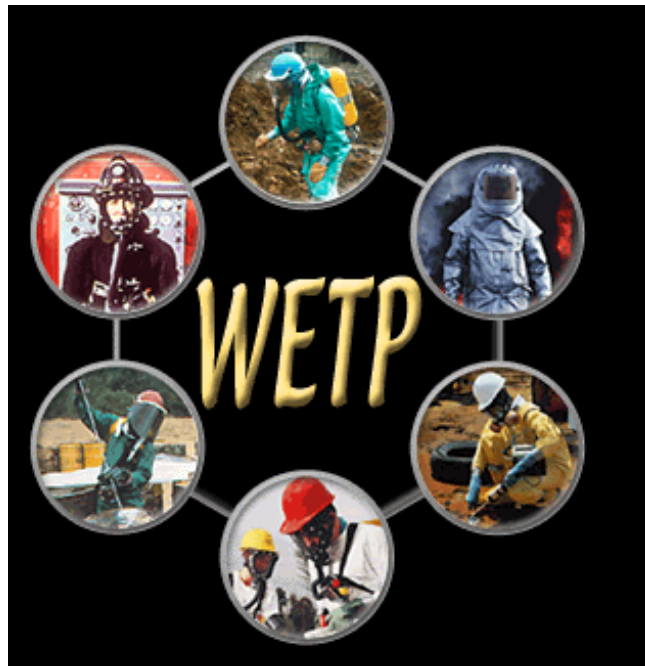


# ***NIEHS Superfund Worker Training Program***



## ***FY 2002 Accomplishments and Highlights: (September 1, 2001 – August 31, 2002)***

**U.S. Department of Health and Human Services | National Institutes of Health | National  
Institute of Environmental Health Sciences**

**Report Submitted: January 29, 2003**

***September 1, 2001 – August 31, 2002 Accomplishments and Highlights:  
NIEHS/EPA Superfund Worker Training Program***

**Submitted by the  
National Institute of Environmental Health Sciences  
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**January 27, 2003**

**September 1, 2001 – August 31, 2002 Accomplishments and Highlights:  
NIEHS/EPA Superfund Worker Training Program**

**1 Introduction**

The Superfund Amendments and Reauthorization Act of 1986 (SARA) established an assistance program for training and education of workers engaged in activities related to hazardous waste removal, containment and emergency response. Grant recipients are non-profit organizations with demonstrated access to appropriate worker populations and experience in implementing and operating worker health and safety education training programs. Until FY 2000, the National Institute of Environmental Health Sciences (NIEHS) was given responsibility for establishing and managing this program through Interagency Agreements with the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE). To achieve this, the NIEHS established the Worker Education and Training Program (WETP). The core program for the WETP is its Hazardous Waste Worker Training Program (HWWTP). Beginning in FY 2001, the WETP began receiving direct funding for the HWWTP and the Minority Worker Training Program (MWTP).

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

New support has expanded the scope of the NIEHS-supported training to include workers involved in transporting hazardous materials, a minority worker job training program (MWTP) to serve urban youth, an initiative focused on job training for brownfields cleanup sites, and a program targeted to workers involved in the cleanup of the DOE nuclear weapons facilities. The Brownfields and the DOE training programs continue to be funded through Interagency Agreements with EPA and DOE.

During this year, the WETP received significant supplemental funding for its awardees in response to the September 11th attacks and subsequent emergency response and remediation activities. The results of this effort are highlighted in this report.

Having received direct funding for the HWWTP, the WETP implemented a Small Business Innovative Research (SBIR)/Small Business Technology Transfer Research (STTR) program. This document provides an update on this new program.

Finally, during this period, the WETP issued two important reports. The first, the WETP Strategic Plan, provides guidance for the future direction of the entire program. The second, Learning from Disasters: Weapons of Mass Destruction Preparedness Through Worker Training, provides practical, experienced-based guidance upon which the WETP can develop and advance future training initiatives in this most critical area. Both of these activities are described in this report.

## **2 2001 – 2002 Program Highlights**

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

In completing the fifteenth year of the Superfund WETP (FY 1987-2002), the NIEHS has successfully supported twenty primary awardees. These represent over one hundred different institutions that have trained over 1 million workers across the country and presented over 56,000 classroom and hands-on training courses, which have accounted for over 15 million contact hours of actual training (See Appendix 1).

Twenty-three million dollars of the September 1, 2001 – August 31, 2002 funds were allocated to continue support of the HWWTP to train hazardous waste workers and emergency responders. Of the \$23 million, one supplemental action was made, which included \$444,046 for World Trade Center (WTC) training response. Three million dollars of the funds were allocated to continue support for the MWTP. As a result of the funding (See Appendix 2):

- 17 HWWTP awardees received awards totaling \$18,566,669
- 5 MWTP awardees received awards totaling \$3,000,000
- 5 WTC awardees received awards totaling \$444,046

During the past year, health and safety training occurred in all regions of the country to relevant target populations with the prime focus on 29 CFR 1910.120 (See Appendix 3). The seventeen primary worker-training awardees, in conjunction with over eighty collaborating institutions, have delivered 5,298 courses, reaching 93,996 workers, which account for 1,098,154 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, 2001 and August 31, 2002, 48% of the training focused on delivering CERCLA cleanup worker training. This comprises 36,603 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).

Although supplemental training for the Advanced Training Technologies (ATT) and Superfund Jobs Training Initiative (SuperJTI) were conducted during this period, awards were funded using September 1, 2002 – August 31, 2003 funds. Progress for these supplemental awards will be described in this report.

## 2.1. Hazardous Waste Worker Training Program (HWWTP) Accomplishments

After the completion of the second year of the five-year cooperative agreements to support worker-training activities, 17 organizations submitted progress reports and training data. Continuation awards were made on September 1, 2002 after the NIEHS review showed that satisfactory progress had been achieved by all awardees.

The cooperative agreements are grants made to non-profit organizations with the NIEHS as partners. These consist of consortia that are collectively made up of over eighty member institutions including universities, community colleges, public health groups, labor-management trust funds, labor organizations, and state and local government units.

Participating programs have developed model curricula and training programs. The core curriculum includes: hazard recognition and control; air, soil, and water sampling aspects; selection, care and use of respirators and other personal protective equipment; engineering controls and their use; safe work practices; proper decontamination procedures; medical surveillance requirements; confined space entry; spill containment and other emergency procedures; community health protection, legal rights and responsibilities; on-site record keeping requirements; and other elements required by the OSHA and EPA regulations.

Training programs have implemented qualitative and quantitative systems to monitor the training. The program has worked closely with EPA, OSHA, NIOSH, DOE, DOT, FEMA and other federal agencies to maintain technical accuracy of training materials and to assure training of the highest quality. The NIEHS refers to this as "gold standard" training. The high quality curricula and other training-related materials developed by the program are available to the public through a NIEHS-sponsored National Clearinghouse for Hazardous Waste Worker Training and its Internet home page at (<<http://www.wetp.org>>).

During the past year, there were several areas of training development that are particularly deserving of recognition. These are: A) Partnerships with State and Local Governments; B) Maintaining the Gold Standard for Hazardous Materials Training; and C) Outreach Activities. In each of these areas, anecdotal highlights of this year's training activities carried out by the NIEHS and Hazardous Waste Worker Training awardees include:

### A) Partnerships with State and Local Governments:

A fiscal crisis has hit most states and municipalities. Faced with shrinking revenues and budget reductions, state and local governments have sought innovative ways to lower costs while still meeting their responsibility to provide appropriate health and safety training for their employees. A number of the NIEHS awardees have assisted in this effort, responding to issues of health and safety and bottom-line economics:

**The AFSCME Training and Education Institute (AFSCME)** offered excellent, affordable training to state and local governments in a number of locations including Louisiana (State Department of Transportation), Milwaukee, Miami, Dade County, and Buffalo. Their target population included those who are likely to witness and/or respond to haz mat emergencies in their own workplaces, such

as water and wastewater treatment workers. The target population also included street, bridge, sewer, sanitation, other public works and public safety workers across the country.

**International Chemical Workers Union (ICWU)**, operated by the Center for Worker Health & Safety Training (CWHST), in cooperation with the United Steelworkers of America (USWA), the International Association of Machinists and Aerospace Workers (IAM), the American Flint Glass Workers, the Rubber Plastics Industry Conference of the USWA (R/PIC), the Aluminum, Brick and Glass Workers Division of the USWA (ABGWD), the Coalition of Black Trade Unionists (CBTU), the United Food and Commercial Workers Union (UFCW) and the American Federation of Teachers (AFT), assisted New York City and state public schools in training chemistry and science lab specialists and teachers; and in the development and refinement of evacuation plans, a direct consequence of the terrorist attacks.

#### **National Puerto Rican Forum (NPRF)**

In Kentucky, the training of the state's 40,000 emergency responders was divided among a number of state agencies resulting in inefficiencies, inconsistency in training, and in higher costs. OAI, Inc., a member of the NPRF consortium, was instrumental in bringing to the table these multiple state entities, i.e., the Fire Marshall, Fire Department, Police Department, Governor's Office, Drug Enforcement Authority and the educational system to develop a plan to coordinate training activities and share resources among all the agencies. As a result of OAI's involvement, there is now a much-improved coordinated system of training. Since then, because of the program's success, the state has asked OAI to develop a specialist level training focusing on illegal, highly dangerous methamphetamine labs.

**The New England Consortium (TNEC)** has developed specific training courses for the Lowell Fire Department (8-hour ER Refresher for 160 students) and the Lowell Police Department and a specialized ER course for Ben & Jerry's Ice Cream. Lowell Firefighters appreciate that local city sites and real scenarios have been incorporated in their contract course and that some advanced homework is required prior to the course. This year's ER Refresher course focused on rail tanker accidents, leaks or spills. At the end of May, local Lowell firefighters were able to successfully respond when a serious release of hydrochloric acid was discovered at a parked tanker car near a residential neighborhood in Lowell. TNEC has been working with the university to develop an "enhanced partnership" with the Lowell Police Department and recently delivered an ER awareness course for twenty key members of the department dealing with responses to natural disasters or acts of terrorism. A similar model was employed in this year's training for emergency medical technicians.

**Service Employees International Union, AFL-CIO (SEIU)** SEIU continued to provide 4-hour refresher training to members of the Maine Department of Transportation who had previously taken the 8-hour awareness class. This year 571 participants were trained in 30 refresher classes. Last year, 399 persons were trained in the 4-hour refresher. Once again, they exceeded their refresher-training goal of 400 for the year.

One 40-hour train-the-trainer program was conducted to prepare new trainers to lead confined space entry and blue-collar awareness-level classes. There were 18 participants, mostly drawn from state workers in New Hampshire and New York. The goal for the year was to train 14 new worker-



trainers, so once again expectations were exceeded. With new trainers in place, the SEIU is in a position to meet the demand for confined space entry training for the foreseeable future.

#### B) Maintaining the Gold Standard for Hazardous Materials Training:

The Gold Standard in training means developing and delivering training events of the highest quality possible, using the most advanced adult educational materials, exercises and techniques; items that are reviewed and evaluated by technical experts; that are kept up-to-date or "evergreen;" and that are carried out in appropriate learning environments with appropriate student/teacher ratios. The gold standard is based upon the NIEHS Technical Workshop report "Interpretive Guidance to the Minimum Criteria for Worker Health and Safety Training for Hazardous Waste Operations and Emergency Response." This report can be found on-line at: [http://www.wetp.org/oldchfiles/workshops/mincrter\\_guide\\_94.pdf](http://www.wetp.org/oldchfiles/workshops/mincrter_guide_94.pdf). During this past year, examples of the NIEHS awardees Gold Standard work include:

Curricula: Newly identified training needs have multiplied in the past several years. The NIEHS awardees have responded. **The L-AGC Education and Training Fund**, for example, developed two Microbial Remediation Worker Pilot Courses. Extensive mold and mildew contamination has been identified as a health risk to adults and children; thus, an industry has developed in the areas of microbial remediation. For the worker in this industry, the constant, daily exposure to high levels of microbes poses an even greater risk. The Microbial Remediation Worker course was delivered as a pilot in February and April of 2002. Each course was approximately 20 hours in length with an additional two hours used for participants to evaluate the training they had just received. In both classes, some of the workers had previous experience on mold remediation jobs. During the first course, only a review of hands-on activities was provided. During the second course, approximately eight hours were dedicated to hands-on activities such as containment building and removal of building materials. The course evaluation included the use of an evaluation form and a facilitated discussion. In general, both the forms and the comments indicated that participants enjoyed the training and believed they knew more about microbial remediation after the training. Each pilot course yielded several useful comments related to the actual delivery of the course, and these suggestions will be incorporated into the appropriate lesson plans.

**The Hazardous Materials Training and Research Institute (HMTRI)** developed a blended-learning 24-hr hazardous waste course focused on household hazardous wastes that became available in July. This consortium consists of community colleges from many regions partnered with business and industry, universities, and community-based organizations offering a consistent and quality response to the national training need for hazardous waste workers, and emergency response personnel. This course is a first-of-its-kind in the nation, mixing many of the hands-on skill sets of a 40- and 24-hr Hazwoper course with content focused on common household products that show up at recycling centers and household hazardous waste collection sites. The class also has interactive e-learning exercises, numerous links to resources around the nation and self-grading tests.

**The International Union of Operating Engineers (IUOE)** developed a pilot course involving integration of Hazwoper Emergency Response training with mine rescue techniques for the West Virginia Mine Rescue Team. Nineteen team members were given a 40-hour Hazwoper course but the

practical exercise was held at the Memorial Tunnel near Charleston, West Virginia. This facility contains several different environments for police and rescue personnel to practice responding to situations from terrorist attacks to illicit drug labs. Mine rescue teams are highly disciplined responders who can provide a rural equivalent of the Urban Search and Rescue Teams that worked so assiduously to save victims in the WTC attacks. The IUOE intends to continue providing this training.

**The Paper, Allied-Industrial, Chemical & Energy Workers International Union (PACE)** updated its 40-hour course entitled the "Oil School". This course, one of their major schools each year, focuses on prevention via Emergency Responses through root cause analysis of incidents and lessons learned. System of safety-based training includes activities concerning life cycles and design, mitigation and warning devices, human factors, mechanical integrity programs, and exercises in root cause analysis of accidents and incidents. Strong emphasis is placed on lessons learned as a teaching vehicle. There are a number of hands-on activities that engage participants in examining actual incidents and accidents and applying lessons learned to their own worksites. The training modules incorporated logic trees of catastrophic accidents, such as the Tosco and Anacortes disasters, for review followed by directed discussions and commentary aimed at developing industry-wide responses. An additional module engages joint health & safety committees in a goal-setting exercise that facilitates articulation and tracking of projected health & safety outcomes for the upcoming year.

Facilities: Gold Standard training requires excellent facilities where students have ample hands-on opportunities to learn procedures and techniques that are basic to their own safety and the safety of the community. An example of such a facility is that maintained by the **HMTRI** at Kirkwood Community College in Iowa. Instructor training is held at their 12,000 square-foot Environmental Training Center. The Center houses several general purpose classrooms, with a seating capacity of 50; an analytical lab with 20 work stations; a chemical prep room; an instrument room; offices; a maintenance lab with 16 work stations; a tool room; a pilot scale 20,000 gallon per day wastewater treatment plant and a wastewater treatment plant process control lab. Adjacent to the Training Center is the HMTRI hazardous materials training grounds. Training here includes fire control techniques, corrosive spill response procedures, confined space entry and rescue, flammable liquid spill response, compressed gas release response, pipe and valve leak response, and loading dock spill response. The basic grounds consists of a 100 x 150 foot concrete pad, an equipment storage building, a simulations lab building, five confined space simulators, a fully instrumented burn building, a simulation for air crash rescue training, and a simulation for Coast Guard-approved maritime firefighting. Adjacent to the grounds is a field, stream, wood lot, and drum storage site used in both spill response and waste site-training programs. The grounds are equipped with a safety shower and eyewash fountain because real chemicals are used in many training exercises. A shelter is provided from sun and rain. This rest area has chairs, water, a chalkboard for instruction, and trash receptacles. There is also a mobile industrial spill and remediation lab built into a 48-foot semi-trailer. The laboratory has a tank and pipe gallery, chlorine cylinders, drum handling area, decontamination equipment, an ammonia compressor, and assorted receivers and tanks.

E-Learning: Independent of the SBIR E-learning program discussed in Section 2.4, a number of HWWTP awardees have developed e-learning materials. **The Center to Protect Workers Rights (CPWR)** has developed as part of a refresher curriculum a DVD-based Emergency Response unit. The curriculum itself is DVD-based, with interviews, demonstrations, video clips, slides, OSHA

references and the like. It is divided into three sections: Hazard Recognition, Personal Protective Equipment, and Decontamination. After undergoing a period of testing and revision, the final pilot product was produced and sent to the NIEHS Clearinghouse. As indicated in the Outcome Evaluation, participants find this training device to be very stimulating and effective, and are asking for additional units. CPWR plans to continue developing additional curricula units in the interactive DVD format for use in Hazardous Waste Refresher training.

