

April 3, 1996
NIEHS/DOE Worker Training Program
Annual Progress Report for FY 1995

Based on the September 24, 1992 Interagency Agreement between NIEHS and DOE, a worker safety and health training program was initiated as authorized under Section 3131 of the National Defense Authorization Act of 1992-93. On July 1, 1993, NIEHS made the first awards for conducting needs assessment and direct training of DOE-related environmental restoration and waste management workers and site emergency responders. This progress report represents a summary of activities conducted between September 1, 1994 and August 31, 1995.

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

The worker training program was originally authorized for five years (FY 87-91) by Congress with the passage of Section 126 of the Superfund Amendments and Reauthorization Act of 1986 (SARA). The 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 unaddressed directly by the market place. The program enhances rather than replaces private sector training responsibility by demonstrating new and cost-effective training techniques and materials.

Completion of a peer-reviewed competition for new DOE Worker Training awards for training of hazardous waste workers and emergency responders --- After receiving concept clearance from the National Advisory Environmental Health Sciences Council (NAEHSC) at its May 1994 meeting, NIEHS developed a new Request for Applications (RFA) for cooperative agreements in order to make new awards based on this additional funding. A notice of availability was published in the NIH Guide to Grants and Contracts on Friday, October 28, 1994 announcing that NIEHS would be accepting new applications with a receipt date of January 20, 1995 and would be planning to fund 15 to 20 new cooperative agreements over the five year period, subject to the annual availability of funding. The Request for Applications (RFA ES 95-001) referenced authorized funding availability in a number of programs administered by NIEHS including the DOE/NIEHS Worker Training Program (\$10 million from DOE).

A program briefing was held for potential applicants in early December 1994, which resulted in the development of additional evaluation criteria for the Worker Training Program and the establishment of a new receipt date (February 17, 1995) for applications. By the February 17, 1995 deadline, the NIEHS Division of Extramural Research and Training (DERT) had received

thirty (30) completed applications for worker training cooperative agreements. Of the thirty applications, 17 were from current grantees of the NIEHS Worker Training Program and 13 were from newly competing institutions.

Based on the work of the Initial Review Group (IRG) in reviewing the twenty-four applications, all twenty four applications were recommended for further consideration, although some components in some applications were not recommended for further consideration. Priorities for funding are based on the rankings by the IRG as designated by the criteria in the Request for Applications (RFA ES-95-001) for assessing program merit and relevance.

The proposed funding plan for twenty new awardees to support worker training activities has been developed based on the criteria established by the PHS Grants Administration Manual in Part 118 at 118.3(c). Budget adjustments in the proposed funding plan have been based on the training needs of high risk populations, national geographic coverage in training availability and the published program priorities for training support. A briefing for relevant DOE staff was held on August 8, 1995 to receive input on DOE priorities for the final funding plan. Adjustments were made according to DOE suggestions. Review by the National Advisory Environmental Health Sciences Council (NAEHSC) was completed on September 14-15, 1995. A list of the new DOE awardees and program descriptions are included in Appendix 2.

Continuation of the first national Labor Market Study of Hazardous Waste Workers and Emergency Responders--- In conjunction with the EPA-Superfund Labor Task Force and EPA-OSWER and DOE staff, NIEHS has worked to develop a study protocol which can capture site specific, environmental restoration employment data and can describe the workforce which is involved in Superfund site cleanup projects. Through a supplemental award, Ruttenberg & Associates has implemented the study design to examine specific labor markets where Superfund cleanups have already been carried out. A number of the primary cleanup sites in the study has come from DOE environmental restoration projects. An Interim Final Report, which examines over 20,000,000 hours of site specific Superfund remediation work, is almost completed and will be reviewed by EPA, NIEHS and outside peer reviewers before it is released.

National Program Evaluation Project --- A summer project, NIEHS supported a doctoral student as a summer intern to organize and summarize the program evaluation data which has been produced by individual awardees in the course of their training delivery. The significant resources that have been allocated for NIEHS training awards require that recipients demonstrate not only effective implementation, but also positive impacts on the health and safety of trained workers. The findings reported here clearly demonstrate that NIEHS grantees have responded to the challenge for program evaluation and have documented monumental changes in the health and safety of workers and communities across the United States. A summary of this longer report is included as Appendix 3.

