: hazardous waste site workers, RCRA-TSD workers and emergency responders. Among hazardous waste site and RCRA-TSD workers, 89% were currently employed, 51% had conducted work at a site since the training, of these 35% were currently working at a site. Additionally, an average of 18 hours was spent per week at hazardous waste or RCRA/TSD sites. Emergency responders reported responding to an average of 6 hazardous materials incidents since their most recent training.

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

The Foster Wheeler Environmental Corporation recently remarked on NIEHS-supported training at the Times Beach Superfund Site: "During the period of performance for our project, hundreds of Laborers were employed by our numerous subcontractors. These Laborers supported various remediation actions that required the implementation and application of a high level of training including, but not limited to, relevant OSHA training and the skills and knowledge required to work in various levels of protection. We could not have achieved success without them Laborers-AGC."

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

Our joint efforts with EPA to support Minority Worker Training for inner-city young adults are preparing them for career-path jobs related to environmental cleanups. The Program, at the completion of its third year, has recruited and successfully trained 918 minority young adults in worker health and safety training for environmental cleanup. The six programs target twelve urban cities including New York City, NY; Baltimore, MD; Washington, DC; Atlanta, GA; New Orleans, LA; Memphis, TN; Minneapolis/St. Paul, MN; Chicago, IL; Los Angeles, Oakland, and San Francisco, CA; and Cleveland, OH. For the period of September 1, 1997 to August 31, 1998, 240 students were trained with 160 courses given representing 146,053 contact hours. There were 20 different training courses/subjects (See Appendix 6). Even with the reduction in the budget this year to 1 million, the awardees were able to provide quality training. During the first three years, the program focused on developing and testing of curriculum, refining training plans and adapting to the challenges and difficulties in running job-training programs.

### Demographics and Placement Data

The progress reports indicate successful completion and job placement of graduates of the program. Of the 240 students that completed training this budget period, 156 are currently employed. This represents a 64% job placement rate for all programs. The 64% employment is consistent with the overall employment rate of 65% since 1995. The jobs range from environmental, general construction, hazardous waste including lead and asbestos. It is anticipated that by 1999 follow up data will indicate an increase in the placement rate to 80%. This has been the trend from previous years of the program. For example, the UMDNJ program has indicated the 80% placement rate as an average after three years of their program. The demographics for this training population are found in Appendix 7. There were 84 percent African American; 14 percent Hispanic; 1 percent Pacific Islanders and 1 percent Asian students. There were 80 percent males and 20 percent females. (See Appendices 8, 9 and 10 for detailed information on student employment).

### Program Changes and Accomplishments

Several programs developed and refined their training plans to focus on reoccurring concerns such as high student drop out and lack of information on job availability. The development and institution of mentoring by former graduates of the program has been extremely successful in increasing the number of individuals applying for the program and increasing student retention. For example, CAU hired several graduates to initiate focus groups of current trainees to discuss concerns and develop strategies to succeed in the environmental industry. Other programs developed other ways to describe their measures of success other than job placement status of trainees. Individual program accomplishments are profiled below.

### University of Medicine and Dentistry of New Jersey

The most extensive data on employment has been collected from the University of Medicine and Dentistry of New Jersey (UMDNJ). Their current job employment data indicate that of the 25 trained, 18 are employed. Specifically 9 trainees employed in environmental jobs and 9 trainees in construction jobs. The UMDNJ submitted two reports that highlight significant achievements and improvement in their program. The first, a job placement report covering two years of training graduates which demonstrates significant impact on job placement and longevity. A second report demonstrated significant improvements in student retention, reductions in tardiness and absences, and a record graduation rate of more than 80%. This data represents information UMDNJ has gathered on trainees systematically over the course of their employment histories that includes placement, employer, wage, duration of employment, SIC code, job title, relationship to environmental cleanup and assessment and whether the employee is represented by a union. The results of their reports indicate the following

- Wages earned by trainee's equal or exceed the total costs of their training.
- There are significant improvements in student retention, reductions in tardiness and absences, and a record graduation rate of more than 80%.
- The successful UMDNJ program has expanded by receiving additional funds for more training programs using the NIEHS model.

#### Wages and Income

UMDNJ graduates (1995-1997) earned an average hourly wage of \$11.03 before benefits. Graduates in 1995-96 and 1996-97 of UMDNJ program have earned significant incomes since graduation. The earliest graduates earned a median income of \$17,215, before benefits, with a maximum of \$44,315. More recent graduates (on the job market since July 1997 to November 1997) have earned a mean income of \$5,212, with the highest already earning \$11,477. Since graduation of both programs, the students have earned a combined pre-benefit total of \$385,606, about the total award for a single year of training to the UMDNJ consortium. Estimating approximately \$200,000 in benefits earned by students, the amount earned back by students has about equaled the total cost of training for both cycles.

#### Student Retention

To address the low student retention program, UMDNJ made extensive changes in recruitment and screening of students. The highlight of this effort was a three-day intensive try-out at which students were systematically evaluated for their participation, dynamics in-groups, attitudes, drive and ability to perform in classroom and shop (construction) setting.

#### Program Expansion

UMDNJ due to the achievement of the NIEHS program were successful in acquiring new sources of supplemental support for training additional students. These two contracts are for Empowerment-Zone related training of young people in the South Bronx and in Northern Manhattan. The first program funded by the US Department of Labor, supports UMDNJ in partnership with FECS, a job development program in the South Bronx. This program will train 75 young residents of two public housing developments over the next three years. An additional program in Northern Manhattan through an agreement with the New York City Housing Authority (NYCHA) will train 50 people in the next three years who are residents of NYCHA owned property. While not supported by NIEHS funding, the model developed by UMDNJ in the NIEHS-MWT will be followed.

#### DePaul University



DePaul's current training, and employment centered on twenty-two (22) ethnic minority inner-city residents from communities in Granite City, Illinois and Chicago, Illinois. These trainees successfully participated in and completed dynamic critical thinking skills development, life support skills development, job readiness, and environmental technician training to acquire jobs and enter into careers in the environmental remediation industry. Of the 22 trained, 21 are currently employed in the environmental industry. The program has continued to improve their training by focusing on a highly successful learning tool called Cognitive Education: The Integration of Feuerstein's Instrumental Enrichment (FIE) and Mediated Learning Experience (MLE) in conjunction with the Hazardous Waste Operations and Emergency Response and Lead-based Paint Abatement Worker 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 FIE exercises, mediating application of these principles, enhancing the cognitive functions, and promoting higher order, interdisciplinary, and analytic thinking. Professor Reuven Feuerstein developed Instrumental Enrichment in the 1950's which 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. Specifically, the major outcome attributed to this training is the increased retention rate of students. Some of the other outcomes are:

- 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.

### **Clark Atlanta University**

This consortium is a collaborative effort between Clark Atlanta University (CAU), Xavier University (XU) and the Laborers-AGC Education and Training Fund. Of the 35 students in the program, 24 are employed. In addition to the great placement record, CAU acquired a job development/placement specialist during this period that has been instrumental to their program. The placement specialist developed a MWTP - Employment Handbook. The handbook included the following information: "Things to Remember" when looking for a job, listing of environmental/construction contractors, and current listing of job openings. In addition, Career Days were hosted on the campuses of XU and CAU. This provided an opportunity for potential employers to meet program graduates and share additional information concerning their companies and description of jobs in the construction and environmental industry. The most beneficial aspect of career days hosted on campus was that students were able to apply directly for jobs with the employers. Therefore, program participants did not have to travel to remote areas to complete hire packets for employment. This process allowed many program participants to go directly to work.

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

Since 1995 Laborers-AGC Education and Training Fund (Laborers-AGC) has successfully trained 123 minority youth through their program at San Francisco State University and Cuyahoga Community College. The third year, Laborers-AGC trained 32 students with 28 students employed. The wages range from \$8/hr to \$47/hr with an

average wage of \$16. This is one of the most diverse programs with recruitment of individuals at 16 % Hispanics, 3 % Asian/Filipino and 81 % African American. This is due in part to the diversity of its consortium members. The members represent several ethnic organizations including Chinese for Affirmative Action, Ella Hill Hutch Community Center, Young Community Developers and Mission Hiring Hall. This year, in both locations, the Laborers-AGC was highly successful in placing students in environmental jobs. Another success for the Laborers is their ability to encourage students to enroll in degree programs. For instance, the Cuyahoga Community College component reports 20% enrollment of graduates in degree programs.