**The International Association of Firefighters (IAFF)** expanded the capability of its World Wide Web (www) functionality. They developed 5 new online learning modules that compliment the IAFFs basic first responder course; created a Virtual Academy section of the website that outlines the HazMat Departments capabilities, provides more opportunities for visitors to communicate and request assistance from IAFF staff and includes new postings of e-learning aides for course instructors; completed and posted 16 new case studies; and finished an online (www) system so that visitors to the IAFF website may submit questions to members of the IAFF HazMat instructional team (this system enables instructors to prepare email responses to the visitor). In addition, the IAFF has released the digital version of its new Technician course. This course is unique in that it provides six hours of training video in a DVD format.

Evaluation: As stewards of the public's money, both the NIEHS and its awardees are committed to implementing programs that are as effective as possible. While all WETP awardees have in place systems for evaluating students, instructors, curricula and materials, there is one evaluation effort that clearly stands out. Acting in partnership, PACE, AFSCME, and the United Automobile Workers (UAW), are using a participatory evaluation system entitled the Solidarity Research and Evaluation Project (SREP).

SREP is a team-based, multi-union learning-action-research collaborative designed to build and expand the program research and evaluation capacities of worker health and safety training programs. Participants are encouraged to develop a team of people from their program including workers, trainers, staff and program evaluators. While there are important examples of participatory action research within the field of evaluation, these projects have focused on single worksites. By contrast, as a multi-union collaborative initiative, SREP tries to foster participatory learning across unions and workplaces from a union-centered perspective. This project also builds upon the recently expanded role of workers in many health and safety trainings. Over the past decade, programs have increasingly embraced a peer-training model in which workers serve as the primary health and safety trainers. By expanding the trainers' roles to include evaluation, SREP has sought to institutionalize a new base of worker-produced knowledge for improving health and safety.

At its core, SREP consists of workshops in which participants learn about evaluation (the training part) and work with their teams to plan and building their evaluation projects (the organizing part). The workshops are coupled with team-based evaluation projects in which participants learn more about and apply participatory research methods to learn more about their organization's health and safety and training programs. The evaluation projects are not proscribed, and are initiated and implemented by each participating team to meet their organizational needs. The Project Coordinating Team, made up of representatives from each partner organization, and the two project facilitators lead SREP and facilitate the workshops. The workshops expand their knowledge and critical analysis of evaluation in the real world, including labor-management relations, workplace dynamics of how

health and safety change occurs, the different needs and perspectives of program stakeholders, and how budget and time constraints affect evaluation choices. The workshops also provide opportunities for teams to plan and advance their evaluation projects, and for people from all participating organizations to build relationships and a learning community.

Each team engaged in activities to design and implement their own team-based pilot evaluation projects. During the year, all teams engaged in evaluation projects that examined their union's hazardous materials health and safety training program, each team tailored its evaluation to its program's particular goals and concerns. The NIEHS is very excited by this new development in evaluation and looks forward to the final results of this effort.

### C) Outreach Activities:

The WETP is truly a national program. It's awardees have provided training from Alaska to Florida; from Saipan to Boston; in urban and rural areas. In addition, the program has made a special effort to reach out to Native American, Pacific Islander, Hispanic, and African American workers. A few example of this work follow.

**The University of Alabama at Birmingham (UAB)** staff continued to provide training to Native Americans through a consortium with the Native American Fish and Wildlife Society (NAFWS). Training was provided in all geographic regions of the United States, including Alaska - in some cases at locations that were remote and difficult to access. As in previous years, UAB provided training at every location requested.

The vast majority of trainees are tribal members, including tribal representatives of natural resource, law enforcement, emergency medical, fire service, and public works agencies. A small number of non-Native employees of tribal or federal agencies also attend. The major interest of the Native American trainee population continues to be their preparation for hazardous materials emergencies that may occur at locations such as transportation corridors crossing tribal lands. Tribal awareness and knowledge of emergency planning and preparation continues to be lower than that of the non-Native population, but is improving.

First Responder Awareness Level and Incident Management Systems courses continue to generate the most interest among Native Americans. Seven 8-hour First Responder Awareness Level classes were provided and attended by 175 trainees. Three 16-hour Incident Management System courses were provided and attended by 41 trainees. In addition, two 24-hour First Responder Operations Level courses were scheduled and attended by 37 trainees. The Operations Level courses marked the first time that UAB instructors conducted field training in Native American courses. UAB also provided training in Clandestine Drug Lab Awareness in response to specific requests from tribal law enforcement and fire personnel. Two pilot courses were scheduled and thirty-five trainees participated in the 4-hour Clan Lab course. UAB also assisted in the Southeastern Native American Youth Practicum, during which five 1-hour training sessions were conducted to provide an introduction to hazardous materials awareness. The training provided an overview of recognition of hazardous materials emergencies in the community and chemical hazards in the home to 48 young trainees who will be at the forefront of workplace, community, and environmental protection in the future.

UAB projected that 400 Native American trainees would attend courses this grant year, and that another 100 would be peer-trained by tribal members. In fact, 336 Native Americans attended UAB courses, with no additional peer training conducted by tribal members.

**California /Arizona Consortium member, Arizona State University (ASU)** had a significant increase for this period largely due to the continued success of their outreach program with the Native American community through their continued partnership with the Bureau of Indian Affairs. These courses include a total of six 40 hour HAZWOPER courses; five 8 hour HAZWOPER Refresher courses; two 16 hour Hazardous Materials Transportation Courses (HM 181); one 8 hour Hazardous Materials Transportation Refresher course; and one 24 hour Laboratory Safety Training course. This year, ASU trained a total of 523 Navajo Nation workers for a total of 10,064 contact hours.

**The Alaska Health Project (AHP)**, also a member of the California Arizona Consortium, has remained in contact with the Native Corporations around the state and has trained and retrained their workers. They have provided 40 Hour Hazwoper, Refresher, General Safety, Confined Space, Hazardous Materials Transportation Basic, Hazard Communication, and Hazard Awareness Classes this past year. They have provided Refresher classes for Native Alaskans at Yakutat and the towns of Hydaburg and Craig on Prince of Wales Island. They trained workers in conjunction with a new partnership developed between local union apprenticeship programs and Native Corporations. These trained workers then cleaned up problems in the Delta Region of Alaska during the spring.

**AFSCME** succeeded in a special effort this year to increase the proportion of African American course participants, achieving an increase from 8% to 27%. By the end of the grant year they had delivered 7 trainer development programs, 3 specifically for peer trainers that deliver training to workforces that consist predominantly of people of color (Washington D.C. and Tucson). The programs included one initial train-the-trainer program, the annual trainer refresher for all peer trainers, and 5 additional workshops on specialized topics such as curriculum development and evaluation.

Through their consortium member, the Coalition of Black Trade Unionists (CBTU), they were able to lend assistance to labor-community alliances focused on environmental justice. They continued to help members of CBTU's Community Action and Response to Toxics (CARAT) Teams receive health and safety training, in coordination with the ICWUC Consortium. The goal of the CARAT Teams is to provide information and assistance to communities of color in order to prevent and reduce exposure to environmental hazards.

**George Meany Center for Labor Studies/National Labor College (GMCLS)** conducted a "field" program for Native American and Spanish-speaking rail workers from a Union Pacific Railroad mobile production gang. Production gangs are highly mechanized mobile work crews and traditionally work over a large geographic area and can spend weeks or months away from home. The gangs employ large concentrations of the railroads' Native American population, and a growing percentage of non-English speaking workers. The course was planned to coincide with the end of an eight-day work shift in the Las Vegas area. The four-day course was conducted to create a greater knowledge base of hazardous materials in transportation to a population of basically untrained workers. The program also represented the opportunity to present training to a population difficult to

reach through conventional training methods. The participants were all somewhat fluent in English. Two peer trainers were available to provide language translation in Navajo or Spanish when necessary.

## **2.2. Minority Worker Training Program (MWTP) Development**

The MWTP completed its seventh year of training with five programs: the Center to Protect Workers' Rights, Xavier University, National Puerto Rican Forum, Laborers-AGC Education and Training Fund, and the University of Medicine and Dentistry of New Jersey. The main goal of this program is to recruit young people of color and provide a vigorous training program that eventually leads to productive employment. Over the past seven years, 2,318 young minority adults have been successfully trained in worker health and safety for construction and environmental cleanup. For the seven-year summary, of the 2,318 students trained, 1,496 trainees are employed representing an overall job placement rate of 65% (See Appendix 6).

These five programs during the period of September 1, 2001 to August 31, 2002 provided training to 334 trainees in 15 cities. These cities are. Baltimore, MD; Chicago, IL; Denver, CO; East St. Louis, MO; New Haven, CT; Exton, PA; Houston, TX; Newark, NJ; New Orleans and Baton Rouge, LA; New York City, NY; Oakland, Los Angeles, and San Francisco, CA; and Washington, DC. Of those 334 trainees trained, 222 trainees are gainfully employed. Most of the 222 trainees employed entered into the construction and environmental fields with 30% construction, 14% carpentry, 9 % environmental, 9% hazardous waste and 8% asbestos abatement.

Courses ranged from Life Skills to Environmental Technician training with a total of 185 courses offered representing 133,419 contact hours (See Appendices 7 and 8). Each program developed specialized training programs specific to the workforce needs in their geographic area; however, hazardous materials and waste training remained the primary core curriculum. The specialization of each of the programs increased their efficiency and overall effectiveness in providing quality health and safety training. For example, each program has development partnerships with local organizations that provide a variety of training programs especially in the life skills arena. By doing this, each program provided an outreach arm in the community with an established and trusted organization that has delivered services to their perspective communities for years.

### Demographics and Placement Data

Of the 334 trainees this program year, 289 trainees were male and 45 were female, with the majority of trainees Black (84%) and Hispanic (11%). It is important to note that approximately 28% of the participants had no GED. Keeping this in mind, many programs developed specific measures to increase reading and math proficiencies among participants. Examples of educational programs are included in the highlights follow. A complete breakout of demographic data is located in Appendix 9.

Those programs that had exceptional job placement for this year were Xavier (96 %), L-AGC (73%), and NJ/NY Consortium (69%). See Appendices 10 and 11 for a seven-year summary of employment and training for all programs. Highlights from all of the programs are below.

### **Xavier University (Xavier)**

Xavier's Deep South Center for Environmental Justice (DSCEJ) in collaboration with Southern University in Baton Rouge (SUBR), the L-AGC, and the North Baton Rouge Environmental Association implemented year two of the East Baton Rouge Parish MWTP. The program targeted twenty-five (25), eighteen to twenty-five year old African American men and women from communities within East Baton Rouge Parish in the area encompassing Baker, Alsen, and Scotlandville, LA and the Prescott area in Baton Rouge, LA, all of which are situated at the northern end of the Mississippi River Chemical Corridor. The program provided six weeks of basic skills training at SUBR that included Study Skills, Mathematics, Introduction to Hazardous Materials Terminology, Introduction to Computer Basics, Physical Fitness, Life Skills, Job Readiness, Individual Counseling, Group Counseling, and Environmental Justice. The L-AGC training facility in Livonia, LA provided technical training. The technical training consisted of 80 hour-General Construction, 80 hour-Hazardous Waste Worker, and 80-hour Concrete Practices and Procedures.

Active job placement efforts began after the May 4th graduation program. Twenty-six (26) of the 27 trainees were employed as of October 31st, for a placement rate of 96%. An employment contractor in New Orleans extended job opportunities in asbestos and lead abatement to MWTP graduates from Baton Rouge as well, which required the program to request a reinstatement of training in asbestos and lead abatement for their trainees. It is anticipated that if students receive the specialized construction training in concrete technology, as well the asbestos and lead certifications to satisfy the job demands in the construction industry in the Baton Rouge area, they will be more marketable and eventually be more willing to travel to other parts of the country in the jobs contracted by Colorado Environmental.

Pre and posttests were administered in reading, mathematics and hazmat, as a means of tracking academic improvement. There was a general improvement in test scores across the board. Specifically, the improvement in reading averaged 38 %; the improvement in mathematics averaged 40 %; the improvement in hazmat averaged 24 %.

Success Stories: Although the demographic and academic data cited above are indicative of program success, some of the least successful candidates on paper prove to be successful in the workplace. A good example of this is Anthony Richardson who was almost dismissed from the program. He struggled throughout, but was able to complete program requirements and obtain all certifications. After graduation, he was placed in a short-term job with Exxon. He frequently contacts the office, and has continued to participate in the Brother-to-Brother mentoring sessions. He is developing into a skilled, dependable worker.

### **Laborers AGC Education and Training Fund (L-AGC)**

In the second year of a new five-year cooperative agreement, the L-AGC Minority Worker Training Program continues to positively impact the lives of program trainees in five communities across the country. For six years, the L-AGC Minority Worker Training Program has successfully provided basic life skills and environmental and construction skills training, coupled with subsequent job placement opportunities to minority youth between the ages of 18 and 25 living in environmentally impacted communities. This important work has given the L-AGC Minor Worker Training Program the reputation of success in urban communities across the country.

Sixty-five trainees or 73% of program trainees are employed. Of the 89 students trained, 65 students are employed. For those workers employed, salaries range from \$15,360 to \$66,560 a year (see Appendix 12). A total of 33 trainees have been indentured into the Laborers CCL Apprenticeship Program: 16 from the New Haven, CT, 8 from the Washington, DC and 9 from the San Francisco, CA. The link between the CCL Apprenticeship Program and the MWTP continues to increase every year of program implementation. This link to a seamless system of training and jobs has begun to increase interest from both local unions and contractors, and most importantly it is a beneficial job placement option for program trainees. This connection to the CCL Program is an indicator of success as outlined by benchmarks set up in the original proposal. Job placement continues to be the major indicator of program success for worker training programs. L-AGC also outlined, as one of the original objectives of the program, a benchmark for creating job opportunities for program participants through ongoing networking and formal job searches that would result in a 75% job placement rate. This years 73% job placement rate is just shy of this benchmark.

The devastating events of September 11, 2002, have affected everyone in all walks of life, and the L-AGC was no exception. Training at the Exton, Pennsylvania; Washington, DC; and Pomfret Center, Connecticut sites was delayed due to additions to their training schedules to provide training in microbial remediation, anthrax, and/or bioterrorism. The Exton and Pomfret Center sites hosted pilot courses in microbial remediation and anthrax in February and April respectively. The Washington, DC training site held a series of bioterrorism training classes for different police and federal agencies in the area.

Approximately 88% of all trainees are between the ages of 22 and 25. Female participation increased due to the second cycle of the Washington, DC program. Overall female participation was 19% of the total trained. Seventy-two or 81% of the trainees were male. Eighty-three or 93% of the trainees were unemployed before entering the program. Twelve or 60% entered with a high school diploma, 5 or 25% with a GED, and 3 or 15% had no GED when entering the program. All DC MWTP trainees were unemployed prior to the program, and none had previous construction experience.

Success Stories: The life skill component of the program proves to be very effective in motivating trainees to take an active role in changing life situations. Trainees typically enter the program with multiple barriers to employment and with habits and behaviors that support negative employment and life outcomes. After participation in this component, trainees exhibit improved employment and life behavior patterns that increase their overall quality of life and economic independence. There are success stories of specific graduates in every L-AGC Minority Worker Training Program. One woman in the San Francisco MWTP who was interviewed during the focus group conducted by EduWorks, Inc., was outstanding. When Ms. Shucrita Jones came to the San Francisco MWTP, she was on welfare and not really motivated to take on the full responsibility of financial independence. She arrived at YCD and became motivated by one of the counselors and some of the trainees that she saw there and decided to join the San Francisco MWTP. Although overweight; she took on the physical challenges of boot camp and advanced through the rigors of the physical training portion of the program. She pushed hard and endured. Upon graduation, she was placed in employment paying \$66,560 per year. She is currently working on the Third Street Light Rail project previously mentioned and is looking to relocate herself and her family out of public housing. Ms. Jones is a



prime example of one the objectives of the MWTP, a strong commitment to increase the amount of women of color in the construction workforce.

Continued student employment is the real key to the success of the program. An outstanding example from the New Haven MWTP is Samuel Jones, a 2000 MWTP graduate, who was featured in the Connecticut Yankee Nuclear Power Plant (CY) newsletter for receiving an award for work performance, creativity, and ingenuity. Mr. Jones has had continuous employment with the same company since graduation from the New Haven MWTP in May of last year. He is a union member, current in his dues, and still active in the CCL Apprenticeship Program, obtaining his recertification this past year. Mr. Jones received additional radiation worker skills training and is employed with the Bechtel Company at a nuclear power plant that is being decommissioned for demolition. Recognized as an outstanding employee, he was honored with Bechtel's Silver Dollar Award for his initiative in designing an innovative aid for packing high integrity containers (HICs). The device, which he calls the "Five Fourteen Low Dose Peak With Low Dose," eliminates the need for workers to lean over the shielding, thereby reducing the worker's dose exposure when they attach and tighten bolts on a HIC lid. He is now in the process of obtaining a patent for this device. Under his own initiative, he designed, purchased the materials, and built the prototype. The device is a tripod that holds a light source and mirrors enabling workers to see the lid behind the shielding.