Award of a new contract for the continued operation and support for a national clearinghouse on hazardous waste worker training --- A new RFP for operation of the clearinghouse function resulted in a new five year contract award after a lengthy competitive

process which was completed in May 1995. NIEHS has continued to support the operation of the National Clearinghouse for Worker Safety and Health Training for Hazardous Materials, Waste Operations and Emergency Response through a contract with Ruth Ruttenberg and Associates, with a subcontract to the George Meany Center for Labor Studies in Silver Springs, Maryland. The Clearinghouse functions as a link between awardees of NIEHS Worker Training cooperative agreements and other members of the general public who are concerned with quality worker health and safety training. Tasks of the Clearinghouse include, but are not limited to, the distribution of curricula, research work to support the development of the NIEHS Worker Training Program, cataloguing of training materials, and other information pertaining to worker health and safety training for hazardous materials, waste operations, and emergency response, as well as other related activities. A summary of Clearinghouse activities is provided in Appendix 4.

Safety and Health Concerns of Emerging Environmental Restoration Technology -- A March 1995 technical workshop, organized by the Clearinghouse, was the first of two Innovative Technology workshops dealing with the integration of health and safety into the design of new environmental remediation technologies. At the end of that conference a working guidance document was developed. In November 1995, a second workshop on innovative technology was held and participants reviewed and provided comments to the draft guidance documents to produce final guidance on the integration of safety and health into the design of innovative remediation technologies.

Streamlining Pilots for DOE HAZWOPER Training --- As a joint project with DOE-EH and DOE-EM, the NIEHS Worker Training Awardees undertook a national project to streamline the modules which make up the basic CERCLA cleanup worker training course. This project grew out of the concern that there were redundancies and repetition in the course which could be more efficiently reduced, without losing the high quality of the overall course content. Pilots of course modules were prepared by different awardees and presented at the Hanford site through the HAMMER program. This program is still under development and review by the DOE Richland area office.

Summary

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

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

Appendix 1:

Summary of DOE/NIEHS Worker Training Awards for FY 1995

1) United Brotherhood of Carpenters ---- The United Brotherhood of Carpenters (UBC) Health and Safety Fund has training components for the EPA Hazardous Waste Worker Training Program (HWWTP), the DOE HWWTP and the EPA Minority Worker Training Program (MWTP). The target population are members of the five participating consortium International Unions, or union training funds. These unions are: the United Brotherhood of Carpenters and Joiners (UBC); the Ironworkers National Training Fund (IW); the Painters and Allied Trades Labor-Management Fund (PAT); the Sheetmetal Workers Training Fund (SW); and the Operative Plasterers and Cement Masons Union (OPC). All of these unions perform construction and general industry work, as defined by OSHA, on sites containing hazardous materials, or on sites where HAZMAT operations are present or planned. These five unions represent 35% of the organized construction workers in the United States and perform over 50% of all the construction work on remedial sites. The UBC consortium plans to identify 6,120 journeymen and the target populations as defined are appropriate and their access to them is evident.

2) Laborers/AGC --- This proposal from the Laborers-AGC (L-AGC) and the International Brotherhood of Teamsters (IBT) represents a new joint effort. This application includes proposals for an EPA Hazardous Waste Worker Training Program (HWWTP), a DOE HWWTP and an EPA Minority Worker Training Program (MWTP). The proposals for the EPA and DOE HWWTP include a joint venture between the Laborers-AGC (L-AGC) and the IBT. In regard to their target populations, L-AGC and IBT members are central to EPA superfund clean up work in this country. They have demonstrated the need for trained environmental workers and their needs assessment is outstanding. L/AGC and IBT are proposing special outreach efforts to train underserved worker groups. This includes efforts with Native Americans, continued instruction in Spanish, and a new minority worker initiative.