### **Carpenters Health and Safety Fund**

The Carpenters Health and Safety Fund (UBC) has formed a consortium including the International Brotherhood of Painters and Allied Trades (IBPAT) and other Building and Construction Trades Unions. The UBC, the largest program, implemented training in five cities; Los Angeles, CA; Minneapolis-St. Paul, MN; New Orleans, LA; Baltimore, MD; and Oakland, CA. The UBC trained 126 students with 63 employed with ongoing efforts for job placement of the remaining students. All programs provided life skills training, GED training and/or remedial reading and math, as well as construction pre-apprenticeship skills and environmental worker training courses. The program added another training site, the Cypress Mandela Training Center in West Oakland, CA with excellent results. The Mandela Center placed 11 of their first class of 18 students in jobs performing construction work in the East Bay area involving the dismantling of buildings and/or demolition of structures prior to reconstruction. These properties contained both lead and asbestos. The amount of work currently underway is far greater than the available manpower. Because Cypress Mandela has been working closely with the Bay Area Carpenters District Council that relationship has enabled the transition from training to employment for a significant number of minorities. Additionally, established working relationships with other Construction and Building Trades unions offer even greater opportunities for the program graduates.

### **Superfund Jobs Training Initiative**

The Superfund Jobs Training Initiative (Super JTI), a project of the Office of Community Involvement for the EPA Superfund Program, has partnered with the NIEHS Worker Education and Training Program to provide additional training to residents around Superfund Sites across the country. This initiative is similar to the MWTP therefore collaboration has been beneficial for both EPA and NIEHS with the beneficiaries being the residents receiving training and jobs under this partnership. Since the partnership began in 1996, approximately 50 students from 3 different communities have been trained.

Under the Super JTI, supplemental funds were used to provide recruitment and training to residents of 4 sites. Those sites are Agriculture Street Landfill Site, New Orleans, LA; NL Taracorp Site, Granite City, IL; East Palo Alto, CA site and the AT&SF Site, Albuquerque, NM. The NL Taracorp Site training this year was very successful with the completion of training of 16 students. Of the 16 students, 15 students are employed. The Agriculture Street Site, under the direction of the CAU consortium with Xavier University and the Laborers, has trained 5 young men. All 5 completed all facets of basic skills and technical training. There are 2 students employed in environmental jobs and the remaining are scheduled to begin work in the surrounding areas including the Pointe La Hache courthouse outside of New Orleans. In East Palo Alto, the UBC trained 22 students of which 20 students are employed in construction and hazardous waste jobs. The majority of students are working in construction for the new airport construction program. The UBC training in Albuquerque involved a consortium of the Carpenters Local 1319, IBPAT, and the San José Community Awareness Council to train ten (10) residents surrounding

the AT&SF Site. Due to difficulty in recruitment and slow startup at this site, the UBC has abandoned the Albuquerque Program. They have plans to re-direct the Albuquerque funding during the next year for training in the Bay View Hunters Point area. In the next year, training will expand to the Washington Navy Yard, Washington, DC; a site in North Denver, CO; RSR Smelter Site, Dallas, TX; and the Dutchboy Site, Chicago, IL. (See Appendix 11 for more information).

### **2.3 Continued expansion of national training opportunities to under-served, low literate and non-English-speaking populations**

Based on review criteria established by NIEHS in 1992 and the President's Executive Order on Environmental Justice, the NIEHS Worker Training Awardees continue to implement special initiatives to ensure that disadvantaged populations who are exposed to hazardous waste and toxic materials will have meaningful access to high quality safety and health training. Many of the NIEHS awardees have responded by translating curricula into appropriate languages and dialects for non-English speaking waste cleanup workers and forming partnerships with community organizations in contaminated regions with large minority populations. Efforts by all awardees have been made to incorporate environmental justice concerns into program development, outreach to high-risk target populations, curricular modifications and training evaluation. Some recent examples include:

#### **George Meany Center for Labor Studies**

In Flagstaff, Arizona, 50 rail workers received awareness level training. An estimated 90% of participants were Native American, reflecting the substantial population of Native American railroad workers in the Four Corners area of the U.S. Almost all of these workers were members of the Brotherhood of Maintenance of Way Employees, which coordinates the training location, date and recruitment. Maintenance of way workers are most likely to be required to repair and replace track before or during hazardous waste control and clean-up.

#### **AFSCME Training and Education Institute**

Coalition of Black Trade Unionists (CBTU), working AFSCME Training and Education Institute (ATEI) and the Chemical Workers Training Center is continuing its Community Action and Response Against Toxics Team Activities in order to provide information and assistance to communities of color to help prevent and reduce exposures to environmental hazards. Two planning meetings and three Community Toxics Conferences were held prior to the end of the year, with ATEI support.

#### **Oil Chemical and Atomic Workers Union**

OCAW has been working with the Environmental Justice Network to bring together community residents around chemical plants with workers for Jobs and Environment training. OCAW has adapted its Jobs and the Environment training for use in Environmental Justice training and included as the central theme transitioning the community and the workforce affected by bans, phaseouts and other issues that cause changes or loss of workers' jobs and negative impacts to the community tax base and economy. This training promotes discussion on what would be good public policy for workers and communities to justly transition to new work and economic paradigms.

### **University of California at Los Angeles**

The California-Arizona Consortium, under the direction of the UCLA Labor Occupation and Health Program, has continued to provide an extensive training program to minority workers through out the Western part of the United States. Due to the large number of Hispanic workers in their training area, they have developed an integrated consortium of trainers to address the need for bi-lingual training. With a cadre of bi-lingual instructors with translated curriculum to include extensive training exercises and other training materials, their outreach to small businesses has been very successful. Their work in providing training to all levels of workers in electroplating industry in California has been a hallmark of their program. In addition, their program with the Southwest Network for Economic and Environmental Justice on the Worker/Community Toxics Health and Safety Program, has produced a network of community trainers addressing worker training issues and community issues around exposure to workplace and contaminated sites. This alliance has produced not only a cadre of community trainers but training manuals in Navajo, Spanish, Korean and Cantonese that has been used to train over 75 community residents and affected workers. UCLA has begun a program working with the Indigenous Environmental Network (IEN) to train a core group of Native American occupational health and safety outreach trainers based in tribal areas in the Western US. Also, they held 3 First Responder courses in Hilo, Hawaii with Alaska courses reaching many Alaskan natives.

### **2.4 Completion of National Labor Market Study of Brownfields Remediation**

In conjunction with the EPA-Superfund Labor Task Force and EPA-OSWER staff, NIEHS has published a study protocol to capture site specific, environmental restoration employment data and describe the workforce which is involved in brownfields site cleanup projects. Through a supplemental award to the George Meany Center for Labor Studies, Ruttenberg & Associates has implemented the study design to examine specific labor markets where brownfields cleanups have already been carried out. **Brownfields: Hazmat Cleanup But More**, a study carried out by Ruth Ruttenberg and Associates, (RRA) explains what brownfields are and how, though the path taken to remediate them differs from other sites, they are, in many basic, and obvious ways, quite similar to many hazardous waste sites. It then goes on to discuss the scope of interest being generated by Brownfields, from communities to the federal government, and private industry. Finally, the paper considers the impact of Brownfields initiatives on communities and how best to assure that impacted communities benefit from the redevelopment efforts, not only in terms of a nicer environment, but in terms of opportunities for personal growth, leading to continuous employment. The study found that the HAZWOPER standard clearly applies not only at Superfund sites, but at virtually all hazardous waste sites, including Brownfield sites. With the application of 1910.120 comes much responsibility on the part of the employer. It is necessary that all those who work at hazardous waste sites in the brownfields program have full knowledge of the standard and how it applies to them so that they, as well as their employers, can ensure safety.