Success stories from this same class of graduates in New Haven and others are also a gauge of training effectiveness. Of the 17 graduates of the 2000 New Haven MWTP who received radiation protection training, 12 (75%) were involved in some aspect of the decommissioning of a nuclear power plant. Of the 40 postgraduates who remain in the New Haven database, 14 (35%) are still active in the Apprenticeship Program and working in environmental remediation construction. A female graduate of the 1999 New Haven MWTP, a single mom of two young children, successfully logged the 4,000 hours needed to complete the Apprenticeship Program and achieve journey worker status. This was achieved within three years of her completing the New Haven-based MWTP program. In the San Francisco MWTP, a graduate of the 2000 program, Steven Garnett, made substantial financial gains, being placed with an environmental company that conducted part of the anthrax cleanup in New Jersey.

This year Shawna Jackson, a graduate of last year's Houston MWTP, received an Outstanding Student Award for her achievements both in the program and in the workforce. The only female in her Houston MWTP, Shawna was always at the top of her class and motivated other trainees to succeed. Achieving against all odds, Shawna, a single mother, lived across town from the MRI training site and had to catch two modes of public transportation daily to get to class. Since graduation, Shawna has been employed as an environmental technician for Philip Services, Inc. After seven months on the job, she was promoted to supervisor and still holds the position to date.

### **Center to Protect Workers Rights (CPWR)**

CPWR administered the program through the MWTP Consortium. The following cities and community-based organizations served as the lead-agencies and represented the MWTP Consortium: Denver, CO - Cross Community Coalition; Baltimore, MD -East Baltimore Fair Chance/International Union of Painters and Allied Trades; New Orleans, LA- Louisiana Regional Council of Carpenters (LARC); and Oakland, CA- Cypress Mandela/WIST Center. The CPWR pre-apprenticeship/environmental construction-training model consisted of five components. The five components were:

- Life Skills, recruitment, screening, selection, case management, counseling, job readiness, ESL classes, GED training and testing, day care and transportation;
- Construction Skills, trade specific introduction to one or more building trades union's crafts;
- Environmental Skills Training, lead-abatement worker training, asbestos abatement worker training, hazardous waste/basic superfund site worker training, and confined space training;
- Job Development/Job Placement, identify environmental cleanup and construction jobs and placement of program graduates with employers engaged in the environmental or construction industries; and
- Job tracking, following students for a one-year period after program completion.

A total of 100 students, ages 18-25 years, received training. CPWR proposed to train 75 students for the program year and exceeded its training goals by 33%. Of the 100 students trained, a total of 63 students were placed in jobs. The following is the breakdown per city: Baltimore, MD (East Baltimore Community Corporation as lead agency) in partnership with the International Union of Painters and Allied Trades District Council #51 proposed to train 15 students, and actually trained a total of 17 students. Baltimore originally projected 100% percent placement but placed only 10 students; Denver, CO (Cross Community Coalition/ COPEEN as lead agency) proposed to train 15 students and actually trained 16 students, 2 dropped out and 9 students were employed; New Orleans, LA (LA Regional Council of Carpenters) proposed to train 20 students, actually trained 22 students, and placed 19 students; and Oakland, CA (Cypress Mandela/WIST Center as lead agency) proposed to train 30 students, actually trained 45 students, and placed 25 students.

For the entire program year 63% of the total students receiving training were placed in jobs. Two of the four programs experienced lower job placements than in prior years. The cities indicated that after the tragedy of September 11, 2001 many of the construction sites were shutdown for months due to increased national and local security. When work commenced, the callbacks were based upon seniority and personnel needs for the startup work. The MWTP administrators felt that within the next peak construction season in the spring of 2003, contractors will again start hiring, therefore enabling many of the graduates who were not initially placed to obtain jobs in construction at that time. The MWTP Consortium provided training to ethnically diverse population 93 males and 7 females of the 100 students 65 were African American, 1 American Indian, 20 Hispanic and 14 Asian. At program entry 70 students were unemployed and 30 students were underemployed. Forty-three (43) had high school diplomas, 17 had GEDs and 40 had no GEDs.

Success Stories: The East Baltimore MWTP was structured to complement another community training project under the auspices of the IUPAT, Local DC #51. The Local Painters' Union received a grant from Department of Juvenile Justice to provide construction training for youth of the East Baltimore area. The project involved the renovation of the City of Baltimore Juvenile Justice Center. These properties were tested for lead and asbestos and as a result of the testing, abatement occurred. The East Baltimore Community Corporation integrated its environmental training with that project and enabled MWTP students to work and learn at the same time. The environmental training was not conducted on-site but was held at the Painters' training facility.

Another significant accomplishment of the New Orleans Program was that the unions allowed the MWTP to act as a pre-apprenticeship training for their applicants. Historically, unions accept candidates for apprenticeship off the street. Seventy percent (70%) of the union's applicants fail the

required math test the first time they take it. Often these individuals never returned to retake the math exam. To change this pattern those who did not pass the apprenticeship math exam for entry into the union's apprenticeship were deferred to the New Orleans MWTP. Those students that completed the MWTP with the extensive life skills training including remedial math had no trouble passing the union's math re-test and were accepted in the Apprenticeship program.

### **New Jersey/New York Hazardous Materials Worker Training Center (NJ/NY Consortium)**

The NJ/NY Consortium administered by the University of Medicine and Dentistry of New Jersey (UMDNJ) successfully recruited 35 students to begin pre-apprentice training in New York City (NYC). The training cycle was completed on May 15, 2002 with a graduation of 31 or 88% of those who started the Program in January 2002. Within four weeks of graduation, 21 had secured employment. Overall, 77% of the graduates have been employed, a 69% employment overall rate. Jobs include environmental clean-up, construction, maintenance, and one in the entertainment industry.

The training partners for the program included the New York District Council of Carpenters Labor Technical College (LTC) and the New York City Environmental Justice Alliance (NYCEJA). The MWTP is housed at the LTC, and is co-administered by the training partners. A weaker than expected economy, coupled with the tragic events of September 11, 2001, resulted in an unpredictable employment environment. Many former graduates were employed at the Ground Zero site, some as supervisors in the environmental remediation field. The Ecological Restoration course, taught in conjunction with the New York City Parks Department, was strengthened this year to include information on bio hazards, and an introduction to Weapons of Mass Destruction, designed by the UMDNJ was added to the curriculum in immediate response to the new environment. The MWTP this year started with 146 people qualifying to compete for 35 spots in the incoming class. The final competition, known as the Try-Outs, began with 86 people being considered which made the job of selecting 35 enrollees particularly difficult. The community based organization partners, who are responsible for the outreach and recruitment effort throughout the metropolitan area, worked towards achieving a large turn out of young people, from 18 - 25 years of age, for the Try-Outs, particularly those who have been the hardest to reach and whose communities have continued to suffer high unemployment rates during a period of economic prosperity.

A new Apprenticeship Program has sprung out of the collaboration with the NYC Parks Department for those who completed the ecological restoration component with honors. The MWTP also continued its collaboration with Habitat For Humanity on a site in Brooklyn, New York. The students worked, with their Carpenter Shop teachers, to learn onsite skills for employment in a construction environment. Other highlights of the program year include: expanded computer literacy program, the inclusion of a new institution of higher learning in the curriculum development process, formalizing a relationship between the MWTP and the City of New York, and expansion of the Carpenters Union's role in the MWTP itself.

Measures of Success: Training is designed to assist students' entry primarily into construction and environmental assessment and cleanup work, and secondarily into higher education and community service. It is their goal for students to gain entry into local construction unions. Being a member of a union results in higher wages, better benefits, contribution toward pensions, better workplace standards and improved health and safety protection. Being an apprentice member of a construction

union obligates students to maintain enrollment in a multi-year apprentice program. In the case of the New York District Council of Carpenters, the apprentice program lasts four years and is free to all apprentice union members in good standing. Other members of the building trades have similar programs, including the Painters, Sheet Metal, Stationary Engineers and the Laborers. Of the 21 students working, 19 (90%) are members of building trade or municipal unions, including 9 as Carpenters, 1 as a Sheet Metal Worker, 1 as a Laborer, 3 as Painters, 4 as Stationary Engineers, and 1 as a Building Maintenance Engineer. Wages and benefits of students are consistent with previous years. They average \$14.92 per hour (\$32 including benefits). The minimum wage earned is \$12.00 per hour; the maximum is \$28.00 per hour.

In addition to successful employment after graduation, some graduates decided to pursue higher education. For example, two graduates have been accepted into full time higher education programs, one declaring a major in Environmental Science. Three graduates have been accepted for positions with the City of New York in the areas of waterfront redevelopment and ecological restoration. Four students have successfully achieved their GEDs. Through their Job Club component, the NJ/NY Consortium is continuing to work with those students still seeking employment in the field of their choice. Recruitment and hiring has been slower during this period because of the area's economy. Finally, they will continue to maintain close contact with their graduates over the coming years.

The successful placement of 60% of the graduates within six weeks, 11% of the graduates achieving their GEDs, the ability to be a part time employer, and 6% going on to higher education in an area hard hit economically by the times, as well as the events of September 11, 2001, reflects the strength of the training program, and is indicative of the intensive and extensive screening program that MWTP initiated, and continues to fine tune.

#### **National Puerto Rican Forum, Inc. (NPRF)**

The NPRF Consortium goals for the MWTP were to train 25-30 students in Chicago, Illinois through the Office of Applied Innovations, Inc. (OIA) and 25-30 students in Washington, DC through Alice Hamilton Occupational Health Center (AHOHC). Additional training was conducted in East Saint Louis, Illinois with the Neighbors United for Progress (NUP). Although an economic downturn has hindered job placement in some areas, the programs, now under the NPRF Consortium, have trained 83 students and placed 44 students in jobs. Although the majority of the students were unemployed at the start of the program, 44 are now working in the construction, lead and asbestos abatement industries earning \$9-\$16 per hour. Through their connections with local community based agencies, faith-based groups, advisory board members, state welfare agencies, etc., the programs conducted outreach and identified over 200 prospective participants for the programs in Washington D.C. and Chicago. Students received more than 800 hours of classroom and hands on training in a variety of environmental remediation and life skills courses. Case-management/counseling, job placement and student supportive services were also offered to all participants and over 14,000 contact hours were generated. Courses such as lead abatement, Hazardous Waste Operations (HAZWOPER), asbestos abatement, underground storage tanks, employability skills, and mold awareness were a part of the MWT curriculum this year.

Chicago, IL Program: OAI restructured its MWTP this year by identifying more effective community collaborators, creating stronger relationships with employers, and leveraging multiple sources of funding to better serve the participants and businesses. More concerted efforts were made

to involve prospective employers much earlier in the program. Potential employers were involved as guest speakers, mentors, and program evaluators. OAI conducted outreach and recruitment, and screened more than 60 interested applicants. From this pool, approximately 30 candidates were identified for further assessment and consideration for OAI's MWTP.

In an effort to increase job placement and improve employer relations for its MWTP, OAI held its first Environmental Health and Safety (EH&S) Employer Leadership Forum on June 20 in partnership with the Chicagoland Chamber of Commerce. OAI's EH&S Employer Forum was designed to expose Chicagoland area environmental and construction services employers to the OAI EH&S mission, staff, training programs, graduates and existing partners. As a former member of the Chamber's Environmental Committee, Michelle Simmons of OAI developed a panel that included individuals from all environmental sectors including law and policy, consulting, contracting and government. Some of the panel included: Henry Henderson, former commissioner for the City of Chicago's Department of Environment; Karen Hoffschmidt, Deputy Executive Director, South Suburban Mayors and Managers Association; and Deborah Orr, Project Manager and Brownfields Coordinator, USEPA Region 5 Superfund Division. Overall, the forum was well received by the participants, and OAI had the benefit of an excellent partner and an extraordinary panel.

OAI conducted four cycles of training. Two of the cycles are described below. OAI held its first training session in March 2001 at its Bronzeville site in south Chicago and eight (8) individuals from various community organizations and programs were given the 40-hour HAZWOPER training. To date, all of those individuals are employed with an environmental staffing company and remain in contact with OAI.

During the second cycle, OAI has placed considerable effort in forming a partnership with the City of Chicago's Skill Builders Program to provide the 40-hour HAZWOPER and other training to their students eligible to receive MWTP services. This collaboration is a significant step in strengthening the placement aspect of OAI's MWTP. Free to Chicago residents, Skill Builders is a pre-apprenticeship construction trades program supported by the Mayor of Chicago and endorsed by all major trade unions in the city. It is designed to help participants pass the required exams and enter apprenticeship programs in various construction trades. A total of seven (7) MWT students successfully passed the HAZWOPER course in May and have been placed in apprenticeship programs by the Skill Builders program.

Washington DC Program: The Washington DC Minority Training Program provided by the AHOHC conducted two cycles of training, Winter 2001 and Spring 2002. In Winter 2001, the program enrolled 21 and graduated 18 participants. For the spring, 25 enrolled and 24 participants graduated on May 31, 2002. Training was held at the AHOHC in Silver Spring, Maryland. Currently, nine (9) from the Winter 2001 cycle graduates are employed with hourly rates ranging from \$9 to \$15.85 per hour. Of the twenty-four (24) graduates in the spring cycle, twenty (20) were ready and available for work. Currently, 15 of those graduates have been placed in environmental restoration jobs ranging from \$12 to \$16 per hour. The remaining graduates have signed up to become members of the Insulators Local 24, and the union will focus on placing these students.

Success Stories: Two students were present at the Advisory Board meeting. One was a male graduate of OAI's 2002 MWTP in Chicago, and the other was a female graduate of Era's 2002

BMWTP in Kansas City. Both students expressed their appreciation to the consortium for allowing them the opportunity to participate in the training programs. The male student indicated that his younger brother died from lead poisoning at the age of three. He knew then that lead was a dangerous substance and that he would have done anything to save his life if he had known how. Joining the MWTP was a way for him to gain knowledge about dangers of lead, obtain employment, and save other children from lead exposure.

Prospective employers often ask training organizations: “Would you hire this graduate?” In a sense, this is a measure of the effectiveness of the program itself. From this perspective, two recent AHOHC MWTP graduates were hired by the AHOHC as assistant trainers with the intent to become trainers. One graduate, hired in February, assisted with the training session held in spring 2002. He proved to be conscientious and responsible, and demonstrated a sincere commitment to the students. The second graduate is bilingual and has great potential as an instructor. Both graduates had excellent attendance, and have gained valuable field experience.

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

We have completed our sixth year of working with EPA to support the SuperJTI. This collaboration has allowed EPA Office of Community Involvement and the NIEHS to partner and provide much needed training particularly in disadvantaged communities to priority sites across the US. The Super JTI Program is an important example of how to engage in community involvement and outreach training. Some of these concerns may deal with general awareness level training, community right-to-know, general life skills training, environmental restoration training and emergency response training.

As a result of this collaboration, the NIEHS issued requests for supplemental support through the use of Administrative Supplements to existing awardees to address targeted SuperJTI sites. Supplements were limited to \$100,000 in total costs. In addition to applying for supplements, awardees could use existing funds to perform training at previous or SuperJTI priority sites during this period. As instructed in the supplemental request, special attention to the development of partnerships with EPA Regional Offices, community-based organizations and the NIEHS training organizations were essential to this program. Particular focus was also given to those awardees that would form partnerships with local training providers and community based organizations for recruitment, life skills, and remedial training. For more information about the SuperJTI program, see attached fact sheets or go to their web site at <http://www.epa.gov/superfund/oerr/sfjti/index.htm>.

The following SuperJTI sites were targeted during this period.

#### **Region 3**

Site Name: Lower Darby Creek Site  
Location: Philadelphia & Delaware Counties, Pennsylvania

Site Name: Abex  
Location: Portsmouth, Virginia

**Region 9**

Site Name: Aerojet General Corporation Superfund Site  
Location: Rancho Cordova, California

Site Name: Waste Disposal, Inc.  
Location: Sante Fe Springs, California

**L-AGC**

As a result of this request for supplemental funding, the NIEHS provided a \$100,000 supplement to the L-AGC through the Hazardous Waste Worker Training Program to fund a Super JTI Training Program in Southern California during this period targeting the Waste Disposal Inc. Site in Sante Fe Springs, California. Overall, L-AGC conducted two Super JTI programs during this period, one through the Tri Counties Labor Foundation (TCLF) in Southern California and the other through an existing program with the Young Community Developers, Inc. (YCD) in San Francisco, CA. (See chart below with job placement data).

Program	Super JTI Site	# Trained	# Employed	% Employment
TCLF	Waste Disposal, Inc., Site (WDI)	12	10	80%
YCD	Bayview Hunters Point Shipyard	25	24	96%
Totals	2 sites	37	34	92%

**Waste Disposal, Inc. Site**

The TCLF successfully implemented the L-AGC Supplemental Super Job Training Initiative (Super JTI) Program for the Region 9 Waste Disposal, Inc., Site (WDI) in Sante Fe Springs, California. Located in Oxnard, California, the TCLF recruited and trained individuals who live near the WDI Superfund site in Sante Fe Springs, as well those in the surrounding counties of Ventura, Santa Barbara, San Luis Obispo, Los Angeles, and Sacramento. The TCLF began the Super JTI Program on Monday, March 18th with a total of 12 trainees. Based on program information and files, 12 trainees (100%) have completed the entire training program. The comprehensive, integrated training program provided life and academic skills training, assistance with the GED, and job skills training in general construction, lead and asbestos abatement, and hazardous waste work. The training prepares community residents who are at risk of exposure to contaminated properties for work in the construction and environmental remediation industries. The program formed partnerships with our local training fund in Southern California and a local community-based organization the Tri Counties Labor Foundation to target community residents who were underemployed or unemployed because they lack the skills and knowledge required for many of the available career opportunities in environmental restoration occurring in their communities.

