

National Institute of Environmental Health Sciences Worker Education and Training Program (NIEHS WETP)



Photograph Above: Training as Real as It Gets - Emergency Response Demonstration Conducted by the International Association of Firefighters at the HAMMER Training Facility, Hanford Washington

Department of Energy and NIEHS WETP Nuclear Worker Training Program

Accomplishments and Highlights September 1, 2010– August 31, 2011

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Charts and Graphs

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NIEHS
National Institute of
Environmental Health Sciences



Background Information

The Superfund Amendments and Reauthorization Act of 1986 (SARA), Section 126(g), authorizes an assistance program for training and education of workers engaged in activities related to hazardous waste generation, removal, containment or emergency response and hazardous materials transportation and emergency response. The Congress assigned responsibility for administering this program to the National Institute of Environmental Health Sciences (NIEHS), an Institute of the National Institutes of Health (NIH) within the Public Health Service (PHS) of the US Department of Health and Human Services (DHHS).

The National Defense Authorization Act for fiscal years 1992 and 1993 (42 USC 7274(d)) authorized the Secretary of Energy in section 3131(a)(1)(A)-(B) to make awards: "to provide training and education to persons who are or may be engaged in hazardous substance response or emergency at Department of Energy (DOE) nuclear weapons facilities; and to develop response curricula for such training and education." The Secretary was further authorized in Section 3131(a)(2)(A)-(B) to make the training awards to non-profit organizations demonstrating capabilities in: "implementing and conducting effective training and education programs relating to the general health and safety of workers; and identifying, and involving in training, groups of workers whose duties include hazardous substance response or emergency response."

To implement this, DOE entered into an agreement with NIEHS to award and administer the grants and to adapt its existing program to meet the needs of the DOE nuclear weapons complex.

Protecting worker health and safety through the delivery of safety and health training is a priority of the Secretary of Energy and is a primary goal of the Office of Environmental Management (EM). As the DOE's mission has shifted from weapons production to environmental restoration, the site worker is exposed to new operations and hazards while conducting restoration activities, many of which are associated with potential exposure to hazardous substances and wastes.

To provide protection to workers' health and safety, all workers at DOE sites engaged or potentially engaged in environmental restoration activities, including hazardous substance response or emergency response, are required by CERCLA and respective DOE Orders to meet the requirements of the Occupational Safety and Health Administration's (OSHA) regulations 20 CFR 1910.120 and the EPA Hazardous Waste Operations and Emergency Response (HAZWOPER) training requirements (40 CFR 300.150).

2010-2011 UPDATE: A Partnership for Worker Protection—Facts About the DOE NIEHS Nuclear Worker Training Program

Introduction: Crane operators, carpenters, welders, laborers, boilermakers, chemical operators, construction workers, electricians, environmental technicians, insulators, laboratory technicians, machinists, painters, pipe fitters, truck drivers: these are the people who make up the workforce engaged in environmental restoration activities at DOE nuclear weapons sites. And these are the workers receiving health and safety training under the DOE/National Institute of Environmental Health Sciences (NIEHS) Nuclear Worker Training Program.

Administered since 1993 by the NIEHS Worker Education and Training Program, this effort has resulted in a DOE complex that has one of the best safety and health records of any major industrial site. This has been achieved by providing site-specific, quality safety and health training to workers in a timely and cost-effective manner, through a partnership involving government, contractors, and labor organizations. A cornerstone of the program is the use of "worker-trainers," employees well versed in performing a given task in a hazardous environment who are trained to instruct other workers.

What Is the Goal of the Program? These DOE sites are complicated, featuring a combination of nuclear, industrial, demolition, and construction activities; therefore, safety and health training must be both site specific and trade-specific. NIEHS, through its awardees, has provided such high quality training to ensure that DOE site workers are prepared to work safely in hazardous environments; and that workers have sufficient knowledge to identify hazardous situations and to take appropriate actions to protect themselves, fellow workers, and the environment.

Who Are the Awardees of the Program? The eight current awardees are the International Association of Fire Fighters, International Union of Operating Engineers, United Steelworkers of America, International Chemical Workers Union, LIUNA Training and Education Fund (formerly Laborers/Associated General Contractors Education and Training Fund), International Brotherhood of Teamsters, CPWR - Center for Construction Research and Training, and the Hazardous Materials Training and Research Institute.

How Many Are Trained? Across the DOE complex 5,764,681 contact hours of safety and health training were delivered by the NIEHS/DOE awardees between 1993 and 2011. During this period, the awardees have trained 421,741 workers and presented 29,722 classroom and hands-on training courses. In 2010-2011, 31,236 workers received 405,556 contact hours of training in 1987 classes.