### **2.5 Publication of "Resource Guide for Evaluating Worker Training: A Focus on Safety and Health"**

During May 1998, the Resource Guide for Evaluating Worker Training: A Focus on Safety and Health was published by RRA in conjunction with the George Meany Center and NIEHS. This guide summarizes the insights and methodologies of the NIEHS Worker

Training Awardees in conducting formative and summative program, training, instructor and trainee evaluations. During March 1996, NIEHS sponsored the first national conference on Measuring and Evaluating the Outcomes of Hazardous Waste Worker Training to examine the methods which have been developed by various programs to document the effectiveness of training activities. Drawing on public health experts in the evaluation field, awardee representatives spent two days exploring the methodological issues that underlie the collection of program effectiveness data. Breakout sessions examined issues from trainee comprehension of curricula to outcome results in the workplace after training had taken place. The significant resources that have been allocated for NIEHS training awards require that recipients demonstrate not only effective implementation, but also positive impacts on the health and safety of trained workers. The findings reported at the technical workshop and the publication of the Resource Guide clearly demonstrate that NIEHS grantees have responded to the challenge for program evaluation and have documented monumental changes in the health and safety of workers and communities across the United States.

## **2.6 Continued operation and support for a national clearinghouse on hazardous waste worker training**

The Clearinghouse functions as a link between awardees of NIEHS Worker Training cooperative agreements and other members of the general public who are concerned with quality worker health and safety training. Tasks of the Clearinghouse include, but are not limited to, the distribution of curricula, research work to support the development of the NIEHS Worker Training Program, cataloguing of training materials, and other information pertaining to worker health and safety training for hazardous materials, waste operations, and emergency response, as well as other related activities. The Clearinghouse is the information exchange and dissemination mechanism for 19 worker training programs whose support from the Environmental Protection Agency (EPA) is intended to set a high standard for health and safety training to protect workers in the burgeoning environmental technology sector.

The Clearinghouse web page has been redesigned and includes a help desk section designed to provide information on the Internet for both the computer novice and the expert. Links exist for the following topics: Brownfields, Regulations, Hazard Communication, Hazardous Materials Libraries, Lead and Asbestos, Material Safety Data Sheets, NIEHS Grantees, Pollution Prevention, Radiation, and State Resources.

Also linked to the page are documents produced by the Clearinghouse, including the **Resource Guide for Evaluating Worker Training: A Focus on Safety, and the Minimum Criteria Document**. Interested parties are now able to register for workshops and meetings on-line via the Clearinghouse Web Page.

Features of the updated Web Page were presented at the October awardee meeting. This task by the Clearinghouse will also include enhancing the existing Web page and related resources, collecting data on existing computer technology, linkages to other resources, and direct assistance and consultations in creating on-line access for individual users and participating organizations in the NIEHS program. The Help desk program will increase the use of Web page resources, available LISTSERV resources, NIEHS FTP site, email exchange, on-line conferencing capabilities and related electronic resources. The Clearinghouse web address is: <http://www.niehs.nih.gov/wetp/clear.htm>

## **2.7 Trainee Environmental Job Tracking Initiative**

In our request for continuation applications during May 1998, NIEHS 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, RRA and the Clearinghouse have 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.

Besides conducting a telephone survey of awardees to gather information on data collection systems, the Clearinghouse helped organize a meeting on tracking, in Washington, D.C., which was attended by about 40 representatives of awardee organizations, NIEHS, DOE, and EPA. As a basis for discussion, before and after the meeting, the Clearinghouse collected and disseminated, by fax and with the help of a tracking listserve, the data collection instruments used by various awardee organizations.

Technical/research support was also supplied to awardees who participated in a series of tracking conference calls organized by NIEHS during September and October. The conference calls were organized for sub-groups of NIEHS awardees: separate calls were conducted for the industrial union group, the construction group, the DOE group, the university group and the Minority Worker Training Program group. The results of these conference calls were presented at the October awardee meeting. A new trainee tracking page has been added to the Web Page. All awardees have created pilots projects to collect trainee employment data. Three sample charts are included as examples of Awardee Job Tracking Pilots as Appendix 12. Descriptions of these efforts include:

### **International Association of Firefighters**

The IAFF has selected training sites by identifying departments near geographic locations with the highest densities of Superfund sites and TSD facilities. The IAFF entered data from the federal EPA NPL Final Site Bulletin (dated 10/02/95) into a software program (Geographic Information System) that mapped the entered locations and listed the top locations for NPL sites. For site clusters near several smaller cities, the IAFF identified central locations for training. The sites receiving training over the past three years were among these top locations.

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

Laborers-AGC recently developed a separate application to be used for all environmental remediation refresher courses. This form continues to provide demographic information that was included on the old form, but it also has a section on recent work activities in the environmental remediation field. Trainees are asked to provide their work history on hazardous waste sites, including the job location, contractor, and date of job. They are also asked to indicate if their training was relevant to their job, prepared them for their job, or improved their health and safety on the job.

### **University of Massachusetts at Lowell**

The New England Consortium (TNEC) is required to survey its Refresher Course attendees and report back to NIEHS regarding certain information about hazardous waste sites at which attendees have worked during the past year. Information desired includes Types and names of sites, chemicals involved, involvement of a respective employer and the approximate number of workers there.

### **University of Medicine and Dentistry of New Jersey**

The registration form used by the New Jersey/New York Consortium is a scannable form. Data are collected in several means. 1. Registration forms; 2. Follow-up questionnaires; 3. Refresher Courses. It collects typical demographic data, including age, gender, education level, ethnicity, primary language. Additionally, it collects whether the trainee is employed, and where they are employed (i.e. private industry, government, union, DOE site), and job duty (i.e. clean-up of waste sites, transport wastes, TSD of wastes, site investigation).

## **2.8 Worker Trainer Programs: Guidelines for Success in hazardous waste operations and emergency response**

Key to the success of the Superfund Worker Training Program has been the continuing development of trainers at the local level throughout the United States. NIEHS has undertaken an effort to inventory Train-the-Trainer Programs for hazardous waste workers and emergency responders in order to examine the characteristics of successful programs. This inventory process and a companion technical workshop was resulted in the publication of **Worker Trainer Programs: Guidelines for Success in hazardous waste Operations and Emergency Response**, a technical document which summarizes best practices and lessons learned for the development of high quality train-the-trainer programs. It is the goal of this effort to establish a national consensus for how to maintain the delivery of high quality HAZWOPER training through the ongoing support and development of both professional and worker trainers. This national development of a minimum criteria document includes a state of the art discussion concerning the current status of the unique characteristics of train-the-trainer programs which will include the content of training programs, mechanisms for ongoing support of peer trainers, and minimum qualifications for trainers in 1910.120 programs. Information has been collected and catalogued from NIEHS Worker Training awardees to document the processes and content of existing trainer programs, refresher and tune-up activities, and other activities which assure the ongoing technical competency of trainers supported by NIEHS programs.

## **2.9 Summary of the Environmental Job Training Summit in New Orleans, LA**

In March 1998 more than 170 participants conferred for a workshop on environmental job training with the focal point of continuing review and planning for the Minority Worker Training Program. Participants represented trainees, peer trainers, labor unions, professional trainers, training program administrators, colleges and universities, community groups, environmental justice advocates, consultants, and government officials. Hosted by Xavier University and sponsored by Clark Atlanta University, U.S. Environmental Protection Agency and NIEHS in cooperation with the National Clearinghouse for Worker Safety and Health Training, discussion centered on:

- A look-back of three years of start-up and training in the MWTP and progress since the technical workshop at Cuyahoga Community College in Cleveland, April 17, 1995 on "Environmental Job Training for Inner City Youth."
- A review of the programs as they currently exist, evaluating recruitment, life skill training, jobs skill training, safety and health training, placement, retention, and advancement.
- A look forward at ways to improve training, training partnerships, and training-to-work partnerships. Substantial time both formally and informally was spent strengthening and forging such vital links.