Currently 10 of the 12 trainees (80%) who initially enrolled are employed in the construction industry through a Laborers- Local Union and/or an apprenticeship program. Initially and previously

reported, trainee wages ranged from 11.08 per hour to 19.46 per hour. Trainees are now earning wages ranging from 11.55 per hour to 20.00 per hour plus benefits, with a salary range of \$20,800 to \$41,600 per year. Each of the 10 who were employed are working for union contractors including R Help Construction, Granite Construction, Tidwell Excavating, P&M Construction, and M&M Maintenance.

The most outstanding program accomplishment is the expedient job placement. Even before the official end of the training program, 67 percent or 8 of the 12 students were working in construction. Five of the trainees have been inducted into the Laborers' Construction Craft Laborer (CCL) Apprenticeship Program, which will allow program graduates continuing education and training along broad career paths. Eight of the 12 trainees are currently employed in the construction industry through two of our partner Laborers' Local Unions in the targeted area: Laborers' Local 585 in Ventura County and Laborers' Local 300 in Los Angeles County. The participants were sought after by Tidwell Excavating, who employed three graduates of the program as Laborer apprentices, and Toro Enterprises, who employed one of the graduates as an apprentice. In addition, one other student is employed as an apprentice at a masonry contractor, and three others with local construction contractors in the area.

Also, TCLF has the support of local elected officials, including Senator Jack O'Connell and Oxnard Mayor Manuel Lopez, who believe that the Super JTI Program provides invaluable training to the TCLF community. More specifically, TCLF's partner organizations include Laborers' Locals 585, 591, 402, and 300; Laborers Training and Retraining Trust Fund of Southern California; Ventura County Building and Construction Trades Council; El Concilio del Condado de Ventura; U.S. Veterans Administration; Board of Supervisors Ventura County; Oxnard Adult Education; Ventura Unified School District Adult Education; and others.

Overall, both L-AGC and TCLF believe this has been a successful program year to date. TCLF will begin supplemental job placement activities on June 10th to ensure that the remaining four individuals not working are given every opportunity available to become a part of the CCL Apprenticeship Program through one of the many Laborers' local union partnerships and to begin working with a union contractor.

#### Bayview Hunters Point Shipyard

The San Francisco MWTP is also considered a Super JTI Program because of the location of the community and its continuous involvement with the Bayview Hunters Point Shipyard Redevelopment Program, a Super JTI site. The program is in the seventh year of program implementation and continues to be a model program, having exceeded its targeted goals of trainee completion each year for the past four years. Young Community Developers, Inc., (YCD) is a 28-year old community-based organization located in the Bayview Hunters Point community of San Francisco, implementing and managing the San Francisco MWTP. The job skills component of training is unique in that, mobile units from Iowa and Southern California conduct the training at a site designated in the community by YCD. With a projected training goal of 15 trainees, the San Francisco MWTP exceeded its training goal and trained a total of 25 trainees, 10 trainees or 67% more than its projected goal. A highlight of this year's training is the increased number of trainees trained, due to an additional cycle of trainees, for specific work at the Bayview Hunters Point Shipyard (a Superfund site) and on the Third Street Light Rail Project slated to begin in the Bayview



Hunter Point community in July. Because of the substantial job market in the area and the reputation of YCD in successful job placement, it is not unusual for the San Francisco MWTP to exceed its training goal by implementing additional training.

Job placement exceeded projected efforts for placing graduates in environmental jobs. Of the two cycles of 25 trainees, currently 24 or 96% of them are employed. Specifically, all 12 (100%) of the trainees trained in the Fall cycle are currently employed. Five or 42% of the 12 employed are in the environmental field-2 with environmental companies in the area and 3 at the Hunter's Point Shipyard, the local Superfund site previously mentioned.

#### **2.4. WETP Small Business Innovative Research Request for Applications (SBIR)**

During FY 2001, funding for the HWWTP began to be directly appropriated to the NIEHS; therefore allowing the NIEHS to take a percentage of the funding to establish a Small Business Innovative Research (SBIR)/ Small Business Technology Transfer Research (STTR) program.

Based on its program experience, the WETP identified a need to create new products that would support high quality health and safety training for hazardous waste workers and emergency responders. On-line or "e-learning" technologies have the potential to provide such support in a manner that is economical and effective in terms of adult learning. Given the WETP core values for hands-on learning, instructor-to-learner, and learner-to-learner interactions, these new technologies needed to be developed with a careful understanding of the relationship between individual skill-based components and hands-on, instructor and worker-oriented training. Using the Small Business Innovative Research (SBIR)/ Small Business Technology Transfer Research (STTR) program, the WETP sought to assist in the development of technology driven commercial products that can support and be integrated into current training activities. The NIEHS thus issued an RFA entitled "Development of Innovative E-Learning Products for Worker Safety and Health Training In Hazardous Waste and Chemical Emergency Response" (RFA-ES-02-002).

The NIEHS encouraged applicants to this SBIR RFA to pursue partnerships and collaboration with awardees of the WETP program and to design new e-learning products that can extend the existing NIEHS curricula and training programs into the digital world. The WETP entertained well-justified Phase I applications for an SBIR/STTR award with a project period up to two years and a budget not to exceed a total cost of \$200,000 per year.

The Request for Applications (RFA-ES-02-002) was released on December 12, 2001 with a receipt date of April 17, 2002. The NIEHS received 19 letters of intent and 15 applications. Of these, eight were SBIR Phase 1, three were STTR Phase 1, and four were deemed non-responsive to the RFA. Dr. Sally Eckert-Tilotta, Scientific Review Branch, organized the technical merit review that was held June 24 in RTP, NC. Concurrence with the review process by the National Advisory Environmental Health Sciences Council took place on September 10, 2002.

In September, 2002, the WETP made four Small Business Innovative Research (SBIR) Phase One awards totaling \$756,347 for the development of innovative "e-learning" products for worker safety and health training in hazardous waste and chemical emergency response. These awards will result in

new products that will help provide high-quality health and safety training for hazardous waste workers and emergency responders. Effective and economical, these particular on-line or electronic learning technologies are aimed at specific training needs identified by the small business applicants in partnership with other WETP awardees. During 2003, the WETP hopes to issue a new SBIR/STTR RFA that will expand upon the lessons learned from the current awards and include a component that utilizes e-learning to assist skilled support personnel, such as crane operators, in preparing to address WMD events. A brief description of each current awardee and their project is provided below:

### **FOF Communications (FOF)**

FOF is an informational design company with more than 20 years of experience in research, print, video, CD, and web-based programs for government, non-profit, labor, and corporate clients. Mr. Rod Welford and Ms. Marilyn Larson have been the partners since the Washington, DC-based firm's founding in 1979. FOF products include the award-winning new employee orientation video for the U.S. Internal Revenue Service, the Medicare Fraud video for Booz Allen Hamilton, The Handbook of Skin Protection for The Aberdeen Group, and dozens of nationally used CDs, books, DVDs, and videos. In the research arena, the partners are recipients of the prestigious Kammer Merit in Authorship Award from the American College of Occupational Medicine.

The company's NIEHS SBIR project involves the development and evaluation of e-HazTools™ an interactive, commercially viable software product to teach or learn the fundamentals of practical chemistry for hazardous materials. e-HazTools™ will hook into public chemical databases to drive e-outcomes in questioning-method scenarios and problem-solving exercises. FOF is partnering with the NPRFC. Consortium members will provide subject matter consultation and the Alice Hamilton Occupational Health Center, an NPRFC member, will provide field-test opportunities. The IBT and the Sheet Metal Occupational Health Institute also will provide expertise and field-test options.

"Instructional solutions for CD and the web require more than just text, graphics, animation, video, and audio components," says Rod. "It is the well-planned design, integration, and testing that create effective instructional products."

### **Advanced Technologies and Laboratories International, Inc. (ATL)**

ATL is a young, dynamic consulting company specializing in health and safety, environmental protection and information systems. Since 1995, ATL has built a solid reputation for technical excellence, attention to customer service, and value. Among ATL's customers are the Occupational Safety and Health Administration (OSHA), the Department of Energy (DOE), the Nuclear Regulatory Commission (NRC), the National Institute for Occupational Safety and Health (NIOSH), the National Center for Environmental Health, the Department of Housing and Urban Development, the Center to Protect Workers' Rights, the IUOE, and the United Mine Workers.

ATL is a woman-owned, 8(a) certified small business based in Germantown, Maryland, with field offices in Oak Ridge, Tennessee, Richland, Washington, and Albuquerque, New Mexico.

For its SBIR project, ATL is partnering with the IUOE National Hazmat Program (IUOENHP). The IUOENHP has distinguished itself as an outstanding provider of Hazwoper and related training, and a leader in adapting new training technologies. ATL and the IUOENHP have worked together successfully on other projects for over two years.

ATL's primary aim under the SBIR grant is to develop and test a Web-Based Training Center that integrates a set of web-based functions into a coherent technology-assisted learning tool. This unique product will enable training techniques such as virtual "small group activities" that draw upon the work experiences and skills of the training participants in collaborative, "team" settings. It will retain the focus on "peer" worker-trainers that is at the heart of most WETP-sponsored training.

### **Y-Stress Inc.**

Y-Stress is a small business located in Tobyhanna, Pennsylvania, in the heart of the Pocono Mountains. Their Training Technologies Division's goal is to make online learning both accessible and enjoyable. Y-Stress Inc.'s SBIR project, entitled "Scenario-Based Virtual Hazardous Awareness Training," entails working with the George Meany Center for Labor Studies - National Labor College (GMC - NLC) to turn their current Railway Workers Online Eight-Hour Awareness Course into a more interactive, virtual hands-on SCORM-compliant version. This will be done using the latest in technologies that will allow streaming of rich multimedia content over low bandwidth connections.

The goal is to increase online completion rates as well as retention by making the course more interactive and engaging so that as learning and mastery increase, the safety and health of the workers also increase. GMC-NLC is providing their online course, related data, subject expertise, and pilot testing sites. Once it is concluded that these applied technologies increase learning, it will then be applied to other safety courses that will become part of a safety portal based on an open source philosophy. The new version of the Railway Workers Online Eight-Hour Awareness course and portal will be hosted on [www.safetywired.com](http://www.safetywired.com). Anyone interested in reviewing and giving feedback on the course during its development and implementation phases can e-mail [review@safetywired.com](mailto:review@safetywired.com).

### **New Leaf Interactive Media**

For the past seven years, New Leaf Interactive Media has specialized in creating interactive media content for education and business. Their primary goal in creating CD-ROMs, websites, and kiosks for businesses, museums, and faculty has been to combine excellence in design with transparent functionality. They recognize that, while users will endure a learning curve for application software, in presentation software the learning curve must be low to nil.

In partnership with Kirkwood Community College's HMTRI program, and its director, Doug Feil, New Leaf Interactive Media plans to create an immersive experience – using digital video, actors, and sets – that will place hazardous waste worker trainees at the scene of an accident, encouraging them to observe the various clues and formulate a plan of action. Each choice on the part of the trainee results in immediate feedback. A choice that results in negative consequences gives feedback about that consequence then returns the user to the menu screen to make a choice that works better. A series of correct choices leads the worker to finish the exercise in about twenty minutes, with video footage of procedures to reinforce correct methods. Incorrect choices might lead the user to spend over an hour with the training disc.

DVD-video is an inexpensive medium, requiring only a set-top player and remote control device. Since DVD-Video can also be played on personal computers, we plan to add some content in the ROM portion of the disc which will take the user to a website for testing. However, in respect of the

digital divide in our culture, all testing materials will also be made available on paper, so that a personal computer is not required to use the lessons.

Over two years, New Leaf Interactive Media plans to produce a series of three DVD-video discs: "Mystery Drum" – a chemical spill and various possible outcomes; "Lock-out Tag-out in a Confined Space" – problems related to making a safe entrance through lock-out procedures; and "Brownfields Hazardous Assessment Exercise" – redeveloping a 4-block site containing contaminants. This plan will include extensive testing of the discs, prior to commercial release, with target groups. The discs are intended for use both in the classroom, as a teaching aid, and for individual use outside of class, including for certification training. In the course of the project, New Leaf Interactive Media will develop a new website related to the development, sale, and use of the grant products, and will publicize the address. (This should be in place in the late summer/early fall of 2003.)

## **2.5. WETP Strategic Planning Workshop (November 2001)**

Development of the WETP Strategic Plan began in April, 2001 with the design of a strategic planning process that was based on three key principles: (1) *Stakeholder Inclusion*-the idea that inputs from all stakeholder groups involved with and impacting the program (Awardees, Other Federal Agencies, Champions of the Program) should be strongly represented in the formulation of the plan; (2) *Realistic Goals*- the plan should be realistic and address a significant number of near term operational items that impact the month to month running of the program as well as long-term growth issues; and, (3) *Peer Review Process*- the plan needs to contain a review process that keeps the plan current and that helps the WETP “realize that we are moving forward” and staying on track with the latest developments in the field of worker training.

After the events of September 11, 2001, the WETP put together a Strategic Planning Workshop, which occurred on November 1-2, 2001 in Chapel Hill, NC and became the key opportunity for Principal Investigators and key program staff to discuss in detail the components of the plan. The final strategic plan, which was completed in June 2002, owes its insights and operational items in large part to the hard work of the WETP awardees during the November 1-2, 2001 Strategic Planning Workshop.

The strategic core of our plan contains the following four sections:

- Partnerships
- Organizational Alignment of WETP
- Maintaining Human Capital--Leadership & Training
- Sharing Information

As part of the strategic planning process, it was decided that the WETP’s mission statement should reflect the activities of the program awardees. The words, "protecting workers and their communities," in the pre-plan mission statement took on new meaning after September 11th. While the WETP mission statement has not changed, the activities of the program post September 11<sup>th</sup> have included training in support of the WTC Cleanup Requirements, the Anthrax Cleanup activities, the emerging needs for Microbial remediation training, and the efforts to understand the special training

requirements that might be required with respect to environmental response and cleanup arising from incidents involving WMD.

The WETP sees this refocus of energy and funds in the creation of WMD specific training as part of our existing mission statement. It also impacts the operational plan of the program. We recognize the intertwined nature of the traditional environmental response and cleanup program activities with the newly emerging problems of response to incidents of terrorism that may involve biological agents and/or WMD and have incorporated WMD training and other WMD prevention activities as part of our program activities.

The Strategic Planning Workshop with the NIEHS awardees concluded that the WETP Core Program rests on the recognition of the environmental response and cleanup community that worker protection is dependent on the compliance by contractors and governmental agencies with the provisions of 29 CFR 1910.120. That is, whether traditional superfund sites, uncontrolled hazardous waste sites, or sites emanating from an act of terrorism, the components of worker protection do not change.

The strategic planning process has resulted in the conclusion that the engagement of WETP in the new world of environmental response and cleanup emanating from incidents involving biological agents, terrorism or WMD is based on the identical premise. Moreover, for most situations, the target population of workers to be trained is identical. For a copy of the Strategic Plan, go to [www.wetp.org](http://www.wetp.org).

## **2.6. Weapons of Mass Destruction Training Workshop Summary**

WETP National Technical Workshop was held on April 25-26, 2002 in Nashville, Tenn. to define appropriate training to protect workers during responses. The report resulting from the workshop, "Learning from Disasters: WMD Preparedness Through Worker Training," provided numerous recommendations for improving worker training and preparedness for disaster responses. The objective of the workshop was to develop a practical, experienced-based foundation upon which the WETP can develop and advance future training initiatives, based upon the HAZWOPER foundation of the current training grant program that will contribute to the Nation's terrorism preparedness program.

This Workshop represents the initial efforts to bring together awardees and experts to explore the issues with respect to worker training surrounding emergency response and cleanup involving WMD. It was envisioned that the product of the workshop would serve as the initial basis upon which the WETP can advance development of the Hazwoper-based WMD response training initiative.

One breakout group on protecting Skilled Support Personnel (SSP) during disaster response presented a number of issues for consideration in responding to future terrorist attacks. These addressed, among others, improving the effectiveness of SSP in terrorist incident responses, training instructional staff considerations, SSP training, Biochemical training, training delivery methods, and suggested approaches for the WETP to serve the grantee participants in the WMD initiative. There was general consensus that construction trades could be pre-incident trained in anticipation of the

need to respond to WMD incidents and that a registry of this prepared-to-respond work force would be appropriate.

Another breakout group was tasked with developing recommended guidelines for the establishment of a WETP-focused communication and coordination activity during a national disaster or another terrorist attack. It was recommended that the program should work on facilitating effective communication, coordination, and interaction among all of the grantees as the WETP WMD- specific program develops and expands.

The Transportation and Chemical industry sectors represent potential terrorist targets, yet no terrorist attack on these sectors has occurred recently. This breakout group had to consider all the possible WMD threats: destructive, biological, chemical, and nuclear in addition to the release of industry-specific hazardous materials from production and transport activities. The group focused attention on approaches that might be considered and taken with respect to the training that could be provided to their training constituency as an aid to meaningfully participate in the terrorism preparedness activities in these industry sectors.