How Much Does It Cost? Through an Interagency Agreement, NIEHS received \$10 million from FY 2010 DOE appropriations, which provided \$ 9,591,120 in funding to NIEHS awardees during the past year (September 1, 2010- August 31, 2011).

Where Is the Training Held? Though training was conducted at 30 different DOE sites in 2010-2011; it was concentrated at Oak Ridge (25% of all workers trained), Hanford (25%), Los Alamos (12%), Savannah River Site (4%), Idaho Falls (4%), Paducah (4%), and Nevada Test Site (4%).

A National Asset: It should be noted, that in case of accidental or deliberate radiological events, the DOE/NIEHS program represents a large pool of trained, certified workers. NIEHS WETP has also developed a mechanism for identifying and mobilizing these workers. While it was never imagined that this program would result in a capacity to respond to such events, this is an actual benefit and a national security asset.

DOE/NIEHS Awardees

United Steelworkers of America (USW): Representing approximately 875,000 USW members who form 3,500 local unions located in every state, USW has established health and safety training programs and fields more than 200 national and site worker-trainers who recruit and train workers. Approximately 336,000 USW members are concentrated in the paper, petroleum, chemical, rubber, plastics and primary metals industry groups, all of which contain large quantities of hazardous waste, and experience large quantities of toxic releases.

In the DOE program, the USW has more than 3,500 members in seven states, through six union locals at six DOE reservations. They target workers whose jobs (primarily site remediation and reclamation) put them at risk of exposure to hazardous materials and waste, and risks associated with hazardous materials incidents. These cleanup programs generate hazardous waste that must be removed, containerized, stored, processed and shipped by site workers.

LIUNA Training and Education Fund (formerly Laborers/Associated General Contractors Education and Training Fund): Laborers' International Union of North America (LIUNA) affiliated funds service the training needs of hundreds of LIUNA local unions and thousands of construction-related contractors by providing relevant and necessary training to LIUNA members and apprentices. Each year thousands of LIUNA members and apprentices receive training at one of the state-of-the-art training facilities that comprise the Laborers' training network.

International Union of Operating Engineers (IUOE): The International Union of Operating Engineers (IUOE) represents 360,000 workers including operating engineers (heavy equipment operators, mechanics, and surveyors), stationary engineers who maintain buildings and industrial complexes, nurses and other health workers, and a variety of public employees.

International Chemical Workers Union (ICWU): This consortium is based at the Center for Worker Health & Safety Education which is operated by the International Chemical Workers Union (ICWU) and includes the International Association of Machinists and Aerospace Workers (IAM), the American Flint Glass Workers (AFG), 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). The consortium also includes the University of Cincinnati and the Greater Cincinnati Occupational Health Center.

International Association of Firefighters (IAFF): IAFF has more than 2,700 affiliates, representing 263,000 fire fighters and paramedics in more than 3,500 communities in the U.S. and Canada.

CPWR—The Center for Construction Research and Training: CPWR and its Construction Consortium for Hazardous Waste Worker Training includes the following international- national construction unions: Insulators & Asbestos Workers, Iron Workers, Boilermakers, Painters, Bricklayers, Plasterers & Cement Masons, Carpenters, Plumbers & Pipe Fitters, Electrical Workers, Sheet Metal Workers. These unions represent over 2,000,000 workers.

Hazardous Materials Training and Research Institute (HMTRI): This consortium is led by the Partnership for Environmental Training and Education includes the Community and College Consortium for Health and Safety Training (CCCHST). There are 93 colleges and universities, five community-based organizations, eight governmental units, 12 independent training providers and one union in CCCHST, representing 32 states and one territory.

International Brotherhood of Teamsters (IBT): The International Brotherhood of Teamsters – National Labor College Consortium's target population for the DOE Worker Training Program is: 1) remediation site workers and supervisors at DOE facilities; 2) construction workers and supervisors involved in the remediation of DOE facilities, including drivers of specialized off-road and waste hauling vehicles; 3) truck transportation workers and supervisors who are involved in the transportation of radioactive waste and chemical waste from DOE facilities; and 4) railroad workers and supervisors involved in the transportation of radioactive waste and chemical hazardous waste from DOE facilities.

NIEHS WETP National Clearinghouse for Worker Safety and Health Training Update 2010-2011

The National Clearinghouse for Worker Safety and Health Training, operated by MDB, Inc., provides strong technical support to the NIEHS awardees that conduct hazardous waste worker training around the DOE weapons complex. The Clearinghouse regularly features articles in its electronic newsletter - distributed to over 900 subscribers - about chemical and radiological issues around the complex. News-brief articles cover critical issues such as cleanup completion at sites, and include links to recently released DOE reports, and features DOE health and safety meetings in the Calendar of Events section.