Participants were invited to a tour of facilities such as training sites, chemical companies, brownfield sites, and other sites in the New Orleans and Mississippi River Chemical Corridor. The Opening Plenary included welcome from Norman Francis, President of Xavier University, and Dr. Yvonne Scruggs-Leftwich, Executive Director and CEO of the Black Leadership Forum. This first plenary provided an excellent overview and challenge to training with emphasis on urban infrastructure issues, and how to maximize the benefits of training for trainees, the community and the training providers. Several breakout sessions were presented on topics such as Life Skills Management and Curriculum Issues; Incentives and Barriers to Modifying Construction/Cleanup Contracts; Linking Up With Other Job Training Programs; and Raising the Level of Training.

## **2.10 The Brownfields National Partnership Agenda**

Under the brownfields program, NIEHS staff are active members of the Interagency Working Group that has convened several times during this year to promote and develop an Interagency Brownfields National Action Agenda. Under a special taskforce established by the Office of Solid Waste and Emergency Response, a Sub-Committee on Job Training and Workforce Development has been established and NIEHS staff are members of that Sub-Committee. The major goals of this collaboration is to share information between EPA/NIEHS program regarding brownfields pilots; tie Minority Worker grants closely to ongoing activities in brownfields pilot cities; and leverage job training opportunities for residents of brownfields pilot communities.

The NIEHS has been working diligently with EPA/OSWER Staff and is one of the leading contributors to Workforce Development for the Brownfields Program. During the development of the EPA Job Training and Development Demonstration Pilots initiative, NIEHS provided comments on the review criteria as well as served on the committee to review the applications. In addition to providing written responses, staff participated on several conference calls to develop a ranking of top applications for funding under the program.

## **2.11 EPA Regional and Local Coordination**

Under the Brownfields Program and the Super JTI Program, OERR and the Regional EPA offices, especially Region 4, 5, 6, 7 and 9, are working with NIEHS to address specific projects. Some of those projects include the Super JTI programs in East Palo Alto, CA; New Orleans, LA; Granite City, IL; Dallas, TX; and Denver, CO. Some of these programs are completed and new projects have just started this September.

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



Through an Interagency Agreement, NIEHS received \$26 million from the FY 98 EPA appropriations to support cooperative agreements for providing model occupational safety and health training for workers and their supervisors that perform dangerous jobs in the nation's hazardous waste management and remediation programs, as well as for emergency responders to uncontrolled hazardous materials releases.

### **3.1 Continuation Applications**

Twenty million dollars of the FY 98 funds for the were allocated to continue support of the Superfund Worker Training Program to train hazardous waste workers and emergency responders. Three million dollars of the FY 98 funds were allocated to continue support for the Minority Worker Training Program (MWTP). EPA transferred \$3 million to support Brownfields MWTP and \$275,000 to support Superfund Jobs Training Initiative (Super JTI) activities, which provided additional funding to NIEHS MWTP awardees. As a result of the Interagency Agreements, NIEHS awarded:

- 17 EPA/HWWT awardees received awards totaling \$19,044,000
- 6 EPA/MWT awardees received awards totaling \$3,000,000
- 4 Brownfields awardees received awards totaling \$3,000,000
- 4 Super JTI awardees received awards totaling \$275,000

See Appendix 13 for Awardee Breakout of FY 98 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. Individual progress report forms for each awardee are included as appendices to this document, along with budget worksheets, in which targeted reductions have been made in specific line item categories.

### **3.2 Brownfields Minority Worker Training Program (BMWTP)**

As part of the Department of Health and Human Services commitment to the Brownfields National Partnership Agenda, the NIEHS provided support for the establishment of the Brownfields Minority Worker Training Programs targeting the Showcase Communities. Through an interagency agreement between NIEHS and EPA, the NIEHS awarded \$3 Million for the development of brownfields environmental job training programs targeting people of color at the 16 Brownfields Showcase Communities. The NIEHS made four (4) awards for the Brownfields Minority Worker Training Program. The four awards were provided to Laborers-AGC, DePaul University, Clark Atlanta University, and United Brotherhood of Carpenters. These 4 programs focus on 11 of the 16 communities including Lowell, MA; Chicago, IL, Kansas City, MO; Baltimore, MD; Eastward Ho!, Fl;

Dallas, TX; Los Angeles, CA; East Palo Alto, CA; Portland, OR; St. Paul, MN and Salt Lake City, UT. This program represents an tremendous opportunity to enhance the successful partnership between NIEHS and EPA. This partnership will assist in broadening the Minority Worker Training Program 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 brownfields sites. For more information about this program, review the fact sheets listed at <http://www.niehs.nih.gov/wetp/bfield/htm> or Appendix 14.

During the development of the administrative supplemental request, NIEHS actively engaged in discussions with EPA headquarters and regional staff to develop specific review criteria and asked key EPA staff to review the applications. NIEHS staff also participated in several Brownfields Meetings including Brownfields '97, Showcase Community Kickoff Meetings including Eastward HO!, FL; Glen Cove, NY; Kansas City, MO/KS; State of Rhode Island; and Baltimore, MD.

Other proposed activities for the coming program year will include:

### **3.3 Conference on Workplace Safety & Health Training**

With the involvement of the EPANIEHS Superfund Worker Training Program, an interagency effort has been initiated to examine health and safety training. A National Conference on Workplace Safety & Health Training will be held October 24-26, 1999 in the Henry VIII Hotel & Conference Center, St. Louis, Missouri, co-sponsored by the National Institute for Occupational Safety & Health, the Occupational Safety and Health Administration, and the National Institute of Environmental Health Sciences. The conference is planned to bring 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.

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

### **3.4 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, 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 is proposed as a requirement in the draft rule. Yet, very little detail is included with regard to the development of training programs associated with the Program rule.

The Guidelines developed in this Workshop and the resulting Guidance Document will serve 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 guidelines document, therefore, is 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 are 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.

### **3.5 Technical Workshop on Virtual Safety and Health Training**

WORKER TRAINING AND THE INTERNET: A RESOURCE AND A TRAINING MEDIUM will be an upcoming technical workshop in April 1999 in Denver, Colorado. Both computer-based training and on-line distance learning are becoming invaluable resources for hazardous waste and emergency response training information. Worker access to the Internet can provide 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 upcoming 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 E-mail. 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.

### **3.6 Request for Applications (RFA) Development Process**

During August 1999, the NIEHS will be releasing the next formal program announcement which will describe 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 will specify a deadline in December 1999 for grant applications from qualified non-profit organizations to support curriculum development, direct training delivery and program evaluation.

NIEHS' announcement will specifically state 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 to include workers involved in waste site investigations and assessments and in the transportation and generation of hazardous waste; groups facing potential health risks that are similar to cleanup workers and emergency responders.

The NIEHS will request 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 will also require 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 will be encouraged to minimize duplication of efforts, to provide wide geographic coverage and to reduce administrative costs.

#### **4 Conclusion**

Based on our program experience over the past eleven years, the NIEHS will continue to use cooperative agreements as the appropriate mechanism for making awards to non-profit training organizations for fiscal years 1995-99. Because of the substantial programmatic involvement by NIEHS staff to ensure the consistency, appropriateness and technical reliability of funded training programs, the use of cooperative agreements appear to be a more suitable instrument for supporting extramural training of hazardous waste workers and emergency responders and assuring the delivery of high quality safety and health programs to high-risk populations.

In administering the Superfund Worker Training Program through an Interagency Agreement with the Environmental Protection Agency (EPA), the NIEHS ensures that the traditional peer review process of the National Institutes of Health (NIH) provides the essential framework for the oversight of grant application reviews, and guidance of the program with grants management activities and ongoing program administration. Technical experts in toxicology, industrial hygiene, labor education and hazardous waste management from both the public and private sectors have played an ongoing role in assuring that NIEHS supported programs demonstrate high technical merit and adhere to stringent standards for quality control through periodic site reviews and an ongoing peer review process.

The NIEHS/EPA Superfund Worker Training Program must continue to meet the Superfund-related national environmental goals of protecting communities from exposures to wastes at abandoned dumpsites and currently operating facilities and from exposures related to the storage, treatment and disposal of waste. Additionally, we will continue to develop programs to protect and train those who live and work in communities affected by EPA brownfields and environmental justice initiatives; and everyone who works with disease-causing hazardous materials. These goals will be achieved by responding to the nation's changing needs for worker training in the area of hazardous waste operations and emergency response to hazardous materials.