The workshop recommended that the WETP should consider establishment of an information and resource center to support the WMD initiative. Such a center might include authoritative WMD information and sources, a resource listing of pre-qualified organizations that can provide crisis management services to grantee served workers in future WMD responses, a central coordination center for WMD initiative-developed training products, and a single information contact point for external entities among others.

## **2.7. WETP Clearinghouse Update**

Through an ongoing contract with OD Systems Inc., the National Clearinghouse for Worker Safety and Health Training continued to act as a centralized distribution and information point through which members of the worker education and training community can access technical documents, safety and health update information, technical workshop reports, and curricula produced by the WETP awardees. The National Clearinghouse continued to operate as the information dissemination arm of the WETP, disseminating program information between and among the grantees, to other government agencies, and to the worker safety community.

Clearinghouse staff visited Ground Zero in New York shortly after the terrorist attack, to get a first hand assessment of the situation and of the WETP's evolving role in protecting those workers involved in the rescue and recovery effort. The WETP communication channels, such as the weekly Newsbrief and WETP web site, were dedicated during the months after September 11th to keeping worker safety professionals updated on conditions at Ground Zero and to keeping them abreast of new information provided by the CDC, NIOSH, OSHA, EPA and other organizations. A worker safety study was commissioned immediately after September 11th and was the first professional assessment of the safety and health issues associated with the WTC work site, one which gave a true and honest review of the dangers faced by workers and the minimal protections afforded to them.

The National Clearinghouse facilitated two workshops during the 2002 fiscal year.

The NIEHS Strategic Planning Meeting was held on November 1-2, 2001 in Chapel Hill, North Carolina and was the culmination of a planning process begun in April, 2001; and the Learning From Disasters, WMD Preparedness Through Worker Training Workshop, which was held on April 25 - 26, 2002 in Nashville, Tennessee. The Learning From Disasters workshop was planned and developed by National Clearinghouse staff members. The final WETP Strategic Plan and the final report for the Learning From Disasters workshops are both currently available on the WETP web site.

The WETP weekly digital newsbrief underwent some dramatic changes during the year to increase the usability of the newsbrief and to provide subscribers the maximum number of worker safety-related stories appropriate for an online newsbrief format. Subscribers now have a password to their accounts and can modify their email address without having to contact National Clearinghouse staff. MDB also created administrative screens, which allow the automated distribution of the newsbrief to WETP readership. The subscribers now number more than 300 and are continually increasing. The Newsbrief is also completely accessible from the webpage where it is utilized by thousands of readers.

The National Clearinghouse was also tasked to focus on the feasibility of building a National Registry of HAZMAT Trained Workers for federal disaster response and for providing an outline of how to create a pilot version of this registry. On August 15, 2002, a meeting was held at the NIEHS to discuss future safety and health training program initiatives regarding WMD incident response with a particular focus on what training is appropriate for skilled support personnel and the feasibility of establishing a national registry of trained personnel to respond to future terrorist actions. Bruce Lippy of the MDB staff is leading this effort. Participants included members from the WETP awardee community that had received supplemental funding to support their WMD-specific initiatives. The draft report is now available at [www.wept.org](http://www.wept.org). The Feasibility Study is scheduled for completion in fiscal year 2003.

## **2.8. World Trade Center (WTC) Response Update**

Since September 11, 2001, our nation has been forced to take a closer look at how all our agencies respond to federal disasters, how to protect the health and safety of the workers and volunteers who do respond to these emergencies, and how to better prepare our nation in the event of future disasters. For the NIEHS Worker Education and Training Program (WETP) and its cooperative agreement awardees, the aftermath of this disaster has presented an opportunity to provide environmental training resources and expertise on the front lines of the country's disaster response.

Subsequent to September 11<sup>th</sup>, supplemental awards were made by the NIEHS to support education and training activities related to the WTC cleanup, the anthrax contamination response, and the development of WMD training. Through its extramural awardees, NIEHS was able to quickly mobilize sustained resources to provide information, equipment and training resources to high-risk worker populations engaged in WMD response. Training courses and curricula developed by NIEHS awardees include classroom, hands-on and on-line health and safety training for workers, supervisors and professionals focused on hazardous waste operations and emergency response.

A site-specific worker training program developed by the NIEHS grantees, which includes a three-hour WTC site safety and health orientation and a train-the-trainer program, has been used by 55 unions, employers, and governmental representatives to train approximately 1,300 construction workers at Ground Zero, including most of the building and construction trade workers who have worked from mid-September through June, 2002. This NIEHS-sponsored training has been coordinated by the CPWR and the IUOE.

Also, the IAFF has worked vigorously over the past eight months to reestablish the hazardous materials management capability of the New York City Fire Department. FDNY response on 9/11 resulted in the loss of 343 fire personnel. Most of the Department's hazardous materials response personnel were among the victims, including the command structure. All of the Hazmat Specialists were lost. Over the past year, the IAFF has retrained almost the entire cadre of skilled hazmat technicians for FDNY with NIEHS support.

L-AGC, with the NIEHS support, has conducted anthrax remediation training for environmental laborers in New York City and New Jersey. The L-AGC is translating the anthrax worker course into Spanish and Polish, and is developing two new course modules on other WMD to begin the process of creating a comprehensive Chemical/Biological Agent Remediation Worker course. Short modules were immediately created to provide training for the L-AGC who were actively involved in the anthrax remediation at the U.S. Postal facilities in Washington, DC and New Jersey as well as the NBC building in NYC.

L-AGC also provided special Hazardous Waste/Anthrax response training to several law enforcement agencies using NIEHS support. In December 2001, L-AGC provided two 50-hour HW Operations/Anthrax Awareness courses to the DC Metropolitan Police SWAT teams. In January 2002, a similar course was provided to a group of U.S. Marshals who are tasked with protecting various judicial buildings/personnel throughout the United States. The U.S. Marshals have had approximately 150 more marshals take this specialized HW Worker course. Requests for training are also in process from the Capitol Police, the Park Police (US National Park Service), and the FBI.

As the work continues and recovery turns into rebuilding, more skilled support personnel have been needed to clean up the lower Manhattan area and the contaminated buildings adjacent to the WTC complex. From the operating engineers, who manned one of the first Hazmat mobile units on the WTC site and provided respiratory equipment and testing, to the IAFF, NY Carpenters, L-AGC Education and Training Fund, CPWR, and all of the other health and safety support at the WTC site, workers have received this critically needed training.

Based on its experience at the WTC site and in supporting anthrax remediation efforts, WETP is exploring a coordinated federal disaster response training program that focuses on health and safety and environmental course curricula which should include at a minimum emergency response protocols, hazard communication, personal protection equipment and respiratory protection. As a first step toward creating a trained cadre of WMD remediation workers, NIEHS has begun the development of training modules on various biological/chemical agents that can be incorporated into Hazardous Waste Refresher courses or can stand alone as part of a larger WMD training program. Chemical/biological agents that are being considered for inclusion in a training program include the



following: smallpox, botulism, plague, tularemia, mustard gas, phosgene, choking agents, and the nerve gas B sarin.

NIEHS has also begun a feasibility study to explore the development of a national registry of trained and pre-certified skilled construction support personnel in relevant crafts for immediate response to national disasters or possible catastrophic terrorist attacks under this special program. This capacity building activity will allow rapid contact and deployment of skilled support personnel anywhere in the country, wherever and whenever terrorists strike again.

The example of the NIEHS response to the 9/11 tragedies has provided a great opportunity for bringing scientific expertise and environmental health resources to bear on disaster situations that are fraught with potential environmental peril. Minimization of injuries and further loss of life through public health prevention is a critical tool to assure that our nation does not experience secondary disasters and other potential collateral damage.

## **2.9. WETP Supplemental Awards**

As part of the federal response to the September 11, 2001 terrorist attacks, the National Institute of Environmental Health Sciences (NIEHS) received \$6,000,000 to support World Trade Center (WTC) training response actions, including education and training of new Hazmat teams for the New York City Fire Department, training environmental remediation workers, health and safety training for site cleanup workers, training and certification in the use of personal protection equipment in the cleanup effort, and weapons of mass destruction training for the Hazmat workforce. After a review by representatives of relevant federal agencies, six supplemental awards were made on April 3, 2002 to current cooperative agreement recipients of the NIEHS Worker Education and Training Program (WETP). The purpose of these administrative supplements was to develop an integrated education and training approach that will address immediate and long-term worker health protection concerns arising from the September 11th terrorist attack on the World Trade Center (WTC). A summary of the supplemental funding is below. Detailed information regarding their accomplishments is located in Appendix 14.

### **International Association of Firefighters (IAFF) --- \$3,205,597**

The IAFF received support for direct delivery of hazardous materials technician and chemical protective clothing/decontamination training classes for the Fire Department of the City of New York (FDNY). Support was also requested to cover replacement personnel while critical FDNY staff members attend required OSHA HAZMAT training. The training proposal was designed to meet the needs of rebuilding the FDNY infrastructure with a good mix of classroom and hands-on training.

### **International Union of Operating Engineers (IUOE) -- \$1,451,047**

The supplemental proposal from IUOE received support under four separate Response Activities. Support was provided as follows: 1) development of modules to prepare skilled support personnel for quick response at weapons of mass destruction sites and a registry of trained individuals; 2) evaluation of the appropriateness of the WTC awareness training and the development of guidance for the preparation of skilled construction support personnel at future mass destruction sites; 3) creation of a summary report concerning the distribution and fit testing of respiratory protection

equipment at the WTC site and the development of a training module that covers the lessons learned from this process; and 4) development of two distinct training programs for mine safety inspectors and stationary engineers which focus on the use of weaponized microbes and other biochemical agents to assure appropriate emergency response and remediation actions.

**The National Puerto Rican Forum, Inc (NPRF) ---- \$480,000**

The NPRF and their consortium members at the Alice Hamilton Occupational Health Center, Office of Applied Innovations and the Maine Labor Group on Health received support for weapons of mass destruction training for the Hazmat workforce. The NPRF consortium provided direct instructor and worker training for hazmat workers in three principal target populations including the International Association of Heat and Frost Insulators & Asbestos Workers (AWI), the American Federation of Government Employees (AFGE) and emergency response personnel in Kentucky, Maine and Washington, DC. The training consisted of add-on training modules for emergency response (ER) awareness (some specific to biological contamination such as anthrax), the ER operations level, the hazardous waste worker initial and refresher training to include modules on preparing and responding to bio-terrorism related incidents such as anthrax contamination.

**University of Medicine & Dentistry of New Jersey (UMDNJ) --- \$398,711**

The UMDNJ consortium received support for training activities which included: support for NYCOSH (New York Committee for Occupational Safety and Health) to provide training for 200 Transit Union Workers in lower Manhattan with 24-hour hazardous materials technician training; support for the New York District Council of Carpenters Labor Technical College for training their members in health and safety training for WTC site cleanup; and support for the New Jersey State Police (NJSP) receive to train approximately 2,875 Hazmat workers in the police and hospital setting with knowledge and skills to effectively respond to emergency situations regarding weapons of mass destruction.

**Laborers-AGC Education and Training Fund (L-AGC) --- \$314,645**

The supplemental proposal from L-AGC received support for training workers currently employed on the WTC cleanup and the WTC subway reconstruction project and for training non-English speaking workers in New York City and New Jersey who are involved in anthrax remediation sites. The proposal is an important initiative with a high priority target population.

**Center to Protect Workers Rights (CPWR)--- \$100,000**

It was recommended that the CPWR consortium receive support to continue the 3-hour health and safety training targeting workers at the World Trade Center. In addition, the CPWR focused on the following: developing a disaster response training; conducting a series of focus groups to assist in determining the content of a worker training program, and hosting a series of train-the-trainer programs to bring their network of over 3,500 OSHA-certified instructors “up to speed” in the delivery of the training. The training included the following topics: educate members about how best to support first responders in a disaster situation, e.g., command structure and communication channels of firefighters and emergency medical personnel; provide essential information about the types of hazards that could be confronted under various disaster scenarios, e.g., physical hazards, chemical hazards, biological hazards; and provide more targeted training on personal protective equipment, particularly respiratory protection, decontamination, etc.

## **2.10. Program Update for September 1, 2002 – August 31, 2003**

On July 1, 2002, all the current NIEHS Awardees submitted reapplications for continued funding for the period beginning September 1, 2002. This is the third annual segment of a five-year funding cycle. Each of the reapplications detailed program accomplishments and proposed training plans for the current year.

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

Thirty million dollars of the September 1, 2002 to August 31, 2003 funds were allocated to continue support of the HWWTP to train hazardous waste workers and emergency responders. Of the \$30 million, three supplemental actions were made, which included \$371,968 for Advanced Training Technologies (ATT), \$99,758 for Superfund Jobs Training Initiative (SuperJTI), and \$5,950,000 for World Trade Center (WTC) training response. Over three million dollars of the funds were allocated to continue support for the MWTP. For the first time, the WETP allocated \$756,532 to support the Small Business Innovative Research (SBIR) Program. As a result of the funding, NIEHS awarded:

- 17 HWWTP awardees received awards totaling \$19,457,485
- 5 MWTP awardees received awards totaling \$3,210,914
- 4 SBIR awardees received awards totaling \$756,532
- 5 ATT awardees received awards totaling \$371,968
- 1 SuperJTI awardee received an award totaling \$99,758
- 6 WTC awardees received awards totaling \$5,950,000

See Appendix 15 for awardee breakout of funds for the budget period of September 1, 2002 to August 31, 2003. Budget adjustments in the proposed funding plan are 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 carryover of unexpended funds from prior years.

Descriptions of the ATT, SuperJTI, and WTC supplemental awards were included in the September 1, 2001 – August 31, 2002 accomplishments.

## **2.11. WETP Staff Activities**

The WETP staff is very active in exploring new areas of workplace safety and health training related to the mission of the program. The staff has been involved in a number of activities to stimulate interest in, and knowledge about, the NIEHS and the WETP. The staff has continued to make presentations at various conferences and meetings on the success of the program and have participated in outreach activities with EPA regional offices and other federal agencies. For a complete list of activities please see Appendix 16.

### **3 Future Program Implementation and Conclusion:**

The Worker Education and Training Program (WETP) continues to play a critical role in assisting the EPA in implementing its primary objective of reducing and controlling risks to human health and the environment at hundreds of hazardous waste sites across the nation.

During the past year, NIEHS/WETP has also had a number of opportunities of partner with EPA in responding to terrorist events, each of which has had significant impact on human health and the environment. Through the National Response Team (NRT), the EPA Labor Task Force and other mechanisms, we will continue to consult and collaborate in responding to worker protection issues in the homeland security arena.

An educational objective of virtually every NIEHS funded training program is to raise awareness and concerns about hazardous materials, and to positively affect health and safety attitudes. Evaluators have reported a wide array of post-training enhancements in these areas for thousands of students. Perhaps the most dramatic evidence of training program success comes from specific information on post-training hazardous materials incidents. Both workers and managers who have experienced these incidents have related their perceptions of the program's impacts in improving response actions and saving lives, health and property.

Positive changes in measures of personal protective practices have been recorded by a number of evaluation programs. Evaluators have also documented systemic changes in work site programs; policies, plans, and equipment that have been attributed to NIEHS training grant programs. Finally, a number of studies have looked at the ability of NIEHS funded training programs to catalyze additional site-based training.

The NIEHS Worker Education and Training Program must continue to meet the Superfund-related national environmental goals of protecting workers and communities from exposures to wastes at abandoned dumpsites and currently operating facilities and from exposures related to the storage, treatment, and disposal of waste and chemical emergency response. The NIEHS model programs will continue to encourage innovation for training difficult-to-reach populations in a cost-effective manner. This program is addressing issues such as literacy, appropriate adult education techniques, training quality improvement, and other areas not addressed directly by the market place. The program enhances rather than replaces private sector training by demonstrating innovative worker training techniques and materials.