The Clearinghouse website, <http://tools.niehs.nih.gov/wetp/> has a library that houses numerous reports on environmental, health and safety topics specifically related to DOE. With technical support from WETP, DOE produced innovative communication tools called Technology Safety Data Sheets (TSDS) for workers. The Clearinghouse website contains numerous examples of TSDS and also houses a database of ES&H curricula developed for DOE workers by NIEHS awardees with DOE funds that are available to professional trainers.

In partnership with DOE's National Training Center and HAMMER, WETP and Clearinghouse staff participated in four Safety Training Collaboration meetings across the DOE complex. Meetings began in Oak Ridge, TN during the previous fiscal year and ended in Idaho Falls, ID in October 2010. Representatives from federal, contractor, and union organizations took part in this workshop. The National Training Center (NTC) within the Office of Healthy, Safety and Security (HSS) acted as the lead facilitator for the workshop which included presentations from federal as well as union leadership, HAMMER staff, and NIEHS representatives. The focus of the effort was primarily health and safety training that meets the requirements of Title 10 CFR Part 851, Worker Health and Safety Program Rule. At each of the meetings, Deborah Weinstock made a presentation on the site's safety and health profile from the Clearinghouse's DOE Needs Assessment report. The goal of all four meetings was to strengthen the safety of site operations; enhance the quality and efficiency of safety training programs; and reduce redundancy of safety training programs.

Ms. Weinstock organized a panel presentation for the August 2011 VPPPA Conference on the Safety Training Collaboration project being done with DOE, NIEHS and HAMMER. The panel highlighted results of the four safety training collaboration focus group meetings that had been held and introduced the Safety Training Collaboration White Paper that was just being released for comment.

Part of the Clearinghouse support includes attending and presenting at meetings. In October 2010, Deborah Weinstock participated in a meeting with the HAMMER worker-trainers, as well as attended the HAMMER Medical Surveillance Subcommittee and Steering Committee meetings at Hanford, WA. In April 2011, Deborah Weinstock, Director of the Clearinghouse, attended the HAMMER Medical Surveillance Subcommittee and Steering Committee meetings in Washington, DC.

Total Training by Awardee 2010-2011

AWARDEE	COURSES COMPLETED	WORKERS TRAINED	CONTACT HOURS
INTERNATIONAL CHEMICAL WORKERS UNION	299	4,958	40,450
INTERNATIONAL BROTHERHOOD/TEAM/CHAUF/WHM	198	3,414	39,644
INTERNATIONAL UNION OPERATING ENGINEERS	214	4,419	53,004
PARTNERSHIPS FOR ENVIRONMENTAL TECHNICAL EDUCATION	233	2,765	17,242
LIUNA TRAINING AND EDUCATION FUND	495	5,999	110,940
UNITED STEELWORKERS OF AMERICA	258	4,264	41,860
CPWR - The Center for Construction Research and Training	275	5,115	79,936
INTERNATIONAL ASSOCIATION FIRE FIGHTERS	15	304	22,480
TOTAL	1,987	31,238	405,556

Target Populations for 2010-2011

TARGET POPULATIONS	# COURSES COMPLETED	% COURSES COMPLETED	# WORKERS TRAINED	% WORKERS TRAINED	# CONTACT HOURS	% CONTACT HOURS
Other Safety and Health	551	28%	8,043	26%	100,055	25%
CERCLA Cleanup	803	40%	15,060	48%	184,951	46%
Asbestos Abatement	237	12%	3,103	10%	46,180	11%
Radiation	262	13%	3,261	10%	36,459	9%
Hazmat Transport	6	0%	69	0%	552	0%
RCRA/Industrial	60	3%	778	2%	9,995	2%
Emergency Response	36	2%	636	2%	24,042	6%
Educational Enhancement	23	1%	190	1%	1,386	0%
Lead Abatement	9	0%	98	0%	1,936	0%
TOTALS	1,987	100%	31,238	100%	405,556	100%

Funding by Awardee 2010-2011

GRANTEE	2010-2011
HMTRI Kirkwood Community College	301,904
International Association of Firefighters	661,846
International Brotherhood of Teamsters	677,326
International Chemical Workers Union	824,497
International Union of Operating Engineers	1,468,960
LIUNA Training and Education Fund (formerly Laborers/Associated General Contractors Education and Training Fund)	2,131,350
United Steel Workers of America	1,710,735
CPWR—The Center for Construction Research and Training	1,800,382
Total	\$9,577,000