The NIEHS model programs will continue to encourage innovation for training difficult-to-reach populations. This program is addressing issues such as literacy, appropriate adult education techniques, training quality improvement and other areas unaddressed directly by the market place. The program enhances rather than replaces private sector training by demonstrating new and cost-effective training techniques and materials.

**Appendix 1: Eleven-Year Summary**

<b>EPA HWWT 11 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
<b>TOTAL</b>	<b>37,939</b>	<b>730,063</b>	<b>11,414,275</b>

**Appendix 2: FY 97 Funding**

**EPA/NIEHS WORKER EDUCATION AND TRAINING AWARDS  
FOR BUDGET PERIOD 09/01/97-08/31/98  
FY 1997 FUNDS**

EPA HWWT		EPA MWT		
AWARDEE	HWWT 9/97 AWARD	MWT 9/97 AWARD	JTI 9/97 AWARD	TOTAL 9/97 AWARD
University of Alabama Birmingham	449,990			449,990
International Chemical Workers Union Council	1,700,000			1,700,000
International Association of Fire Fighters	550,000			550,000
George Meany Center for Labor Studies	520,700			520,700
University of Massachusetts, Lowell	700,000			700,000
University of California at Los Angeles	1,000,176			1,000,176
Laborers-AGC Education and Training	5,687,000	105,000		5,792,000
Oil, Chemical & Atomic Workers	783,000			783,000
HMTRI Kirkwood Community College	300,000			300,000
Service Employees International	490,000			490,000
University of Medicine & Dentistry of New Jersey	800,000	270,000		1,020,000
International Union, United Auto Workers	625,000			625,000
International Union of Operating Engineers	1,208,000			1,208,000
University of Cincinnati	1,400,000			1,400,000
United Brotherhood of Carpenters	1,839,000	315,000	100,000	2,154,000
Jackson State University		60,000		60,000
AFSCME Training and Education Institute	707,000			707,000
Clark Atlanta University		370,000	100,000	220,000
DePaul University	435,000	80,000	56,589	571,589
<b>TOTAL</b>	<b>19,194,866</b>	<b>1,200,000</b>	<b>256,589</b>	<b>20,651,455</b>

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

<b>EPA HWWT COURSE DATA BY EPA REGION 9/1/97 - 8/31/98</b>			
<b>EPA REGION</b>	<b>COURSES COMPLETED</b>	<b>WORKERS TRAINED</b>	<b>CONTACT HOURS</b>
Region 1	255	4,843	59,340
Region 2	1,129	20,611	223,541
Region 3	324	6,404	87,310
Region 4	311	4,169	73,067
Region 5	949	18,641	229,725
Region 6	246	2,825	37,771
Region 7	470	9,254	118,898
Region 8	176	1,840	34,420
Region 9	505	8,985	139,234
Region 10	353	3,534	59,388
Other	92	3,155	28,096
<b>TOTAL</b>	<b>4,810</b>	<b>84,261</b>	<b>1,090,790</b>



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

<b>EPA/NIEHS WORKER EDUCATION AND TRAINING AWARDS TOTAL TRAINING FOR BUDGET PERIOD 09/01/97-08/31/98</b>			
<b>AWARDEE</b>	<b>COURSES COMPLETED</b>	<b>WORKERS TRAINED</b>	<b>CONTACT HOURS</b>
University of Alabama Birmingham	231	5,620	52,854
International Chemical Workers Union Council	201	6,340	61,489
International Association of Fire Fighters	20	461	10,040
George Meany Center for Labor Studies	462	4,828	41,880
University of Massachusetts, Lowell	40	600	10,384
University of California at Los Angeles	182	2,873	43,090
Laborers-AGC Education and Training	508	7,590	185,217
Oil, Chemical & Atomic Workers	36	593	5,064
HMTRI Kirkwood Community College	728	10,799	138,732
Service Employees International	82	1,584	12,540
University of Medicine & Dentistry of New Jersey	694	12,682	125,864
International Union, United Auto Workers	57	1,271	13,536
International Union of Operating Engineers	832	17,880	243,030
University of Cincinnati	287	4,247	58,933
United Brotherhood of Carpenters	211	3,287	56,144
AFSCME Training and Education Institute	174	2,853	21,935
DePaul University	65	753	10,056
<b>TOTAL</b>	<b>4,810</b>	<b>84,261</b>	<b>1,090,790</b>

**Appendix 5: Target Populations**

**EPA HWWT  
TARGET POPULATIONS  
9/1/97 – 8/31/98**

<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>	2,069	43%	34,537	41%	585,076	54%
Emergency Response	1,083	23%	21,353	25%	220,447	20%
Other Safety and Health	617	13%	12,342	15%	121,052	11%
Hazmat Transport	546	11%	6,476	8%	48,822	5%
RCRA/Industrial	449	10%	8,867	11%	100,048	9%
Asbestos Abatement	22	0%	107	0%	1,592	0%
Radiation	16	0%	409	0%	9,816	1%
Lead Abatement	4	0%	69	0%	1,752	0%
Educational Enhancement	4	0%	101	0%	2,183	1%
<b>FY 98 TOTALS</b>	<b>4,810</b>	<b>100%</b>	<b>84,261</b>	<b>100%</b>	<b>1,090,790</b>	<b>100%</b>

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

**Appendix 6: Third Year Summary of Type and Number of Courses**

<b>NIEHS/EPA MINORITY WORKER TRAINING PROGRAM: THIRD YEAR SUMMARY OF TYPE AND NUMBER OF COURSES</b>	
<b>TYPE OF COURSE</b>	<b>NUMBER OF COURSE</b>
Life Skills	19
Basic Construction Skills	13
Mentoring/Career Guidance	14
Basic Reading/Writing Skills	12
Basic Math Skills	12
Lead Abatement Worker Basic	15
Basic Superfund Site Worker	10
GED Training and Certification	8
Asbestos Abatement Worker Basic	10
Physical Fitness	6
Confined Space	4
General Construction Safety	8
Environmental Justice	5
Adult CPR	8
Environmental Preparation	2
First Aid	8
Hazardous Waste Operations	2
Basic Electrical Training	1
Underground Storage Tank Basic Worker	1
Site Worker Refresher	2

### Appendix 7: Demographics

NIEHS/EPA MINORITY WORKER TRAINING PROGRAM: DEMOGRAPHICS								
<b>STUDENTS</b>	240							
<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>
	29	30	28	41	27	31	24	30
<b>ETHNICITY</b>	<u>BLACK</u>	<u>HISPANIC</u>	<u>ASIAN</u>	<u>PAC. ISLANDER</u>				
	200 (84%)	34 (14%)	3 (1%)	3 (1%)				
<b>GENDER</b>	<u>MALE</u>				<u>FEMALE</u>			
	193 (80%)				47 (20%)			

### Appendix 8: Three-Year Summary of Training

NIEHS/EPA MINORITY WORKER TRAINING PROGRAM THREE-YEAR SUMMARY OF TRAINING			
YEAR	STUDENT TRAINED	PLACE IN JOBS	PERCENTAGE OF STUDENTS PLACE IN JOBS
FY 96	368	246	67%
FY 97	310	193	62%
FY 98	240	154	64%
<b>OVERALL TOTAL</b>	918	593	65%

**Appendix 9: Three-Year Summary of Training per Awardee**

<b>NIEHS/EPA MINORITY WORKER TRAINING PROGRAM: (THREE- YEAR SUMMARY OF TRAINING PER AWARDEE)</b>				
<b>AWARDEE</b>	<b>FY 96 STUDENT TRAINED</b>	<b>FY 97 STUDENT TRAINED</b>	<b>FY 98 STUDENT TRAINED</b>	<b>TOTAL</b>
University of Medicine & Dentistry of New Jersey	26	25	25	76
Laborers-AGC Education and Training	50	41	32	123
Alice Hamilton Occupational Health Center	46	20	0	66
United Brotherhood of Carpenters	60	139	126	325
DePaul University	70	34	22	126
Jackson State University	86	27	0	113
Clark Atlanta University	30	24	35	89
<b>TOTAL</b>	<b>368</b>	<b>310</b>	<b>240</b>	<b>918</b>