Appendix 1: Fifteen-Year Summary

<b>EPA HWWTP                      FIFTEEN-YEAR TRAINING SUMMARY                      FOR BUDGET PERIOD 09/01/1988-08/31/2002</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	5,143	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	1,102,234
1995	4,667	81,245	1,391,440
1996	4,752	73,724	1,087,919
1997	4,212	79,976	1,041,792
1998	4,810	84,261	1,091,932
1999	3,980	74,013	954,935
2000	4,124	75,155	983,183
2001	4,806	79,710	1,030,257
2002	5,298	93,996	1,098,154
<b>TOTAL</b>	<b>56,148</b>	<b>1,052,937</b>	<b>15,483,890</b>

Appendix 2: 2001 – 2002 Funding

<b>EPA/NIEHS WORKER EDUCATION AND TRAINING AWARDS FOR BUDGET PERIOD 09/01/2001-08/31/2002</b>				
<b>AWARDEE</b>	<b>HWWT 9/01 AWARD</b>	<b>WTC 9/01 AWARD</b>	<b>MWTP 9/01 AWARD</b>	<b>9/01 TOTALS</b>
University of Alabama Birmingham	483,151			483,151
International Chemical Workers Union Council	1,801,239			1,801,239
International Association of Fire Fighters	667,339	100,000		767,339
George Meany Center for Labor Studies	571,229			571,229
University of Massachusetts, Lowell	924,681			924,681
University of California at Los Angeles	1,024,536			1,024,536
Laborers-AGC Education and Training Fund	3,342,123	80,000	891,928	4,314,051
Paper, Allied-Industrial, Chemical and Energy Worker International Union	1,175,279			1,175,279
HMTRI Kirkwood Community College	595,404			595,404
Service Employees International Union	546,823			546,823
University of Medicine & Dentistry of New Jersey	892,399	80,000	557,825	1,530,224
International Union, United Auto Workers	731,376			731,376
International Union of Operating Engineers	1,369,769	100,000		1,469,769
University of Cincinnati	1,602,129			1,602,129
Center to Protect Workers' Rights	1,418,542	84,046	654,343	2,156,931
Xavier University			397,855	397,855
AFSCME Training and Education Institute	717,336			717,336
National Puerto Rican Forum	703,314		498,049	1,201,363
<b>TOTAL</b>	<b>18,566,669</b>	<b>444,046</b>	<b>3,000,000</b>	<b>22,010,715</b>

Appendix 3: Course Data by EPA Region

<b>EPA HWWTP                      COURSE DATA BY EPA REGION                      09/01/2001 - 08/31/2002</b>			
<b>EPA REGION</b>	<b>COURSES COMPLETED</b>	<b>WORKERS TRAINED</b>	<b>CONTACT HOURS</b>
Region 1	221	3,946	57,804
Region 2	1,493	32,485	273,291
Region 3	245	4,028	73,802
Region 4	583	9,007	112,071
Region 5	1,300	22,568	243,541
Region 6	104	1,673	27,254
Region 7	349	4,917	77,913
Region 8	208	2,676	38,727
Region 9	605	10,045	150,960
Region 10	188	2,626	42,210
Territory Border <sup>1</sup>	2	25	584
<b>TOTAL</b>	<b>5,298</b>	<b>93,996</b>	<b>1,098,154<sup>2</sup></b>

<sup>1</sup>Territory border training includes Mexico and Canada.

<sup>2</sup>Numbers do not add exactly to 1,098,154 due to rounding.

Appendix 4: Total Training by NIEHS Awardee

<b>EPA/NIEHS WORKER EDUCATION AND TRAINING AWARDS TOTAL TRAINING FOR BUDGET PERIOD 09/01/2001-08/31/2002</b>			
<b>AWARDEE</b>	<b>COURSES COMPLETED</b>	<b>WORKERS TRAINED</b>	<b>CONTACT HOURS</b>
University of Alabama Birmingham	132	3,013	41,707
International Chemical Workers Union Council	158	2,512	45,942
International Association of Fire Fighters	54	1,169	37,328
George Meany Center for Labor Studies	115	1,210	12,567
University of Massachusetts, Lowell	59	756	12,912
University of California at Los Angeles	144	2,714	35,408
Laborers-AGC Education and Training Fund	554	7,166	164,851
Paper, Allied-Industrial, Chemical and Energy Worker International Union	264	4,996	45,441
HMTRI Kirkwood Community College	985	13,003	157,466
Service Employees International	109	1,879	14,234
University of Medicine & Dentistry of New Jersey	949	22,586	164,874
International Union, United Auto Workers	80	1,642	10,291
International Union of Operating Engineers	697	14,325	174,667
University of Cincinnati	582	9,745	89,028
Center to Protect Workers' Rights	179	2,886	51,754
AFSCME Training and Education Institute	109	1,502	7,992
National Puerto Rican Forum	90	1,622	27,884
WTC Collaboration: IUOE, CPWR, UMDNJ, and Laborers	38	1,270	3,810
<b>TOTAL</b>	<b>5,298</b>	<b>93,996</b>	<b>1,098,154<sup>1</sup></b>

<sup>1</sup>Numbers do not add exactly to 1,098,154 due to rounding.



Appendix 5: Target Populations

<b>EPA HWWTP                      TARGET POPULATIONS                      FOR BUDGET PERIOD 09/01/2001-08/31/2002</b>						
<b>TARGET POPULATIONS</b>	<b># COURSES COMPLETED</b>	<b>% COURSES COMPLETED</b>	<b># WORKERS TRAINED</b>	<b>% WORKERS TRAINED</b>	<b># CONTACT HOURS</b>	<b>% CONTACT HOURS</b>
CERCLA Cleanup <sup>1</sup>	2,129	40%	36,603	39%	523,323	48%
Emergency Response	1,656	31%	34,126	36%	325,214	30%
Other Safety and Health	1,025	19%	16,292	17%	148,205	13%
Hazmat Transport	164	3%	1,719	2%	11,858	1%
RCRA/Industrial	216	4%	3,357	4%	61,983	6%
Asbestos Abatement	64	1%	1,154	1%	17,608	2%
Radiation	28	1%	554	1%	4,724	0%
Lead Abatement	16	1%	191	0%	5,240	0%
<b>TOTALS</b>	<b>5,298</b>	<b>100%</b>	<b>93,996</b>	<b>100%</b>	<b>1,098,154<sup>2</sup></b>	<b>100%</b>

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

<sup>2</sup> Numbers do not add exactly to 1,098,154 due to rounding.

Appendix 6: Seven-Year Summary of Training

<b>NIEHS/EPA MWTP                      SEVEN-YEAR SUMMARY OF TRAINING                      FOR BUDGET PERIOD 09/01/1996-08/31/2002</b>			
<b>YEAR</b>	<b>STUDENTS TRAINED</b>	<b>PLACED IN JOBS</b>	<b>PERCENTAGE OF STUDENTS PLACED IN JOBS</b>
1996	368	246	67%
1997	310	193	62%
1998	240	154	64%
1999	360	233	65%
2000	364	244	67%
2001	342	204	60%
2002	334	222	66%
<b>TOTAL</b>	<b>2,318</b>	<b>1,496</b>	<b>65%</b>

Appendix 7: Total Training by MWTP Awardee

<b>EPA/NIEHS MWTP                      WORKER EDUCATION AND TRAINING AWARDS                      TOTAL TRAINING FOR BUDGET PERIOD 09/01/2001-08/31/2002</b>			
<b>AWARDEE</b>	<b>COURSES COMPLETED</b>	<b>STUDENTS TRAINED</b>	<b>CONTACT HOURS</b>
University of Medicine & Dentistry of New Jersey	19	35	27,091
Laborers-AGC Education and Training Fund	45	89	29,418
Center to Protect Workers' Rights	70	100	51,086
National Puerto Rican Forum	40	83	15,852
Xavier University	11	27	9,972
<b>TOTAL</b>	<b>185</b>	<b>334</b>	<b>133,419</b>

Appendix 8: MWTP Summary of Type and Number of Courses

<b>NIEHS/EPA MWTP                      SUMMARY OF TYPE AND NUMBER OF COURSES                      FOR BUDGET PERIOD 09/01/2001-08/31/2002</b>	
<b>COURSE NAME</b>	<b>NUMBER OF COURSES</b>
Adult CPR	5
Asbestos Abatement Supervisor	2
Asbestos Abatement Worker Basic	11
Basic Construction Skills	9
Basic First Aid	5
Basic Math Skills	12
Basic Reading/Writing Skills	7
Basic Superfund Site Worker	20
Computer Skills	2
Concrete Practices and Procedures	3
Confined Space	7
Environmental Justice	4
Environmental Preparation	5
Environmental Sampling	2
GED Training and Certification	1
General Industry Safety	1
General Construction Safety	15
Hazard Communication	2
Lead Abatement Worker Basic	16
Life Skills	20
Logout-Tagout	2
Mentoring/Career Guidance	15
Microbial Remediation: Mold and Mildew	4
Persistent Bioaccumulative Toxics	1
Physical Fitness	7
Radiation Protection Worker/Basic	1
Scaffold	6
<b>TOTAL</b>	<b>185</b>

Appendix 9: MWTP Demographics

<b>NIEHS/EPA MWTP:                      DEMOGRAPHICS                      FOR BUDGET PERIOD 09/01/2001-08/31/2002</b>								
<b>STUDENTS</b>	334							
<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>
	33	47	34	36	41	37	41	65
<b>ETHNICITY</b>	<u>BLACK</u>	<u>HISPANIC</u>	<u>ASIAN</u>	<u>AMERICAN INDIAN</u>			<u>PAC. ISLANDER</u>	
	281 (84%)	36 (11%)	14 (4%)	2 (1%)			1 (0%)	
<b>GENDER</b>	<u>MALE</u>				<u>FEMALE</u>			
	289 (87%)				45 (13%)			

Appendix 10: Seven-Year Summary of Students Trained per Awardee

**NIEHS/EPA MWTP:  
(Seven-Year Summary of Students Trained per Awardee)  
FOR BUDGET PERIOD 09/01/1996-08/31/2002**

<b>AWARDEE</b>	<b>1996 STUDENTS TRAINED</b>	<b>1997 STUDENTS TRAINED</b>	<b>1998 STUDENTS TRAINED</b>	<b>1999 STUDENTS TRAINED</b>	<b>2000 STUDENTS TRAINED</b>	<b>2001 STUDENTS TRAINED</b>	<b>2002 STUDENTS TRAINED</b>	<b>TOTAL</b>
University of Medicine & Dentistry of New Jersey	26	25	25	30	30	30	35	201
Laborers-AGC Education and Training Fund	50	41	32	96	93	127	89	528
Alice Hamilton Occupational Health Center	46	20	N/A	N/A	N/A	N/A	N/A	66
Center to Protect Workers' Rights	60	139	126	100	89	73	100	687
National Puerto Rican Forum	70	34	22	69	63	89	83	430
Jackson State University	86	27	N/A	20	42	N/A	N/A	175
Clark Atlanta University	30	24	35	45	47	N/A	N/A	181
Xavier University <sup>1</sup>						23	27	50
<b>TOTAL</b>	<b>368</b>	<b>310</b>	<b>240</b>	<b>360</b>	<b>364</b>	<b>342</b>	<b>334</b>	<b>2,318</b>

N/A – No training was performed during this period.

<sup>1</sup> First year in the MWTP.

Appendix 11: Seven-Year Summary of Employment per Awardee

<b>NIEHS/EPA MINORITY WORKER TRAINING PROGRAM: SEVEN-YEAR SUMMARY OF EMPLOYMENT PER AWARDEE FOR BUDGET PERIOD 09/01/1996-08/31/2002</b>									
<b>AWARDEE</b>	<b>1996 TOTAL EMPLOYMENT</b>	<b>1997 TOTAL EMPLOYMENT</b>	<b>1998 TOTAL EMPLOYMENT</b>	<b>1999 TOTAL EMPLOYMENT</b>	<b>2000 TOTAL EMPLOYMENT</b>	<b>2001 TOTAL EMPLOYMENT</b>	<b>2002 TOTAL EMPLOYMENT</b>	<b>TOTAL</b>	<b>TOTAL</b>
University of Medicine & Dentistry of New Jersey	16	12	18	14	24	23	24	131	131
Laborers-AGC Education and Training	27	25	28	80	71	84	65	380	380
Alice Hamilton Occupational Health Center	38	11	N/A	N/A	N/A	N/A	N/A	49	49
Center to Protect Workers' Rights	54	85	63	45	54	57	63	421	421
National Puerto Rican Forum	56	26	21	48	34	23	44	252	252
Jackson State University	39	17	N/A	19	29	N/A	N/A	104	104
Clark Atlanta University	16	17	24	27	32	N/A	N/A	116	116
Xavier University <sup>1</sup>	0	0	0	0	0	17	26	43	43
<b>TOTAL</b>	<b>246</b>	<b>193</b>	<b>154</b>	<b>233</b>	<b>244</b>	<b>204</b>	<b>222</b>	<b>1,496</b>	<b>1,496</b>

N/A – No training was performed during this period.

<sup>1</sup> First year in the MWTP.

Appendix 12: Laborers-AGC MWTP Job Placement Chart

<b>MWTP JOB PLACEMENT CHART</b>					
<b>MWTP Student</b>	<b>Student State</b>	<b>Company Name</b>	<b>Annual Salary</b>	<b>Job Title</b>	<b>Field/Type of Work</b>
001	CA	BAYVIEW ENVIRO	\$26,880.00	ENVIRO TECH	CONSTRUCTION
002	CA	ITSI	\$27,560.00	ENVIRO TECH	HAZ WASTE
003	CA	BAYVIEW ENVIRO	\$26,880.00	ENVIRO LABORER	CONSTRUCTION
004	CA	BAYVIEW ENVIRO	\$26,880.00	ENVIRO LABORER	CONSTRUCTION
005	CA	HERC	\$31,200.00	ABATEMENT WORKER	MOLD/MILDEW
006	CA	N/A	\$0.00	N/A	NONE
007	CA	MUNI	\$32,640.00	OUTREACH COORD.	TRANSPORTATION
008	CA	BAYVIEW ENVIRO	\$26,880.00	ENVIRO LABORER	CONSTRUCTION
009	CA	FOOTLOCKER	\$19,968.00	SALES ASSOC.	MERCHANDISE
010	CA	BAYVIEW ENVIRO	\$26,880.00	ENVIRO LABORER	CONSTRUCTION
011	CA	ITSI	\$27,560.00	ENVIRO TECH	ABESTOS
012	CA	ON SITE	\$35,360.00	ENVIRO TECH	HAZ WASTE
013	CA	N/A	\$0.00	N/A	NONE
014	CA	HERC	\$31,200.00	ABATEMENT WORKER	MOLD/MILDEW
015	CA	MARINSHIP	\$24,960.00	GEN LABORER	CONSTRUCTION
016	CA	ON SITE	\$35,560.00	ENVIRO TECH	HAZ WASTE
017	CA	HERC	\$31,200.00	ABATEMENT WORKER	MOLD/MILDEW
018	CA	ON SITE	\$35,560.00	ENVIRO TECH	HAZ WASTE
019	CA	HERC	\$31,200.00	ABATEMENT WORKER	MOLD/MILDEW
020	CA	HOME DEPOT	\$21,120.00	STOCK PERSON	HOME IMPROVEMENT
021	CA	ITSI	\$27,560.00	ENVIRO TECH	HAZ WASTE
022	CA	TETRA TECH	\$24,960.00	SURVEYER	LEAD SAMPLING
023	CA	N/A	\$0.00	N/A	NONE
024	CA	BAYVIEW ENVIRO	\$26,880.00	ENVIRO LABORER	CONSTRUCTION
025	CA	HERC	\$31,200.00	ABATEMENT WORKER	MOLD/MILDEW
026	CT	A.A.I.S	\$24,960.00	LABORER	GENERAL CONSTRUCTION
027	CT	UNIVERSAL STUDIOS	\$33,800.00	SECURITY GUARD	ENTERTAINMENT SECURITY
028	CT	ABCON ENVIRONMENTAL	\$24,960.00	REMEDIAION WORKER	ASBESTOS ABATEMENT
029	CT	STANDARD DEMOLITION	\$31,200.00	LABORER	DEMOLITION
030	CT	ABCON ENVIRONMENTAL	\$24,960.00	REMEDIAION WORKER	ASBESTOS ABATEMENT
031	CT	A.A.I.S	\$24,960.00	LABORER	GENERAL CONSTRUCTION
032	CT	ZERRELLI DEMOLITION	\$39,000.00	LABORER	GENERAL CONSTRUCTION
033	CT	ABCON ENVIRONMENTAL	\$24,960.00	REMEDIAION WORKER	ASBESTOS ABATEMENT
034	CT	BROOKS CONSTRUCTION	\$31,200.00	LABORER	GENERAL CONSTRUCTION
035	CT	STANDARD DEMOLITION	\$31,200.00	LABORER	GENERAL CONSTRUCTION
036	CT	MURDOCK ASBESTOS	\$29,120.00	REMEDIAION WORKER	ASBESTOS ABATEMENT
037	MD		\$7,000.00	Janitor	Janitorial
038	MD	CHERRY HILL	\$15,360.00	Flagger	Construction
039	MD	WHITING TURNER	\$18,432.00	Laborer Apprentice	Construction
040	DC		\$19,200.00	Janitor	Janitorial



**Appendix 13: Laborers-AGC MWTP Continued**

<b>MWTP Student</b>	<b>Student State</b>	<b>Company Name</b>	<b>Annual Salary</b>	<b>Job Title</b>	<b>Field/Type of Work</b>
041	MD	WHITING TURNER	\$18,432.00	Laborer Apprentice	Construction
042	VA	CLARK	\$18,432.00	Laborer Apprentice	Construction
043	MD		\$15,360.00	Janitor	Janitorial
044	MD	RESCOM	\$16,416.00	Janitor	Janitorial
045	MD	WHITING TURNER	\$18,432.00	Janitor	Janitorial
046	PA	DIAMOND HUNTBACK	\$22,880.00	Asbestos Worker	Asbestos Removal
047	PA	HAKE CONSTRUCTION	\$39,998.00	Construction Craft Laborer	General Construction
048	PA	PRIVATE REAL ESTATE	\$24,960.00	Helper	Drywall/Painting
049	PA	TACO BELL	\$12,480.00	Crew Member	Fast Food Service
050	PA	HENKIES/MCCOY	\$31,200.00	Flagger	Pipeline
051	TX	AUSTIN INDUSTRIAL	\$18,720.00	Laborer	Construction
052	TX	ONSITE ENVIRONMENTAL	\$18,720.00	Laborer	Environmental
053	TX	DOW CHEMICAL	\$28,620.00	Laborer	Environmental
054	TX	FOLEY'S WAREHOUSE	\$16,640.00	Forklift Operator	Warehouse
055	TX	Phillips Chemical	\$18,720.00	Laborer	Environmental
056	TX	ONSITE ENVIRONMENTAL	\$22,880.00	Laborer	Environmental
057	TX	CCC GROUP	\$22,880.00	Fire Watcher	Environmental
058	TX	ONSITE ENVIRONMENTAL	\$18,720.00	Laborer	Environmental
059	TX	POWER ELECTRICAL	\$18,720.00	Laborer	Construction
060	TX	Phillips Chemical	\$27,040.00	Laborer	Environmental
061	TX	ONSITE ENVIRONMENTAL	\$22,880.00	Laborer	Environmental
062	TX	GES Co.	\$39,624.00	Group Leader	Construction
063	TX	ONSITE ENVIRONMENTAL	\$18,720.00	Laborer	Environmental
064	TX	BAYOU ENVIROMENTAL	\$18,720.00	Laborer	Construction
065	TX	BFI WASTE MNGMT	\$16,900.00	Waste Recycle	Environmental
066	TX	ONSITE ENVIRONMENTAL	\$18,720.00	Laborer	Construction

## Appendix 14: Summary of WETP Supplemental Awards For WTC and WMD Training

Administrative supplement applications were accepted from WETP awardees that could demonstrate previous or current worker education and training response activities associated with the WTC in one or more of the five response activities. The purpose of these administrative supplements is to develop an integrated education and training approach that will address immediate and long-term worker health protection concerns arising from the September 11th terrorist attack on the WTC.