Multi-Year Training Summary

Year	Total Courses	Total Workers	Total Contact Hours
1994	486	7,107	184,604
1995	1,091	13,566	249,704
1996	1,199	18,642	290,938
1997	1,277	18,394	244,212
1998	983	15,048	217,666
1999	922	14,049	202,997
2000	1,152	15,860	218,087
2001	1,379	18,833	245,436
2002	1,954	25,399	302,723
2003	1,959	23,187	303,633
2004	2,367	29,240	374,957
2005	1,961	25,442	329,840
2006	2,044	26,365	325,533
2007	2,283	34,074	400,491
2008	2,225	33,702	414,746
2009	2,265	36,266	530,271
2010	2,188	35,329	523,287
2011	1,987	31,238	405,556
TOTAL	29,722	421,741	5,764,681

Total Training by Site 2010-2011

SITE	COURSES COMPLETED		WORKERS TRAINED		CONTACT HOURS	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
Argonne East	44	2%	762	2%	15,502	4%
Los Alamos National Laboratory	212	11%	3,605	12%	29,772	7%
Nevada Test Site	90	5%	1,202	4%	24,123	6%
West Valley Demonstration Project	1	0%	30	0%	900	0%
Ashtabula	12	1%	193	1%	2,486	1%
Barker Brothers	1	0%	20	0%	600	0%
Brookhaven National Laboratory	10	1%	157	1%	4,960	1%
Hanford Waste Vitrification Plant	412	21%	7,728	25%	79,114	20%
Pantex Plant	13	1%	190	1%	3,056	1%
Santa Susanna Field Laboratory	6	0%	87	0%	954	0%
St. Louis Airport Site	4	0%	66	0%	1,508	0%
Non-DOE Sites	151	8%	2,561	8%	43,428	11%
Idaho National Engineering Laboratory	131	7%	1,372	4%	16,461	4%
Kansas City Plant	5	0%	117	0%	2,694	1%
Princeton Plasma Physics Laboratory	1	0%	16	0%	640	0%
Rocky Flats Office	1	0%	25	0%	1,000	0%
Savannah River Site	75	4%	1,208	4%	23,485	6%
Weldon Springs	1	0%	12	0%	96	0%
Portsmouth Gaseous Diffusion Plant	44	2%	701	2%	10,568	3%

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Total Training by Site 2010-2011 Continued

SITE	COURSES COMPLETED		WORKERS TRAINED		CONTACT HOURS	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
Multiple DOE sites	18	1%	318	1%	14,824	4%
Lawrence Berkeley	3	0%	51	0%	408	0%
Pinellas Plant	12	1%	211	1%	2,632	1%
Bettis Plant	31	2%	555	2%	4,650	1%
Department of Energy - Headquarters	3	0%	48	0%	384	0%
Fernald Integrated Demonstration Site	9	0%	139	0%	3,004	1%
Formerly Utilized Sites Remedial Action Program	19	1%	222	1%	4,566	1%
Lawrence Livermore National Laboratory	9	0%	172	1%	2,488	1%
Mound Plant	15	1%	289	1%	2,990	1%
Oak Ridge Field Office	510	26%	7,785	25%	93,236	23%
Paducah Gaseous Diffusion Plant	144	7%	1,396	4%	15,027	4%
TOTAL	1,987	100%	31,238	100%	405,556	100%

Training Parameters Summary

Training Parameters Summary: DOE/NIEHS Worker Education and Training Program

TRAINING PARAMETERS ¹	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	TOTAL Since 1994
Number of Awardees	7	8	8	8	8	8	8	8	8	8	8	
Courses Completed	1,152	1,379	1,954	1,959	2,367	2,044	2,283	2,225	2,265	2,188	1,987	27,761
Workers Trained	15,860	18,833	25,399	23,187	29,240	26,365	34,074	33,702	36,266	35,329	31,238	395,833
Contact Hours	218,087	245,436	302,723	303,633	374,957	325,533	402,635	414,746	530,271	523,287	405,556	5,436,985
Dollars Awarded	7,423,500	8,200,000	8,076,971	8,201,000	8,031,138	9,559,539	9,571,671	9,358,264	9,510,125	9,670,474	9,577,000	\$154,035,682
Cost Per Contact Hours	\$34.04	\$33.41	\$26.68	\$27.01	\$21.42	\$29.37	\$23.77	\$22.56	\$17.93	\$18.48	\$23.61	\$28.33