**Appendix 10: Three-Year Summary of Employment per Awardee**

<b>NIEHS/EPA MINORITY WORKER TRAINING PROGRAM: (THREE- YEAR SUMMARY OF EMPLOYMENT PER AWARDEE)</b>				
<b>AWARDEE</b>	<b>FY 96 TOTAL EMPLOYMENT</b>	<b>FY 97 TOTAL EMPLOYMENT</b>	<b>FY 98 TOTAL EMPLOYMENT</b>	<b>TOTAL</b>
University of Medicine & Dentistry of New Jersey	16	12	18	46
Laborers-AGC Education and Training	27	25	28	80
Alice Hamilton Occupational Health Center	38	11	0	49
United Brotherhood of Carpenters	54	85	63	202
DePaul University	56	26	21	103
Jackson State University	39	17	0	56
Clark Atlanta University	16	17	24	57
<b>TOTAL</b>	<b>246</b>	<b>193</b>	<b>154</b>	<b>593</b>

## **Appendix 11: Superfund Jobs Training Initiative**

### **Superfund Jobs Training Initiative**

#### **Summary**

The Superfund Jobs Training Initiative (Super JTI), a project of the Office of Community Involvement for the EPA Superfund Program, has partnered with the NIEHS Worker Education and Training Program to provide additional training to residents around Superfund Sites across the country. This initiative is similar to the MWTP therefore collaboration has been beneficial for both EPA and NIEHS with the beneficiaries being the residents receiving training and jobs under this partnership. Since the partnership began in 1996, approximately 50 students from 3 different communities have been trained.

#### **Pilot Sites**

##### **Clark Atlanta University**

###### **1. Agricultural Street Landfill Community, New Orleans, LA**

In 1997, supplemental funds were provided to Clark Atlanta University to recruit and train residents of the Agricultural Street Landfill community in New Orleans, LA. The Five (5) men selected from this area joined with the 1997 class of MWTP trainees conducted by CAU's consortium member Xavier University. All five students completed every facets of basic skills and technical training. Two (2) of them are currently employment in the construction industry and three (3) students are pending employment with Environmental Abatement Services in Baton Rough, LA. The three trainees' are scheduled to perform primarily asbestos abatement at the Pointe La Hache courthouse outside of New Orleans.

###### **2. RSR Smelter Site, West Dallas, TX**

On September 1, 1998, CAU received an award to respond to the educational and training needs of the West Dallas community affected by the RSR Corporation lead smelter. Xavier University will provide the training for this site. To this end, the project will develop comprehensive educational and job training programs designed to improve the general academic skills and provide job training in the areas of basic construction and hazardous material abatement that should lead to employment in this area.

A major objective is the development of a partnership for collaboration between the Deep South Center for Environmental Justice at Xavier University (XU), the New Start Community Organization, and the Laborer's-AGC Education and Training Fund. The focus of the interaction will be on the identification, recruitment, and training of West Dallas residents for employment in basic construction and hazardous material abatement. The project is designed to achieve the following goals: (1) develop an intake/recruitment plan to identify fifteen (15) community residents for training; (2) assess the academic skills levels of potential trainees/screen potential participants

### **Appendix 11: Superfund Jobs Training Initiative Cont.**

through an interview process; (3) modify DSCEJ existing basic skills curriculum to address the reading, writing, math, study skills, and life skills levels of trainees; (4) conduct one six weeks basic skills/pre-apprenticeship training cycle; and (5) conduct one six weeks job training cycle.

The program has six components: (1) administrative/management component; (2) outreach and recruitment component; (3) curriculum development component; (4) job development and placement component; (5) evaluation and tracking component; and (6) advisory board.

#### **Training Components**

<b>Subjects</b>	<b>Provider</b>
Recruitment, Outreach to Community, and Job Placement	➤ XU/New Start, West Dallas Community Development Corporation, and West Dallas Multipurpose Center and other community based organizations
Basic Remedial Skills which includes reading, writing, mathematics, environmental awareness, life skills, and job readiness training.	➤ XU/New Start and Mountain View College, TX
General Construction - Tool and Material Recognition, safety, etc (80 hours)	➤ L-AGC Texas/LA
Lead Abatement (40 hours)	➤ L-AGC Texas/LA
Asbestos Abatement (40 hours)	➤ L-AGC Texas/LA
Hazardous Waste Worker Training (40 hours)	➤ L-AGC Texas/LA

#### **United Brotherhood of Carpenters Health and Safety Fund**

##### 3. East Palo Alto, CA

In 1997, the UBC was awarded funds to develop training with Carpenters' District Council, OIC-West, DePaul University, Private Industry Council, the City of East Palo Alto Economic Development Office, Mission Community College, and the Regional EPA office to train 22 residents. The project originally proposed to train 10 students but with such strong support from the local partners, they were able to provide for a large class of trainees. Union contractors have been awarded construction work for the new airport construction project and twenty (20) jobs have been lined up for the East Palo Alto program graduates.



## Appendix 11: Superfund Jobs Training Initiative Cont.

### Training Components

Subjects	Provider
Recruitment, Outreach to Community, and Job Placement	➤ OIC-West
Basic Remedial Skills which includes reading, writing, mathematics, environmental awareness, life skills, instrumental enrichment and job readiness training.	➤ OIC-West and DePaul University
General Construction - Tool and Material Recognition, safety, etc. (80 hours)	➤ L-AGC Texas/LA
Lead Abatement (40 hours)	➤ UBC
Asbestos Abatement (40 hours)	➤ UBC
Confined Space	➤ DePaul University
Underground Storage Tank	➤ DePaul University
Hazardous Waste Worker Training (40 hours)	➤ DePaul University

#### 4. AT&SF Site, Albuquerque, NM

Also in 1997, the UBC subcontracted with the San Jose Community Awareness Council, local Carpenters Local 1319 and the IBPAT to train ten (10) young adults. The Carpenters JATC provided the funds to cover the costs of their pre-apprenticeship instructor and materials. Recruitment of trainees has been extremely difficult, thus causing a delay in program start up. They had planned on providing 1 lead and hazardous waste course integrated into six weeks of construction skills training with 3 weeks of carpentry and painting. Due to the slow startup and the inability to recruit individuals for this program, the UBC has decided to end this program and devote their efforts to either the Bayview Hunters Point in San Francisco, CA or Washington Navy Yard in Washington, DC Super JTI sites. More information will be provided on this change in training scope by the end of December 1998.

#### **DePaul University**

#### 5. NL Taracorp Site, Granite City, IL

In 1997, sixteen ethnic minority residents of ages 18-25 years from the community surrounding the Superfund site in Granite City, Illinois participated in education and environmental technician training. This opportunity was provided through a unique university-public-private-community partnership involving DePaul University's Office of Applied Innovations (OAI), Chicago, Illinois; the National Institute of Environmental Health Sciences (NIEHS) of the United States Environmental Protection Agency (US EPA); US EPA Region 5, Chicago, Illinois; US Army Corps of Engineers, Madison, Illinois; Belleville Area Community College (BACC), Madison, Illinois; Venice Lincoln Technical Center (VLTC), Venice, Illinois; and OHM Remediation Services Corporation, Madison, Illinois.

## **Appendix 11: Superfund Jobs Training Initiative Cont.**

Residents of this community have been and continue to be disproportionately impacted by historical and current industrial pollution emissions and releases into the atmosphere, watercourses, and soils. Adults, children, and the unborn are confronted daily with exposure to contaminants that range from high levels of toxic lead and other heavy metals to toxic organics that have invaded all domains of their environment. In addition to the lead-contaminated Superfund site, there are steel mills and other heavy industries, high vehicular traffic volumes, old housing stocks that contain lead-based paint and asbestos, and lead-contaminated yards and playgrounds. Many of the residents live in austere poverty and are chronically unemployed or underemployed. These conditions constitute a serious case of environmental injustice for the Granite City community. This cognitive education and environmental training program is a response to a much needed synergy of environmental quality, economic vitality, and community well-being that should be the norm for every at-risk community and city in this country.