The \$6,000,000 in supplemental funds, which were appropriated by Congress, were allocated for five designated response activity areas, including 1) education and training of new Hazmat teams for the New York City Fire Department; 2) training environmental remediation workers; 3) health and safety training for site cleanup workers; 4) training and certification in the use of personal protection equipment in the cleanup effort, and 5) WMD training for the Hazmat workforce. A panel of eight federal agency representatives with relevant technical expertise was convened to evaluate the WTC supplemental proposals on Monday, March 18, 2002. A summary of response activities by the NIEHS awardees follows below:

### **New Jersey/New York Consortium**

#### Response Area 2: Training for Environmental Remediation Workers

New York Committee for Occupational Health and Safety (NYCOSH)  
NYCOSH initiated a program to train 100 members of the Transport Workers Union Local 100 in the 24-hour Hazardous Materials Technician course. The Transport Workers Union, Local 100 represents 2,300 members who were involved in the initial rescue and recovery efforts following the fire and subsequent collapse of the World Trade Center Towers. Their employer, the New York City Transit Authority, has assigned 300 members to work at jobs around the World Trade Center area.

Due to this exposure and a heightened awareness of the potential for terrorist attacks in the subway system, TWU believed that these workers need additional training in emergency response. Therefore, this supplemental funding was used to train 100 of the 300 workers identified by the Transit Authority. The needs assessment carried out prior to the training helped to determine the skill levels needed by these workers to adequately protect themselves, co-workers and the public. As a result of the needs assessment and input from the TWU, the union requested Awareness and Operations level training instead of Technician level training. NYCOSH presented a 04-hour Awareness and a 16-hour Operations course for employees of the TWU. NYCOSH presented two Awareness courses, training 31 employees, and four operations courses training 59 employees.

#### Response Area 3: Health and Safety Training for Site Clean-up Workers in the WTC Area

##### New York District Council of Carpenters (NY Carpenters)

The NY Carpenters initiated a comprehensive training program to prepare Carpenters to work safely at the WTC site. The training was designed to meet the need for diversified training related to workers on the site of the World Trade Center. Since the September 11 terrorist attack

on the World Trade Center, there has been growing concern about worker injuries and illnesses related to the disaster. Workers at or near the WTC site potentially sustained exposures to: 1) a range of environmental toxins, including cement and glass dust, asbestos, fiberglass, PM2.5 and PM10 (small particulate matter), larger particulate matter, lead and other heavy metals, PCBs, dibenzofurans, volatile organic compounds and other products of combustion; 2) psychological trauma and; 3) physical hazards including fire, collapsing buildings, falling debris, noise, and extremes of temperature. This training has been designed to meet these needs and the ever-changing environment at the World Trade Center Site. To date, most of the energy has been expended in putting together the necessary curriculum to ensure relevant training, and staff preparedness to teach members who found themselves in an extraordinary space.

The training included increased asbestos and hazard awareness training, fit testing and PPE training, and being trained to train under the Joint Labor-Management Initiative to Prevent Injuries. We maintained an active presence at daily health and safety meetings, as well as monitoring members' qualifications and training to work at the site. Specifically, the Carpenters presented four Asbestos Worker/Handler courses, reaching 60 Carpenters; four Asbestos Refresher courses reaching 34 Carpenter; four Aerial Lift courses reaching 64 Carpenters; two lift truck courses reaching 50 Carpenters; and one 16-hour Confined Space course reaching 12 Carpenters.

#### Response Area 5: Weapons of Mass Destruction Training for the HAZMAT Workforce

##### New Jersey State Police (NJSP)

NJSP have initiated their training program addressing the Response Area, Weapons of Mass Destruction Training for Emergency Responders. The NJSP have been called to present many courses in response to Weapons of Mass Destruction incidents. Their training was developed before September 11, 2001 as part of a Department of Justice initiative. Due to the events of Fall, 2001, the NJSP WMD courses were actively sought by many members of the response community. The NJSP have developed a series of courses, similar to 1910.120 emergency response courses, for WMD incidents.

The NJSP oversees the operations of the New Jersey Urban Search and Rescue Team (NJ-Task Force 1) who conducted stabilization and recovery operations at the World Trade Center Site for three weeks starting on the afternoon of September 11, 2001. Their experience at the site proved an invaluable source of information and experience to add to our programs.

The NJSP-EMB Domestic Preparedness / Weapons of Mass Destruction (WMD) Training Program is a comprehensive series of training modules designed to allow the participant to achieve the level of training appropriate to their response role. Those who participate or expect to participate in emergency response to WMD incidents are being offered training in the following courses. The NJSP provided a total of 342 courses, training 10,296 participants in 48,546 contact hours. The WMD Awareness course was offered 201 times reaching 5,841 participants. The WMD Operations course was presented 99 times, reaching 3,024 participants. The WMD Technician course was offered seven times to 135 participants. The WMD Hospital Staff Operations course was presented 19 times to 1,138 participants. Additionally, the NJSP provided 16 Train-the-Trainer courses to 158 new trainers in the WMD program. A description of several courses is below.

The 16-hour Domestic Preparedness/WMD Technician program is a combination of classroom lecture, tabletop and practical exercise. It is designed for hazardous materials technicians who may have to operate in a WMD scene. Lectures familiarize participants with terrorism, weapons of mass destruction and the actions that may be applied in response to a terrorist incident. The course reviews basic technician level response principals and may serve as a refresher program for (OSHA) level 3 trained individuals.

The 08-Hour WMD Operations for Hospital Staff offers training to hospital staff and Emergency Medical Technicians who may have to handle a medical emergency involving weapons of mass destruction. It deals with the defensive actions and the role and duties that they may be called on to perform when providing support for a hazardous materials team. As per the recent position letter from OSHA, the course will concentrate on personal protective equipment (PPE) and patient decontamination and emphasize hands-on training over lectures.

The NJSP-OEM offers Train-The-Trainer programs for most of the courses we provide. All instructors who present these hazardous materials programs are certified through the NJSP-OEM to assure that the program will be presented in a professional and informative manner. Prospective instructors must currently be active as safety instructors with a background in emergency response or hazardous material handling. They are required to enroll as students in the course they wish to teach and then go on to the course one level higher before they may enroll in any train-the-trainer course.

#### **L-AGC Education and Training Fund (L-AGC)**

The Mason Tenders Training Fund located in Manhattan immediately responded to the need to provide trained workers for the WTC rescue and recovery and the site remediation. On September 11, instructors and workers volunteered their time as soon as it was possible to help out on the site. L-AGC has no record of the number of people on-site during the early days. Records were only taken after organized training efforts had begun. Early assistance consisted primarily of volunteers and provisions of supplies, including eye protection, ear plugs, leather gloves, respirators, respirator filters, and hard hats.

Beginning on October 1, 2001, the Mason Tenders Training Fund established an on-site trailer to provide respiratory protection training, respirator fit testing, and blood lead level testing. Thirty-seven respiratory protection awareness courses were held from October 1, 2001 to December 10, 2001 for WTC workers. A total of 285 workers were trained in the 1-hour course for a total of 285 hours, representing one week of training. Most of the workers were male (267 male and 18 female). No records on minority status were kept on these workers.

During the WTC subway remediation, there was a large need for laborers. On any given day there were 300 or more laborers on the job site. With this many workers potentially affected by exposure to toxics found at the WTC, the need for training was considerable. Under the WTC II program, a total of 43 courses were conducted for 370 workers. This represents 5.6 weeks of training and 3,201.5 contact hours.

L-AGC affiliated training funds conducted four HW Operations courses for 63 workers who were currently or planning to work on the WTC subway remediation and reconstruction. In addition, two Steward/Field Agent Refresher courses were conducted in NYC at the Mason Tenders Training Fund. One steward course was conducted in Spanish. Refresher training for

WTC stewards included reviews of PPE needs at the WTC, a discussion on the lack of proper equipment for the jobs conducted at the perimeter of the site, the type of training that was needed prior to working at the WTC site, and the skills that may be needed on the site in the future.

Also the Mason Tenders Training Fund conducted 37 Respiratory Protection Awareness courses (including fit testing) for 286 workers. These workers were already on the WTC site and needed to obtain and learn how to use respirators.

#### Response Activity #5 - Weapons of Mass Destruction (WMD)

As a result of the October 2001 anthrax mailings in the United States, trained workers were needed to remediate the buildings contaminated with *Bacillus anthracis* spores. The nation must also be prepared to respond to similar threats and terrorist acts in the future including the use of anthrax and other chemical and biological agents. Under the WMD program, L-AGC developed curriculum and conducting training for workers who will be responsible for post-incident response to terrorist acts. A total of 98 trainees received certification under the WMD Supplemental Program. This represents 5.5 training weeks or 4,330 contact hours.

Through a Department of Labor grant, L-AGC developed an anthrax remediation worker manual and is in the process of creating a CD-Rom version of this course. The course materials were extensively reviewed by scientists, physicians, health and safety experts, anthrax contractors, and government personnel from various agencies with a responsibility for anthrax response. This manual is regarded as the best, most comprehensive material currently available for anthrax remediation training. L-AGC also worked with LHSFNA to develop a WMD curriculum. These materials were designed to provide a brief overview of various WMDs, including a definition of each WMD, how to identify it, and descriptions of the health effects of exposure to the WMD agents. Several short course modules focused on chemical weapons, biological agents, and PPE. L-AGC also developed a short course manual, PowerPoint presentation, and WMD brochure under the program.

Under the WMD program, L-AGC translated the anthrax remediation manual into Spanish and Polish. Many of the workers (and a large majority in NYC) who are engaged in the ongoing anthrax remediation projects do not speak English. The predominant language spoken is Spanish, and Polish is also heavily used in the NYC metropolitan area. Workers must clearly understand all material to ensure their safety and health in the extremely hazardous anthrax contaminated job sites. Providing the training in their native language helps accomplish this. The translation jobs have been awarded and both translations were completed.

The Mason Tenders Training Fund conducted two HW Operations courses in Spanish. When the Spanish version of the anthrax manual was available, trainees returned to take the Anthrax Remediation Worker course. The HW Operations courses were conducted under the WMD program as prerequisites to the anthrax courses conducted and funded by the Mason Tenders Training Fund. Thirty-nine trainees participated in the HW Operations courses, and 22 of these trainees were able to return to take the Anthrax Remediation training.

The WV Mobile Unit conducted two specially developed 50-hour HW Operations/Anthrax courses for federal law enforcement personnel. This special training was approved by the NIEHS and represented a collaborative effort among federal agencies to ensure that the various

agencies charged with federal protection duties had the necessary training to respond to terrorist attacks or other destructive incidents, including hostage situations. A total of 41 law enforcement officers received training in the two courses, accounting for 2.5 weeks of training and 4,330 contact hours.

The WV Mobile Unit conducted several courses under the DOE Worker Training Program as well as under the WMD. Trained law enforcement personnel from the DC Metropolitan Police and SWAT teams, the Capitol Police, the U.S. Park Police, the U.S. Marshals, and other federal agencies received training. These and other agencies continue to request the training, which they cite as being the best they have participated in and the most useful because of the hands-on activities and real life relevance.

### **National Puerto Rican Forum (NPRF)**

In response to the NIEHS WTC 2 supplemental proposal for weapons and mass destruction, the NPRF consortium received \$480,000 funding to do additional training by August 31, 2002. A list of accomplishments as they relate to the WTC 2 Supplement are listed below:

To date the Alice Hamilton Occupational Health Center (AHOHC) has accomplished the following:

- Assembled an advisory board to review curricula and promote the training program. All members of the proposed advisory board have actually agreed to serve except Dr. Olga Katz and Mr. Matt Gillen. They have been replaced with Dr. Edward Cetaruck and Mr. Glen Sawtelle. The advisory board has been active in planning for the upcoming conference.
- Planned for the conference in Orlando, Florida for the International Association of Heat and Frost Insulators & Asbestos Workers. This conference will be held July 7-9, 2002.
- Conducted two planning meetings with the American Federation of Government Employees (AFGE) to plan and deliver training for AFGE members.
- Executed contracts for the curriculum development and Web-site development efforts.
- Curricula development efforts are well underway. The AHOHC staff and FOF Communications have been working on the student manuals for both the Emergency Response and incident clean-up training. FOF has also done considerable work on presentation materials. Some of these products will be available via the website later this month for review; and at the conference in July.
- Met with the environmental training team at the Los Alamos National Lab (LANL) to coordinate the delivery of bio-terrorism training for the LANL site.

AHOHC taught seven additional courses from June to August as a part of the WMD supplement. The courses consisted of 3 HAZWOPER classes, 1 site worker refresher, 1 general hazardous waste train the trainer, 1 RCRA TSD site worker, and 1 emergency response for specific hazards class. A total of 126 workers were trained at the Washington Naval Yard, Los Alamos, the Army National Guard, and various other sites.

### **Office of Applied Innovation (OAI)**

Based on the expressed needs from Kentucky and the recent supplemental award to the NPRF Consortium, OAI proposed to deliver training in biological hazards and weapons of mass

destruction WMD. OAI's initial plan was to conduct awareness and training the trainer courses but as a result of consultation with a top-level state official on June 6, the state expressed an urgent need to undertake a statewide needs assessment, strategic and coordination planning prior to the implementation of WMD training.

A second meeting was held with the Commonwealth of Kentucky on June 27. The Division of Emergency Management, the State Fire Marshall, the Kentucky Fire Commission, and the Kentucky Community and Technical College System were all present along with Jack Huenefeld, Director of OAI's Environmental Health and Safety Division and Dr. Glenn Paulson, consultant and OAI Board member, attended the meeting representing OAI. The Commonwealth of Kentucky representatives stressed a strong need for actions that would integrate and coordinate the activities of all various state agencies. Some specific needs mentioned by the Commonwealth are improved physical security in state office buildings, evaluation of detection technologies for WMD agents, and others. It was generally agreed that addressing these issues would take time and should be spread over the long term. The group developed a tentative consensus on pursuing the following items in the near future: Setup a schedule for awareness-level training on WMD issues; Establish a schedule of interviews to prepare for the WMD needs assessment; conduct a one-day briefing/awareness on WMD issues for a wide audience; and plan for and begin the development of training and educational materials that could provide a protocol for response by telephone to answer public and public official concerns about a potential.

It is expected that the final needs assessment report will be completed and disseminated by mid November. Dr. Glenn Paulson will present summary of findings at the next awardee meeting on October 25, 2002 in Baltimore, Maryland.

#### Maine Labor Group on Health (MLGH)

As a part of the WTC 2 Supplemental award, MLGH taught a one-day WMD de-con course for 20 firefighters from the City of Portland on July 25.

#### **International Union of Operating Engineers (IUOE)**

##### WTC Response Activity 2: Training for environmental remediation workers

Funding for the second NIEHS supplemental covered IUOE activities at WTC beginning April 1, 2002. The IUOE training has been primarily focused on the parts of the HAZWOPER standard that cover the normal clean-up of hazardous waste sites, not emergency responses. The NIEHS funds have allowed IUOE to alter this historical approach and initiate modules specifically geared to train heavy equipment operators to function as skilled support personnel capable of responding quickly and effectively to destruction of the magnitude seen at the WTC. These modules are being crafted with specific case studies from the WTC to redirect both the 40-hour and refresher training away from normal hazardous waste site cleanup practices, as described in 1910.120(a) through (p), towards the requirements of the emergency response requirements found in (q). Group exercises are being developed around the following real experiences at Ground Zero:

- The accident involving two iron workers in a manbasket who were slammed into a building because of a load computer malfunction;

- The near miss where a beam being hoisted by a crane dropped into a pit previously occupied by several firefighters; and
- The near miss when a grappler fell into the pile when the materials shifted.