3) International Chemical Workers Union ----- ICWU, in cooperation with United Steelworkers, the University of Cincinnati and the Greater Cincinnati Occupational Health Center was first awarded a training grant from NIEHS in 1987. In 1990-92 four additional unions were added and two additional regional training centers began. This project proposes to train over the next five years: 2,900 members at the primary Cincinnati Center; 1,000 members at five regional facilities (adding three new facilities); develop members of the Coalition of Black Trade Unions (CBTU) as trainers, and expand the existing train-the-trainers program to meet increased field training programs which will reach an additional 12,500 workers over five years. To date, corporations at 90 sites have sponsored training by the Center. Extensive evaluation efforts have been conducted and will be continued and expanded. The proposed expansion of the program includes a partnership with the Coalition of Black Trade Unionists (CBTU), three new regional

facilities to train workers, and to initiate an annual trainers conference with trainers from the 6 unions.

4) International Union of Operating Engineers ---This application from the International Union of Operating Engineers (IUOE) includes proposals for an EPA Hazardous Waste Worker Training Program (HWWTP) and a DOE HWWTP. IUOE has developed a training plan to provide hazardous materials health and safety training to its membership, in particular the Hoisting and Portable (H&P) engineers and Stationary Engineers. They plan to expand and administer their on-going training effort to ensure that their membership who could work in hazardous waste cleanup have the skills to recognize and control hazards.

5) Alice Hamilton Consortium ---- This application includes proposals for an EPA Hazardous Waste Worker Training Program (HWWTP), a DOE HWWTP and an EPA Minority Worker Training Program (MWTP). The Alice Hamilton Consortium includes the Alice Hamilton Occupational Health Center (AHOHC), four local Committees on Occupational Safety and Health (COSH groups), six international unions who represent primarily construction workers in industries that generate and otherwise have to handle hazardous materials, and two universities. The Department of Health Education at University of Maryland will evaluate the project and the Howard University School of Social Work will help provide access to minority populations. COSH groups are independent local organizations typically including representatives of workers, health and safety professionals, and others. The purpose of this application is to reach members of the represented unions and others to provide awareness level and operations level training.

6) Oil, Chemical and Atomic Workers Union ---- This application from the Oil Chemical and Atomic Workers Union (OCAW) includes proposals for an EPA Hazardous Waste Worker Training Program (HWWTP), a DOE HWWTP and a DOT HWWTP. Specific aims of this proposal are to "raise the standard of safety and health training throughout the petrochemical and nuclear industries." for their members; to insure their members receive the best possible training, and by creating a worker-to-worker training program conceived, designed, and implemented by the union's membership, to foster a "culture of safety." They seek continued funding for the Hazardous Waste Operations and Emergency Response Training Program in conjunction with the Labor Institute and the Work Environment Program at University of Massachusetts, Lowell.

7) International Association of Firefighters ----This application from the International Association of Fire Fighters (IAFF) includes proposals for an EPA Hazardous Waste Worker Training Program (HWWTP), a DOE HWWTP and a DOT HWWTP. The International Association of Fire Fighters (IAFF) proposes to disseminate training and evaluation materials, institute a train-the-trainer program where feasible and to train fire fighters directly when no qualified instructors are available. IAFF represents 85% of career fire service personnel in USA and Canada. They have provided training materials and direct training in hazardous materials emergency response since 1987. Their goals in this program are to: 1) determine which communities need the training; 2) train the trainers where possible (approximately 120

instructors will be trained under this program), and 3) conduct direct training (300 first responders 100 emergency medical technicians and paramedics, and 60 hazmat technicians each year).

8) University of Medicine and Dentistry of New Jersey --- This application from the New Jersey/New York Hazardous Materials Worker Training Center includes proposals for an EPA Hazardous Waste Worker Training Program (HWWTP), a DOE HWWTP, and an EPA Minority Worker Training Program (MWTP). The New Jersey/New York Hazardous Materials Worker Training Center has been funded by NIEHS since 1987. The Center members include the University of Dentistry and Medicine of New Jersey, Hunter College, New Jersey Department of Labor, New Jersey State Police, New York Committee for Occupational Safety and Health, New York Carpenters Labor Technical College, and the University of Buffalo. The applicant proposes to train 13,500 workers in the first year who are involved in hazardous waste site investigation or clean-up, emergency response, and operations at RCRA/TSD facilities in New Jersey, New York, and Puerto Rico.