The cognitive education and environmental technician training took place between February 23 – March 20, 1998 at OHM Remediation Services Corporation's facilities in Madison, Illinois. Thinking skills were developed using Feuerstein's Instrumental Enrichment (FIE) with Mediated Learning Experience (MLE). The environmental training consisted of 40 hours of Hazardous Waste Operations and Emergency Response (HAZWOPER) and 27 hours of Lead-based Paint Abatement Training.

On Tuesday and Thursday of each week, from 10 A.M. to noon, trainees were given job readiness instruction at BACC. On Friday, February 22, students were given an 8-hour special mathematical skills development workshop at OHM. The instructor for this workshop was from VLTC.

Sixteen MWT students completed the Lead Abatement Training, passed the course examination, were certified by DePaul University, and were licensed by the State of Illinois. Thirteen MWT students completed the HAZWOPER Training, passed the course examination, and were certified by DePaul University as HAZWOPER technicians. Thirteen of the MWT students also completed the 32-hours of critical thinking skills development.

### **6. Dutchboy Site, Chicago, IL**

Both the Taracorp and the Dutchboy sites are the focus of the MWTP for DePaul University for the September 1, 1998 to August 31, 1999 year. Last year DePaul was successful in training at the NL Taracorp site through collaboration with the EPA Region 5 office. They were able to work with the Community Involvement Coordinator, Remedial Project Manager and OHM Environmental (EPA cleanup contractor) for the site.

The Dutchboy site is a new designated Super JTI pilot that DePaul will provide training for during the 1998 year. They will work with the Abraham Lincoln Center and the One Stop program and EPA Region 5 to provide the training for resident surrounding this site.

## **Appendix 11: Superfund Jobs Training Initiative Cont.**

### **7. Washington Navy Yard, Washington, DC**

DePaul University has subcontracted with the Alice Hamilton Occupational Health Center to provide training for residents surrounding the Washington Navy Yard Site in Washington, DC. As part of the AHOHC Minority Worker Training Program in 1998, the AHOHC will provide one training class targeting the Washington Navy Yard site. AHOHC will partner with the Friendship House Association for Round One MWTP that will take place in the Fall and Winter of 1998. Friendship House has supported the recruitment efforts of the Alice Hamilton Centers MWT for years.

AHOHC and Friendship House has been working together, as two non-profits incorporated in the District, with the Washington Navy Yards' Bridge to Friendship Partnership Program. The Bridges to Friendship is working partnership dedicated to supporting the cleanup and redevelopment of the Washington Navy Yard and the greater South Washington Community. Along with the AHOHC and Friendship House, Bridges to Friendship, initiated by the Washington Navy yard, is supported by the Covenant House Washington, Urban Tree House, District of Columbia Government, Ellen Wilson Redevelopment LLC, GSA, Global Environmental & Technological Foundation, US Dept. of Agriculture, US Dept. of Housing and Urban Development, US Dept. of Interior, National Park Services, US Department of Labor, and the US Environmental Protection Agency. In addition to the \$100,000 from the regular MWTP, AHOHC was awarded an additional \$15,000 to support this Super JTI at the Washington Navy Yard.

### **Oil Chemical and Atomic Workers (OCAW)**

### **8. North Denver Super JTI Site**

For the period of September 1, 1998 to August, 31, 1999, the OCAW has partnered with the EPA Regional Office 8 in Denver and other local community based organization to train minority Latino residents of North Denver, CO. The goal of this program is, that by providing this training, affected residents will be better prepared to become employed on Superfund cleanup project. The partners include the EPA Region 8, Colorado People's Environmental and Economic Network (COPEEN) and the Denver Mayor's office. COPEEN is a non-profit community coalition made up of residents, environmental activities, and churches whose interest includes environmental justice. Ms. Jenni LaBlanc, a EPA student intern, has worked as a coordinator for this program assisting with recruiting, training, and arranging post training employment with contractors. In order to address the economic justice issues surrounding the cleanup of this Superfund site, the OCAW are working with COPEEN and the Mayor's office to ensure that the contractors are fully aware of this training program. In particular, the Mayor's office will alert contractors that the residents of this targeted community have completed the appropriate regulatory health and safety training to be considered for hire.

The OCAW will furnish current EPA worker trainees with workbooks and materials to conduct 2 Hazwoper training classes in the 1999 budget year to approximately 48 trainees. These trainees will be recruited from the residents of the Swansea, Elyria and Globeville communities of North Denver. There will be an interpreter for those trainees who have limited English language skills.

This program started on September 1 with early exceptional results. Of the 16 participants in the first training class, 10 are preparing resumes to present to contractors. Of these 10, approximately 5 are working for a local environmental contractor at \$21/hr.

## Appendix 12: Samples of Awardee Job Tracking Pilots

### Sample Chart on United Brotherhood of Carpenters (UBC) Trainee Follow Up

Construction Consortium training has helped members of the participating trades obtain work on jobs which require hazardous waste certification and/or other health and safety training. Information on job placement is obtained from students in UBC Health & Safety Fund refresher courses. The following is a sampling of the information reported by trainees who attended refresher courses during the current grant year.

<u>Contractor</u>	<u>Site, location</u>	<u>Work</u>
UNOCAL	Pier 70, Seattle, WA	Pile Driving
A. J. Diani	Vandenberg AFB, CA	Decon
R. P. Richards	Vandenberg AFB, CA	Asbestos
Hurland	Terminal 5, Seattle, WA	Pile driver / Augur crew
Am. Construction	Fremont Bridge, Seattle, WA	Soil monitoring, piledriving
Bechtel	Diablo Canyon, CA	Scaffolding
L.A., Rasmussen	San Luis Obispo	Bridge retrofit– lead
Diani Construction	Vandenberg AFB, CA	Oil spill
Perini	Tunnel cut, Boston, MA	Struts
Schnabel Foundation	Naval Fuel Depot, Newport, RI	Soldier piles, lagging, tie backs
JJ Wuellner	Shell, Hartford, IL	Scaffolding
Rice Equipment	Ethyl Corp., Sauget, IL	Millwright
BiState LDS	P&G, St. Louis, MO	Millwright, piers & docks
Clayco Accurat	Times Beach Incinerator, MO	Millwright
Hanna Construction	Harbor Point, Utica, NY	Cleanup
WMX	Adams Center Landfill, Ft. Wayne, IN	Adding cells
MJK Construction	Various sites, CA	UST removal
Carter Pile	Central Artery Project, Boston, MA	Piledriving
Franks	Columbia Hts. Metro Station, Washington, DC	Piledriving, welding
Kajima-Kiska	11 <sup>th</sup> & Park Road Metro site, Washington, DC	Sheeting & shoring

Franks	Columbia Hts. Metro Station, Washington, DC	Removal of contaminated soil
MJK Construction	Edwards AFB,. CA	UST removal
OHM	Richmond, CA Marina Sitcum Remediation,	Hazardous waste recovery
Manson Construction	Port of Tacoma, WA	Dredging
Luedtke Engineering Co.	Ford Motor, Monroe, MI	Dredging, cleanup
CCS	Salem Harbor, Salem, MA	Diving
William Environmental	McNanas Power Plant, Brunswick, GA	Soil Contamination Drive sheet pile along Ottawa River
The Righte Co., Inc.	BP Refinery, Lima, OH	
Raytheon	BP, Oregon, OH	Scaffold
Raytheon	Belpre, OH	Scaffold, Carpentry
MJD	Bayer, New Market, WV	Concrete forms
Rudolph Libbe	G&H Landfill, Utica, MI	New construction
Davidson Crane	Envirosafe, OR	Machinery replacement
Lathrop	BP, Oregon, OH	Scaffold, Carpentry Diesel spill containment, cleanup
Carl Bolander	Glennview, IL Naval Station	
Case & Slurry	Kerr McGee, West Chicago, IL	Piledriver
Newberg / Perini	Kerr McGee, West Chicago, IL	Piledriver
Jay Fortune Construction	Missoula Gulch, Butte, MT	Concrete forms