The first pilot of these new training materials took place on June 26, 2002 during a master instructor refresher in Beckley, WV. The materials were presented by Bruce Lippy, CIH, CSP and Ralph Pascarella to twenty-one of the union's best instructors. At the end of the training, each will be provided a support package that will include sampling data information, hundreds of WTC digital photos, and video footage. All of the students who finish this program will be listed as the first group in the registry being developed of skilled support personnel available anywhere in the country to support in time of need.

### WTC Response Activity 3: Health and Safety training for site cleanup workers in the WTC area

The IUOE was the lead organization for the 3-Hour Safety & Health Orientation class required for all trades at Ground Zero. The original plan was for each trade to train their own members in a 2-day course. The logistics proved too unwieldy and the time too long, consequently, the program was shortened to a three-hour awareness program. The original program was developed by the Center to Protect Workers Rights but was reduced and revised by the IUOE. The intent of the training was to provide workers an overview of the health and safety plan. The plan, however, was not issued in final form for the site until October 29th, 48 days after the towers fell. This affected the timely creation and approval of the safety awareness program for the site, which obviously had to include the key tenets from the plan. Consequently, formal training onsite did not occur until November 29th, 78 days after the towers fell.

By the end of March, 1,512 individuals had attended the mandatory three-hour safety and health awareness program. The PowerPoint presentation for the course was designed by Ralph Pascarella, Local Union 30 Training Director, and Larry DeMark, Local Union 825 Training Director. Nearly all of the classes were instructed by Ralph Pascarella, who had been working with the IUOE Hazmat Emergency Management team since September 17, 2001, and assisted by members of Local Union 15. Upon completion of the Safety & Health Orientation course, the workers received a badge that was developed by the IUOE Hazmat Emergency Management Team. Workers were required to wear the badge at all times while on the job site at Ground Zero and were not allowed to enter the site without the badge as of January 10, 2002. An average of 21 classes per week were taught with 1525 workers having completed the training program. This training was also translated into Spanish.

Under this Response Activity, Davitt McAteer, a consultant to IUOE, former Assistant Secretary of Labor for the Mine Safety and Health Administration, and Acting Solicitor of Labor, has begun producing a report of the efforts of the IUOE at the WTC. Mr. McAteer has addressed the following in the first draft of the report:

- Case studies and lessons learned that will facilitate the development of focused training materials;
- A clear record of the contributions of the members of the IUOE in the historic response to the greatest attack against the American homeland;
- Results from industrial hygiene monitoring; and



- A record that will allow greater clarity in understanding any health problems that IUOE members may develop in the future.

The IUOE has been working with the Mt. Sinai School of Medicine and the Johns Hopkins Bloomberg School of Hygiene and Public Health to establish a medical screening program for all IUOE members who worked at the WTC.

WTC Response Activity 3: Training and certification in the use of personal protection equipment in the WTC cleanup

The IUOE technical team produced a report about respiratory protection at the WTC for the NIEHS Clearinghouse webpage. The report identified that the type of respirator chosen initially for the site - a half-face, negative-pressure respirator with P-100 OV/AG cartridges was adequate for the exposures documented. The report also documented that respirator usage was considerably greater at the Fresh Kills site, consistently reported as more than 90 percent. Additionally, the workers all wore Tyvek suits at Fresh Kills. That site has been treated as a Level C HAZWOPER project, which is an important lesson that IUOE will integrate into all future training about respiratory protection.

The IUOE distributed over 11,000 half-face respirators at the site to any site worker who needed one, including police and fire fighters. Distribution of respirators, cartridges, safety glasses, Tyvek protective garments, and other PPE continues at the WTC site, although at a much reduced rate. Of particular concern is the need for replacement cartridges for respirators, which will continue for months to come.

The Master Instructor Refresher held in Beckley the week of June 24, 2002 included a videoconference with John Dower, a respirator expert from NIOSH, who presented the students with the latest information on the NIOSH certification for respirators for CBRN responses. This information will be formalized into a module that will also include:

- A group exercise that will allow the students to use the NIOSH decision logic to systematically and logically choose a respirator.
- A color-coded map of the restricted zone (called the Green Zone) with corresponding photos from early in October 2001, and a map of the zone from late January 2002, with photos of the yellow construction barriers used to demarcate the zone. These images will be used to lead group discussions on why there was poor compliance with respirators. A series of questions will be asked about which zoning approach was more realistic and how the lessons from the WTC can guide us to improving control of entry into hazardous areas.
- Airborne exposure data from the site will be reviewed to determine what class of respirator would be acceptable (based on protection factors) and then which type of cartridges should be chosen. The group discussion will focus on whether positive and negative fit checking is sufficient for entry in WTC-type environments.
- A PowerPoint presentation reviewing the key respirator issues at the WTC site.
- An interactive PowerPoint presentation about providing sufficient respiratory protection against biological and chemical agents that will have integrated Internet links from sources like the NIEHS Clearinghouse. The Internet links will allow the students to gather information for specific questions including:

- Will P-100 filters protect against anthrax spores?
- Are P-100 filters capable of stopping small pox viruses?
- What type of filtration is needed for blood agents like hydrocyanic acid? For vesicants like Mustard or Lewisite?

#### WTC Response Activity 5: Weapons of Mass Destruction (WMD) for the Hazmat workforce

The IUOE, on February 11-15, 2002, conducted a pilot program of training for WMD response. Approximately 20 West Virginia State mine rescue personnel who were also mine inspectors, attended a 40-hour HAZWOPER class at the IUOE IETTC in Beckley that included special training on biological and chemical agents. The hands-on exercises, which are normally conducted at the Beckley facility, were moved to a location that enabled the class to participate in extremely realistic conditions. The hands-on exercise was held at the National Response's Memorial Tunnel complex in Standard, West Virginia, off the West Virginia Turnpike. Inside this tunnel, disaster conditions can be approximated with numerous crushed cars, rubble, smoke, and even a subway station with a subway car.

The mine rescue teams were given the scenario of a large parking garage collapse, possibly the result of terrorists, that they were entering to search for survivors. The briefing they received was quite detailed and provided specific safety precautions that were to be followed to end the exercise if anyone was in trouble. The teams were allowed to ask questions and then to discuss how they were going to make the entry.

As part of the HAZWOPER exercise, the teams wore Level B suits provided by IUOE, with which they had no previous experience. Part of the exercise was to determine how these suits affected teams who had trained to do their work in coveralls. The teams wore their closed-circuit rebreathers that they normally use in mine rescue. These units can provide up to four hours of air, rather than the 30 minutes normally experienced with open circuit SCBAs. This difference is critical and needs to be discussed for future responses.

The pilot program went extremely well and indicated the viability of this approach. The OENHP has begun negotiations with the National Response's Memorial Tunnel training site to conduct more of these. IUOE has been using the services of Davitt McAteer, a former head of MSHA, to arrange for these specialized training programs. Several other courses for mine safety inspectors are in the planning stages.

#### **International Association of Fire Fighters (IAFF)**

##### WTC Response Activity 1: Trainers New Hazmat Teams for New York City Fire Department.

The WTC2 project represents a more comprehensive approach to rebuilding FDNY's hazardous materials response capabilities. The WTC1 project provides the foundation for a long-term rebuilding effort by educating specialized instructors who can train for years to come. Before, during and after the WTC1 training, IAFF staff met regularly with FDNY administrative, training academy and SOC officials. The IAFF was able to determine a training regimen that will help FDNY deliver what is needed to rebuild its HazMat response capability:

- Provide Technician-level Instructor Training so that FDNY instructors, including those trained in the WTC1 project, can deliver the highest level of training to their members.
- There were more than 80 FDNY technician candidates who were unable to complete the second, 40-hour, segment of their Technician training. The WTC2 project outlines four courses to complete the training for all of the candidates in question.
- FDNY has more than 300 Technicians throughout the City who are behind schedule on their refresher training. The WTC2 project outlines 16 courses to ensure that their skills are kept current.
- Deliver two, 80-hour, Technician courses in order to educate new members to help staff FDNYs HazMat Company 1 and Squad 288 the only two units in New York City dedicated to HazMat response.
- Provide twenty, 40-hour, Technician courses to rescue support companies throughout the City.
- Educate up to 1,000 support units from all of the battalions in FRO training that provides specific emphasis on Chemical Protective Clothing (CPC) and decontamination techniques.

Through May 31, 2002, the IAFF has been able to complete all of the proposed Instructor Training for Technician-level instructors and the second 40-hour segment of Technician training for those who were previously unable to complete the training (the first two bullet points noted above). Additionally, the IAFF has secured dates to complete the two 80-hour Technician courses needed to re-staff FDNYs HazMat units.

However, the IAFF has encountered significant delays and problems securing the training schedules needed to begin the remaining Technician and FRO training. The FDNY administration demonstrated to the IAFF that little to no training would be possible without an administrative subsidy to help offset the cost of taking students out of service and making them available for training. This Replacement Cost program enables the WTC2 grant to reimburse FDNY the straight-time cost of providing the needed backfill to ensure that all fire stations maintain minimum safe staffing levels while training takes place. Unfortunately, we have found that severe personnel shortages in the SOC units make it difficult to reach our target audience even when the WTC2 project is able to provide financial subsidies. The IAFF is using its local union resources and ongoing communications with FDNY officials to expedite an amenable training schedule to ensure that the outlined training is completed as soon as possible.

A total of 86 people were trained through May 31, 2002, of the IAFF/WTC 2 project. These students were trained during 3,440 contact hours in six separate courses. Specifically, the following courses were delivered:

- (2) Instructor Training events (40-hour)
- (2) Train-the-Trainer for the Technician level
- (3) Technician Programs (40-hour)

Overall, the projected Number to be Trained was 50 Instructors, 840 Technicians and 800 First Responders. A total of 154 students (34 Instructors and 120 Technicians) were trained through August 2002 under the WTC 2 project. Through August 31, 2002, the IAFF completed all of the proposed Instructor Training for Technician-level instructors and the second 40-hour segment of Technician training for those who were previously unable to complete the training (the first two bullet points noted

above). Additionally, the IAFF has completed two out of three 80-hour Technician courses needed to re-staff FDNYs HazMat units.

Appendix 15: 2002 – 2003 Funding

<b>EPA/NIEHS WORKER EDUCATION AND TRAINING AWARDS FOR BUDGET PERIOD 09/01/2002-08/31/2003</b>							
<b>AWARDEE</b>	<b>HWWTP 9/02 AWARD</b>	<b>SBIR 9/02 AWARD</b>	<b>ATT 9/02 AWARD</b>	<b>SJTI 9/02 Award</b>	<b>WTC 9/02 AWARD</b>	<b>MWTP 9/02 AWARD</b>	<b>9/02 TOTALS</b>
University of Alabama Birmingham	497,676		71,969				569,645
International Chemical Workers Union Council	1,855,274						1,855,274
International Association of Fire Fighters	712,478		100,000		3,205,597		4,018,075
George Meany Center for Labor Studies	547,006		50,000				597,006
University of Massachusetts, Lowell	966,084						966,084
University of California at Los Angeles	1,070,038						1,070,038
Laborers-AGC Education and Training Fund	3,804,040			99,758	314,645	918,683	5,137,126
Paper, Allied-Industrial, Chemical and Energy Worker International Union	1,204,378						1,204,378
HMTRI Kirkwood Community College	611,957						611,957
Service Employees International Union	563,226						563,226
University of Medicine & Dentistry of New Jersey	916,458		99,999		398,711	585,071	2,000,239
International Union, United Auto Workers	753,320		50,000				803,320
International Union of Operating Engineers	1,419,809				1,451,047		2,870,856
University of Cincinnati	1,653,230						1,653,230
Center to Protect Workers' Rights	1,461,097				100,000	673,973	2,235,070
Xavier University						468,995	468,995
AFSCME Training and Education Institute	717,336						717,336
National Puerto Rican Forum	704,078				480,000	564,192	1,748,270
Y-Stress, Inc.		199,213					199,213
FOF Communications, Inc		159,279					159,279
New Leaf Interactive Media		199,020					199,020
Advanced Technologies & Laboratories International		199,020					199,020
<b>TOTAL</b>	<b>19,457,485</b>	<b>756,532</b>	<b>371,968</b>	<b>99,758</b>	<b>5,950,000</b>	<b>3,210,914</b>	<b>29,846,657</b>

## Appendix 16: WETP Staff Activities

### Joseph Hughes

- *Mr. Hughes* presented on the safety and health training responses to the WTC terrorist attack on September 11, 2001 at the NIOSH Resource Center Annual Meeting in San Diego, CA on February 5, 2002.
- *Mr. Hughes* participated in a Congressional Superfund Testimony in Washington, DC on March 14, 2002. He accompanied Dr. Olden, Dr. Sassaman, and Dr. Suk.
- *Mr. Hughes and Mr. Outwater* presented at the 12th Annual Construction Safety and Health Conference and Exposition on May 21-23, 2002 in Chicago, Illinois. The Worker Education and Training Program along with Center to Protect Workers' Rights, NIOSH, the Construction Safety Council and many other organizations sponsored this conference. The conference shared information and ideas about effective safety and health interventions and how to move "best practices" from inception to practical implementation.
- *Mr. Hughes* attended the International Association of Fire Fighters Instructor Development Conference in Las Vegas, Nevada on July 17-19, 2002. He presented the WMD Report to the National Response Team Subcommittee.
- *Mr. Hughes* presented at the Federal Emergency Management Agency/Occupational Safety and Health Summit on Federal Disaster Response Personnel Safety-Personal Protective Equipment in Washington, DC on December 17, 2001.
- *Mr. Hughes* participated in and presented at the U.S. National Response Team Training Subcommittee in Washington, DC on November 11, 2001.

### Sharon Beard

- *Ms. Beard, OD/WETP*, attended the National Institute of Science/Beta Kappa Chi National Meeting and manned the NIEHS exhibit booth in Columbia, SC on March 26, 2002.

### All Staff

- The NIEHS (through the Worker Education and Training Program) sponsored a Technical Workshop entitled "Learning From Disasters: Weapons of Mass Destruction (WMD) Preparedness Through Worker Training." The workshop assisted trainers in creating the curricula necessary to train WMD remediation workers and emergency responders dealing with biological/chemical agents, in addition to helping trainers update existing curricula to incorporate lessons learned from workers responding to and working at the World Trade Center site. The workshop was held in Nashville, Tennessee on April 25-26, 2002. Staff attended the workshop and participated in various activities included *Mr. Hughes, Ms. Beard,*

and Ms. Thompson, OD/WETP. On April 24, 2002, the semi-annual WETP Awardee Meeting was held. Ms. Mason, OPD/GMB, also participated in the meeting.

- *Mr. Hughes* and staff hosted the NIEHS/Worker Education and Training Program Training Skilled Support Personnel meeting in Research Triangle Park, North Carolina on August 15, 2002. The focus of the meeting was on to discuss future safety and health training program initiatives regarding weapons of mass destruction incident response with a particular focus on what training is appropriate for skilled support personnel. The meeting also focused on the feasibility of establishing a national registry of trained personnel to respond to future terrorist actions. Staff attending the meeting and participating in various activities included *Ms. Beard, Mr. Outwater, Ms. Thompson, and Ms. Chaney, OD/WETP.*
- *Mr. Hughes and Ms. Beard* participated in the Town Hall Meeting, “Voices for Healthy Environments, Healthy Communities, Healthy Jobs,” at the First Church of God in Inglewood, California on December 7 and 8, 2001. They served as government representatives on workshop panels. More than three hundred people attended the Town Hall Meeting. This NIEHS Meeting was organized by the Southern California Environmental Sciences Center (SCEHSC) and the UCLA Labor Occupational Safety and Health (LOSH) Program. Co-sponsors included Communities for a Better Environment, the Environmental Health Coalition, the Southern California Particle Study Center, the UCLA Center for Occupational and Environmental Health and thirty community partners. UCLA received funding for this Town Hall Meeting from the WETP; therefore, a significant focus of this meeting was on occupational health and safety issues.

Scientists from USC, UCLA and the King-Drew Medical Center presented their findings to the community members and listened to community concerns directed at them and the governmental agencies present. In particular, Dr. Olden and other NIEHS senior and program staff (including WETP) attended and participated in the meeting. Open microphones over the two days allowed much input from the community organizations. During one open mike session members of the organization Pro Uno/Inquilinos en Huelga said they were on a rent strike because their landlord had not cleaned their apartment of asbestos, mold and other environmental health problems. As a result, this group secured commitments to investigate their situation from staff of the EPA and the California Department of Toxic Substances Control. In a later workshop they obtained technical assistance commitments from several community-based groups: Esperanza Community Housing Corporation and Strategic Actions for a Just Economy - both groups that are working on toxics in housing.

There were several key recommendations which came out of the 8 workshops that were held on the second day and follow-up funding has been provided to UCLA by WETP to address some these recommendations.

## **Staff Honors and Awards**

- *Mr. Hughes, Ms. Beard, Ms. Chaney, Ms. Thompson, and Ms. Mason, OPD/GMB* received a Special Act Award on July 9, 2002 for expedited processing of \$6 million in supplemental awards to support training and protection of World Trade Center cleanup workers.

### **New Staff**

- *Mr. Theodore Outwater* joined the Worker Education and Training Program as a Public Health Educator. He is the former Associate Director of the Hunter College Center for Occupational and Environmental Health, City University of New York, and has direct experience in health and safety training programs, as well as with non-profit foundations.