Appendix 3:

National Clearinghouse for Worker Safety and Health Training for Hazardous Materials, Waste Operation, and emergency Response

The National Clearinghouse for Worker Safety and Health Training for Hazardous Materials, Waste Operations, and Emergency Response provides the George Meany Center with a resource center of the latest information on training workers who are exposed to hazardous materials, emergency response and environmental cleanup. Additionally, two technical workshops on campus each year bring national leaders in hazardous waste training from labor, government, academia and industry to the Center.

A five year renewable contract for the Clearinghouse was awarded on May 1, 1995 to Ruth Ruttenberg & Associates, Inc., with the George Meany Center for Labor Studies as a major subcontractor. The Director, an Assistant Director, and three research associates are employed by Ruth Ruttenberg & Associates, Inc. The other Assistant Director, Industrial Hygiene support, and two full time Clearinghouse staff members are employed by the Meany Center

The Clearinghouse is the information exchange and dissemination mechanism for 18 worker training programs whose support of \$30 million from the Environmental Protection Agency (EPA) and the Department of Energy (DOE) monies is intended to set a high standard for health and safety training to protect workers in the burgeoning environmental technology sector. Eleven of the prime awardees (including the Meany Center's Railway Workers Hazardous Materials Project) and 12 of the sub-awardees are AFL-CIO affiliates. Administration of the program by one of the National Institutes of Health--the National Institute of Environmental Health Sciences (NIEHS) --- enhances the programs's stature and credibility. Close to 500,000 workers have received hazardous materials training in the past eight years through the NIEHS-funded programs (refresher training is also required on an annual basis).

The Clearinghouse serves as a resource center housing numerous sets of model curricula produced under the award and which training providers use as reference in developing new courses or improving existing ones. The Clearinghouse is the only authorized distributor of these curricula. In addition to the curricula, the resource center also houses hundreds of basic reference texts, key periodicals, books, regulatory information, and other documents of relevance to occupational and environmental health and safety. The resource center is open to everyone. A technical information specialist is available to answer questions and is located in the office next to the resource center.

A March 1995 technical workshop, organized by the Clearinghouse, was the first of two Innovative Technology workshops dealing with the integration of health and safety into the design of new environmental remediation technologies. At the end of that conference a working guidance document was developed. In November 1995, a second workshop on innovative technology will be held and participants will mark-up the draft guidance document to produce final guidance on the integration of safety and health into the design of technologies. A technical

workshop scheduled for March 1996 will be titled, Measuring and Evaluating the Outcomes of Training. Workshops are held on the George Meany Center campus and proceedings are expected to be published in refereed journals. A monthly Newsbrief is written and produced by Clearinghouse Staff, and is distributed to approximately 200 training program staff members and interested parties. The Newsbrief provides information on HAZMAT matters pertinent to awardees, including monthly columns on hazardous waste news, government agencies, environmental justice, and industrial hygiene. Also included monthly is an Awardee resource exchange to promote the sharing of relevant resources. Upcoming events are also noted, as well as summaries of events which have been attended by either the Clearinghouse or awardees. In August 1995 the Newsbrief became available electronically, via the Internet. Subscriptions to those not associated with the NIEHS program are available at \$25 per year.

The Clearinghouse is also responsible for outreach on the training program and response to public inquiries from those seeking information on health and safety training for hazardous waste operations and emergency response. The Clearinghouse distributes thousands of brochures on the program and individual training providers throughout the year at trade shows and conferences. The 1995 exhibit schedule has included attendance at one of five National Environmental Justice Advisory Council meetings, the National Association of Environmental Professionals Annual Conference, the Mid-Atlantic Industrial and Hazardous Waste Conference, and the Ground Breaking of the Hazardous Materials Management and Emergency Response Training Facility in Hanford, Washington. Still to be attended are the DOE's Training Resources and Stat Exchange Annual Conference and the meeting of the Society for Occupational and Environmental Health.