## Appendix 12: Samples of Awardee Job Tracking Pilots Cont.

University of Massachusetts Lowell  
Trainee Site Activity Summary

**Information supplied by students who took the 8-hour refresher course between September 1, 1997 and May 31, 1998.**

No. Of Students	Name of Site	State	Type of Site
1	New Bedford	MA	Superfund
1	NCBC	RI	Military
6	Kokusai BTI	MA	Haz Mat ER/Spill cleanup
1	Maxwell AFB	AL	Military cleanup
1	Ft. Carson	CO	Military cleanup
1	Gilson Road	NH	Superfund
1	Mass Military Reservation	MA	Superfund/Military Cleanup
2	Saco Landfill	ME	Superfund
1	Oil Spill	RI	ER
1	Degreaser Mist	MA	Industrial
1	Industriplex	MA	Superfund
1	Well G & H	MA	Superfund
3	Charles George Landfill	MA	Superfund -
1	Allied Signal	MA	Superfund/Site Specific
1	Boston University	MA	RCRA/Correction Action
1	City of Boston	MA	RCRA/Correction Action
1	Unamea	OH	RCRA/Correction Action
1	Gas Station	NH	UST
1	Soil Pile	MA	Private Cleanup
1	Great Northern Paper	MA	State-lead site
1	Duracell Battery	MA	State-lead Site
1	Lowell	MA	Brownfield
1		CT	Superfund
1	Edwards Field	MA	Brownfield
1		ME	Site Specific Cleanup
1	Laboratory/chemical spill	ME	Emergency Response
1	Confidential	CT	Superfund
1	Confidential	RI	Private Cleanup
1	Lowery Landfill	CO	RCRA/TSD
1	Pease AFB	NH	Military Cleanup
3	Silresim	MA	Superfund

No. Of Students	Name of Site	State	Type of Site
2	Colonial Gas	MA	Private Cleanup
1	Billerica Street	MA	Private Cleanup
1	Natick Labs	MA	Military
1	Ft. Devens	MA	Military
1	Hingham Training Annex	MA	Military
2	Logan St (MGP)	MA	RCRA/TSD
1	Picillo	RI	Superfund
1	Groundwater pump & Treatment	MA	
1	Holyoke Water Power	MA	Superfund
1	GE	CT	Superfund
1	Holbrook	MA	Superfund
1	Acton	ME	Superfund
1	Electro Circuits Plating Co.	MA	Emergency Removal
1	Various Landfills	NJ	Superfund
1	Ft. Campbell		Superfund



**Appendix 12: Samples of Awardee Job Tracking Pilots Cont.**

International Brotherhood of Teamsters:  
**TRAINEE FOLLOW UP**

Trainee Employment

The following is a summary of trainees who participated in the Hazardous Waste Worker Training Program, and as a result of the training, have acquired employment on hazardous waste sites, Superfund sites, and construction sites found to be contaminated with hazardous chemicals. It is broken down by the IBT's regional training sites.

Eastern Region Training Center

Name of Site  
Location  
Employment

Kingsland Landfill  
Brooklyn, NY  
2

Central Landfill  
Johnstown, RI  
3

Brookhaven Natl. Labs  
New York  
3

Coakley Landfill  
North Hampton, NH  
3

Colesville Landfill  
Colesville, NY  
2

Craig Farm Dump  
Parker, PA  
2

Croton Landfill  
Croton, NY  
18

Delaware Sand and Gravel Landfill  
New Castle County  
3

DuPont Pumpton Lakes  
New Jersey  
1

Pelham Bay Landfill  
Pelham Bay, NY  
7

Davy/IDM  
Boundbrook, NJ  
2

Elizabethtown Landfill  
Elizabeth, PA  
2

BASF  
Westchester, PA  
2

Big Hill Landfill  
South Hampton, NY  
7

Haviland Complex  
Hyde Park, NY  
3

Industrial Highway  
Eddystone, PA  
2

Kin-Buc Landfill  
Edison Township, NJ  
6

Kodak Remediation Site  
Rochester, NY  
24

Liberty Finishing  
Farmingdale, NY  
9

Name of Site  
Location  
Employment

NY Environmental Contract  
Freeport, NY  
2

Mobile Oil Remediation Site  
Eggsboro, NJ  
2

Alcoa Clean-Up  
Massena, NY  
5

Onondaga Lake Project  
Syracuse, NY  
4

Pup Landfill  
Jersey City, NJ  
4

NJ DOT Rail Line  
Jersey City, NJ  
8

Tamapo Landfill  
Ramapo, NJ  
2

Austin Avenue Superfund Site  
Niagara Falls, NY  
6

Freshkill Landfill  
Flushing, NY  
2

Clarkstown Landfill  
Clarkstown, NY  
3

"5445" Countries/Taylor Oil Company  
Somerville, NJ  
2

Warwick Landfill  
Tampa, FL  
3

Walsh Landfill  
Honeybrook Township, PA  
3

Big Dig  
Boston, MA  
2

9A Big Dig  
Elmsford, NY  
5

City Garage  
Yonkers, NY  
7

Fashion Mall  
White Plains, NY  
4

Eastern Region Training Center  
TOTAL:

168

Central/Southern Region Training Center

Name of site  
Location  
Employment

Winfield Locks and Dam  
Charleston, WV  
13

Metro Airport  
Detroit, MI  
19

Ulland Brothers and Northland Brothers  
Construction  
Duluth, MN  
13

Alcoa Chemical Project  
Chattanooga, TN  
10

Kirschhoff Brothers  
Waukegan, IL  
7

Rich Park Development/Great Lakes  
Construction  
Valley View, OH  
16

Smith's Farm Superfund Site Louisville, KY 16	Rocky Mountain Arsenal Denver, CO 14
Crab Orchard Project W. Frankfort, IL 19	Eldorado Company Landfill California 5
Prairie Concrete Chicago, IL 57	Kennecott Copper/Sharon Steel Midvale Salt Lake City, UTAH 34
AK Steel Project Evansville, IN 54	Marysville Landfill Marysville, WA 12
Stadium Construction Project Cleveland, OH 47	Sparks Tank Farm Sparks, NV 4
Cousins Waste/Water Reclamation Project Toledo, OH 26	Empire Sand and Gravel Concord, CA 12
Joliet Arsenal/Kerr-McGee Superfund Site/Joliet Landfill Joliet, IL 50	Pacific Gas and Electric Sites Auburn, CA 10
Sequoyah Nuclear Power Plant Soddy Daisy, TN 20	Areojet/McClellan AFB/Union Pacific/ Alviso Levee Sacramento, CA 75
Rust Precision/Waste Management Mid-Western United States 29	Umatilla Army Depot Umatilla, OR 3
Dixie Warehouse Louisville, KY 61 drivers	Hamilton AFB/Hunters Point Shipyard San Francisco, CA 24
Central/Southern Regional Training Center TOTAL:  457	Terminal 9 California 26
Northern California Training Center	Northern California Training Center TOTAL:  219
Name of Site Location Employment	Southern California Training Center

Name of Site Location Employment	OHM Environmental California 2
Ancon Marine Wilmington, CA 50	On-Site Environmental Santa Ana, CA 12
Johnston Controls Fort Irwin, CA 50	Foss Environmental Long Beach, CA 5
C.A. Rasmussen, Inc. Simi Valley, CA 4	Camp Pendleton Marine Base Oceanside, CA 45
Alcoa Cast Plant Vernon, CA 4	El Toro Marine Base Tustin, CA 49
Silverado Contractors Irvine, CA 4	S and E Pipeline Construction Santa Fe Springs, CA 8
Pleasant Valley Environmental Coalinga, CA 2	Hood Corporation South Gate, CA 2
Fiske Environmental Cerritos, CA 4	Scalers Union #56 San Pedro, CA 40
Greenfield Environmental California 20	Southern California Training Center TOTAL: 301

### Appendix 13: FY 98 Funding

<b>EPANIEHS WORKER EDUCATION AND TRAINING AWARDS FOR BUDGET PERIOD 09/01/98-08/31/99 FY 1998 FUNDS</b>								
EPA HWWT				EPA MWT				
AWARDEE	HWWT 9/98 AWARD	JTI 9/98 AWARD	TOTAL 9/98 AWARD	MWT 9/98 AWARD	JTI 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
Oil, Chemical & Atomic Workers	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
United Brotherhood of Carpenters	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 14: Brownfields Minority Worker Training Program Fact Sheets**