Another component to the Clearinghouse is its ongoing research program--focussing this year on measuring the outcomes of training, on profiling the labor market for hazardous waste workers and emergency responders, and on environmental justice and the new NIEHS Minority Worker Training Program.

The Clearinghouse is now on-line via CompuServe, which widens its capabilities to disseminate information, to receive inquiries, to access the latest information. While awardees are on campus for the next technical workshop, special sessions will be scheduled, at their request, to aid them in the use of the CD-ROM capacity now available in the meany Center library, as well as in the use of the Internet.

**Final Two Year Summary:
DOE-NIEHS Worker Health and Safety Training Program**

Training Parameters	1994	1995	Total	% Change
No. Of Awardees	7	7		
Courses Presented	533	1,086	1,619	+100%
Workers Trained	7,468	13,586	21,054	+72%
Contact Hours	185,759	248,864	434,623	+37%
Dollars Awarded	\$9,898,826	\$9,591,026	\$19,489,852	-4%
Cost Per Contact Hour	\$53.28	\$38.54	\$44.84	-30%

Data on training accomplishments and expenditures are final for FY 1995.

FY 95		
DOE/ NIEHS Training by site		
Courses	Workers	Hours
Ashtabula		
1	10	80
Alaska		
1	8	80
Weldon Springs		
3	3	152
West Valley		
72	861	12,680
UMTRA		
3	43	376
Sandia Lab		
1	5	184
Savannah R		
71	416	16,461
Rocky Flats		
42	368	16,096
Princeton PI		
19	87	1,549
Portsmouth		
6	94	2,704
Pantex Plant		
31	409	3,656
Paducah		
27	261	5,968
Oak Ridge		
317	4,853	73,628
NevadaTst		
50	458	17,808
Mound Plt		

	16	204	3,264
L Alamos			
	28	288	7,928
Livermore			
	22	213	4,000
Berkeley			
	5	78	2,320
Kansas Cty			
	7	151	1,576
Idaho Ntl			
	29	308	4,128
Hanford			
	177	2,913	44,800
FUSRAP			
	27	142	2,144
Fernald			
	34	532	9,648
DOE-HQ			
	23	98	2,086
Brookhav=n			
	14	227	2,744
Argonne-E			
	3	11	400
Non-DOE			
	31	193	6,360

DOE/NIEHS FY 95 Training Summary by Target Population			
Target Population	Courses	Workers	Hours
CERCLA Cleanup	460	5,757	118,416
RCRA TSD	145	2,483	26,640
Emerg Resp	22	239	6,040
Radiation Prot.	98	748	19,861
Misc. Training	116	1,030	27,515
Total	1,086	13,494	248,128

Dont add up

DOE/NIEHS FY 1995 Training Contact Hours
by DOE Cleanup Site

Name of DOE Site	Total Contact Hours	Percent of Total Hours
1) Oak Ridge	73,628	31%
2) Hanford	44,800	18%
3) Nevada Test Site	17,808	7%
4) Savannah River	16,461	6.8%
5) Rocky Flats	16,096	6.6%
6) West Valley	12,680	5.2%
7) Fernald	9,648	4.0%
8) Los Alamos	7,928	3.2%
9) Paducah Plant	5,968	2.4%
10) Idaho National Lab	4,128	1.7%
11) Livermore	4,000	1.6%
12) Pantex Plant	3,656	1.5%
Other DOE sites	29,977	12%
FY 95 Total Hours	248,864	100%

DOE FY 95 Total Training
By NIEHS Awardee

Awardee	# Courses	# Workers	# Contact Hours
California/Arizona Consortium	11	165	2,544
New Jersey/New York Consortium	110	1210	16,577
Intl Union of Operating Engineers	171	2728	42,688
Oil Chemical & Atomic Workers	141	2,682	28,360
International Chemical Workers Union	132	1,949	23,672
Laborers/Associated General Contractors	362	2,466	90,835
Intl. Brotherhood of Teamsters	74	881	19,736
United Brotherhood of Carpenters	84	1,505	24,452
Total	1,085	13,586	248,864